Oracle® Enterprise Asset Management

User's Guide

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- Did you understand the context of the procedures?
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- Do you need different information or graphics? If so, where, and in what format?
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Preface

Intended Audience

Welcome to Release 12.1 of the *Oracle Enterprise Asset Management User's Guide.*

This guide is designed for users and administrators of the Oracle Enterprise Asset Management application. It assumes that you have a working knowledge of the principles and customary practices of your business area, along with specific application knowledge of the Oracle Enterprise Asset Management product.

See Related Information Sources on page xvi for more Oracle E-Business Suite product information.

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1 Oracle Enterprise Asset Management Overview

This chapter provides a high level overview of the Oracle Enterprise Asset Management application.

2 Setting Up

This chapter provides Enterprise Asset Management administrators necessary setup information. You can also refer to the Oracle Enterprise Asset Management Implementation Guide for additional information, such as APIs and Profile Options.

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4 Preventive Maintenance
5 eAM Planning and Scheduling
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Related Information Sources

Oracle Assets User's Guide

This guide defines an asset, describes key information Oracle Assets stores for each asset, and explains how to define them. The concepts and tasks related to maintaining and retiring assets are detailed, and information regarding depreciation, depreciation projections, what-if depreciation, and the depreciation transaction archive purge feature is discussed. Asset accounting, tax accounting features, and capital budgeting are described in detail.

Oracle Bills of Material User's Guide

This guide describes how to create various bills of material to maximize efficiency, improve quality, and lower costs for the most sophisticated manufacturing and/or

maintenance environments. By detailing integrated product structure and processes, flexible product and process definition, and configuration management, this guide enables you to manage product details within and across multiple sites.

Oracle Cost Management User's Guide

This guide contains information about setting up Oracle Cost Management, as well as other integrated applications. The guide explains how to define, view, and purge item cost information, and the processes common to both standard and average costing. Standard, Average, FIFO, and project manufacturing costing methods are detailed, including how transactions are costed. Flow manufacturing, periodic costing, and period close functions are all discussed in detail.

Oracle Enterprise Asset Management Implementation Guide

This guide discusses the major business flows within Enterprise Asset Management (eAM), how to set up eAM, APIs, and user interfaces.

Oracle Human Resources User's Guide

This user's guide explains the setup procedures you need to perform in order to successfully implement Oracle HRMS in your enterprise.

Oracle Internet Procurement Implementation Guide

Use this guide for further direction on enabling internal users to independently order items from both internal and external catalogs.

Oracle Inventory User's Guide

This guide describes how to define items and item information, perform receiving and inventory transactions, maintain cost control, plan items, perform cycle counting and physical inventories, and set up Oracle Inventory.

Oracle Work In Process User's Guide

This guide describes how Oracle Work in Process provides a complete production management system. Specifically, this guide describes how discrete, repetitive, assemble-to-order, project, flow, and mixed manufacturing environments are supported.

Integration Repository

The Oracle Integration Repository is a compilation of information about the service endpoints exposed by the Oracle E-Business Suite of applications. It provides a complete catalog of Oracle E-Business Suite's business service interfaces. The tool lets users easily discover and deploy the appropriate business service interface for integration with any system, application, or business partner.

The Oracle Integration Repository is shipped as part of the Oracle E-Business Suite. As your instance is patched, the repository is automatically updated with content appropriate for the precise revisions of interfaces in your environment.

Do Not Use Database Tools to Modify Oracle E-Business Suite Data

Oracle STRONGLY RECOMMENDS that you never use SQL*Plus, Oracle Data Browser, database triggers, or any other tool to modify Oracle E-Business Suite data unless otherwise instructed.

Oracle provides powerful tools you can use to create, store, change, retrieve, and maintain information in an Oracle database. But if you use Oracle tools such as SQL*Plus to modify Oracle E-Business Suite data, you risk destroying the integrity of your data and you lose the ability to audit changes to your data.

Because Oracle E-Business Suite tables are interrelated, any change you make using an Oracle E-Business Suite form can update many tables at once. But when you modify Oracle E-Business Suite data using anything other than Oracle E-Business Suite, you may change a row in one table without making corresponding changes in related tables. If your tables get out of synchronization with each other, you risk retrieving erroneous information and you risk unpredictable results throughout Oracle E-Business Suite.

When you use Oracle E-Business Suite to modify your data, Oracle E-Business Suite automatically checks that your changes are valid. Oracle E-Business Suite also keeps track of who changes information. If you enter information into database tables using database tools, you may store invalid information. You also lose the ability to track who has changed your information because SQL*Plus and other database tools do not keep a record of changes.

Part 1

Welcome to Enterprise Asset Management

1

Oracle Enterprise Asset Management Overview

This chapter provides a high level overview of the Oracle Enterprise Asset Management application.

This chapter covers the following topics:

- Introduction
- Overview of Oracle Enterprise Asset Management
- Asset Management
- eAM Work Management
- Integration with Other Oracle Application Products

Introduction

Oracle Enterprise Asset Management (eAM) is part of Oracle's *E-Business Suite* and addresses the comprehensive and routine asset maintenance requirements of asset intensive organizations. Using eAM, organizations can efficiently maintain both assets, such as vehicles, cranes and HVAC systems, as well as rotable inventory items, such as motors and engines. To measure performance and optimize maintenance operations, all maintenance costs and work history are tracked at the asset level.

This chapter contains the following topics:

- Overview of Oracle Enterprise Asset Management, page 1-2
- Asset Management, page 1-2
- eAM Work Management, page 1-4
- Integration with Other Oracle Application Products, page 1-5

- Required Products, page 1-5
- Optional Products, page 1-5

Overview of Oracle Enterprise Asset Management

Oracle Enterprise Asset Management (eAM) is a part of Oracle's E-Business Suite, providing organizations with the tools to create and implement maintenance procedures for both assets and rebuildable inventory items. Maintenance procedures are an integral part of an organization's complete asset lifecycle management strategy, enabling an organization to optimize asset utilization. eAM enables users to optimally plan and schedule maintenance activities with minimal disruption to an organization's operations or production. Importantly, it improves resource efficiency, enhances maintenance quality, tracks work history, and records all maintenance costs.

Oracle eAM tracks the performance of assets (including rebuildable, inventory items) using meters, quality plans, and condition monitoring systems. By effectively monitoring an asset's operating condition, effective preventive maintenance strategies can be implemented. In addition to creating preventive maintenance schedules, users can create alternative maintenance strategies for seasonal or production capacity changes.

eAM's comprehensive maintenance functionality supports asset lifecycle strategies for asset intensive industries, including Metals/Mining, Manufacturing, Pulp/Paper, Petrochemicals, Facilities, and Education. eAM eliminates the need for spreadsheets and disparate data repositories, by enabling companies to manage reactive, planned, preventive maintenance, and adopt a centralized, proactive strategy for managing asset maintenance across an enterprise.

eAM enables an organization to do the following:

- Create a preventive maintenance strategy
- Maximize resource availability, including both equipment and labor
- Optimize scheduling and resource efficiency
- Integrate with Oracle's E-Business Suite for enterprise-wide solutions

The following topics are included in this section:

- Asset Management, page 1-2
- eAM Work Management, page 1-4

Asset Management

eAM eliminates the need for point solutions that offer a limited, "flat" view of an asset

by expanding the visibility and ownership of an asset throughout an entire organization. Different entities may describe an asset in several ways:

- Fixed asset to an accounting department
- Leased asset to facilities management
- Piece of production equipment to operations
- Inventory item to materials management
- Maintainable asset to mechanical engineers

Oracle eAM incorporates the above views of an asset through a single entity. An asset is an entity for which users can report problems. Assets can be cooling towers, cranes, buses, buildings, conveyors, or anything that needs work. eAM provides the flexibility to address the many types of assets through the definition of the following:

- Asset groups and attributes
- Asset links to an enterprise
- Asset costs and work history
- Asset activities and meters

By first establishing asset groups, you can define assets and asset characteristics that can be inherited by the assets belonging to that group. Detailed information, such as nameplate data, engineering specifications, property detail, and other searchable characteristics are defined with asset attribute elements and values. Asset groups also define a default master bill of materials (BOM) for assets. This BOM can be edited for specific assets. Virtual assets can be designed to create a network of assets or routings. This combines several assets to a single work activity.

Oracle eAM enables you to quickly identify plants and facilities using an Asset Navigator (See: Defining Asset Numbers, page 2-65). You can view details of an asset, such as cost, hierarchal (parent/child) information, and launch transactions. You can also view current or historical configurations, and work details of an asset. As rotable, inventory items of an asset are removed from and reinstalled into an asset, the asset genealogy and parent/child meter readings are recorded automatically. Attributes, such as cost history, bills of material, and document attachments can be associated with a specific asset.

You can view the locations of assets by using the built-in integration of web-based source map viewers of Google Maps or ESRI. The system also provides the provision to integrate with a third-party HTML based map viewer. Assets can be geocoded and then assets and work can be displayed in the map viewer based on user-entered search criteria. See Google Maps Integration, page 21-1 and ESRI Integration, page 22-1.

Asset Hierarchies

You can focus on an asset hierarchy, or a set of parent/child relationships of an asset. You can view all associated asset information such as asset details, bill of material, work orders, maintenance activities, quality plans, maintenance costs, contract services, and work order history. You can view cost information for one asset, or view rolled-up costs of its children assets.

Related Topics

Defining Asset Numbers, page 2-65

Obtaining Asset Number Information, page 20-4

Viewing Asset Number Information, page 20-6

Viewing Capital Asset and Rebuildable Inventory Work Orders, page 20-35

Google Maps Integration, page 21-1

ESRI Integration, page 22-1

eAM Work Management

Preventive and predictive maintenance strategies are supported by eAM. Preventive maintenance can be based on Day or Runtime intervals, as well as a specific list of dates, for both assets and inventory items. Organizations that practice predictive maintenance can monitor and scrutinize maintenance work history and performance trends with quality plans. They can also study asset conditions by monitoring systems. By combining these strategies, an organization can establish a maintenance strategy that ensures minimal downtime. Oracle Enterprise Asset Management enables you to monitor reliability and predict the need for maintenance in the future. You can identify any breach of performance defined by engineering and immediately alert maintenance, monitor conditions of an asset, collect meter readings, forecast the frequency at which preventive maintenance should be performed, and establish Run to Failure schedules and forecasts, based on predicted failures.

Oracle eAM enables operations and maintenance staff to create work requests to report any problems with an asset. To avoid duplicate work orders for the same issue, you can review any outstanding work requests that are currently assigned to an asset.

A supervisor can approve, place on hold, or reject a work request. An approved work request can be linked to a work order. The status of a work request is then updated when it is linked to a work order.

Related Topics

Obtaining Work Request Information, page 17-3

Creating and Updating Work Requests, page 17-6

Work Orders, page 20-35

Integration with Other Oracle Application Products

Oracle Enterprise Asset Management is part of the Oracle E-Business suite, and directly integrates with Oracle Manufacturing, Oracle Purchasing, Oracle Property Management, Oracle Quality, Oracle Inventory, Oracle Human Resources, Oracle Financials, Oracle Fixed Assets, and Oracle Projects. This enables you to strategically monitor resource and cost planning throughout the enterprise. Improvement programs can be enforced and reviewed to ensure compliance with industry standards by tracking problems through to resolution.

A well-planned maintenance environment depends on the ability of key personnel to view available inventory items, equipment, and skilled personnel. Because eAM is an enterprise solution, you can view the resource availability for assets that are used by operations and coordinate maintenance work to minimize operation disruption. Most importantly, Oracle eAM is designed for the maintenance user who performs the work. Using Oracle's Maintenance User, trades people and supervisors with minimum training can easily perform their work.

Required Products

To implement Enterprise Asset Management, you must have the following required products installed:

- Oracle Inventory
- Oracle Bills of Material
- Oracle Human Resources
- Oracle Cost Management
- Oracle Manufacturing Scheduling
- Oracle Quality
- Oracle Work In Process

Optional Products

To implement Enterprise Asset Management, the following products are not required; however, they are useful in the overall robust eAM solution:

- Oracle Master Scheduling/MRP

- Oracle Property Management
- Oracle Financials
- Oracle Fixed Assets
- Oracle iProcurement
- Oracle Projects
- Oracle Project Manufacturing
- Oracle Purchasing
- Oracle Order Management
- Oracle Time and Labor

Part 2

Enterprise Asset Management Administration

The Enterprise Asset Management Administration role contains people who are generally responsible for entering information, often for other maintenance employees. Information entered may include Work Order resource transactions, Work Order completion details, and Time and Labor hours. This person might have limited maintenance knowledge and is generally responsible for supporting the maintenance department by handling information entry.

This part contains the following chapter:

- Chapter 2, "Setting Up", page 2-1

2

Setting Up

This chapter provides Enterprise Asset Management administrators necessary setup information. You can also refer to the Oracle Enterprise Asset Management Implementation Guide for additional information, such as APIs and Profile Options.

This chapter covers the following topics:

- Before You Begin
- Oracle Enterprise Asset Management Setup Overview
- Organization Setup
- Setting Up Organizations
- Enabling Organizations for Enterprise Asset Management
- Setting Up Install Base Parameters
- Setting Up Services Fulfillment Manager Parameters
- Defining eAM Parameters
- General eAM Setup
- Setting Up Areas
- Defining Departments and Resources
- Defining Department Approvers
- Defining Miscellaneous Documents
- Setting Up Electronic Records and Signatures
- Defining Lookups
- Asset Setup
- Using the Activity Workbench
- Rebuildable Item Setup
- Non-Stock Direct Item Setup

- Preventive Maintenance Setup
- eAM Planning and Scheduling
- Defining a Master Demand Schedule Name
- Defining a Material Requirements Plan Name
- Defining Plan Options
- Quality Integration Setup
- Creating Collection Elements
- Creating eAM Quality Collection Plans
- Creating eAM Quality Collection Plans for a Supplier
- Outside Processing Integration Setup
- Setting Up Outside Service Processing
- Setting Up Direct Items
- Cost Management Integration Setup
- Setting Up Cost Categories
- Setting Up Purchase Order Category Associations for Direct Items
- Setting Up eAM Cost Management
- Setting Up Zero Cost Rebuild Item Issue
- Process and Discrete Manufacturing Integration Setup
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- Associating Assets with Production Equipment
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- Executing the Export Process
- Executing the Asset Number Interface
- Service Integration Setup
- Creating Maintenance Service Request Types
- Enabling Service Requests for Assets and Rebuildables
- Enabling eAM Specific Fields
- Oracle Time and Labor Integration Setup

- Defining Persons as Users
- Creating Eligibility Criteria
- Work Order Billing Setup
- Setting Up Parameters
- Setting up Costs for the Cost Plus Billing Basis
- Setting up Prices for the Price List Billing Basis
- Service Attribute Setup
- Setting Up Billable Material
- Setting Up a Billable Resource
- Setting Up a Billable Activity

Before You Begin

As you plan your implementation of Oracle Enterprise Asset Management (eAM), Oracle recommends that you consider the implementation issues discussed in this section. By carefully planning your implementation, you can save time and reduce errors.

Overview of Setting Up

This section contains a checklist that includes each task to complete the implementation of Oracle Enterprise Asset Management. It lists the steps required to implement Oracle Enterprise Asset Management, along with advanced implementation topics for you to consider. The setup checklist is organized into several subsections.

When installing Oracle Enterprise Asset Management, the installation process automatically creates five responsibilities: Oracle Enterprise Asset Management, Maintenance User Workbench, Maintenance Super User, Self-Service Work Requests, and Self Service Time and Expenses. The Oracle Enterprise Asset Management is a super user responsibility. It includes the necessary functions to set up and implement Oracle Enterprise Asset Management.

Before setting up Oracle Enterprise Asset Management, set up the users and assign their appropriate responsibilities for the implementation.

Related Product Setup Steps

Oracle Enterprise Asset Management setup includes various setup steps within Oracle Applications products. These steps are discussed in detail in the Overview of Setting Up sections of the respective Oracle Product users guides.

Setting Up Underlying Oracle Applications Technology

Ensure that you complete the following setup steps, including:

- Performing system-wide setup tasks, such as configuring concurrent managers and printers
- Managing data security, which includes setting up responsibilities to enable access to a specific set of business data and complete a specific set of transactions, and assigning individual users to one or more of these responsibilities
- Setting up Oracle Workflow

  Additional Information: If you plan to use work requests for reporting maintenance problems in Oracle Enterprise Asset Management, and those work requests need approval by a maintenance department user, then you should set up Oracle Workflow.

Oracle Enterprise Asset Management Setup Overview

Oracle Enterprise Asset Management (eAM) may have unique setups for each organization, including parameters, user defined lookups, and attributes. During the implementation process, the implementation team should discuss system and user options for Enterprise Asset Management. Users implementing Enterprise Asset Management should also have determined the structure of their organizations and user access via the Oracle System Administrator responsibility. This chapter covers the following topics:

- Organization Setup, page 2-5
- General Enterprise Asset Management Setup, page 2-15
- Defining Lookups, page 2-23
- Asset Setup, page 2-47
- Using the Activity Workbench, page 2-80
- Rebuildable Item Setup, page 2-105
- Non-Stock Direct Item Setup, page 2-116
- Preventive Maintenance Setup, page 4-1
- eAM Planning and Scheduling, page 2-150

- Quality Integration Setup, page 2-157
- Outside Processing Integration Setup, page 2-168
- Cost Management Integration Setup, page 2-178
- Process and Discrete Manufacturing Integration Setup, page 2-187
- Project Manufacturing Integration Setup, page 2-190
- Property Manager Integration Setup, page 2-195
- Service Integration Setup, page 2-199
- Oracle Time and Labor Integration Setup, *Oracle Enterprise Asset Management User's Guide*
- Work Order Billing Setup, page 2-209

Organization Setup

Organization setup is required before you can set up any additional Enterprise Asset Management information. Tasks include:

- Setting Up Organizations, page 2-5
- Enabling Organizations for Enterprise Asset Management, page 2-7
- Defining eAM Parameters, page 2-11

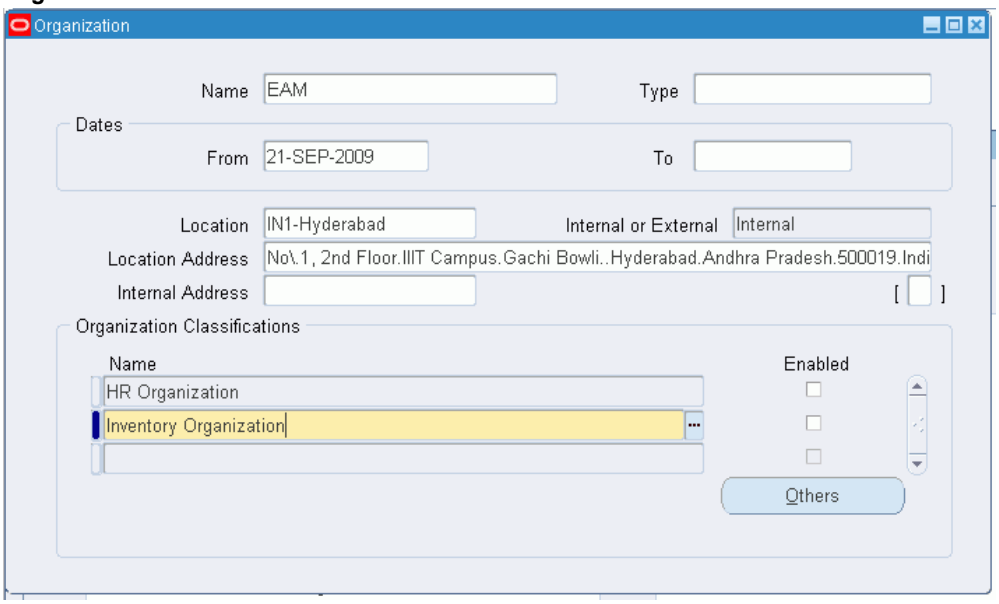
Setting Up Organizations

A valid organization is a requirement for Enterprise Asset Management setup. Decisions are made during implementation as to which organizations are enabled for Enterprise Asset Management. If the decided upon organizations already exist, you can skip this section and proceed to Enabling Organizations for Enterprise Asset Management, page 2-7.

To set up organizations:

1. Navigate to the Organization window.

Organization



2. Enter an organization Name, for example, Seattle Maintenance.

3. Select an organization Type. For information on Type, Dates region fields, Location, Internal or External, Location Address, and Internal Address fields, see: Creating an Organization, *Oracle Human Resources User's Guide*.

4. Save your work. A valid location must be set up before you can save (See: Creating an Organization, *Oracle Human Resources User's Guide*).

5. In the Organization Classifications region, establish this organization as an Inventory Organization. Select Inventory Organization from the Name list of values.

   Additional Information: An eAM organization must be classified as an Inventory Organization. You can classify an eAM as other product organizations, as well.

6. Save your work.

Related Topics

Creating an Organization, *Oracle Human Resources User's Guide*

Enabling Organizations for Enterprise Asset Management

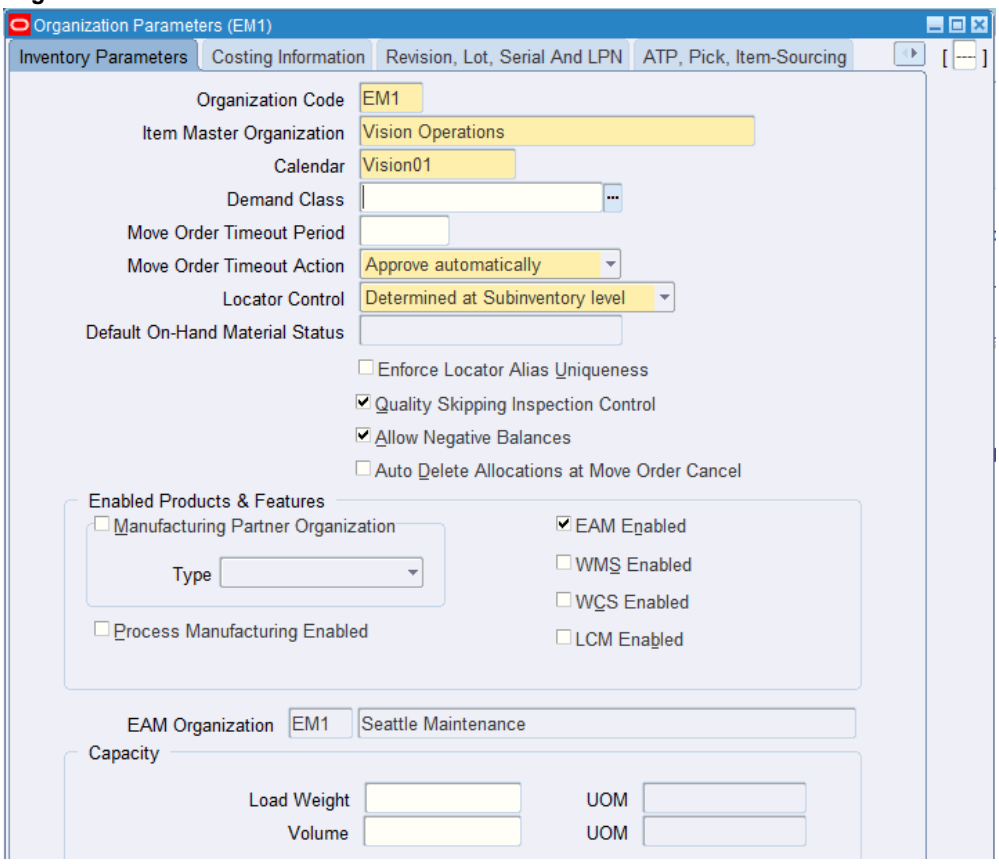
Before you begin implementing Enterprise Asset Management (eAM), decide which organizations are eAM enabled. A valid organization must exist before you can enable the organization for Enterprise Asset Management (See: Setting Up Organizations, page 2-5).

To define an Enterprise Asset Management enabled organization:

You can create a new Enterprise Asset Management enabled organization, or convert an existing organization to an Enterprise Asset Management enabled organization. Oracle recommends that you keep Enterprise Asset Management organizations separate from production organizations. Enterprise Asset Management parameters are on the Inventory Parameters tab, within the Organization Parameters window.

1. Navigate to the Organization Parameters window.

Organization Parameters



2. Enter a valid organization code. For information on how to create an organization, See: Setting Up Organizations, page 2-5.

3. Select the EAM Enabled check box to enable Enterprise Asset Management for this organization. You cannot clear this check box after Enterprise Asset Management items or Enterprise Asset Management parameters are defined in the current organization.

4. If Enterprise Asset Management is enabled for the current organization, the EAM Organization value defaults and is disabled; the current organization code defaults.

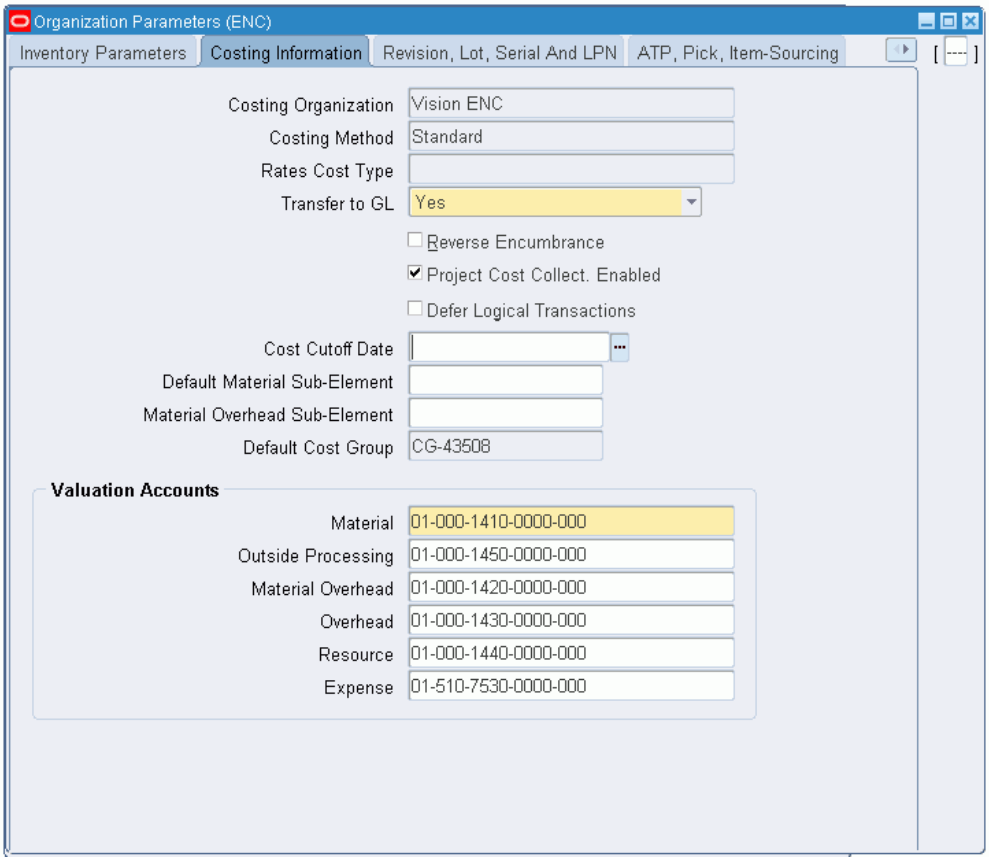
   For organizations that are not Enterprise Asset Management enabled, you can populate the EAM Organization field with an Enterprise Asset Management enabled organization code. The designated eAM organization maintains equipment items for the designated production organization. For example, if the current organization is a production organization, this is how you would identify a maintenance organization that is associated with the production organization (See: Overview of the Process and Discrete Manufacturing Integration, page 10-1). You can update this field, if asset equipment association does not exist in this

organization.

5. If you are using encumbrance accounting, you must enable this feature.

   Navigate to the Costing Information page.

Costing Information



6. Select the **Reverse Encumbrance** option.

7. Save your work.

Related Topics

Organization Parameters Window, *Oracle Inventory User's Guide*

For more information regarding encumbrance accounting, see Encumbrance Accounting, page 2-190

Setting Up Install Base Parameters

Oracle Enterprise Asset Management is integrated with Oracle Install Base. Therefore, the Install Base parameters must be set up to ensure that assets are created correctly in eAM.

Creating an Internal Party

❒ Before you set up the parameters for Oracle Install Base, you must first create an internal party. The internal party will be used to complete the Install Base setup.

Follow these steps to create an internal party:

1. Navigate to the Customer Support - Asset Maintenance responsibility.
2. Click the Contact Center link.
3. Enter contact or customer details in the header section of the page.
4. Click the Party Information tab.
5. Press the F11 key. This action enables you to access fields in the page.
6. Enter all applicable information for the internal party.
7. Save your work.

You must perform the following steps in Oracle Install Base:

1. Navigate to the Install Base Administrator responsibility.
2. Under the Setups menu, click the Install Parameters link.
3. Set up the Install Parameters for Install Base.

   Additional Information: See the *Oracle Install Base Implementation Guide* for assistance on how to set up the Install Base parameters.

   See "Set Up Installation Parameters", Setup Steps within Oracle Install Base, *Oracle Install Base Implementation Guide*.

4. Make sure that the Freeze check box has been selected.

   If it is unchecked, then select the check box.

5. Save your work.

Setting Up Services Fulfillment Manager Parameters

Several transactions originating from Inventory and Order Management are processed in Install Base, and these transactions must be serialized.

In order to guarantee the serialization of the transactions, you must perform the following steps to ensure that asset transfers are performed correctly in eAM:

1. Navigate to the SFM System Administrator responsibility.
2. Navigate to Administration, and then click the Queue Console link.
3. Click the Services button.
4. Select the SFM Event Manager Queue Service value.
5. Enter a value of 1 for both the Actual and Target to ensure that the Services Fulfillment Manager is up and running.
6. Save your work.

Related Topics

See "Ensure the Serializability of Transactions Processed in Oracle Install Base," Implementation and Setup for New Users, *Oracle Install Base Implementation Guide*.

Defining eAM Parameters

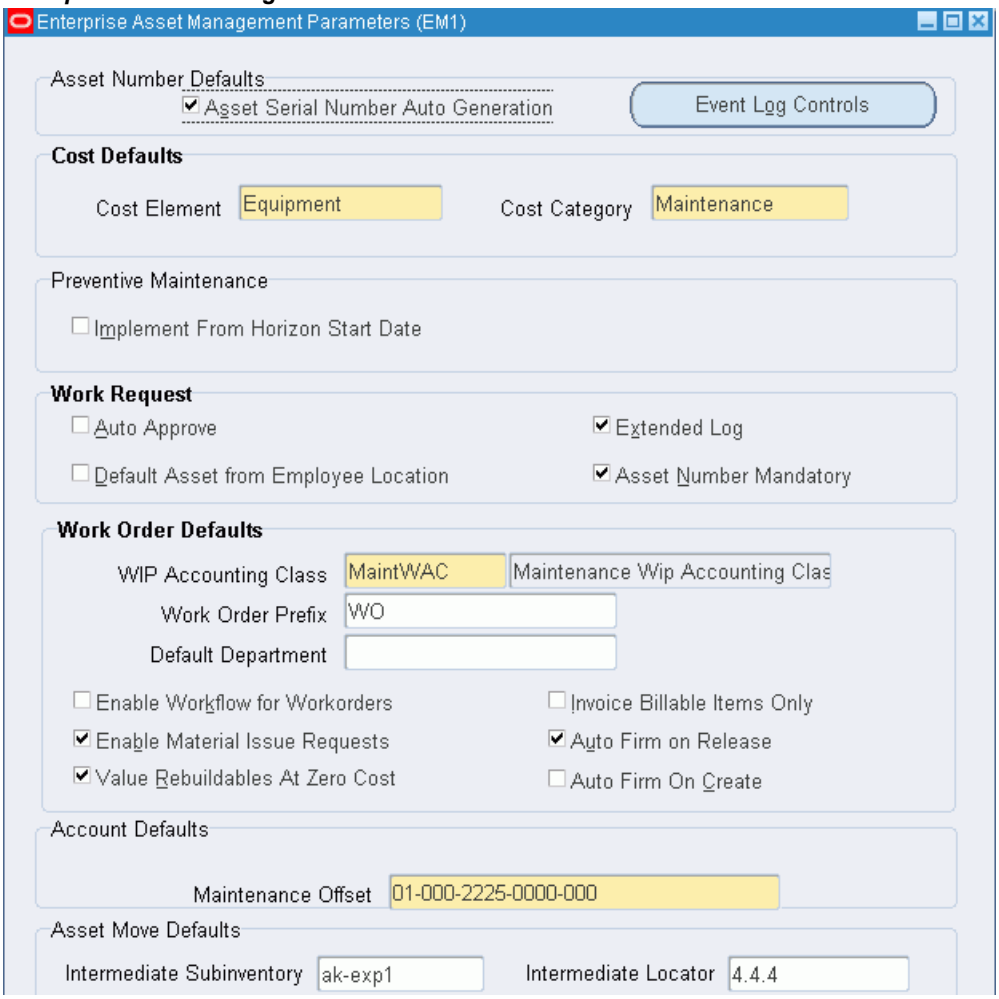
After you have established an Enterprise Asset Management enabled organization, set up specific Enterprise Asset Management parameters that determine organization level defaults for individual transactions. Setup information such as asset number defaults, cost defaults, work request information, and work order defaults.

> **Important:** Before creating eAM Parameters, first create an Asset Subinventory in the current eAM-enabled organization (Inventory > Setup > Organizations > Subinventories). See: Creating Subinventories, *Oracle Inventory User's Guide*.

To define Enterprise Asset Management parameters:

1. Navigate to the Enterprise Asset Management Parameters window.

Enterprise Asset Management Parameters



2. Optionally indicate whether this organization has system generated asset numbers within individual asset groups. See: Defining Asset Groups, page 2-50. You can specify the starting serial number within the Organization Parameters window or the Master Item window, when defining asset groups. If the starting serial number is defined for the asset group, this definition overwrites the starting serial number within the Organization Parameters.

3. Optionally choose Event Log Controls to enable system events that are logged within the current organization. You can select the Log Enabled check box next to the events that you want logged for your assets. See: Asset Operational Logging, page 20-8.

4. The Cost Defaults region represents default cost information for future Work Orders, without defined cost elements within the work order.

Select an Enterprise Asset Management Cost Element to indicate how to capture cost overheads and any miscellaneous resource costs. Valid values are Equipment, Labor, and Material. See: Overview of eAM Cost Management, page 6-1.

5. Select a Cost Category to use as the default for departments that do not have a cost category defined. Department costs are then posted to the appropriate cost elements. Values are Maintenance, Operations, Contract, and any other values that you might have added within the extensible lookup table. See: Overview of eAM Cost Management, page 6-1.

6. In the Preventive Maintenance region, optionally select the Implement From Horizon Start Date check box to bypass past due work order suggestions when executing the Preventive Maintenance process. If this check box is selected, suggested work orders, from the Horizon Start Date forward, are executed.

7. Indicate whether work requests are automatically approved upon creation, or if every user, with the responsibility assigned to the asset's current owning department, receives a notification via Workflow (See: *Oracle Applications Workflow* and Defining Department Approvers, page 2-20). This notification appears within self service, within the responsibility you use to log in.

   If the Auto Approve check box is selected, work requests are created with an Awaiting Work Order status. If the check box is not selected, work requests are created with an Open status.

   > **Note:** A work request status must be Awaiting Work Order before you can associate it with a Work Order. The Awaiting Work Order status indicates that the work request is approved.

8. Optionally select the Default Asset from Employee Location check box to indicate the default asset information when creating a work request. If this check box is selected, the Asset Number information defaults as the Location number exported from Oracle Property Manager. Oracle Property Manager is a separate product.

9. If you choose the Extended Log check box, the system keeps an audit trail of records when defining or updating work requests.

10. Optionally select the Asset Number Mandatory check box to indicate that the Asset Number field is mandatory when creating a work request.

11. Select the WIP Accounting Class default to ensure that Work Orders generated within Enterprise Asset Management have an established account code structure assigned to accept charges incurred by that work order.

    The WIP accounting class codes available are of type, Maintenance. If a Maintenance type WIP accounting class does not exist, you can define a new one. If you are using encumbrance accounting, you must include a budget account to

capture encumbrance amounts. (See: Defining WIP Accounting Classes, *Oracle Work in Process User's Guide*).

> **Note:** Cost Management handles maintenance work orders as nonstandard expense jobs.

12. Optionally enter a Work Order Prefix.

    A prefix enables your organization to identify routine work orders.

13. Optionally select a Default Department.

    Oracle recommends that you select a default department. This department defaults to maintenance work orders as they are entered. If a department does not exist on a work order, you cannot release it.

14. Select the *Enable Workflow for Work Orders* check box to initiate approval processes for work orders and work permits. Work orders and work permits might require approvals or notifications at different stages in their lifecycles. Workflow automates this process. You can set up business events and event subscriptions (or use seeded events and subscriptions) within Oracle Workflow to indicate what events trigger Workflow. Seeded events that you can enable to trigger workflow are: Work Order creation, Work Order release approval, Work Order completion, Work Order status change, Operation completion, Work Permit release approval, Work Permit status update. See: Setting Up Oracle Workflow, *Oracle Workflow User's Guide* and Setting Up the Business Event System, *Oracle Workflow User's Guide* and Planning Your Organization's Approval Process, *Oracle Approval Management User's Guide*).

15. Indicate whether Material Issue Requests are enabled.

    If this check box is selected, the Enable Material Issue Requests check box on eAM Work Orders defaults as selected.

16. Within the Work Order Defaults region, select the Value Rebuildables at Zero Cost to indicate that rebuildable components charge at zero cost (See: Setting Up Zero Cost Rebuild Item Issue, page 2-185). If this check box is selected, rebuildable items issued out of the subinventory expense account are issued at zero cost.

17. Indicate whether only billable items are invoiceable.

    If the Invoice Billable Items Only check box is selected, only billable items can invoice; however, the item needs to be invoiceable (Invoiceable Item and Invoice Enabled check boxes selected within the Master Item window. See: Invoicing Attribute Group, *Oracle Inventory User's Guide*) and the Billing Type check box needs to be selected (See: Work Order Billing Setup, page 2-209).

    If the Invoice Billable Items Only check box is not selected, any item can be invoiced if it is invoiceable within the Master Item window (Invoiceable Item and Invoice

Enabled check boxes selected within the Master Item window). See: Invoicing Attribute Group, *Oracle Inventory User's Guide*.

18. If you select the Auto Firm on Release check box, the dates on the work order cannot automatically reschedule, after the work order is at Released or On Hold statuses.

    You can still manually reschedule a resource on the work order, thereby updating the dates on its corresponding operation and work order.

19. If you select the Auto Firm on Create check box, the dates on the Work Order cannot automatically reschedule, even in Draft and Unreleased statuses.

    You can still manually reschedule a resource on the work order, thereby updating the dates on its corresponding operation and work order.

20. Within the Account Defaults region, select a Maintenance Offset account.

    You can create or break a parent and child (hierarchy) relationship that exists between an asset number and a rebuildable serial number, manually using the Configuration History page. This account records what is sent to Inventory when a Rebuildable is removed from an Asset, and then transferred into inventory.

    For example, if the relationship is broken, the Asset or Rebuildable is sent to either Scrap or Inventory. If the Rebuildable is sent to Inventory, the accounting is as follows:

    Debit Inventory

    Credit Maintenance Offset

21. Within the Asset Move Defaults region, select a default Intermediate Subinventory and Intermediate Locator value.

    Only the expense subinventories associated with your organization are available for selection.

    This intermediate subinventory is the default subinventory to which all the assets undergoing miscellaneous receipt transactions are received while performing the Asset Move transfer. The Intermediate Locator value indicates the number assigned to the expense intermediate inventory.

    See Using the Asset Move Workbench, page 20-32

22. Save your work.

General eAM Setup

General Enterprise Asset Management Setup tasks include the following:

- Setting Up Areas, page 2-16

- Defining Departments and Resources, page 2-17
- Defining Department Approvers, page 2-20
- Defining Miscellaneous Documents, page 2-21
- Setting Up Electronic Records, page 2-22

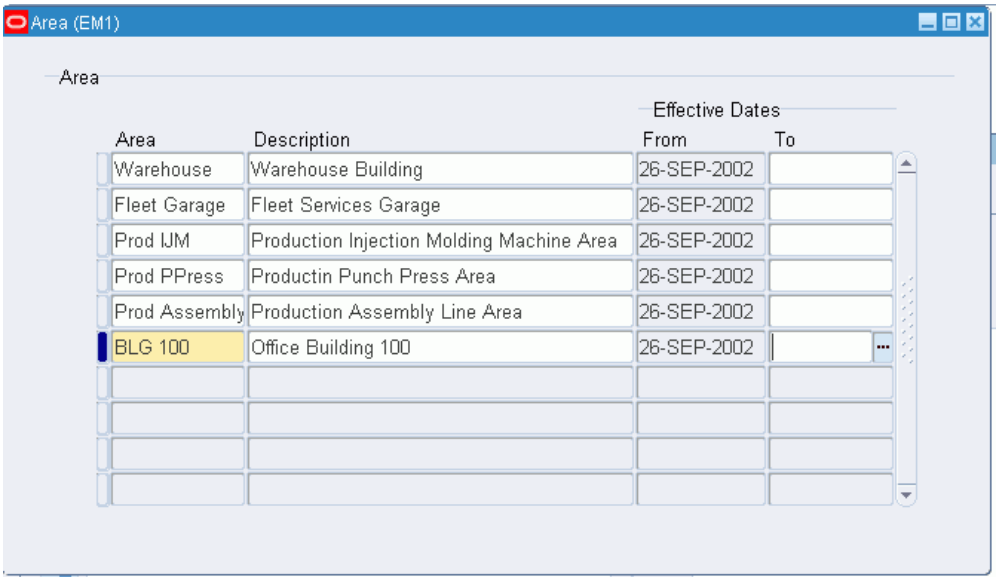
Setting Up Areas

Use areas to logically sort assets by the zones in which they reside. Areas divide the maintenance plant or facility into zones, which help to track and account for assets. Areas are later associated with assets.

To set up Areas:

1. Navigate to the Area window.

Area



2. Using the Add icon on the tool bar, add an area.
3. Enter a Description for this location.
4. The Effective From Date defaults as the system date, but you can optionally update it. Optionally select an Effective To Date to indicate an expiration of the area.
5. Save your work.

Defining Departments and Resources

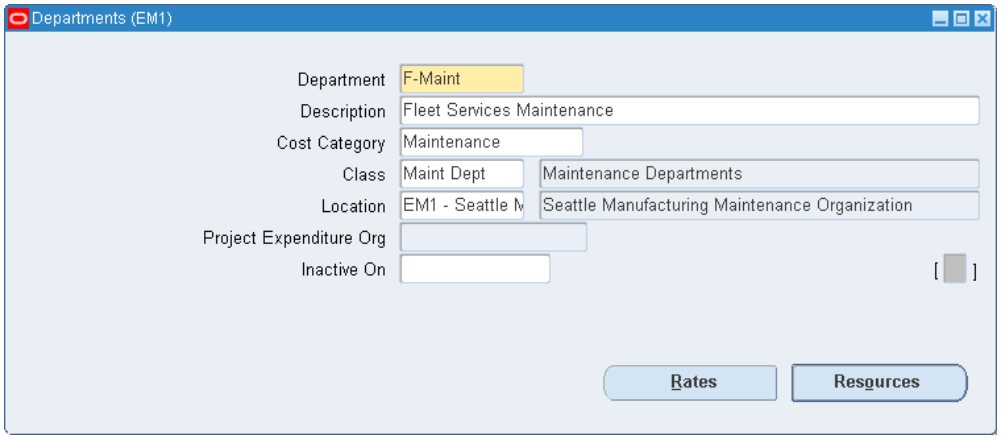
A department represents a crew within your organization. A crew may include people, machines, or suppliers. Departments are also used to collect costs, apply overhead, and compare load to capacity. Assign a department to each operation of a routing and assign resources that are available for that department. The department assigned to each operation of a routing also becomes the assigned department of the corresponding operation within the Work Order, assuming the Work Order is using the routing.

Resources are defined before departments. For information on defining resources, See: Defining a Resource, *Oracle Bills of Material User's Guide*. When you define a department, you specify available resources. A resource represents a craft. You can enter multiple resources for each department. For each resource, you can specify the shifts that the resource is available. For each resource shift, you can specify capacity modifications that change the available hours per day, units per day, or workdays.

To define departments (crews) and resources (crafts):

1. Navigate to the Departments window.

Departments



2. Enter the Department name, unique to the Organization.

3. Optionally select a department Class (See: Creating Department Classes, *Oracle Bills of Material User's Guide*).

4. Select a Location. Enter a location for a department if it is the receiving department following outside processing (See: Overview of eAM Contractor Services, page 8-1 and Outside Processing, *Oracle Work in Process User's Guide*).

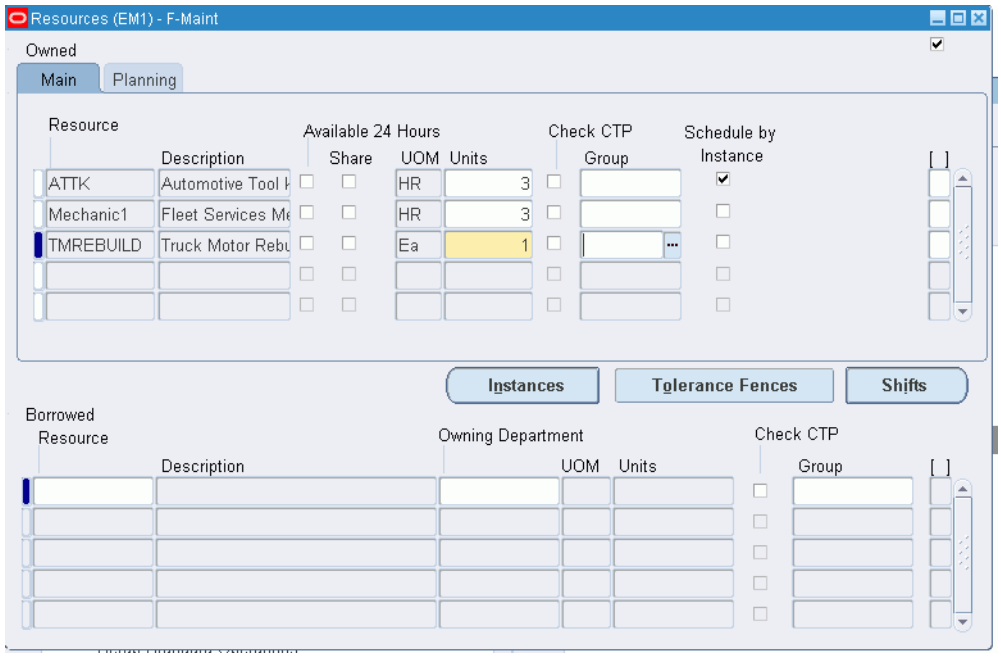
5. Enter a Project Expenditure Organization.

6. Optionally enter an Inactive On date on which you can no longer assign this department to routing operations.

   For instructions on all remaining fields, See: Defining a Department, *Oracle Bills of Material User's Guide (Bills of Material, Routings, Departments)*.

7. Click the **Resources** button to add resources or crafts to the current department.

Resources



8. Enter the Resource to assign to the current department.

9. Optionally, for owned resources, indicate whether the resource is available 24 hours per day. You cannot assign shifts to a resource that is available 24 hours per day.

10. For owned resources, indicate whether this department can share the resource and capacity with other departments.

11. Enter the number of capacity Units (resource units) available for this department, for example, the number of machines for a machine resource.

    Each resource can assign to any number of departments; multiple resources can be assigned to each department.

12. Optionally select the Check CTP check box to indicate that this resource is used in a Capable to Promise (CTP) check (See: Capable to Promise, *Oracle Master Scheduling/MRP and Supply Chain Planning User's Guide*).

13. Optionally enter a resource Group for the resource in this department.

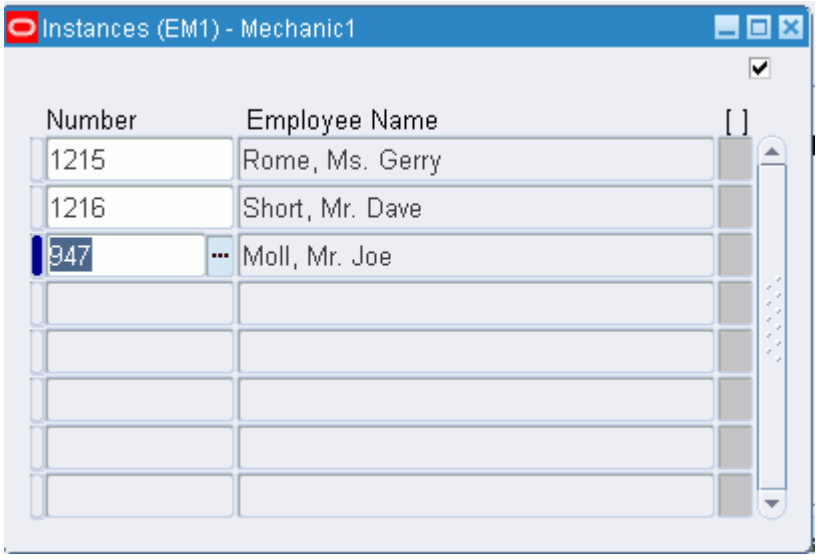
14. Optionally select the Schedule by Instance check box to indicate whether the department resource should be scheduled at the instance level (specific employee name or piece of equipment).

15. For borrowed resources, enter the Owning Department.

16. Select the Planning tab. Optionally enter an Exception Set. The exception sets that you assign help to identify capacity problems (See: Planning Exception Sets, *Oracle Capacity User's Guide*).

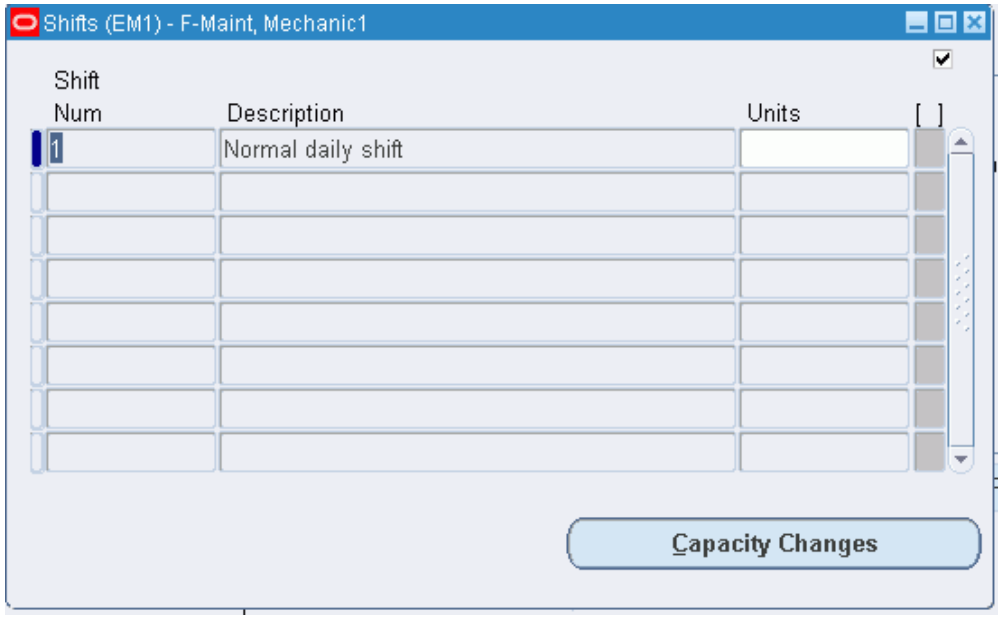
17. Choose Instances to add employees or equipment to the current resource. An instance is a specific employee name or piece of equipment. See: People and Assignments, *Implementing Oracle HRMS*.

Instances



18. Choose Shifts for owned resources that are not available 24 hours per day. This enables you to assign and update shift information for the resource and define capacity changes for a shift.

Shifts



1. Select a Shift Number.

   The shifts available are those assigned to the workday calendar and assigned to the current organization.

2. Choose Capacity Changes to define capacity changes for a shift.

For more information, See: Assigning Resources to a Department, *Oracle Bills of Material User's Guide (Bills of Material, Routings, Departments)*.

Defining Department Approvers

With a responsibility assigned to the current asset's owning department, you can set up department approvers so that Work Request notifications are sent to each approver, via Oracle Workflow (See: Defining Departments and Resources, page 2-17 and Defining Asset Numbers, page 2-65, and *Oracle Applications 12 Workflow*). Approvers can view these notifications on the Enterprise Asset Management Self Service Maintenance Home Page (See: Home, page 20-2). Everyone who receives the notification can access the work request to change its status, or add additional information to the Work Request log. After one user approves the Work Request, the notification is removed from the users' notification lists, and the work request status transitions from Open to Awaiting Work Order.

A work request can be rejected. If an approver rejects a work request, the notification is removed from that approver's notification list. You can re-assign a notification to another user for approval or additional information; for example, the originator might

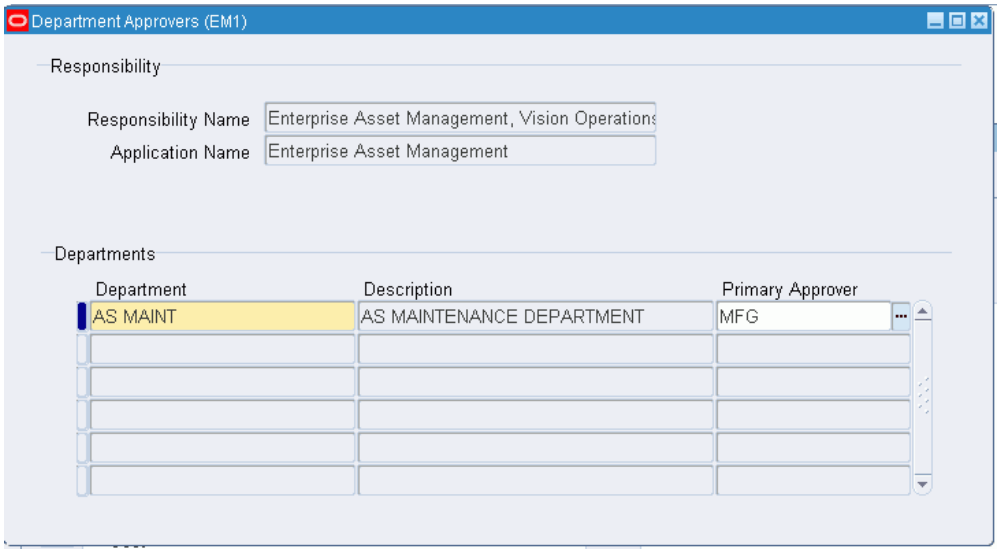
need to provide additional information on the work request.

To define Department Approvers:

1. Navigate to the Department Approvers window.

2. Select a Responsibility Name. A department is assigned to one responsibility.

Department Approvers



3. In the Departments region, select a Department. You can select an unlimited number of departments.

4. Optionally select a Primary Approver for the department from the Name list of values. The list of values contains all users within the current responsibility. If the Primary Approver is not specified, the notification is sent to all users with the particular responsibility.

5. Save your work.

Related Topics

Work Requests, page 17-1

Home, page 20-2

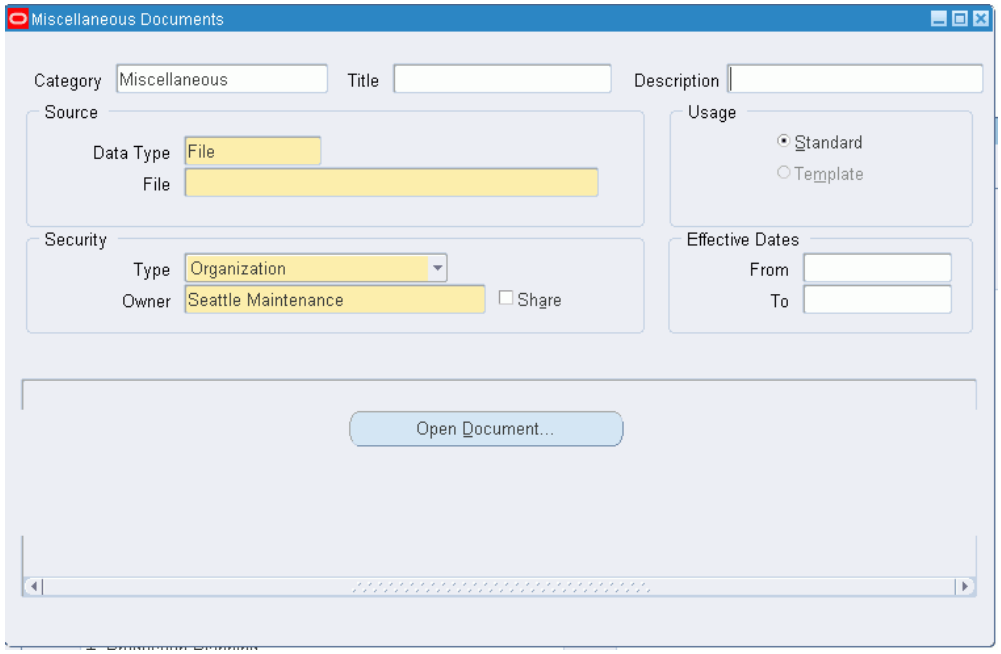
Defining Miscellaneous Documents

You can create text and files, such as spreadsheets, graphics, and OLE objects. You can attach these documents to a maintenance Work Order, asset, or operation.

To define miscellaneous documents:

1. Navigate to the Miscellaneous Documents window.

Miscellaneous Documents



2. Select a Data Type. Valid values are File, Short Text, and Web Page.

3. If the Data Type is File, attach the appropriate file. If the Data Type is Web Page, enter the relevant URL. If the Data Type is Short Text, insert the text in the Text field.

   For information on all fields, See: Working With Attachments, *Oracle Applications User's Guide*.

Setting Up Electronic Records and Signatures

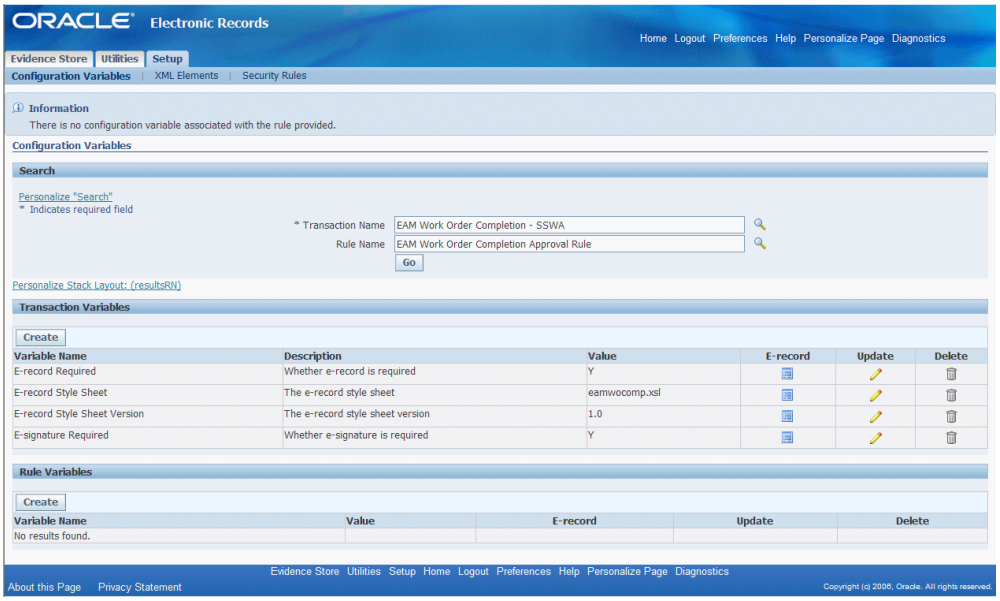
During Work Order completion, you can require Electronic Signatures and Electronic Records. These are provided using the Oracle ERES framework. Electronic Signatures ensure that the person processing the transaction verifies their identity by providing their User Identification and password, during the transaction. Electronic records provide a permanent snapshot of the transaction data that the user is verifying.

To set up electronic records and signatures:

1. Navigate to the Electronic Records page (ERES Administrator: Setup >

Configuration Variables).

Electronic Records



2. Select *EAM Work Order Completion - SSWA* from the **Transaction Name** list of values.

3. Optionally select a **Rule Name**.

4. Choose Create to create Variable Names.

   - Select *E-record Required* from the **Transaction Name** list of values. Set this value to Y.

   - Select *E-signature Required* from the **Transaction Name** list of values. Set this value to Y.

5. Choose Apply.

Defining Lookups

Lookup codes must be decided upon and defined during the implementation process. Lookup codes fall within three categories: extensible, user defined, or system defined. If a lookup code is extensible, the existing lookup codes cannot be modified, but you can add new codes to the table. If lookup codes are user defined, all codes may be modified. If lookup codes are system defined, the existing codes cannot be modified, and new codes cannot be added to the table.

You need to define Asset Lookups, Work Request Lookups, and Work Order Lookups.

This section includes the following topics:

- Activity Types, page 2-24
- Activity Causes, page 2-25
- Activity Sources, page 2-27
- Asset Activity Priorities, page 2-28
- Cost Category Codes, page 2-36
- Criticality Codes, page 2-37
- Asset Import Scope Codes, page 2-31
- Asset Import Statuses, page 2-32
- Asset Log User-defined Events, page 2-33
- Contact Preferences, page 2-35
- Failure Code Types, page 2-39
- Work Request Statuses, page 2-40
- Work Request Types, page 2-41
- Work Order and Work Request Priority Codes, page 2-43
- Work Order Reconciliation Codes, page 2-44
- Work Order Types, page 2-45

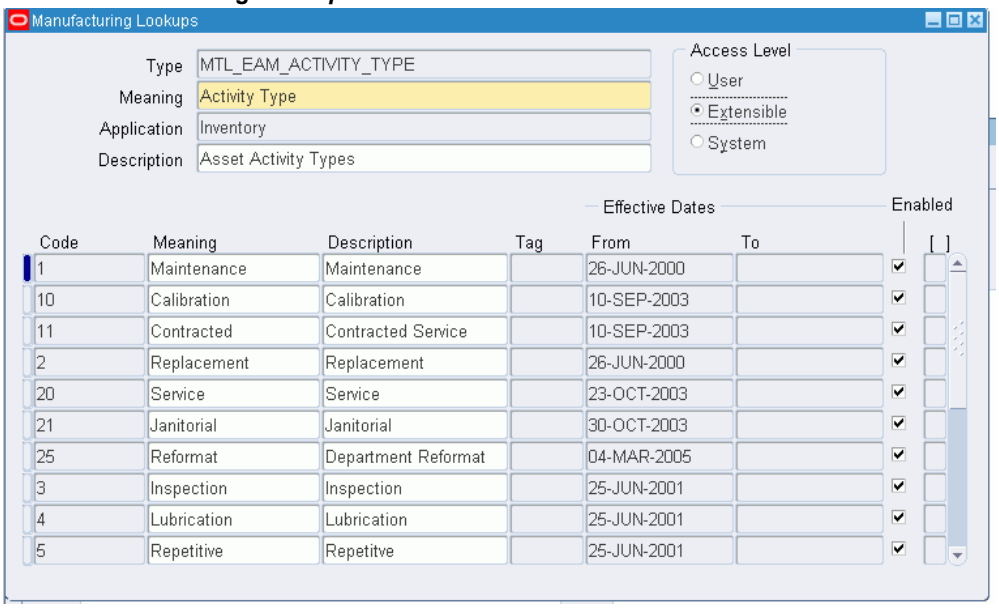
Activity Types

Activity Types are used to describe the type of maintenance work that is performed on an asset (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*). For example, Inspections, Lubrications, Overhauls, Calibration, and Repetitive work. Activity Types are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define activity types:

1. Navigate to the Oracle Manufacturing Lookups window.

Oracle Manufacturing Lookups



2. Select the flashlight Find icon.

3. Select MTL_EAM_ACTIVITY_TYPE from the Type list of values.

4. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

5. Enter the Meaning of the code, for example, Lubrication.

6. Enter a Description for the code.

7. Optionally enter a Tag to categorize lookup values. This field is for informational purposes.

8. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

9. Select the Enabled check box to enable this code for Enterprise Asset Management.

10. Save your work.

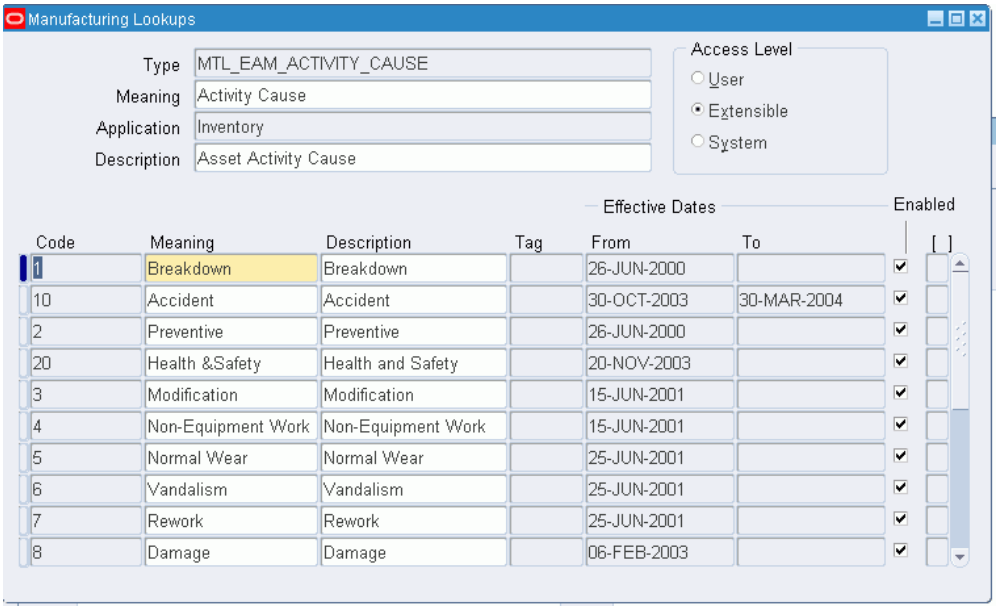
Activity Causes

Activity Cause codes are reasons for an asset failure. For example, Preventive, Normal Wear, Rework, and Breakdown. This information enables you to understand the dynamics that affect an asset's ability to perform. They establish critical data that is used for reporting and analysis of asset failure causes and the frequency of such conditions. Asset Cause Codes are referenced when setting up an Activity (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*). Activity Cause codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define activity cause codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Activity Cause Codes



2. Select MTL_EAM_ACTIVITY_CAUSE from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Breakdown.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled checkbox to enable this code for Enterprise Asset Management.

9. Save your work.

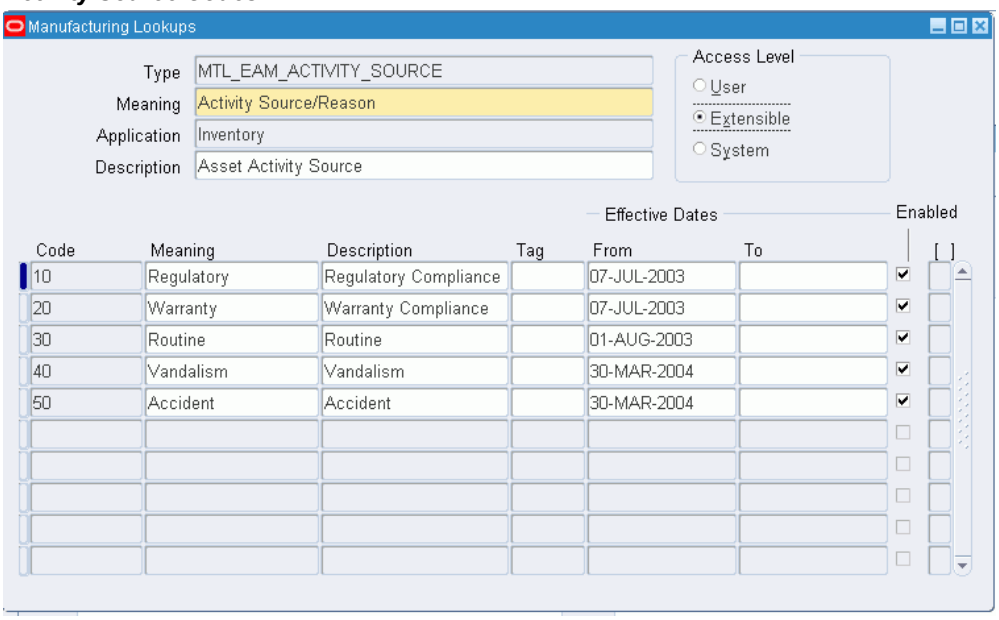
Activity Sources

Activity source codes are reasons activities are executed. For example, warranty compliance, OSHA compliance, or military specification requirements. Activity source codes are referenced when setting up an activity (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*). Activity source codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define activity source codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Activity Source Codes



2. Select MTL_EAM_ACTIVITY_SOURCE from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering of alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Breakdown.
5. Enter a Description for the code.
6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.
7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

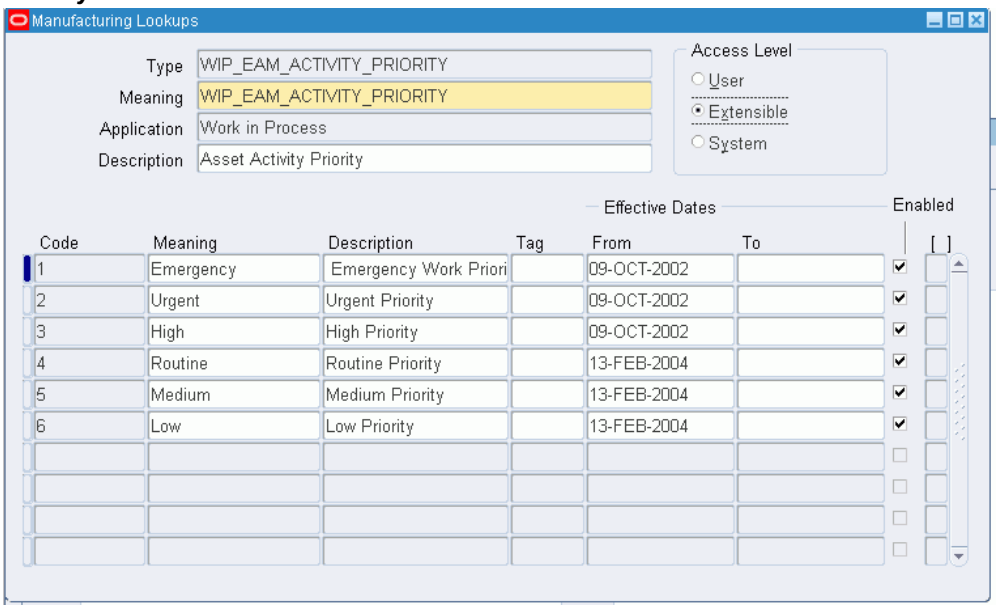
Asset Activity Priorities

Activity priority codes indicate asset activity priority levels, for example, Low, Medium, and High. Activity priorities are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define activity priorities:

1. Navigate to the Oracle Manufacturing Lookups window.

Activity Priorities



2. Select WIP_EAM_ACTIVITY_PRIORITY from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering of alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, High.

5. Enter a Description.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled checkbox to enable this code for Enterprise Asset Management.

9. Save your work.

Asset Failure Source Types

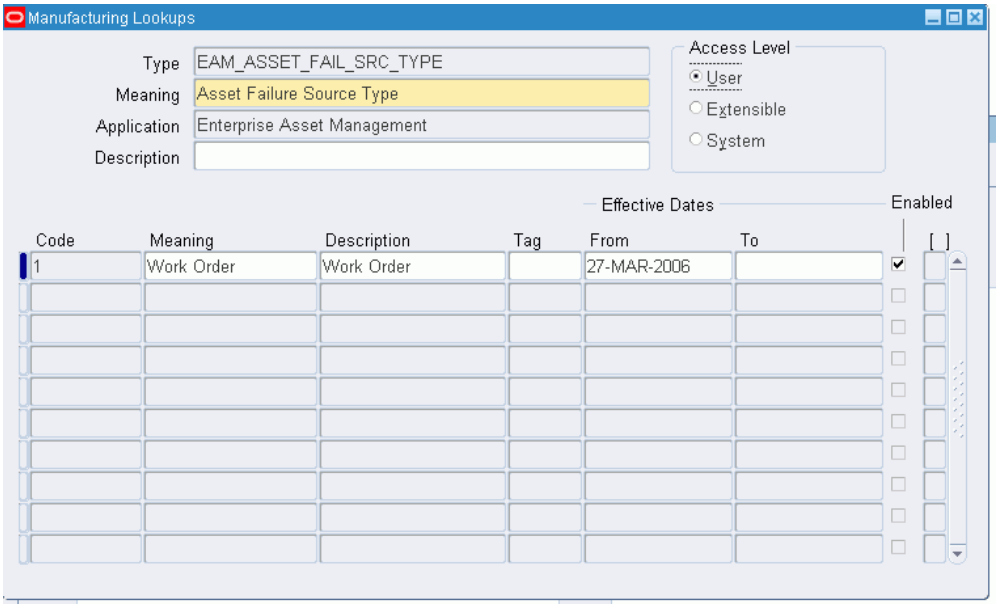
Failure is reported on a work order. Each work order represents one single failure

occurrence (event) for the asset specified on the work order (See: Failure Analysis Overview, *Oracle Enterprise Asset Management User's Guide*). You can optionally add more codes, specifying different source types. For example, you may specify different types of work orders with different source types. Asset failure source types are user-defined (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define asset failure source types:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Failure Source Types



2. Select EAM_ASSET_FAIL_SRC_TYPE from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning, for example, Preventive Maintenance Work Order.

5. Enter a Description.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this.

Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled checkbox to enable this code for Enterprise Asset Management.

9. Save your work.

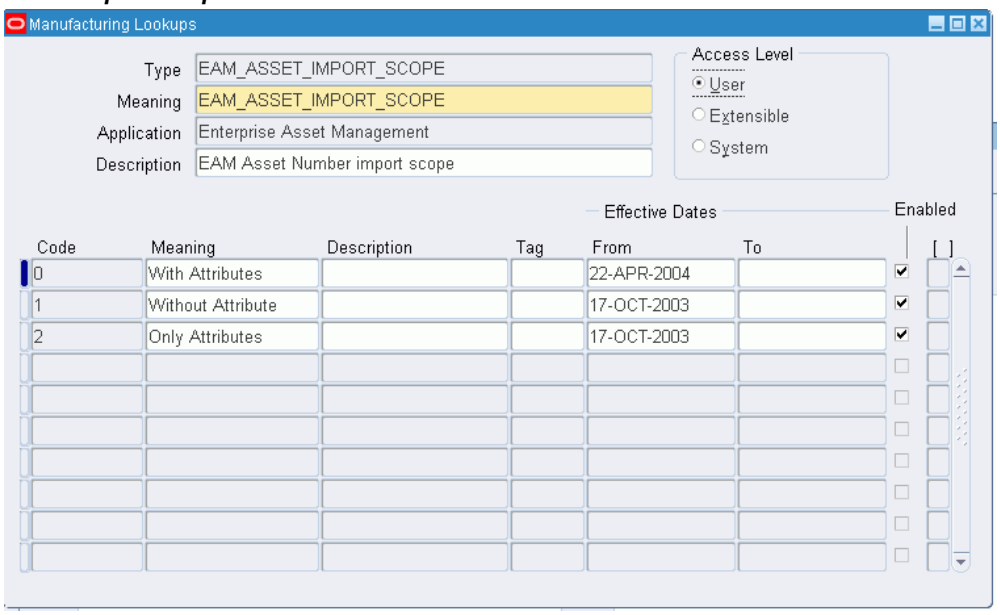
Asset Import Scope Codes

The eAM Asset Number Open Interface enables you to import asset numbers into eAM, using a batch process. You can optionally import Asset Number attributes. You can create new asset numbers and attributes, or update existing asset numbers and attributes. See: eAM Asset Number Open Interface, *Oracle Enterprise Asset Management Implementation Guide*. Define the process' parameter scope codes. Asset import scope codes are user-defined (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define asset import scope codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Import Scope Codes



2. Select EAM_ASSET_IMPORT_SCOPE from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning, for example, With Attributes.
5. Enter a Description.
6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.
7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

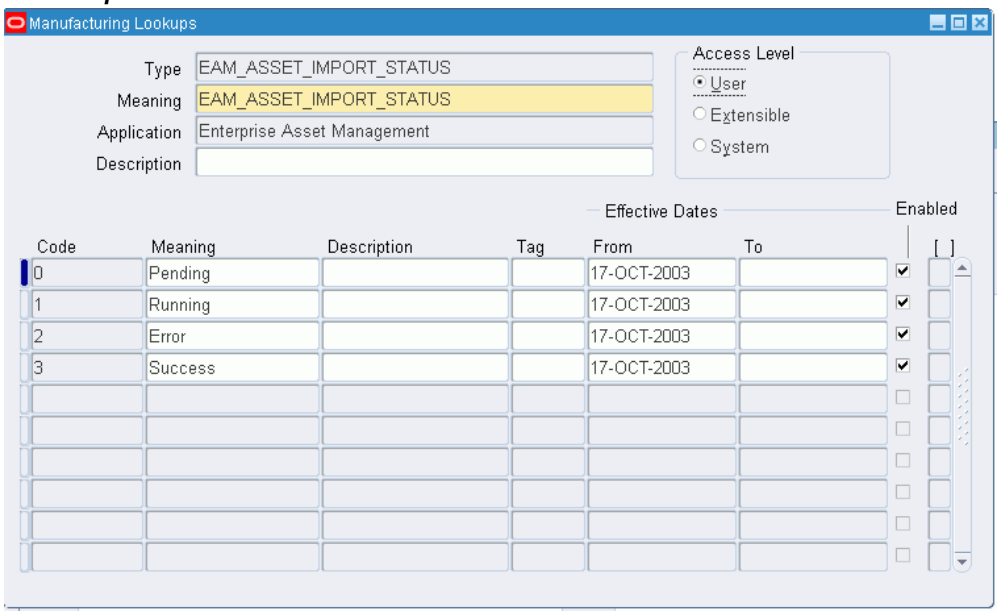
Asset Import Statuses

The eAM Asset Number Open Interface enables you to import Asset Numbers into eAM, using a batch process. You can optionally import Asset Number attributes. You can create new Asset Numbers and attributes, or update existing Asset Numbers and attributes. See: eAM Asset Number Open Interface, *Oracle Enterprise Asset Management Implementation Guide*. Define the process' import statuses. Asset Import Statuses are user defined (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define asset import statuses:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Import Statuses



2. Select EAM_ASSET_IMPORT_STATUS from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning, for example, Success.

5. Enter a Description.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled checkbox to enable this code for Enterprise Asset Management.

9. Save your work.

Asset Log User-defined Events

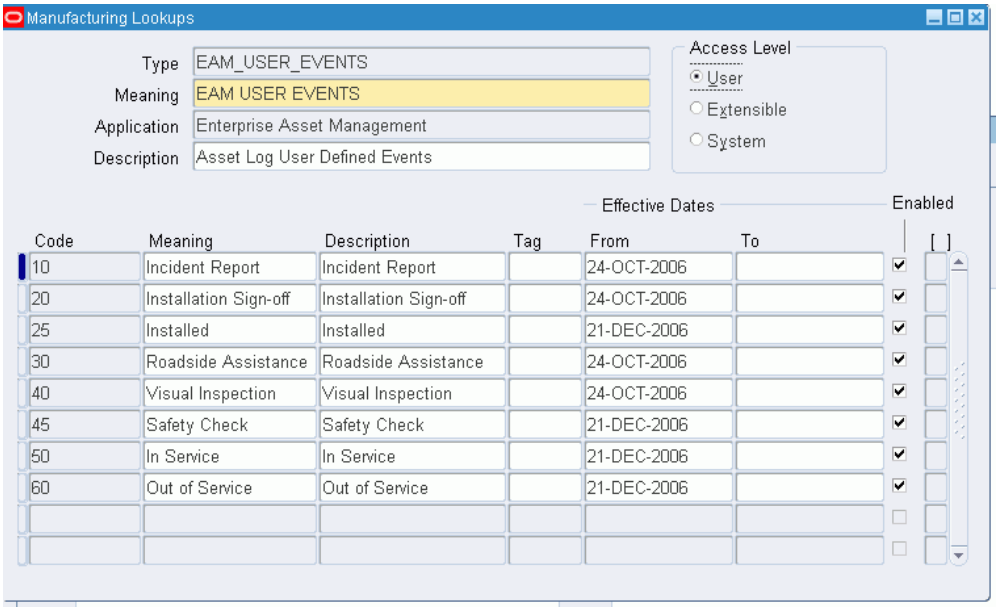
You can define events, and associate them to work order statuses. A Work Order might

require approvals or notifications at different stages of its lifecycle. Workflow automates this process. You can initiate Workflow to generate notifications, approvals, transactions, and update a work order status. These statuses are used within your customized workflow (See: Setting Up Oracle Workflow, *Oracle Workflow User's Guide* and Setting Up the Business Event System, *Oracle Workflow User's Guide*). Asset Log User-defined Events are user-defined (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define asset log user-defined events:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Log User-Defined Events



2. Select EAM_USER_EVENTS from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code.

5. Enter a Description.

6. The Effective From Date defaults as the system date, but you can update this.

Optionally enter a Effective To Date to indicate an expiration of the code.

7. Select the Enabled checkbox to enable this code for Enterprise Asset Management.

8. Save your work.

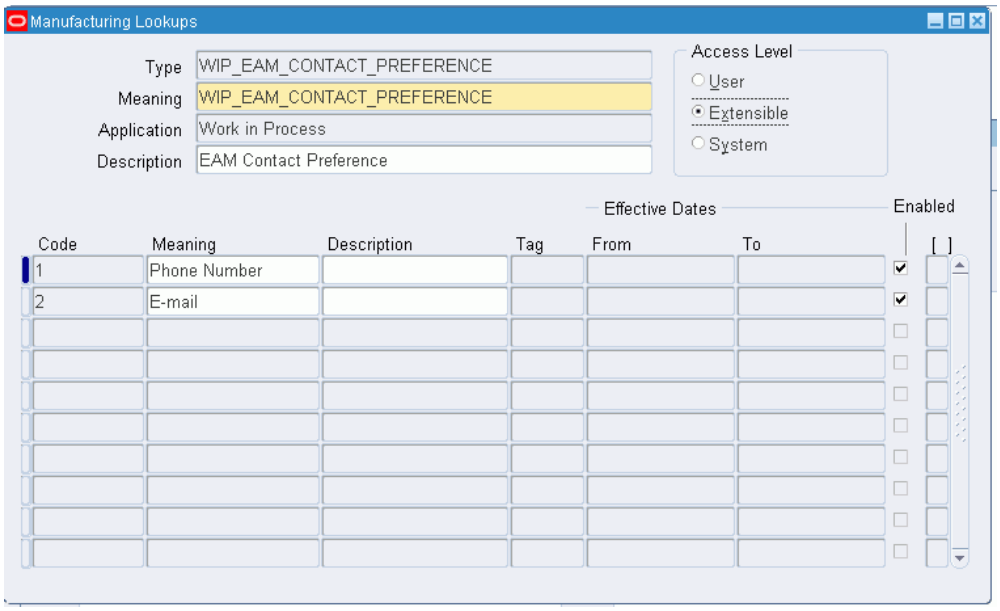
Contact Preferences

You can set up Contact Preferences. Contact preferences are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define contact preferences codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Contact Preferences



2. Select WIP_EAM_CONTACT_PREFERENCE from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code.

5. Enter a Description.

6. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

7. Select the Enabled checkbox to enable this code for Enterprise Asset Management.

8. Save your work.

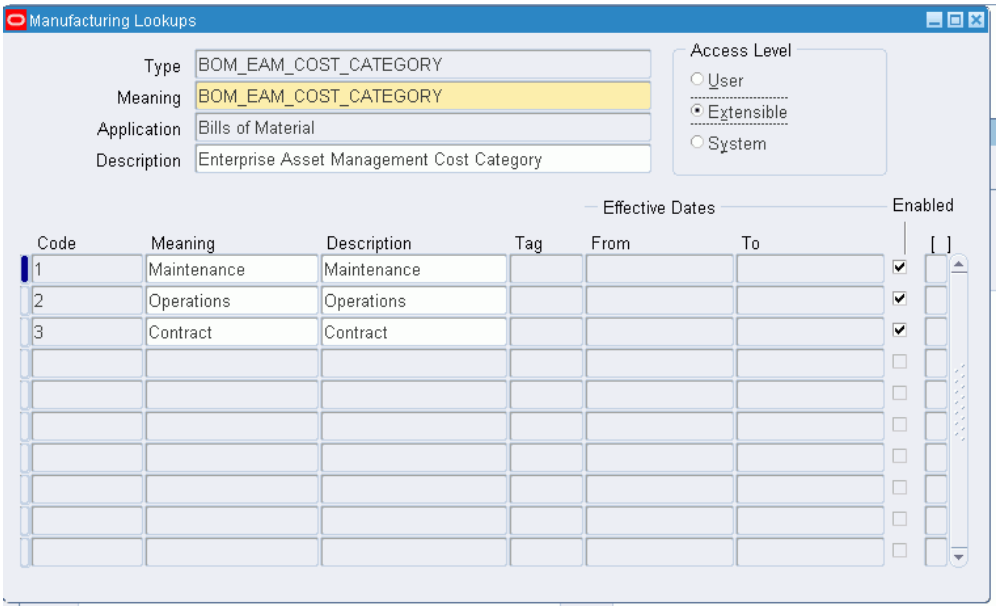
Cost Category Codes

Cost Category codes are used as the default for departments that do not have a cost category defined. Department costs are then posted to the appropriate cost elements. Valid values are Maintenance, Operations, Contract, and any other values that you might add within this extensible lookup table. See: Overview of eAM Cost Management, *Oracle Enterprise Asset Management User's Guide*.

To define cost category codes:

1. Navigate to the Oracle Manufacturing Lookups window.

BOM Cost Category Codes



2. Select BOM_EAM_COST_CATEGORY from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entering alpha codes causes

database errors in the application.

4. Enter the Meaning of the code, for example, High.
5. Enter a Description for the code.
6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.
7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.
8. Select the Enabled checkbox to enable this code for Enterprise Asset Management.
9. Save your work.

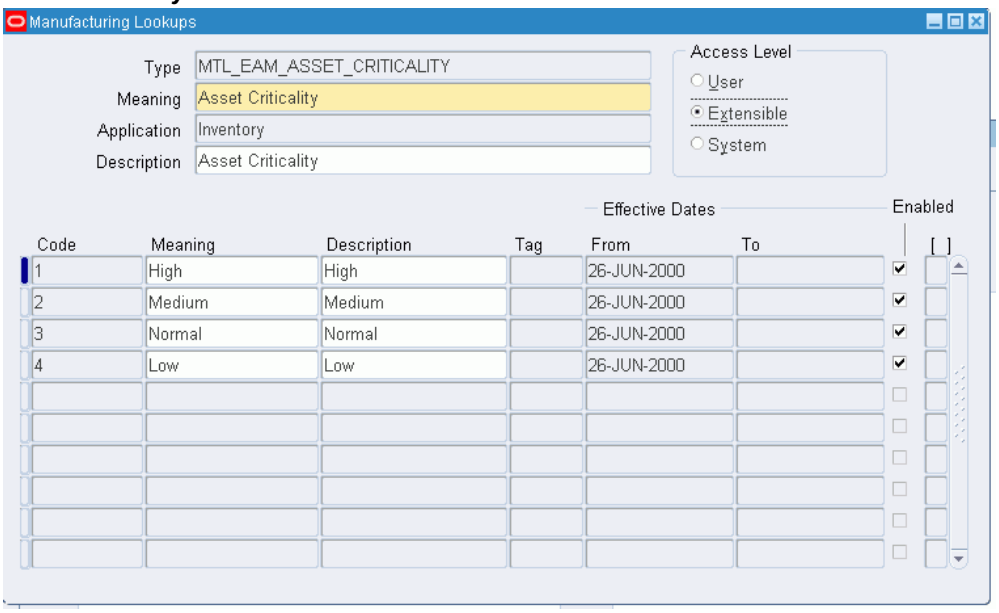
Criticality Codes

Criticality codes suggest the importance of an asset to an organization, for example, High and Low. An asset that has a direct impact on production or that is difficult to replace may be considered a critical asset. Asset criticality codes help you to determine the urgency of requested work. Asset criticality codes are referenced when defining an asset (See: Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*). Asset Criticality Codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define asset criticality codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Asset Criticality Codes



2. Select MTL_EAM_ASSET_CRITICALITY from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

   Warning: Oracle recommends that you do not create more than 250 asset criticality codes in order to avoid performance issues.

4. Enter the Meaning of the code, for example, High.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled checkbox to enable this code for Enterprise Asset Management.

9. Save your work.

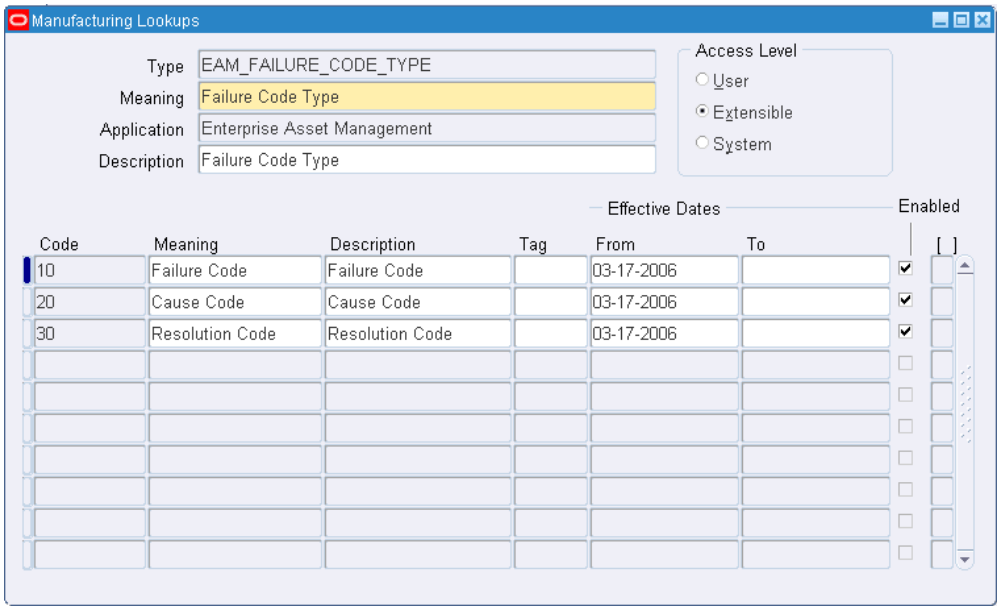
Failure Code Types

Failure codes, Cause codes and Resolution codes are organized into multiple tree structures called Failure Code Sets, which are then assigned to asset groups. Each set provides asset group-specific information on the possible failures of an asset group, the possible causes of each failure, and the possible resolutions for each cause. Assets within an asset group inherit the assigned Failure Code Set. At the work order level, Failure Tracking codes are entered to report a failure, its cause, and resolution. (See: Failure Analysis Overview, *Oracle Enterprise Asset Management User's Guide*). You can optionally update Failure Code Types' meanings.

To define failure code types:

1. Navigate to the Oracle Manufacturing Lookups window.

Failure Code Types



2. Select EAM_FAILURE_CODE_TYPE from the Type list of values.

3. Optionally update the Meaning, for example, Failure Code.

4. Enter a Description

5. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

6. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

7. Select the Enabled check box to enable this code for Enterprise Asset Management.

8. Save your work.

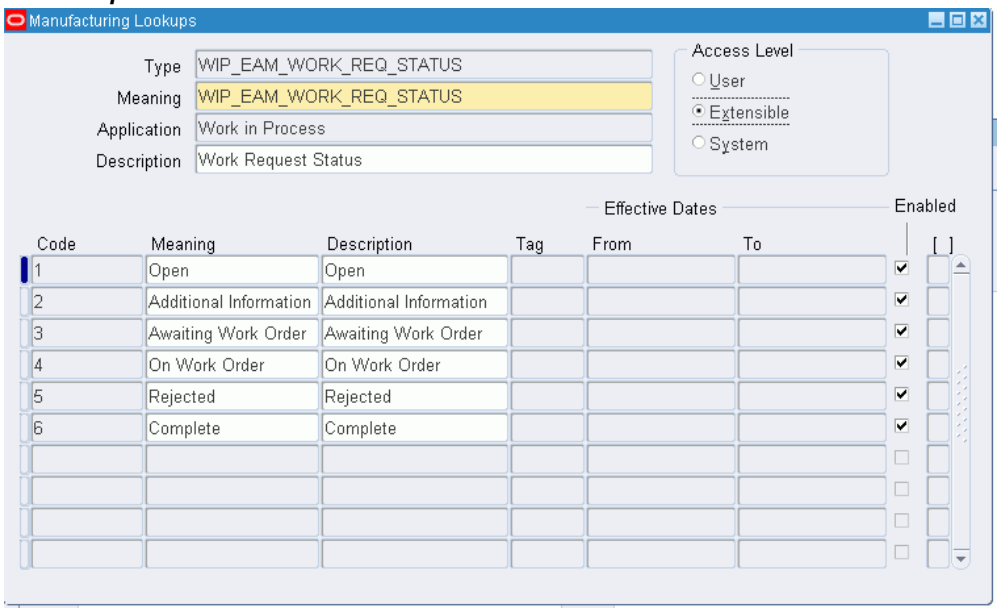
Work Request Statuses

Work Request Approval is the process of changing a Work Request status from Open to Awaiting Work Order. Maintenance Work Orders are linked to Work Requests with a status of Awaiting Work Order. When defining the Enterprise Asset Management parameters (See: Defining eAM Parameters, *Oracle Enterprise Asset Management User's Guide*), if the Auto Approve check box is selected, Work Requests are created with an automatic status of Awaiting Work Order, for that organization. If the check box is not selected, Work Requests are created with a status of Open; any user who receives the notification (See: Defining Department Approvers, *Oracle Enterprise Asset Management User's Guide*) can change the Work Request status to Awaiting Work Order. A plant or facility might need to include additional statuses. Currently, the workflow cannot be customized to work with user-defined Work Request statuses. Work Request Approval statuses are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define Work Request statuses:

1. Navigate to the Oracle Manufacturing Lookups window.

Work Request Statuses



2. Select WIP_EAM_WORK_REQ_STATUS from the Type list of values.

3. Optionally add additional Codes to the pre-existing list of codes. The codes that are pre-existing cannot be deleted, however their Meanings can be modified.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Open.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. Optionally enter Effective From and To Dates to indicate an expiration of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Work Request Types

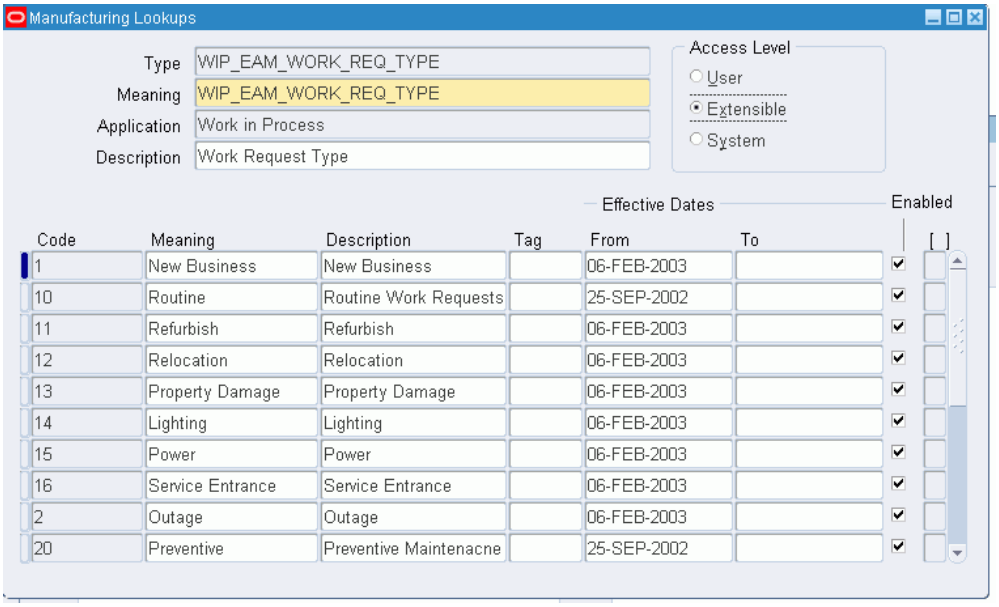
Work Request Types describe and categorize Work Requests. For example, Manual, System, Routine, Capital, and Furniture. Work Request Types are extensible (See:

Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define a Work Request type:

1. Navigate to the Oracle Manufacturing Lookups window.

Work Request Types



2. Select WIP_EAM_WORK_REQ_TYPE from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Manual.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled checkbox to enable this code for Enterprise Asset Management.

9. Save your work.

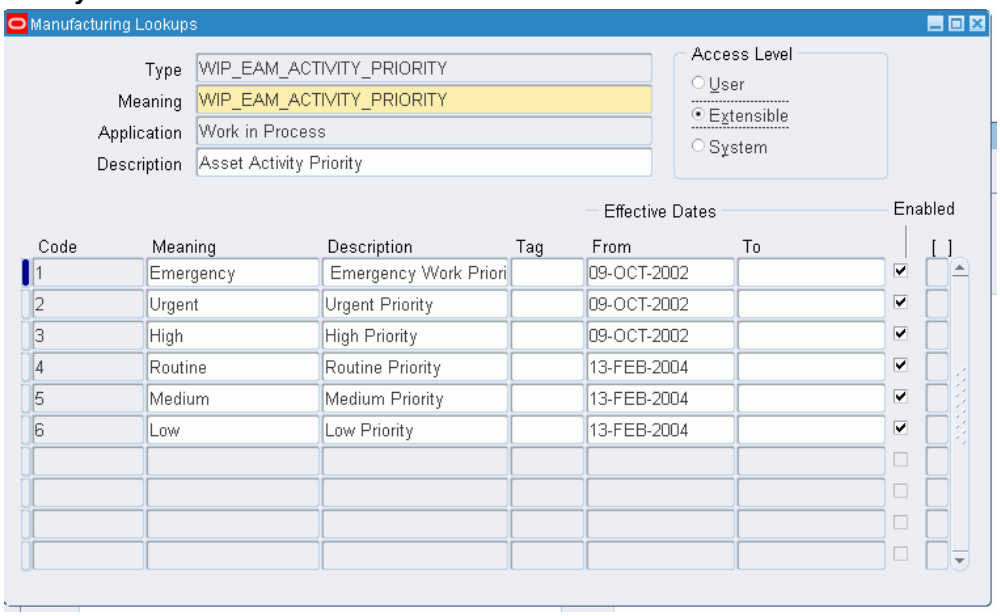
Work Order and Work Request Priority Codes

Work Order Priority Codes contribute to the organization and execution of Work Orders. For example, High, Medium, and Low, or 1,2, and 3, respectively. Typically, a priority is assigned by the people entering Work Requests and Work Orders. The planner or supervisor compares this priority to the asset criticality (See: Asset Criticality Codes, *Oracle Enterprise Asset Management User's Guide*). These codes are entered when creating Activity associations, Work Orders, and Work Requests. Typically, a priority is assigned by the person that enters the Work Request and its related Work Order. Priority specified during Activity association becomes the Work Order priority when a Work Order is created, using the Activity Association (See: Routine Work Orders, *Oracle Enterprise Asset Management User's Guide* and Work Requests, *Oracle Enterprise Asset Management User's Guide*). Work Order Priority Codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To create work order priority codes:

1. Navigate to the Oracle Manufacturing Lookups window.

Priority Codes



2. Select WIP_EAM_ACTIVITY_PRIORITY from the Type list of values.

3. Optionally add additional codes to the pre-existing list of codes. The codes that are pre-existing cannot be deleted, however their Meanings can be modified.

Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, High.
5. Enter a Description for the code.
6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.
7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

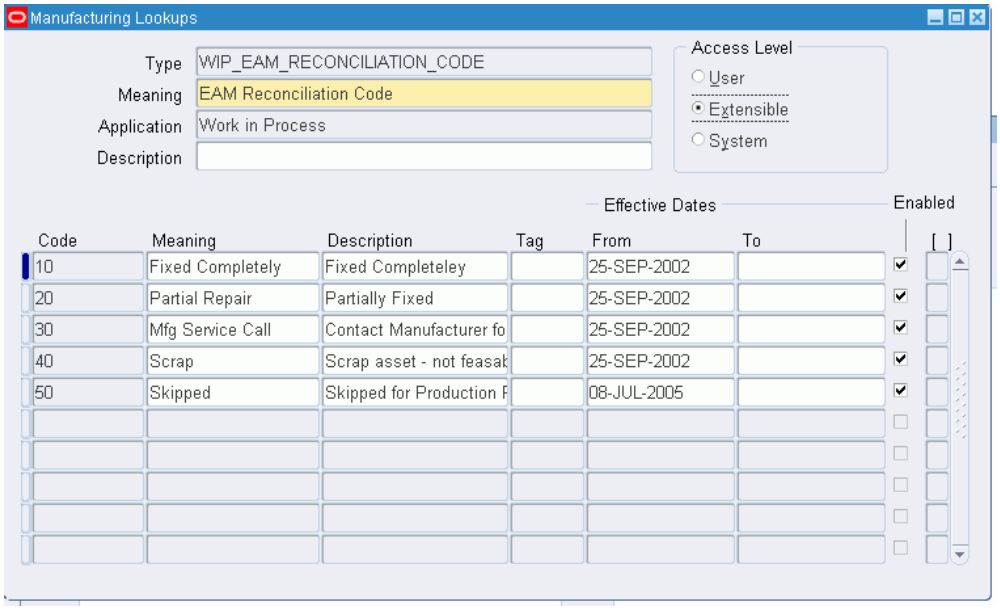
Work Order Reconciliation Codes

Reconciliation Codes detail how Work Orders and operations were completed. These codes usually fall within two categories: Completed as Planned or Partial Completion. You can further define the condition within these two types of completion statuses. These codes enable you to evaluate Work Orders by percentage completed or delayed, and if they were delayed, the reason for the delay. Reconciliation Codes are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define Work Order reconciliation codes:

1. Navigate to the window.

Work Order Reconciliation Codes



2. Select WIP_EAM_RECONCILIATION_CODE from the Type list of values.

3. Enter a numeric Code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Fixed Completely.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Work Order Types

Work order types enable you to differentiate work orders. For example, Routine, and

Rebuild. Maintenance management can use this information to sort and monitor work activity for reporting and budgeting. Work order types are referenced in the activity and work order.

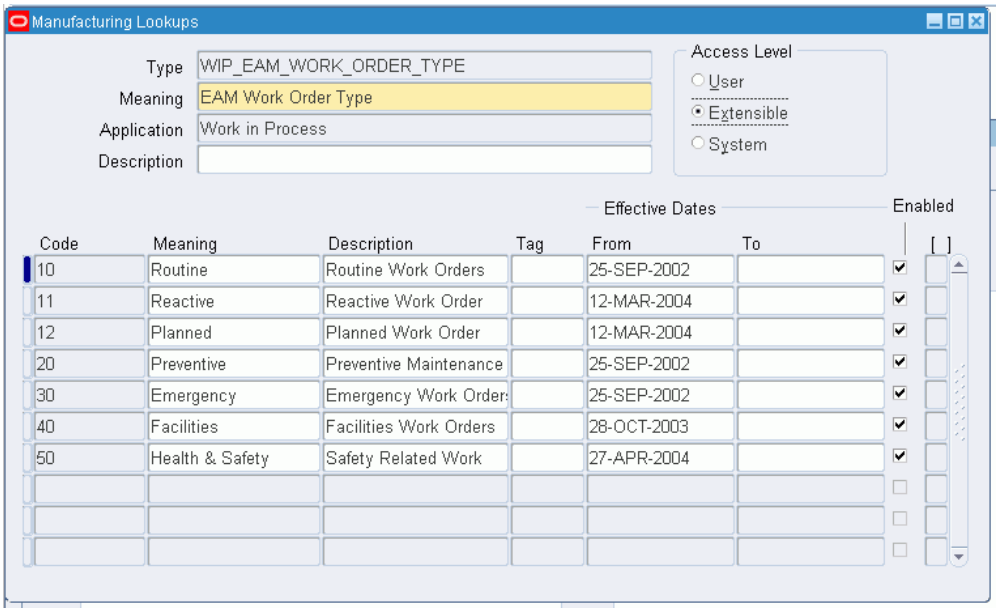
Work order types are created manually or automatically. For example, rebuildable work orders are created automatically or manually (See: Rebuild Work Orders, *Oracle Enterprise Asset Management User's Guide*). Preventive maintenance work orders are created automatically, based on meter readings (See: Preventive Maintenance Work Orders, *Oracle Enterprise Asset Management User's Guide*).

Work order types are extensible (See: Defining Lookups, *Oracle Enterprise Asset Management User's Guide*).

To define work order types:

1. Navigate to the Oracle Manufacturing Lookups window.

Work Order Types



2. Select WIP_EAM_WORK_ORDER_TYPE from the Type list of values.

3. Enter a numeric code. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, Routine.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is for information purposes.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Asset Setup

Asset Setup includes the following tasks:

- Setting Up Category Codes, page 2-47
- Defining Asset Groups, page 2-50
- Defining Activities, page 2-53
- Activity Association Templates, page 2-58
- Setting Up Attributes, page 2-61
- Defining Asset Documents, page 2-64
- Defining Asset Numbers, page 2-65
- Defining Asset Routes, page 2-74
- Setting Up Asset Bills of Material, page 2-77

Setting Up Category Codes

Category codes are used as naming conventions for assets by creating classes and subclasses. They are user defined, and used to logically group assets, simplifying the search for Asset Numbers.

For example, Cranes are classified by several different types, such as Overhead Cranes, Jib Cranes, and Mobile Cranes. You can query using the class CRANE, which displays all assets defined as Cranes within that organization. If you enter CRANES.JIB, the system would then narrow the results to just those assets defined as Jib Cranes. With both queries, you can identify assets based on familiar names, rather than numbers.

Category codes are first defined, then added to the Enterprise Asset Management Category Set. After they belong to this category set, they are associated with asset

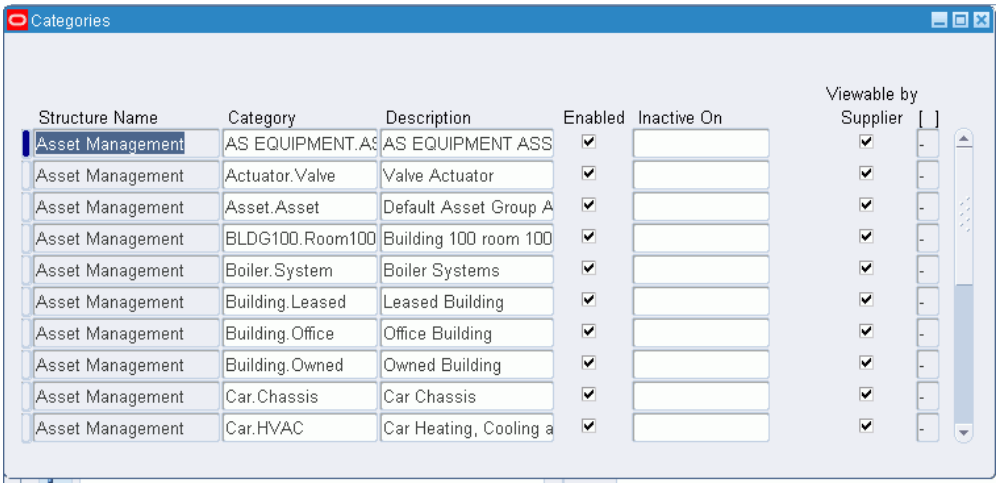
groups, which tie to individual assets. See also: Defining Categories and Defining Category Sets, *Oracle Inventory User's Guide*.

To set up category codes:

1. Navigate to the Find Categories window. You can find existing category codes, or create new ones.

2. Choose New.

Categories



3. Select the Asset Management category to create a new Class.Subclass from the Structure Name list of values.

4. Enter in a new Category, for example TRUCK.FRKLFT.

5. Add a long Description for this category.

6. Optionally select the Enabled check box to indicate that this category is enabled.

7. Optionally enter an Inactive On date.

8. Optionally select the Enabled for iProcurement check box to indicate that this category is enabled for iProcurement.

9. Optionally select the Viewable by Supplier check box to indicate that this category is viewed by the Supplier.

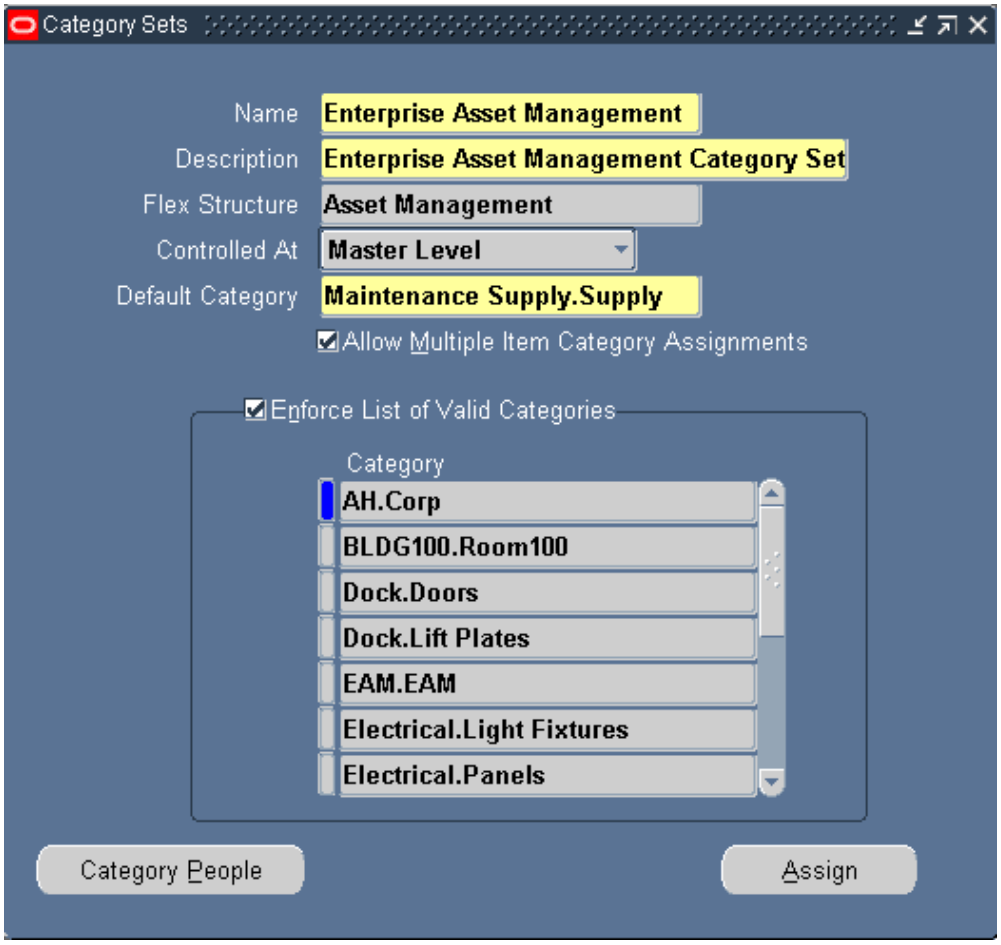
10. Save your work.

To set up category sets:

To associate Category Codes (TRUCK.FRKLFT) with an asset group, first define the item category relationship using the Category Sets menu option.

1. Navigate to the Category Sets window.

Category Sets



2. Select the flashlight icon from the tools menu, then select Enterprise Asset Management.

3. A description defaults; you can optionally change it.

4. Select Asset Management from the Flex Structure list of values.

5. Indicate the Controlled At level. Valid values are Master Level, and Organization Level.

6. Enter a Default Category code for the Category Set.

7. If you select Allow Multiple Item Category Assignments, you can define a series of categories, such as Crane.Jib, and Crane.Overhead, that are associated to a single asset group.

8. If you select Enforce List of Valid Categories, you are preventing users from entering incorrect categories that are not associated with the asset group associated with the asset being created.

9. Enter the Category Codes that you want to associate with this category set.

10. Select Assign to display a table enabling you to associate the categories with an asset group.

11. Save your work.

Defining Asset Groups

During implementation, asset group (Asset Group or Rebuildable Item) names should be established. Asset groups represent groups of assets that are virtually identical. Generally, an asset group is defined for each Manufacturer and Model Number combination (Make, Model, and Year). Examples include Acme Model 123 Pump and Ford F150 2002 Truck.

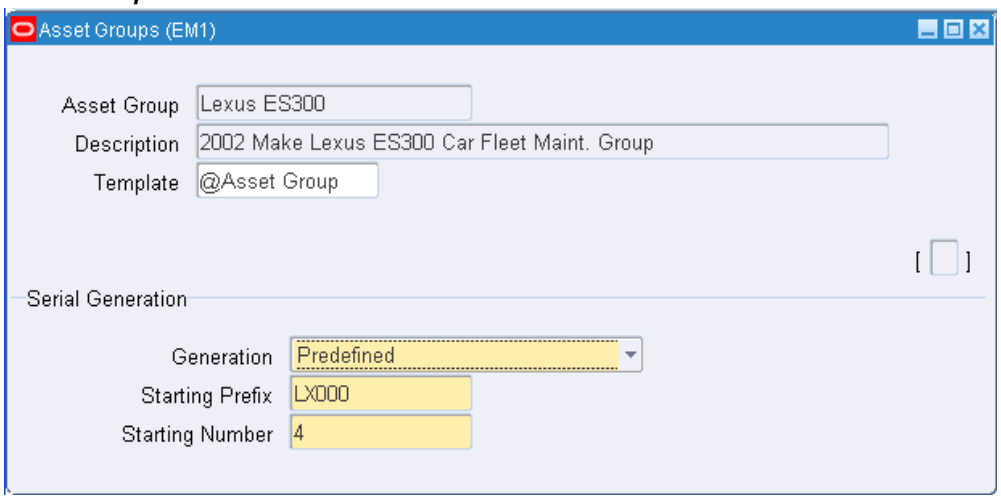
Note: If you have assets in your organization that are virtually identical (for example, the same manufacturer and model), consider creating an asset group for those assets.

Note: The Asset Groups window does not support electronic signatures. If you create an asset group, the record does not contain your electronic signature.

To set up asset groups:

1. Navigate to the Asset Groups window.

Asset Groups



2. Enter the name of the asset group.

3. Enter a Description for this asset group, up to 240 characters.

4. Select the @Asset Group Template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.

> **Note:** You can create asset groups using the template described above, or you can copy an asset group from an existing asset group (See: Defining Items, *Oracle Inventory User's Guide*).

The following table presents the necessary attribute values that are applied automatically to the asset group, when using the template:

Asset Group Attributes

Attribute	Value
User Item Type	Asset Group
Item Status	Active
Inventory Item	Enabled
Transactable	Disabled

Attribute	Value
Serial Number Generation	Predefined
Effectivity Control	Model/Unit Number
EAM Item Type	Asset Group

5. In the Serial Generation region, select Predefined for the Generation value.

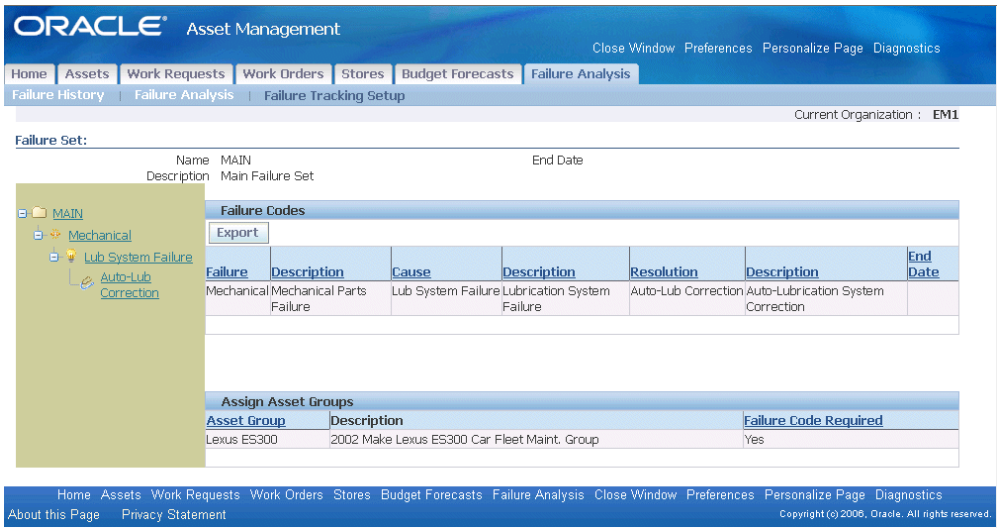
6. Define a Starting Prefix and Starting Number for this asset group. If Serial Generation is set at Item Level for the Organization, the system defaults the prefix, along with the starting number sequence, when a new Asset Number is created for this asset group.

7. Save your work.

To access failure analysis information:

You can access the Failure Set page to view failure tracking codes that are assigned to the current asset group.

1. From the Asset Groups window, select Maintain Failure Set from the Tools menu. If the asset group does not have an associated Failure Set, this menu option is disabled. See: Defining Failure Codes and Sets, page 26-2 and Failure Analysis Overview, page 26-1.



2. Close the window.

To associate asset groups with multiple organizations:

1. From the Asset Groups window, select Item Details from the Tools menu.
2. Select the Organization Assignment tab.
3. Enter additional organizations in the available table.
4. After saving your work, you can create Assets for this asset group.

Defining Activities

Activities provide you with a standard template of jobs, which are applied to Work Orders, such as Routine or Preventive Maintenance. After these Activity Templates are created, they are associated with one or more Asset Numbers or Rebuildables (See: Activity Association Templates, page 2-58 and Rebuildable Item/Activity Association, page 2-111). They are also associated to a maintenance BOM (See: Setting Up Activity Bills of Material, page 2-93) and activity routing (See: Defining Asset Routes, page 2-99), containing the materials and resources needed for operations, respectively. When Work Orders are created for assets associated to the Activity, the material and resources associated with the current Activity automatically copy to the Work Orders created.

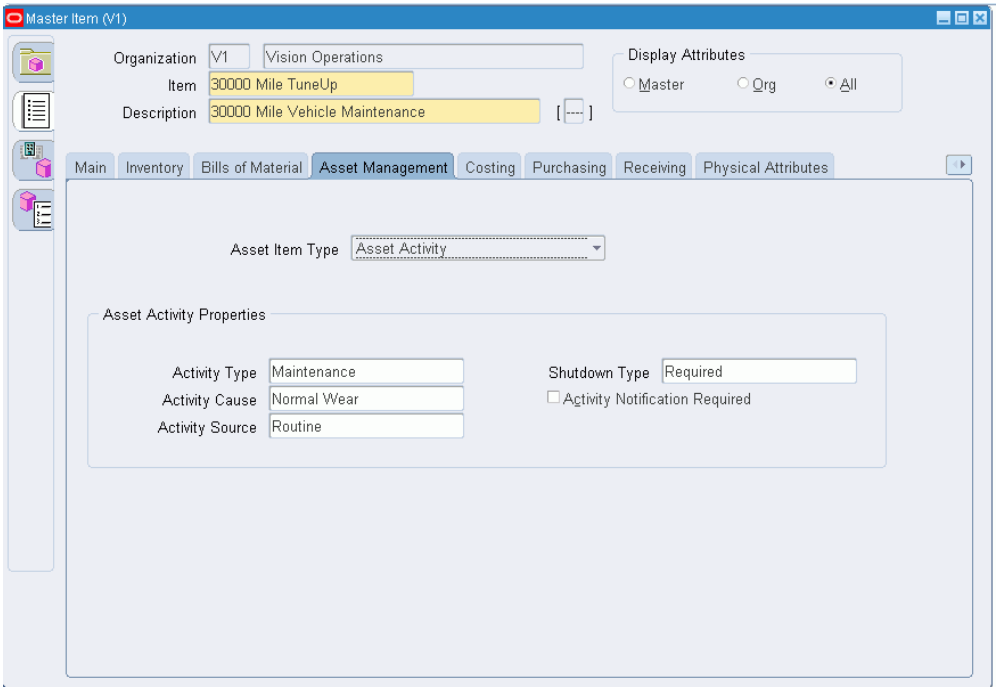
There are three methods you can use to create an Activity. You can create an Activity within the Master Activity (Master Item) window, create Activities from the Activity Workbench, and create Activities from within a Maintenance Work Order.

To set up activities within the Master Activity window:

1. Navigate to the Activity (Master Item) window. The Master Item window is used to

create asset groups, activities, and rebuildable.

Master Item



2. Enter the name of the activity in the Item field.

3. Enter a Description for this activity, up to 240 characters.

4. Use the @Activity template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.

    1. Select Tools from the Tools menu, and then select Copy From.

    2. Select the @Activity template.

        Note: You can create Activities using the template described above, or you can copy an Activity from an existing Activity (See: Defining Items, *Oracle Inventory User's Guide*).

The following table presents the necessary attribute values that are applied automatically to the Activity, when using the template:

Activity Attributes

Attribute	Value
User Item Type	Activity
Item Status	Active
Inventory Item	Enabled
EAM Item Type	Activity

5. Select the Asset Management tab.

   In the Activity Property region, optionally enter an Activity Type to indicate the type of maintenance for this Activity. It is used when defining a Work Order. It should remain generic, and should not describe the job in detail. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning.

6. Optionally select an Activity Cause to specify what situation caused this work to generate. For example, Breakdown, Vandalism, Normal Wear, or Settings.

7. Optionally select an Activity Source. Activity Source codes are reasons activities are executed. For example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. See: Activity Sources, page 2-27.

8. Optionally select a Shutdown Type. This indicates whether a shutdown is necessary to perform this maintenance activity. For example Required, and Not Required. This field is for information purposes.

9. Optionally select an Activity Notification Required value to indicate whether the asset requiring work is mobile, and should be brought into the shop for repairs. This field is for information purposes.

10. Save your work. After saving your work, this activity can be associated with an asset (See: Activity Association Templates, page 2-58).

To associate activities to multiple organizations:

1. From the Master Item window, select TOOLS from the Tools menu.

2. Select the Organization Assignment.

3. Enter additional organizations in the available window.

4. Save your work.

To associate Assets with activities:

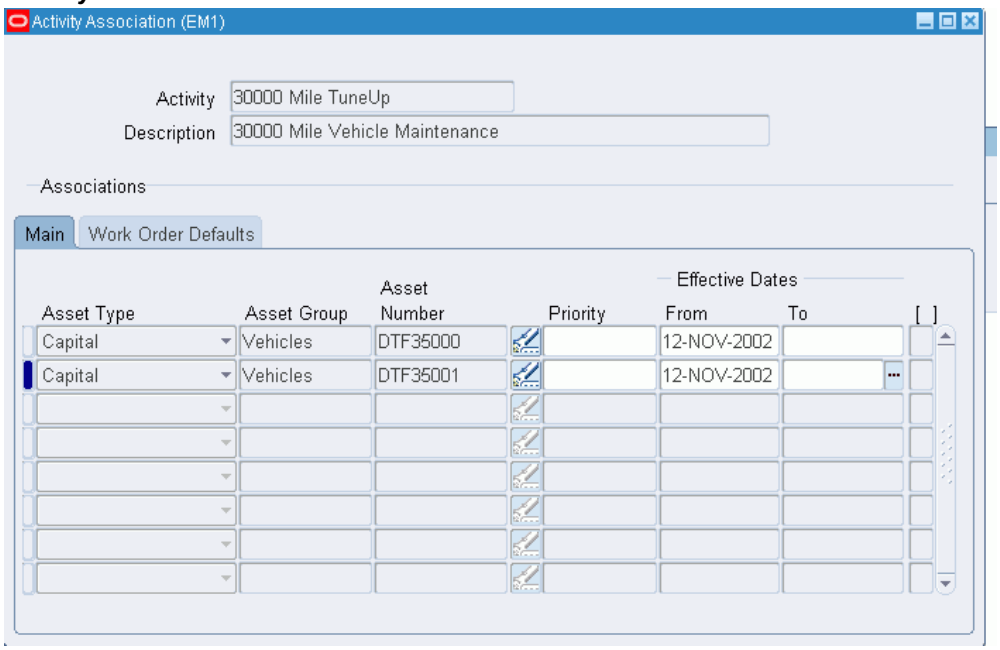
After you have defined asset groups (See: Defining Asset Groups, page 2-50), Assets (See: Defining Asset Numbers, page 2-65), and Activities, you can associate the Activities with assets and/or rebuildables. However, you can streamline the creation of Activities and associations using an Activity Association Template (See: Activity Association , page 2-58Templates). Assets are associated with Activities before entering the Activity into a Preventive Maintenance Schedule.

> **Note:** The Activity Workbench is generally used to streamline your Activity setups, including Asset Number/Activity associations (See: Using the Activity Workbench, page 2-80). Also, you can streamline the creation of activity associations using an Activity Association Template. For example, when you create an asset group, and then asset numbers within that group, you do not need to utilize the Association window to associate those Asset Numbers with an Activity. If you create an Activity Association Template, the activity that you associate with the asset number for the current asset group automatically determines the Activity that is associated with the current Asset Number (See: Activity Association Templates, page 2-58).

You can also use Oracle Web Services to automatically create, update and search for asset activity associations. These public interfaces enable you to more easily convert data from another instance or another system. These web services are annotated and available in the I-Repository along with other public Oracle APIs. (See: *Oracle Manufacturing APIs and Open Interfaces Manual* for more information on APIs.)

1. Navigate to the Activity Association window.

Activity Association



2. Select an Activity.

3. Within the Main tab, select Asset or Rebuildable from the Item Type list of values. This field works directly with the asset group and Asset Item fields. If Asset is selected, the asset group refers to the asset group, and the Asset Number refers to the Asset Number. If Rebuildable is selected, the asset group refers to the Rebuildable Item, and the Asset Number refers to the specific serial numbers for the current Rebuildable Item.

4. Select an asset group. If Asset is populated in the Item Type field, Asset Groups are available.

5. Select an Asset Number. Asset Numbers associated with the previously selected asset group are available. Asset Numbers are always serial controlled. If you had selected a Non-serialized Rebuildable in the Asset Group field, then an Asset Number value is not required.

6. Optionally select a Priority Code. This field is for information purposes.

7. Optionally enter Effective Dates. If the Effective From field is left blank, it defaults to the system date. If the Effective To field is left blank, it defaults to NULL.

8. Within the Activity tab, the Activity Cause defaults from the Activity definition (See: Defining Activities, page 2-53), specifying what situation caused this work to generate. For example, Breakdown, Vandalism, Normal Wear, or Settings.

Optionally you can select an Activity Cause.

9. The Activity Type defaults from the Activity definition (See: Defining Activities, page 2-53). This code indicates the type of maintenance activity to perform for this Activity. It is used when defining a job or a standard job. This code should remain generic, and should not describe the job in detail. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. Optionally you can select an Activity Type.

10. Optionally select the Tagging Required check box to indicate whether tag out procedures are required. The Area may need securing for operations required for carrying out a Work Order. Tags are generally printed and placed on an asset, warning the plant that the asset is shutdown, and should not be started. This check box helps the planner isolate those jobs that require a tagout. This is for information.

11. The Owning Department responsible for this activity or asset defaults from the Asset Number definition (See: Defining Asset Numbers, page 2-65). Optionally you can select an Owning Department. This is normally a Planner or Supervisor.

12. Optionally select a Shutdown Type. This indicates whether a shutdown is necessary to perform this maintenance activity. For example Required, and Not Required. This field is for information purposes. This value defaults from the Master Activity information that was created within the Master Item window. See: Defining Activities, page 2-53.

13. Optionally select a WIP Accounting Class. You can update the value that defaults from the Enterprise Asset Management Parameters information, for the current organization. See: Defining eAM Parameters, page 2-11.

14. Optionally select an Activity Source. Activity Source codes are reasons activities are executed. For example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. See: Activity Sources, page 2-27. This value defaults from the Master Activity information that was created within the Master Item window. See: Defining Activities, page 2-53.

15. Save your work.

Activity Association Templates

Activities provide you with a standard template of jobs, which are applied to Work Orders, such as Routine or Preventive Maintenance. After these Activity Templates are created, they are associated with one or more Asset Numbers or Rebuildables (See: Activity Association Templates, *Oracle Enterprise Asset Management User's Guide* and Rebuildable Item/Activity Association, *Oracle Enterprise Asset Management User's Guide*). They are also associated to a maintenance BOM (See: Setting Up Activity Bills of Material, *Oracle Enterprise Asset Management User's Guide*) and activity routing (See:

Defining Asset Routes, *Oracle Enterprise Asset Management User's Guide*), containing the materials and resources needed for operations, respectively. When Work Orders are created for assets associated to the Activity, the material and resources associated with the current Activity automatically copy to the Work Orders created.

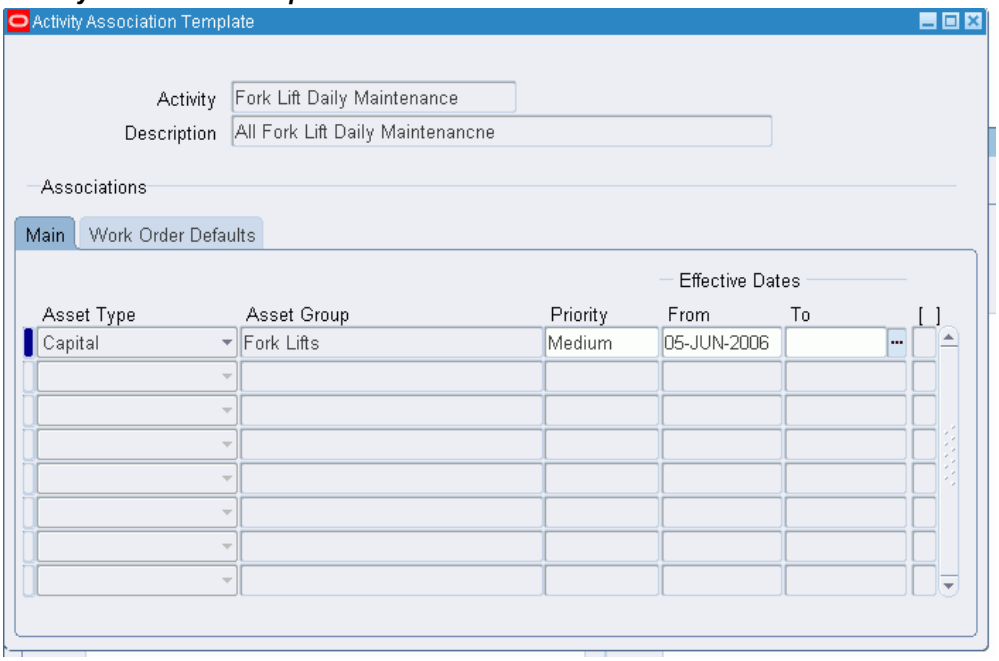
You can streamline the creation of Activity associations using an Activity Association Template. For example, when you create an asset group, and then Asset Numbers within that group, you do not need to utilize the Association window to associate those Asset Numbers with an Activity. If you create an Activity Association Template, the Activity that you associate with asset group for the current Asset Number automatically determines the Activity that is associated with the current Asset Number.

> **Note:** The Activity Workbench is generally used to streamline your Activity setups, including Activity Association Templates (See: Using the Activity Workbench, *Oracle Enterprise Asset Management User's Guide*).

To create activity association templates:

1. Navigate to the Activity Association Template window.

Activity Association Template



2. Select a valid Activity. The Activity needs to already have been created within the Master Item window.

3. Within the Main tab, select an Item Type of Asset or Rebuildable.

4. Select an asset group. After this record is saved, this asset group is associated with the current activity. Each asset number created within the current asset group is automatically associated with the current activity.

5. Optionally select a Priority code. This value defaults from the Master Activity information created within the Master Item window.

6. Optionally enter Effectivity Dates for this Activity Template.

7. Within the Activity tab, optionally select an Activity Cause. This value specifies what situation caused this work to generate. For example, Breakdown, Vandalism, Normal Wear, or Settings. This value defaults from the Master Activity information created within the Master Item window. See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*.

8. Optionally select an Activity Type to indicate the type of maintenance for this Activity. It is used when defining a work order. It should remain generic, and should not describe the job in detail. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This value defaults from the Master

Activity information created within the Master Item window. See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*.

9. Optionally select the Tagging Required check box to indicate whether tag out procedures are required. The Area might need to be secured for operations required for carrying out a work order. Tags are generally printed and placed on an asset, warning the plant that the asset is shutdown, and should not be started. This check box helps the planner isolate those jobs that require a tagout. This is for informational purposes only.

10. Optionally select an Owning Department. This value defaults from the Enterprise Asset Management Parameters information for the current organization. See: Defining eAM Parameters, *Oracle Enterprise Asset Management User's Guide*.

11. Optionally select a Shutdown Type to indicate whether a shutdown is necessary to perform this maintenance activity. For example Required, and Not Required. This field is for informational purposes. This value defaults from the Master Activity information that was created within the Master Item window. See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*.

12. Optionally select a WIP Accounting Class. This value defaults from the Enterprise Asset Management Parameters information for the current organization. See: Defining eAM Parameters, *Oracle Enterprise Asset Management User's Guide*.

13. Optionally select an Activity Source. Activity Source codes are reasons activities are executed. For example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. See: Activity Sources, *Oracle Enterprise Asset Management User's Guide*. This value defaults from the Master Activity information that was created within the Master Item window. See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*.

14. Save your work.

Setting Up Attributes

You can define common characteristics data specific to asset groups, such as Facility Information, Engineering Specifications, Regulation Requirements, Horsepower, Voltage, and Square Footage, by creating Attribute Groups using descriptive flexfields. After the Attribute Group is created, you can then assign it to an asset group. This enables you to define additional characteristics data when defining an asset associated with the asset group. This provides extensive query capabilities. Attribute groups are descriptive flexfields, defined by segments and values.

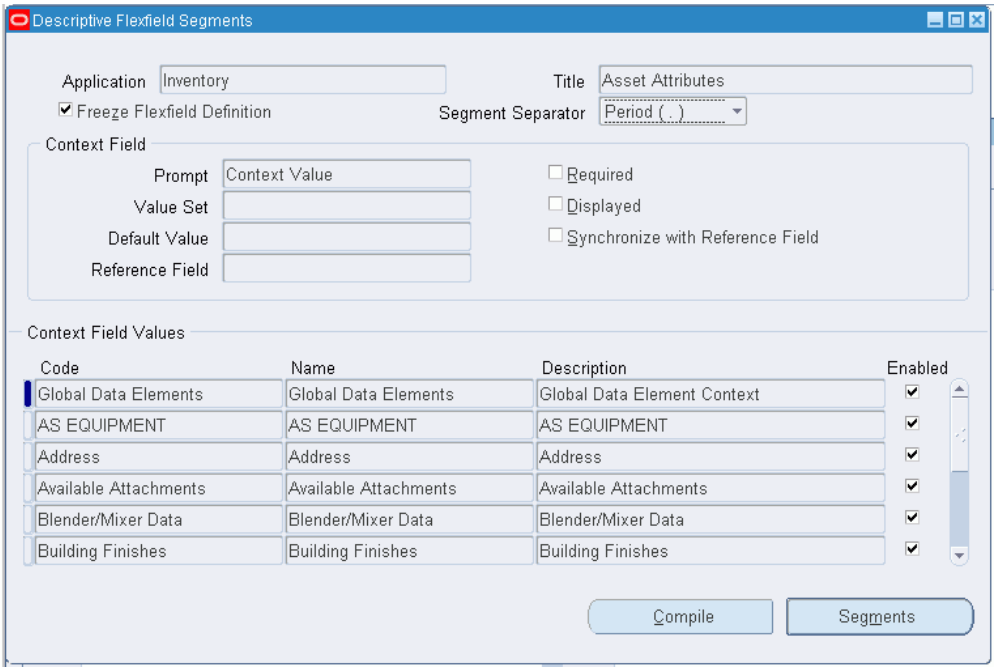
For example, you can define an Attribute Group, Front Loader Nameplate data. This group can then be associated with the CARS Asset Group. When defining an asset within the CARS Asset Group, you can optionally utilize the attributes to specify nameplate data (specified data such as make, year, and model) for the asset. This creates

a simplified way of entering specified data (See: Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*) related to a specific asset group.

To set up attributes:

1. Navigate to the Descriptive Flexfield Segments window.

Descriptive Flexfield Segments



2. Select the flashlight icon from the tool bar, and then select the Oracle Inventory Application with the Title, Asset Attributes.

3. Unfreeze the Flexfield Definition by clearing the Freeze Flexfield Definition check box.

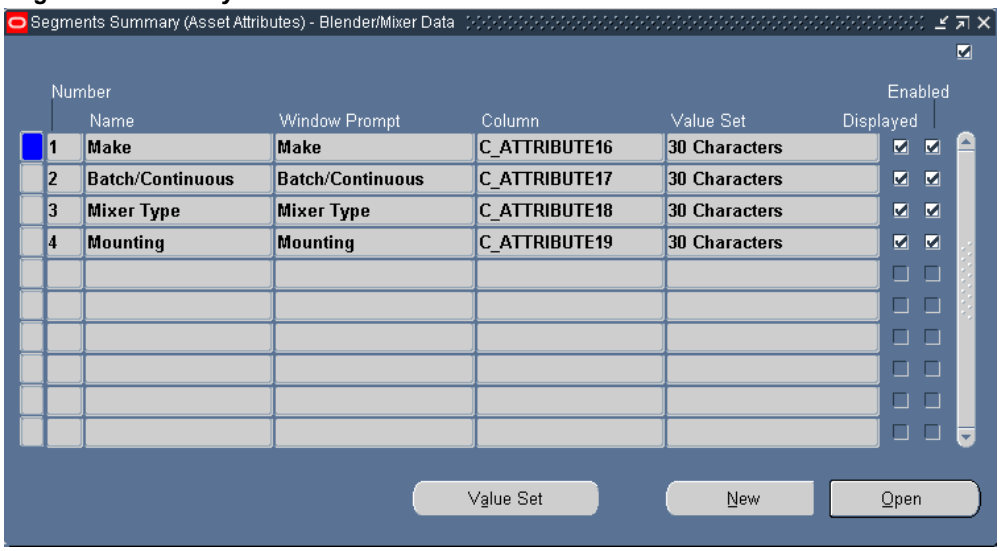
4. In the Context Field Values region, select a row, then click the New icon. A blank row is added for you to create an attribute group.

5. Enter the attribute group name in the Code field.

6. Optionally enter a Description for this attribute group.

7. Select Segments to add attributes to the attribute group you just created.

Segments Summary



8. Enter a Number to sequence the data.

9. Define the Name of the specific attribute. The Window Prompt defaults to this name.

10. Select a Column value.

11. Select a Value Set, or optionally choose Value Set to create a new one.

12. If the Displayed check box is selected, this attribute appears for you when defining data for an asset within the asset group (for example, CARS) associated with the attribute group (for example, NAMEPLATE) in which this attribute (for example, Make) resides.

13. Optionally select the Enabled check box to enable the attribute for availability when defining assets (See: Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*).

14. Save your work, and return to the Descriptive Flexfield Segments window.

15. Select the Freeze Flexfield Definition check box. Failure to do this prevents you from querying the segments from the Attribute window.

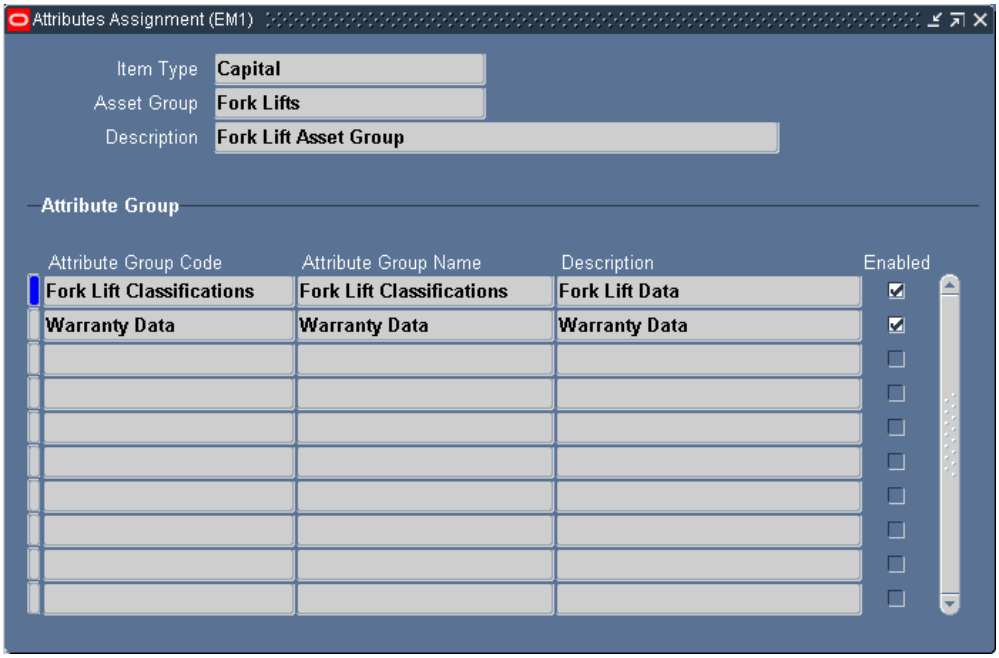
16. Save your work.

To associate the attribute group with an asset group:

1. Navigate to the Attributes Assignment window.

In the following example, any asset created within the Fork Lifts Asset Group has the Fork Lift Classifications attribute group code available as an option for data entry.

Attributes Assignment



2. Select an asset group. See: Defining Asset Groups.

3. Select an Attribute Group Code.

   You can have an unlimited number of Attribute Groups associated with an asset group.

4. Save your work.

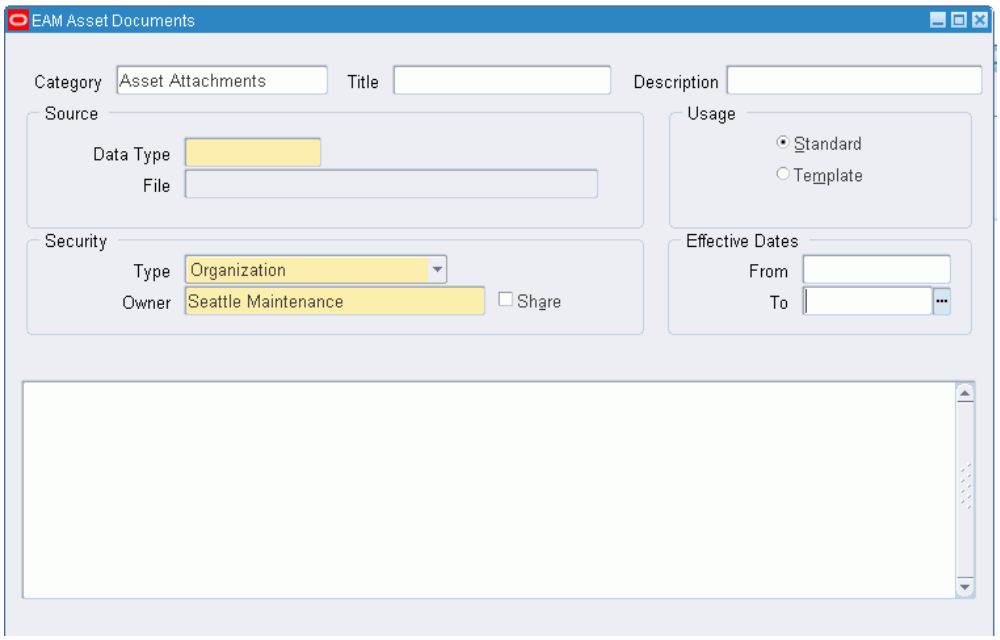
Defining Asset Documents

You can attach existing documents to an asset, and create text to associate with an asset. You can attach text, URLs, or files, such as spreadsheets, graphics, and OLE objects. When creating a work order for an asset with attachments, you can attach the asset's attachments to the Work Order. For this to function, the appropriate attachment category, Asset Attachments (1), must be associated with the attachment function, EAMWOMDF (See: Working With Attachments, *Oracle Applications User's Guide*.

To define asset documents:

1. Navigate to the EAM Asset Documents window.

EAM Asset Documents



2. Select a Data Type.

3. If the Data Type is File, attach the appropriate File. If the Data Type is Web Page, enter the relevant URL. If the Data Type is Short Text, insert the text in the text field.

   For information on all fields, See: Working With Attachments, *Oracle Applications User's Guide*.

Defining Asset Numbers

Enterprise Asset Management provides three methods in which you can enter a new asset. You can create them individually, by copying information from an existing asset, utilize the multiple asset entry method, or use the Import Asset Number interface.

You can also use Oracle Web Services to automatically create, update and search for asset numbers. These public interfaces enable you to more easily convert data from another instance or another system. These web services are annotated and available in the I-Repository along with other public Oracle APIs. (See: *Oracle Manufacturing APIs and Open Interfaces Manual* for more information on APIs.)

> **Warning:** You cannot use "_" or "%" when creating an asset number using Oracle eAM.

In addition, when an asset is received and delivered to Inventory, an asset number is created automatically.

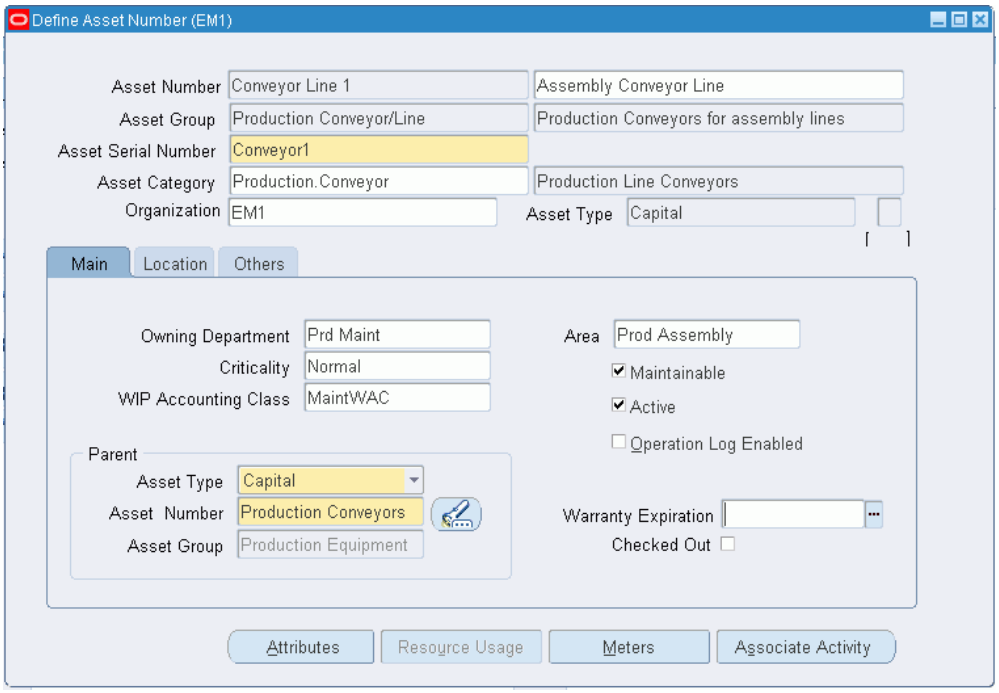
Prerequisites

You must set up the following task prior to defining asset numbers in Oracle eAM:

- Define asset groups. See: Defining Asset Groups, *Oracle Enterprise Asset Management User's Guide*

To define assets individually:

1. Navigate to the Define Asset Number window.



2. Enter an Asset Number if you do not have them automatically generated, or accept or modify the default, if you have automatic number generation enabled (See: Defining eAM Parameters, *Oracle Enterprise Asset Management User's Guide*).

   After an asset is saved, it cannot be deleted. The asset can be deactivated if there are no open work orders or work requests for the asset, and if the asset is not part of an asset hierarchy.

3. Optionally enter an Asset Description, up to 240 characters.

4. Select an asset group. This asset group is associated with this asset.

   Note: After an asset group is associated with an asset and then saved, it cannot be changed.

5. Enter a value in the Asset Serial Number field, or accept the default value that appears if automatic number generation is enabled.

   Note: The Asset Serial Number can be modified to be identical to the Asset Number.

   The Asset Serial Number might have a non-unique value across organizations, but the Asset Number must be globally unique, regardless of the defaulting value. When an asset number generates automatically at receipt by the Deliver to Inventory transaction, it defaults to the Item Instance number. You can change it, as long as it is a globally unique number.

6. Optionally associate this asset to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes and Sets, *Oracle Enterprise Asset Management User's Guide*.

7. Optionally, change the defaulted **Organization**. This organization may be different than the eAM-enabled organization that maintains the asset. You can define an asset group and Asset Number directly in the production organization.

   You can define an asset group in an organization that is not eAM-enabled, if it is associated with an eAM-enabled organization in its Organization parameters.

   In this Define Asset Number window, you can define an asset number for asset groups defined in the eAM-enabled organization itself, and also for asset groups that are defined in organizations that are maintained by the eAM organization, by specifying the organization is this field. The list of values includes the eAM-enabled organization, as well as all organizations that are not eAM-enabled but are associated with the eAM-enabled organization in their Organization Parameters.

8. Within the Main tab, optionally select an owning Department for this asset to represent the crew responsible for the asset. Notifications regarding work requests are sent to the Primary Approver of the work request's associated asset's current owning department (See: Defining Department Approvers, *Oracle Enterprise Asset Management User's Guide* and Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*).

9. Optionally select a Criticality code to indicate the importance of the asset to the organization. This field is for information purposes.

10. Optionally select a WIP Accounting Class to identify the Expense cost elements associated with the work performed, such as materials, labor, and resources.

11. Optionally enter the area where this asset resides. This is a user-defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See: Setting Up Areas, *Oracle Enterprise Asset Management User's Guide*).

12. Indicate whether this asset is maintainable. If the Maintainable check box is selected, you can create work requests and work orders for this asset.

    For example, you can create an asset for cost-tracking purposes. For example, you might want to view the cost for all top level assets in an asset hierarchy, but you do not want to maintain those assets. In this situation, do not select this check box.

    > **Note:** After work orders are created for this asset, you cannot clear this check box unless those work orders are at Complete, Canceled or Closed statuses.

13. Optionally select the Active check box to indicate that the asset is functioning, for example, maintenance work orders can be created for this asset. This check box change when you activate or deactivate an asset from the Tools menu.

14. Indicate whether Asset Operational Logging is enabled for this asset. If you select the Operation Log Enabled check box, you can view all current and past asset operational information, such as Check Out, Check In, associated work requests and work orders. You can remove or add a child asset, remove a parent asset, activate or deactivate the asset, transfer the asset to another location, and receive or issue the asset into/from Inventory. By default, logging is turned off for an asset. See: Asset Operational Logging, *Oracle Enterprise Asset Management User's Guide*.

15. Within the Parent region, optionally select a parent Asset Number to establish asset hierarchy information. Work order costs roll up through the Parent/Child hierarchies defined, and can roll up to any level within an asset hierarchy. This enables you to review all cost associated with an asset or asset hierarchal view.

    > **Note:** When a child asset is transferred to another eAM organization, it is still included in the parent hierarchy. The organization that the asset currently resides in appears in parentheses. Transferring the asset does not remove the asset from the asset hierarchy. You must remove the asset manually, to remove the asset from its hierarchy.

16. The Checked Out check box indicates whether the current asset is checked in or out. You can check out an asset to view asset details, enter collection plan data, enter meter information, and optionally create a work request, within Maintenance Super User. This check box is protected against update. See: Asset Operational Logging, *Oracle Enterprise Asset Management User's Guide*.

17. Within the Location tab, the Subinventory and Locator fields are view-only, displaying the subinventory location of this asset within Inventory and its Locator segments. If this asset if received into Inventory, these fields are populated.

    You can specify the geocode information with details of latitude, longitude and

direction for the asset. This information is used to display the assets in the chosen map viewer.

18. Optionally select a Location Code to specify a physical location for this asset. The Address field simultaneously populates with the selected Location Code's associated Address. The previously defined area is organization-specific and not associated with a physical location.

    If your asset does not reside in a subinventory, you can specify an external location for it. You can only select an external location that is defined as a HZ location. You may optionally define external locations with a location code.

    Valid Location Codes are defined within Oracle Install Base.

19. The Address defaults as the populated Location Code's associated address. You can optionally select a different address. If the current asset is in stores, the address of the Location's organization appears (See: Stores, *Oracle Enterprise Asset Management User's Guide*).

20. Optionally select a Production Organization. The list of values displays the production inventory organizations maintained by the current asset's organization. See: Enabling Organizations for Enterprise Asset Management, *Oracle Enterprise Asset Management User's Guide*for information on designating eAM organizations to maintain equipment items for designated production organizations.

21. Select an Equipment Item. This is mandatory if you populated the Production Organization field. Items that were defined with an equipment template (See: Item Templates, *Oracle Inventory User's Guide*), or with the Equipment item attribute enabled (See: Physical Attributes, *Oracle Inventory User's Guide*), are available.

22. Enter an **Equipment Serial Number**. This is mandatory if you populated the Production Organization field. This is the specific name of the component within the Equipment Type, defined above, if an asset resides directly in the Production Organization, and its asset group is defined directly in the Production Organization as Equipment. You can view the Production Organization and the Asset Serial Number, but you cannot update them.

23. Optionally enter the Number if Oracle Fixed Assets is installed. This represents a fixed Asset Number that belongs to a fixed asset category, associated with the asset.

24. The Property Management fields, Location Name and Location Code, default from a Property Manager export process (Export Locations to Enterprise Asset Management), if Oracle Property Management is installed. These fields are disabled. These values cannot be changed.

    Note: Before the above information is passed from Property Manager into Enterprise Asset Management, asset groups must be

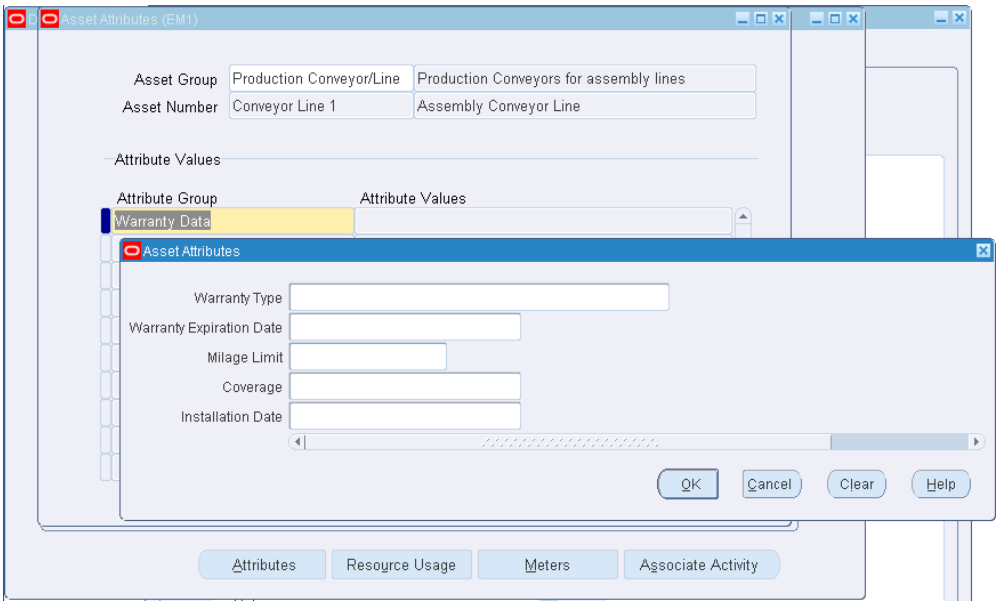
defined. See: Defining Asset Groups, *Oracle Enterprise Asset Management User's Guide*.

25. Optionally choose Location Details to view or update Property Manager field information.

26. Optionally select Attributes to enter attribute values for the asset (See: Setting Up Attributes, *Oracle Enterprise Asset Management User's Guide*).

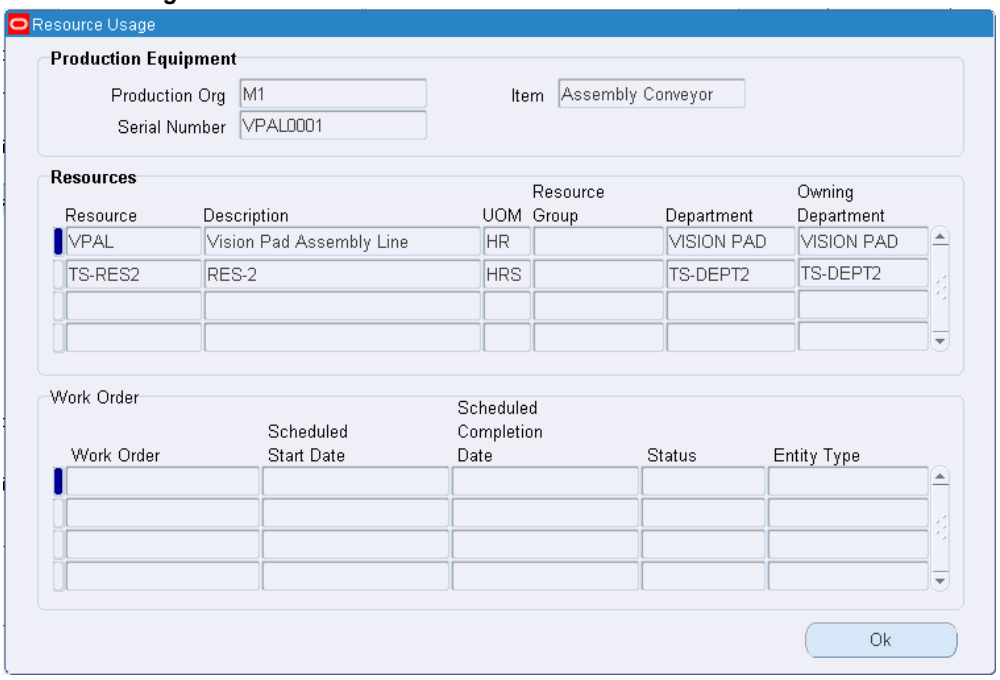
    Existing, enabled attribute groups appear (See: Setting Up Attributes, *Oracle Enterprise Asset Management User's Guide*). These attribute groups are optional. You do not need to enter values for all existing attribute groups. From this window, you cannot generate attribute groups.

Asset Attributes



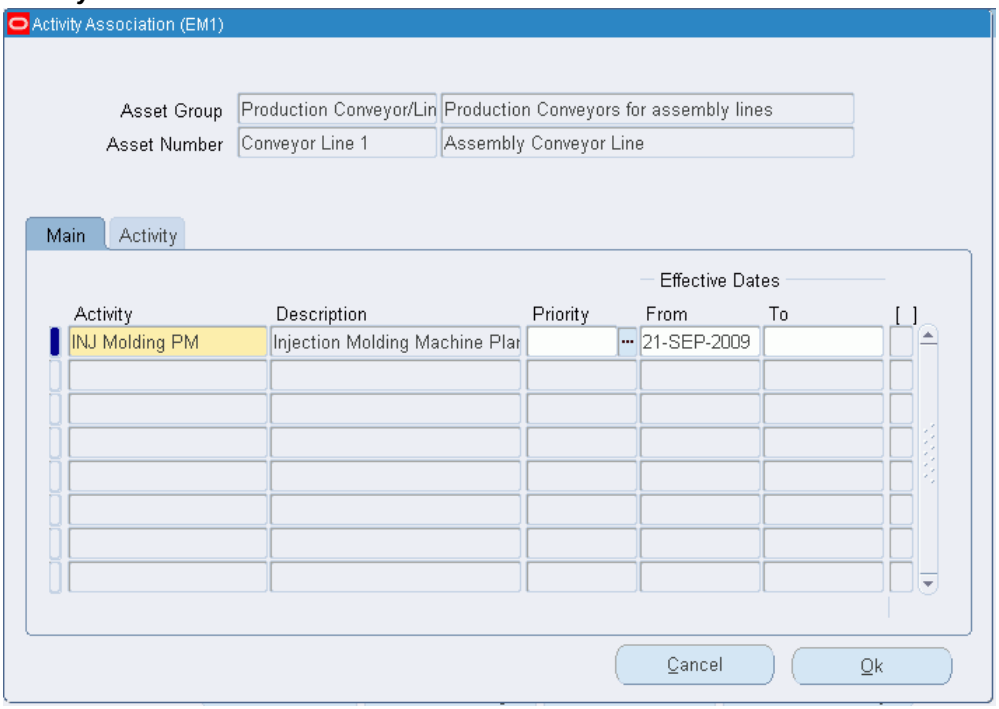
27. You can choose Resource Usage if the fields in the Production Equipment region are populated. This enables you to view production work orders using the equipment that corresponds with this asset number as a resource.

Resource Usage



28. Optionally select Associate Activity to directly associate this Asset with an Activity. See: Activity Association Templates, *Oracle Enterprise Asset Management User's Guide* .

Activity Association



29. Optionally enter file, URL, or text attachments to this asset by choosing the paperclip Attachments icon. You can then choose Document Catalog to add asset specific documents. See: Defining Asset Documents, *Oracle Enterprise Asset Management User's Guide*.

30. Save your work.

To copy assets from existing assets:

You can copy asset information from existing assets. When using this method, everything copies to the new asset, including attributes and attachments. Equipment Serial Numbers are not copied. You are prompted to enter the Equipment Serial Number, when saving.

1. Navigate to the Define Asset Number window.

2. Select an asset group. This asset group is associated with this asset.

3. Enter an Asset Number if you do not have them automatically generated, or accept or modify the default, if you have automatic generation enabled (See: Defining eAM Parameters, *Oracle Enterprise Asset Management User's Guide*). After an asset has been saved, it cannot be deleted. The asset can be deactivated if there are no open Work Orders or Work Requests for the asset, and if the asset is not part of an

asset hierarchy.

4. Optionally enter an Asset Description, up to 240 characters.

5. From the Tools menu, select *Copy Asset Number from*.

6. Select the desired Asset.

7. Optionally associate this Asset to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD, or BUILDING.FLOOR. See: Setting Up Category Codes and Sets, *Oracle Enterprise Asset Management User's Guide*.

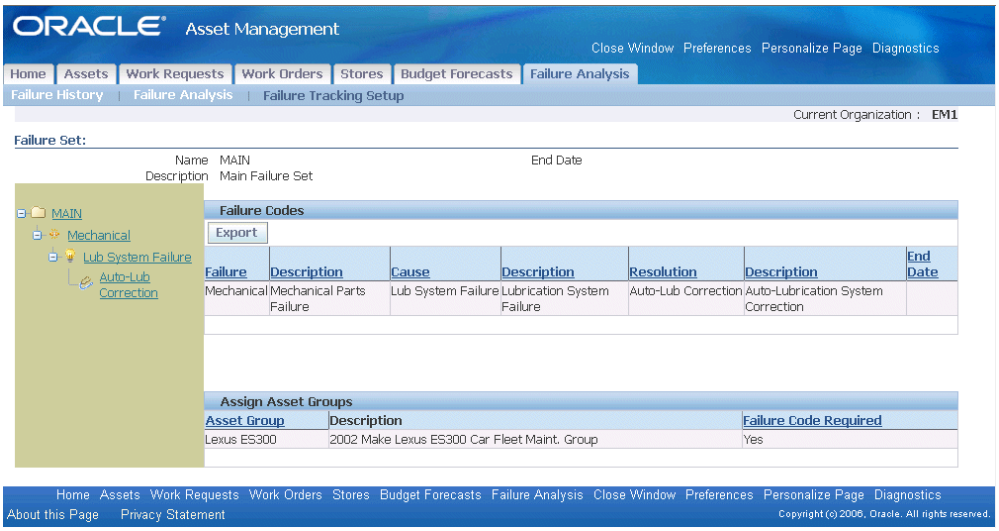
8. Select an owning Department for this asset. E-mail notifications, regarding Work Requests, are sent to the Primary Approver of the Work Request's associated asset's owning department (See: Defining Department Approvers, *Oracle Enterprise Asset Management User's Guide* and Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*).

9. Save your work.

To access failure analysis information:

You can access the Failure Set page to view failure tracking codes that are assigned to the current Asset Number.

1. From the Define Asset Number window, select Maintain Failure Set from the Tools menu. If the Asset Number does not have an associated Failure Set, this menu option is disabled. See: Defining Failure Codes and Sets, *Oracle Enterprise Asset Management User's Guide* and Failure Analysis Overview, *Oracle Enterprise Asset Management User's Guide*.



2. Close the window.

To deactivate an asset:

1. Navigate to the Define Asset Number window.
2. Select the flashlight Find icon to display the Find Asset Number window.
3. Select an Asset Number to deactivate.
4. From the Tools menu, select De-Activate Asset Number.
5. Save your work.

To activate an asset:

1. Navigate to the Define Asset Number window.
2. Select the flashlight Find icon to display the Find Asset Number window.
3. Select a Deactivated Asset Number to activate.
4. From the Tools menu, select Re-Activate Asset.
5. Save your work.

Defining Asset Routes

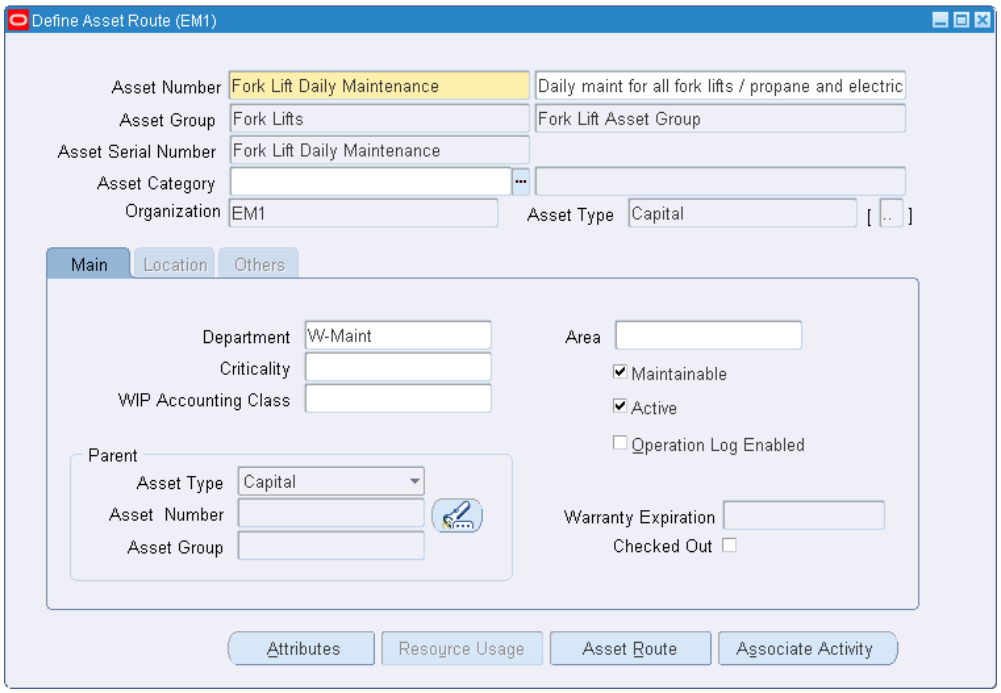
You might need to perform an Activity on multiple Asset Numbers. To eliminate the possibility of creating multiple Work Orders for the same Activity, you can define Asset Routes. You can define a Preventive Maintenance schedule for your Asset Route to

specify when an Activity should be scheduled for the Asset Route. You can define day interval rules for Asset Routes.

To define asset routes:

1. Navigate to the Define Asset Route window.

Define Asset Route



2. Enter the name of the Asset Route in the Asset Number field.

3. Select an asset group.

4. The Asset Serial Number defaults to the Asset Number. You can optionally select the next serial number for the current organization.

   The Asset Serial Number might have a non-unique value across organizations, but the Asset Number must be globally unique, regardless of the defaulting value.

5. Optionally associate this Asset Route to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes and Sets, *Oracle Enterprise Asset Management User's Guide*.

6. Within the Main tab, optionally select an owning Department for this Asset Route. This represents the crew responsible for the asset. Notifications, regarding Work Requests, are sent to the Primary Approver of the Work Request's associated asset's current owning department (See: Defining Department Approvers, *Oracle Enterprise*

Asset Management User's Guide and Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*).

7. Optionally select a Criticality code to indicate the importance of the Asset Route to the organization. This field is for information purposes.

8. Optionally select a WIP Accounting Class to identify the Expense cost elements associated with the work performed, such as materials, labor, and resources.

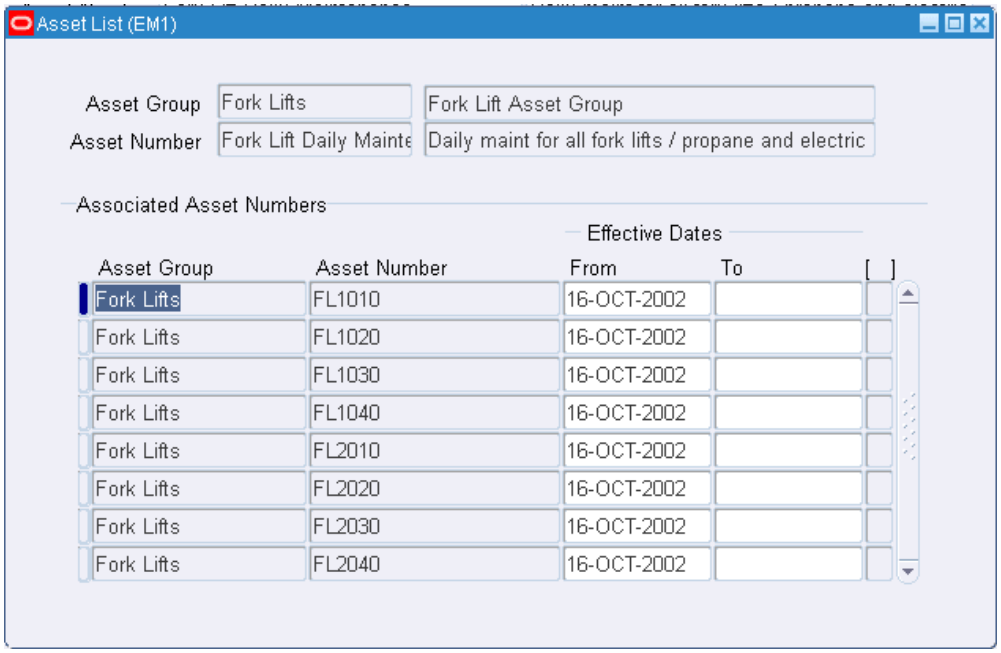
9. Optionally enter the Area where this Asset Route resides. This is a user defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See: Setting Up Areas, *Oracle Enterprise Asset Management User's Guide*).

10. Indicate whether this Asset Route is maintainable. If the Maintainable check box is selected, you can create Work Requests and Work Orders for this Asset Route.

11. Optionally select the Active check box to indicate that the asset route is functioning. This check box change when you activate or deactivate an asset route from the Tools menu.

12. Choose Asset Route to display the Asset Route window.

Asset Route



13. In the Associated Asset Numbers region, select an asset group.

14. Select an Asset Number. Asset Numbers associated with the previously selected asset group are available.

    You can associate an unlimited number of Asset Numbers.

15. Optionally enter Effective Dates. If the Effective Date From field is left blank, the system date defaults.

16. Save your work.

> **Note:** Asset Numbers can associate with Asset Routes. An Asset Route cannot associate with another Asset Route.

Setting Up Asset Bills of Material

You can identify and select the required items that make up an asset. A bill of material (BOM) is used to list all items and components that make up a particular asset, and is defined for each asset group. The items defined on an asset BOM are standard inventory components (See: Defining Items, *Oracle Inventory User's Guide*).

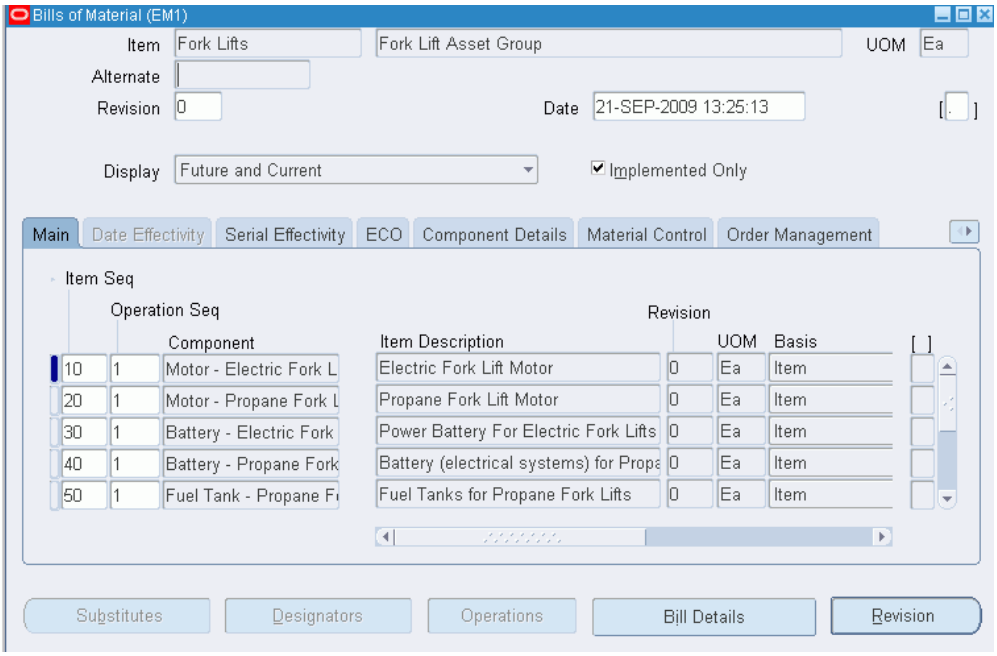
> **Note:** Even if you are not using Project Manufacturing applications,

Project Parameters are defined for your eAM enabled organization to successfully create asset groups. This is required because an Asset BOM is of type Model/Unit Effective and this BOM type is currently allowed if PJM organization parameters are set up for the eAM enabled organization to which the asset group has been assigned. To define Project Parameters, open the Project Parameters window using Project Manufacturing Super User responsibility and without entering any data in the window, save the record. If you plan to use Project Manufacturing, see: Project Manufacturing Integration Setup, *Oracle Enterprise Asset Management User's Guide* for information on defining Project Parameters.

To set up an Asset BOM:

1. Navigate to the Bills of Material window.

Bills of Material



2. Select an asset group from the Item list of values.

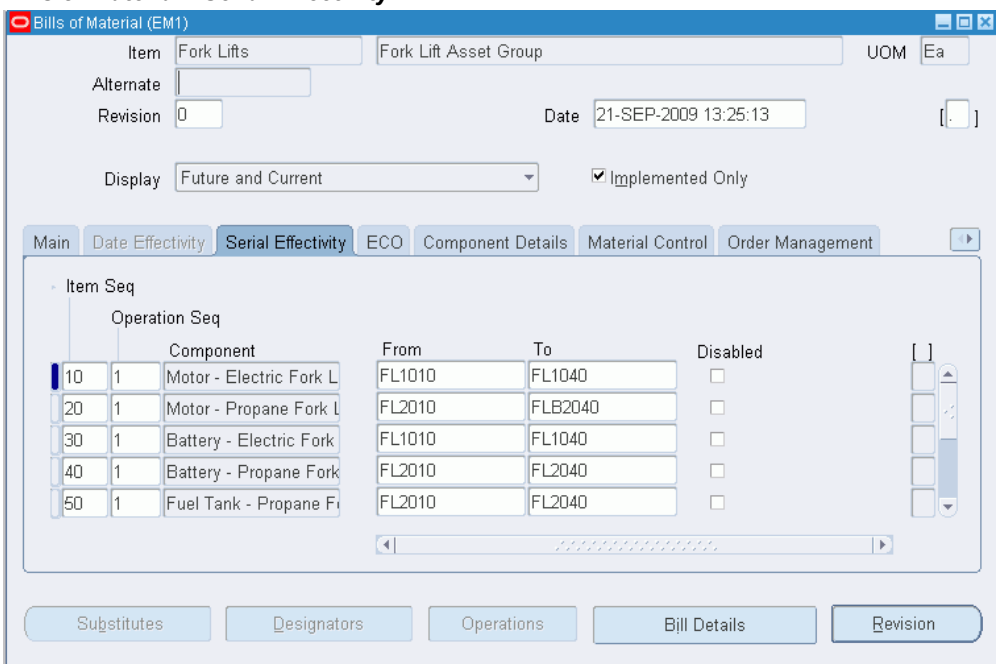
3. Within the Main tab, the Item Sequence and an Operation Sequence values default.

4. Enter the inventory Component to make up the Asset Number.

5. Enter the Quantity of that component necessary for the asset.

6. Select the Serial Effectivity tab.

Bills of Material - Serial Effectivity

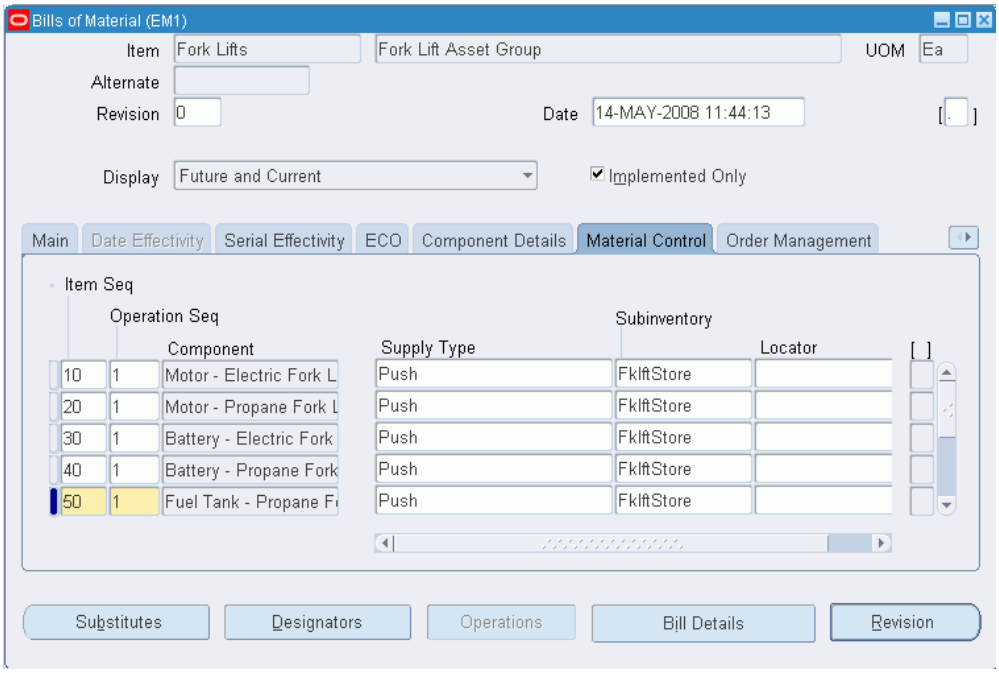


7. Select the Asset Number (Asset Numbers are always serialized) that the inventory items are associated with, in the From and To fields. Asset Numbers associated with the current asset group are available.

   If the Component is installed in all Asset Numbers within the asset group, enter 0 in the From field, and leave the To field blank.

8. Optionally select the Material Control tab, and enter a subinventory location or source locator for this asset BOM. If the Auto Request Material option is selected at the BOM level, material allocation will be initiated when the work order is released, and the source subinventory and source locator values you enter will override these values in the Inventory sourcing rules. If the Auto Request Material option is not selected, you can specify a source subinventory and source locator for your material when you perform a material request or a One-Step Material Issue.

Material Control



9. Save your work.

   For information on all remaining fields, See: Creating a Bill of Material, *Oracle Bills of Material User's Guide*.

Related Topics

Defining Activities, *Oracle Enterprise Asset Management User's Guide*

Using the Activity Workbench, *Oracle Enterprise Asset Management User's Guide*

Rebuildable/Activity Association, *Oracle Enterprise Asset Management User's Guide*

Using the Activity Workbench

You can use a central workbench to manage your organization's activity functions. Using the Activity Workbench, you can view, create (See: Defining Activities, page 2-53), query, and manage all of your activities. From this central workbench, you can view, create, and update maintenance routes, maintenance BOMs, Preventive Maintenance schedules, and suppressions associated with your activities. You can create various copy functions within a single activity, across multiple Activities, as well as between work orders and activities or asset activity associations. You can view or update Last Service for the asset activity association, as well as view cost estimates for the activity. These copy functions save time and standardize processes across your organization.

This section includes the following topics:

- Defining Activities, page 2-81
- Navigating the Activity Workbench, page 2-85
- Setting Up Maintenance Bills of Material, page 2-93
- Associating Asset Numbers with Activities, page 2-96
- Defining Maintenance Routes, page 2-99
- Creating Activity Templates, page 2-103

Defining Activities

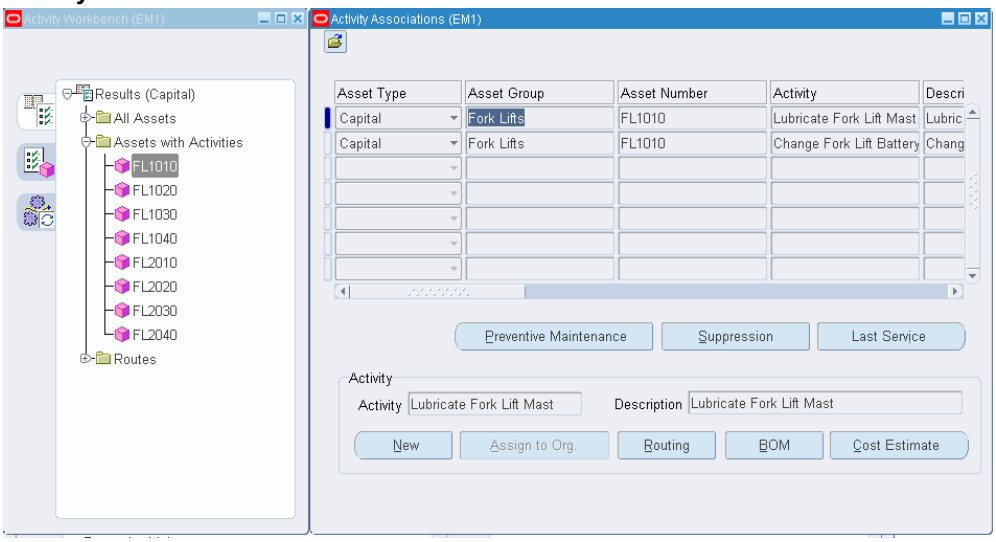
There are three methods you can use to create an activity:

- Within the Master Activity (Master Item) window.
- From the Activity Workbench.
- Within a maintenance work order.

To set up activities using the Activity Workbench:

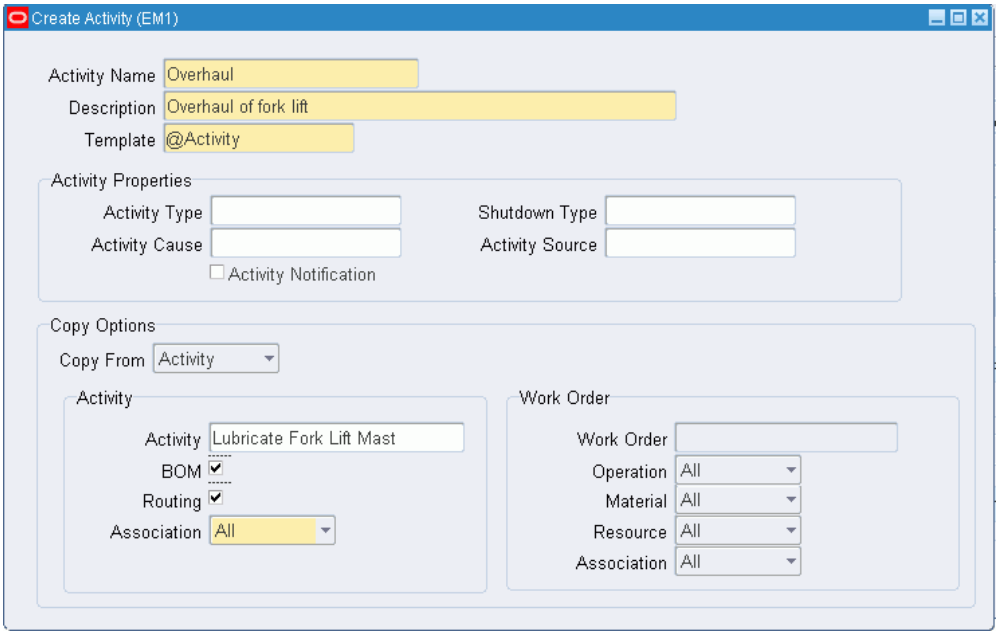
1. Navigate to the Activity Workbench window.
2. Choose Launch.

Activity Association



3. To create an activity, select New.

Create Activity



4. Enter an Activity Name.

5. Enter an Activity Description.

6. Choose an activity Template. This automatically links the properties associated with an Activity. The @Activity template is created for you. You can create your own Activity Templates, as well.

7. Within the Activity Properties region, optionally select an Activity Type (See: Activity Types, *Oracle Enterprise Asset Management User's Guide*). The value defaults from the Template properties above.

8. Within the Activity Properties region, optionally select an Shutdown Type. The Shutdown Type is user defined, and indicates whether an activity shutdown is required. For example, the Shutdown Type can refer to whether the Asset Activity association shutdown is required before the activity is performed. The value defaults from the Template properties above. This field is for information purposes.

9. Within the Activity Properties region, optionally select an Activity Cause (See: Activity Causes, *Oracle Enterprise Asset Management User's Guide*). The value defaults from the Template properties above.

10. Within the Activity Properties region, optionally select an Activity Source (See: Activity Sources, *Oracle Enterprise Asset Management User's Guide*). The value defaults from the Template properties above.

11. The Activity Notification check box is informational until a future release.

12. You can optionally create an activity by copying it from another activity or a work order. Within the Copy Options region, select the entity to copy information from. Valid values are Activity and Work Order. If you select Activity, the values within the Activity region are relevant, and the values within the Work Order region are irrelevant. If you select Work Order, the values within the Work Order region are relevant, and the values within the Activity region are irrelevant.

13. Within the Activity region, if Activity is populated in the Copy From field, optionally select an Activity name. This is the Activity from which you are copying.

14. Within the Activity region, if Activity is populated in the Copy From field, optionally select the BOM check box to indicate that the Maintenance Bill of Material, associated with the current Activity within the Activity region, copies to the new Activity Name.

    For example, in the screen shot, the Maintenance Bill of Material, associated with the 3000 Mile Truck Maint, copies to Oil Change.

15. Within the Activity region, if Activity is populated in the Copy From field, optionally select the Routing check box to indicate that the routings associated with the current Activity within the Activity region copies to the new Activity Name.

    For example, in the screen shot, routings that are associated with the 3000 Mile Truck Maint copy to Oil Change.

16. Within the Activity region, if Activity is populated in the Copy From field, select All or None from the Association list of values.

    - *All*: All asset and rebuildable associations related to the current activity within the Activity region copy to the new activity.

    - *None*: No asset and rebuildable associations related to the current activity within the Activity region copy to the new Activity.

17. Within the Work Order region, if Work Order is populated in the Copy From field, select an existing maintenance work order.

18. Within the Work Order region, if Work Order is populated in the Copy From field, select All or None from the Operation list of values.

    - *All*: All operations associated with the current work order, populated in the Work Order field, copy to the new Activity.

    - *None*: No operations associated with the current work order, populated in the Work Order field, copy to the new Activity.

19. Within the Work Order region, if Work Order is populated in the Copy From field, select All, Issued, or None from the Material list of values.

    - *All*: All material associated with the current work order, populated in the Work Order field, copies to the new Activity.

    - *Issued*: Material issued to the current work order, populated in the Work Order field, copies to the new Activity.

    - *None*: No material associated with the current Work Order, populated in the Work Order field, copies to the new Activity.

20. Within the Work Order region, if Work Order is populated in the Copy From field, select All, Issued, or None from the Resource list of values.

    - *All*: All resources associated with the current Work Order copy to the new Activity.

    - *Issued*: Resources issued to the current Work Order copy to the new Activity.

    - *None*: No resources associated with the current Work Order copy to the new Activity.

21. Within the Work Order region, if Work Order is populated in the Copy From field, select None, Current, or All from the Association list of values.

    - *None*: No Assets and Rebuildables, associated with the current Work Order,

associate with the new Activity.

- *Current*: An Asset and/or Rebuildable, associated with the current Work Order, associates with the new Activity.
- *All*: All Assets and/or Rebuildables, associated with the current Work Order's Activity, associate with the new Activity.

22. Save your work. After saving, the new Activity is automatically assigned to the current organization.

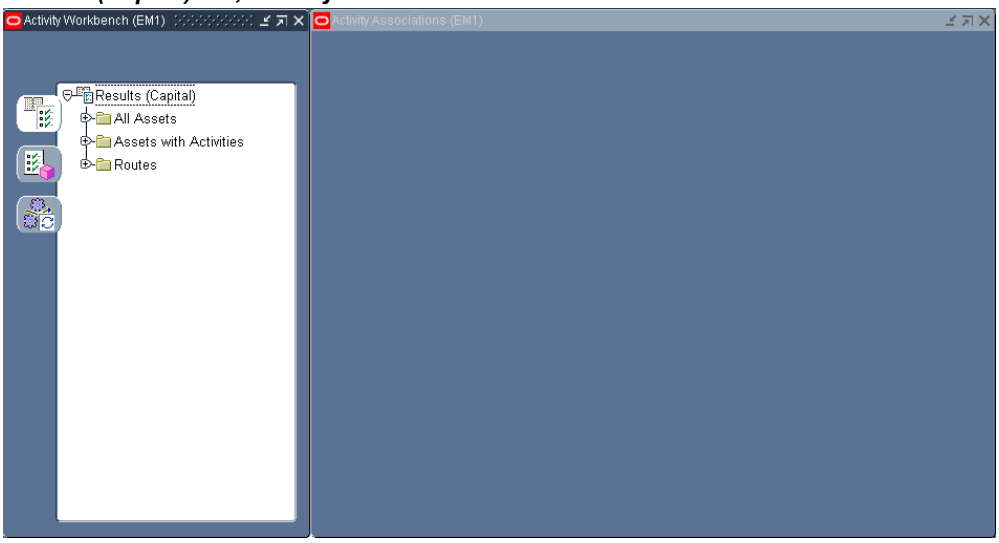
Navigating the Activity Workbench

The Activity Workbench enables you to manage all of your organization's Activity functions. Before launching the Activity Workbench, you can narrow your data selection; the Activity Workbench provides a query capability as you enter the Activity Workbench. The top portion of the window enables you to query by Asset Type, Asset Number, Asset Group, Area, Asset Category, Owning Department, and provides you the choice of including children assets within asset hierarchies. The bottom portion of the window enables you to query by Activity, Activity Type, Activity Source, Shutdown Type, and Activity Cause. You can also select data that is between specified Effective dates.

To navigate the Activity Workbench:

1. Navigate to the Activity Workbench window.
2. Optionally narrow your data selection by selecting criteria within the Activity Workbench window. If you make selections, you can view those selections after you launch the Activity Workbench.
3. Choose Launch.
4. Optionally select the Results (Capital) tab.

Results (Capital) tab, Activity Workbench



5. Optionally expand the Results (Capital) folder.

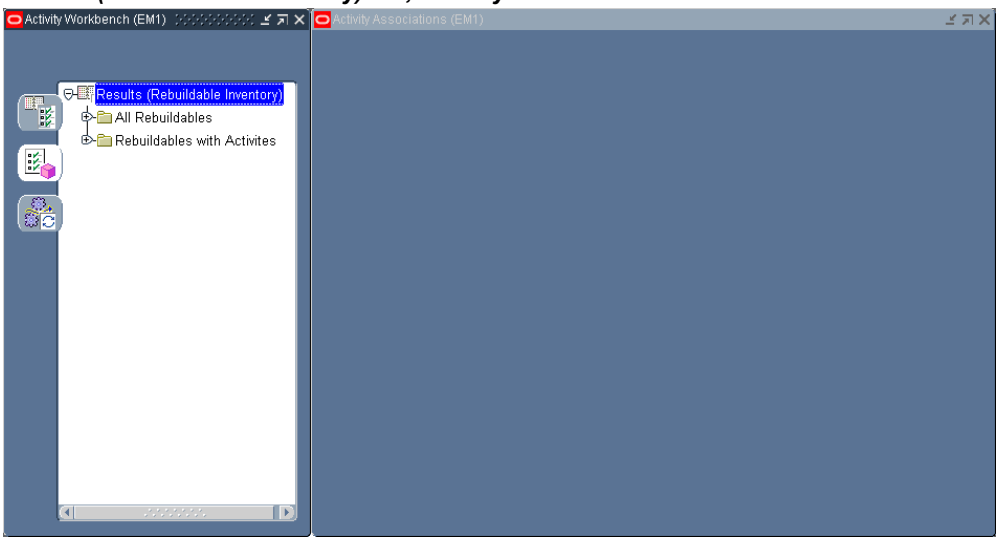
   - Optionally expand the All Assets folder to display all Asset Numbers, based on your chosen selection criteria. You can select an asset and view related Activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can associate Activities with the current asset.

   - Optionally expand the Assets with Activities folder to display all Asset Numbers that are currently associated with one or more Activities, based on your chosen selection criteria. You can select an asset and view its related Activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can view, create, or update preventive maintenance schedule definitions, create or update Suppression definitions, view or update last service information, view the parts list, and view or update the maintenance routing.

   - Optionally expand the Routes folder to display all Asset Routes that are currently associated with one or more Activities, based on your chosen selection criteria. You can select an Asset Route and view related Activity information within the corresponding Activity Associations window.

6. Optionally select the Results (Rebuildable Inventory) tab.

Results (Rebuildable Inventory) tab, Activity Workbench



7. Optionally expand the Results (Rebuildable Inventory) folder.

8. Optionally expand the All Rebuildables folder.

   - Optionally expand the Serialized folder to display all Rebuildable Serial Numbers, based on your chosen selection criteria, within the Activity Workbench window. You can select a Rebuildable Serial Number and view related Activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can associate Activities to the current Rebuildable Serial Number.

   - Optionally expand the Non-serialized folder to display all Non-serialized Rebuildables, based on your chosen selection criteria, within the Activity Workbench window. You can select a Non-serialized Rebuildable and view related Activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can associate Activities to the current Serialized Non-rebuildable.

9. Optionally select the Rebuildables with Activities folder.

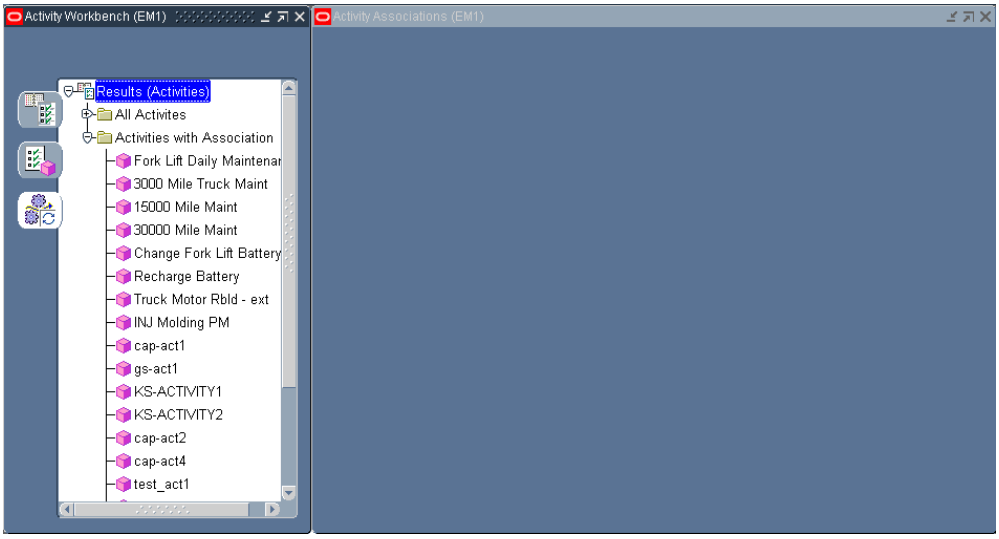
   - Optionally expand the Serialized with Activities folder to display all Rebuildable Serial Numbers that are currently associated with one or more Activities, based on your chosen selection criteria, within the Activity Workbench window. You can select a Rebuildable Serial Number and view related Activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can create or update preventive maintenance schedule definitions, create or update Suppression definitions, view or update last service information, view the parts

list, view or update the maintenance routing, and view cost estimations for a Rebuildable Serial Number and Activity combination.

- Optionally expand the Non-serialized with Activities folder to display all Non-serialized Rebuildables that are currently associated with one or more Activities, based on your chosen selection criteria, within the Activity Workbench window. You can select a Non-serialized Rebuildable and view related Activity information within the corresponding Activity Associations window. Within the corresponding Activity Associations window, you can create or update preventive maintenance schedule definitions, create or update Suppression definitions, view or update last service information, view the parts list, view or update the maintenance routing, and view cost estimations for a Rebuildable Serial Number and Activity combination.

10. Optionally select the Results (Activities) tab.

Results (Activities) tab, Activity Workbench



11. Optionally expand the All Activities folder to display all valid Activities, based on your chosen selection criteria, within the Activity Workbench window. You can select an Activity and view its related Activity information within the corresponding Activity Associations window, if an association exists. You can associate an Asset Number with the current, selected Activity using the corresponding Activity Associations window. You can select an Activity within the Activity Workbench pane, and then view its related information within the corresponding Activity Associations window. For a selected Activity, you can create a new Activity, create or update its associated Maintenance Routing, create or update the associated Maintenance BOM, and view cost estimations.

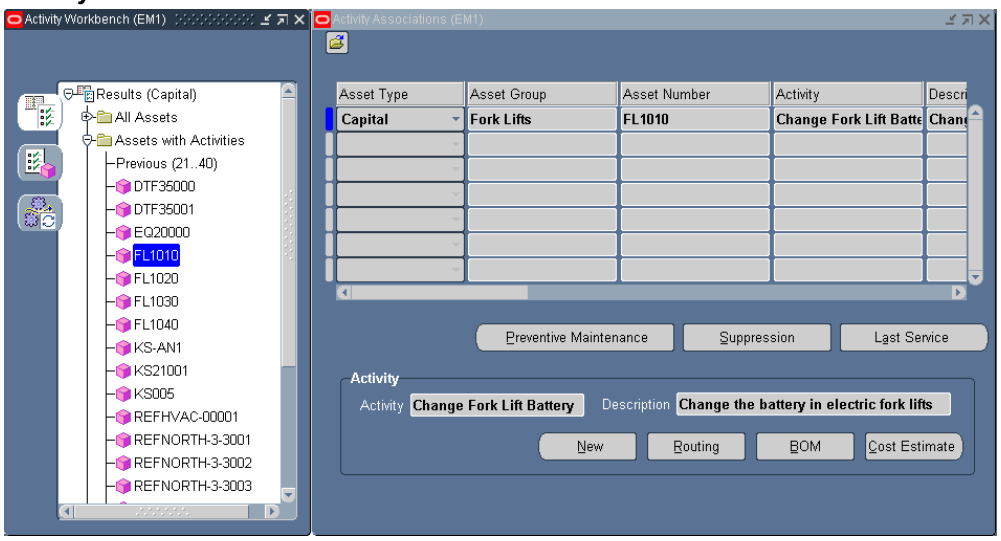
12. Optionally expand the Activities with Association folder to display all Activities that are associated with an Asset Number, based on your chosen selection criteria, within the Activity Workbench window. You can select an Activity within the Activity Workbench pane, and then view its related information within the corresponding Activity Associations window. For a selected Activity, you can create a new Activity, create or update its associated Maintenance Routing, create or update the associated Maintenance BOM, and view cost estimations.

To create or update a PM schedule definition:

You can view, create or update a Preventive Maintenance (PM) Schedule definition for Activity/Asset Number and Activity/Asset Route combinations.

1. Within the Activity Workbench pane, select any one of the three tabs: Results (Capital), Results (Rebuildable Inventory), or Results (Activities).

Activity Workbench



2. If you selected Results (Capital), expand either the Assets with Activities or Routes folders, then select an Asset Number or Route, respectively. You cannot create or update a PM Schedule definition for an Asset Number that is not associated with an Activity.

   If you selected Results (Rebuildable Inventory), expand the Rebuildables with Activities folder, expand either the Serialized with Activities or Non-serialized with Activities folder, then select a Serialized or Non-serialized Rebuildable, respectively. You cannot create or update a PM Schedule definition for an Asset Number that is not associated with an Activity.

   If you selected Results (Activities), expand the Activities with Association folder, then select an Activity.

3. Choose Preventive Maintenance. The PM Schedules window displays all PM Schedule definitions for the current Activity/Asset Number or Activity/Asset Route combination.

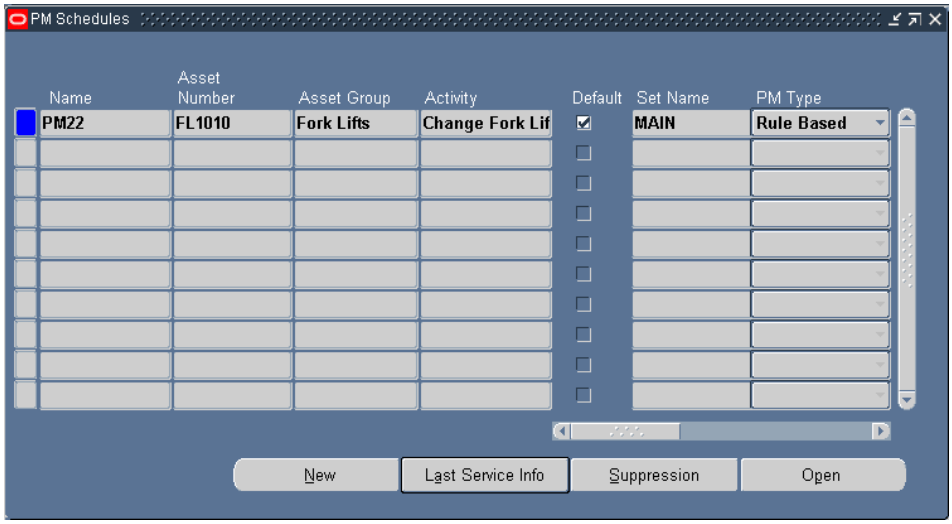
    1. Optionally choose New to create a new PM Schedule definition.

    2. Optionally choose Last Service Information to create or update Last Service Information.

    3. Optionally choose Suppression to create or update a suppression definition, associated with the current Activity/Asset Number or Activity/Asset Route combination.

    4. Optionally select a PM Schedule definition, and then choose Open to view its details.

PM Schedules



4. Close the window.

5. Save your work.

To create or update an activity suppression:

You can view, create, or update suppression definitions for Activity/Asset Number and Activity/Asset Route combinations.

1. Within the Activity Workbench pane, select any one of the three tabs: Results (Assets), Results (Rebuildables), or Results (Activities).

2. If you selected Results (Assets), expand either the Assets with Activities or Routes

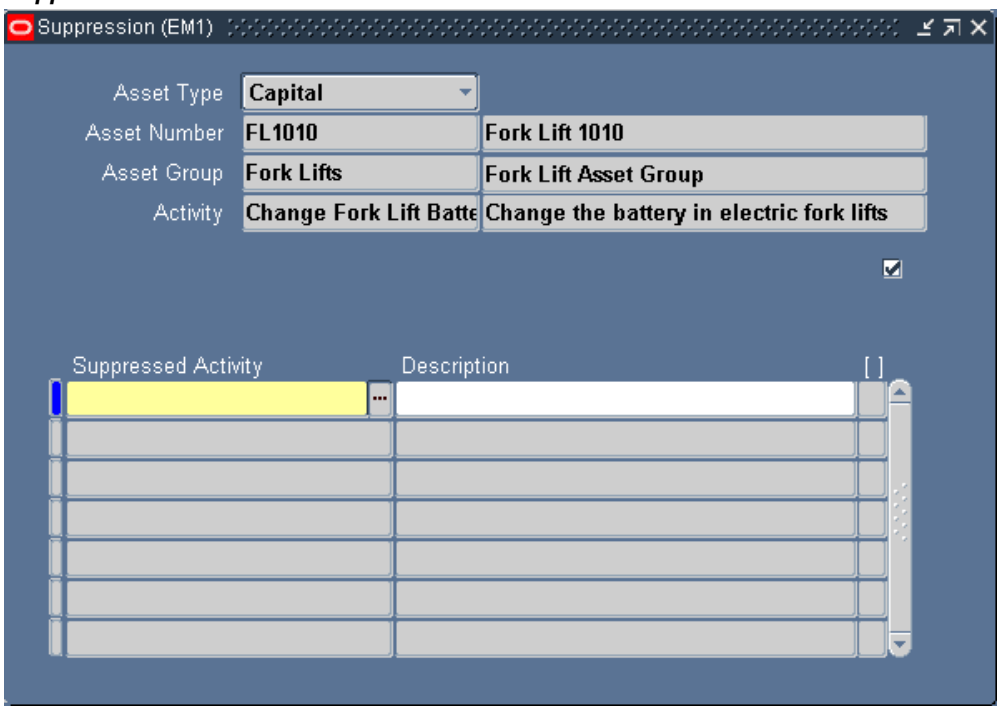
folders, then select the Asset Number or Route, respectively. You cannot create or update a suppression definition for a Asset Number that is not associated with an Activity.

If you selected Results (Rebuildables), expand the Rebuildables with Activities folder, expand either the Serialized with Activities or Non-serialized with Activities folder, then select a Serialized or Non-serialized Rebuildable, respectively. You cannot create or update a suppression definition for a Asset Number that is not associated with an Activity.

If you selected Results (Activities), expand the Activities with Association folder, then select an Activity.

3. Choose Suppression.

Suppression



4. Add or update the Suppression Activity associated with the current Activity.

5. Save your work.

To view or update last service information:

You can view or update last service information for Activity/Asset Number and Activity/Asset Route combinations.

1. Within the Activity Workbench pane, select any one of the three tabs: Results

(Assets), Results (Rebuildables), or Results (Activities).

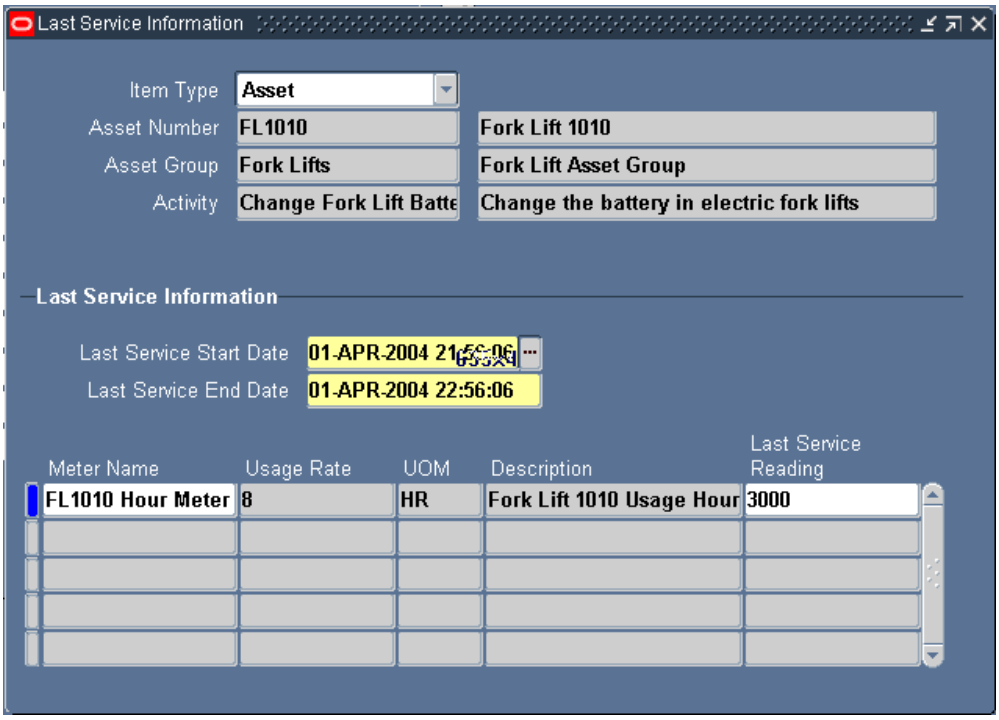
2. If you selected Results (Assets), expand either the Assets with Activities or Routes folders, then select the Asset Number or Route, respectively.

   If you selected Results (Rebuildables), expand the Rebuildables with Activities folder, then expand either the Serialized with Activities or Non-serialized with Activities folder, and finally select a Serialized or Non-serialized Rebuildable, respectively.

   If you selected Results (Activities), expand the Activities with Association folder, then select an Activity.

3. Choose Last Service to view or update last service information.

Last Service Information



4. Save your work.

To view estimated cost information:

You can view estimated cost information for an Activity. Estimating Activity costs is often necessary for planning and budgeting purposes.

1. Within the Activity Workbench pane, select any one of the three tabs: Results (Assets), Results (Rebuildables), or Results (Activities).

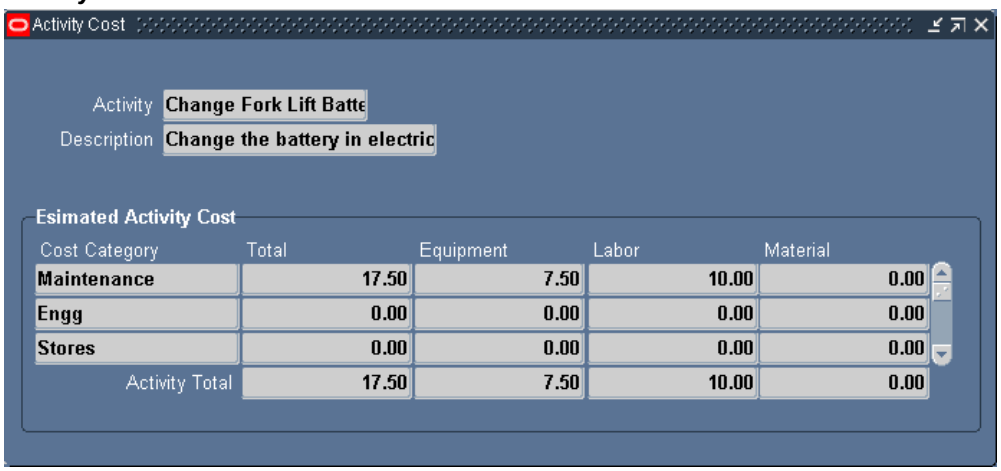
2. If you selected Results (Assets), expand either the Assets with Activities or Routes folders, then select the Asset Number or Route, respectively.

   If you selected Results (Rebuildables), expand the Rebuildables with Activities folder, then expand either the Serialized with Activities or Non-serialized with Activities folder, and finally select a Serialized or Non-serialized Rebuildable, respectively.

   If you selected Results (Activities), expand the Activities with Association folder, then select an Activity.

3. Choose Cost Estimate to view the Activity's cost estimation information.

Activity Cost



Setting Up Maintenance Bills of Material

You can identify and select the required items used by an Activity. A bill of material (BOM) is used to list all inventoried or Direct Items needed to perform a particular Activity, and is defined for each Activity. For example, you might have an Activity titled, Fork Lift Daily Maintenance. The items necessary to perform this Activity include water, fork lift lubrication oil, filled propane tanks, and shop rags. As Maintenance BOMs are created, they are associated to an Activity (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*).

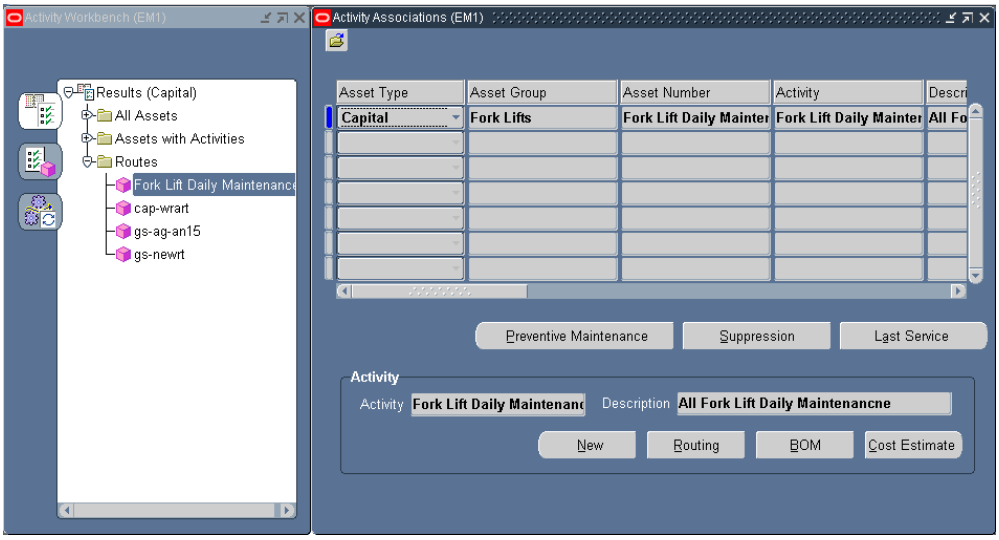
When a work order is created for an activity, the Maintenance BOM corresponding to the Activity explodes to the work order (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*); all components specified in the maintenance BOM are copied to the work order as material requirements.

To set up a maintenance BOM:

1. Navigate to the Activity Workbench window.

2. Choose Launch.

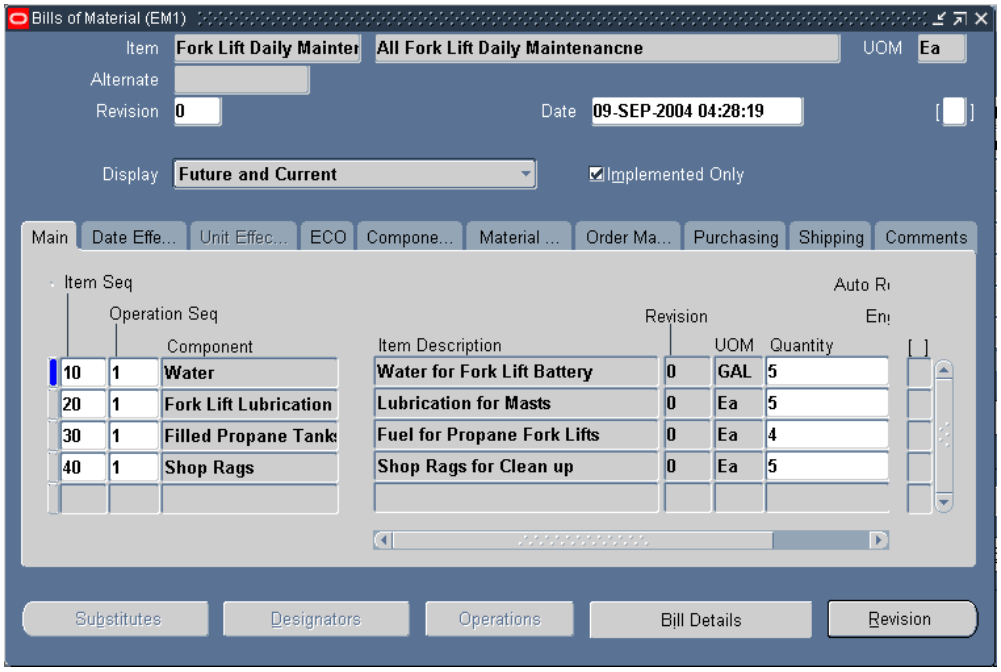
Activity Workbench



3. Within the Activity Workbench pane, select the Activity for which you wish to define the Bill of Material.

4. Choose BOM.

Bills of Material



5. Select an Activity from the Item field list of values.

6. Select the Main tab. The Item Sequence defaults.

7. Enter the Operation Sequence that this Component (material item necessary for the operation sequence, NOT rebuildable item) is needed for (See: Defining Maintenance Routes, *Oracle Enterprise Asset Management User's Guide*).

8. Enter necessary Components and their Quantities that are required to perform the activity. You can enter an unlimited number of inventory and non-inventory, direct items.

   Note: The Purchasing tab is enabled for Maintenance and Asset Bills of Material, and contains attributes specific to non-stockable, inventory items.

9. Optionally select the Auto Request Material check box to indicate that requisitions and purchase orders are created automatically, for the current component or Direct Item, when the work order is released.

10. Optionally select the Date Effectivity tab to specify effectivity dates per component.

11. Save your work.

For information on all remaining fields, See: Creating a Bill of Material, *Oracle Bills of Material User's Guide*

For information on defining activities using the Activity Workbench, See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*.

Associating Asset Numbers with Activities

After you have defined asset groups, asset numbers, and activities, you can associate the activities with assets and rebuildables. However, you can streamline the creation of activities and associations using an activity association template. Assets are associated with activities before entering the activity into a preventive maintenance schedule (See: Entering PM Scheduling Definitions).

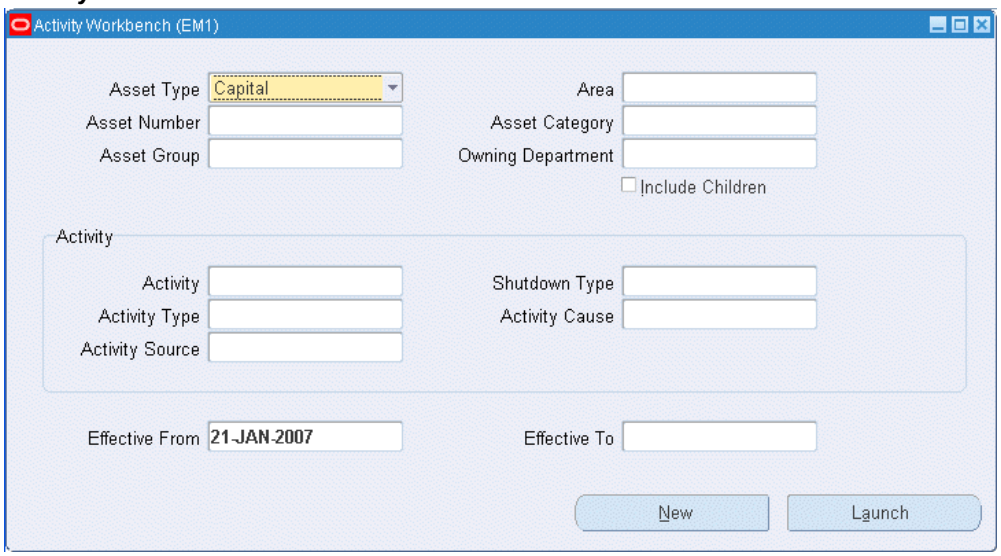
> **Note:** You can streamline the creation of Activity associations using an Activity Association Template. For example, when you create an asset group, and then Asset Numbers within that group, you do not need to utilize the Association window to associate those Asset Numbers with an Activity. If you create an Activity Association Template, the Activity that you associate with the current asset group automatically determines the activity that is associated with the current Asset Number (See: Activity Association Templates, *Oracle Enterprise Asset Management User's Guide*).

- Defining Asset Groups, *Oracle Enterprise Asset Management User's Guide*
- Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*
- Defining Rebuildable Serial Numbers, *Oracle Enterprise Asset Management User's Guide*
- Defining Activities, *Oracle Enterprise Asset Management User's Guide*
- Activity Association Templates, *Oracle Enterprise Asset Management User's Guide*

To associate Asset Numbers (capital or rebuildable inventory) with Activities using the Activity Workbench:

1. Navigate to the Activity Workbench window.

Activity Workbench



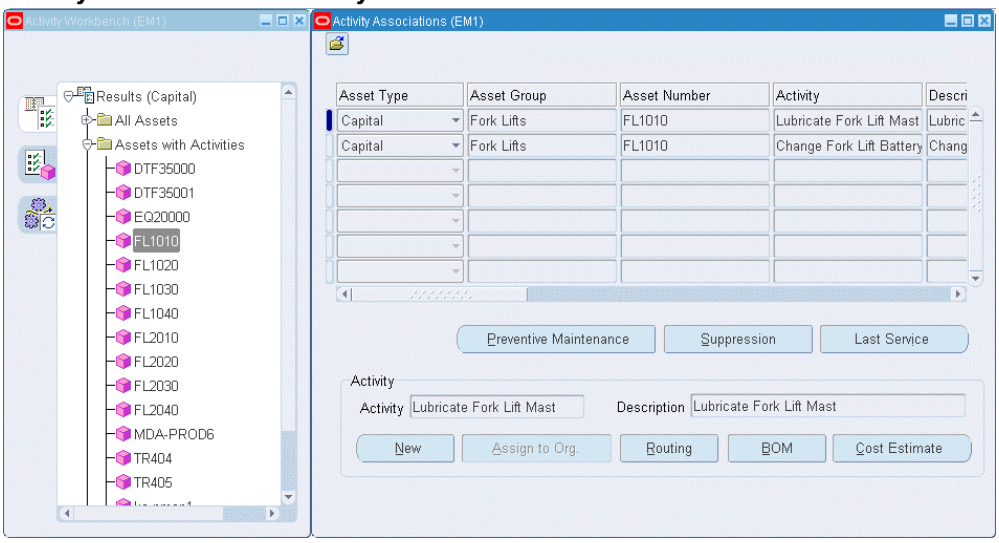
2. Select Asset or Rebuildable from the Item Type list of values. The item type determines the type of Asset Number you are associating with the Activity.

3. Optionally narrow your data selection by selecting the Asset Number you intend to associate with an Activity.

4. Optionally narrow your data selection by selecting and Activity.

5. Choose Launch.

Activity Workbench and Activity Associations



6. Depending on the Item Type chosen while performing step 2, select the corresponding tab within the Activity Workbench pane. For example, if you selected an Item Type of Asset, select the Results (Assets) tab. If you selected an Item Type of Rebuildable, select the Results (Rebuildables) tab.

7. Expand the All Assets (within the Results (Assets) tab) or All Rebuildables (within the Results (Rebuildables) tab) folder. If you specified an Asset Number while performing step 3, that Asset Number appears.

8. Select an Asset Number by highlighting it. The Activity Associations window appears. If the Asset Number is already associated with one or more Activities, those rows display within the window.

9. Select the next available row and then select an asset group.

10. Select an Asset Number. Asset Numbers associated with the previously selected asset group are available. Asset Numbers are always serial controlled. If you had selected a Non-serialized Rebuildable in the Asset Group field, then the Asset Number field is not required.

11. Select an Activity.

12. When an asset is transferred from one organization to another, its maintenance may be handled by a new eAM organization. Any activities that are assigned to the asset are visible in the Activity Workbench, within the new eAM organization. Activities that are not currently assigned to the new organization are displayed in blue.

    Choose **Assign to Org** to assign the selected activities to the new organization.

13. Save your work.

Defining Maintenance Routes

Operations are the instructions or tasks to perform a repair. Because each operation is associated with a department, each operation contains assigned resources, for example, trades people, outside service providers, and equipment (See: Defining Departments and Resources, *Oracle Enterprise Asset Management User's Guide*). A Maintenance Route is the set of operations or jobs necessary to perform an Activity. When a Work Order is created for an Activity, the Maintenance Route corresponding to the Activity explodes to the Work Order (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*); all operations specified in the Maintenance Route are copied to the Work Order as its operations.

Maintenance Routes are not Asset Routes. For information on Asset Routes, See: Defining Asset Routes, *Oracle Enterprise Asset Management User's Guide*.

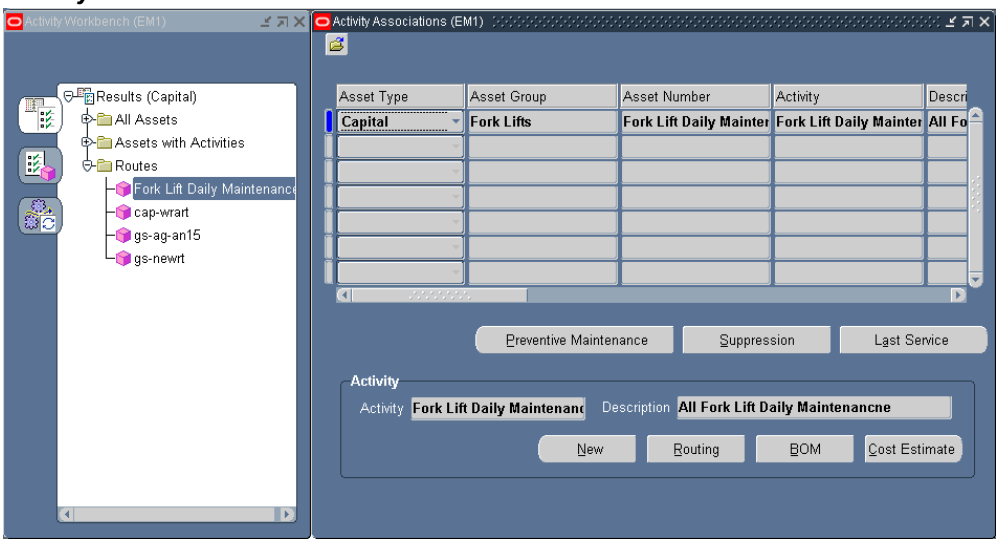
Enterprise Asset Management operations differ from manufacturing operations because manufacturing operations are performed sequentially, whereas eAM operations are not performed sequentially. In Enterprise Asset Management, operations may not be sequential. You can specify that one operation is dependent on another. Also, it is possible that two unrelated operations can happen concurrently. One operation can depend on multiple operations. Multiple operations can depend on one operation. The dependency may not be totally connected.

To define a maintenance route:

1. Navigate to the Activity Workbench window.

2. Choose Launch.

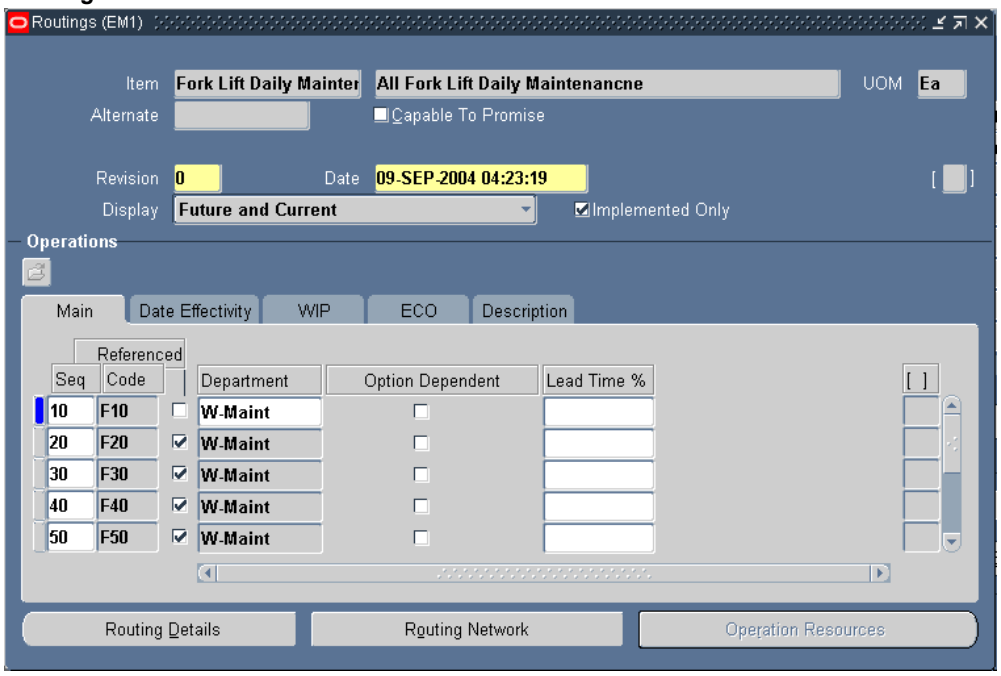
Activity Workbench



3. Within the Activity Workbench pane, select the Activity for which you wish to create the Routing.

4. Choose Routing.

Routings



5. Select an Activity from the Item list of values.

6. Within the Main tab, enter an operation Sequence, or let the system automatically generate it for you, according to your profile setup (See: Item and Operation Sequence, *Oracle Bills of Material User's Guide*).

7. To copy or reference standard operations into a routing, use the operation Code list of values. You can define a new standard operation by selecting Standard Operations from the Tools menu.

   If you use a standard operation code, the operation information for that code is copied into the current operation. You can then update that information as desired (See: Creating a Standard Operation, *Oracle Bills of Material User's Guide*).

8. Select a Department where the operation is performed.

9. Select the Referenced check box to indicate that any changes to standard operations are reflected in the routing. If the standard operation is selected, this check box is selected by default.

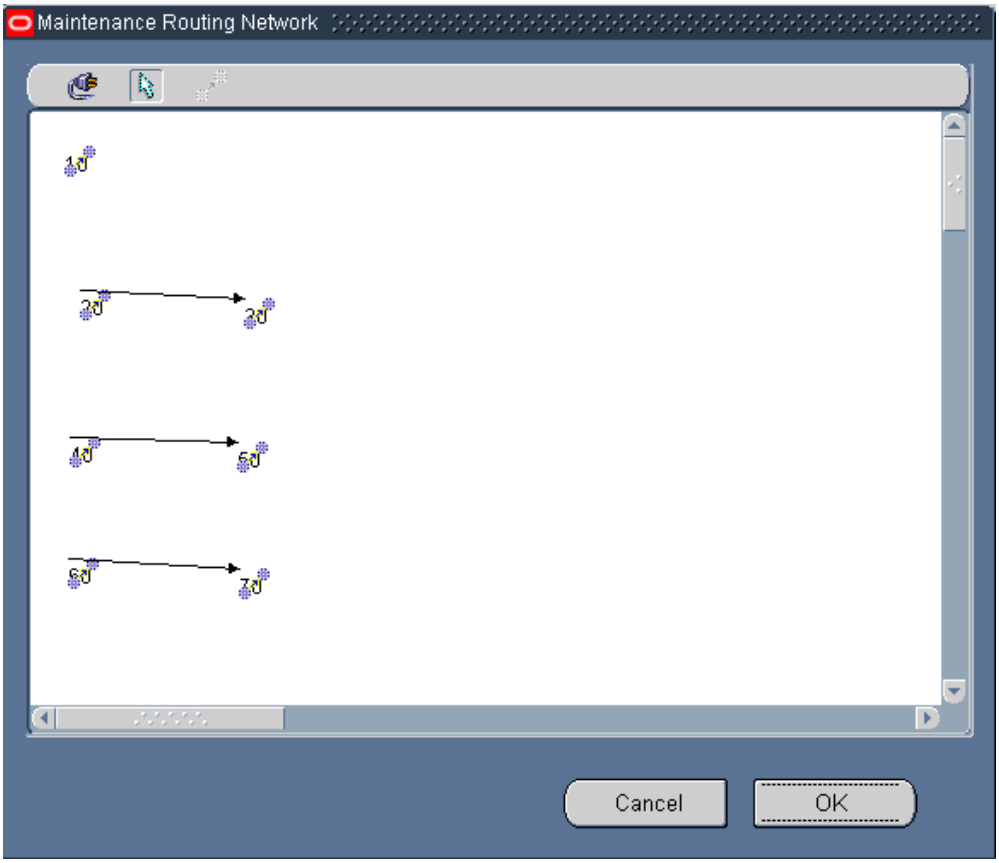
10. The Effective date defaults to the system date, but you can optionally change this (See: Effective Date Fields, *Oracle Bills of Material User's Guide*).

11. Optionally enter a Disabled date to indicate the current operation's expiration.

12. Select the Description tab. Enter a Description for the current operation.

13. Optionally choose Routing Network to view the operation dependencies for the current asset route.

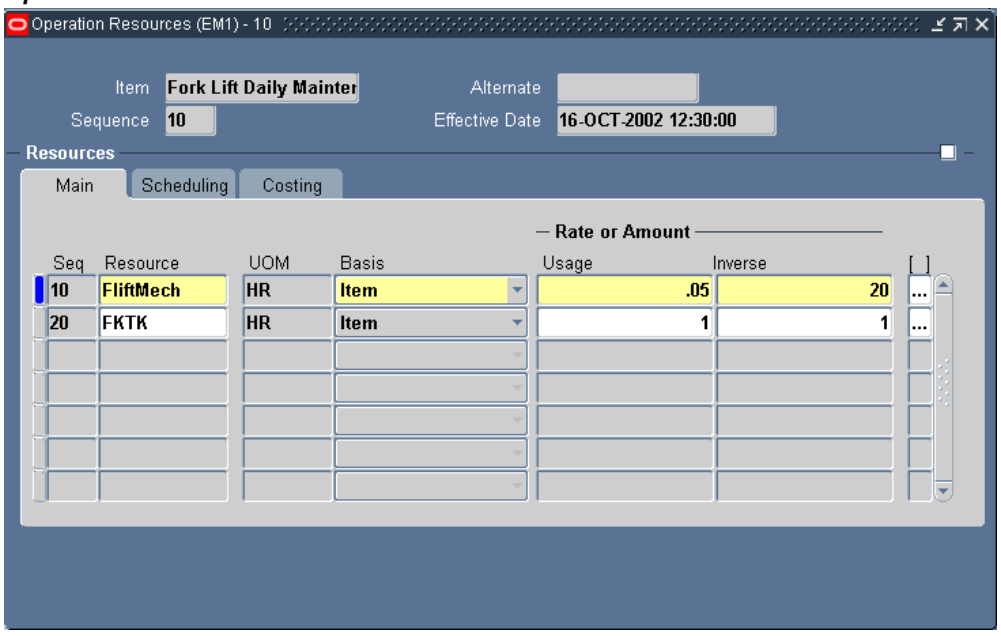
Maintenance Routing Network



You can schedule operations to execute in parallel, sequence, or through dependent steps. In the screen shot above, for example, Operations 20, 30, 40, and 50 are dependent on Operation 10, since there is a line connecting the operations. These operations also run in parallel to each other. The operation numbers identify the sequence that they are performed (See: Preparing Work Order Operations, *Oracle Enterprise Asset Management User's Guide*).

14. Optionally select an operation, then choose Operation Resources to view the resources associated with the current department attached to this operation (See: Defining Departments and Resources, *Oracle Enterprise Asset Management User's Guide*). Optionally you can modify the resources listed (See: Assigning Operation Resources, *Oracle Bills of Material User's Guide*).

Operation Resources



15. Save your work.

    For information on all remaining fields, See: Creating a Routing, *Oracle Bills of Material User's Guide*

    For information on defining Activities using the Activity Workbench, See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*.

Creating Activity Templates

You can streamline the creation of Activity associations using an Activity Association Template. For example, when you create an asset group, and then Asset Numbers within that group, you do not need to utilize the Association window to associate those Asset Numbers with an Activity. If you create an Activity Association Template, the Activity that you associate with the current asset group automatically determines the activity that is associated with the current Asset Number.

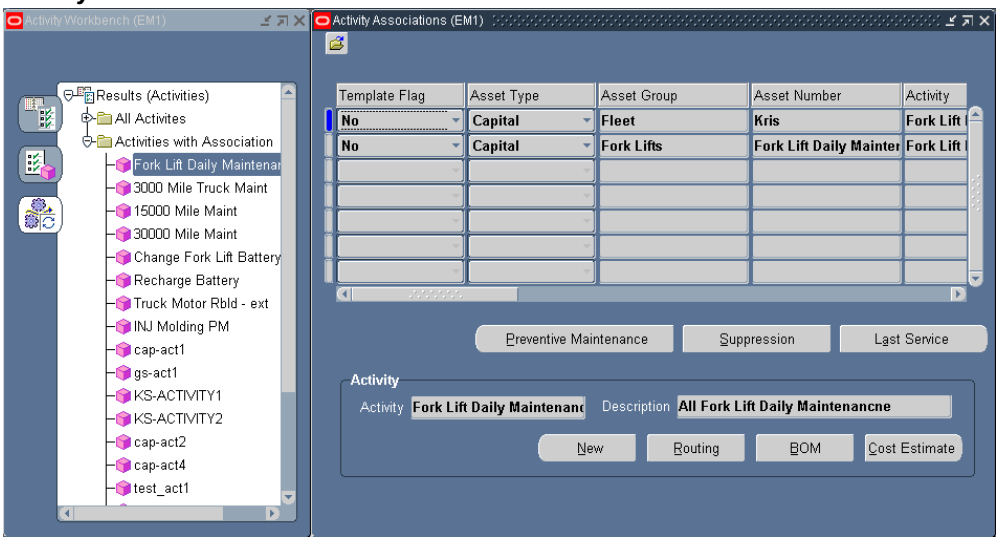
While creating an Asset Activity association within the Activity Workbench, you also have the option of creating an Activity Template at the same time.

To create an Activity Template:

1. Navigate to the Activity Workbench window.

2. Choose Launch.

Activity Associations



3. Select the Results (Activities) tab.

4. Optionally expand the All Activities folder to display all valid Activities, based on your chosen selection criteria, within the Activity Workbench window. You can select an Activity and view its related Activity information within the corresponding Activity Associations window, if an association exists. You can associate an Asset Number with the current, selected Activity using the corresponding Activity Associations window. You can select an Activity within the Activity Workbench pane, and then view its related information within the corresponding Activity Associations window. For a selected Activity, you can create a new Activity, create or update its associated Maintenance Routing, create or update the associated Maintenance BOM, and view cost estimations.

5. Optionally expand the Activities with Association folder to display all Activities that are associated with an Asset Number, based on your chosen selection criteria, within the Activity Workbench window. You can select an Activity within the Activity Workbench pane, and then view its related information within the corresponding Activity Associations window. For a selected Activity, you can create a new Activity, create or update its associated Maintenance Routing, create or update the associated Maintenance BOM, and view cost estimations.

6. Select Yes from the Template Flag list of values to indicate that this Activity and asset association is also an Activity Association Template. If you select No, an asset and Activity association is created.

7. For information on all remaining fields within the Activity Associations window, See: Associating Asset Numbers with Activities, *Oracle Enterprise Asset Management User's Guide*.

8. Save your work.

Related Topics

Defining Activities, *Oracle Enterprise Asset Management User's Guide*

Preventive Maintenance Setup, *Oracle Enterprise Asset Management User's Guide*

eAM Cost Estimation, *Oracle Enterprise Asset Management User's Guide*

Activity Association Templates, *Oracle Enterprise Asset Management User's Guide*

Rebuildable Item Setup

Rebuildable Item Setup tasks include:

- Defining Rebuildable Items, page 2-105
- Defining Rebuildable Serial Numbers, page 2-107
- Rebuildable Item/Activity Association, page 2-111
- Defining Rebuildable Bills of Material, page 2-114

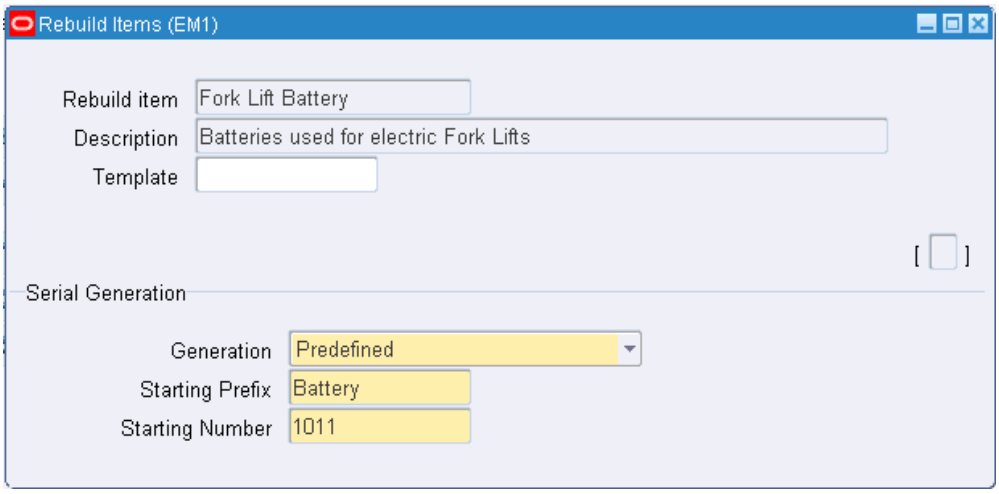
Defining Rebuildable Items

Items that are installed, removed, and refurbished are referred to as Rebuildable Items. Examples of Rebuildable Items include motors, control boxes, and computer boards. Rebuildable Items might need to be removed or refurbished while a parent Asset is maintained. Rebuildable Items are inventory items; you have the option to serialize them.

To set up rebuild items:

1. Navigate to the Rebuild Items window.

Rebuild Items



2. Enter the name of the Rebuild Item.

3. Enter a Description for this Rebuild Item, up to 240 characters.

4. Select the *@Rebuildable* Template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.

   Note: You can create Rebuild Items using the template described above, or you can copy a Rebuild Item from an existing Rebuild Item (See: Defining Items, *Oracle Inventory User's Guide*).

5. In the Serial Generation region, select Predefined for the Generation value.

6. Define a Starting Prefix and Starting Number for this Rebuild Item. If Serial Generation is set at Item Level for the Organization, the system defaults the prefix, along with the starting number sequence, when a new Serialized Rebuild is created for this Rebuild Item.

7. Save your work.

To access failure analysis information:

You can access the Failure Set page to view failure tracking codes that are assigned to the current Rebuild Item.

1. From the Rebuild Items window, select Maintain Failure Set from the Tools menu. If the Rebuild Item does not have an associated Failure Set, this menu option is disabled. See: Defining Failure Codes and Sets, *Oracle Enterprise Asset Management*

User's Guide and Failure Analysis Overview, *Oracle Enterprise Asset Management User's Guide*.

2. Close the window.

To associate rebuildable items to multiple organizations:

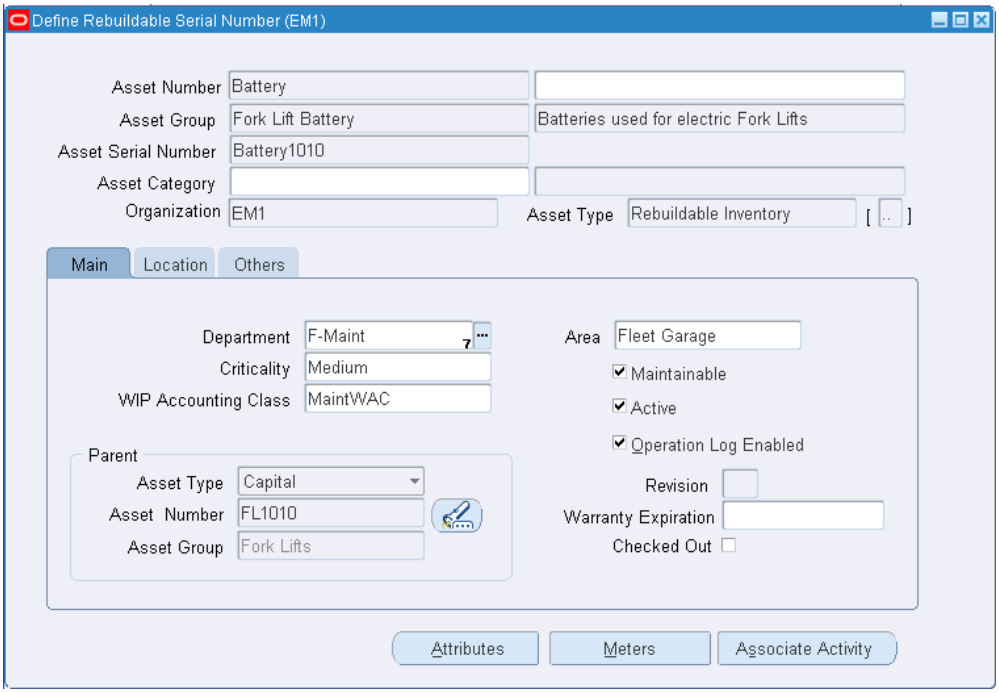
1. From the Rebuild Items window, select Item Details from the Tools menu.
2. Select the Organization Assignment tab.
3. Enter additional organizations in the available table.
4. After saving your work, you can associate this Rebuildable Item with an Activity (See: Rebuildable Item/Activity Association, *Oracle Enterprise Asset Management User's Guide*).

Defining Rebuildable Serial Numbers

To set up rebuildable serial numbers individually:

1. Navigate to the Define Rebuildable Serial Number window.

Define Rebuildable Serial Numbers



2. Enter an Asset Number (Rebuildable Serial Number) if you do not have them automatically generated. Accept or modify the default Asset Number, if you have automatic generation enabled (See: Defining eAM Parameters, *Oracle Enterprise Asset Management User's Guide*).

3. Select an asset group. This is the asset group (Rebuildable Item) you are associating with the Rebuildable Serial Number you are currently creating.

   Note: After an asset group (Rebuildable Item) is associated with a Rebuildable Serial Number and then saved, you cannot change it.

4. The Asset Serial Number (Rebuildable Serial Number) defaults to the Asset Number. You can optionally select the next serial number for the current organization.

   The Asset Serial Number might have a non-unique value across organizations, but the Asset Number must be globally unique, regardless of the defaulting value.

5. Optionally associate this Rebuildable Serial Number to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes and Sets, *Oracle Enterprise Asset Management User's Guide*.

6. Optionally enter a description for the Rebuildable Serial Number of up to 240 characters.

7. Within the Main tab, optionally select an owning Department for this Rebuildable Serial Number. This represents the crew responsible for the Rebuildable Serial Number. Notifications, regarding Work Requests, are sent to the Primary Approver of the Work Request's associated Asset Number's current owning department (See: Defining Department Approvers, *Oracle Enterprise Asset Management User's Guide* and Defining Asset Numbers, *Oracle Enterprise Asset Management User's Guide*).

8. Optionally select a Criticality code to indicate the importance of the Asset Number to the organization. This field is for information purposes.

9. Optionally select a WIP Accounting Class to identify the Expense cost elements associated with the work performed, such as materials, labor, and resources.

10. Optionally enter the Area where this Asset Number resides. This is a user defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See: Setting Up Areas, *Oracle Enterprise Asset Management User's Guide*).

11. Indicate whether this asset is maintainable. If the Maintainable check box is selected, you can create work requests and work orders for this asset.

    For example, you can create an asset for cost-tracking purposes. We may want to see the cost for all top level assets in an asset hierarchy, but we do not want to maintain those assets. In this situation, do not select this check box.

    > **Note:** After work orders are created for this asset, you cannot clear this check box unless those work orders are at Complete, Canceled or Closed statuses.

12. Optionally select the Active check box to indicate that the asset is functioning, for example, maintenance Work Orders can be created for this asset. This check box change when you activate or deactivate an asset from the Tools menu.

13. Indicate whether Asset Operational Logging is enabled for this asset. If you select the Operation Log Enabled check box, you can view all current and past asset operational information, such as Check Out, Check In, associated Work Requests and Work Orders. You can remove or add a child asset, remove a parent asset, activate or deactivate the asset, transfer the asset to another location, and receive or issue the asset into/from Inventory. By default, logging is turned off for an asset. See: Asset Operational Logging, *Oracle Enterprise Asset Management User's Guide*.

14. You can optionally associate the current Rebuildable Serial Number with a parent capital asset or parent rebuildable.

1. Select an Asset Type. Valid values are Capital and Rebuildable Inventory.

2. If you selected a Capital Asset Type, optionally select a parent Asset Number. If you previously selected a Rebuildable Inventory Asset Type, optionally select a Rebuildable Serial Number from the Asset Number list of values.

3. If you selected a Capital Asset Type, optionally select a parent asset group. If you previously selected a Rebuildable Inventory Asset Type, optionally select a Rebuildable Item from the Asset Group list of values.

15. The Checked Out check box indicates whether the current asset is checked in or out. You can check out an asset to view asset details, enter collection plan data, enter meter information, and optionally create a Work Request, within Maintenance Super User. This check box is protected against update. See: Asset Operational Logging, *Oracle Enterprise Asset Management User's Guide*.

16. Within the Location tab, the Subinventory and Locator fields are view-only, displaying the subinventory location of this asset within Inventory and its Locator segments. If this asset if received into Inventory, these fields are populated.

17. Optionally select a Location Code to specify a physical location for this asset. The Address field simultaneously populates with the selected Location Code's associated Address. The previously defined Area is organization-specific and not associated to a physical location.

    Valid Location Codes are defined within Oracle Install Base.

18. The Address defaults as the populated Location Code's associated address. You can optionally select a different address. If the current asset is in stores, the address of the Location's organization appears (See: Stores, *Oracle Enterprise Asset Management User's Guide*).

19. Optionally select a Production Organization. The list of values displays the production inventory organizations maintained by the current asset's organization. See: Enabling Organizations for Enterprise Asset Management, *Oracle Enterprise Asset Management User's Guide*for information on designating eAM organizations to maintain equipment items for designated production organizations.

20. Select an Equipment Item. This is mandatory if you populated the Production Organization field. Items that were defined with an equipment template (See: Item Templates, *Oracle Inventory User's Guide*), or with the Equipment item attribute enabled (See: Physical Attributes, *Oracle Inventory User's Guide*), are available.

21. Enter an Equipment Serial Number. This is mandatory if you populated the Production Organization field. This is the specific name of the component within the Equipment Type, defined above.

22. Select the Others tab to optionally enter the Fixed Asset region information, if Oracle Fixed Assets is installed. This is Enterprise Asset Management's integration with Fixed Assets. Enter a Category, which is a grouping of fixed assets, defined within Oracle Fixed Assets. This category is tied to a set of books, and must be the same set of books that is assigned to the current Enterprise Asset Management organization. See: Setting Up Asset Categories, *Oracle Fixed Assets User's Guide*.

23. Optionally enter the Number if Oracle Fixed Assets is installed. This represents a fixed asset number that belongs to a fixed asset category, associated with the asset.

24. The Property Management fields, Location Name and Location Code, default from a Property Manager export process (Export Locations to Enterprise Asset Management), if Oracle Property Management is installed. These fields are disabled. These values cannot be changed.

25. Before the above information is passed from Property Manager into Enterprise Asset Management, asset groups (rebuildable items) need to first be established. See: Defining Rebuildable Items, *Oracle Enterprise Asset Management User's Guide*.

26. Optionally choose Location Details to view or update the Property Manager field information.

27. Save your work.

28. Optionally select Attributes to enter attribute values for the asset (See: Setting Up Attributes, *Oracle Enterprise Asset Management User's Guide*).

    Existing, enabled attribute groups appear (See: Setting Up Attributes, *Oracle Enterprise Asset Management User's Guide*). These attribute groups are optional. You do not need to enter values for all existing attribute groups. From this window, you cannot generate attribute groups.

29. Optionally choose Meters to associate the current rebuildable serial number to one or more meters.

30. Optionally choose Associate Activity to associate the current rebuildable serial number to an activity.

> **Additional Information:** To establish this Rebuildable Serial Number in Inventory, you must execute any receipt transaction, such as a Miscellaneous Receipt or a Purchase Order Receipt.

Rebuildable Item/Activity Association

After you have defined rebuildable items and activities, you can associate activities to the rebuildable items. For example, you may have a Rebuild Engine Activity, and an Engine Rebuildable Item. After you create a rebuild work order for the engine, the

associated Rebuild Engine Activity attaches its associated maintenance BOM (material) and maintenance routing (resources) to the work order.

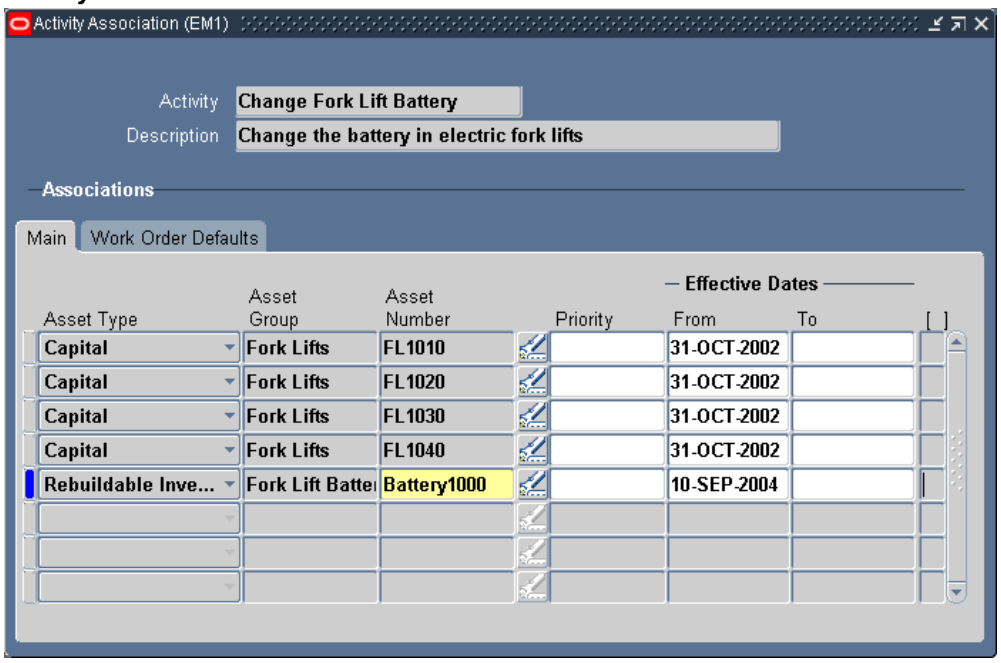
> **Note:** Activity association for Rebuildable Serial Numbers are streamlined by using Activity Association Templates. If an Activity Template is defined for a Rebuildable Item, the activity association automatically creates when a new serial number is created for that item, within the maintenance organization.

- Defining Rebuildable Items, page 2-105
- Defining Activities, page 2-53
- Rebuild Work Orders, page 3-14
- Defining Maintenance Routes, page 2-99
- Setting Up Maintenance Bills of Material, page 2-93

To associate Rebuildable Items with Activities:

1. Navigate to the Activity Association window.

Activity Association



2. Select an Activity.

3. Within the Main tab, select Rebuildable from the Item Type list of values.

4. Select a Rebuildable Item from the Asset Group list of values.

5. If the Rebuildable Item is serial number controlled (See: Defining Rebuildable Items, page 2-105), select a Rebuildable Serial Number from the Asset Number list of values.

6. Optionally select a Priority Code. This field is for information purposes.

7. Optionally enter Effective Dates. If the Effective From field is left blank, the system date defaults. If the Effective To field is left blank, it defaults as NULL.

8. Within the Activity tab, the Activity Cause defaults from the Activity definition (See: Defining Activities, page 2-53), specifying what situation caused this work to generate. For example, Breakdown, Vandalism, Normal Wear, or Settings. Optionally you can select an Activity Cause.

9. The Activity Type defaults from the Activity definition (See: Defining Activities, page 2-53). This code indicates the type of maintenance activity needed to perform for this Activity. It is used when defining a job or a standard job. It should remain generic, and should not describe the job in detail. For example, Inspection,

Overhaul, Lubrication, Repair, Servicing or Cleaning. Optionally select an Activity Type.

10. Optionally select the Tagging Required check box to indicate whether tag out procedures are required.

11. The Owning Department field is used when associating asset numbers to activities (See: Activity Association Templates, page 2-58).

12. Save your work.

Defining Rebuildable Bills of Material

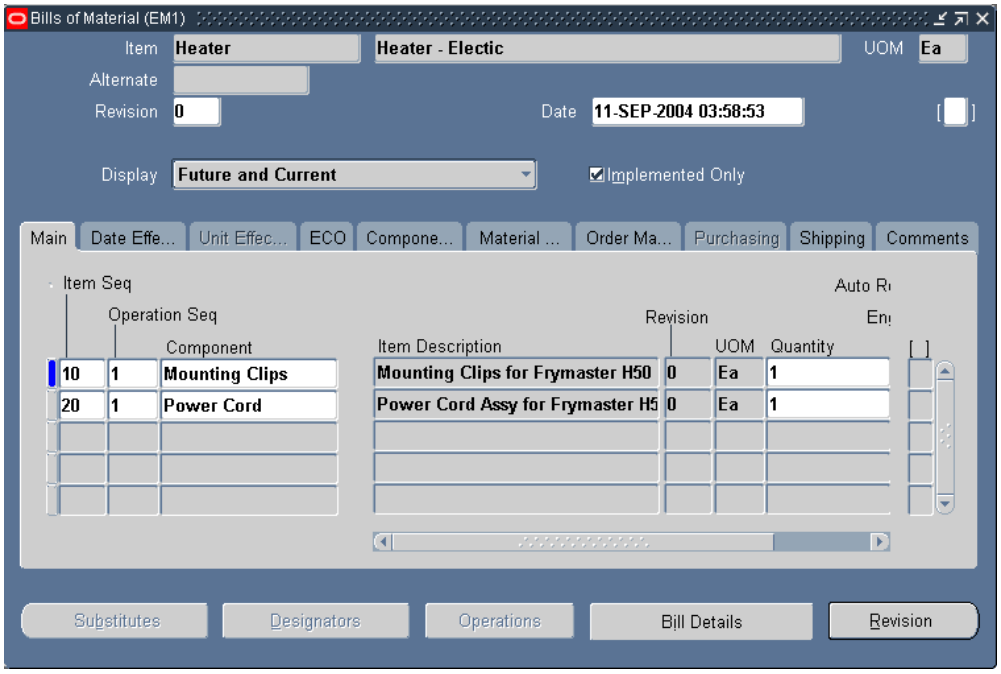
You can identify and select the required items that make up a Rebuildable Serial Number. A bill of material (BOM) is used to list all items and components that make up a particular asset or rebuildable, and is defined for each Rebuildable Item. The items defined on a Rebuildable BOM are standard inventory components and/or non-inventory, direct items (See: Defining Items, *Oracle Inventory User's Guide*).

> **Note:** If you are not using Project Manufacturing applications, Project Parameters are defined for your eAM enabled organization to successfully create Rebuildable Items. This is required because a Rebuildable BOM is of type Model/Unit Effective and this BOM type is currently allowed if PJM organization parameters are set up for the eAM enabled organization to which the Rebuildable Item has been assigned. To define Project Parameters, open the Project Parameters window using Project Manufacturing Super User responsibility and without entering any data in the window, save the record. If you plan to use Project Manufacturing, see: Project Manufacturing Integration Setup, page 2-190 for information on defining Project Parameters.

To set up a rebuildable BOM:

1. Navigate to the Bills of Material window.

Bills of Material



2. Select a Rebuildable Item from the Item list of values.
3. Within the Main tab, the Item Sequence and Operation Sequence values default.
4. Enter the inventory or non-inventory Component to make up the Rebuildable Serial Number.
5. Enter the Quantity of that component necessary for the Rebuildable Serial Number.
6. Save your work.

Related Topics

Defining Items, *Oracle Inventory User's Guide*

Associating Asset Numbers with Activities, page 2-96

Defining Subinventories, *Oracle Inventory User's Guide*

Defining Stock Locators, *Oracle Inventory User's Guide*

Creating a Bill of Material, *Oracle Bills of Material User's Guide*

Non-Stock Direct Item Setup

Non-Stock Direct Items can represent items that are not stocked in inventory, such as services that are purchased from a supplier. Non-Stock Direct Items are not stocked in inventory; they are defined in the Item Master as an inventory item, Purchased, Purchasable, and the Stockable check box cleared. See: Purchasing Attribute Group, *Oracle Inventory User's Guide*. These items are contrived as "one off", bought directly from a vendor for a specific Work Order and Operation. These items are delivered directly to the Shop Floor for maintenance Work Order execution.

You can add only coded items (i.e. Inventory Stockable and Non-Stockable-Direct items) to the Maintenance Bills of Material BOM. (See: Defining Direct Item Material Requirements, page 3-43).

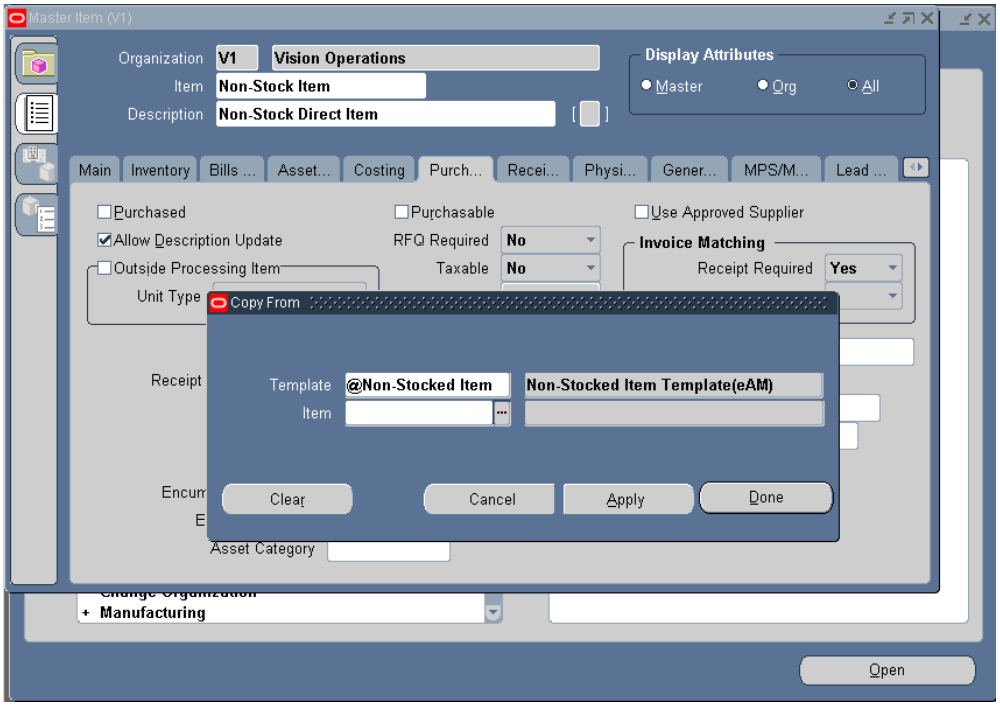
To set up Non-Stock Direct Items, access the Master Item window within Oracle Inventory, and apply the @Non Stocked Item template. See: Defining Items, *Oracle Inventory User's Guide*. Description Based Direct Items are not set up within Oracle Inventory.

If direct items exist on a Bill of Material, they default as material requirements when creating a Work Order for that asset; however, you can add additional direct item material requirements to an existing Work Order.

To set up a Non-Stock Direct Item:

1. Navigate to the Master Item window.

Master Item



2. Enter the non-stock direct Item name.
3. Enter a Description.
4. From the Tools menu, select Copy From.
5. Select the @Non-Stocked Item Template.
6. Choose Apply.
7. Choose Done.
8. Save your work. The Stockable check box is clear and the Purchased and Purchasable check boxes are selected.

Related Topics

Defining Rebuildable Bills of Material, page 2-114

Setting Up Maintenance Bills of Material, page 2-93

Setting Up Asset Bills of Material, page 2-77

Defining Items, *Oracle Inventory User's Guide*

Preventive Maintenance Setup

eAM can generate Work Orders automatically based on meter readings, runtime and/or calendar days. An example of meter-based preventive maintenance is your car's oil changes. Most car manufacturers recommend that you change your engine oil every 3,000 miles or six months, whichever comes first.

To set up the above scenario, you would first define your car's odometer as a meter. Next, you would associate that meter to an asset (your car), using the Asset Meter Association window. After you have associated the meter to the asset, you can associate the Maintenance Activity (oil change) that should occur, based on the meters you have defined. This is done via Preventive Maintenance Scheduling.

This section includes the following topics:

- Project and Task Setup, page 2-118
- Defining Meter Templates, page 2-118
- Defining Meters, page 2-121
- Defining Set Names, page 2-124
- Defining a Preventive Maintenance Template, page 2-126
- Entering Preventive Maintenance Schedule Definitions, page 2-134

Project and Task Setup

Work Orders can associate with a Project, Task or Seiban number, at the time of implementing PM suggestions to work orders. The Forecast Work Order window is customizable.

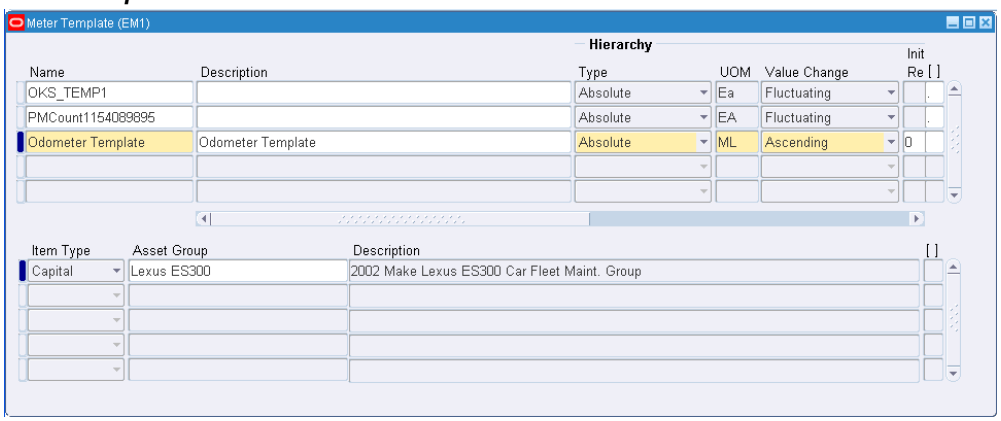
Defining Meter Templates

There are two ways to create meters. You can create them within the Meter window, or create them first using the Meter Template window, and then next instantiating them when defining an asset. If you create Meters using the Meter window (See: Defining Meters, page 2-121), associate that meter definition with individual Asset Numbers manually. If you utilize the Meter Template definition functionality, you can associate that Meter Template with asset groups. After the association is created, when an Asset Number (Asset Numbers or Serialized Rebuilds) is created within that asset group (asset group or Rebuildable Item), the system automatically creates a new instance of the meter, associated with the specific Asset Number. This enables you to streamline your meter setup. However, the meters are not created retroactively; it applies to Asset Numbers created after the Meter Template was created.

To define Meter Templates:

1. Navigate to the Meter Template window.

Meter Template



2. Enter a unique meter template Name.

3. Enter the template's Description.

4. Select the meter Type.

   When entering meter readings for the current meter, if the meter is an Absolute type, the Value field is enabled. If the meter is a Change type, the Change field is enabled.

5. Select a unit of measure (UOM). After the meter is created, this field is disabled.

6. Select whether the meter readings is Ascending, Descending, or Fluctuating. A fluctuating meter reading is one that can go up and down, for example, a temperature gauge. As production units pass through meters, meter readings increment. Another example of an ascending meter is a car odometer. Some liquid dispensers start full and record decreasing readings as material is used.

   Note: If the meter is fluctuating, it is not used in Preventive Maintenance scheduling.

7. Optionally enter an Initial Reading. This is automatically used as the first meter reading entered, or each new instance of the meter that is created and associated with an Asset Number (or Serialized Rebuild) via the Meter Template.

8. If you select the Used in Scheduling check box, the meter is used in Preventive Maintenance Scheduling. If there are any scheduling rules associated with this meter, you cannot clear this check box. If this is a fluctuating meter, this check box is disabled. If the Used in Scheduling check box is selected, the Usage Rate (per day) and Number of Past Reading fields are mandatory.

9. Optionally select the Required check box to indicate whether readings for the meter are required during work order completion, regardless of whether a work order was generated from Preventive Maintenance or if it was created manually.

   You can select or clear this check mark at any time; it impacts only future meter readings. However, if the meter is a Primary Failure Meter for any current asset/meter association, you cannot clear the check box.

10. Enter a usage Rate (per day). This field works in conjunction with the Number of Past Readings field to provide daily meter usage estimates, based on historical readings. It supplies the system benchmark data that is used to set the occurrence of scheduled PMs. Rate per day is referred to in the absence of a sufficient value in the Number of Past Readings field.

    This field is mandatory if you have selected the Used in Scheduling check box.

11. Enter a value for the Number of Past Readings. This value designates how many readings prior the scheduler should go to for calculating the usage rate. If there is an insufficient number of readings (for example four, instead of the required five), the system continues the calculation based on the usage Rate per day.

    This field is mandatory if you have selected the Used in Scheduling check box.

    > **Note:** If you enter a value of 1, the system perpetually calculates at the usage Rate per day.

12. Select the meter template effective dates. If left blank, the meter is effective all of the time. You can disable a meter effective on a specific date by selecting a To date.

13. Save your work.

To associate Meter Templates with Asset Groups:

If you utilize the Meter Template definition functionality (See: Defining Meter Templates, page 2-118), you can associate that Meter Template with asset groups, within the same Meter Template window. After you create the association, when a new Asset Number (Asset Numbers or Rebuildable Serial Numbers) is created within that asset group (asset group or Rebuildable Item) a new instance of the corresponding meter is automatically created. This enables you to streamline your Meter setup.

1. Select an Item Type. Valid values are Capital or Rebuildable.

2. Select an asset group. If you previously selected Capital, asset groups are available for selection. If you previously selected Rebuildable, Rebuildable Items are available for selection.

3. Save your work. After saving, every Asset Number defined as part of the current asset group automatically associates with the Meter Template; you do not need to create this association manually.

Defining Meters

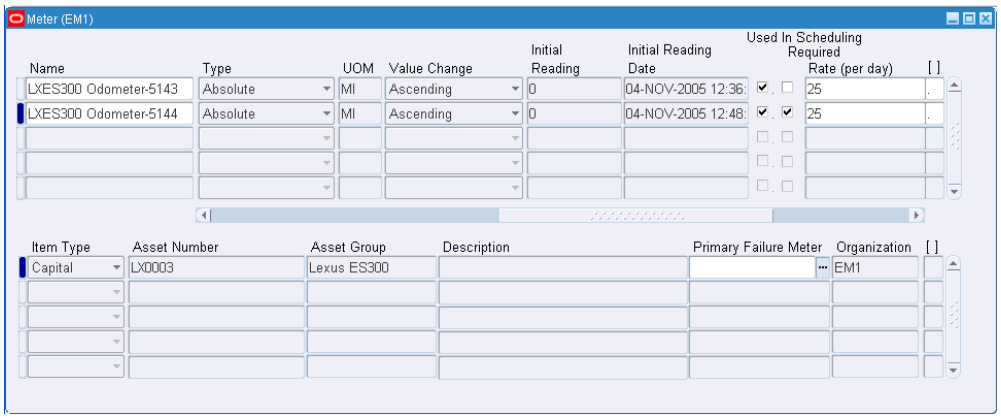
Alternatively, you can create Meters using the Meter window. Manually associate the meter definition with individual Asset Numbers. If you utilize the Meter Template definition functionality, you can associate that Meter Template with asset groups (See: Defining Meter Templates, page 2-118).

Defining Meters

To define a meter within the Meter window:

1. Navigate to the Meter window.

Meter



2. Enter a unique meter Name.

3. Enter a Description for this meter.

4. Optionally select a Source Meter from the list of values. As the Source Meter's readings are updated, the associated target meter (current meter) is updated automatically. Companies can associate a Source Meter to an Asset Number/Meter association. The Source Meter reading subsequently feeds corresponding meters that are associated with assets within the Meter Hierarchy.

   For example, some companies must track units, using a Meter, to a parent asset

(truck). These units should then trickle down to all children components of that parent asset (transmission, tires, belts). Each child component has different Meters to track the units and history on the individual components. If the transmission is replaced, the Rebuild Replacement process enables you to remove the replaced transmission from the meter hierarchy and add the new transmission to the hierarchy. From that point, meter readings logged to the truck should also update the transmission's child meter with those units. Any time a reading is logged to the truck, it will update the transmission child Meter with those units.

5. Select the meter Type.

   When entering meter readings for the current meter, if the meter is an Absolute type, the Value field is enabled. If the meter is a Change type, the Change field is enabled. A Change type meter is used to measure incremental changes in meter readings. The incremental amount is added to the current meter reading. After meter readings are entered for a Change Meter, you cannot change the type to Absolute.

6. Select a unit of measure (UOM), associated with this meter. After the meter is created, this field is disabled.

7. Select whether the meter readings are Ascending, Descending, or Fluctuating. A fluctuating meter reading is one that can go up and down, for example, a temperature gauge. As production units pass through meters, meter readings increment. Another example of an ascending meter is a car odometer. Some liquid dispensers start full and record decreasing readings as material is used.

   Note: Fluctuating meters are not used in Preventive Maintenance scheduling.

   After the meter is created, this field is disabled.

8. Enter an Initial Reading. This is automatically used as the first meter reading entered, or each new instance of the meter that is created and associated to a Asset Number via the Meter Template.

9. If you select the Used in Scheduling check box, the meter is used in Preventive Maintenance Scheduling. If there are any scheduling rules associated with this meter, you cannot clear this check box. If this is a fluctuating meter, this check box is disabled. If the Used in Scheduling check box is selected, the Usage Rate (per day) and Use Past Reading fields become mandatory.

10. Optionally select the Required check box to indicate whether readings for the meter are required during work order completion, regardless of whether a work order was generated from Preventive Maintenance or if it was created manually.

    You can select or clear this check mark at any time; it impacts only future meter

readings. However, if the meter is a Primary Failure Meter for any current asset/meter association, you cannot clear the check box.

11. Enter a usage Rate (per day). This field works in conjunction with the Number of Past Readings field to provide daily meter usage estimates, based on historical readings. It supplies the system benchmark data that is used to set the occurrence of scheduled PMs. Rate per day is referred to in the absence of a sufficient value in the Number of Past Readings field.

    This field is mandatory if you have selected the Used in Scheduling check box.

12. Enter a value for the Number of Past Readings. This value designates how many readings prior the scheduler should go to for calculating the usage rate. If there is an insufficient number of readings (for example four, instead of the required five), the system continues the calculation based on the usage Rate per day entered.

    This field is mandatory if you have selected the Used in Scheduling check box.

    > **Note:** If you enter a value of 1, the system perpetually calculates at the usage Rate per day.

13. Select the meter Effective Dates. If left blank, the meter is effective all of the time, after it is created. If you select a future date, the meter is disabled until that date. You can disable a meter effective on a specific date by selecting a To date.

14. Save your work.

To associate meters with capital assets and/or serialized rebuilds:

Meter Association creates the relationship between the meter definition and the capital Asset Number and/or Serialized Rebuild.

1. Select an Item Type of Capital, if you are going to associate the current meter with an Asset Number. Select Rebuildable if you are associating the current meter with a Serialized Rebuild.

2. Select an Asset Number (or Serialized Rebuild). The asset group (or Rebuildable Item) defaults.

3. Optionally select a Primary Failure Meter to indicate the default meter that is used for failure analysis. This meter's readings are used to calculate meter-based MTBF and MTTR. See: Failure Analysis Overview, page 26-1.

    You can select a Primary Failure Meter for any meter with the Required check mark selected. Only one meter can be selected at a time, for an asset.

4. Save your work.

Defining Set Names

A PM schedule for an Activity and an Asset Number or asset group must uniquely belong to a Set Name. Multiple PM Schedules for the same Asset Number or asset group and Activity combination are created across Sets. However, out of those PM Schedules, one can be identified as the Default and used for generating Work Orders. Other PM Schedules in other Sets can be used for simulation purposes. Every Set Name has an end date. Every PM schedule that belongs to the Set Name must have its effective-to date before the end date of the PM Schedule's Set Name. Before assigning a Set Name to a PM schedule, you need to define Set Names within the Set Name Definition window. If you do not want to create Set Names, you can assign PM schedules to set, MAIN; it already exists.

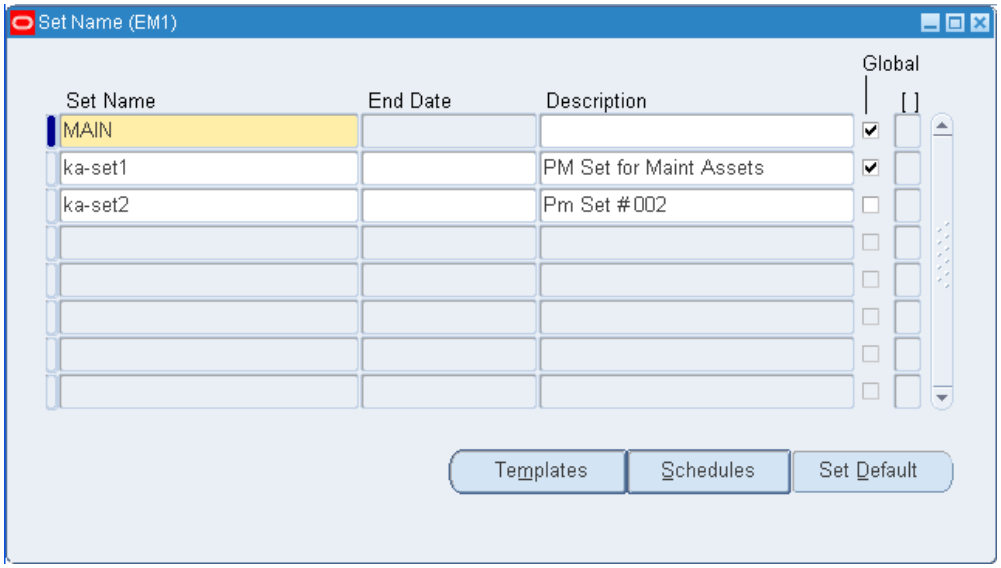
PM schedules might contain assets that transferred from one organization to another. The asset's destination organization can update and use the PM schedules that are assigned to a global PM set. However, you can only view, within the destination organization, PM schedules that are assigned to the asset's originating organization's local PM sets.

Defining Set Names

To define Set Names:

1. Navigate to the Set Name window.

Set Name



2. Enter the Set Name.

3. Optionally enter an End Date. Every PM schedule that belongs to the Set Name must have its effective-to date before the End Date of the PM Schedule's Set Name. If you leave this field blank, the current Set Name does not expire.

4. Optionally enter a Description for this Set Name.

5. Optionally select the Global check box to indicate that the set is visible globally. If this check box is clear, the set is confined to the current organization.

   Note: You can change this setting from Global to local, if the set is not used in an PM schedules of another organization's assets.

6. Optionally choose Templates to add, change, delete, or view Preventive Maintenance Schedule Templates, associated with the current Set Name (See: Preventive Maintenance Schedule Templates).

7. Optionally choose Schedules to create PM Schedule Definitions, associated with the current Set Name (See: Defining a Preventive Maintenance Template, *Oracle Enterprise Asset Management User's Guide*).

8. Optionally choose Set Default to identify all schedules within this set as Default. PM Schedules identified as Default automatically generates Work Orders, by the PM Scheduler process. PM schedules that are not identified as Default can generate Work Order suggestions, by the PM Scheduler process. The generated suggestions

cannot be converted into Work Orders. You can create an unlimited number of Set Names within this window.

9. Save your work.

Defining a Preventive Maintenance Template

An activity and asset number combination can be associated with Runtime, Day Interval Rules, or a list of dates, defining when an activity should be scheduled for an asset, serialized and non-serialized rebuildables, or an asset route. Day Interval rules and List of Dates rules are supported for non-serialized rebuildables and asset routes. The Preventive Maintenance (PM) Scheduler process creates suggested work order dates based on these rules. A planner can then view these forecasted work orders, and generate them as necessary.

There are two ways to create PM schedule definitions for Rebuildable Serial Numbers and Assets. You can create them individually within the Preventive Maintenance Schedules window (See: Entering Preventive Maintenance Schedule Definitions, *Oracle Enterprise Asset Management User's Guide*), or streamline the process of creating them using a PM Template. A PM Template is a schedule, defined for an Asset Group (Asset Group or Rebuildable Item)/Activity association. If you utilize the PM Template functionality, a new PM Schedule is automatically created for a newly created Asset Number (asset or rebuildable) for the Asset Group. All PM Template attributes are copied over to the PM Schedule for the Instance. You can optionally modify the values of the PM Instances created.

Before a PM Template is created, the following prerequisites must exist:

- Meter Template Definition (See: Defining Meter Templates, *Oracle Enterprise Asset Management User's Guide*)

  A Meter Template definition is required if the PM Template is based on Runtime Rule

- Activity Definition (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*)

- Meter Template Association (See: Associating Meter Templates with Asset Groups, *Oracle Enterprise Asset Management User's Guide*)

  A Meter Template Association is required if the PM Template is based on Runtime Rules.

- Activity Association Template (See: Activity Association Templates, *Oracle Enterprise Asset Management User's Guide*)

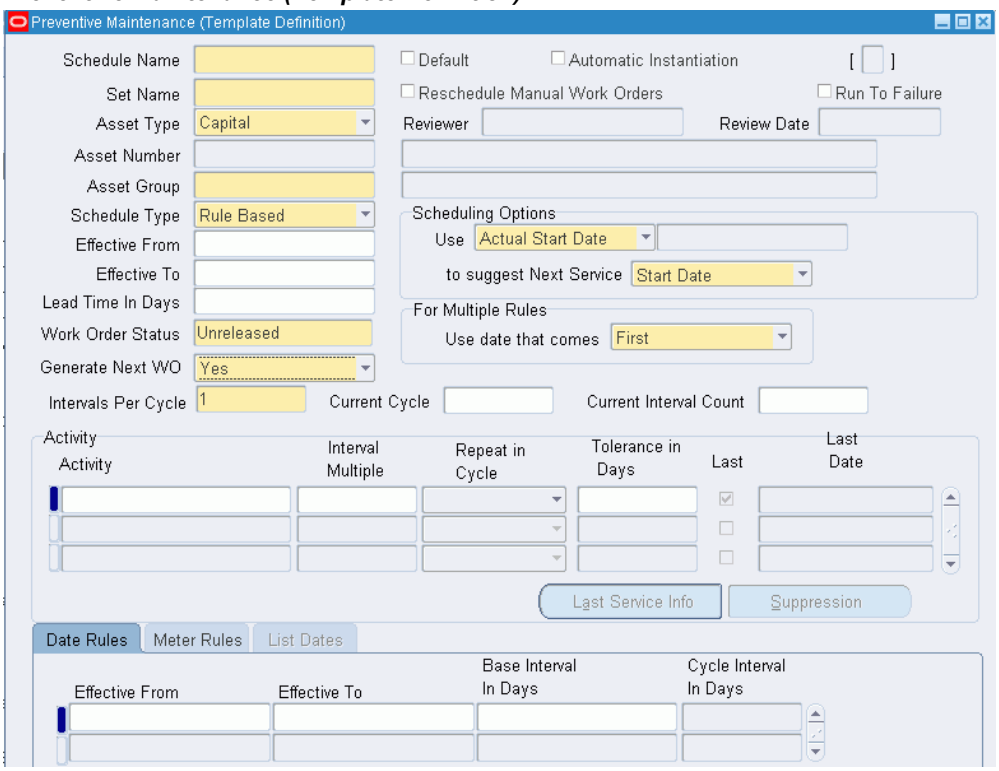
To create a PM Template:

1. Navigate to the Find Preventive Maintenance Schedules window. This window enables you to enter information to narrow your search for query mode.

   Select Yes in the Generate Next WO field if you want the PM Scheduler to be able to create the next work order only if the previous work order has been completed for this work order completion date.

   To define a new PM Template, select the **New** button.

Preventive Maintenance (Template Definition)



2. Enter a PM Template name in the Schedule Name field.

3. Enter a Set Name. A PM schedule for an Activity and Asset Group must uniquely belong to a Set Name (See: Defining Set Names, *Oracle Enterprise Asset Management User's Guide*). Every Set Name has an end date. Every PM schedule that belongs to the Set Name must have its Effective To date before the end date of the PM Set Name. Before assigning a Set Name to a PM schedule, define Set Names within the Set Name Definition window. If you do not want to create Set Names, you can assign PM schedules to set, MAIN; it already exists.

PM schedules might contain assets that transferred from one organization to another. The asset's destination organization can update and use the PM schedules that are assigned to a global PM set. However, you can only view, within the destination organization, PM schedules that are assigned to the asset's originating organization's local PM sets. You can copy these PM schedules to a global, local set or to your organization's local set.

4. Select an Asset Type. Valid values are Capital and Rebuildable Inventory. If Capital is selected, the Asset Group fields refer to the Asset Group. If you select Rebuildable Inventory, the Asset Group fields refer to the Rebuildable Item.

5. Select an Asset Group.

6. Select a Schedule Type. Valid values are Rule Based and List Dates. If you select Rule Based, the Day Interval Rules and Runtime Rules tabs are enabled to enter information. If you select List Dates, you can define information within the List Dates tab.

7. The Effective dates default from the current Activity association, if they exist. Optionally select or update the Effective From and Effective To dates.

8. Optionally enter a Lead Time In Days.

   Lead time in a Preventive Maintenance Schedule is different than lead time associated with Work Order creation. The Preventive Maintenance process suggests Work Orders to be created or scheduled, starting from the last service day of the Asset to the cutoff day you specified while running the process. If a Lead Time In Days is specified, the Preventive Maintenance process predicts work for those extra days beyond the cutoff date. This provides the maintenance department advanced visibility for maintenance work that is typically predicted in the next planning process. The maintenance department can prepare for such work in the current planning period.

9. Optionally select a Work Order Status that best fits your business process. When Preventive Maintenance Work Orders are generated, (See: Generating Work Orders, *Oracle Enterprise Asset Management User's Guide*) they are created with this specified status. You can optionally update this status within the Maintenance Workbench (See: Using the Maintenance Workbench, *Oracle Enterprise Asset Management User's Guide*).

10. Optionally select Yes in the Generate Next WO field if you want to enable the scheduler to create the next work order only if the previous work order has been completed for the work order completion date.

11. Optionally select the Default check box to indicate that the current PM schedule definition generates Work Orders. If this check box is not selected, Work Order suggestions will not generate. You can have only one Default PM for an Asset

Item/Activity combination.

12. Optionally select the Automatic Instantiation check box. If this check box is selected, a new instance of the current PM schedule template is created for each new Asset (Asset Number or Rebuildable Serial Number).

13. Optionally select the Reschedule Manual Work Orders check box. If this check box is selected, non-firm, unreleased manual work orders are considered during PM scheduling.

14. If the Run To Failure check box is selected, the Preventive Maintenance Scheduler does not automatically schedule Asset Numbers within this Asset Group and Activity association, although you can create manual Work Orders. This is relevant for Asset Numbers that cost more to maintain than the Asset Number itself. You might also check this box for forecasting and budgeting reasons. For example, your asset is a conveyor belt. It is common in maintenance environments to let this asset wear out completely before replacing it. You estimated that the life of this asset is 18 months, and have set up a schedule for a replacement Work Order every 18 months. In reality, you found that the belts have ended up wearing out every 12 months, affecting your cost budget.

    You may select this check box and clear it later. For example, you might associate an Asset Number to an Activity, but maybe you cannot currently maintain or schedule this Asset Number. You may have future plans to maintain this Asset Number.

    If this check box is selected, PMs created as a copy of this PM Template generate Work Orders for the corresponding asset in the Maintenance Workbench (See: Using the Maintenance Workbench, *Oracle Enterprise Asset Management User's Guide*).

15. In the Scheduling Options region, indicate how the PM Scheduler process calculates Work Order dates. The *Use* field works in conjunction with the *to suggest Next Service* field. The date field indicates the Last Service date

    - *Actual Start Date to Start Date*: The PM Scheduler process uses the Last Service Actual Start Date, and calculates scheduled start dates. This is a forward scheduling method.

    - *Actual Start Date to End Date*: The PM Scheduler process uses the Last Service Actual Start Date, and calculates the scheduled end dates. This is a backward scheduling method.

    - *Actual End Date to Start Date*: The PM Scheduler process uses the Last Service Actual End Date, and calculates the scheduled start dates. This is a forward scheduling method.

    - *Actual End Date to End Date*: The PM Scheduler process uses the Last Service

Actual End Date, and schedules the scheduled end dates. This is a backward scheduling method.

- *Scheduled Start Date to Start Date*: The PM Scheduler process uses the Last Service Scheduled Start Date, and calculates scheduled start dates. This is a forward scheduling method.

- *Scheduled Start Date to End Date*: The PM Scheduler process uses the Last Service Scheduled Start Date, and calculates the scheduled end dates. This is a backward scheduling method.

- *Scheduled End Date to Start Date*: The PM Scheduler process uses the Last Service Scheduled End Date, and calculates the scheduled start dates. This is a forward scheduling method.

- *Scheduled End Date to End Date*: The PM Scheduler process uses the Last Service Scheduled End Date, and schedules the scheduled end dates. This is a backward scheduling method.

- *Base Date*: You must enter a date as the basis for the PM calculation. As your intervals change, you might want to update the Base Date so that your PM work orders are generated at your choice intervals. It is recommended that you change the Base Date to the Last Service Date if your scheduling interval changes, to ensure that the new scheduling is impacted only from that point and forward. Actual and scheduled work order dates are not considered when you use the Base Date or Base Meter options.

- *Base Meter*: You must enter a Meter, as well as the initial interval. The PM engine uses that initial reading as the anchor for its calculation. Actual and scheduled work order dates are not considered when you use the Base Date or Base Meter options.

16. In the Multiple Rules region, indicate how the predicted due dates are determined for multiple rules.

    - *First*: The due date is set to the first due date of all rules.

    - *Last*: The due date is set to the last due date of all rules.

    For example, below is a Runtime Rule that includes two meters, Meter1 and Meter2.

Schedule Based On Example

Interval	Effective From	Effective To	Meter
100	0	10,000	Meter1
50	0	2,500	Meter2

If you specify First Due Date in the Scheduling Based On region of the PM Template, between the two meters, the first meter that hits the due reading triggers the service. In this case, if Meter1's reading reaches the interval of 100 first, the service happens before Meter2's reading reaches its interval of 50. Conversely, you can choose Last Due Date in the Scheduling Based On region. In this case, even if Meter1 reaches its due reading, the service is not scheduled until Meter2 has also reached its due reading.

This region is disabled if the current PM schedule definition's Scheduling Type field is populated with List Dates.

17. In the Activity region, select one or multiple activities. Activities associated with asset groups are eligible for defining a Schedule Template.

    A Maintenance Planner can create a single PM schedule for multiple activities on an Asset Template. You can list multiple activities to perform on an asset that share a common base interval of either a date, meter, or both. Each maintenance activity on the schedule generates work orders, based on a multiple of the base interval occurring. The group of maintenance activities on one PM schedule represents a cycle of activities. **Base Interval** refers to the minimum of a space of time (such as 90 days), or meter reading (such as 7,500 miles) between when PM activities included in one PM schedule should be performed. It can be considered a common denominator among the multiple activities included in one PM Schedule that share a common base interval. A **cycle** is a complete round of maintenance activities performed on an asset that share a common base interval of a meter or time period, or both, or a multiple of the shared intervals.

    After the cycle of activities completes, the cycle restarts. For example, you can define a PM schedule for two activities that have a common Base Interval of 7,500 miles. The first activity is an oil change, and is scheduled every 7,500 miles. The second activity, a tune-up, is scheduled for every fourth interval or 30,000 miles. The work order for the oil change generates on each occurrence of the 7,500 mile interval and the work order for the tune-up generates on the fourth interval occurrence.

    When an asset transfers to another organization, the schedule that is associated with the local PM Set is viewable within the new organization. For example, the PM Set Name, Local, is created in organization, EM1. A PM schedule is defined in EM1

for Asset Number, #1554877, and is associated with Local (Set Name). Asset Number #1554877 is transferred to another eAM-enabled organization, EM2. A planner in this new organization (EM2) can view the PM schedule that is associated with the Local PM set. However, it is view-only; it cannot be updated. The associated Activity appears in blue, to indicate that the activity definition has not yet been assigned to EM2. In this scenario, to use the PM schedule, the planner must either assign the schedule's Activity to the current organization, EM2, or update the schedule's PM Set Name from Local to a global set or a local PM set that was defined in EM2.

> **Note:** You can define an unlimited number of activities, however, it is recommended that you keep it simple.

18. Optionally indicate the Interval Multiple of the Base Interval. This field works with the Repeat in Cycle field to determine how many intervals for an activity to repeat.

19. Optionally select the Repeat in Cycle value to determine if the activity interval repeats in the cycle. If you select *Yes*, the Interval Multiple field determines how many times the activity interval repeats. If you select *No*, the activity is scheduled once for each cycle.

20. Optionally enter a Tolerance In Days to indicate a minimum interval in days that suggested Work Orders' dates are spaced from each other.

21. Within the Date Rules tab, optionally enter Effective From and To dates to specify the rule's expiration.

22. Enter a Base Interval In Days. For example, if you enter the number three, a Work Order suggestion is created every three days.

    You can optionally create variable Date Rules. For example, you would like Work Order suggestions created every three days in January, and every four days in February. The window below illustrates this example:

23. Within the Meter Rules tab, optionally select a Meter Name to indicate that Preventive Maintenance scheduling is based on a Meter Rule. If you have previously set up a Date Rule, you can base the scheduling on a Runtime Rule, as well. Meter Templates associated with this Asset Group (See: Associating Meter Templates with Asset Groups, *Oracle Enterprise Asset Management User's Guide*), and with the Used in Scheduling check box selected in the meter template definition, are available.

    For example, trucks of a specific Make and Model need to be scheduled for an oil change every 30 days, or every 1000 miles.

Date Rule

Field	Value
Last Service Start/End Date	December 26, 2001
Interval In Days	30

Meter Rule

Field	Value
Last Service Reading	3000
Interval	1000
Latest Meter Reading	3100 (found within meter reading history)
Latest Meter Reading Date	January 1, 2002 (this can be found via meter reading history)
Usage Rate	25 miles per day (calculated, based on Linear Regression's Least Square formula. In a least-squares model, the best-fitting line for the observed data is calculated by minimizing the sum of the squares of the vertical deviations from each data point to the line. For example, if a point lies on the fitted line exactly, then its vertical deviation is zero.)

If the Meter Rule is taken into account, the next due date is February 6, 2002 (January 1 2002 + [(3000 + 1000 - 3100)/25 = January 1, 2002] +36 days), and every 40 days after that. This is calculated as the interval (1000 miles) divided by the usage rate (25 miles per day).

The PM Scheduler process compares the above suggested dates from the runtime interval rule, to those of the date rule: Base Date of December 26, 2001 + every 30 days.

The work orders ultimately created by the PM Scheduler process are those of the earliest or latest dates, depending on how the Schedule Based On region is populated. If you selected First Due, the earliest suggestion is used for work order

creation. The opposite is also true.

24. The Interval and UOM fields work together. For example, for every 2000 miles, this Asset Number needs an oil change.

    The UOM defaults from the Meter Template definition of the current Meter Template.

    You can optionally create multiple Runtime Rules. For example, from zero to 10,000 miles, you would like your asset serviced every 3,000 miles. From 10,000 to 50,000 miles, you would like your asset serviced every 2,000 miles.

25. Optionally enter the Last Service Reading in the Last Service Information window. This field is also automatically updated with the meter reading information recorded at Work Order completion (See: Work Order Completion, *Oracle Enterprise Asset Management User's Guide*).

    > **Note:** The Preventive Maintenance Scheduler (See: Generating Work Orders, *Oracle Enterprise Asset Management User's Guide*) automatically calculates the meter usage rate, based on historical data, which is then used to predict the next meter due date. Refer to the example below.

26. If you populated List Dates within the Schedule Type field, select the List Dates tab to define the specific due dates that Work Orders should transpire.

    For example, you want asset, Car1, serviced on May 1 and November 1 every year for the next three years. In this case, you would create a List Dates type schedule definition, and list all the due dates within this tab. The PM Scheduler process creates suggested Work Order dates on those specified dates.

27. Save your work.

Entering Preventive Maintenance Schedule Definitions

Schedule definitions are implemented to create scheduled Work Orders, based on Day Interval Rules, and/or Runtime Rules. Schedules can also be based on a list of specific dates by using List Date rules. List Date rule based PM schedules cannot have Runtime or Day interval rules. Runtime or Day Interval Rule based PM schedules cannot have List Date rules. You can create a Preventive Maintenance Schedule Definition on an Asset Group (Non-serialized Rebuildable)/Activity combination, Asset Number/Activity combination, or an Asset Route/Activity combination.

If a meter is entered in a runtime interval rule, the following prerequisites must exist before creating a Preventive Maintenance Schedule:

- Meter Definition (See: Defining Meters, *Oracle Enterprise Asset Management User's Guide*)

A Meter definition is required if the PM schedule is based on Runtime Rules.

- Activity Definition (See: Defining Activities, *Oracle Enterprise Asset Management User's Guide*)
- Meter/Asset Association (See: Associating Meters with Asset Numbers, *Oracle Enterprise Asset Management User's Guide*)

  A Meter/Asset Association is required if the PM schedule is based on Runtime Rules.

- Asset Group (Non-Serialized Rebuildable) or Asset Number/Activity Association (See: Associating Asset Numbers with Activities, *Oracle Enterprise Asset Management User's Guide*)

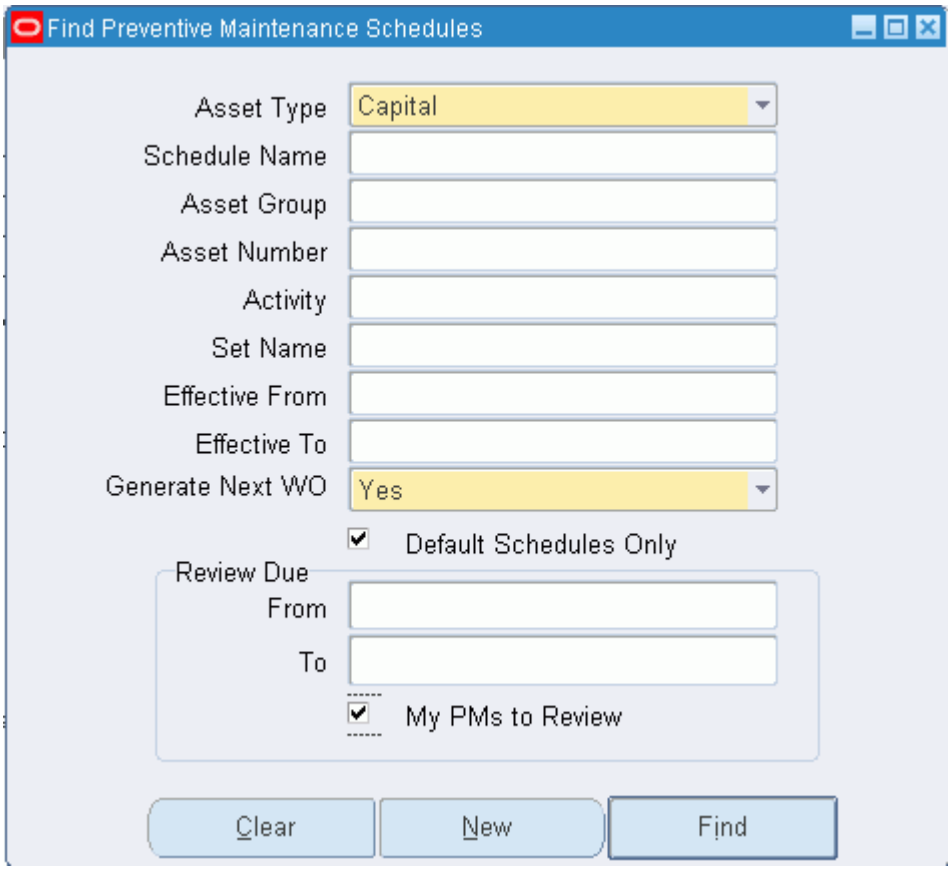
Defining Preventive Maintenance (PM) Schedules

To define a Preventive Maintenance schedule for an asset number:

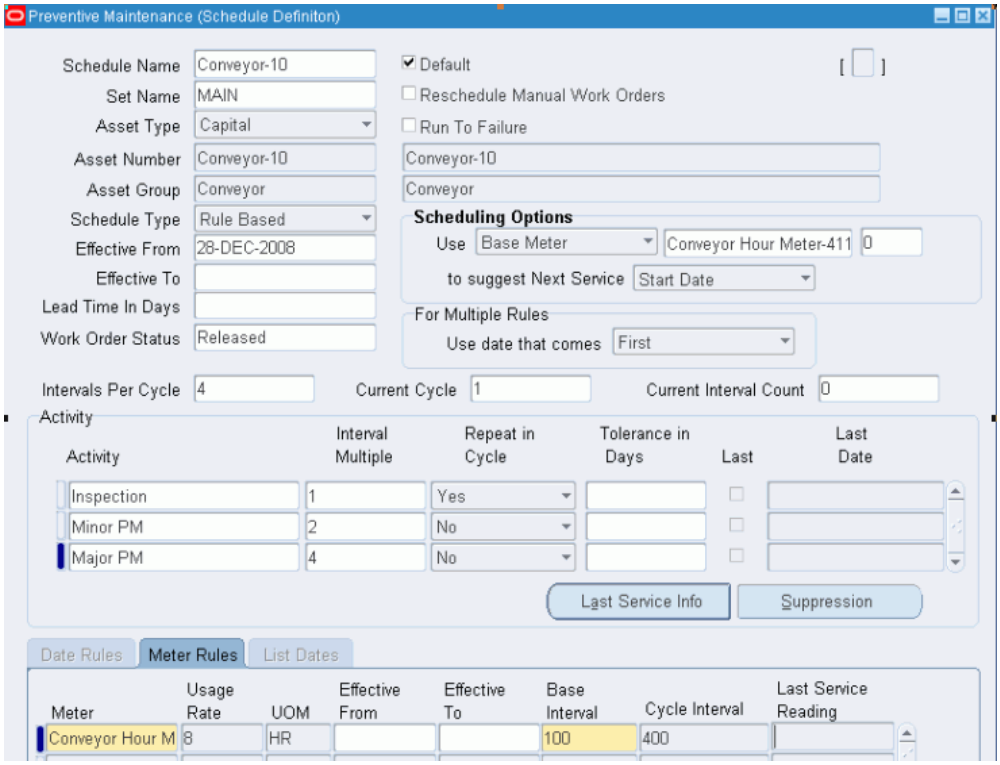
1. Navigate to the Find Preventive Maintenance Schedules window. This window enables you to enter information to narrow your search for query mode.

   Select Yes in the Generate Next WO field if you want the PM Scheduler to be able to create the next work order only if the previous work order has been completed for this work order completion date.

   To define a new schedule, click the **New** button.


Find Preventive Maintenance Schedules
Asset Type
Capital
Schedule Name
Asset Group
Asset Number
Activity
Set Name
Effective From
Effective To
Generate Next WO
Yes
Default Schedules Only
Review Due
From
To
My PMs to Review
Clear
New
Find

Preventive Maintenance (Schedule Definition)



2. Enter a Schedule Name.

   Important: If your PM schedule requires more than one activity and if the activities use different cycles, we recommend that you create separate PM schedules.

3. Enter a Set Name. A PM schedule for an Activity and an Asset Number or Asset Group must uniquely belong to a Set Name (See: Defining Set Names, *Oracle Enterprise Asset Management User's Guide*). Every Set Name has an end date. Every PM schedule that belongs to the Set Name must have its Effective To date before the end date of the PM Set Name. Before assigning a Set Name to a PM schedule, define Set Names within the Set Name Definition window. If you do not want to create Set Names, you can assign PM schedules to set, MAIN; it already exists.

   PM schedules might contain assets that transferred from one organization to another. The asset's destination organization can update and use the PM schedules that are assigned to a global PM set. However, you can only view, within the destination organization, PM schedules that are assigned to the asset's originating organization's local PM sets. You can copy these PM schedules to a global, local set or to your organization's local set.

4. Select an Asset Type. Valid values are Capital and Rebuildable Inventory. If Capital is selected, the Asset Number and Asset Group fields refer to the Asset Number and Asset Group, respectively. If Rebuildable Inventory is selected, the Asset Number and Asset Group fields refer to the Rebuildable Serial Number and Rebuildable Item, respectively. If a Non-Serialized Rebuildable Item is entered in the Asset Group field, the Asset Number field is not required.

5. Select an Asset Number. Assets that are maintainable and associated with Activities are available. The Asset Group field populates with the Asset Group associated with the current Asset Number. If you wish to define a PM Schedule for a Non-serialized Rebuildable, enter the Asset Group; the Asset Number field does not apply.

   For assets that transferred from one organization to another, PM schedules that are defined for assets within their originating organizations are also visible within their destination organizations.

6. Select a Schedule Type. Valid values are Rule Based and List Dates. If you select Rule Based, the Day Interval Rules and Runtime Rules tabs are enabled to enter information. If you select List Dates, you can define information within the List Dates tab.

7. The Effective dates default from the current Asset Activity association, if they exist. Optionally select or update the Effective From and Effective To dates.

8. Optionally enter a Lead Time In Days.

   Lead time in a Preventive Maintenance Schedule is different than lead time associated with Work Order creation. Lead time within a Preventive Maintenance Schedule covers the time between the end date of the first execution of the Preventive Maintenance Schedule process, and the start date (system date) of the second execution of the Preventive Maintenance Schedule process. For example, a department executes the Preventive Maintenance Scheduler process every two months; the end date of each Preventive Maintenance Scheduler process is the end of every other month. However, due to circumstance, the meter data is not ready until the middle of the month. Therefore, the Preventive Maintenance Scheduler process starts in the middle of the month, instead of at the beginning, creating a lapse between the first and second Preventive Maintenance Scheduler executions. Lead time is used to cover this lapse.

9. Optionally select Yes in the Generate Next WO field if you want to enable the scheduler to create the next work order only if the previous work order has been completed for the work order completion date.

10. Optionally select a Work Order Status that best fits your business process. When Preventive Maintenance Work Orders are generated, (See: Generating Work Orders, *Oracle Enterprise Asset Management User's Guide*) they are created with this specified status. You can optionally specify a different status for each PM schedule.

You can also update this status, using the Maintenance Workbench (See: Using the Maintenance Workbench, *Oracle Enterprise Asset Management User's Guide*).

11. Optionally select the Default checkbox to indicate that the current PM schedule definition generates Work Orders. If this checkbox is not selected, Work Order suggestions will not generate. You can have only one Default PM for an Asset Item/Activity combination.

12. Optionally select the Reschedule Manual Work Orders checkbox. If this checkbox is selected, non-firm, unreleased manual Work Orders are considered during PM scheduling.

13. If the Run To Failure checkbox is selected, the Preventive Maintenance Scheduler does not automatically schedule this Asset Number and Activity association, although you can create manual Work Orders. This is relevant for Asset Numbers that cost more to maintain than the Asset Number itself. You might also check this box for forecasting and budgeting reasons. For example, your asset is a conveyor belt. It is common in maintenance environments to let this asset wear out completely before replacing it. You estimated that the life of this asset is 18 months, and have set up a schedule for a replacement Work Order every 18 months. In reality, you found that the belts have worn out every 12 months, affecting your cost budget.

    You can select this checkbox and clear it later. For example, you might associate a non-maintainable asset to an activity, but maybe you cannot currently maintain or schedule this asset. You might have future plans to maintain this Asset Number.

    If this check box is selected, the work orders for this asset do not appear in the Maintenance Workbench at the time of PM Scheduling (See: Using the Maintenance Workbench, *Oracle Enterprise Asset Management User's Guide*).

14. For new PM schedule definitions, the default value for the Reviewer is based on the user login information, and the Review Date field defaults to the current system date.

    If you are updating a PM schedule definition, the Reviewer field indicates the last reviewer of the PM Schedule, and the Review Date field indicates the date on which the last review occurred. When updating the schedule definition, the Reviewed Date can be changed.

15. In the Scheduling Options region, indicate how the PM Scheduler process calculates work order dates.

    The *Use* field works in conjunction with the *to suggest Next Service* field. The date field indicates the Last Service date.

    - *Actual Start to Start Date*: The PM Scheduler process uses the Last Service Actual Start Date, and calculates scheduled start dates. This is a forward scheduling method.

- *Actual Start Date to End Date*: The PM Scheduler process uses the Last Service Actual Start Date, and calculates the scheduled end dates. This is a backward scheduling method.

- *Actual End Date to Start Date*: The PM Scheduler process uses the Last Service Actual End Date, and calculates the scheduled start dates. This is a forward scheduling method.

- *Actual End Date to End Date*: The PM Scheduler process uses the Last Service Actual End Date, and schedules the scheduled end dates. This is a backward scheduling method.

- *Scheduled Start Date to Start Date*: The PM Scheduler process uses the Last Service Scheduled Start Date, and calculates scheduled start dates. This is a forward scheduling method.

- *Scheduled Start Date to End Date*: The PM Scheduler process uses the Last Service Scheduled Start Date, and calculates the scheduled end dates. This is a backward scheduling method.

- *Scheduled End Date to Start Date*: The PM Scheduler process uses the Last Service Scheduled End Date, and calculates the scheduled start dates. This is a forward scheduling method.

- *Scheduled End Date to End Date*: The PM Scheduler process uses the Last Service Scheduled End Date, and schedules the scheduled end dates. This is a backward scheduling method.

- *Base Date*: You must enter a date as the basis for the PM calculation. As your intervals change, you might want to update the Base Date so that your PM work orders are generated at your choice intervals. It is recommended that you change the Base Date to the Last Service Date if your scheduling interval changes, to ensure that the new scheduling is impacted only from that point and forward. Actual and scheduled work order dates are not considered when you use the Base Date or Base Meter options.

- *Base Meter*: You must enter a Meter, as well as the initial interval. The PM engine uses that initial reading as the anchor for its calculation. Actual and scheduled work order dates are not considered when you use the Base Date or Base Meter options.

16. In the For Multiple Rules region, indicate how the predicted due dates are determined for multiple rules.

    - *First*: The due date is set to the first due date of all rules.

    - *Last*: The due date is set to the last due date of all rules.

For example, below is a Runtime Rule that includes two meters, Meter1 and Meter2.

Schedule Based On Example

Interval	Effective From	Effective To	Meter
100	0	10,000	Meter1
50	0	2,500	Meter2

If you specify First in the Multiple Rules region of the PM schedule definition, between the two meters, the first meter that hits the due reading triggers the service. In this case, if Meter1's reading reaches the interval of 100 first, the service happens before Meter2's reading reaches its interval of 50. Conversely, you can choose Last in the Multiple Rules region. In this case, even if Meter1 reaches its due reading, the service is not scheduled until Meter2 has also reached its due reading.

This region is disabled if the current PM schedule definition's Scheduling Type field is populated with List Dates.

17. Optionally enter a value for the **Intervals Per Cycle** field. This field represents the number of base intervals that comprise the complete cycle. For example, 12 monthly intervals would comprise a 1-year cycle, and four 7,500 miles base intervals would comprise a 30,000-mile cycle.

    The system automatically updates these fields:

    - **Current Cycle**: The current execution cycle of a Preventive Maintenance cycle for an asset. This field is automatically updated by the system when preventive maintenance work orders generated out of a given schedule are completed.

    - **Current Interval Cycle**: The current execution interval within a current running cycle. This field is automatically updated by the system when preventive maintenance work orders generated out of a given schedule are completed. It is advisable not to change the current cycle and current interval count after initial definition, unless really required to do so. These fields can be disabled for edit by users through function based menu exclusions.

18. Within the Activity region, select one or multiple Activities. Activities associated with Asset Numbers or Non-serialized Rebuilds are eligible for scheduling.

    A Maintenance Planner can create a single PM schedule for multiple activities on an Asset. You can list multiple activities to perform on an asset that share a common base interval of either a date, meter, or both. Each maintenance activity on the schedule generates work orders, based on a multiple of the base interval occurring. The group of maintenance activities on one PM schedule represents a cycle of

activities. After the cycle of activities completes, the cycle restarts. For example, you can define a PM schedule for two activities that have a common Base Interval of 7,500 miles. The first activity is an oil change, and is scheduled every 7,500 miles. The second activity, a tune-up, is scheduled for every fourth interval or 30,000 miles. The work order for the oil change generates on each occurrence of the 7,500 mile interval and the work order for the tune-up generates on the fourth interval occurrence.

When an asset transfers to another organization, the schedule that is associated with the local PM Set is viewable within the new organization. For example, the PM Set Name, Local, is created in organization, EM1. A PM schedule is defined in EM1 for Asset Number, #1554877, and is associated with Local (Set Name). Asset Number #1554877 is transferred to another eAM-enabled organization, EM2. A planner in this new organization (EM2) can view the PM schedule that is associated with the Local PM set. However, it is view-only; it cannot be updated. The associated Activity appears in blue, to indicate that the activity definition has not yet been assigned to EM2. In this scenario, to use the PM schedule, the planner must either assign the schedule's Activity to the current organization, EM2, or update the schedule's PM Set Name from Local to a global set or a local PM set that was defined in EM2.

> **Note:** You can define an unlimited number of activities, however, it is recommended that you keep it simple.

19. Optionally indicate the Interval Multiple of the Base Interval. This field works with the Repeat in Cycle field to determine how many intervals for an activity to repeat.

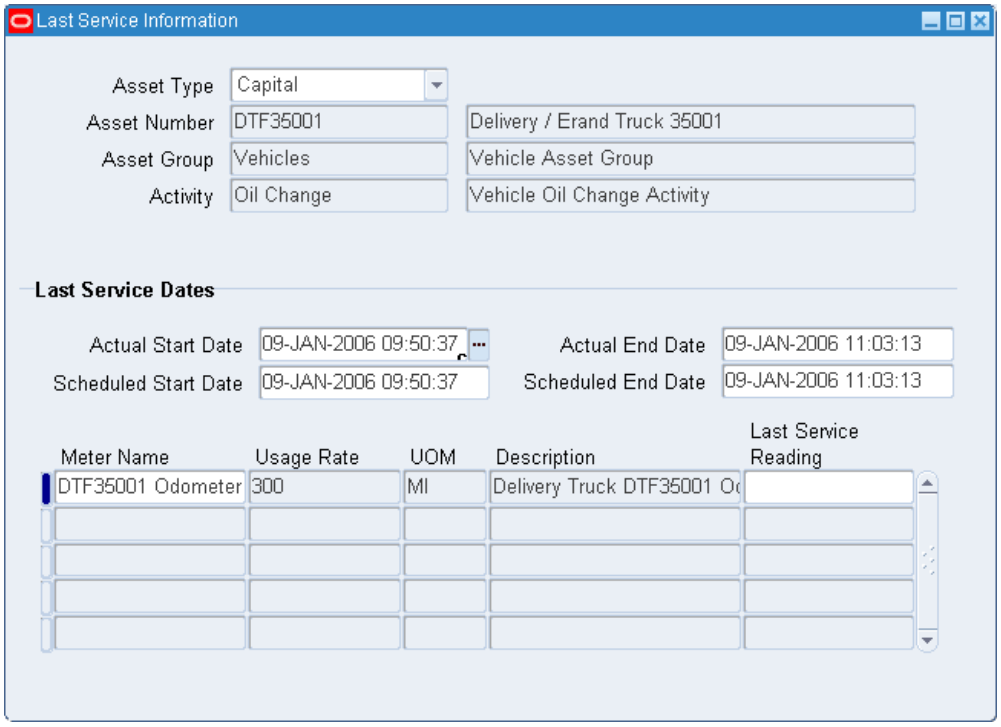
20. Optionally select the Repeat in Cycle value to determine if the activity interval repeats in the cycle. If you select *Yes*, the Interval Multiple field determines how many times the activity interval repeats. If you select *No*, the Activity is scheduled once for each cycle.

21. Optionally enter a Tolerance In Days to indicate a minimum interval in days that suggested Work Orders' dates are spaced from each other.

22. Optionally choose Last Service Info to enter the last service information for the current Asset Number/Activity association. Enter Last Service start and end dates. These dates are used by the Preventive Maintenance Scheduler as a starting point for calculating the next due date for a suggested Work Order. After the Preventive Maintenance Scheduler suggests a Work Order, and that Work Order is completed, this date resets to the completion date. Last service information is always regarding the Asset Number/Activity association, and independent of the association's PM schedule definition.

    The Last Service Reading cannot be greater than the last meter (if the meter is ascending), or less than the last meter reading (if the meter is descending).

Last Service Information

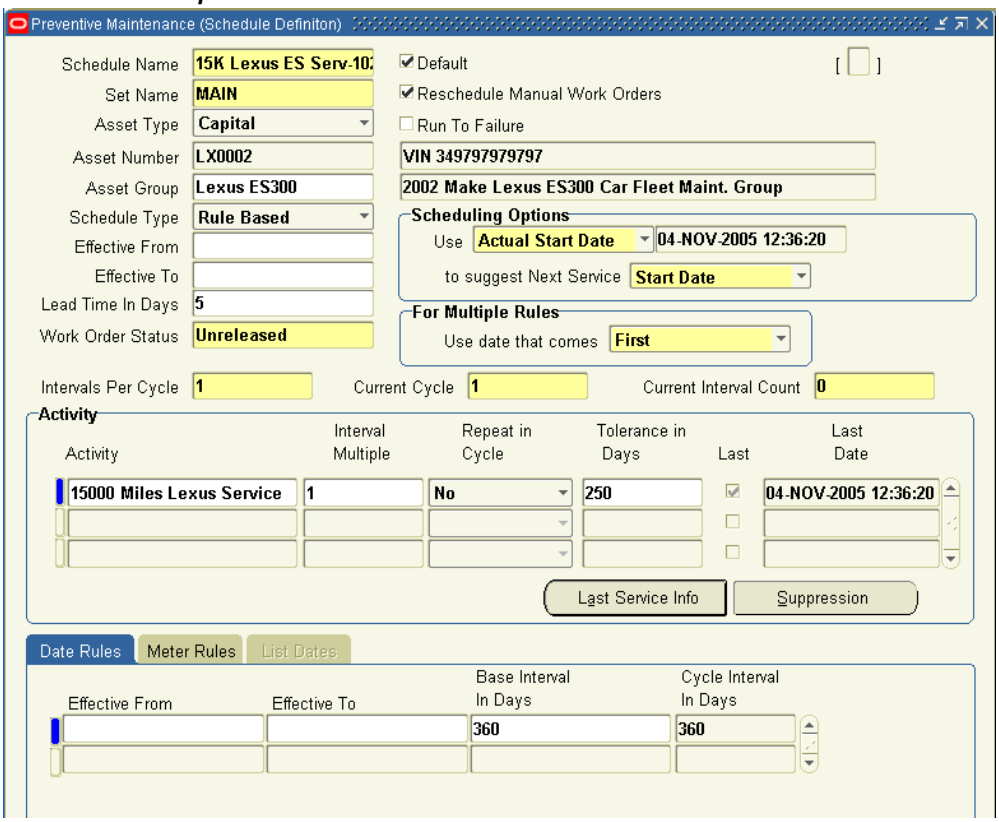


23. Within the Date Rules tab, optionally enter Effective From and To dates to specify the rule's expiration. This tab is enabled if Rule Based is populated in the Schedule Type field.

24. Enter a Base Interval In Days. For example, if you enter the number three, a Work Order suggestion is created every three days.

    You can optionally create variable Date Rules. For example, you would like Work Order suggestions created every three days in January, and every four days in February.

Date Rules Example



25. Optionally within the Meter Rules tab, select a Meter Name to indicate that Preventive Maintenance scheduling is based on a Meter Rule. If you have previously set up a Date Rule, you can base the scheduling on a Meter Rule, as well. Meters associated with this Asset Number (See: Associating Meters with Asset Numbers, *Oracle Enterprise Asset Management User's Guide*), and with the Used in Scheduling checkbox selected in the meter definition, are available.

    For example, a Truck 01 Asset Number is scheduled for an oil change every 30 days, or every 1000 miles.

Date Rule

Field	Value
Last Service Date	December 26, 2001
Interval In Days	30

Meter Rule

Field	Value
Last Service Reading	3000
Interval	1000
Last Service Reading Date	January 1, 2002 (this can be found via meter reading history)
Usage Rate	25 miles per day (calculated as the total of the meter readings value changes, divided by the total of the meter reading date intervals)

If the Meter Rule is taken into account, the next due date is February 10, 2002 (January 1 2002 + 40 days), and every 40 days after that. This is calculated as the interval (1000 miles) divided by the usage rate (25 miles per day).

The PM Scheduler process compares the above suggested dates from the meter rule, to those of the date rule: Base Date of December 26, 2001 + every 30 days.

The Work Orders ultimately created by the PM Scheduler process are those of the shortest interval and earliest dates: December 26, 2002 + every 30 days.

> **Note:** Meter Rules are not applicable for Non-Serialized Rebuildables.

26. The Interval and UOM fields work together. For example, for every 2000 miles, this Asset Number needs an oil change.

    The UOM defaults from the meter definition of the current meter.

    You can optionally create multiple Meter Rules. For example, from zero to 10,000 miles, you would like your asset serviced every 3,000 miles. From 10,000 to 50,000 miles, you would like your asset serviced every 2,000 miles.

27. You cannot enter the Last Service Reading. This field is automatically updated with the meter reading information recorded at Work Order completion (See: Work Order Completion, *Oracle Enterprise Asset Management User's Guide*).

    > **Note:** The Preventive Maintenance Scheduler (See: Generating Work Orders, *Oracle Enterprise Asset Management User's Guide*)

automatically calculates the meter usage rate, based on historical data, which is then used to predict the next meter due date. Refer to the example below.

28. If you populated List Dates within the Schedule Type field, select the List Dates tab to define the specific due dates that Work Orders should transpire.

    For example, you want asset, Car1, serviced on May 1 and November 1 every year for the next three years. In this case, you would create a List Dates type schedule definition, and list all the due dates within this tab. The PM Scheduler process creates suggested Work Order dates on those specified dates.

29. Save your work.

Multiple Activity PM Schedule Definition - Fixed Meter Example:

Parameters for Conveyor PM Schedule

- Inspection every 100 hours of operation
- Minor PM for every 200 hours of operation
- Major PM for every 400 hours of operation
- Scheduling Option: Base Meter

The following are the steps you will perform:

1. Enter the meter name and define the scheduling starting point to the right of the meter.

   The system will define default values for the following:

   - Intervals per Cycle
   - Current Cycle
   - Current Interval Count

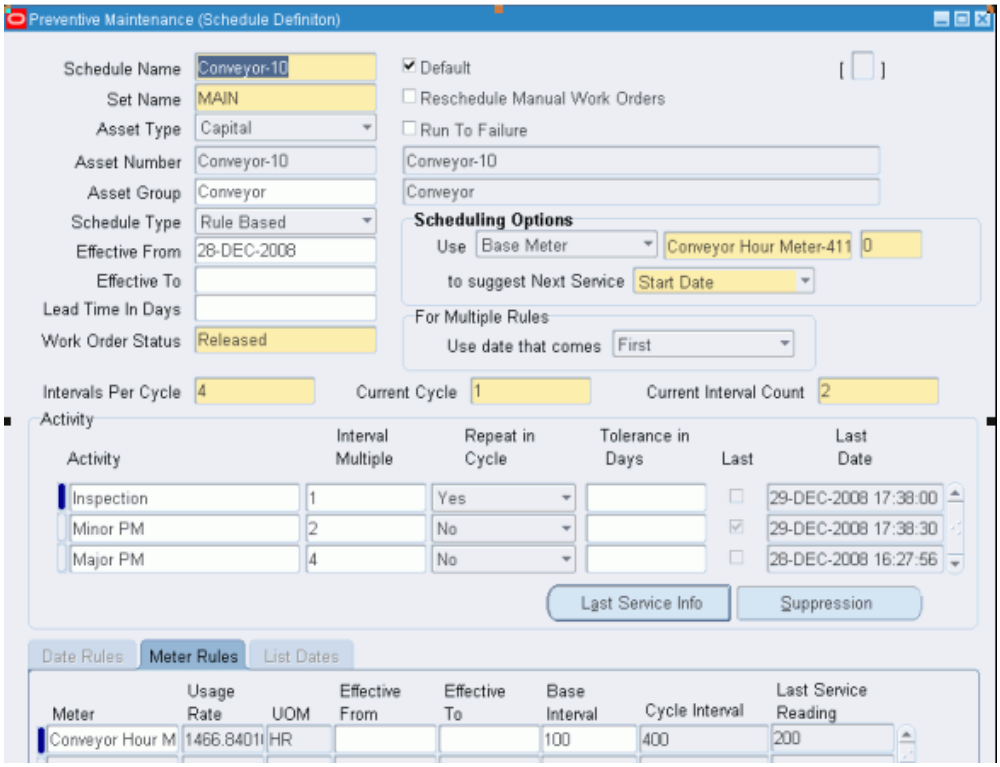
2. Enter the required activities, taking the following into consideration:

   - The Activity "Inspection" is scheduled after 100 hours of operation: (Interval Multiple (1) x Base Interval (100)).
   - The Activity "Minor PM" is scheduled after 200 hours of operation.
   - The Activity "Major PM" is scheduled after 400 hours of operation.

- Repeat in Cycle determines if an activity can occur multiple times during a cycle, in this example the Inspection can occur multiple times within the cycle, the Minor PM will not be planned at the 400 hour interval.

3. Enter the meter name with a base interval of 100.

4. Save your work.



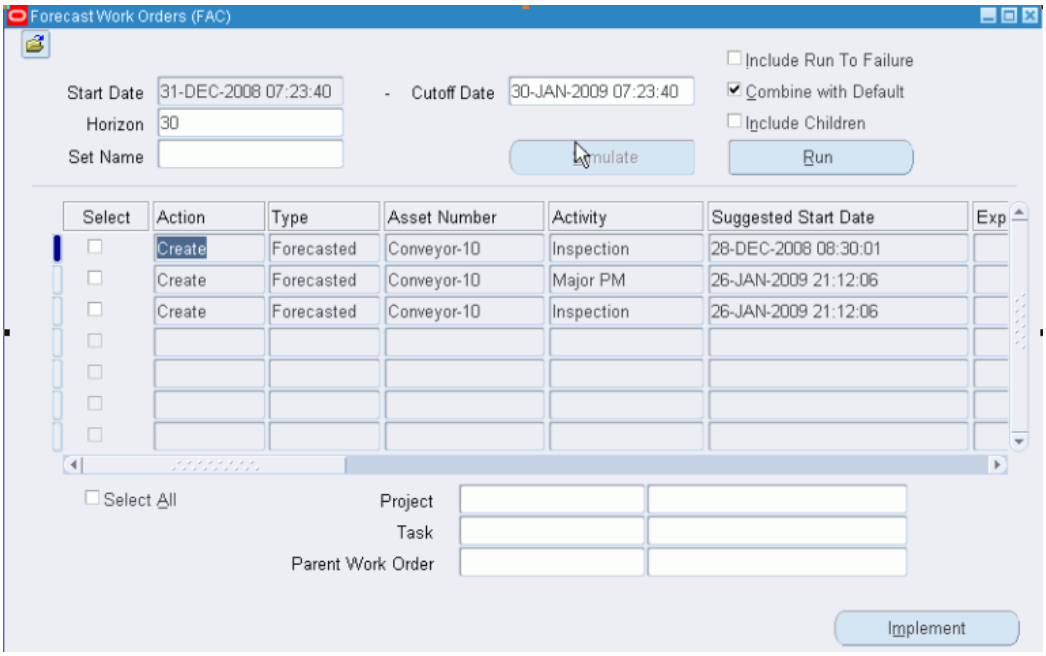
Analysis of Example

The program will update Current Cycle and Current Interval Count when PM work orders are completed. For example at 210 hours of operation, two Inspection work orders and one Minor PM work order have been generated and completed. The Current Interval Count has been updated to (2). The Current Interval Count provides a count within the Current Cycle, the Current Interval Count is updated to (1) with the start of each new cycle.

The Current Cycle provides a count of the number of times a PM Set (Inspection, Minor PM and Major PM) has been completed. In this example, the Current Cycle remains (1), the Current Cycle will be updated to (2) with the completion of the PM Set and the start of a new cycle.

When forecasting work orders for the next 30 days, note that the activity "Minor PM" is not included in the forecast but the Activity "Inspection" is included, the "Repeat in Cycle" controls if an activity will occur within a Cycle. For the activity "Inspection" the

Repeat in Cycle is "Yes", for the activity "Minor PM" the Repeat in Cycle is "No", the " Minor PM" will be generated once per cycle.



To define a Preventive Maintenance schedule for an asset route:

Preventive Maintenance Schedules can be defined based on Asset Routes. See: Setting Up Asset Routes.

1. Navigate to the Preventive Maintenance Schedules window.
2. Select Asset from the Item Type list of values.
3. Select an Asset Route from the Asset Number list of values.
4. See: Preventive Maintenance Scheduling, *Oracle Enterprise Asset Management User's Guide*, for instructions on the remaining fields.

> **Note:** You can define Date Rules and List Dates for Asset Routes. You cannot define Meter Rules.

To create a suppression activity:

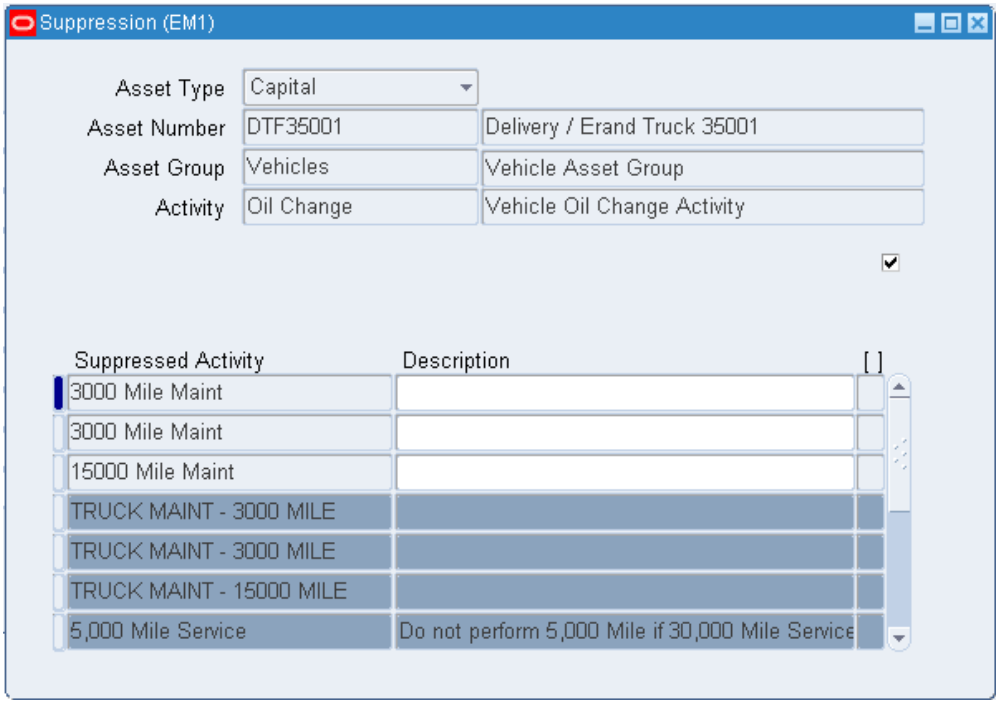
You can suppress other Activities with the current Activity in the scheduling definition. You can enter suppression activities for an Asset Number/Activity combination.

For example, there are two activities associated with a Truck 01 asset: Oil Change (to be performed every five months), and Major Service (to be performed every 12 months). A major service on a Truck 01 includes an Oil Change. Therefore, a suppression definition

needs to be defined; the Activity, Major Service, suppresses the child activity, Oil Change.

1. From the Preventive Maintenance Schedules window, choose Suppression.

Suppression



2. Choose a Suppressed Activity. Activities associated with the Asset Numbers are available.

   Note: One Activity association can suppress multiple Activity associations. One Activity association can be suppressed by one Activity association.

3. Optionally enter a Description for this suppression.

4. Save your work.

   Note: Suppression is applicable to an Activity association and can also be defined from the Activity Workbench and Suppression window.

Related Topics

Entering Meter Readings, page 4-3

Generating Work Orders, page 4-6

eAM Planning and Scheduling

Oracle Enterprise Asset Management utilizes work orders to create demand for asset maintenance. Operations within work orders are completed using the work orders' associated material and resource requirements (See: Overview eAM Work Management, page 3-2). Cost savings and work management efficiencies can be achieved by generating predictive work activities, and then using a planning process to balance the work load for resource management.

The process is as follows:

First, a Master Demand Schedule is created. This Master Demand Schedule is then attached to Material Requirements Planning (MRP) options. MRP is launched, creating planned work order suggestions. You can use the Planner Workbench to implement the suggestions into purchase requisitions or manufacturing orders. Using the Purchasing AutoCreate feature, purchase orders are created from the requisitions. After the purchase orders are received into inventory, you can issue material into a maintenance work order.

This section includes the following topics:

- eAM Planning, page 2-150
- eAM Scheduling, page 2-151

eAM Planning

Oracle eAM utilizes Material Requirements Planning (MRP) to calculate net material requirements from gross material requirements, by evaluating:

- The master schedule
- Bills of material
- Scheduled receipts
- On-hand inventory balances
- Lead times
- order modifiers

Material Requirements Planning then plans material replenishment by creating a set of

recommendations to release or reschedule orders for material, based on net material requirements. MRP assumes infinite capacity is available to meet the material requirements plan.

The following illustration depicts how eAM uses Material Requirements Planning. First, a Master Demand Schedule (MDS) is created. This schedule is then attached to MRP Plan Options. Next, the MRP is launched, creating suggestions for purchasing requisitions. Finally, these suggestions are implemented. They are purchased, and then received into inventory. After the material is in inventory, it can be issued to a maintenance work order.

eAM Material Requirements Planning

This section includes the following topics:

- Defining a Master Demand Schedule Name, page 2-152
- Defining a Material Requirements Plan Name, page 2-153
- Defining Plan Options, page 2-154

eAM Scheduling

Oracle Enterprise Asset Management (eAM) utilizes the Oracle Manufacturing Scheduling application to schedule work orders and operations. The scheduling process calculates work order and operations scheduled duration and dates, based on the forward or backward scheduling goal (See: Routine Work Orders, page 3-3), and Work in Process parameters. The concurrent program is triggered after a work order is released (See: eAM Work Order Statuses, page 3-23). The work order is automatically moved to a Pending Scheduling status, until the concurrent program finishes scheduling. At that time, the work order is moved back to a Released status.

The Scheduler Workbench enables a planner to graphically view and reschedule single work orders and operations. It provides you with a visual display of work orders. You can interactively reschedule work orders, operations, and resources.

Important: You have the eAM Scheduler (infinite scheduler) available to you; this scheduler is not constraint-based.

Additional Information: Oracle eAM uses the Infinite Scheduler for automatic scheduling. The Infinite Scheduler considers only the

calendar and shift setups for scheduling. It does not consider shift exceptions or take the resource loads and availability into consideration. The Resource Availability form is a view to display information on the availability and considers exceptions so that you can perform manual scheduling accordingly.

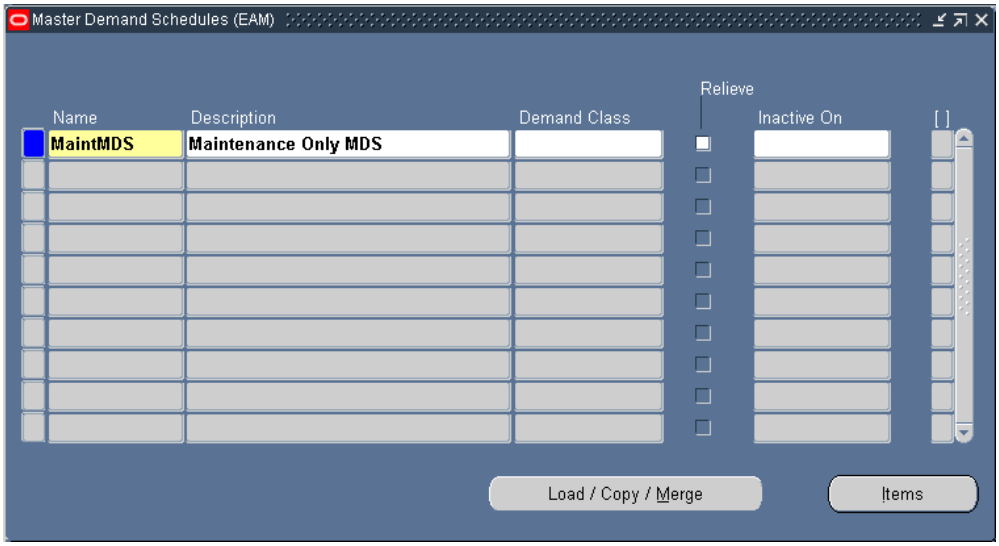
Defining a Master Demand Schedule Name

Before you define a master schedule manually or load a schedule from another source, you must first define a master demand schedule name. You can also set several options for each name.

To define a Master Demand Schedule name:

1. Navigate to the MDS Names window.

Master Demand Schedules



2. Enter a Name and Description for the schedule.

3. Save your work.

Related Topics

Defining a Schedule Name, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

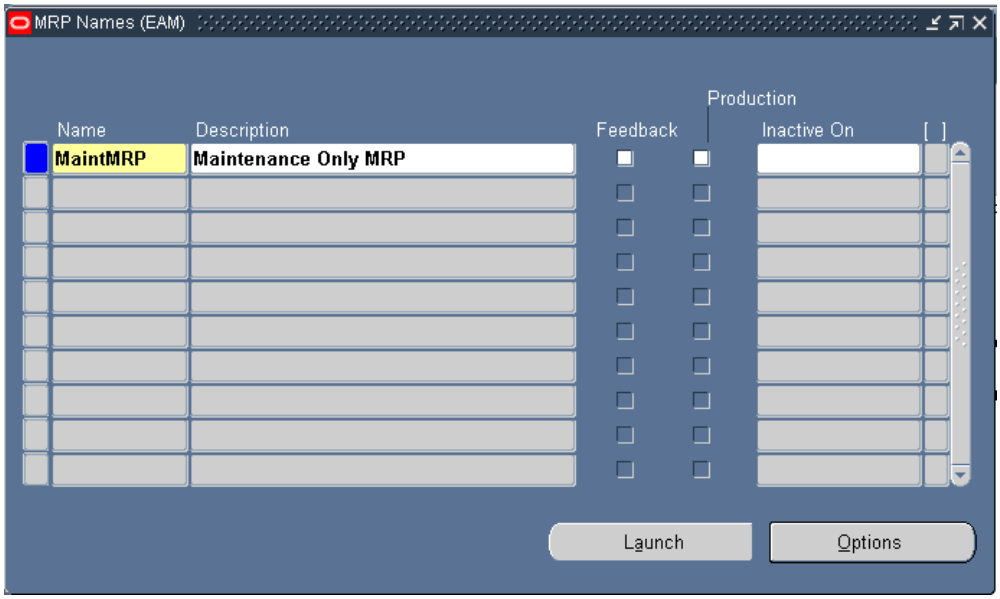
Defining a Material Requirements Plan Name

Master Demand Schedule names trigger the material requirements planning process. A master demand schedule name must be created to perform material requirement planning for maintenance Work Orders.

To define a MRP name:

1. Navigate to the MRP Names window.

MRP Names



2. Enter an alphanumeric Name to identify a unique material requirements.

3. Optionally enter a Description of the MRP name.

4. Optionally select the Feedback check box to monitor the quantity of the planned order that has been implemented as maintenance Work Orders, purchase orders, or purchase requisitions. This provides the planner visibility of the plan's status at any point in time.

5. Optionally select the Production check box to enable a plan to automatically release planned orders. See: Auto-release Planned Orders, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.

6. Optionally enter an Inactive On date on which to disable the plan.

   As of this date, you can no longer update the plan, nor use the plan name in the

planning process. You can still view information and run reports for disabled names.

7. Save your work.

Related Topics

Overview of Planning Logic, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Defining MRP Names, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Defining Plan Options

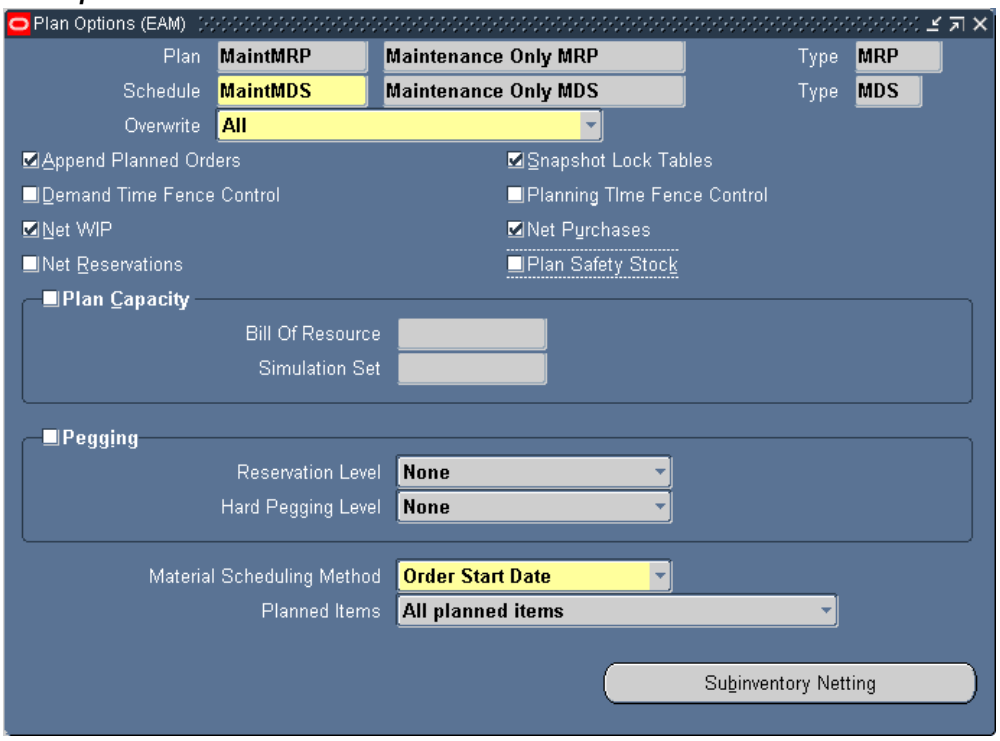
You can enter plan options for any plan. If you are launching the planning process for this plan name for the first time, the plan options you defined in the setup parameters are displayed. Otherwise, the plan options you chose, for the last launch of the planning process, are displayed.

Supply Chain Planning users can also launch a DRP and supply chain MRP and master production schedule (MPS) plan (See also: Reviewing or Adding Plan Options, *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

To enter plan options:

1. Navigate to the Plan Options window.

Plan Options



2. Select a material requirements Plan.

3. Select a master demand Schedule.

4. Select MRP from the Type list of values.

5. Select an Overwrite option:

   All: For a master production schedule (MPS) plan, overwrite all entries and regenerate new MPS entries based on the source master demand schedule. For an MRP, overwrite all MRP firm planned orders for MRP items. This option is displayed when you generate a plan for the first time.

   Outside planning time fence: For a master production schedule (MPS) plan, overwrite all MPS entries outside the planning time fence. For an MRP, overwrite all planned orders and firm planned orders outside the planning time fence.

   None: Do not overwrite any firm planned order for MPS or MRP plans.

6. Select the Append Planned Orders check box to append new planned orders. See: Reviewing or Adding Plan Options, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide* for information regarding situations that cause new planned orders to append.

7. Select the Net WIP check box to indicate that the planning process considers standard discrete jobs, non-standard discrete jobs, or repetitive schedules when planning items during the last plan execution.

8. Select Net Reservations to indicate that the planning process considers stock designated for a specific Work Order when planning the items during the last execution of the plan.

9. Select Net Purchases to indicate that the planning process considers approved purchase requisitions when planning the items during the last execution of the plan.

10. Select Plan Capacity to indicate whether the planning process calculates safety stock for each item during the last plan execution.

    - Specify the Bill of Resource (for MPS plans) and, Optionally a Simulation Set. See: Capacity Modifications and Simulation, *Oracle Capacity User's Guide* and Overview of Bills of Resources, *Oracle Capacity User's Guide*.

11. Select Pegging to calculate graphical pegging information. See: Overview of Graphical Pegging, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*. The planning process then traces supply information for an item to its corresponding end demand details, which you then can view in a graphical display.

    - If you are working in a project environment, set a Reservation Level and, Optionally a Hard Pegging Level. See: Reviewing or Adding Project MRP Plan Options, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.

12. Select a Material Scheduling Method.

    Operation Start Date: Schedule material to arrive in Inventory for availability on the start date of a specific operation.

    Order Start Date: Schedule material to arrive in Inventory for availability on maintenance Work Order start date.

13. Specify which Planned Items you want included.

    All planned items: Include all planned items in the planning process. You would choose this option to be certain that all items are planned, including those you add to a Work Order or schedule, that are not components on any bill of material. Use this option to avoid missing items you want to plan. For items you do not want to plan, define them with an MRP planning method of Not Planned when defining an item in Inventory.

    Demand schedule items only

    Supply schedule items only

Demand and supply schedule items

14. Save your work.

Related Topics

Launching the Planning Process, page 5-3

Viewing Suggested Demand, page 5-5

Reviewing or Adding Supply Chain Plan Options, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Quality Integration Setup

A maintenance work order goes through various steps in its lifecycle (See: eAM Work Order Statuses, page 3-23). One of the steps in the lifecycle is Completion. When completing a maintenance work order, if the Asset Number has associated, mandatory quality collection plans, you need to enter quality results for the work order. A list of quality collection plans associated with the completion transaction appears during the completion process.

While creating a collection plan, you have the option of adding collection triggers to the plan. Triggers are restrictions that you define for a collection plan. For example, work orders for assets that belong to the TRUCK Asset Group require the entry of quality results for the collection plan. Data collection is initiated if all collection trigger conditions are satisfied.

Quality Setup tasks for Enterprise Asset Management include the following:

- Creating Collection Elements, page 2-157
- Creating eAM Quality Collection Plans, page 2-161
- Creating eAM Quality Collection Plans for a Supplier, page 2-165

Creating Collection Elements

Collection elements are the basic building blocks of collection plans, the data structures that you use to collect Quality results. Before you can collect quality data, you must first create a collection plan. Begin by creating collection elements, which define the characteristics of the product or process that you want to monitor, record, and analyze. See: Overview of Collection Elements, *Oracle Quality User's Guide*.

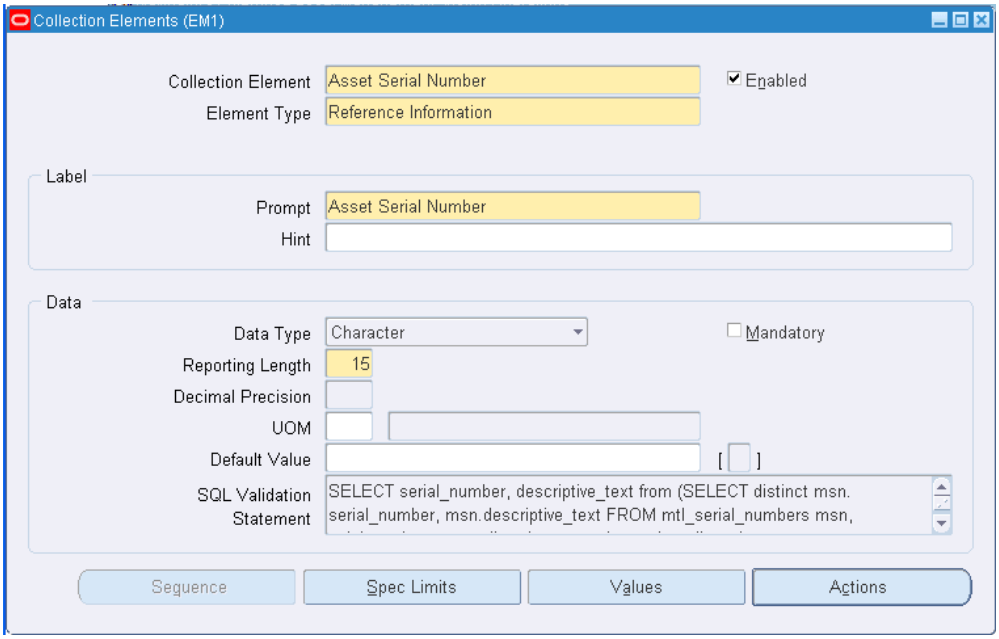
When you define collection elements, you are creating data fields that you can use in collection plans to collect quality results. After you create a collection element, it is available as a selection on a list of values that you can choose from when you set up collection plans. You can create an unlimited number of user-defined collection

elements, or you can use any of Quality's predefined collection elements (See: Predefined Collection Elements, *Oracle Quality User's Guide*) in your collection plans; for example, Asset Num, Asset Serial Number (Asset Serial Number was known as Asset Number in previous releases), Asset Group, Activity, and Work Order. You can also create collection elements by copying them from one collection plan to another.

To define collection elements:

1. Navigate to the Collection Elements window.

Collection Elements



Note: The steps listed below describe how to define Collection Elements one-at-a-time in the Collection Elements window. You can also define several collection elements simultaneously using the Collection Elements Summary window. See: Combination Blocks, *Oracle Applications User's Guide*.

Note: The following Collection Elements are included with Oracle Enterprise Asset Management; you do not need to define them: Asset Group, Asset Num, Asset Serial Number (the asset's Inventory Serial Number), Activity, Maintenance Work Order, Maintenance Operation Sequence.

2. Select the Collection Element name.

The collection element can contain alphanumeric characters, spaces, underscores, and single quotation marks. You cannot use words that are reserved for column names, such as NAME, OCCURRENCE, and ORGANIZATION_ID. See: Reserved Words, *Oracle Quality User's Guide*.

3. Select the Enabled checkbox to enable the collection element. You can add enabled collection elements to collection plans.

4. Select its collection Element Type. See: Collection Element Types, *Oracle Quality User's Guide*.

5. Enter text for the data entry Prompt.

   The prompt is the label for the collection element field displayed in the Results region of the Enter Quality Results window. Prompts also become the column headings on reports and online inquiries. The default prompt is the name of the collection element, but you can overwrite it.

6. Optionally enter a Hint.

   Hints are additional text that appears in the message line, as you enter quality results, to guide you during data entry. See: Message Line, *Oracle Applications User's Guide*.

7. Select the collection element's Data Type.

   You can select any data type, however, you cannot change it after you define the collection element. The available data types are Character, Number, Date, Comment, and Sequence.

   > **Important:** Oracle eAM Self-Service Applications do not support the use of sequence data type collection elements.

8. Optionally select the Mandatory check box to indicate that a value must always be entered for this collection element, when entering quality results. A mandatory collection element can be redefined as non-mandatory when added to a collection plan.

9. Enter the Reporting Length.

   The reporting length specifies how much space is allocated for this collection element's quality results values on reports, inquiries, and in the Enter Quality Results window.

   > **Note:** The reporting length does not determine the amount of space used to store quality results values in the quality data repository. Results values can be up to 150 characters in length.

10. If the Data Type is Number, enter the Decimal Precision.

    If you define specification limits for this collection element, entering the decimal precision (refers to the number of places after the decimal point) here controls the decimal precision of the specification limit values that you can define.

11. Optionally select a UOM. See: Overview of Units of Measure, *Oracle Inventory User's Guide*. Units of measure can be entered for any collection element, regardless of data type.

12. Optionally enter a Default Value for the collection element.

    When you set a default value for the collection element (generally, the most commonly used value for the collection element), it is automatically entered when you enter quality results. You can overwrite this value. See: Default Value Assignment Rules, *Oracle Quality User's Guide*.

13. Optionally enter the SQL Validation Statement.

    This statement is used for validation when you enter quality data. You can base a collection element's data validation on any table in the Oracle database. To do this, you can define a SQL validation statement that Quality uses for validation when you collect quality data. This SQL statement must be a SELECT statement in which you select two columns. For example, if you have entered machine numbers in the database table, you can cross-validate machine numbers entered as you collect quality results against the numbers. See: *SQL*Plus User's Guide and Reference*.

    For example, to validate machine numbers from a table called 'machine_numbers' stored in the database, enter the following SQL validation statement:

```
SELECT machine_number, machine_description

FROM machine_numbers

WHERE NVL(disable_date, SYSDATE+1) > SYSDATE

AND organization_id=:parameter.org_id

ORDER BY custom_machine_number
```

> **Note:** To constrain the SQL Statement to the current organization, you can use the variable, ':parameter.org_id' for the current organization id. To constrain the SQL Statement to the current user's id, you can use the variable, ':parameter.user_id' for the current user's id.

    If you define both a SQL validation statement and a list of collection element values, the list of values is used for validation; the SQL validation statement is ignored.

Related Topics

Overview of Collection Elements, *Oracle Quality User's Guide*

Collection Element Types, *Oracle Quality User's Guide*

Predefined Collection Elements, *Oracle Quality User's Guide*

Collection Element Values, *Oracle Quality User's Guide*

Defining Collection Element Actions, *Oracle Quality User's Guide*

Defining Collection Element Alert Actions, *Oracle Quality User's Guide*

Viewing Collection Elements, *Oracle Quality User's Guide*

Creating eAM Quality Collection Plans

You create collection plans to identify the data that you want to collect, and what actions you want to take based on the quality results that you collect. You can use collection plans to model your test or inspection plans, and you can create an unlimited number of plans to support your enterprise-wide quality data collection and analysis needs. Collection plans are invoked manually for direct results entry, or automatically as you complete a Work Order.

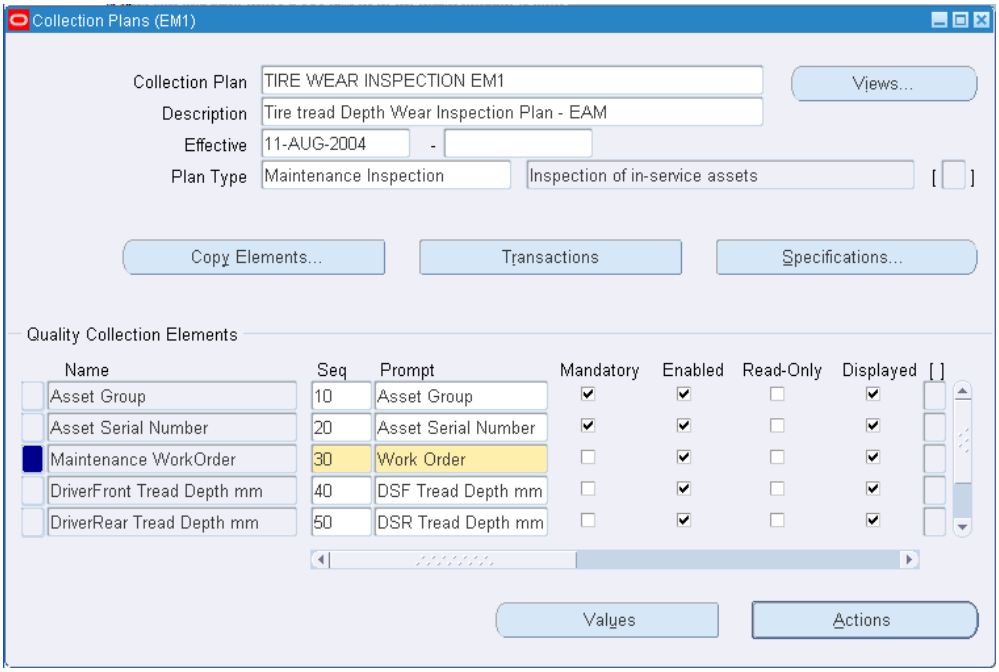
To collect quality data, you must set up a data collection structure called a collection plan. Collection plans are composed of collection elements, their values and specifications, and any actions that you want to initiate in response to quality results. There are some considerations that you must make before you set up collection plans. You first must create collection element types, then the individual collection elements that comprise the plan.

You can attach illustrative or explanatory files to collection plans, in the form of text, images, word processing documents, spreadsheets, or video. Attachments are used to document instructions and corrective action procedures. They are viewed by operations personnel during quality data collection. See: Attachments for Collection Plans, Specifications, and Result Lines, *Oracle Quality User's Guide* and Viewing Attachments Associated with Quality Results, *Oracle Quality User's Guide*.

To review a collection plan:

1. Navigate to the Collection Plans window.

Collection Plans

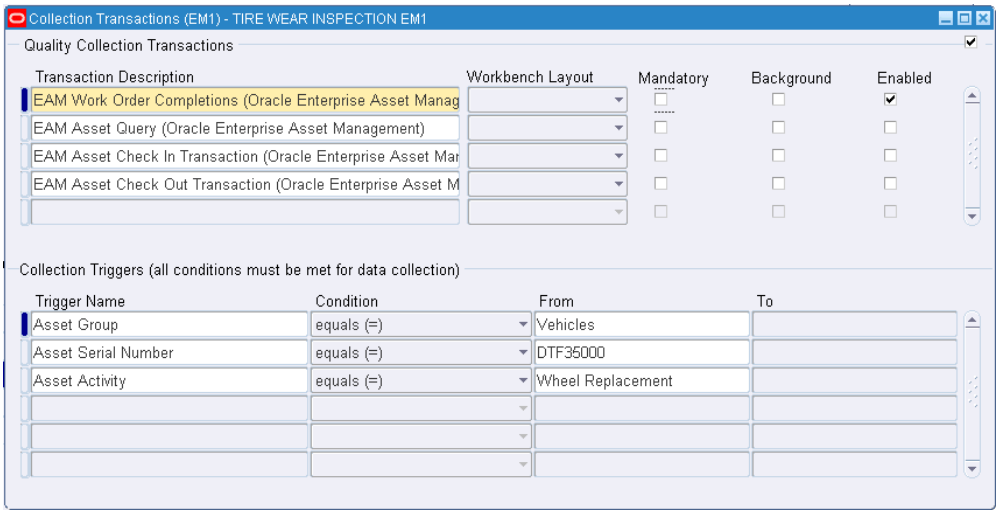


Note: To assist you as you create collection plans, you can select the Summary/Detail option from the View Menu, and run a query to view existing collection plans in summary format. See: Combination Blocks, *Oracle Applications User's Guide*.

2. Select a valid Collection Plan. To create a new collection plan, See: Creating Collection Plans, *Oracle Quality User's Guide*.

3. Choose Transactions. You can create collection plans that are specifically used to collect quality data during transactions performed in other applications (See: Collection Plans for Transactions, *Oracle Quality User's Guide*).

Collection Transactions



4. Select EAM Work Order Completion or Asset Query from the Transaction Description list of values.

   - EAM Asset Query: Enables quality results collection for an asset, independent from any transaction on the asset.

   - EAM Operation Completions: Enables quality results collection for a Work Order's operation pertaining to operation completion or during operation completion (See: Operation Completion, page 3-59).

   - EAM Work Order Completions: Enables quality results collection for a Work Order pertaining to Work Order completion or during Work Order completion (See: Work Order Completion, page 3-60).

   - EAM Asset Check In Transaction: Enables you to record quality information, describing the condition of the asset, during a Check In procedure (See: Asset Tracking, page 20-8).

   - EAM Asset Check Out Transaction: Enables you to record quality information, describing the condition of the asset, during a Check Out procedure (See: Asset Tracking, page 20-8.

5. Optionally indicate whether this collection plan requires the entry of quality results at Work Order completion. If you select the Mandatory check box, you must save at least one quality data record before saving the Work Order completion transaction.

   Note: eAM supports Quality collection during operation

completion transactions, as well as Standalone Asset Query. Valid Transaction Description values are EAM Operation Completions and EAM Asset Query, respectively.

6. Optionally select the Background check box.

   If you select this check box, you can collect quality results for context reference elements (See: Reference Information Collection Element Type, *Oracle Quality User's Guide*).

   > **Note:** The following Collection Elements are included with Oracle Enterprise Asset Management; you do not need to define them: Asset Group, Asset Number, Activity, Maintenance Work Order, Maintenance Operation Sequence.

   Without invoking the Enter Quality Results window, background data collection is initiated when you save the work order completion transaction.

   The system then finds, selects, and initiates the appropriate collection plan or plans.

   If collection triggers are defined for background data collection, data collection is initiated if all collection trigger conditions are satisfied (you define triggers for transactional data collection in the Collection Transactions window).

   Several collection plans can collect data in the background during the same transaction.

   When this is the case, the results for context elements on all of these collection plans are automatically saved when the parent transaction is saved.

7. Select the Enabled check box.

8. Optionally select a Trigger Name.

   Valid trigger values are Activity, Asset Group, Asset Number, Asset Serial Number, and Maintenance Work Order. Triggers are restrictions that you define for this collection plan. In the above example, Work Orders for the JP1 asset require the entry of quality results for the collection plan.

   > **Note:** If a trigger is not defined, then all work orders will require quality collection results; the collection plan is applicable to all assets.

9. If you selected a Trigger Name, select a Condition.

10. Select a From value.

For example, if you selected Asset Group as the Trigger Name, Asset Groups are available. Optionally you can enter a To value to create a range condition. For example, if the trigger is Work Order, you might enter a range of Work Order numbers.

11. Save your work.

Related Topics

Adding Collection Plan Attachments, page 13-3

Triggering a Work Request, page 13-4

Collection Plans for Transactions, *Oracle Quality User's Guide*

Overview of Collection Plans, *Oracle Quality User's Guide*

Overview of Quality Self-Service, *Oracle Quality User's Guide*

Collection Plan Types, *Oracle Quality User's Guide*

Collection Plan and Import Results Database Views, *Oracle Quality User's Guide*

Collection Elements in Collection Plans, *Oracle Quality User's Guide*

Defining Collection Plan Element Values, *Oracle Quality User's Guide*

Associating Specification Types with Collection Plans, *Oracle Quality User's Guide*

Defining Collection Plan Element Actions, *Oracle Quality User's Guide*

Updating and Deleting Collection Plans, *Oracle Quality User's Guide*

Viewing Collection Plans, *Oracle Quality User's Guide*

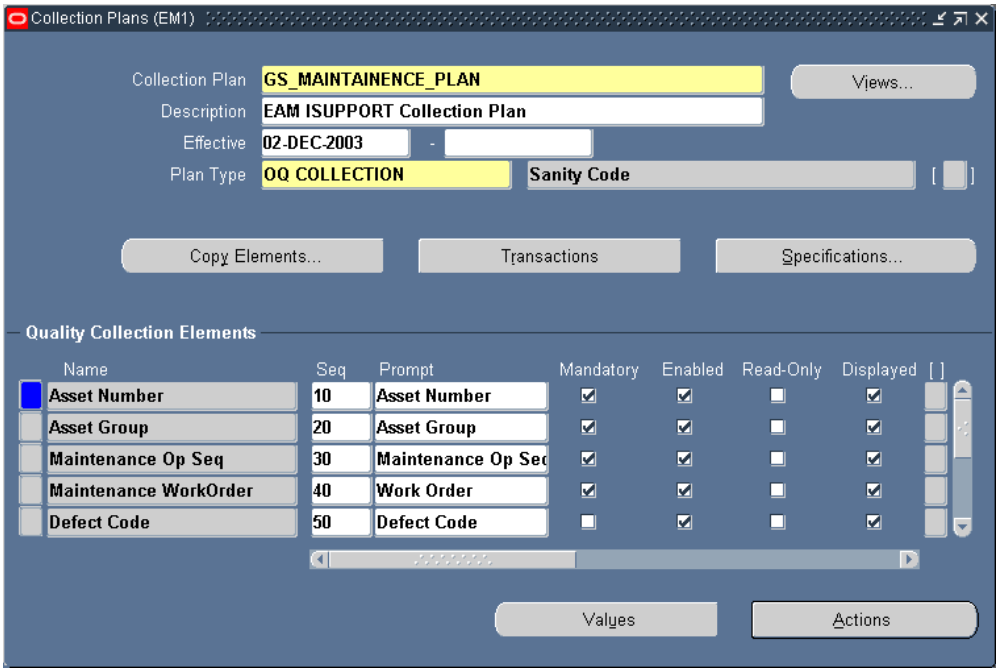
Creating eAM Quality Collection Plans for a Supplier

eAM enables you to create Quality collection plans that are optionally mandatory for a supplier to enter crucial Quality data, via iSupplier Portal, before the supplier can complete an Outside Service Processing operation.

To create and eAM quality collection plan for a supplier:

1. Navigate to the Collection Plans window.

Collection Plans

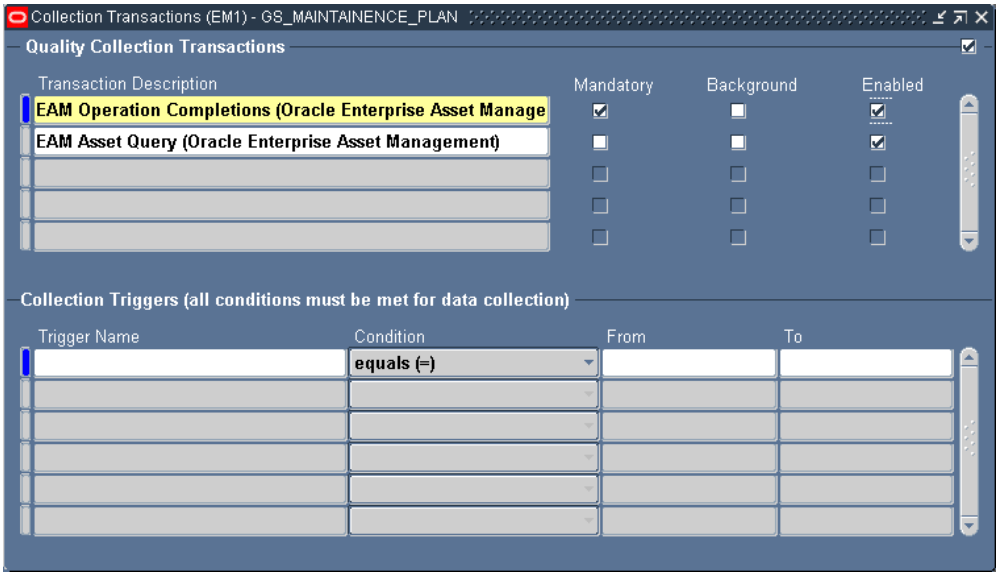


Note: To assist you as you create collection plans, you can select the Summary/Detail option from the View Menu, and run a query to view existing collection plans in summary format. See: Combination Blocks, *Oracle Applications User's Guide*.

2. Select a valid Collection Plan. To create a new collection plan, See: Creating Collection Plans, *Oracle Quality User's Guide*.

3. Choose Transactions. You can create collection plans that are specifically used to collect quality data during transactions performed in other applications (See: Collection Plans for Transactions, *Oracle Quality User's Guide*).

Collection Transactions



4. Select EAM Operation Completions from the Transaction Description list of values.

5. Optionally select the Mandatory check box to indicate that this collection plan requires the entry of quality results at Operation completion. If this check box is selected, the supplier must enter quality data before completing the Outside Services operation.

6. Save your work.

Related Topics

Creating eAM Quality Collection Plans, page 2-161

Adding Collection Plan Attachments, page 13-3

Triggering a Work Request, page 13-4

Overview of Collection Plans, *Oracle Quality User's Guide*

Overview of Quality Self-Service, *Oracle Quality User's Guide*

Collection Plan Types, *Oracle Quality User's Guide*

Collection Plan and Import Results Database Views, *Oracle Quality User's Guide*

Collection Elements in Collection Plans, *Oracle Quality User's Guide*

Defining Collection Plan Element Values, *Oracle Quality User's Guide*

Associating Specification Types with Collection Plans, *Oracle Quality User's Guide*

Defining Collection Plan Element Actions, *Oracle Quality User's Guide*

Updating and Deleting Collection Plans, *Oracle Quality User's Guide*

Viewing Collection Plans, *Oracle Quality User's Guide*

Outside Processing Integration Setup

Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work based on an agreed upon contract or agreement. For example, a contractor service is a painting service. It is also important to associate the purchasing transactions, such as the requisition and purchase order, to the Work Order. In order for this to execute, you must complete the appropriate steps in Purchasing and Enterprise Asset Management.

Outside Service Processing provides the functionality to create items that are contractor services, such as landscaping, include these items on a Work Order, and execute the related purchasing transactions as the Work Order is released. By creating a contract service as an Outside Service Processing item, the purchasing requisition is created when the Work Order is Released. The additional purchasing transaction, including the creation of the purchase order, the approval, and invoicing process, are then managed by Purchasing. This optional process ensures that the actual charges are applied to the Work Order. The supplier accesses the purchase order and maintenance Work Order via iSupplier Portal. Within iSupplier Portal, the supplier can view all open and closed outside service operations and their associated maintenance Work Orders. The supplier can enter mandatory collection plan results, before completing the outside operation (See: Oracle iSupplier Portal, *Oracle iSupplier Portal User's Guide*).

The other option is to enable Standard Rate. This applies predetermined standard rates, for contractor services, to the Work Order.

Outside Processing Setup tasks for Enterprise Asset Management include the following:

- Setting Up Outside Service Processing, page 2-168
- Setting Up Direct Items, page 2-176

Setting Up Outside Service Processing

Purchasing recognizes items, while eAM recognizes resources. As a result, you must link the contractor service item to a resource, for the purchase order to link to the Work Order. This is associated via the Resources window. Additionally, the resource must associate with a department. The department must specify the location where the services are to deliver. This must be a valid location for the organization.

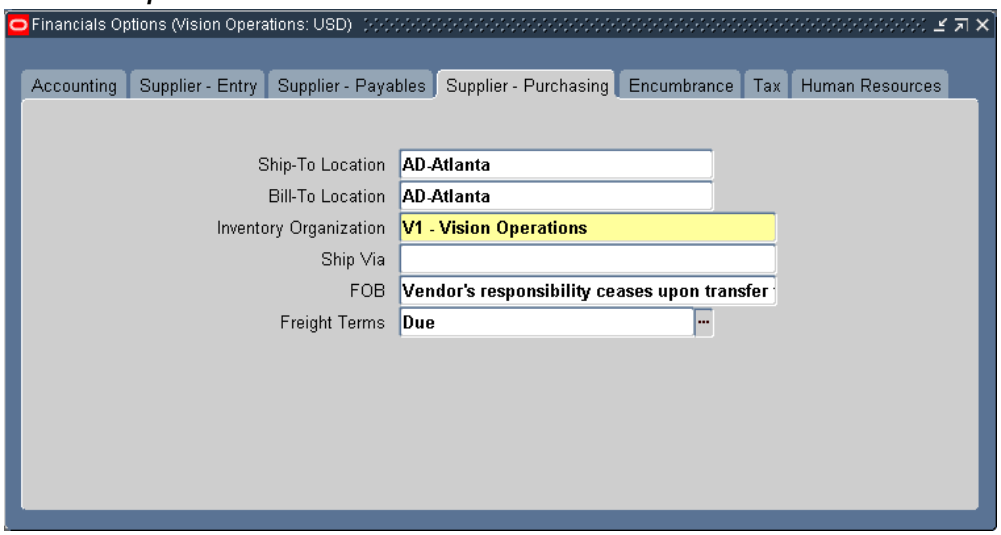
For each contractor service resource, you can determine whether the rate charged to the Work Order is a standard rate or the actual amount, based on the purchase order price. This is set up within the Resources window, and may vary for each resource.

To set up purchasing information:

1. Navigate to the Financials Options window.

2. Select the Supplier-Purchasing tab.

Financials Options



3. The options you define in this region, except for Inventory organization, are used as default values for the Purchasing region of the Suppliers window (See: Suppliers, *Oracle Payables User's Guide*). The supplier values default to new supplier sites for the supplier, which default to new purchasing documents for the supplier site.

4. Select Ship-To and Bill-To Locations. These are the names of the ship-to/bill-to location for the system default values. If the name you want is not available, use the Location window to select a new location (See: Setting Up Locations, *Using Oracle HRMS - The Fundamentals*).

5. Select an Inventory Organization. You can associate each of your purchasing operating units with one inventory item master organization. Your eAM Organization (See: Enabling Organizations for Enterprise Asset Management, page 2-7) should point to this item master. When you associate your purchasing operating unit with an inventory organization, items you define in this organization become available in Purchasing. You can choose an inventory organization that uses the same set of books as your Purchasing operating unit. Do not change the inventory organization after you have already assigned on to Purchasing.

6. Optionally select a Ship Via code. This is the freight carrier you use with suppliers. If the type of freight carrier you want is not available, use the Freight Carriers window to define a new shipping method. The value you enter here is the value in

the Description field of the Freight Carriers window in Purchasing.

7. Select a FOB. If the type of FOB you want is not available, use the Oracle Purchasing Lookups window to define a new FOB.

8. Select a Freight Terms code. The fright terms for a supplier identify whether you or your supplier pays for freight charges on goods you receive. You can define new freight terms in the Oracle Purchasing Lookups window.

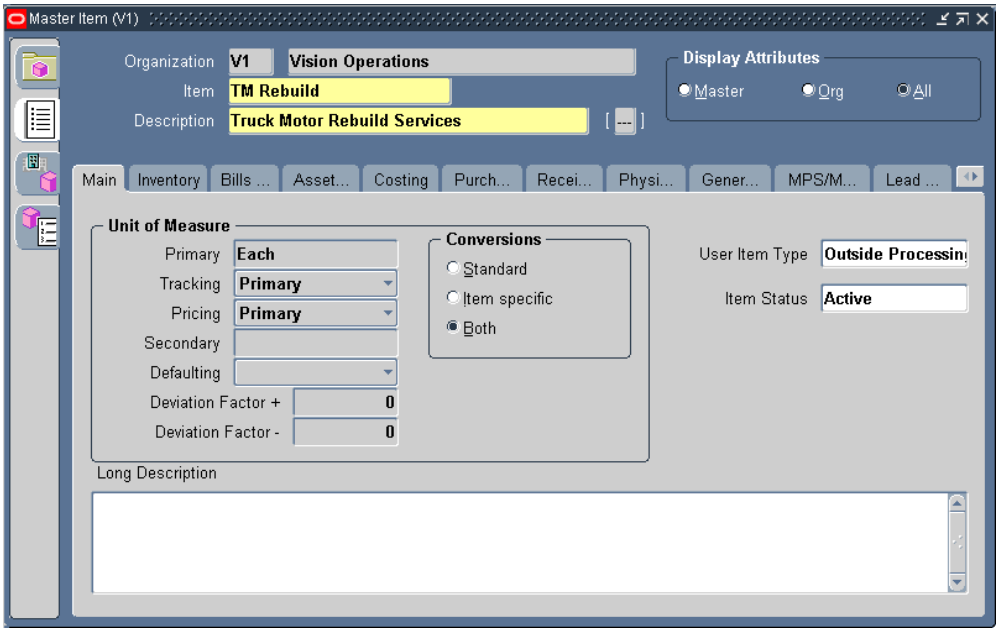
9. Save your work.

To set up outside services as items:

Create an item for each outside service, such as landscaping services.

1. Navigate to the Master Item window.

Master Item



2. Enter the item Name for the contractor service. For example, Landscape Service.

3. Select Copy From within the Tools menu.

4. Select @Outside Processing Item from the Template list of values.

5. Choose Apply.

6. Choose Done.

7. Within the Purchasing tab, ensure that the Outside Processing Item check box is selected.

8. Select the Resource Unit Type.

   Resource: Costs are based on the resource standard rate.

9. Select a Default Buyer.

10. Enter a List Price for this contractor service.

11. Select Each for the Unit of Issue. This is the unit of measure you use to issue the item from inventory.

12. Within the Receiving tab, select Direct from the Receipt Routing list of values.

13. Save your work.

14. Select the Organization Assignment tab on the left side of the window, then assign this item to the eAM organization.

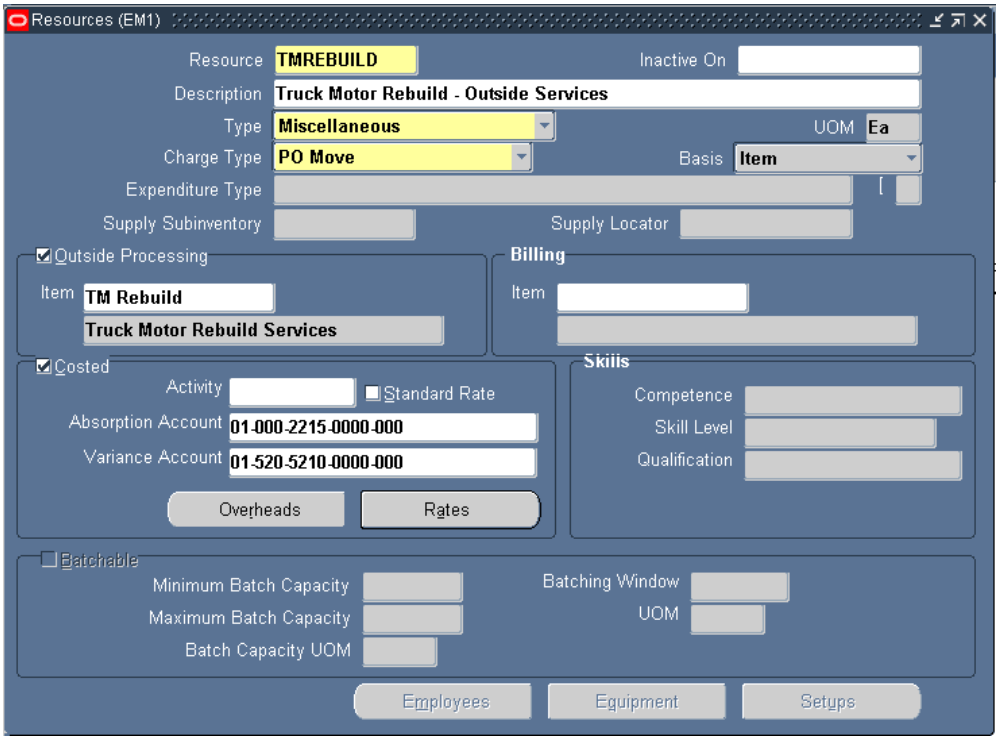
15. Save your work.

To link outside service items to resources:

You must define outside resources and link them to outside items in order to automatically generate purchase requisitions for outside services. When you assign outside resources to a department, you also specify a usage rate or amount that determines the quantity you are requisitioning and/or charging to Work Orders.

1. Navigate to the Resources window.

Resources



2. Select a unit of measure (UOM). This value is the default unit of measure for all transactions, for the current resource.

3. Verify that the Enabled check box is enabled for outside processing.

4. Enter the outside services Item that was entered in Inventory and associate it with the eAM resource.

5. Select the Costed check box to include this outside resource in your Work Order cost. When you define a resource with a charge type of PO Receipt, Cost Management automatically defaults Outside Processing as the cost element.

6. Enter an Absorption Account. You must define an absorption account for each outside resource. The absorption account defaults from the organization's receiving account, which is debited when an outside processing item is received and is subsequently credited when the item is delivered to eAM. The debit goes to the outside processing account associated with the accounting class of the Work Order when the item is delivered to eAM.

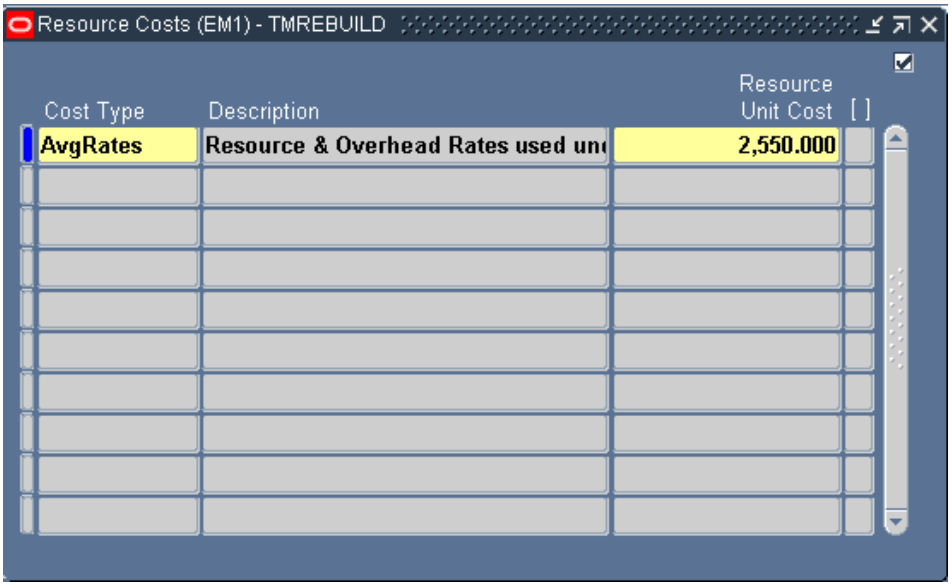
7. Optionally enter a Variance Account. You must define a purchase price variance account for each outside resource you define. This account defaults from the organization's purchase price variance account.

If you select the Standard Rate check box while performing the next step, the Variance Account is mandatory.

8. Optionally select the Standard Rate check box to charge the standard, non-purchase order amount to the Work Order. Clear the Standard Rate check box to charge the Work Order with the actual purchase order amount.

    1. If you selected the Standard Rate check box, choose Rates to enter your standard rates.

Resource Costs



    2. Enter a Cost Type of Value. This is dependent on the costing method defined for your eAM organization.

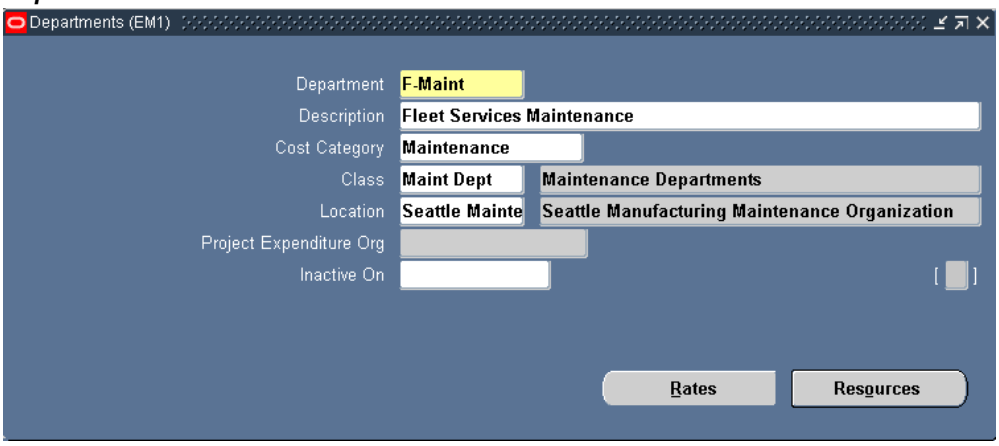
    3. Enter a Resource Unit Cost.

    4. Save your work and close the window.

To link the outside service resource to a department:

1. Navigate to the Departments window.

Departments



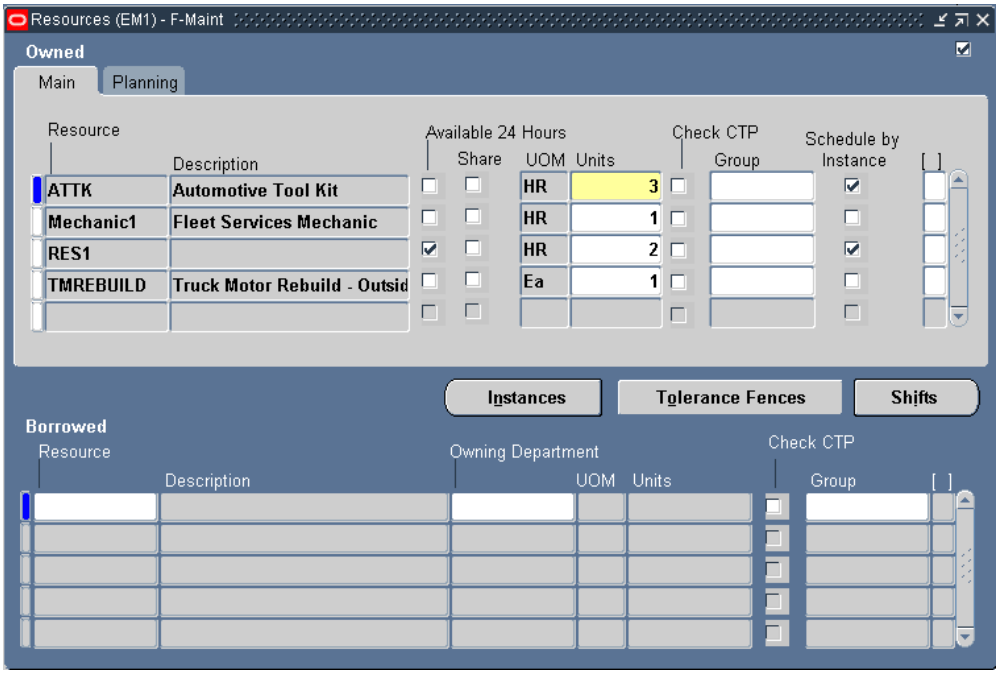
2. Select the Department to associate with the outside service resource.

3. Select a Cost Category for this department. If this is left blank, then the costs related to this department are charged, based on the eAM parameter settings (See: Defining eAM Parameters, page 2-11).

4. Select a valid Location. This is mandatory.

5. Choose Resources.

Resources



6. Select the outside service Resource.

7. Optionally indicate whether this resource is Available 24 Hours a day. You cannot assign shifts to a resource that is available 24 hours a day.

8. Optionally indicate whether this department can share this resource and capacity with other departments.

9. Enter the number of capacity Units (resource units) available for this department.

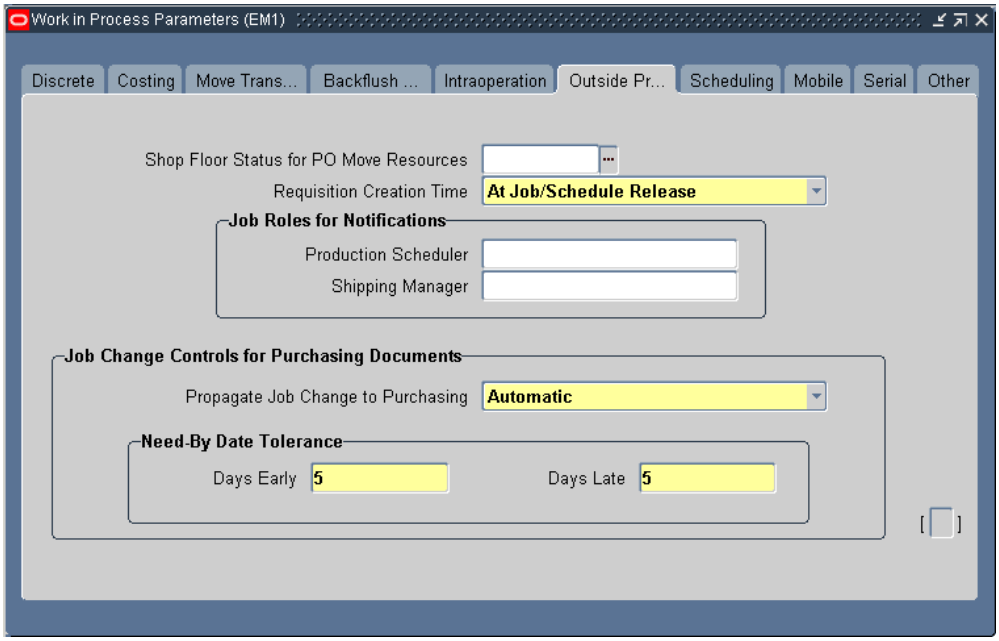
10. Save your work.

    For information on all remaining fields, See: Defining a Resource, *Oracle Bills of Material User's Guide*.

To define WIP parameters:

1. Navigate to the Work in Process Parameters window.

Work in Process Parameters



2. Select the Outside Processing tab.

3. Select a value for Requisition Creation Time.

   At Job/Schedule Release - This enables automatic creation of a purchase order requisition, for contractor services, when the Work Order is Released.

   Manual - Choose Manual to manually create requisitions. With this selection, requisitions are not automatically created.

   At Operation - Oracle recommends that you do not select At Operation. Within eAM, At Operation is equivalent to selecting Manual.

4. Save your work.

Related Topics

Supplier - Purchasing Financials Options, *Oracle Payables User's Guide*

Setting Up Direct Items

You can add Direct Items to a maintenance Bill of Material (BOM) (See: Setting Up Maintenance Bills of Material, page 2-93). When the Maintenance BOM is associated with a work order, you can add more Direct Items to its material requirements list before it is released (See: Defining Inventory Material Requirements, page 3-37). The

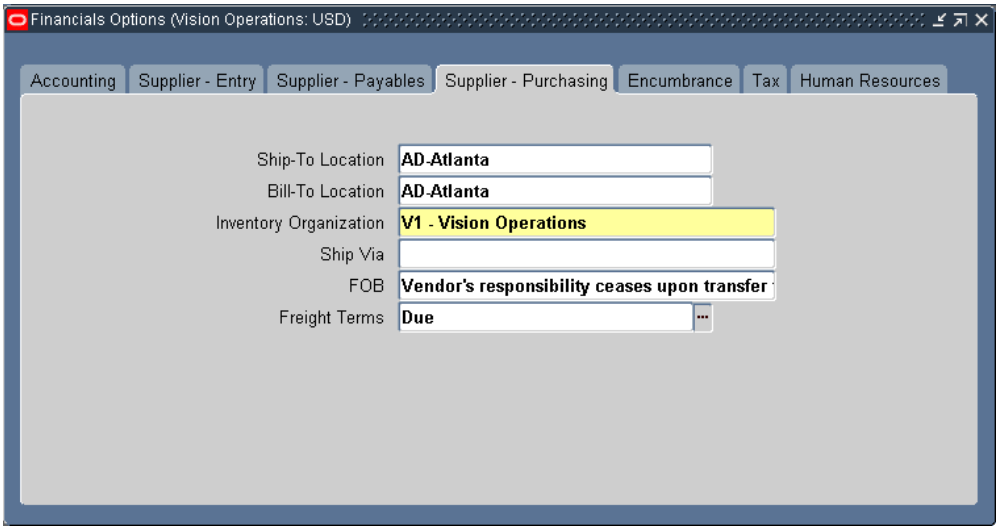
system automatically creates Requisition/Purchase Orders (if the Auto Request Material check box is selected within the Maintenance BOM), for the associated Direct Items, when the work order is released for execution. The supplier can view the maintenance work order detail information within Work Order Details page, via iSupplier Portal.

To set up purchasing information:

1. Navigate to the Financials Options window.

2. Select the Supplier-Purchasing tab.

Financials Options



The options you define in this region, except for Inventory organization, are used as default values for the Purchasing region of the Suppliers window (See: Suppliers, *Oracle Payables User's Guide*). The supplier values default to new supplier sites for the supplier, which default to new purchasing documents for the supplier site.

3. Select Ship-To and Bill-To Locations. These are the names of the ship-to/bill-to location for the system default values. If the name you want is not available, use the Location window to select a new location (See: Setting Up Locations, *Using Oracle HRMS - The Fundamentals*).

4. Select an Inventory Organization. You can associate each of your purchasing operating units with one inventory item master organization. Your eAM Organization (See: Enabling Organizations for Enterprise Asset Management, page 2-7) should point to this item master. When you associate your purchasing operating unit with an inventory organization, items you define in this organization become available in Purchasing. You can choose an inventory organization that uses the same set of books as your Purchasing operating unit. Do not change the inventory organization after you have already assigned on to Purchasing.

5. Optionally select a Ship Via code. This is the freight carrier you use with suppliers. If the type of freight carrier you want is not available, use the Freight Carriers window to define a new shipping method. The value you enter here is the value in the Description field of the Freight Carriers window in Purchasing.

6. Select a FOB. If the type of FOB you want is not available, use the Oracle Purchasing Lookups window to define a new FOB.

7. Select a Freight Terms code. The fright terms for a supplier identify whether you or your supplier pays for freight charges on goods you receive. You can define new freight terms in the Oracle Purchasing Lookups window.

8. Save your work.

Related Topics

Non-Stock Direct Item Setup, page 2-116

Setting Up Asset Bills of Material, page 2-77

Setting Up Maintenance Bills of Material, page 2-93

Defining Rebuildable Bills of Material, page 2-114

Supplier - Purchasing Financials Options, *Oracle Payables User's Guide*

iSupplier Portal User's Guide

Cost Management Integration Setup

Costs are generated as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies defined within Enterprise Asset Management, and can roll up to any level within an asset hierarchy. Labor, Material, and Equipment charges can further classify into several maintenance cost categories.

All work is captured and retained by Enterprise Asset Management. You can reference work that has been completed to review operations, resources, and costs. This information can help you understand the scope of work and the process by which it is completed.

This section includes the following topics:

- eAM Costing Methods and Mappings, page 2-179
- Setting Up Cost Categories, page 2-180
- Setting Up Purchase Order Category Associations for Direct Items, page 2-181
- Setting Up eAM Cost Management, page 2-183

- Setting Up Zero Cost Rebuild Item Issue, page 2-185

eAM Costing Methods and Mappings

eAM supports four perpetual costing methods: standard, average, FIFO, and LIFO. As a foundation, eAM uses the following five basic cost elements provided by Cost Management (See: Cost Elements, *Oracle Cost Management User's Guide*):

- Material
- Material Overhead
- Resource
- Resource Overhead
- Outside Processing

Asset management requires different cost classifications. eAM provides these cost classifications, while maintaining the integrity of the basic costing rules. The five cost elements above are translated into cost elements that are familiar to maintenance managers.

eAM classifies work done on maintenance Work Orders into cost categories. By default, eAM has defined three cost categories: Contract, Operations, and Maintenance.

You can define additional cost categories, if needed. Each cost category is further classified into three cost elements: Equipment, Labor, and Material.

- *Material* - Costs from material transactions.
- *Labor* - Costs from labor resource transactions.
- *Equipment* - Costs from equipment resource transactions.

Material charges are classified as Material cost elements. Resource charge of type person is classified as a Labor cost element. Resource charge of type machine is classified as Equipment cost element. All other resource types are classified by the default cost element in the eAM Parameters (See: Defining eAM Parameters, page 2-11).

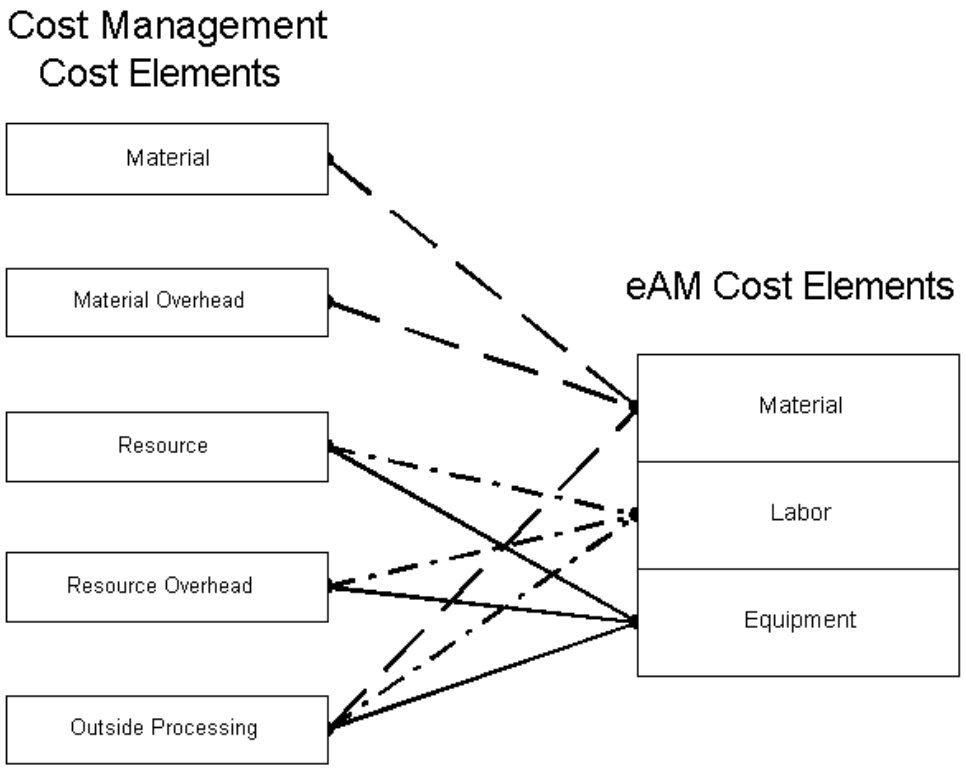
For each department, a maintenance cost classification is identified to reflect the above breakdown. The cost category for the Material cost element is the cost category of the department assigned to the routing of the operation. For the Labor cost element, it is the cost category of the resource's owning department. For the Equipment cost element, it is the cost category of the asset's owning department.

eAM Mappings

The three cost elements (Material, Labor, and Equipment) are mapped to the five basic cost elements (Material, Material Overhead, Resource, Resource Overhead, and Outside Processing) provided by Cost Management.

The following diagram illustrates that the eAM Material cost classifications are mapped to Material, Material Overhead, and Outside Processing. Labor and Equipment cost classifications are mapped to Resource, Resource Overhead, and Outside Processing.

Cost Element Mappings



Setting Up Cost Categories

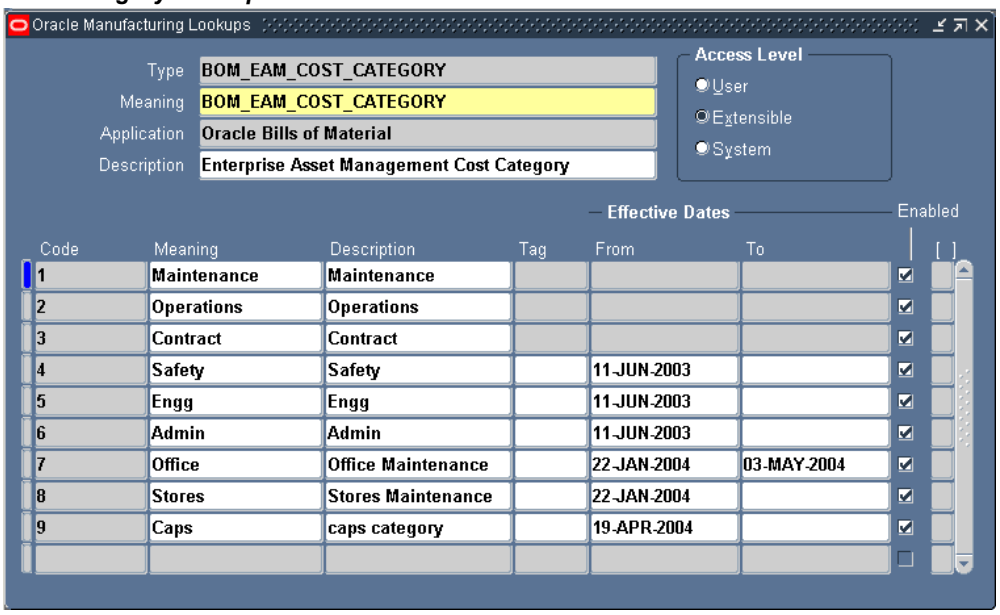
Cost Category codes are used as the default for departments that do not have a cost category defined. Department costs are then posted to the appropriate cost elements. Valid values are Maintenance, Operations, Contract, and any other values that you might have added within this extensible lookup table. See: Overview of eAM Cost Management, page 6-1.

By default, eAM has defined three cost categories: Contract, Operations, and Maintenance. However, you can define additional cost categories, if needed. After you have added the cost categories, they are available in the Cost Category list of values, within the Enterprise Asset Management Parameters window (See: Defining eAM Parameters, page 2-11).

To define additional cost categories:

1. Navigate to the Oracle Manufacturing Lookups window.

Cost Category Lookups



2. Select BOM_EAM_COST_CATEGORY from the Type list of values.

3. Enter a numeric value in the Code field. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

   Warning: Do not use alpha codes. Entering alpha codes causes database errors in the application.

4. Enter the Meaning of the code, for example, High.

5. Enter a Description for the code.

6. Optionally enter a Tag to categorize lookup values. This field is informational.

7. The Effective From Date defaults as the system date, but you can update this. Optionally enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.

9. Save your work.

Setting Up Purchase Order Category Associations for Direct Items

You can specify whether direct items are material, labor, or equipment charges on a

work order, based on the user-specified Purchasing Category on the requisition or purchasing line. Purchasing Categories are associated with a maintenance cost element and its respective valuation account. If an association is not set up, direct items are charged as material on the work order.

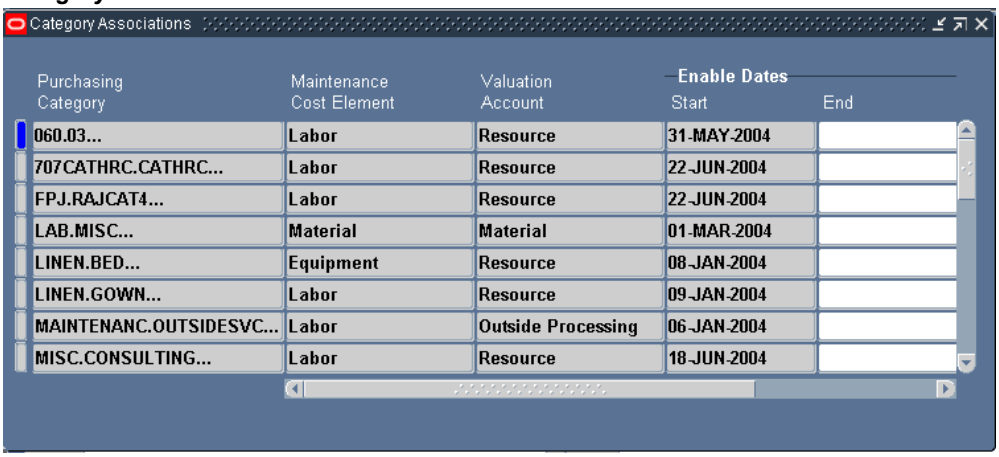
Direct Items may be Non-Stock or Description-based. Non-Stock Direct Items are defined within Oracle Inventory (See: Non-Stock Direct Item Setup, *Oracle Enterprise Asset Management User's Guide*), and the Purchasing Category for this type of Direct Item defaults from the Purchasing Category Set's Item Assignments.

For projects, you can assign direct items to a Direct Item Expenditure Type, other than the one assigned at the organization level. This is performed, based on the Direct Item Expenditure Type associated with the Purchasing Categories used on the requisition or purchasing line.

To set up associations for purchasing categories used for direct items:

1. Navigate to the Find Category Associations window.
2. Choose New.

Category Associations



3. Select a Purchasing Category. See: Defining Category Sets, *Oracle Inventory User's Guide*.
4. Select a Maintenance Cost Element.
5. Select a Valuation Account. If the Maintenance Cost Element is Material, you can choose the Material Valuation Account. If the Maintenance Cost Element is Labor or Equipment, you can select either of the Resource or Outside Processing Valuation Accounts.
6. Select a Start Date.

7. Optionally select an End Date. A Purchasing Category may have one existing association at a time. If you want to assign a different association for a category, select an End Date.

8. Select a Direct Item Expenditure Type if your organization uses Oracle Projects. This is a required step.

9. Save your work.

Related Topics

Defining Items, *Oracle Inventory User's Guide*

Defining Categories, *Oracle Inventory User's Guide*

Defining Category Sets, *Oracle Inventory User's Guide*

Setting Up eAM Cost Management

You can reference work that has been completed to review operations, resources, and costs. This information can help you understand the scope of work and the process by which it is completed. To capture costs for all work within eAM, some key setups must be in place:

1. Define a default cost element.

2. Define a default cost category.

Follow these steps to define these key setups.

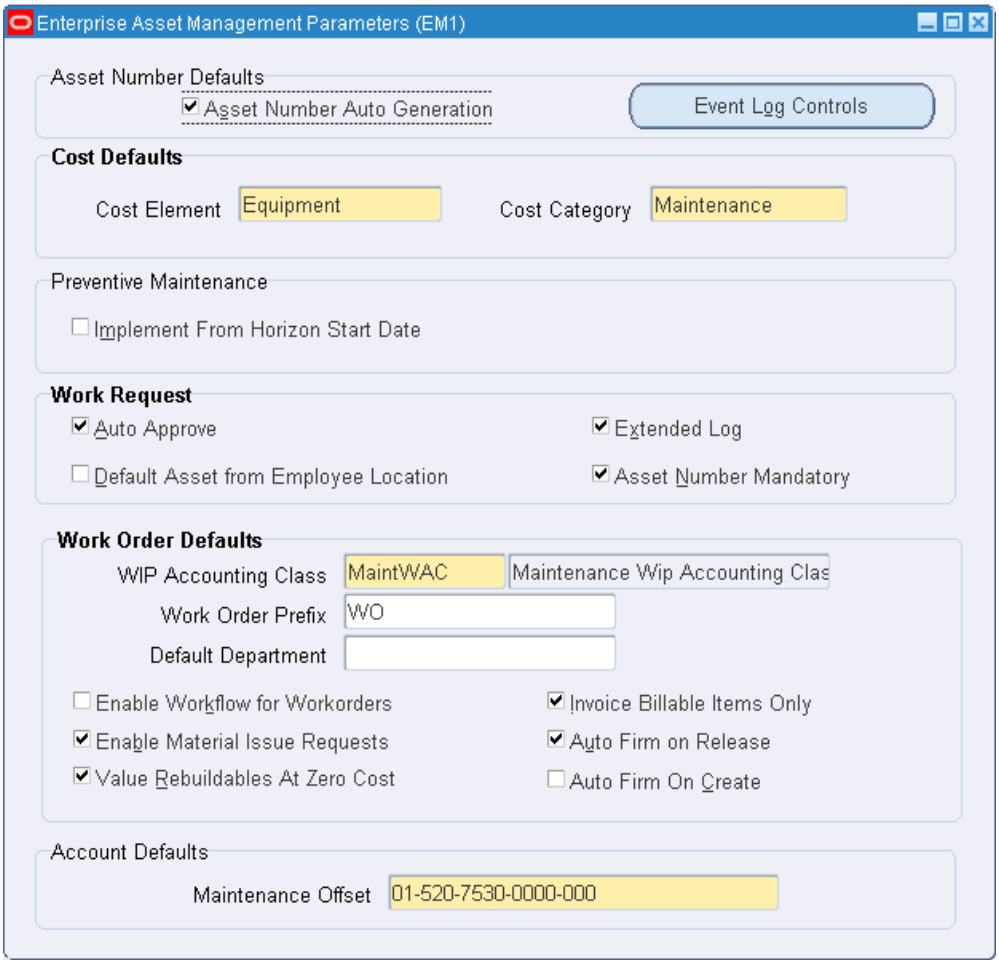
1. Define a default cost element (Material, Labor, or Equipment) when setting up the eAM Parameters. See: Defining eAM Parameters, page 2-11. This is used when no predefined mapping exists to the cost elements in eAM. For example, department overheads are not linked to a particular eAM cost element for cost analysis. Therefore, the default cost element carries the cost for analysis. Also, outside processing types of Currency, Amount, and Miscellaneous are not linked to a particular eAM cost element. When one of these types is used in outside processing, the costs are allocated to the default cost element (See: eAM Costing Methods and Mappings, page 2-179).

2. Define a default cost category when setting up the eAM Parameters. This defaulted cost category is used if there is no cost category defined for the departments.

To define a default cost element and cost category:

1. Navigate to the Enterprise Asset Management Parameters window.

Enterprise Asset Management Parameters



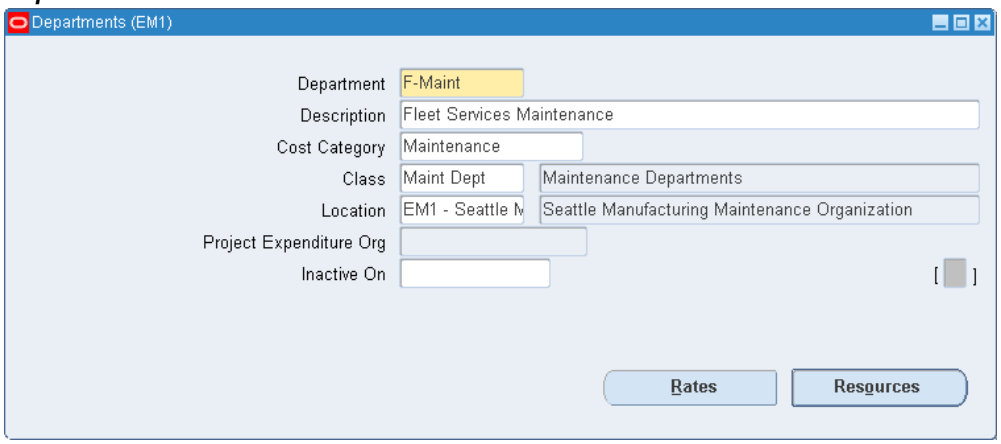
2. In the Cost Defaults region, select an eAM Cost Element to indicate how to capture cost overheads, and any miscellaneous resource costs. Valid values are Equipment, Labor, and Material.

3. Select a Cost Category to use as the default for departments that do not have a cost category defined. Department costs are then posted to the appropriate cost classification.

To define a cost category by department:

1. Navigate to the Departments window.

Departments



2. Select a Cost Category.

> **Note:** It is not required to provide a cost category for a department (crew). However, if you do not provide a cost category for a department (crew), costs for that crew are allocated to the defaulted cost category specified in the eAM parameters (See: Defining eAM Parameters, page 2-11). Each time costs for that element are charged to a Work Order, this default cost category is used for reporting and analysis.

Related Topics

Defining eAM Parameters, page 2-11

Defining Departments and Resources, page 2-17

eAM Cost Estimation, page 6-2

Viewing Cost Information, page 6-4

Transferring Invoice Variances, page 6-17

Setting Up Zero Cost Rebuild Item Issue

eAM Work Order costing supports both WIP Component Issues and the return of rebuildables from/to expense subinventories at their current or zero cost. You can issue rebuildable components from the Expense Subinventory to the maintenance Work Order at zero cost and/or return rebuildable components to the Expense Subinventory at zero cost.

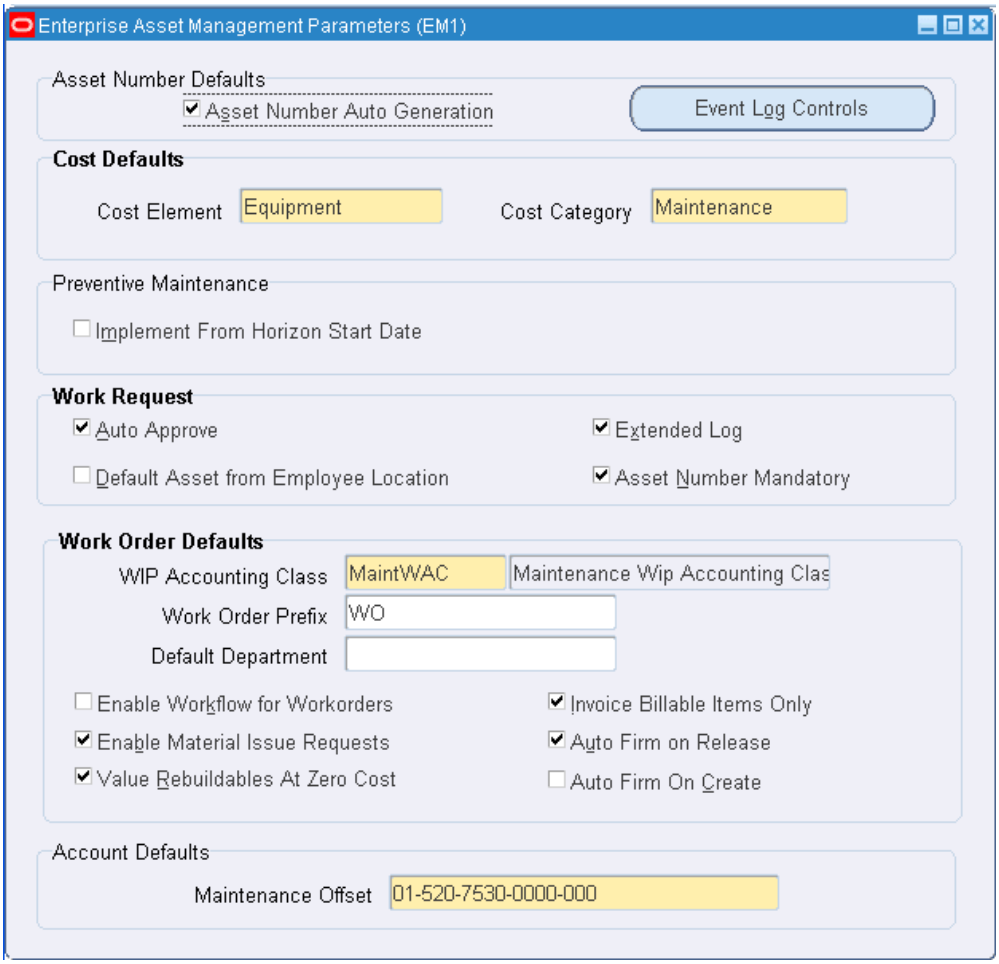
Enterprise Asset Management parameters determine organization level defaults for

individual transactions. Set up Work Order default information to establish how rebuildables are valued in the current organization.

To set up zero cost rebuild item issue:

1. Navigate to the Enterprise Asset Management Parameters window.

Enterprise Asset Management Parameters



2. Within the Work Order Defaults region, select the Value Rebuildables at Zero Cost to indicate that rebuildable components charge at zero cost.

3. Save your work.

Related Topics

Defining eAM Parameters, page 2-11

Process and Discrete Manufacturing Integration Setup

Enterprise Asset Management integrates with Process and Discrete Manufacturing, enabling your maintenance environment to identify Enterprise Asset Management asset relationships with production equipment. This feature associates an asset or many assets to the production equipment located in a discrete or process manufacturing organization. After establishing, you can view the resource usage (maintenance work orders, batches, or FPOs) emanating from production, associated with a maintainable asset. In discrete manufacturing organizations, you can view maintenance equipment downtime requirements and their affect on capacity during production planning and scheduling.

This section includes the following topics:

- Organization Setup, page 2-187
- Associating Assets with Production Equipment, page 2-188

Organization Setup

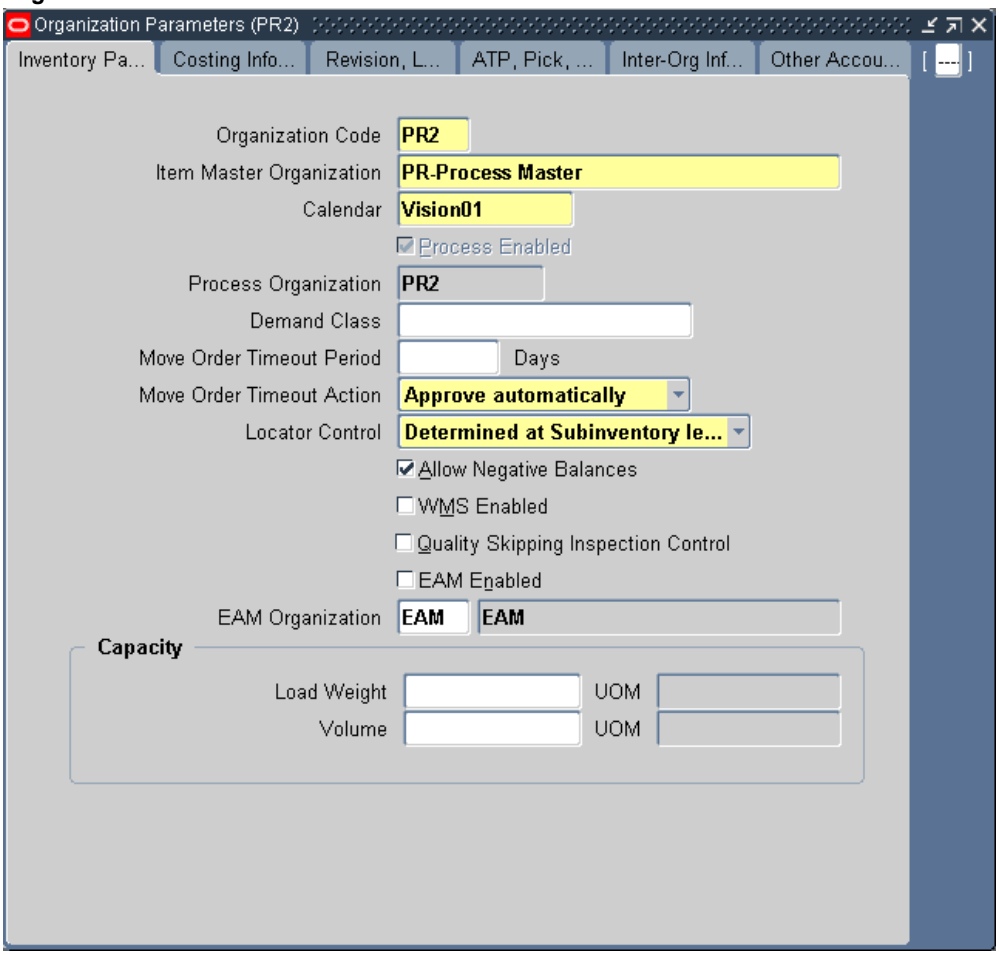
In order for eAM to integrate with process or discrete manufacturing, determine which process or discrete manufacturing organization is associated with your eAM organization.

Process Manufacturing organizations are never the same as eAM organizations; they are mutually exclusive. Although it is possible, Oracle does not recommend commingling eAM and discrete manufacturing organizations. They should have separate organization codes.

To associate a process or discrete manufacturing organization with an eAM organization:

1. Navigate to the Organization Parameters window, and select a valid process enabled or discrete manufacturing organization from the Organization Code list of values.

Organization Parameters



2. Enter an EAM Organization to associate with the current Organization Code. This eAM organization is now linked to the organization code you selected above.

Related Topics

Organization Setup, page 2-5

Creating an Organization, *Oracle Human Resources User's Guide*

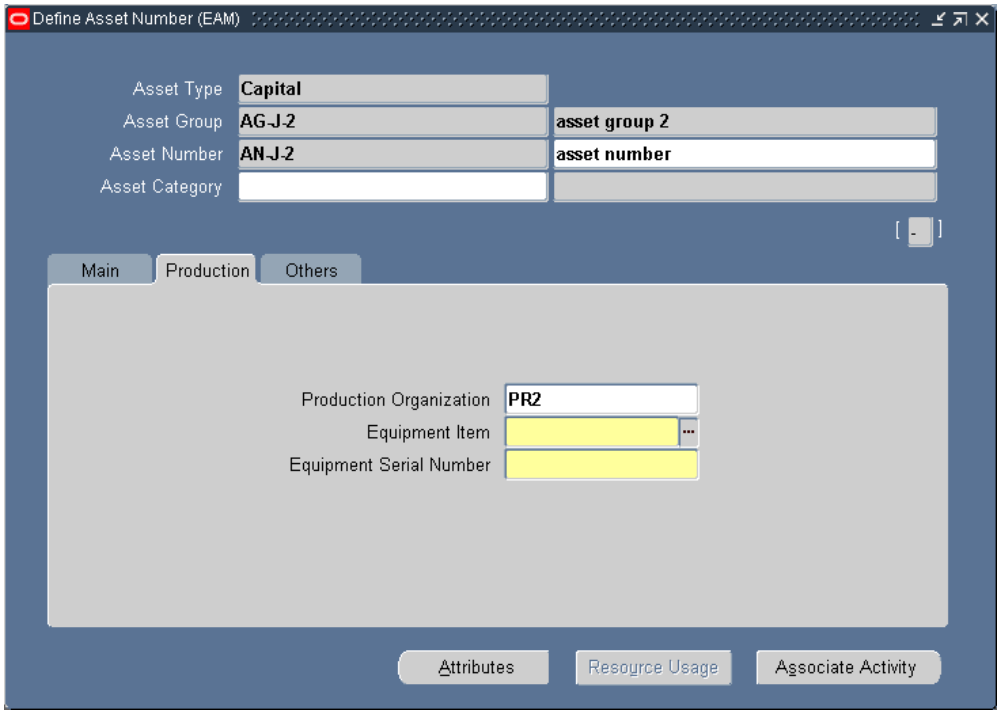
Associating Assets with Production Equipment

You can link an asset to production equipment defined within a process or discrete organization, as well as asset equipment defined within an eAM organization. This relationship is defined while defining or updating assets within eAM.

To associate an asset with production equipment:

1. Navigate to the Define Asset Number window.

Define Asset Number



2. Select an Asset Number that you want to link to production equipment.

3. In the Production tab, select a valid Production Organization.

   The list of values displays those process and discrete organizations that have the current eAM organization selected as their maintenance organization (See: Organization Setup, page 2-187).

4. Select an Equipment Item. This is mandatory if you populated the Production Organization field. Items that were defined with an equipment template (See: Item Templates, *Oracle Inventory User's Guide*), or with the Equipment item attribute enabled (See: Physical Attributes, *Oracle Inventory User's Guide*), are available.

5. Enter an Equipment Serial Number. This is mandatory if you populated the Production Organization field. This is the specific name of the component within the Equipment Type, defined above.

Related Topics

Defining Asset Numbers, page 2-65

Viewing Resource Usage, page 10-2

Encumbrance Accounting

Enterprise Asset Management enables you to use encumbrance accounting for purchase requisitions and purchase orders associated with work orders with a destination type of shop floor.

Prerequisites

You must perform the following setup tasks before you can use encumbrance accounting:

1. Ensure that your eAM organization is associated with an operating unit that allows encumbrance accounting.
2. Select the **Reverse Encumbrance** option on the Organization Parameters - Costing Information tab.
3. Include a budget account in the maintenance WIP accounting class for encumbrance accounting.

Related Topics

See Encumbrance Accounting, *Oracle Enterprise Asset Management User's Guide*

Project Manufacturing Integration Setup

Enterprise Asset Management supports a variety of ways to define work breakdown structures. The methods include, using third party project management systems (with on-line integration), project templates, Seiban number wizard, copy, and manual entry. Work breakdown structures are commonly needed for program management. To support financial project management an reporting, the combination of Oracle Projects and Oracle Project Manufacturing enables budgeting, project costing and tracking, project billing, project revenue recognition, project cash forecasting, and project cost collection, including multi-currency and tax regulations.

To support project supply chain management and execution, Project Manufacturing provides functionality for project sales management, project advanced supply chain planning, project procurement, project execution, and project quality management.

The following diagram illustrates the eAM Project Manufacturing process. First, a

maintenance Work Order is linked to a project or task. If a requisition or purchase order is created for that Work Order, the commitments for the Work Order's associated project or task are updated. The Project Cost Collector process (See: Project Cost Collector, *Oracle Cost Management User's Guide*) then passes the costs to the Work Order's associated project WIP accounting class accounts, rather than the WIP accounting class associated with the eAM asset or eAM organization.

Resources and Material charge against a Work Order. The Work Order is associated with a Project. The charges are transferred to the Project expenditures via the Cost Collector process.

eAM Project Manufacturing

This section includes the following topics:

- Project Definition, page 2-191

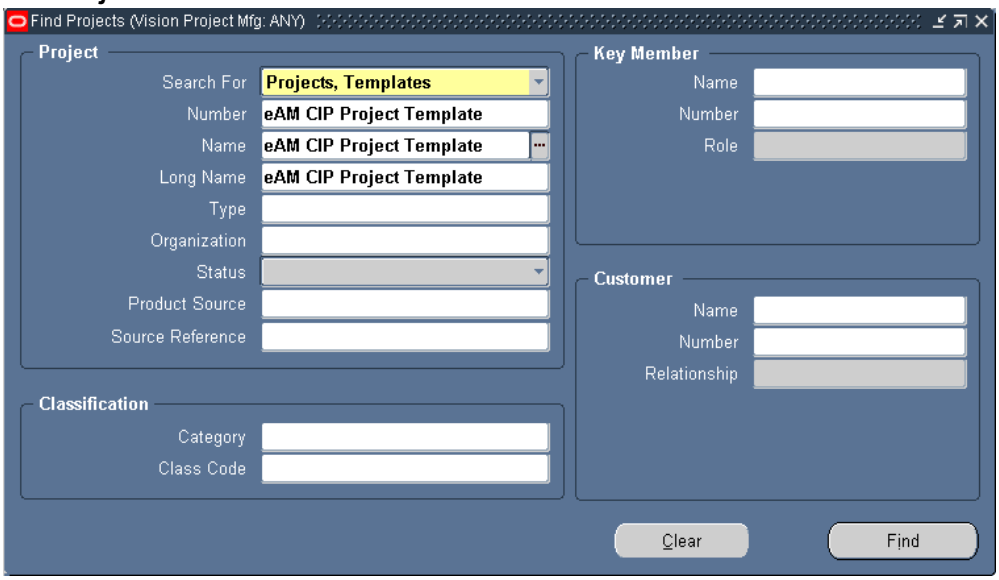
Project Definition

You can inquire on an existing, or copy a new project from a template or existing project. To create a new project, See: Project Definition (Assigning Project Parameters), *Oracle Project Manufacturing User's Guide*. Associate this project number with a planning group, a cost group, and a default WIP accounting class.

To inquire on an existing project:

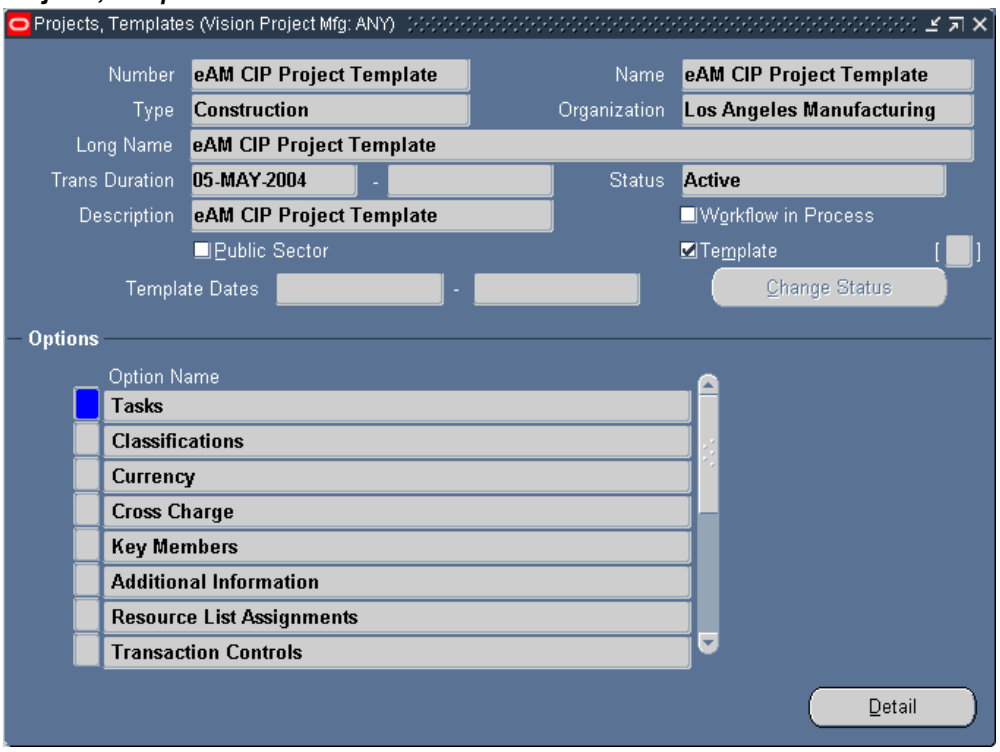
1. Navigate to the Find Projects window.

Find Projects



2. Select a project Number.
3. Choose Find.
4. Choose Open.

Projects, Templates

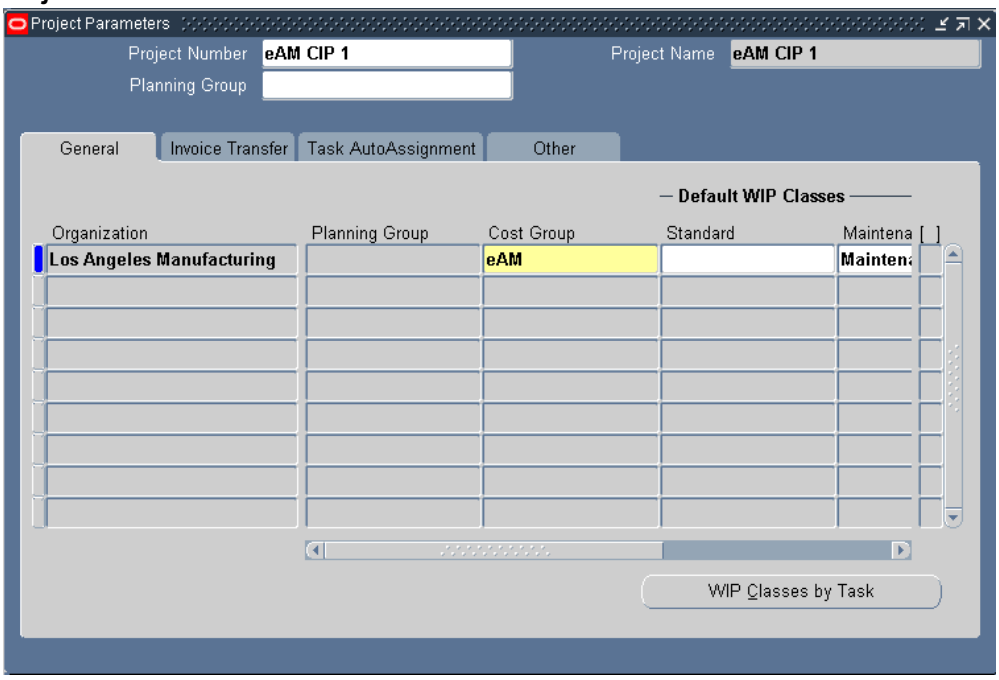


5. Optionally you can view detailed task information by choosing Detail (See: Viewing Project Details, *Oracle Project Manufacturing User's Guide*).

To assign project parameters:

1. Navigate to the Project Parameters window.

Project Parameters



2. Select a valid Project Number.

3. Optionally select a Planning Group.

4. Select a Cost Group.

   If the current organization has selected Average as its primary costing method in the Organization Parameters window, the Cost Group field is required. The list of values includes the Common Cost Group and the user defined cost groups. The list of user defined cost groups includes those cost groups with valid accounts and with Project selected in the Cost Group window (See: Project Cost Groups, *Oracle Cost Management User's Guide*). You must assign the project to its own Cost Group to keep weighted average costing at the project level.

   Associate a Maintenance type WIP Accounting Class to this Cost Group. See: Project Cost Groups, *Oracle Cost Management User's Guide*.

5. Optionally assign a Maintenance WIP Accounting Class to the current project. You can select any Maintenance type WIP Accounting Class that is associated with the selected Cost Group.

6. Optionally select the name of the Planning Group with which you want to associate your project.

   If you plan material requirements by a group of projects, rather than by each

individual project, you need to define a planning group and to assign all the projects to this planning group. If you plan material requirements by a single project, you do not need to associate the project with any planning group (See: Defining Planning Group Lookups, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

7. Select the Other tab.

8. Select Maintenance from the Direct Item Expenditure Type list of values. This expenditure type enables the Cost Collector process to pass costs for direct items to project maintenance work orders.

   This is a required step.

9. Save your work.

Related Topics

Associating a Work Order with a Project, *Oracle Enterprise Asset Management User's Guide*

Creating Purchase Orders from Requisitions, *Oracle Enterprise Asset Management User's Guide*

Updating the Commitments for a Project, *Oracle Enterprise Asset Management User's Guide*

Viewing Commitments, *Oracle Enterprise Asset Management User's Guide*

Project Definition, *Oracle Project Manufacturing User's Guide*

Assigning Project Parameters, *Oracle Project Manufacturing User's Guide*

Project Cost Groups, *Oracle Cost Management User's Guide*

Defining Project Cost Groups, *Oracle Cost Management User's Guide*

WIP Accounting Classes, *Oracle Work in Process User's Guide*

Project Manufacturing Parameters, *Oracle Project Manufacturing User's Guide*

Property Manager Integration Setup

The eAM and Property Manager integration enables eAM assets to correspond with locations defined in Property Manager. The information transferred from Property Manager are the three-level land or building hierarchies, and the associated Location Codes within Property Manager. eAM also provides user-defined Area codes, enabling you to logically sort assets by where they are physically located. However, Area codes in eAM do not equal locations in Property Manager. See: Setting Up Areas, *Oracle Enterjprise Asset Management User's Guide*.

This section includes the following topics:

- Setting Up eAM Prerequisites, *Oracle Enterjprise Asset Management User's Guide*
- Executing the Export Process, page 2-196
- Executing the Asset Number Interface, page 2-198

Setting Up eAM Prerequisites

The following must be defined within eAM before the Export Locations to Enterprise Asset Management concurrent request process can export locations into eAM:

- Asset Group (See: Defining Asset Groups, page 2-50)
- Organization (See: Organization Setup, page 2-5)
- Owning Department (See: Defining Departments and Resources, page 2-17)

Executing the Export Process

Locations from Property Manager are always exported as a hierarchy. The first time that you execute the process, the starting node of the hierarchy is specified as the top level of building or land hierarchies. Thereafter, any level within the building or land hierarchy is specified.

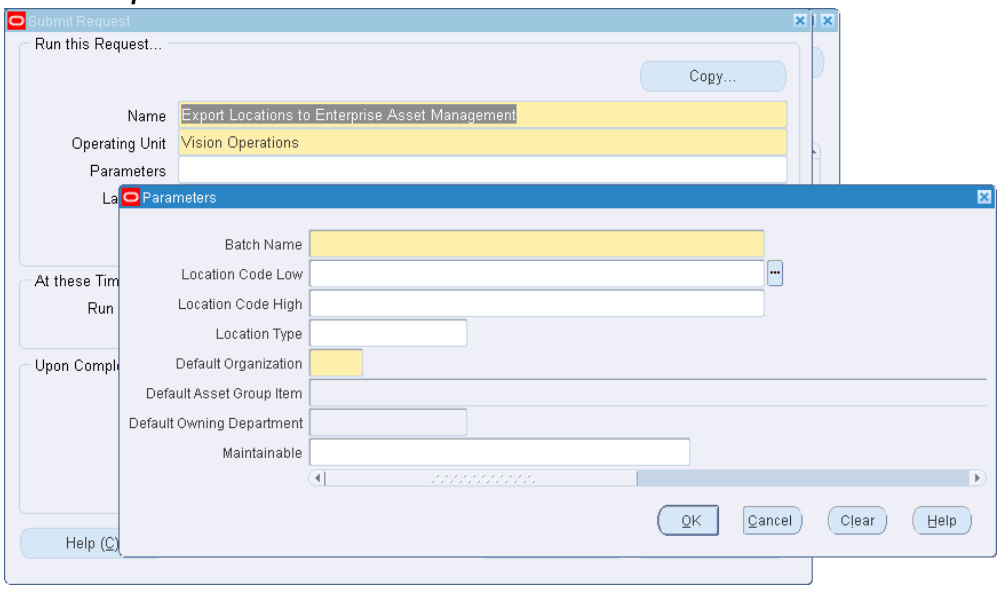
After the process has executed, any changes within Property Manager's building or land hierarchies are automatically changed within eAM's corresponding asset hierarchies.

The Export Locations to Enterprise Asset Management process executes from the Property Manager responsibility. This process can execute in both create and update modes.

To execute the Export Locations to Enterprise Asset Management process:

1. Navigate to the Submit Request window.

Submit Request



2. Select Export Locations to Enterprise Asset Management.

3. Enter the following parameters:

   - *Batch Name:* The Batch Name identifies each export process by name.

   - *Location Code Low:* This code, defined in Property Manager, is the starting node of the building or land hierarchies. This code reflects the Enterprise Asset Management Asset, and is normally entered into one Enterprise Asset Management Asset Group per transfer.

   - *Location Code High:* This code, defined in Property Manager, is the ending node of the building or land hierarchies. This code reflects the Enterprise Asset Management Asset, and is entered into one eAM Asset Group per transfer.

   - *Default Organization:* Select the eAM enabled organization. This code is defined within eAM. See: Organization Setup, page 2-5.

   - *Default Asset Group Item:* Select the Asset Group (defined within eAM). The eAM assets are created in this Asset Group. See: Defining Asset Groups, page 2-50.

   - *Owning Default Owning Department:* This is the designated maintenance department to associate with the exported asset/location within eAM.

   - *Maintainable:* Select whether the asset/location is maintainable within eAM.

4. Choose OK.

5. Choose Submit.

Related Topics

Property Manager Integration, *Oracle Enterprise Asset Management User's Guide*

Submitting a Request, *Oracle Applications User's Guide*

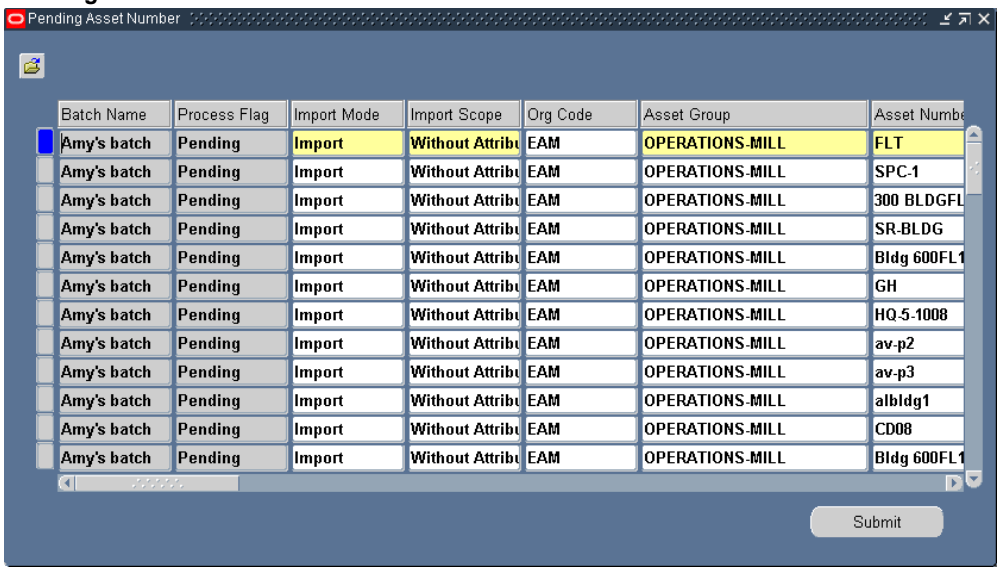
Executing the Asset Number Interface

Locations are set up in Property and are exported to Enterprise Asset Management (eAM) with a two-step process. This allows you the opportunity to modify data before it is exported to eAM. First, push the location records from Property Management to eAM (See: Executing the Export Process). After submission of the concurrent process, the Property Management Location information are entered into the EAM Asset Interface table and are accessed via the Pending Asset Number window within eAM. You can update all relevant information, including Asset Group, Asset Number, Owning Department, and WIP Accounting Class, for this information, before submitting the interface process.

To view pending asset numbers:

1. Navigate to the Pending Asset Number window.

Pending Asset Number



2. Update the information, as necessary.

3. Choose Submit to update your changes.

Related Topics

Executing the Export Process, page 2-196

Service Integration Setup

Use service requests to report and request maintenance service for unplanned maintenance demand on internal assets and rebuildable items. service requests that are classified as type Maintenance are used to identify requests for eAM maintenance. For example, when an employee notices that a printer is broken, the employee can create a service request, even though a technician is scheduled to regularly check the printer monthly. You can create both service and work requests for capital assets and rebuildables, simultaneously, within one eAM organization.

If a valid asset or rebuildable serial number is entered on the service request, the owning department for the serial number defaults. (See: Defining Asset Numbers, page 2-65), and the service request is visible within the eAM Maintenance Workbench. The Owning Department can then approve the service request and create a work order, or reject the service request and notify the service request owner to cancel it. However, customers or employees who report problems are often not aware of the asset or rebuildable's serial number requiring maintenance. In this situation, a default department is used as the Owning Department. You may customize an eAM Workflow

process to identify appropriate default owning departments and department approvers. Within Oracle Service, an agent can create a request for maintenance, provide a problem summary, and provide any additional information, such as an incident address or notes.

A planner creates a work order and then releases it to execute. The planner can choose to create one or multiple work orders for a single service request. When a work order is complete, the service request owner updates the service request status to Closed.

A support agent can view all work order information for each work order created for a service request. You can create eAM work orders for Service and/or Work Requests, or associate requests to existing work orders.

You can customize a workflow process that creates notifications to eAM personnel that indicate service requests requiring work and approval.

> **Note:** Oracle Service must be installed to utilize service request functionality.

This section includes the following topics:

- Creating Maintenance Service Request Types, *Oracle Enterprise Asset Management User's Guide*
- Enabling Service Requests for Assets and Rebuildables, *Oracle Enterprise Asset Management User's Guide*
- Enabling eAM Specific Fields, page 2-202

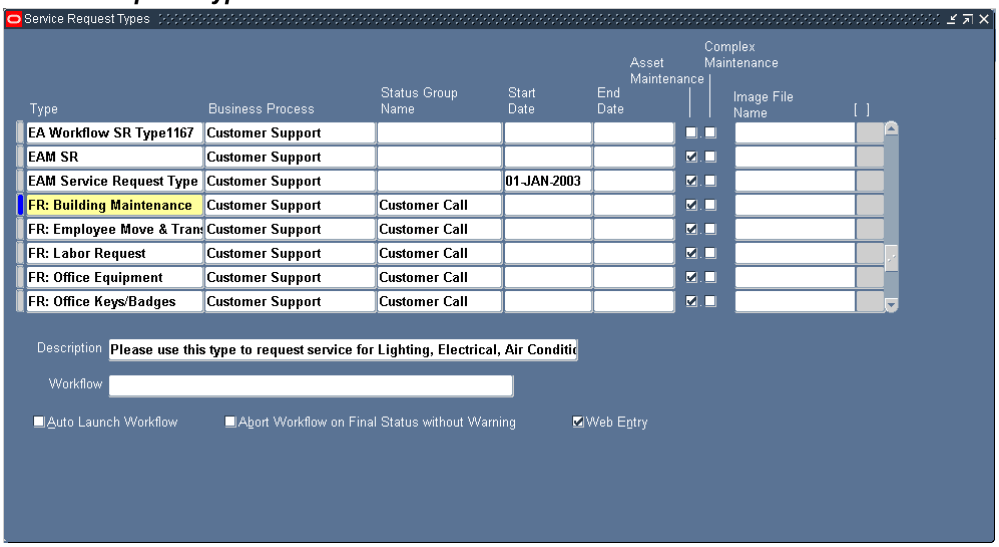
Creating Maintenance Service Request Types

Within Oracle Service, create at least one Maintenance Service Request Type. You can define multiple Service Request Types, if necessary.

To create a Maintenance service request type:

1. Navigate to the Service Request Type window.

Service Request Types



2. Enter the name of the Service Request Type.

3. Select Customer Support, from the Business Process list of values.

4. Optionally select effective dates for this request type.

5. Select the Asset Maintenance check box to indicate that this Service Request Type is of type Maintenance (viewable in eAM). Maintenance Type Service Requests are viewable in eAM.

6. Save your work.

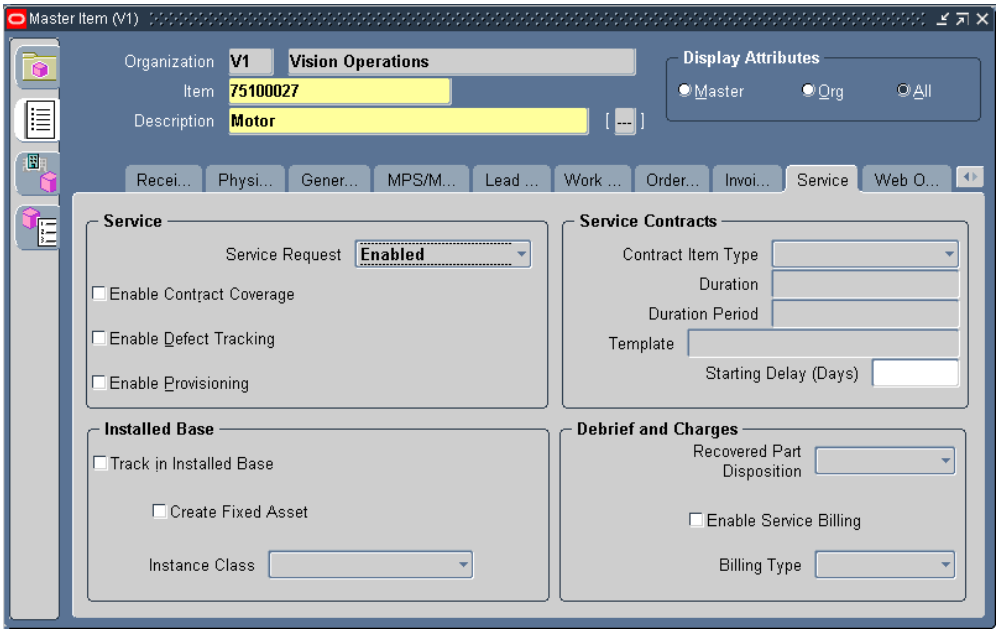
Enabling Service Requests for Assets and Rebuildables

To set up Service Request functionality for Asset and Rebuildable Serial Numbers, enable Asset Groups and Rebuildable Items for Service Requests, respectively.

To enable Service Requests for asset groups and rebuildable items:

1. Navigate to the Master Item window.

Master Item



2. Select an Asset Group or Rebuildable Item.
3. Select the Service tab.
4. Select Enabled, from the Service Request list of values.
5. Save your work.

Enabling eAM Specific Fields

The Service Request window enables a customer support agent to view pertinent information for an entered Service Request, such as associated Work Orders and their statuses. It is necessary to have this important information visible at all times, within the Service Request window. You can customize which fields and records appear (See: Customizing the Presentation of Data in a Folder, *Oracle Applications User's Guide*).

Utilize Oracle's folders functionality to ensure that key eAM-specific fields are visible for maintenance Service Requests. By default, eAM specific fields are hidden. This folders feature provides you a user-defined display of retrieved information, such as:

- Columns displayed
- Width of columns displayed
- Sequence of columns

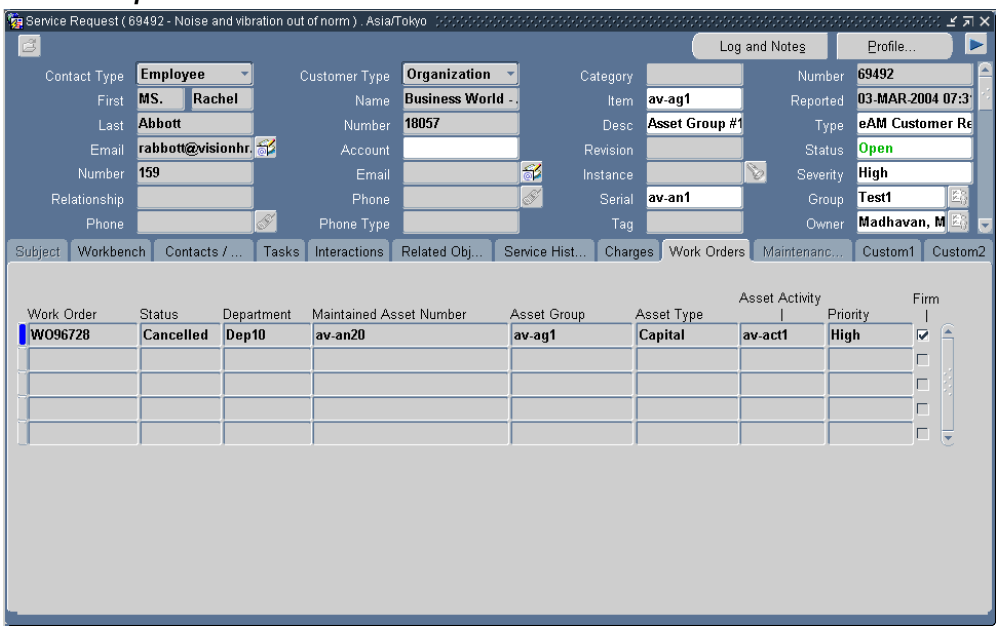
- Prompts associated with columns
- Sequence of records

You can prevent users from creating or modifying folders with profile option, FLEXVIEW: ALLOW_CUSTOMIZATION.

To display eAM-specific fields in the Service Request window:

1. Navigate to the Service Request window.

Service Request



2. From the Folder menu, select an existing, or create a new, Folder definition.
3. Save your work.

Related Topics

Customizing the Presentation of Data in a Folder, *Oracle Applications User's Guide*

Oracle Applications 12 Workflow

Oracle Time and Labor Integration Setup

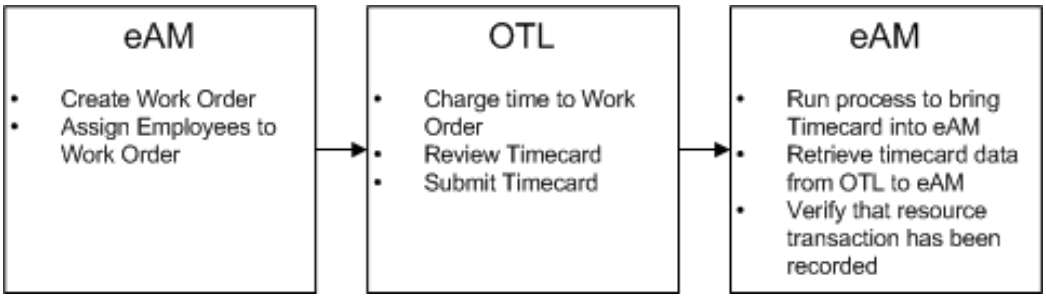
Oracle Time and Labor (OTL) is the repository in which time is entered by employees working in a particular organization. Employees working on Oracle Enterprise Asset Management (eAM) work orders enter their time using OTL Self-Service. Information

collected is stored in OTL Time Store, and is composed of a series of business rules and processes. eAM extracts information from the Time Store and charges eAM work orders for the time spent by employees that work on them.

There are multiple steps within the integration flow. First, timecard information is entered for a specific Work Order, within Oracle Time Store (a piece of Oracle Time and Labor). That information is then extracted from Oracle Time Store to Oracle Enterprise Asset Management. This extraction dynamically creates a resource transaction within Oracle Enterprise Asset Management. Finally, the Cost Manager process is executed. This process charges the resource transaction. After this process executes, you can view the actual costs for the period that you charged, within the Work Order.

The process is as follows:

OTL Process Flow



This section contains the following topics:

- Setting Up Overview, page 2-204

Setting Up Overview

There are two required setup procedures for this integration. The first is to establish employees needing to use this functionality as Persons within Oracle Human Resources (See: *Oracle Human Resources User's Guide*). After established, those Persons are assigned to respective Users, within Enterprise Asset Management. The second setup procedure consists of creating Preference Values, and then linking those values to eligibility criteria.

This section contains the following topics:

- Defining Persons as Users, page 2-204
- Creating Eligibility Criteria, page 2-205

Defining Persons as Users

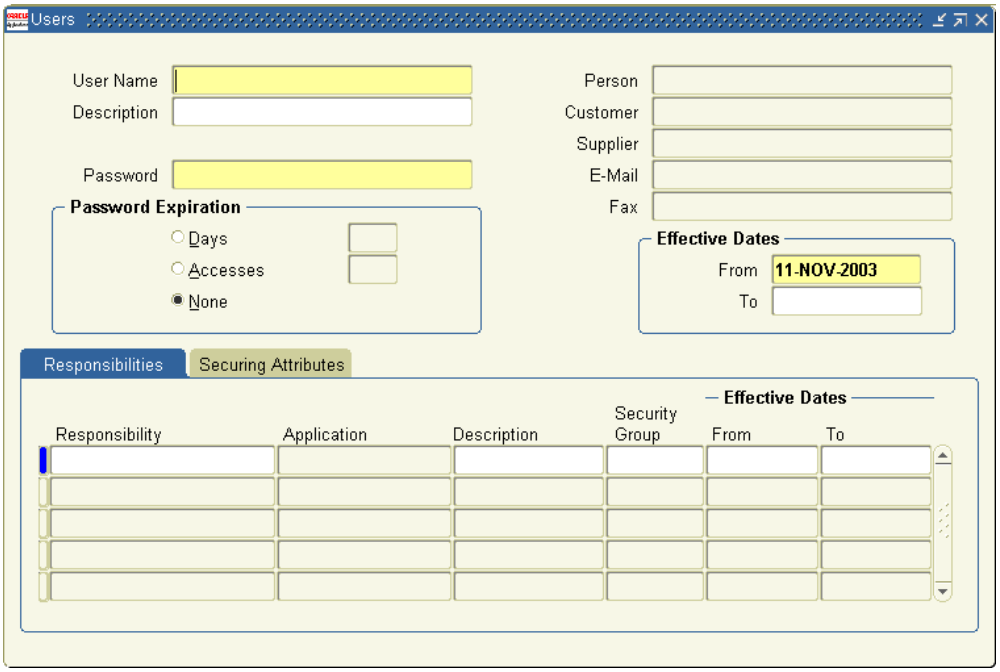
Establish employees needing to use this functionality as Persons within Oracle Human Resources (See: *Oracle Human Resources User's Guide*). After established, those Persons

must be assigned to respective Users, within Oracle Enterprise Asset Management (eAM).

To define Persons as Users within eAM:

1. Navigate to the Users window.

Users



2. Enter a User Name.

3. Select the Person that was created in Oracle Human Resources.

4. Enter a Password.

5. Within the Responsibilities tab, select the appropriate Responsibilities to assign to this User. The responsibilities, US OTL Administrator and Self Service Time and Expenses, are seeded but the Administrator needs to manually assign them to the Person/User.

6. Save your work. Repeat steps one through five for all appropriate Persons.

Creating Eligibility Criteria

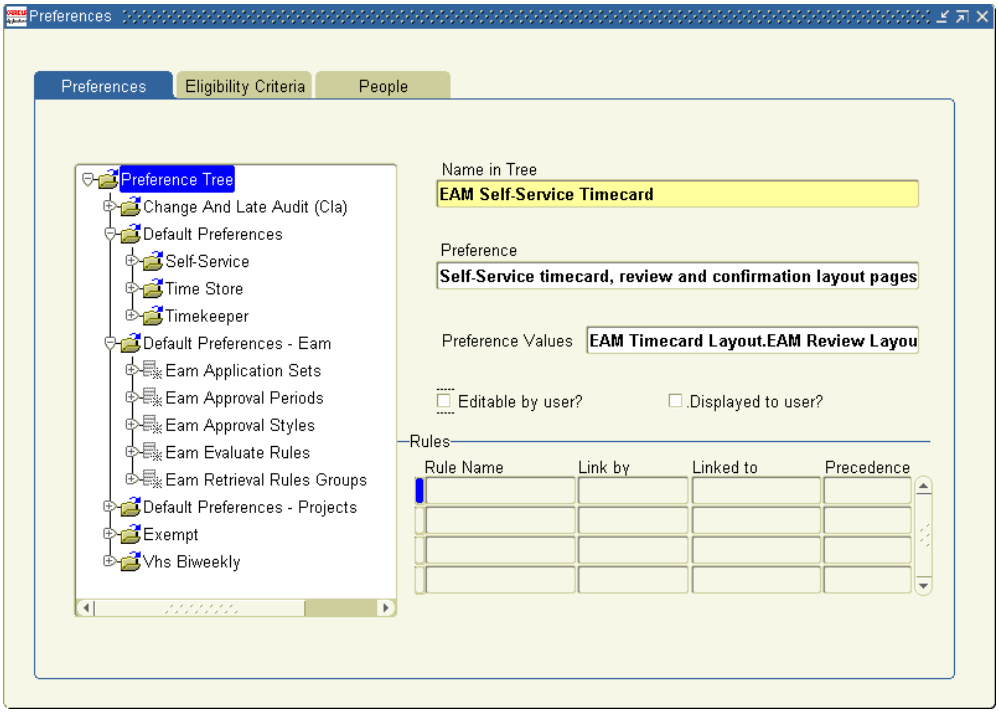
You need to create Preference Values, and then link those values to eligibility criteria.

Note: Preferences are seeded, but the preferences must be assigned to the user.

To create eligibility criteria:

1. Navigate to the Preferences window.

Preferences



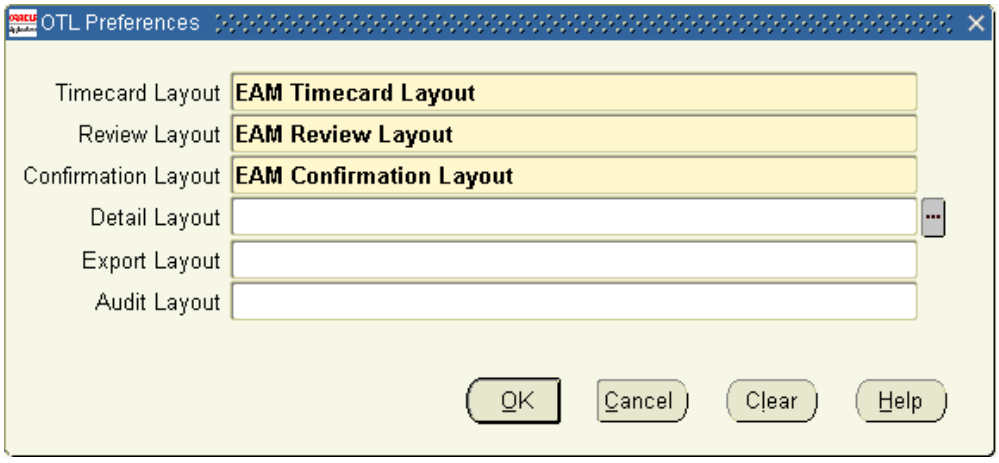
2. Select the Preference Tree node, then choose New.

3. Enter the name of your tree.

4. Select the *Self-Service timecard, review and confirmation layout pages* Preference.

5. Within the OTL Preferences window, select EAM Timecard Layout from the Timecard Layout list of values.

OTL Preferences



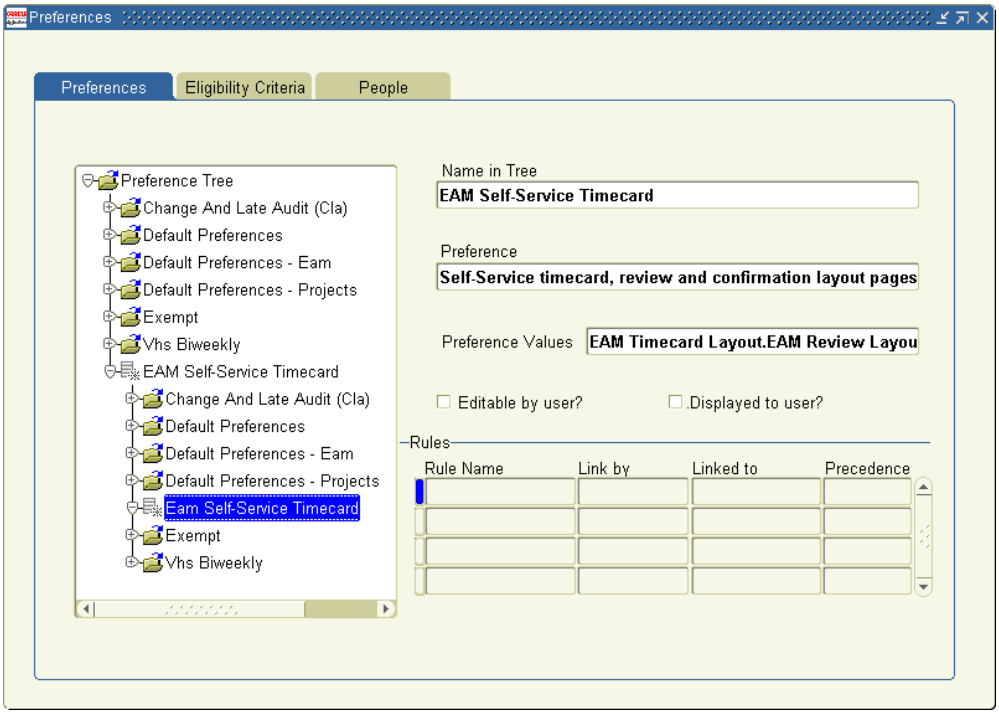
6. Select EAM Review Layout from the Review Layout list of values.

7. Select EAM Confirmation Layout from the Confirmation Layout list of values.

8. Choose OK.

9. Save your work. After saved, you have created a new node on the Preference Tree. Expand this new node, and select Eam Self-Service Timecard.

Preferences



10. To create eligibility criteria for timecard entry, select the Eligibility Criteria tab.

11. Enter the Name of the rule. You can have one rule for everyone, or multiple rules to create different eligibility criteria for different groups.

12. Select EAM Self-Service Timecard from the Name of Branch list of values. This value was previously defined during steps one through nine.

13. Select Person, Organization, or All People from the Link by list of values. If you are creating one rule for all users, select All People.

14. Enter a Precedence value. Valid values are all positive numbers. If you have multiple rules, the rule with the highest precedence is displayed first, and so on. For example, an employee can view the time card with a rule precedence value of 95, versus the timecard with a rule precedence value of 94.

15. Save your work.

Related Topics

Time and Expenses, page 12-2

Work Order Billing Setup

While maintaining an asset or servicing a customer request, you can bill a third party customer for the work that they performed. The cost of the work performed is based on the material and resource requirements (bill of material) of the work order, or the cost of the activity associated with the work order.

This section includes the following topics:

- Setting Up Parameters, page 2-209
- Setting Up Item Costs and Prices, page 2-209
- Service Attribute Setup, page 2-215
- Setting Up Billable Material, page 2-216
- Setting Up a Billable Resource, page 2-217
- Setting Up a Billable Activity, page 2-219

Setting Up Item Costs and Prices

The Billing Basis is either Cost Plus or Price List. The Billing Basis affects your item setup procedures. If you want the flexibility of using both billing basis types for an item, you need to set up both costs and prices for that item. An item is an Activity, Material, or Resource.

This section includes the following topics:

- Setting up Costs for the Cost Plus Billing Basis, page 2-210
- Setting up Prices for the Price List Billing Basis, page 2-213

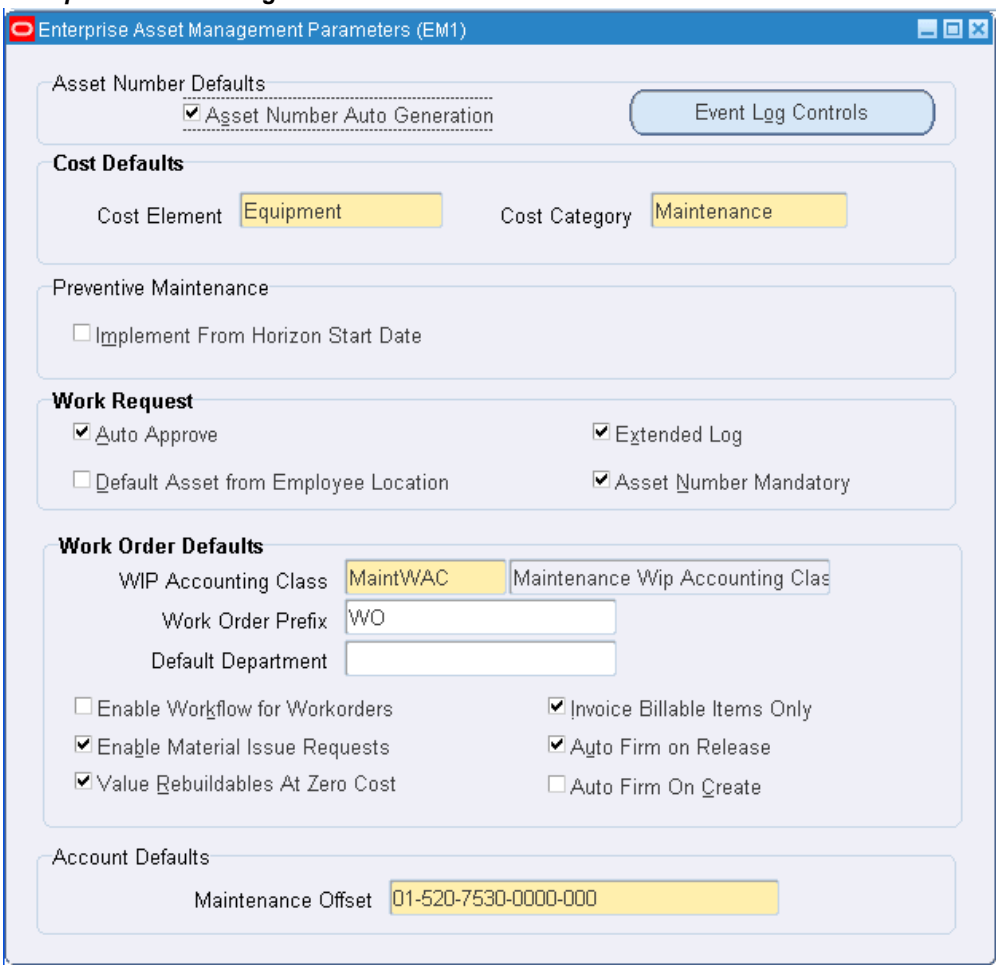
Setting Up Parameters

You can optionally create the ability to change the billable material on a Work Order at the time a bill is created.

To enable the change of billable material functionality:

1. Navigate to the Enterprise Asset Management Parameters window.

Enterprise Asset Management Parameters



2. Optionally select the Invoice Billable Items Only check box. If selected, you can change the billable material at the time the bill is created.

   If selected, this check box indicates that you want to invoice only billable items. Billable items are those that have a populated value within the Billing Type field, within the Service Tab, of the Master Item window. Billing Type is relevant only if you have this check box selected. Also, selecting this check box means that you can choose a different item to bill. See: Service Attribute Setup, *Oracle Enterprise Asset Management Implementation Guide*.

3. Save your work.

Setting up Costs for the Cost Plus Billing Basis

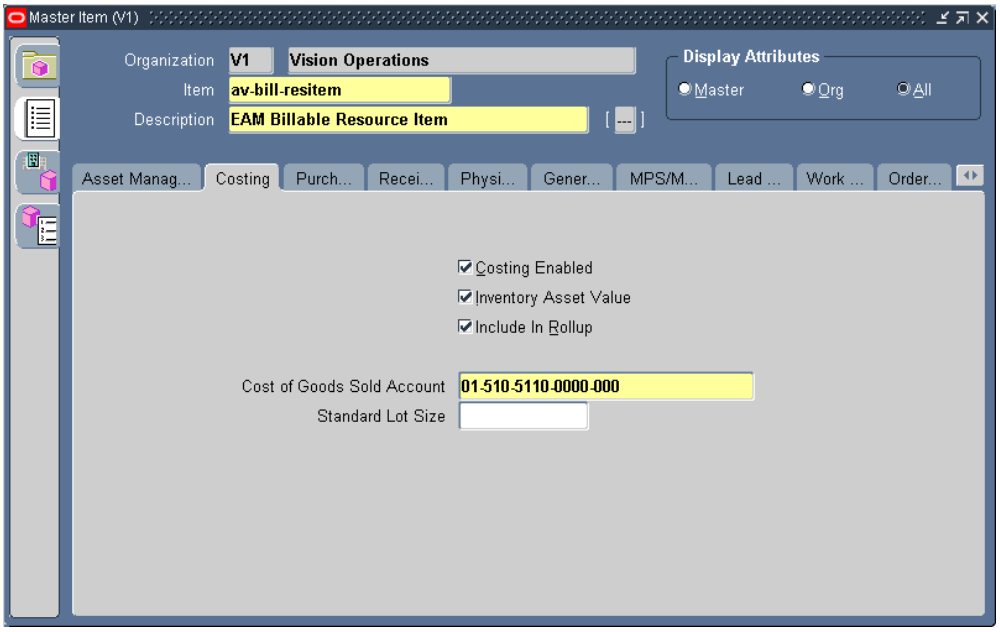
The cost plus method utilizes costs associated with an item. The item should have a cost

defined for it. First, you need to ensure that the appropriate item attributes are set up correctly for the item.

To set up an item's attributes:

1. Navigate to the Master Item window.

Master Item



2. Optionally select the Costing Enabled check box to report, value, and account for any item costs. You need to select this check box if you are using the cost plus billing method.

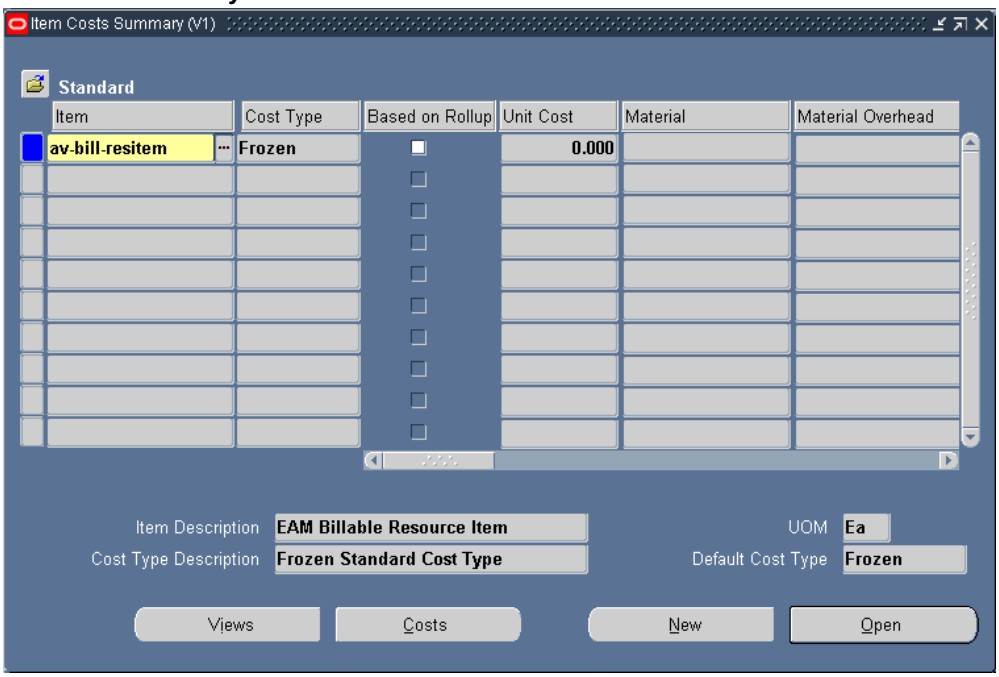
3. Optionally select the Inventory Asset Value check box. You need to select this check box if you are using the cost plus billing method.

4. Save your work.

To set up costs for an item:

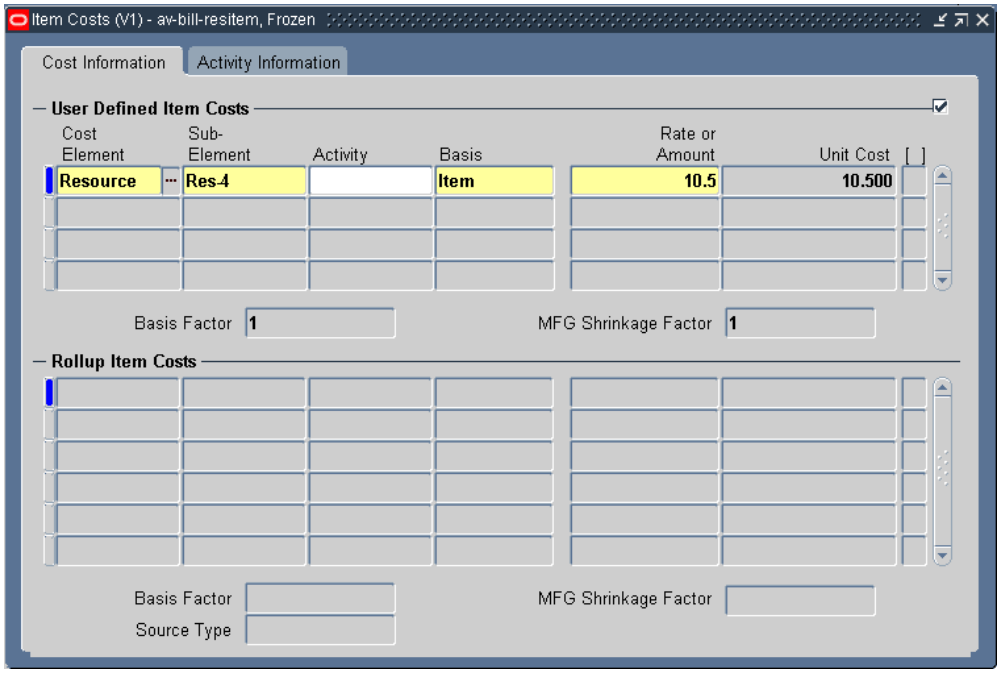
1. Navigate to the Item Costs Summary window.

Item Costs Summary



2. Choose Costs.

Item Costs



3. Enter cost information for your item.

4. Save your work.

Related Topics

Costing Attribute Group, *Oracle Inventory User's Guide*

Defining Item Costs, *Oracle Cost Management User's Guide*

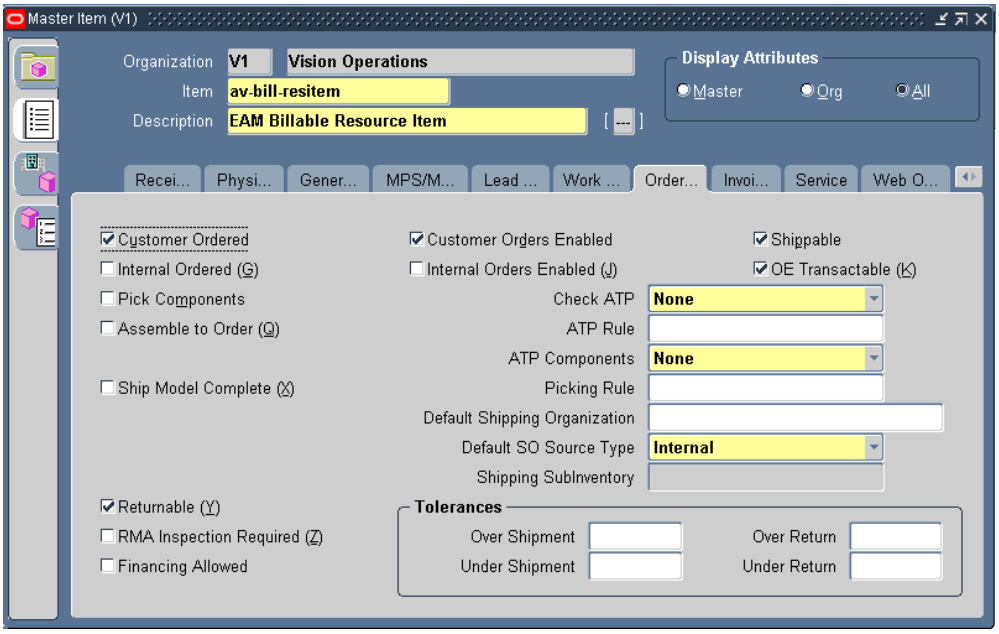
Setting up Prices for the Price List Billing Basis

The price list method uses a specified price list. The specified item should have at least one entry in the price list. First, you need to ensure that the appropriate item attributes are set up correctly for the item.

To set up an item's attributes:

1. Navigate to the Master Item window.

Master Item



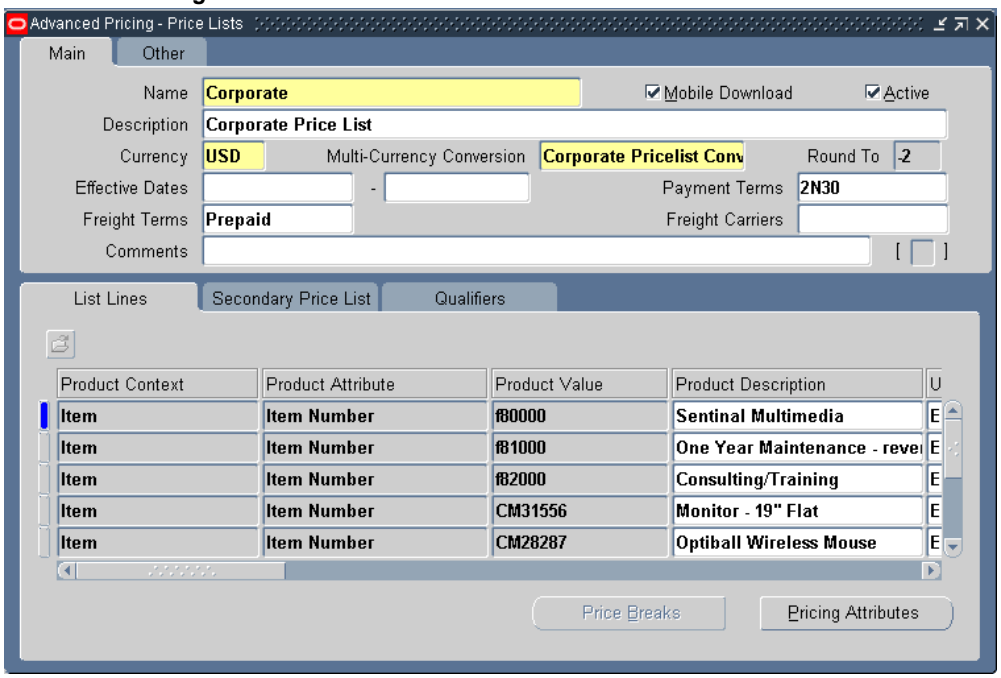
2. Optionally select the Customer Ordered check box in order to create a price within the price list. You need to select this check box if you are using the price list billing method.

3. Save your work.

To set up prices for an item:

1. Navigate to the Advanced Pricing - Price Lists window.

Advanced Pricing - Price Lists



2. Enter price information for your item.

   The same item can repeat multiple times in the price list, with varying values for Start Date, End Date, and Precedence. For example, it is invalid to have overlapping date ranges, if the Precedence is the same.

3. Save your work.

Related Topics

Order Entry Attribute Group, *Oracle Inventory User's Guide*

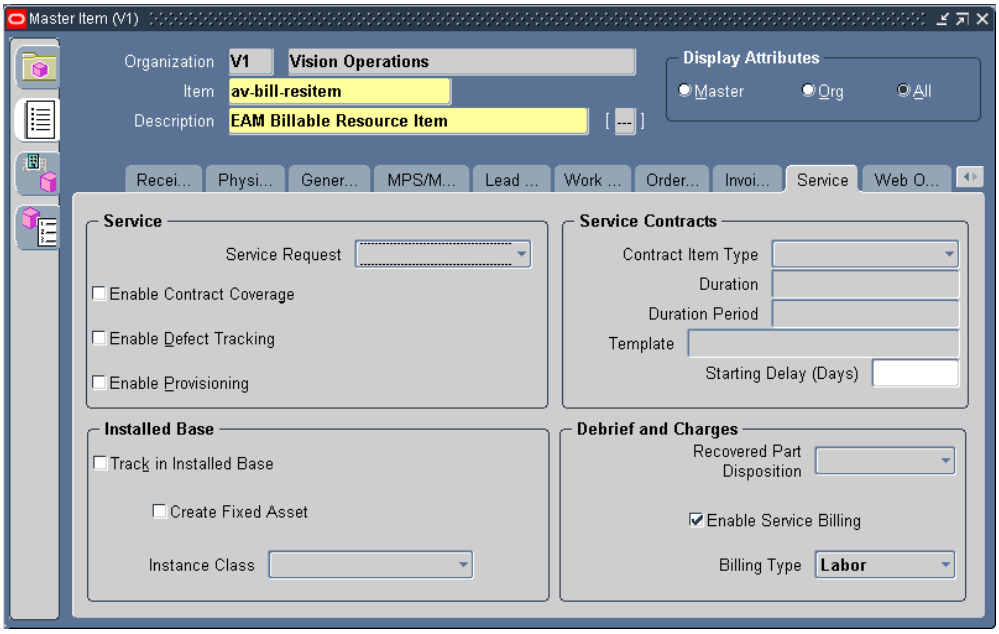
Service Attribute Setup

Set the Billing Type for each item that you want billable. The Billing Type field within the Master Item window must be populated if you have selected the Invoice Billable Items Only check box, within the Enterprise Asset Management Parameters window. See: Setting Up Parameters, page 2-209.

To set up the Billing Type attribute:

1. Navigate to the Master Item window.

Master Item



2. Select the Service tab.

3. Optionally select a Billing Type of Expense, Labor, or Material. This field must be populated if you have selected the Invoice Billable Items Only check box, within the Enterprise Asset Management Parameters window. See: Setting Up Parameters, page 2-209.

4. Save your work.

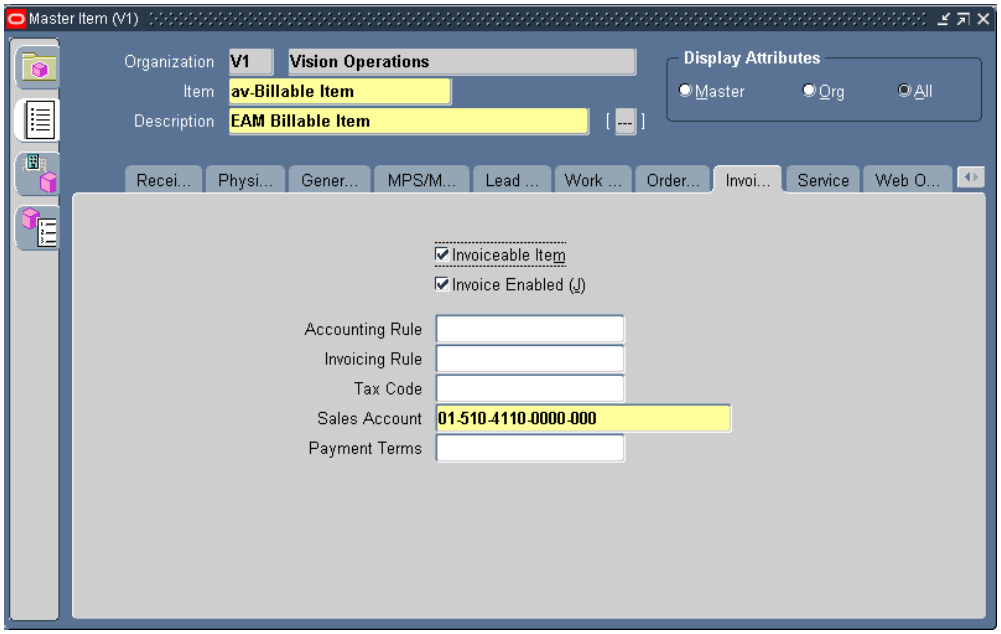
Setting Up Billable Material

To create billable material, first set specific attributes within the Master Item window. Next, assign the resource item to your organization. Decide whether you are pricing this item using the Cost Plus or Price List method, or both, and perform the additional setup for those methods (See: Setting Up Item Costs and Prices, page 2-209). Finally, define costs and prices for your item.

To set up billable material:

1. Navigate to the Master Item window.

Master Item



2. Select the Invoicing tab.

3. Optionally select the Invoiceable Item check box to indicate that the current material item can invoice. You can select this attribute at the Master Organization level.

4. Optionally select the Invoice Enabled check box to indicate that invoices are enabled for the current material item.

   Note: For the current material item, you need to ensure the Billing Type is populated with Material, within the Service tab. See: Service Attribute Setup, page 2-215.

5. Assign the current item to your organization.

6. Save your work.

Setting Up a Billable Resource

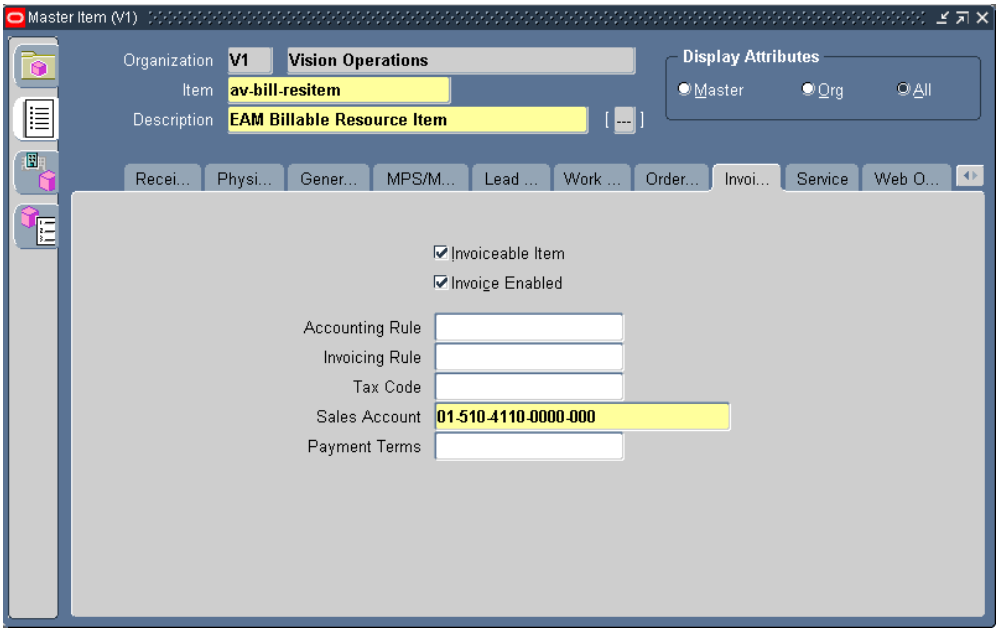
To create a billable resource, you need to first create a resource item by setting specific attributes within the Master Item window. Next, you need to assign the resource item to your organization. Decide whether you are pricing this item using the Cost Plus or Price List method, or both, and perform the additional setup for those methods (See: Setting

Up Item Costs and Prices, page 2-209). Next, you need to define a resource and associate the resource item to the resource. Finally, assign the resource to a department.

To set up a billable resource:

1. Navigate to the Master Item window.

Master Item



2. Select the Invoicing tab.

3. Optionally select the Invoiceable Item check box to indicate that the current resource item can invoice. You can select this attribute at the Master Organization level.

4. Optionally select the Invoice Enabled check box to indicate that invoices are enabled for the current resource item.

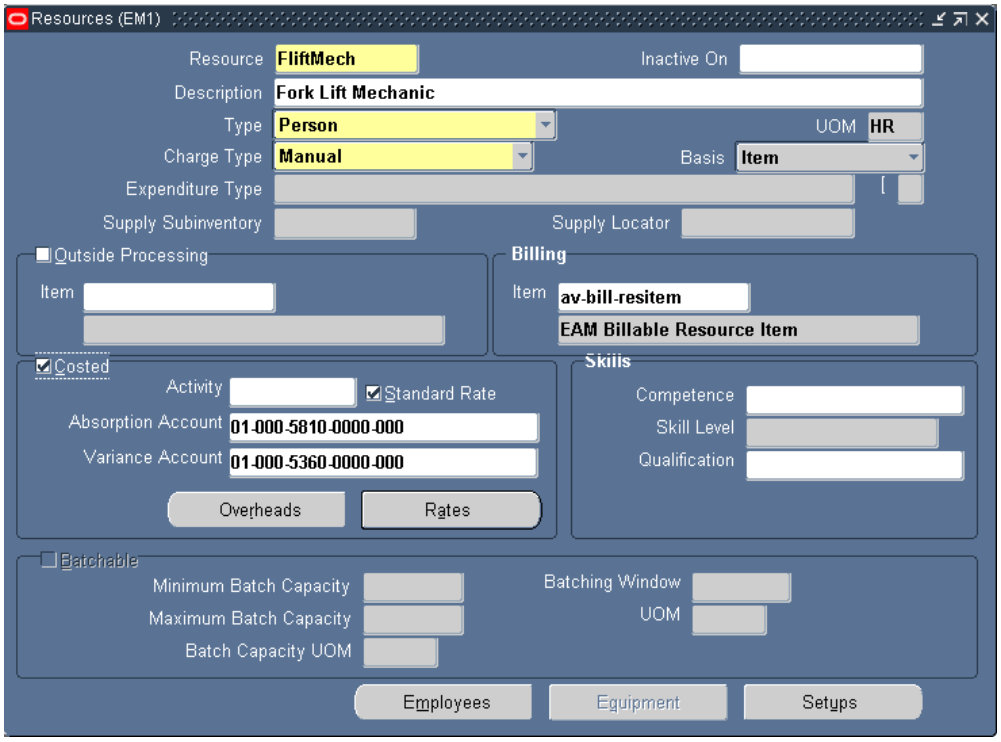
   Note: For the current resource item, you need to ensure the Billing Type is populated with Labor, within the Service tab. See: Service Attribute Setup, page 2-215.

5. Assign the current item to your organization.

6. Save your work and close the window.

7. Navigate to the Resources window.

Resources



8. Enter the name of the Resource within the Resource field.

9. Within the Billing region, select the resource item you created within the Master Item window to ensure that the resource is available for billing.

   Note: Rates defined in the Resources window are not used for billing. For billing rates for the resource item, See: Setting Up Item Costs and Prices, *Oracle Enterprise Asset Management User's Guide*.

10. Save your work.

11. Assign the current resource to a department. See: Defining Departments and Resources, page 2-17.

12. Save your work.

Setting Up a Billable Activity

To create a billable activity, first set specific attributes within the Master Item window. Next, decide whether you are pricing this item using the Cost Plus or Price List method,

or both, and perform the additional setup for those methods (See: Setting Up Item Costs and Prices, page 2-209). Finally, associate the activity to the asset group/asset number that is used to create the work order.

To set up a billable activity:

1. Navigate to the Master Item window.
2. Select the Invoicing tab.
3. Optionally select the Invoiceable Item check box to indicate that the current activity item can invoice. You can select this attribute at the Master Organization level.
4. Optionally select the Invoice Enabled check box to indicate that invoices are enabled for the current activity item.
5. Assign the current item to your organization.
6. Save your work.

Related Topics

Initiating Billing, page 14-4

Part 3

Enterprise Asset Management User

The Enterprise Asset Management User is anyone in an organization who may access eAM. This might include an employee who uses Work Requests to report problems, a Plant Manager who accesses eAM to review high cost assets and their work history, as well as a Maintenance User, such as a technician who accesses the Maintenance User Workbench to review his/her daily work assignments.

This part contains the following chapters:

- Chapter 3, "eAM Work Management", page 3-1
- Chapter 4, "Preventive Maintenance", page 4-1
- Chapter 5, "eAM Planning and Scheduling", page 5-1
- Chapter 6, "eAM Cost Management", page 6-1
- Chapter 7, "Direct Item Procurement for eAM Work Orders", page 7-1
- Chapter 8, "Contractor Services", page 8-1
- Chapter 9, "eAM Property Manager", page 9-1
- Chapter 10, "Process and Discrete Manufacturing Integration", page 10-1
- Chapter 11, "eAM Project Manufacturing", page 11-1
- Chapter 12, "Integration with Oracle Time and Labor", page 12-1
- Chapter 13, "eAM Quality", page 13-1
- Chapter 14, "Work Order Billing", page 14-1
- Chapter 15, "Oracle Service Integration", page 15-1
- Chapter 16, "Secure Enterprise Search for Asset Lifecycle Management", page 16-1

3

eAM Work Management

This chapter covers the following topics:

- Overview eAM Work Management
- eAM Work Orders
- Routine Work Orders
- Using Encumbrance Accounting with Maintenance Work Orders
- Express Work Orders
- Preventive Maintenance Work Orders
- Rebuild Work Orders
- Easy Work Orders
- eAM Work Order Statuses
- Defining Work Order Documents
- eAM Operations and Tasks
- Defining Asset Shutdown Statuses
- Preparing Work Order Operations
- Viewing Work Order Operations
- Defining Material Requirements
- Defining Direct Item Material Requirements
- Viewing Material Requirements
- Defining Resource Requirements
- Viewing Resource Requirements
- Work Order Relationships
- Parent-Child Relationship
- End to Start Dependency

- Cost Relationship
- Follow-up Work Relationship
- eAM Work Order Transactions
- Operation Completion
- Work Order Completion
- Rebuild Work Order Completion
- Transacting Material
- Viewing Resources Transactions
- Closing Work Orders
- eAM Work Order Planning
- Using the Maintenance Workbench
- Capitalizing Work Orders

Overview eAM Work Management

The Work Order is the foundation for all maintenance organizations. Work orders define the resources and items that are needed to conduct work. They can automatically generate through the use of Preventive Maintenance Schedules, the issue of an inventoried rebuildable, breach of quality results, or manually generated as a routine Work Order. These Work Orders are then reviewed and shared with Operations to produce an estimated schedule.

Enterprise Asset Management integrates with Oracle Quality. Use Quality Collection Plans to predefine required feedback information that must be entered into Enterprise Asset Management, upon a Work Order's completion. For example, data to collect may include inspection points for an Asset Number and Downtime variables. If a variance is recorded to the quality plan, a Work Request or Work Order is created. You can define quality collection plans directly on the Work Order, or define them as attributes of an Activity to ultimately default into future Work Orders that are generated for specific Asset Number/Activity combinations.

For each Work Order, the estimated costs aggregate, from the associated BOM and resources, to develop a costing profile for the current Work Order. You can use Costing Profiles for future Budgeting and Forecasting.

For each Work Order, the actual costs aggregate during the Work Order's lifecycle. These costs roll up, based on the hierarchy of the current Work Order's associated Asset Number. View these actual costs by period at a transaction level or at a summary level. Costs can roll up, based on the hierarchy of Work Orders. You can view the costs (both actual and estimates) by period, at a transaction or summary level.

This chapter is divided into the following sections:

- eAM Work Orders, page 3-3
- eAM Operations and Tasks, page 3-28
- Work Order Relationships, page 3-51
- eAM Work Order Transactions, page 3-58
- eAM Work Order Planning, page 3-70

eAM Work Orders

Enterprise Asset Management Work Orders are created for assets and rebuildable inventory items. They are defined manually, or generated automatically based on a scheduled Activity. If you attach an Activity to a manually created Work Order (normally the role of a Planner), the Work Order inherits the Activity's attributes, such as the maintenance BOM, maintenance route (operations), attachments, quality plans, cost information, and scheduling rules. When preplanned Work Orders are created for assets, the Activity information associated with the Work Order's current Asset Number automatically attaches material and resource requirement information to the Work Order.

This section includes the following topics:

- Routine Work Orders, page 3-3
- Preventive Maintenance Work Orders, page 3-13
- Rebuild Work Orders, page 3-14
- Easy Work Orders, page 3-23
- eAM Work Order Statuses, page 3-23
- Defining Work Order Documents, page 3-27

Routine Work Orders

Routine work orders are normally created by a planner from the Maintenance Workbench (See: Using the Maintenance Workbench, page 3-71), and are also created using a menu option. Material and resource planning (See: Overview of Planning and Scheduling, page 5-1) is used at each status of the routine work order (See: eAM Work Order Statuses, page 3-23).

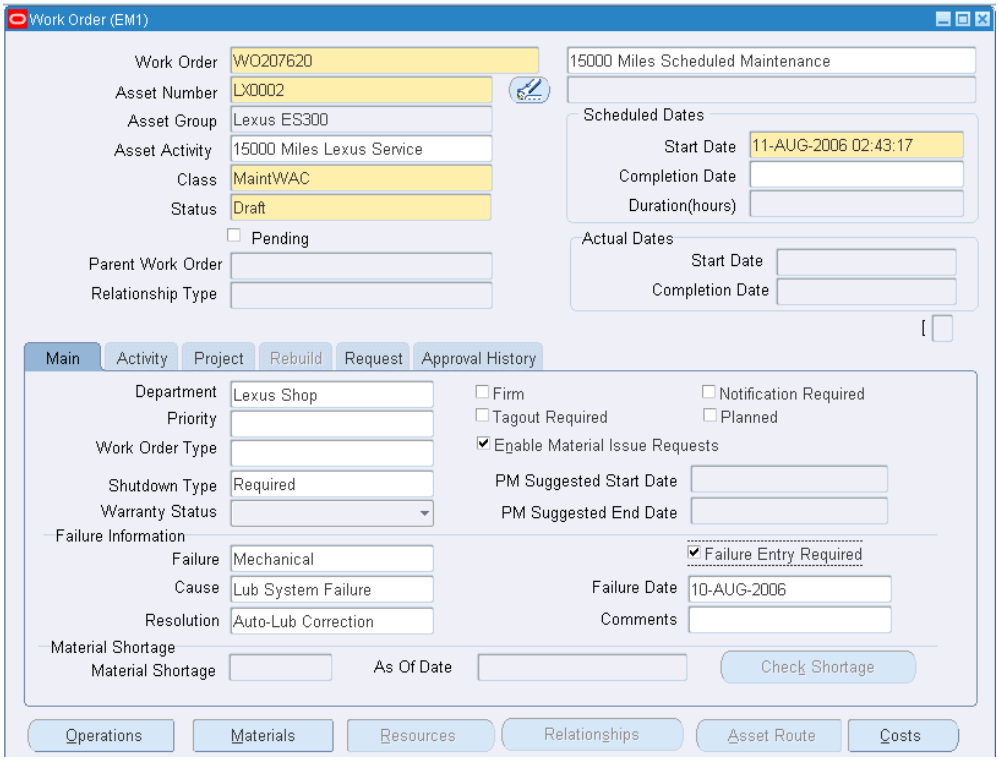
To manually create a work order:

1. Navigate to the Find Work Orders window (Work Orders > Work Orders).

   Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.

2. Choose New.

Work Order



   The header information displays general information about the Asset Number and the type of work required.

3. The Work Order number is assigned, but you can update it.

4. Enter an Asset Number requiring maintenance. The Asset Group defaults (See:

Defining Asset Numbers, page 2-65).

5. Select an Asset Activity. Only Asset Activities associated with this Asset Number are available.

   Note: If this Work Order was previously created, you can add an Asset Activity, as long as the Work Order is at an Unreleased or Draft status, or an Asset Activity was not previously defined. If any tasks, material, or resource requirements exist, these must be deleted before adding an Asset Activity to an existing Work Order.

   After selecting an Asset Activity, the associated maintenance BOM (material) (See: Setting Up Maintenance Bills of Material, page 2-93) and maintenance route (resources), associated with the Activity (See: Defining Maintenance Routes, page 2-99), attach to the Work Order. After an Asset Activity is saved to a Work Order, you can no longer change or delete it.

6. Enter a Class code to represent the charge (expense) accounts associated with the Asset Number. This defaults from the Asset Number (See: Defining Asset Numbers, page 2-65); you can update it.

   Select a maintenance WIP Accounting Class that contains an encumbrance account if want to use encumbrance accounting.

7. Enter the Status. For example, Unreleased, Released, On Hold, and Draft. Certain transactions update this status automatically, including Work Order Completion, for example (See: eAM Work Order Statuses, page 3-23).

8. The Pending check box value determines whether the Work Order has reached the status above or is still pending, due to workflow. This value is set by the Work Order Workflow Approval process. If the check box is clear, the Status reflects the current state. If the check box is selected, the Status reflects a desired target state that is not yet reached due to pending activity, such as a workflow approval that is still in progress.

9. If this is a child Work Order in a Work Order network and Parent Child is populated in the Relationship Type field, the Parent Work Order is populated in this field.

10. The Relationship Type field indicates the type of Relationship associated with the Work Order. Valid relationships are Parent Child, End to Start Dependency, Cost, and Follow-up Work. Manage complex maintenance jobs through these four types of Work Order relationships. See: Work Order Relationships, page 3-51.

    - *Parent Child:* This relationship enables a network of Work Orders, which includes one top level Work Order that defines the time line of all its children Work Orders. The start and end dates of the children Work Orders are within

the start and end dates of the parent Work Order. A child Work Order can be parent to another Work Order. One parent can have multiple children, but one child can have a single parent. There can be an infinite number of parent-child Work Order levels, within the Parent-Child relationship.

- *End to Start Dependency:* You can create Work Orders with scheduling dependency relationships (including child sibling Work Orders). For example, one Work Order's scheduled start date is dependent on another Work Order's completion. With this relationship, the next Work Order cannot start until the prior Work Order is completed.

- *Cost:* You can roll the child Work Order costs into the parent Work Order, for reporting purposes. You can base the cost roll up, within a hierarchy, on scheduling relationships. Scheduling relationships are not required to roll up costs within a hierarchy. You can create a cost reporting hierarchy that is different from the scheduling hierarchy.

- *Follow-up Work:* You can create a Work Order for the current capital Asset Number or Rebuildable Item, while executing work for the asset on another Work Order. For example, a second problem with the asset is discovered while executing a Work Order. A Follow-up Work Order, associated with the original Work Order, is created for the issue. This is independent of scheduling or cost relationships.

11. In the Scheduled Dates region, enter the Work Order's scheduled Start date if it is based on a forward schedule. The scheduling process uses this date as a starting point to calculate the scheduled end date and duration for allocated resources and material. If the material/resources are not available by this date, the scheduling process moves the start date forward (See: eAM Scheduling, page 2-151).

    Note: Actual dates are entered at operation and Work Order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: Overview of Setting Up, *Oracle Manufacturing Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

12. Enter a scheduled Completion date for backward scheduling. This date indicates the requested end by date for the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and material. If the material and resources are not available by that date, the scheduling process moves the start date backwards to ensure completion by the required end date (See: eAM Scheduling, page 2-151).

Note: Actual dates are entered at operation and Work Order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: Overview of Setting Up, *Oracle Manufacturing Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

13. Within the Main tab, the Department value defaults from the selected asset number. (See: Defining Asset Numbers, page 2-65). This indicates the persons or department responsible for this asset number.

    You can change the department at the operation level if no transactions have been recorded for the work order.

14. Optionally select a Priority, such as High, Medium, or Low.

15. Optionally select a Work Order Type. Work Order Types enable you to differentiate Work Orders, for example, Routine, Preventive, Rebuild, Emergency, or Facilities. Maintenance management can use this information to sort and monitor work activities for reporting and budgeting. Work Order Types are referenced in the Work Order. For information on how to create valid values within the available list of values, See: Work Order Types, page 2-45.

16. The Shutdown Type defaults from the Activity. This helps the planner group Work Orders that may require shutdowns, so that they are planned together.

17. If the Firm check box is selected, planning and scheduling does not automatically adjust the schedule, regardless of material or resource availability Overview of eAM Planning and Scheduling, page 5-1. This check box defaults as selected or cleared, depending on the Auto Firm on Release and Auto Firm on Create check box settings, established in the Enterprise Asset Management Parameters setup for the current organization (See: Defining eAM Parameters, page 2-11). This defaults after the Work Order is Released, if you select the Auto Firm on Release check box, and defaults immediately if you selected the Auto Firm on Create check box.

    If the check box is selected, the end date is calculated, based on the Work Order duration. The scheduler automatically calculates the duration based on the operations (resource duration setup) on the Work Order. You can update this check box for Work Orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: eAM Work Order Statuses, page 3-23).

    If the Firm check box is selected, you can still manually reschedule a resource on the Work Order, thereby updating the dates on its corresponding Operation and Work Order.

18. Optionally select the Notification Required check box.

19. Optionally select the Tagout Required check box to indicate that the Area must be secured for operations required to execute this Work Order. Tags are generally printed and placed on an asset, warning the plant that it is shutdown and should not be started. This check box helps the planner isolate those jobs that require a tagout.

    Select the paperclip Attachments icon to attach relevant tagout documents. You can attach URL, file, or text attachments. See: Defining Work Order Documents, page 3-27.

20. The Planned check box is selected if the current Work Order was created from forecasted Work Orders (See: Preventive Maintenance Work Orders, page 3-13).

21. Optionally select the Enable Material Issue Requests check box to enable eAM to manage material availability for the current Work Order. Material is physically available to a Work Order via the material request and verification process. This check box is selected by default if it is selected on the eAM Parameters window.

22. The Construction Estimate field will display if the work order was created by using the Construction Estimate Workbench. The field is display only.

23. Optionally enter Failure Information (See: Failure Analysis Overview, page 26-1). The Failure Information region appears if the *Failure Code Required* value is set to *Yes* , within the Failure Set definition (See: Defining Failure Codes and Sets, page 26-2).

    If the Failure Entry Required check box is selected, Failure Code entry is mandatory during Work Order completion.

24. The Material Shortage region enables you to view material availability. This region populates, after you have saved the Work Order.

    The Material Shortage field displays whether there is a shortage of the material (at that moment in time) that is needed to complete the Work Order's operations. This status helps you to determine when to start work. For example, if there is a material shortage, you typically would not start work. The process that populates this field considers both stocked and direct items. For stocked items, the Work Order Material Shortage process determines whether all of the inventoried material within the Work Order's associated BOM is available to transact (ATP is not considered). For direct items, the Work Order Material Shortage process determines if all of the direct items that are included within the Work Order's associated BOM are received into Inventory. This process should be set to automatically execute periodically, but you can execute it from the menu at any time.

    You can choose Check Shortage to view the shortage details.

25. Select the Activity tab to select alternate, predefined BOMs and Routings. See: Setting Up Maintenance Bills of Material, page 2-93 and Defining Maintenance Routes, page 2-99.

After the alternate BOM and Routing are selected, the system uses the associated items and assigns the associated resources needed to execute the Work Order.

26. Optionally select an Activity Type. This code indicates the type of maintenance for this Activity and is used when defining a job or a standard job, for example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This value defaults from the Activity (See: Defining Activities, page 2-53).

27. Optionally select an Activity Cause to specify what situation caused this work to generate, for example, Breakdown, Vandalism, Normal Wear, or Settings. This value defaults from the Activity (See: Defining Activities, page 2-53).

28. Optionally select an Activity Source to specify reasons Activities need execution, for example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. This value defaults from the Activity (See: Defining Activities, page 2-53).

29. Optionally select the Project tab. This tab is enabled only if Project Manufacturing is installed and enabled.

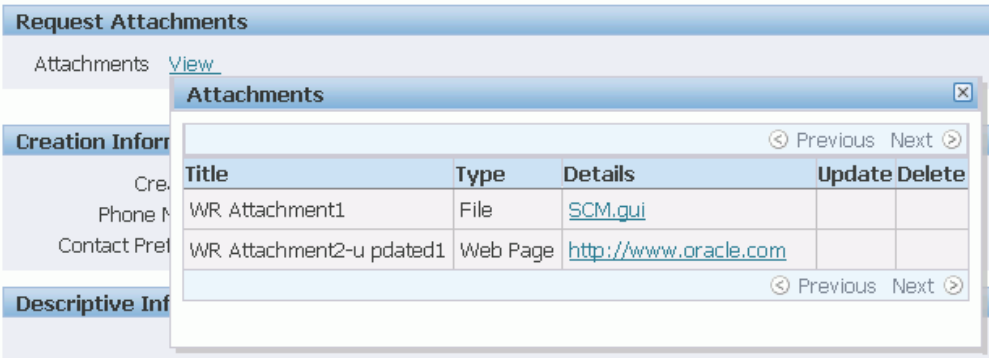
    1. Optionally select a Project.

    2. Optionally select a Task.

30. You can select the Rebuild tab if this Work Order is created for a rebuildable item. See: Rebuild Work Orders, page 3-14.

31. Optionally select the Request tab to display Service and Work Requests associated with this Work Order. You can add Service and/or Work Requests to a Work Order by selecting a Service Request and/or Request Number, respectively. Only Work Requests at an Awaiting Work Order status and Maintenance Type Service Requests at an Open status are available for association. You may associate multiple Work Requests to a single Work Order, but only one Work Order can associate with a Service Request. You can associate a Service Request to multiple Work Orders. You can dissociate a Work Request from a Work Order.

    If you want to view a work request attachment, highlight the work request and then select View, Attachments. If there are any attachments associated with the work request, you will be able to view them.



To delete a work request:

1. Highlight the Work Request.

2. Choose Delete.

32. Optionally select the Approval History tab to view the Work Order's approval history. A Work Order might require approvals or notifications at different stages of its lifecycle. For example, organizations typically want an approval process in place before a Work Order is released. Workflow automates this process. You can initiate Workflow to generate notifications, approvals, transactions, and update a Work Order status. You can enable Workflow for Work Orders within the eAM Parameters (See: Defining eAM Parameters, page 2-11). You can set up Business Events and Event Subscriptions (or use seeded events and subscriptions) within Oracle Workflow to indicate what events trigger Workflow. Seeded events that you can enable to trigger Workflow are: Work Order creation, Work Order release approval, Work Order completion, Work Order status change, Operation completion. See: Setting Up Oracle Workflow, *Oracle Workflow User's Guide*, Setting Up the Business Event System, *Oracle Workflow User's Guide*, Planning Your Organization's Approval Process, *Oracle Approval Management User's Guide* and Defining Work Order Statuses, page 3-23).

33. Optionally choose Operations to prepare necessary operations. These operations default from the maintenance route (See: Defining Maintenance Routes, page 2-99) associated with the current Activity, but you can update and add to them (See: Preparing Work Order Operations, page 3-30).

    You can change the operations if no transactions have been recorded for the work order.

34. Optionally choose Materials to view or add items from the associated Asset Number's items list (See: Setting Up Maintenance Bills of Material, page 2-93 and Defining Material Requirements, page 3-37). From the Material Requirements window, you can optionally choose Select Materials to add materials from this Asset BOM to the material requirements for the current Work Order.

35. Optionally choose Resources to view, add, or update the resources assigned to each operation. See: Defining Resource Requirements, page 3-46.

    You can change the resources for this work order at the operation level if no transactions have been recorded for the work order.

36. Optionally choose Relationships to manage Work Order schedules and view Work Order details. See: Work Order Relationships, page 3-51.

37. Optionally choose Asset Route to view the Asset Route associated with the current Work Order's Asset Group. You might need to perform one Activity on multiple Asset Numbers. To eliminate the possibility of creating multiple Work Orders for the same Activity, you can define Asset Routes. See: Defining Asset Routes, page 2-74.

    You can choose Asset Route if an Asset Route is associated with the current Asset Number.

38. Optionally choose Costs to view the costs of Work Orders falling in the specific accounting periods, specified in the Accounting Information by Period region. Accounting Periods are defined within Oracle General Ledger. See: Defining Period Types, *Oracle General Ledger User's Guide* and Defining Calendars, *Oracle General Ledger User's Guide*.

    1. Optionally select a Work Order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and material against the current Work Order.

        - *Actual Costs*: This is the accumulation of all costs for material and resource transactions for the Asset Number's associated maintenance Work Orders, based on a specified period.

        - *Estimates*: A BOM (material parts list) and routing (resources) can associate with a Work Order. When you select the Estimates tab, the estimated costs of all material and resources associated with a Work Order appear, enabling you to budget costs.

        - *Variances*: The difference between the actual costs recorded and estimated costs.

        - *Material*: All material and material overhead transaction costs.

        - *Labor*: All employee resource and resource overhead transaction costs.

        - *Equipment:* All material resource and resource overhead transaction costs.

    2. Optionally choose Details to view actual, estimated, and variance costs for labor hours, equipment hours, and material for specific operations of the current

Work Order.

39. Optionally select a Work Order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and material against the current Work Order.

40. Save your work.

    After saving a work order, you can optionally attach its associated asset's attachments: (M) Tools > Copy Asset Attachments.

Related Topics

Defining Asset Documents, page 2-64

Overview of eAM Cost Management, page 6-1

Failure Analysis Overview, page 26-1

Using Encumbrance Accounting with Maintenance Work Orders

You must specify an encumbrance account for the WIP Accounting Class used for maintenance (shop floor) work orders.

To define a WIP Accounting Class to use encumbrance accounting:

1. Navigate to the WIP Accounting Class window (Enterprise Asset Management > WIP Accounting Classes).

2. Define all the required fields on the page.

   See Defining WIP Accounting Classes, *Oracle Work in Process User's Guide*).

3. Select the Encumbrance Accounting field, and enter the encumbrance account to be used to capture the expenses.

4. Save your work.

Express Work Orders

You can use the new express work order feature to capture work that has been completed. These types of work orders are also known as 'emergency work orders.'

You can create a new work order, charge time to it and complete it at the same time.

Related Topics

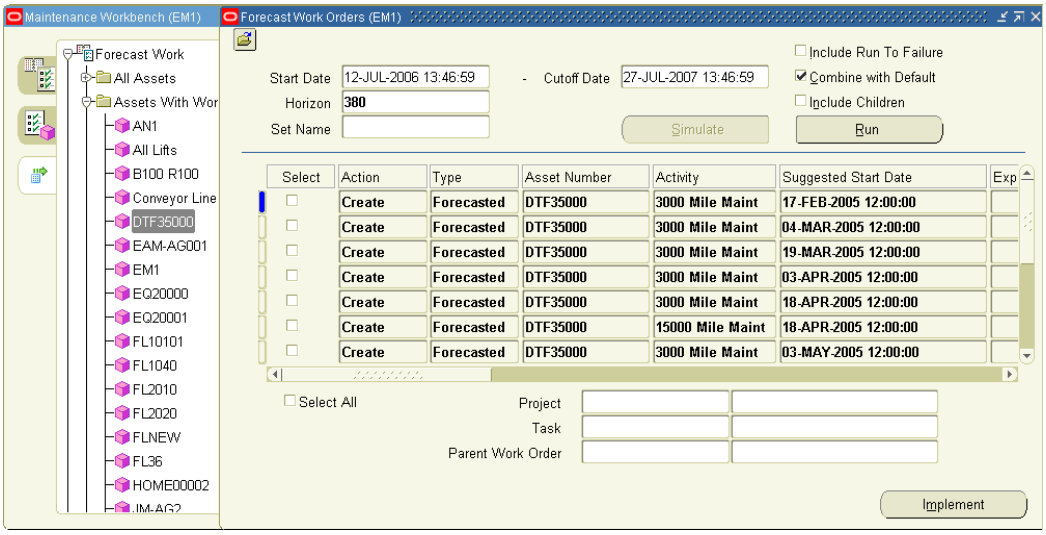
Creating Express Work Orders, page 20-42

Preventive Maintenance Work Orders

Enterprise Asset Management enables you to generate work orders automatically based on meter readings, runtime intervals, and calendar days. Preventive maintenance activities reduce the probability of failure or degradation of the assets' physical conditions. These Activities are executed periodically, by usage, or based on the condition of an asset number (asset or rebuildable serial number). Meters are entered to measure any asset number that needs to be measured and periodically serviced, based on the measurement. For example, a pipe may start out at 12 millimeters, but when it wears to only four millimeters, it needs to be replaced (See: Meters, page 2-121).

Scheduling definitions are defined to create forecasted, scheduled work orders, based on meter readings. You can create a Preventive Maintenance scheduling definition (See: Preventive Maintenance Scheduling, page 2-134) for an Asset Number and/or Rebuildable Item/Activity combination (See: Associating Asset Numbers with Activities, page 2-96), or an Asset Route (See: Defining Asset Routes, page 2-74). After you have defined Preventive Maintenance scheduling definitions, the Preventive Maintenance scheduler process may execute. You can view these forecasted work orders using the Maintenance Workbench (See: Using the Maintenance Workbench, page 3-71). You can execute the Generate Preventive Maintenance Work Orders process. When this process executes, work orders are created with a status of Unreleased. (See: Generating Work Orders, page 4-6). You can choose the Implement button to change the status of the Unreleased work orders to Released work orders.

Forecasted Work Orders



Related Topics

Preventive Maintenance Overview, page 4-1

Rebuild Work Orders

Rebuild Work Orders are created as child Work Orders.

For example, a Work Order was issued for the inspection of a pump. During the pump inspection, you found that the motor, one of the components of the pump, is problematic. You have two options: You can repair and then reinstall this motor (rebuildable item), or you can replace the rebuildable item by issuing a new motor rebuildable item from inventory. If you choose to perform a material issue from inventory, the old motor rebuildable item attaches to the Work Order, automatically creating the child, rebuild Work Order number associated to the parent Work Order. In this case, the Asset Number genealogy would automatically update to identify this new item number. See: Overview of Inventory Transactions, *Oracle Inventory User's Guide*.

If you choose to repair and then reinstall the problematic motor rebuildable item, you can manually create the child rebuild Work Order for the old motor (rebuildable item).

The instructions below show you the option of creating a rebuild Work Order without issuing any new material. The rebuildable item is replaced back into the asset (motor placed back into the pump, for example), and does not go to a subinventory when the Work Order is completed. In this case, the Asset Number genealogy is not updated.

To create rebuild Work Orders:

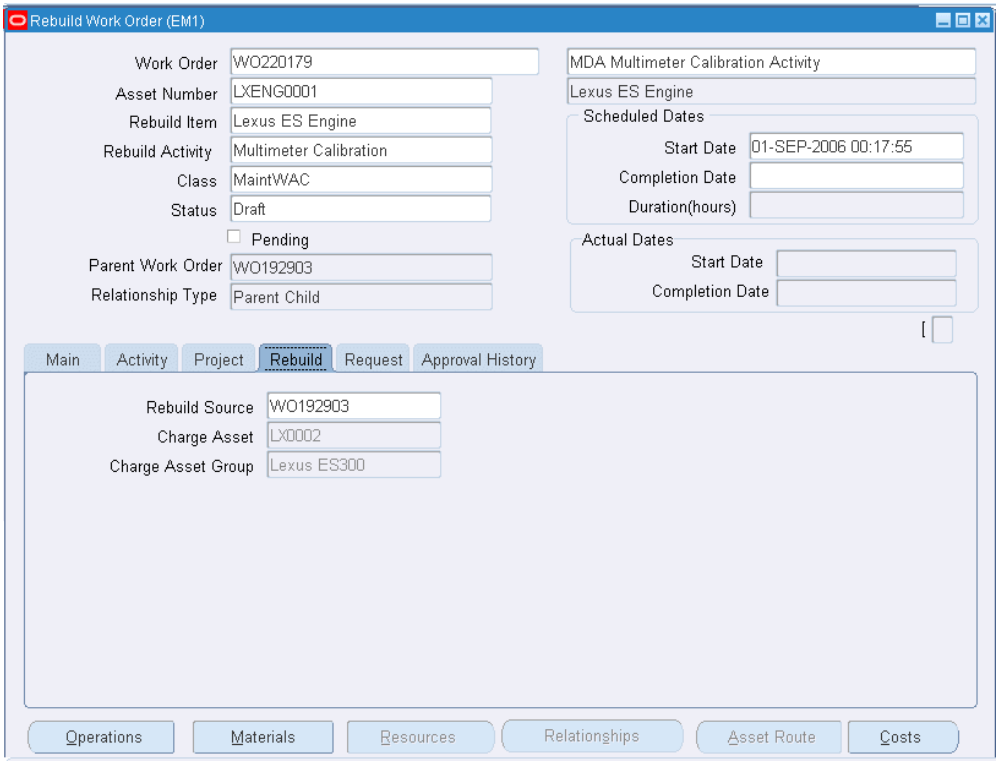
1. Navigate to the Rebuild Work Orders window (Work Orders > Rebuildable Work

Orders).

> **Note:** This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.

2. Choose New.

Rebuild Work Order



The header information displays general information about the rebuildable item and the type of work required.

3. A Work Order number is assigned, but you can update it.

4. Optionally enter a Description for this Work Order, up to 240 characters.

5. Optionally select an Asset Number (Serial Number) from the list of values (See:

Defining Rebuildable Items, page 2-105 and Generating Serial Numbers, *Oracle Inventory User's Guide*.

6. Enter or select a Rebuild Item requiring maintenance.

7. Optionally select a Rebuild Activity. Only Activities associated with this Rebuildable Item are available (See: Rebuildable Item/Activity Association, page 2-111). If an Activity does not exist, you can add operations, and material/resource requirements to this Work Order manually. See: Defining Material Requirements, page 3-37, Defining Resource Requirements, page 3-46, and Preparing Work Order Operations, page 3-30. If an Activity does exist, you can update the material and resources by choosing the Materials or Resources buttons from this window or by utilizing the Maintenance Workbench (See: Using the Maintenance Workbench, page 3-71).

8. Enter a Class code. This represents the charge (expense) accounts associated with the Asset Number. This defaults from the Asset Number (See: Defining Asset Numbers, page 2-65) and can be updated.

9. Enter the Status. For example, Unreleased, Released, On Hold, and Draft. Certain transactions update this status automatically, including Work Order Completion, for example (See: eAM Work Order Statuses, page 3-23).

10. The Pending check box value determines whether the Work Order has reached the status above or is still pending, due to workflow. If the check box is clear, the Status reflects the current state. If the check box is selected, the Status reflects a desired target state that is not yet reached due to pending activity, such as a workflow approval that is still in progress.

11. If this is a child Work Order in a Work Order network and Parent Child is populated in the Relationship Type field, the Parent Work Order is populated in this field.

    This field is also populated if you selected a Rebuild Source work order, within the Rebuild tab.

12. The Relationship Type field indicates the type of Relationship associated with the Work Order. Valid relationships are Parent Child, End to Start Dependency, Cost, and Follow-up Work. Manage complex maintenance jobs through these four types of Work Order relationships. See: Work Order Relationships, page 3-51.

    - *Parent Child:* This relationship enables a network of Work Orders, which includes one top level Work Order that defines the time line of all its children Work Orders. The start and end dates of the children Work Orders are within the start and end dates of the parent Work Order. A child Work Order can be parent to another Work Order. One parent can have multiple children, but one child can have a single parent.

- *End to Start Dependency:* You can create Work Orders with scheduling dependency relationships (including child sibling Work Orders). For example, one Work Order's scheduled start date is dependent on another Work Order's completion. With this relationship, the next Work Order cannot be created until the prior Work Order, for the current asset, is completed.

- *Cost:* You can roll the child Work Order costs into the parent Work Order, for reporting purposes. You can base the cost roll up, within a hierarchy, on scheduling relationships. Scheduling relationships are not required to roll up costs within a hierarchy. You can create a cost reporting hierarchy that is different from the scheduling hierarchy.

- *Follow-up Work:* You can create a Work Order for the current capital Asset Number or Rebuildable Item, while executing work for the asset on another Work Order. For example, a second problem with the asset is discovered while executing a Work Order. A Follow-up Work Order, associated with the original Work Order, is created for the issue. This is independent of scheduling or cost relationships.

13. In the Scheduled Dates region, enter the Work Order's scheduled Start date if it is based on a forward schedule. The scheduling process uses this date as a starting point to calculate the scheduled end date and duration for allocated resources and material. If the material/resources are not available by this date, the scheduling process moves the start date forward (See: eAM Scheduling, page 2-151).

    Note: Actual dates are entered at operation and Work Order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: Overview of Setting Up, *Oracle Manufacturing Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

14. Enter a scheduled Completion date for backward scheduling. This date indicates the requested end by date for the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and material. If the material and resources are not available by that date, the scheduling process moves the start date backwards to ensure completion by the required end date (See: eAM Scheduling, page 2-151).

    Note: Actual dates are entered at operation and Work Order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: Overview of Setting Up, *Oracle Manufacturing Scheduling User's Guide*). Otherwise, the EAM

scheduler calculates the dates.

15. Within the Main tab, the Department defaults from the selected Asset Number (See: Defining Asset Numbers, page 2-65). This indicates the persons or department responsible for this Asset Number.

16. Optionally select a Priority. For example, High, Medium, or Low.

17. Optionally select a Work Order Type. Work Order Types enable you to differentiate Work Orders, for example, Routine, Preventive, Emergency, or Facilities. Maintenance management can use this information to sort and monitor work activity for reporting and budgeting. Work Order Types are referenced in the Work Order. For information on how to create valid values within the available list of values, See: Work Order Types, page 2-45.

18. The Shutdown Type defaults from the Rebuild Activity. This helps the planner group Work Orders that may require shutdowns, so that they are planned together.

19. If the Firm check box is selected, planning and scheduling does not adjust the schedule, regardless of material or resource availability (See: Overview of Planning and Scheduling). This check box defaults as selected or cleared, depending on the Auto Firm on Release and Auto Firm on Create check box settings, established in the Enterprise Asset Management Parameters setup for the current organization (See: Defining eAM Parameters, page 2-11). This defaults after the Work Order is Released, if you select the Auto Firm on Release check box, and defaults immediately if you selected the Auto Firm on Create check box.

    If the check box is selected, the end date is calculated, based on the Work Order duration. The scheduler automatically calculates the duration based on the operations (resource duration setup) on the Work Order. You can update this check box for Work Orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: eAM Work Order Statuses, page 3-23).

    If the Firm check box is selected, you can still manually reschedule a resource on the Work Order, thereby updating the dates on its corresponding Operation and Work Order.

20. Optionally select the Notification Required check box.

21. Optionally select the Tagout Required check box to indicate that the Area needs to be secured for operations required to execute this Work Order. Tags are generally printed and placed on an asset, warning the plant that it is shutdown and should not be started. This check box helps the planner isolate those jobs that require a tagout.

    - Select the paperclip Attachments icon to attach relevant tagout documents. You

can attach URL, file, or text attachments. See: Defining Work Order Documents, page 3-27.

22. The Planned check box is selected if the current Work Order was created from forecasted Work Orders (See: Preventive Maintenance Work Orders, page 3-13).

23. Optionally select the Enable Material Issue Requests check box to enable eAM to manage material availability for the current Work Order. Material is physically available to a Work Order via the material request and verification process.

24. Optionally enter Failure Information (See: Failure Analysis Overview, page 26-1). The Failure Information region appears if the *Failure Code Required* value is set to *Yes* , within the Failure Set definition (See: Defining Failure Codes and Sets, page 26-2).

    If the Failure Entry Required check box is selected, Failure Code entry is mandatory during Work Order completion.

25. The Material Shortage region enables you to view material availability. This region populates, after you have saved the Work Order.

    The Material Shortage field displays whether there is a shortage of the material (at that moment in time) that is needed to complete the Work Order's operations. This status helps you to determine when to start work. For example, if there is a material shortage, you typically would not start work. The process that populates this field considers both stocked and direct items. For stocked items, the Work Order Material Shortage process determines whether all of the inventoried material within the Work Order's associated BOM is available to transact (ATP is not considered). For direct items, the Work Order Material Shortage process determines if all of the direct items that are included within the Work Order's associated BOM are received into Inventory. This process should be set to automatically execute periodically, but you can execute it from the menu at any time.

    You can choose Check Shortage to view the shortage details.

26. Optionally select the Activity tab to select alternate, predefined BOMs and Routings. See: Setting Up Maintenance Bills of Material, page 2-93 and Defining Maintenance Routes, page 2-99.

    After the alternate BOM and Routing are selected, the system uses the associated items and assigns the associated resources needed to execute the Work Order.

    1. Optionally select an Activity Type. This code indicates the type of maintenance for this Activity and is used when defining a job or a standard job, for example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This value defaults from the Activity (See: Defining Activities, page 2-53).

    2. Optionally select an Activity Cause to specify what situation caused this work

to generate, for example, Breakdown, Vandalism, Normal Wear, or Settings. This value defaults from the Activity (See: Defining Activities, page 2-53).

3. Optionally select an Activity Source to specify reasons Activities need execution, for example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. This value defaults from the Activity (See: Defining Activities, page 2-53).

27. Optionally select the Project tab. This tab is enabled if Project Manufacturing is installed and enabled.

    1. Optionally select a Project.

    2. Optionally select a Task.

28. You can select the Rebuild tab to select a *Rebuild Source* work order. This Work Order is the parent to the current child Work Order. The *Charge Asset* field is populated with the parent Work Order's associated asset.

29. Optionally select the Request tab to display Service and Work Requests associated with this Work Order. You can add Service and/or Work Requests to a Work Order by selecting a Service Request and/or Request Number, respectively. Work Requests at an Awaiting Work Order status and Maintenance Type Service Requests are available for association. You may associate multiple Work Requests to a single Work Order, but one Work Order can associate with a Service Request. You can associate a Service Request to multiple Work Orders. You can dissociate a Work Request from a Work Order.

    1. Highlight the Work Request.

    2. Choose Delete.

30. Optionally select the Approval History tab to view the Work Order's approval history. A Work Order might require approvals or notifications at different stages of its lifecycle. For example, organizations typically want an approval process in place before a Work Order is released. Workflow automates this process. You can initiate Workflow to generate notifications, approvals, transactions, and update a Work Order status. You can enable Workflow for Work Orders within the eAM Parameters (See: Defining eAM Parameters, page 2-11). You can set up Business Events and Event Subscriptions (or use seeded events and subscriptions) within Oracle Workflow to indicate what events trigger Workflow. Seeded events that you can enable to trigger Workflow are: Work Order creation, Work Order release approval, Work Order completion, Work Order status change, Operation completion. See: Setting Up Oracle Workflow, *Oracle Workflow User's Guide*, Setting Up the Business Event System, *Oracle Workflow User's Guide*, Planning Your Organization's Approval Process, *Oracle Approval Management User's Guide* and

Defining Work Order Statuses, page 3-23).

31. Optionally choose Operations to prepare necessary operations. These operations default from the maintenance route (See: Defining Maintenance Routes, page 2-99) associated with the current Activity, but you can add or update them (See: Preparing Work Order Operations, page 3-30).

32. Optionally choose Materials to view, add, or update the associated Asset Number's items list (See: Setting Up Maintenance Bills of Material, page 2-93 and Defining Material Requirements, page 3-37). From the Material Requirements window, you can optionally choose Select Materials to add Materials from the Asset BOM to the material requirements for the current Work Order.

33. Optionally choose Resources to view, add, or update the resources assigned to each operation. See: Defining Resource Requirements, page 3-46.

34. Optionally choose Relationships to manage Work Order schedules and view Work Order details. This button is enabled if a Relationship Type was previously selected. See: Work Order Relationships, page 3-51

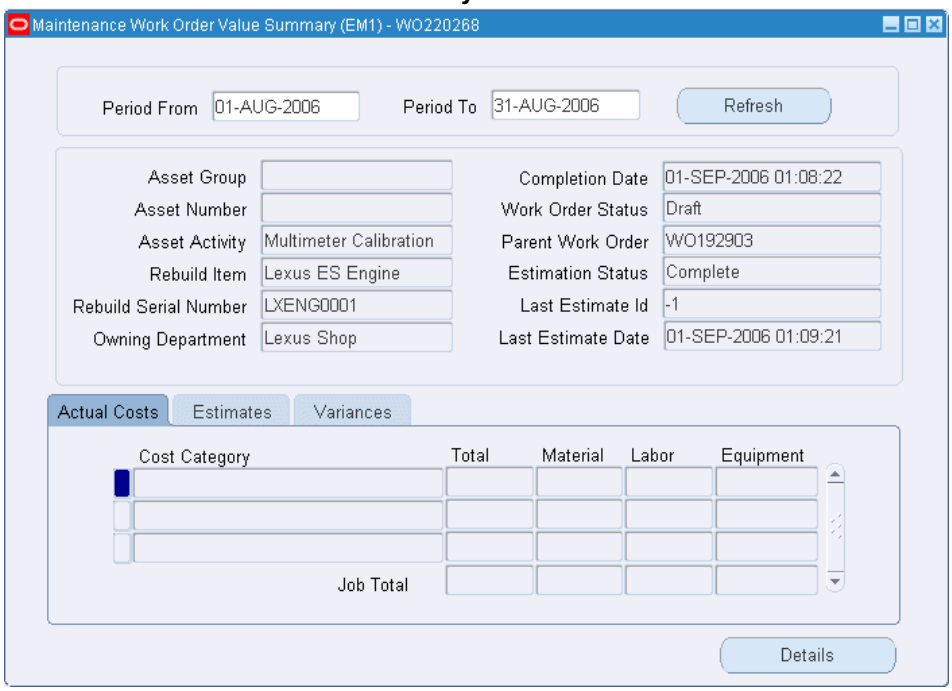
35. Optionally choose Asset Route to view the Asset Route associated with the current Work Order's Asset Group. You might need to perform one Activity on multiple Asset Numbers. To eliminate the possibility of creating multiple Work Orders for the same Activity, you can define Asset Routes. See: Defining Asset Routes, page 2-74.

    You can choose Asset Route if an Asset Route is associated with the current Asset Number.

36. Optionally choose Costs to view the costs of Work Orders falling in the specific accounting periods, specified in the Accounting Information by Period region. Accounting Periods are defined within Oracle General Ledger. See: Defining Period Types, *Oracle General Ledger User's Guide* and Defining Calendars, *Oracle General Ledger User's Guide*.

    1. Optionally select a Work Order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and material against the current Work Order.

Maintenance Work Order Value Summary



- *Actual Costs:* This is the accumulation of all costs for material and resource transactions for the Asset Number's associated maintenance Work Orders, based on a specified period.

- *Estimates:* A BOM (material parts list) and routing (resources) can associate with a Work Order. When you select the Estimates tab, the estimated costs of all material and resources associated with a Work Order appear, enabling you to budget costs.

- *Variances:* The difference between the actual costs recorded and estimated costs.

- *Material:* All material and material overhead transaction costs.

- *Labor:* All employee resource and resource overhead transaction costs.

- *Equipment:* All material resource and resource overhead transaction costs.

2. Optionally choose Details to view actual, estimated, and variance costs for labor hours, equipment hours, and material for specific operations of the current Work Order.

37. Save your work.

- After saving a work order, you can optionally attach its associated asset's attachments: (M) Tools > Copy Asset Attachments

  Note: A requirement for rebuild Work Orders that are created automatically via a material transaction is that the completion subinventory must be an expense subinventory (See: Subinventory General Ledger Account Fields, *Oracle Inventory User's Guide* and Work Order Completion, page 3-60).

  Note: A rebuild Work Order's owning department defaults from the owning department of its parent Work Order. This is viewable when you select the Main tab.

Related Topics

Defining Asset Documents, page 2-64

Overview of eAM Cost Management, page 6-1

Failure Analysis Overview, page 26-1

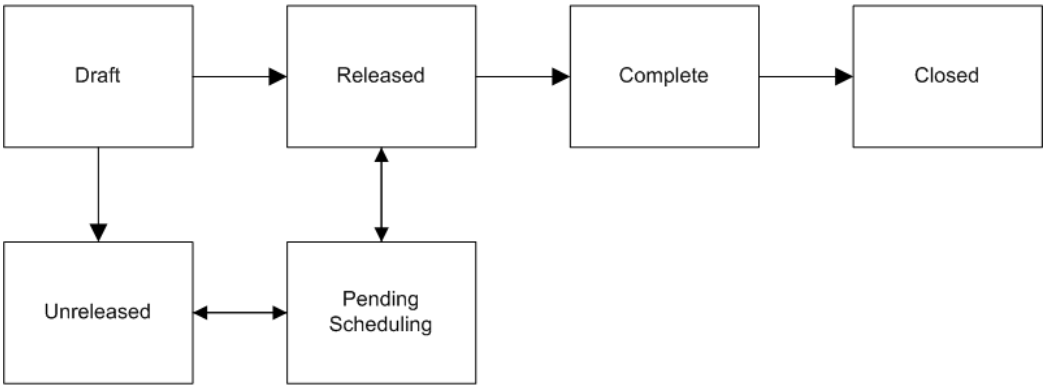
Easy Work Orders

Easy Work Orders are unplanned Work Orders, and enable you to avoid operation and resource planning. An Activity does not default into the Work Order, based on the Asset Number/Activity association as with planned Work Orders, however, you can add an Activity to an Easy Work Order. These Work Orders are only created in Maintenance User. Work Orders can create at any status, such as Released (See: eAM Work Order Statuses, page 3-23), enabling you to execute the Work Order by requesting material and charging labor.

eAM Work Order Statuses

An Enterprise Asset Management work order may progress through several statuses, throughout its lifecycle duration. The diagram below illustrates how Enterprise Asset Management work orders might start at a Draft status, then move to Released, Complete, and finally Closed. These statuses can vary, depending on the type of work order that is created. For example, easy work orders are created in a Released status, bypassing the Draft status.

eAM Work Order Lifecycle



Status	Description
Draft	Infinite resource capacity scheduling of work orders at a Draft status may take place. You cannot charge labor, or request material for work orders at this status.

Status	Description
Released	After a work order is Released, you can execute a work order. You can charge labor, request material, and scheduling for this work order takes place (See: eAM Scheduling, page 2-151) to create the scheduled start or end date. You can release a work order from the Work Orders window (See: Routine Work Orders, page 3-3), and the Maintenance Workbench (See: Using the Maintenance Workbench, page 3-71). If you create a work order with a future date and then release it, the release date is the system date. If you create a work order with a date in the past and then release it, the release date is the scheduled start date, since you can post transactions during any time after the scheduled start date (even if it is in past). The release date has a direct relationship with costing, and transactions for a work order cannot be posted before its release date. The release date might appear different from the start date, because of time zone conversions.
Unreleased	You can move an Enterprise Asset Management work order in Draft or Released status to Unreleased. Scheduling can take place for these work orders (See: eAM Scheduling, page 2-151) but you cannot charge labor or request material. An Unreleased work order cannot be changed to a Draft status.
Pending Scheduling	If the Scheduler is enabled, the work order status changes to Pending Scheduling, if a status of Released is chosen. After the Scheduler process finishes running, the status changes back to Released.

Status	Description
Complete	A Complete status for an Enterprise Asset Management work order does not require any completed operations. When a work order is completed, you can still charge labor. You can uncomplete a work order; this transitions it to a Released status. Uncompletion is performed within the work order complete/uncomplete pages in the Maintenance Super User responsibility. (See: Work Plans, page 20-80).
Complete - No Charges	A Complete - No Charges status for an Enterprise Asset Management work order does not require any completed operations. You cannot charge labor at this status (See: Work Plans, page 20-80). You cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information on a work order that is at a Complete - No Charges status.
Closed	You cannot charge any accounts after an Enterprise Asset Management work order is closed. If a work order was at a Released status at the time of closing it, you can unclose the work order to bring it back to a Released status. If a work order was at a Complete status at the time of closing it, you can unclose the work order to bring it back to a Complete status. For all other statuses during work order closing, unclosing the work order transitions it to an Unreleased status. See: Closing Work Orders, page 3-67. You cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information on a work order that is at a Closed status.
On-Hold	Enterprise Asset Management work orders at Released and Unreleased statuses can be put on hold. You cannot charge labor or request material for a work order at this status.

Status	Description
Cancel	You can cancel an Enterprise Asset Management work order at any status in its lifecycle. You cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information on a work order that is at a Cancel status.

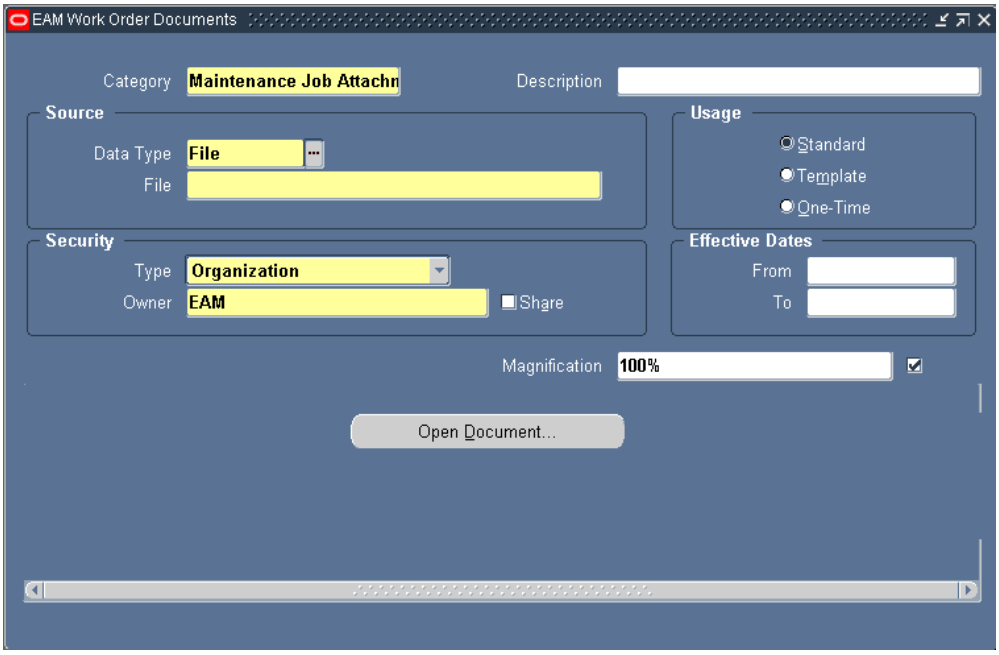
Defining Work Order Documents

You can attach existing documents to a Work Order, and create text to associate with a Work Order. You can attach text and files, such as spreadsheets, graphics, and OLE objects.

To define Work Order documents:

1. Navigate to the EAM Work Order Documents window.

EAM Work Order Documents



2. Select a Data Type.

Related Topics

Working With Attachments, *Oracle Applications User's Guide*

eAM Operations and Tasks

Operations on a Work Order are the instructions or tasks to perform a repair. These operations are assigned resources, for example, trades people, outside service providers, and equipment.

This section includes the following topics:

- Defining Asset Shutdown Statuses, page 3-29
- Preparing Work Order Operations, page 3-30
- Viewing Work Order Operations, page 3-36
- Defining Inventory Material Requirements, page 3-37
- Defining Direct Item Material Requirements, page 3-43

- Viewing Material Requirements, page 3-45
- Defining Resource Requirements, page 3-46
- Viewing Resource Requirements, page 3-50

Defining Asset Shutdown Statuses

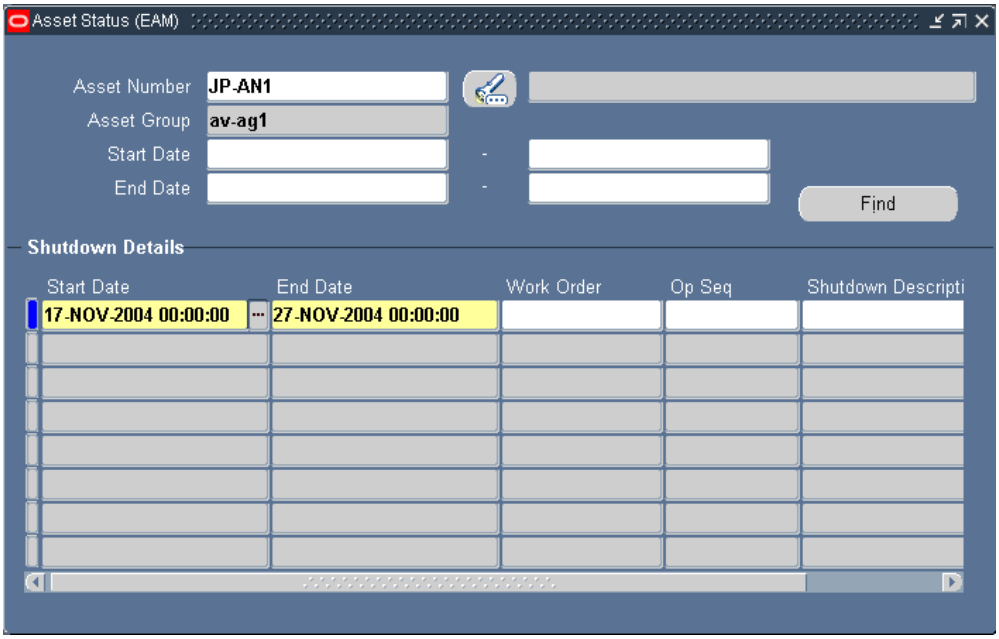
Shutdown of an asset is sometimes necessary to perform a maintenance Activity. You can create new shutdown information associated with an asset, or view existing shutdown history information already recorded to an asset. Shutdown information consists of start and end dates, Work Order numbers requiring maintenance on the asset, and specific operation sequences. While completing a Work Order to its operations, you can view asset shutdown information in the Asset Status window.

All shutdown information entered within the Asset Status window is for information purposes only.

To view and define shutdown information for an asset:

1. Navigate to the Asset Status window.

Asset Status



2. Select an Asset Number.
3. Choose Find. All shutdown information for the current asset appears in the Shutdown Details region.
4. To add new shutdown information for the current asset, Select a Start Date.
5. Select an End Date.
6. Optionally associate the shutdown information to a specific Work Order requiring maintenance on the current asset. Only Work Orders created for the current asset are available.
7. Optionally associate shutdown information to the operation level of a Work Order by choosing a specific Operation Sequence.
8. Optionally enter a Shutdown Description.
9. Save your work.

Preparing Work Order Operations

Operations (also known as tasks) are the instructions to perform maintenance activities. Each operation is assigned to a department (See: Defining Departments and Resources,

page 2-17), associated with assigned resources (trades people, outside service providers, and equipment). When you create a Work Order for an Asset Number, you can attach the Asset Number's associated Activity (See: Numbers with Activities) to that Work Order, bringing its related maintenance route (See: Defining Maintenance Routes, page 2-99) and BOM. The maintenance route is comprised of operations necessary to complete the Activity. You can view and update these operations from the Work Order.

To prepare operations:

1. Navigate to the Select Work Order window (Work Order Details > Operations).

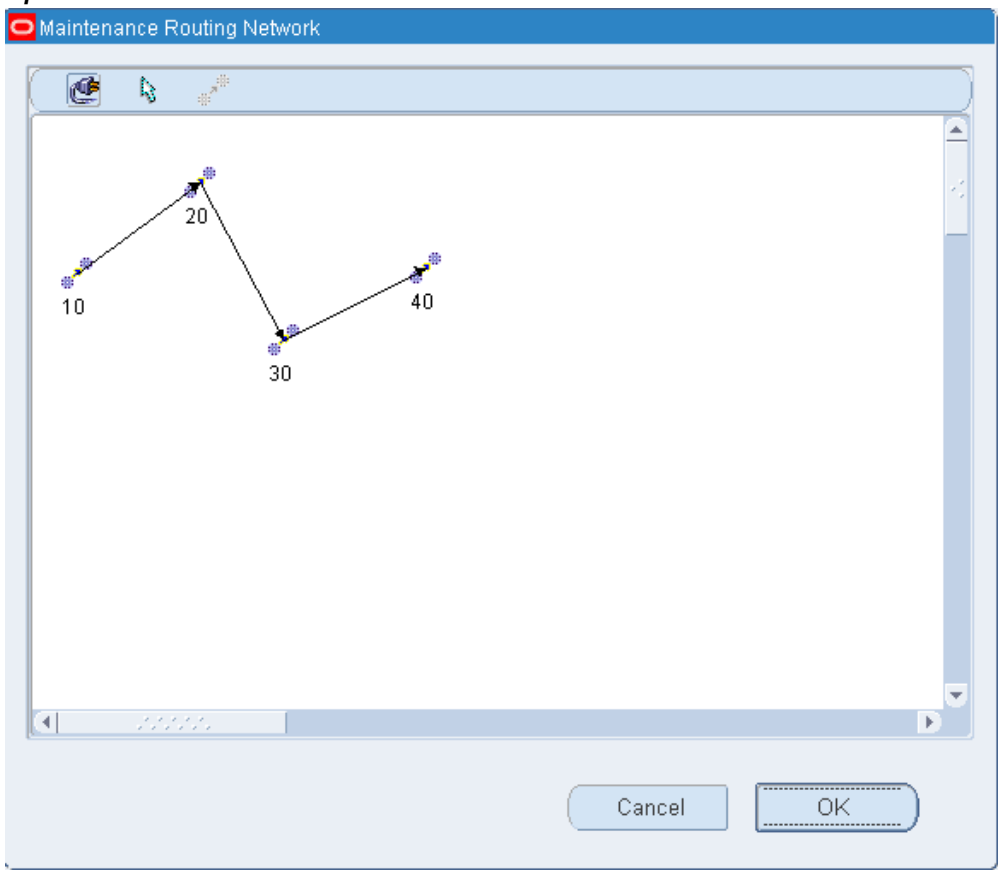
   Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.

2. Choose a Work Order.

3. Choose Continue.

   Operations can be scheduled to run in parallel, sequence, or through dependent steps. In the screen shot below, for example, Operation 20 is dependent on Operation 10, since there is a line connecting the operations; Operation 20 cannot be performed until Operation 10 is complete. Operations 30 and 40 run in parallel to each other. Operation 40 is independent; it can be performed at any time.

Operations



4. Choose the Operation icon, then click in the header to display the New Operation window.

    1. Optionally enter or update an Operation sequence, or let it generate for you, according to your profile setup (See: Item and Operation Sequence, *Oracle Bills of Material User's Guide*). Operations are generally assigned in increments of ten, enabling you to later insert additional steps.

    2. Optionally enter a Description for this operation.

    3. Optionally to copy or reference standard operations into a routing, select an Operation Code. If you use a standard operation code, the operation information for that code is copied into the current operation. You can then update that information (See: Creating a Standard Operation, *Oracle Bills of Material User's Guide*).

    4. Select an Assigned Department. The assigned department identifies the role responsible for performing the task.

5. Select a scheduled Start Date for this operation to base on a forward schedule. The Enterprise Asset Management scheduling process uses the scheduled start date as a starting point to calculate the duration of the operation, based on the resources and material. If the material and resources are not available by this date, the scheduling process moves the start date of the Work Order forward. The planning process uses the scheduled start date to recommend creation of purchase orders for the material (See: Overview of Planning and Scheduling, page 5-1).

6. Select a scheduled Completion date for this operation to base on a backward schedule. The Enterprise Asset Management scheduling process uses the scheduled end date as a starting point to calculate the duration of the operation, based on the resources and material. If the material and resources are not available by this date, the scheduling process moves the completion date of the Work Order backward. The planning process uses the scheduled completion date to recommend creation of purchase orders for the material (See: Overview of Planning and Scheduling, page 5-1).

   Note: Actual dates are entered at operation and Work Order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: Overview of Setting Up, *Oracle Manufacturing Scheduling User's Guide*). Otherwise, the WIP scheduler calculates the dates.

7. Optionally select a Shutdown Type to help the planner group Work Orders that may require shutdowns. When the Work Orders are grouped, they are planned together.

8. Choose OK to return to the Operations window.

   The operations entered in the previous window appear at the bottom of this window. Scroll over to the far right field.

   The Duration identifies the duration of the operation and is measured in hours. You can manually enter this, or let it calculate as the difference between the estimated Start Date and estimated End Date.

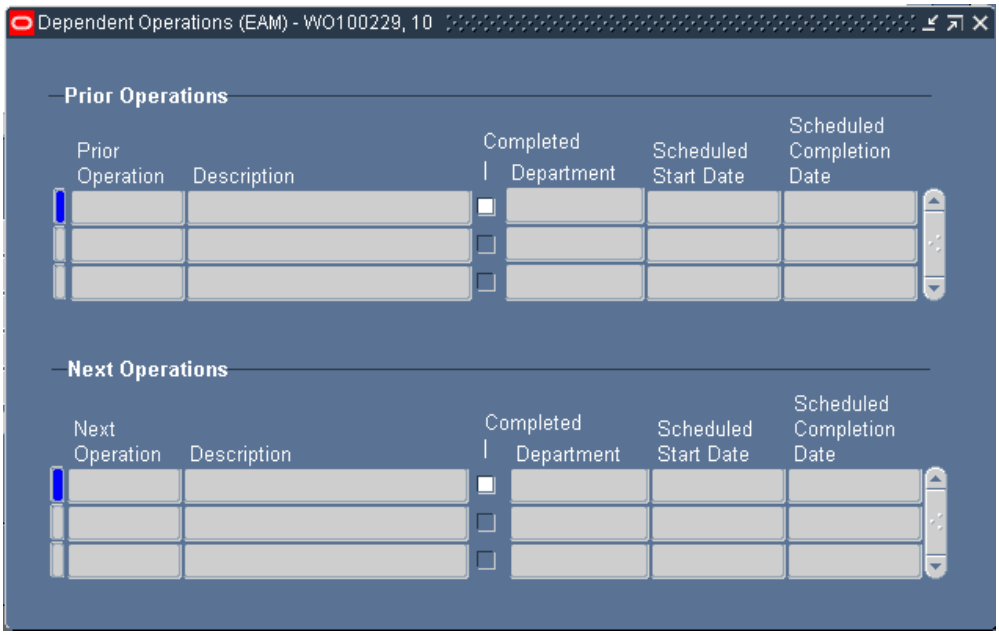
5. After all necessary operations are entered, you can create dependencies as necessary.

   Optionally choose the Connect icon to connect dependent operations. After chosen, you can draw a line between dependent operations.

   You might need to move operations around. Optionally choose the Drag icon to move an operation.

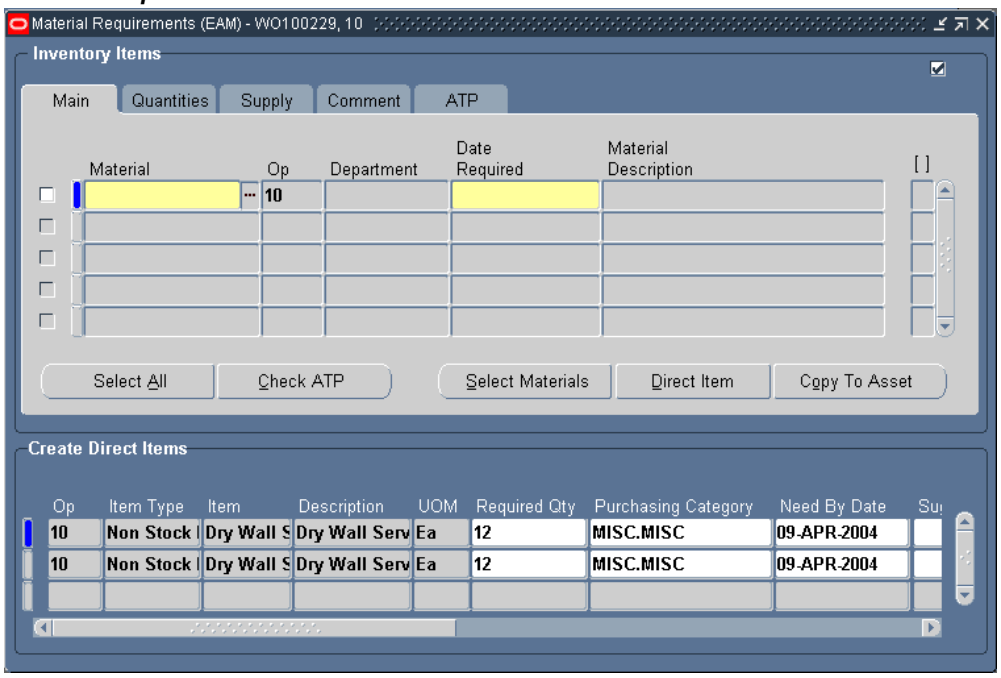
6. Optionally choose Dependencies to set dependencies between operations. For example, Operation 30 is dependent on Operation 10 completing.

Dependent Operations



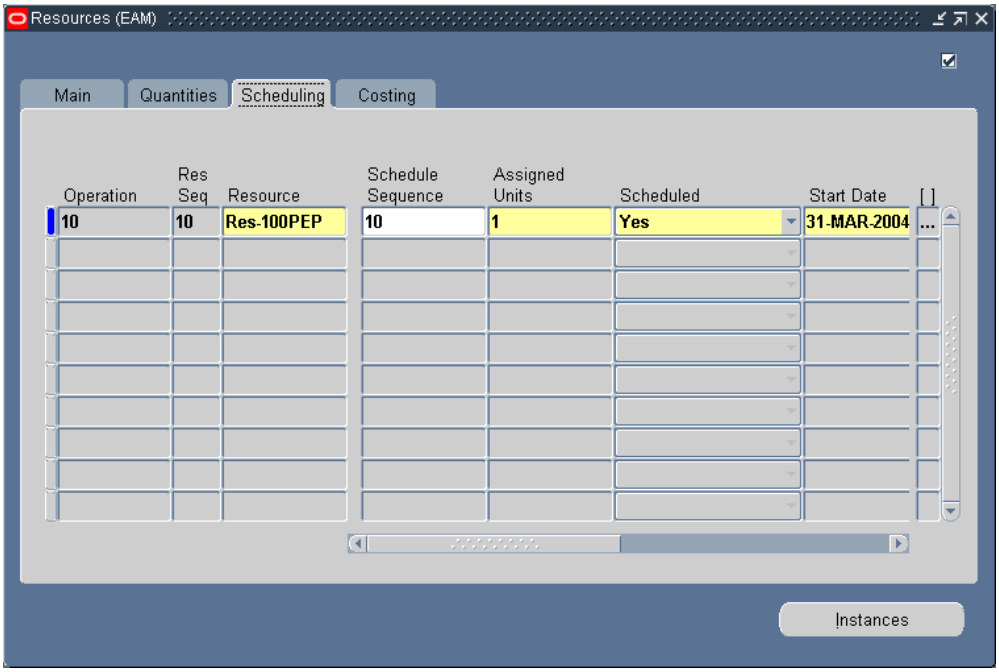
7. Optionally choose Materials to view or update the associated items list for the current operation (See: Setting Up Maintenance Bills of Material, page 2-93 and Defining Inventory Material Requirements, page 3-37).

Material Requirements



8. Optionally choose Resources to view or update the resources assigned to the current operation.

Resources



If you select the Scheduling tab, for each resource operation, you can choose if it is included in scheduling. You can schedule at the resource level within an operation. See: Defining Resource Requirements, page 3-46.

- Select Yes or No from the Scheduled list of values.

> **Note:** You can view Work Order operations in a view-only mode. See: Viewing Work Order Operations, page 3-36.

Viewing Work Order Operations

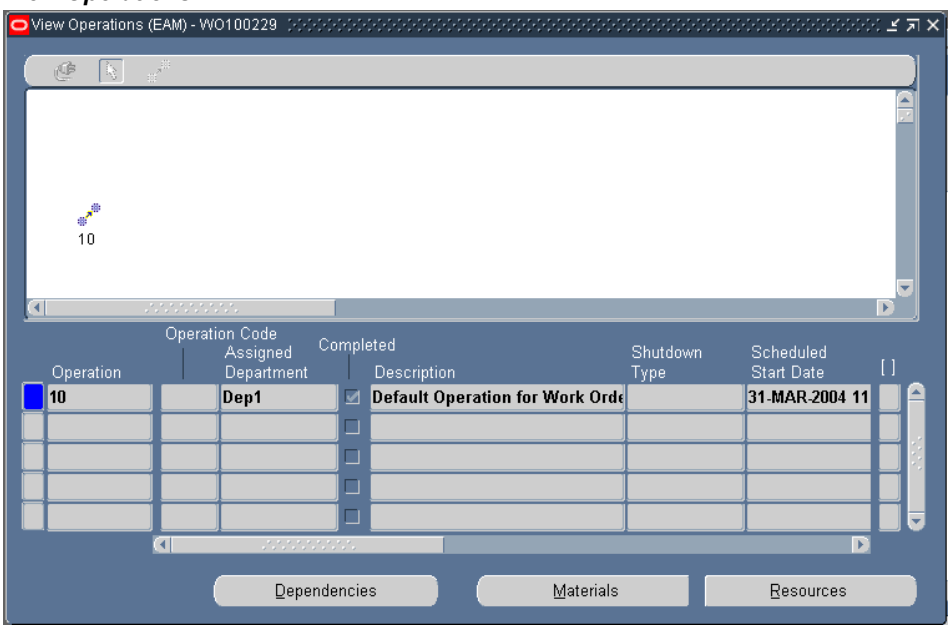
You can view the operations required to perform a repair. These operations are assigned resources (trades people, outside service providers, and equipment), as well as material. The View Operations window does not enable you to update the operations. For instructions on updating operations, See: Preparing Work Order Operations, page 3-30.

To view operations:

1. Navigate to the View Operations window.
    1. Within the Select Work Order window, select a Work Order.

2. Choose Continue.

View Operations



2. Choose Dependencies to view operation dependency information.

3. Choose Materials to view material requirements. See: Defining Material Requirements, page 3-37.

4. Choose Resources to view resource assignment. See: Defining Resource Requirements, page 3-46.

Related Topics

Preparing Work Order Operations, page 3-30

Defining Material Requirements

When entering a work order for an asset number, the activity associated to the asset number attaches the required material and resources to complete its operations. However, you can update, add, view, and delete material requirements for a specific work order.

You can also specify a source subinventory and source locator at the BOM level or the work order material requirement level. If the Auto Request Material option is selected at the BOM level, material allocation will be initiated when the work order is released, and the source subinventory and source locator values you enter will override these

values in the Inventory sourcing rules. If the Auto Request Material option is not selected, you can specify a source subinventory and source locator for your material when you perform a material request or a One-Step Material Issue.

To define work order material requirements:

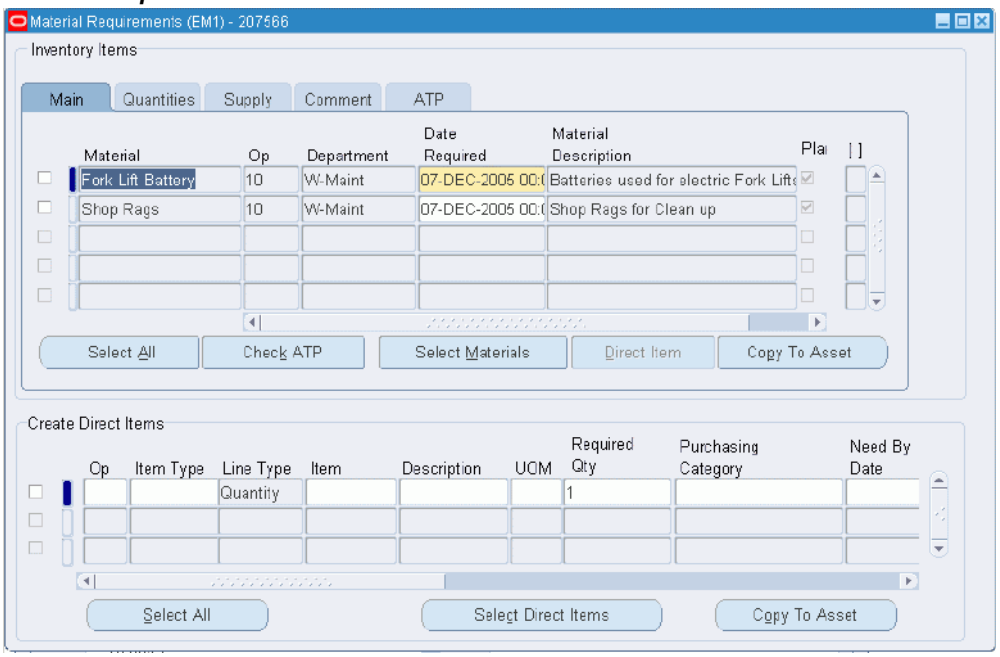
1. Navigate to the Select Work Order window (Work Order Details > Material Requirements).

   Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.

2. Select a work order.

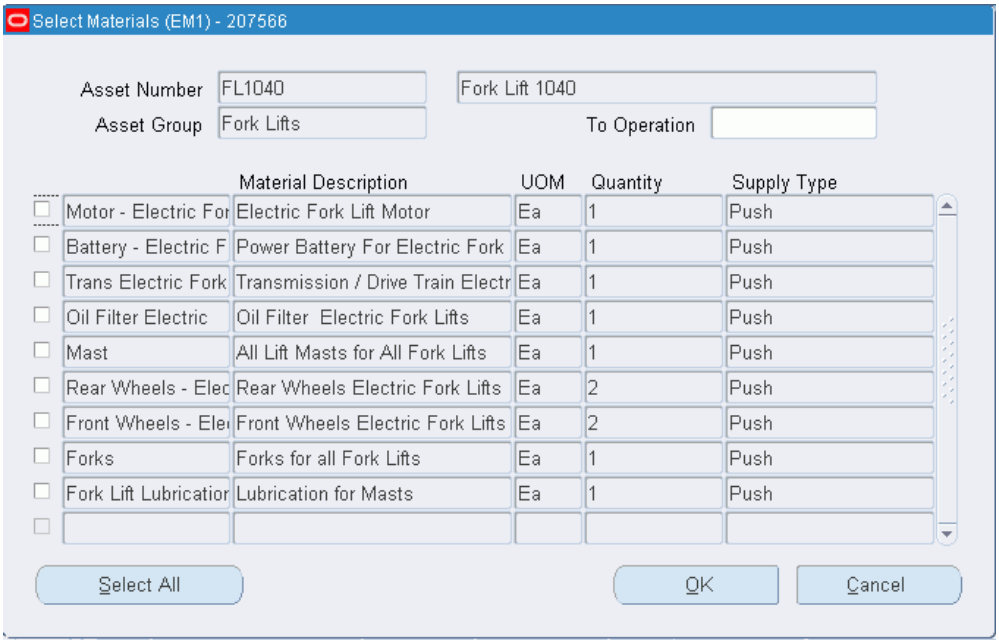
3. Click the **Continue** button.

Material Requirements



4. Optionally, within the Inventory Items region, you can view or update the item list for the current work order. (See: Setting Up Asset Bills of Material, page 2-77) by placing your cursor in the Material field or copy choosing Select Materials. When you choose Select Materials, the current asset numbers associated Asset Bill of Material items are available to be added to the required material for the current work order.

Select Materials



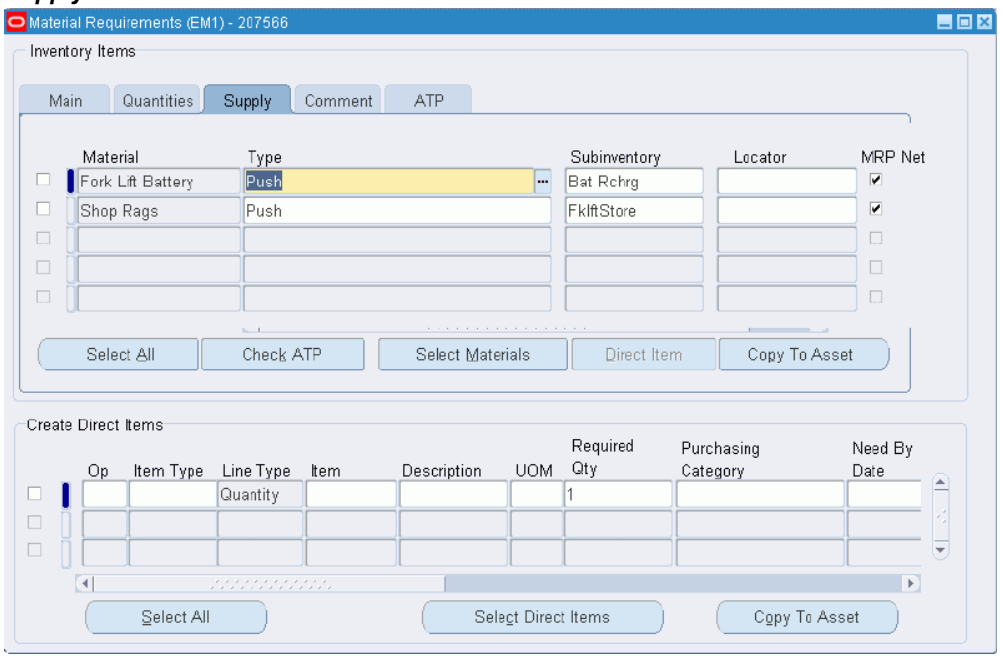
5. Optionally select the Main tab to change operation sequence and the date required.

   Note: If you are accessing the Select Materials window via the Operations window, you cannot change operation information. If you are accessing the Select Materials window using the Work Order window, you can change operation information.

6. Optionally select the Quantities tab to update the quantities Required.

7. Optionally select the Supply tab to select a supply Type. You can optionally specify a value for the Source Subinventory and Source Locator fields.

Supply

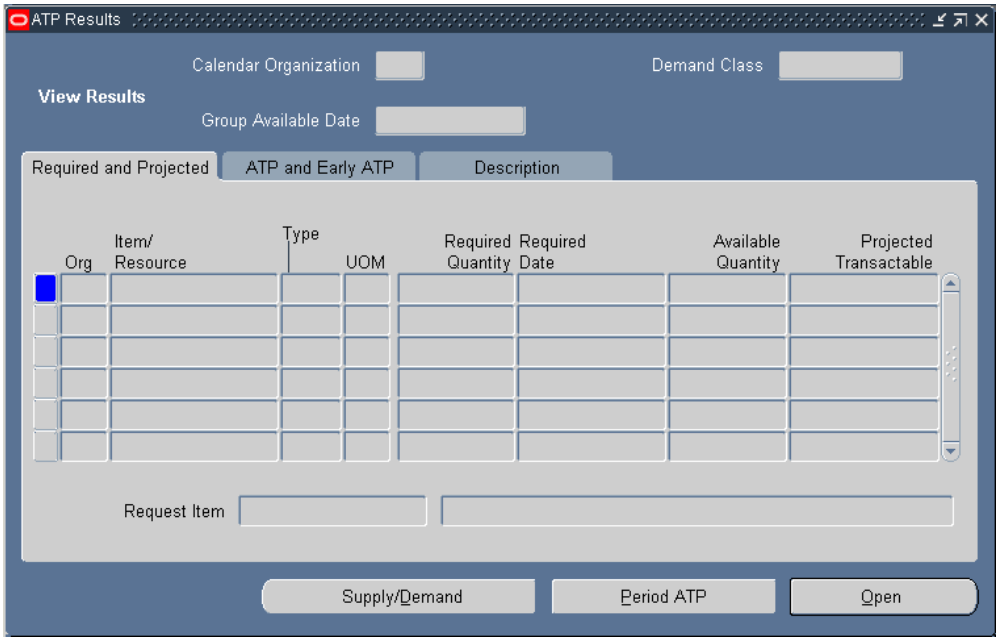


8. Optionally select the Comment tab to enter information for the current Material.

9. Optionally choose the ATP tab to define available to promise information for the current material. If you select the ATP Allowed check box, available to promise information can be calculated for the current material.

10. Optionally choose Check ATP to check available to promise information for the selected material.

ATP Results



11. Optionally choose Direct Item to create requisitions for direct items, and add them to your items list. Oracle Self Service Purchasing defaults the Work Order Number and Operation Number, as well as the class code information for correct expensing. Direct Items are one time, non-inventoried items that are purchased directly from the supplier. After you choose Direct Item, the current Work Order and operation reference values are passed to the requisition created. If the Work Order is project related, the project and task information is captured in the purchase requisition (See: Overview of Direct Item Procurement for eAM Work Orders, page 5-1). You can exit Self Service Purchasing and return to the Material Requirements window by choosing Return To Portal.

    Upon re-inquiry of this Work Order, the Direct Items region reflects any requisition and purchase order details.

    Note: You must have Oracle Self Service Purchasing installed for this functionality. You can purchase direct items from a Requisition or Purchase Order window if you have Oracle Purchasing installed (See: Entering Purchase Orders for Direct Items, page 7-19).

    Note: You can procure direct items to Work Orders at Released statuses.

12. Choose Copy to Asset to dynamically update the BOM associated to the Asset

Group with any items list changes (See: Setting Up Asset Bills of Material, page 2-77).

13. Save your work.

> **Note:** You can view Work Order material requirements in a view-only mode. See: Viewing Material Requirements, page 3-45.

Related Topics

Viewing ATP Information, *Oracle Inventory User's Guide*

Defining Direct Item Material Requirements

Direct Items represent items with infrequent use or criticality; they are not included in the internal catalog as stocked items. These items are considered as "one off", bought directly from a vendor for a specific Work Order and Operation. These items are delivered directly to the Shop Floor for maintenance Work Order execution.

To set up Non-Stock Direct Items, access the Master Item window within Oracle Inventory, and set up the item with the Stockable check box cleared. See: Defining Items, *Oracle Inventory User's Guide*. Description Based Direct Items are not set up within Oracle Inventory.

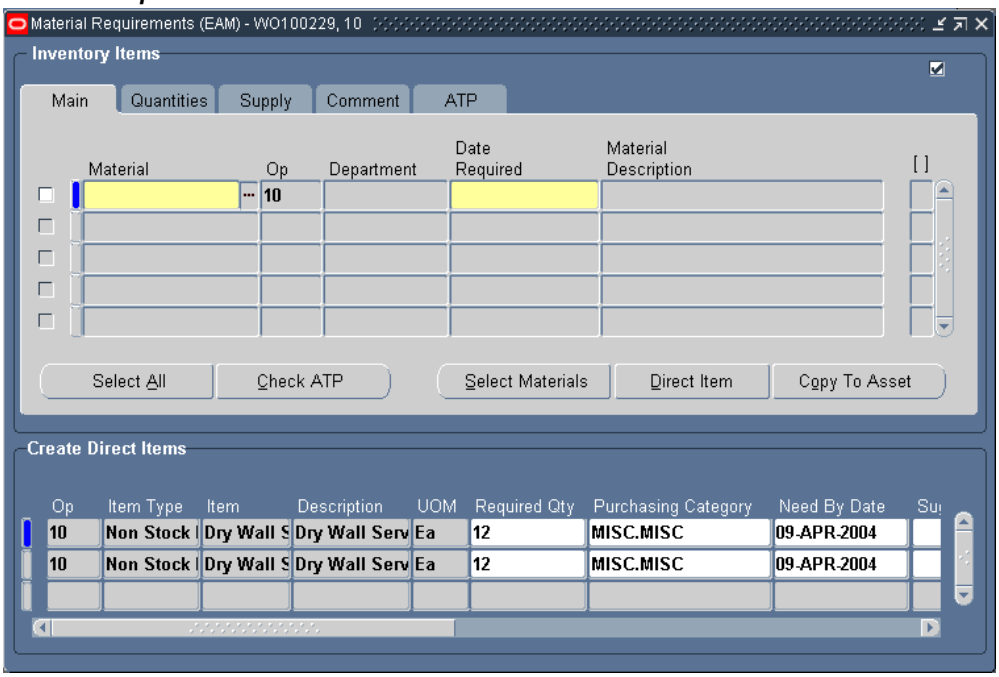
You can add Non-Stock Based Direct Items to Asset (See: Setting Up Asset Bills of Material, page 2-77), Maintenance (See: Setting Up Maintenance Bills of Material, page 2-93), and Rebuildable Bills of Material (See: Defining Rebuildable Bills of Material, page 2-114), but you can add Non-Stock and Description Based Direct Items directly to the material requirements for an existing Work Order.

If direct items exist on an Activity Bill of Material, they default as material requirements when creating a Work Order for that activity. However, you can add additional direct item material requirements to an existing Work Order.

To add direct item material requirements:

1. Navigate to the Select Work Order window.
2. Choose a Work Order.
3. Choose Continue.

Material Requirements



4. Within the Create Direct Items region, select an Operation.

5. Select an Item Type.

   - *Description Based Item:* This direct item type is not stored in Oracle Inventory.

   - *Non Stock Item:* This direct item type is stored in Oracle Inventory. Its Master Item record's Stockable check box is cleared.

6. If you selected a Non Stock Item Type, select an Item. This field is disabled if a Description Based Item Type was previously selected.

7. Enter a Description, if you previously selected a Description Based Item Type.

8. Select a UOM. If you previously selected a Non Stock Item Type, this value defaults from the Master Item.

9. Select a Purchasing Category. See: Setting Up Purchase Order Category Associations for Direct Items, page 2-181.

10. Enter a Need By Date. The system date defaults.

11. Save your work.

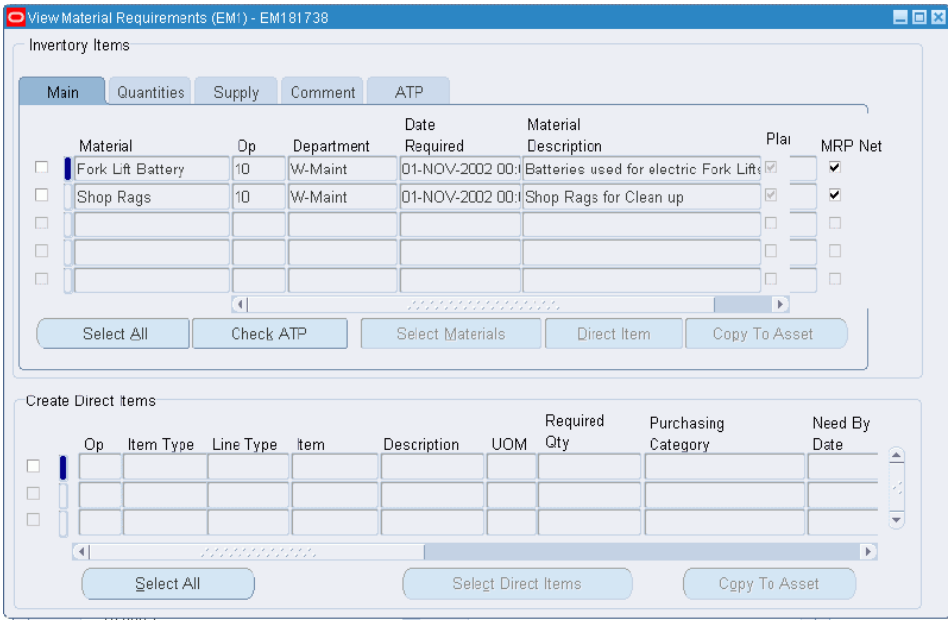
Viewing Material Requirements

When you enter a Work Order for an Asset Number, the activity associated with the work order attaches the required material (See: Setting Up Maintenance Bills of Material, page 2-93) and resources to complete its operations. You can view material requirements for a specific work order.

To view work order material requirements:

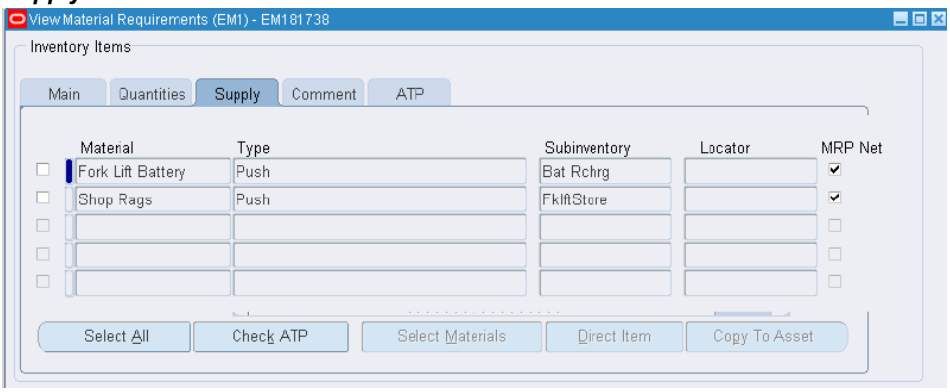
1. Navigate to the View Material Requirements window.
    1. From the Select Work Order window, select a work order.
    2. Click the **Continue** button.

View Material Requirements



2. In the Inventory Items region, you can view inventoried items the required items for the work order. You can view them by warehouse, and at the subinventory level.
    1. In the Main tab, you can view operation sequence and the Date Required.
    2. In the Quantities tab, you can view the quantities Required.
    3. In the Supply tab, you can view supply Type information, such as material, subinventory and source locator, if applicable.

Supply



4. In the Comment tab, you can view comment information.

5. In the ATP tab, you can view defined available to promise information.

Related Topics

Defining Material Requirements, page 3-37

Defining Subinventories, *Oracle Inventory User's Guide*

Defining Resource Requirements

You can view, update, add, or delete resource requirements for a work order. Resources are used to perform a task for a maintenance operation. A resource is an employee, piece of equipment, or contractor service, used to perform an operation. A resource and usage rate for all scheduled activities is required in a routing.

Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work, based on an agreed upon contract or agreement. For example, within maintenance work environments, it is often important to include landscaping services within a work order. It is also important to relate the purchasing transactions, such as the requisition and purchase order to the work order. In order for this to execute, the appropriate steps are completed in Purchasing and Enterprise Asset Management.

When defining departments, available resources are assigned in each department and the shifts that each resource is available. For each operation defined, you specify a department and list of resources and usages. An operation can use any resource that is available in the department, but not all resources are assigned to the department. An operation can use resources that are owned or borrowed from other departments. (See: Defining Departments and Resources, page 2-17).

To define resource requirements:

1. Navigate to the Select Work Order window (Work Order Details > Resource Requirements).

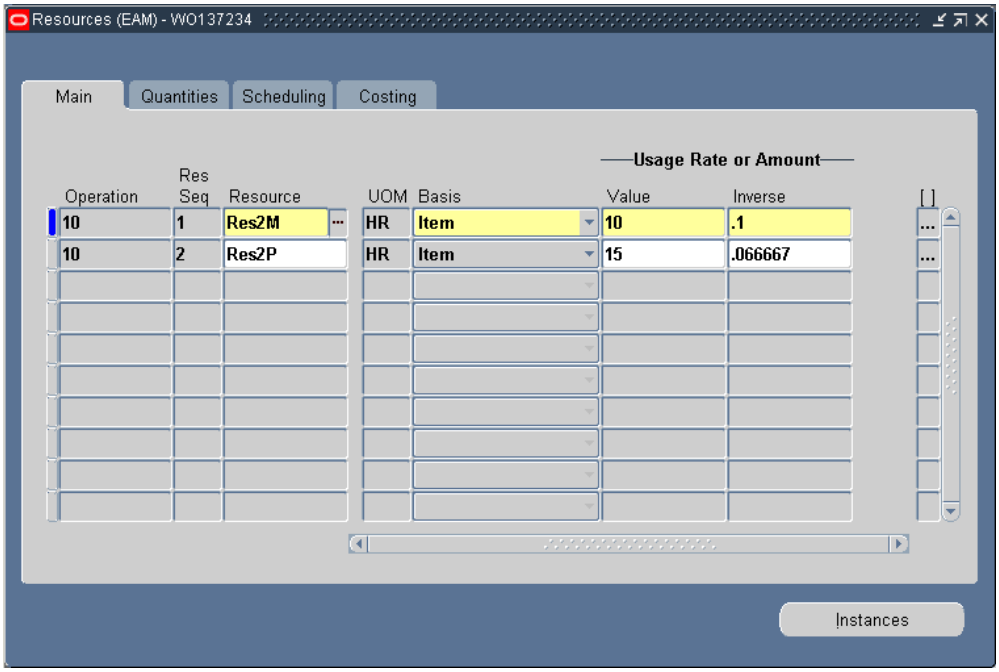
   Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.

2. Choose a Work Order.

3. Choose Continue.

   The resources that appear on the following Resources window are assigned to the department, and assigned to the current operation of the routing. See: Defining Departments and Resources, page 2-17.

Resources



4. Select an Operation. Only valid operations, associated with the routing, are available. See: Preparing Work Order Operations, page 3-30.

   Note: If you access the Resources window via the Operations window, you cannot change operation information. If you access the Resources window via the Work Order window, you can change operation information.

5. Enter a Resource Sequence. You can have multiple resources for an operation.

6. Select a Resource.

7. In the Main tab, the UOM defaults based on the Resource definition. See: Defining Departments and Resources, page 2-17. You can update this if the BOM: Update Resource UOM profile option is set to Yes.

   The UOM requires a time-based measure, for this Work Order to schedule. It must be the same as the site level profile option, BOM: Hour UOM. See: Bills of Material Profile Options, *Oracle Bills of Material User's Guide*.

8. Select a Basis to charge and schedule the resource. This defaults based on the Resource definition. See: Defining a Resource, *Oracle Bills of Material User's Guide*.

- *Item:* Charge and schedule the resource where the resource usage quantity is the amount required per assembly unit you make.

- *Lot:* Charge and schedule the resource where the resource usage quantity is the amount required per job or schedule.

  If you select Lot, the Basis will be based on the *resource item* when the work order is created.

9. Enter the Usage Rate or Amount Value for the resource. You can post usage time for employees, equipment, and miscellaneous material.

10. Select the Quantities tab. You can view the Required quantity of this resource to use. This information defaults from the Usage Rate/Amount information. You can also view the Applied amount or rate of the resource already used. The Open amount or rate identifies the amount of the resource left to use (the difference between the Required and Applied).

11. Select the Scheduling tab. This information defaults from the current operation's setup. See: Preparing Work Order Operations, page 3-30.

    Select Yes in the Scheduled field to indicate that this resource can be scheduled.

12. Select the Costing tab. You can view and update this resource's costing information.

    1. Select a Charge Type.

       - *Manual:* You can manually enter the cost.

       - *PO receipt:* The cost defaults as the cost on the purchase order receipt.

    2. The Department defaults as the area the current resource is assigned to. See: Defining Departments and Resources, page 2-17.

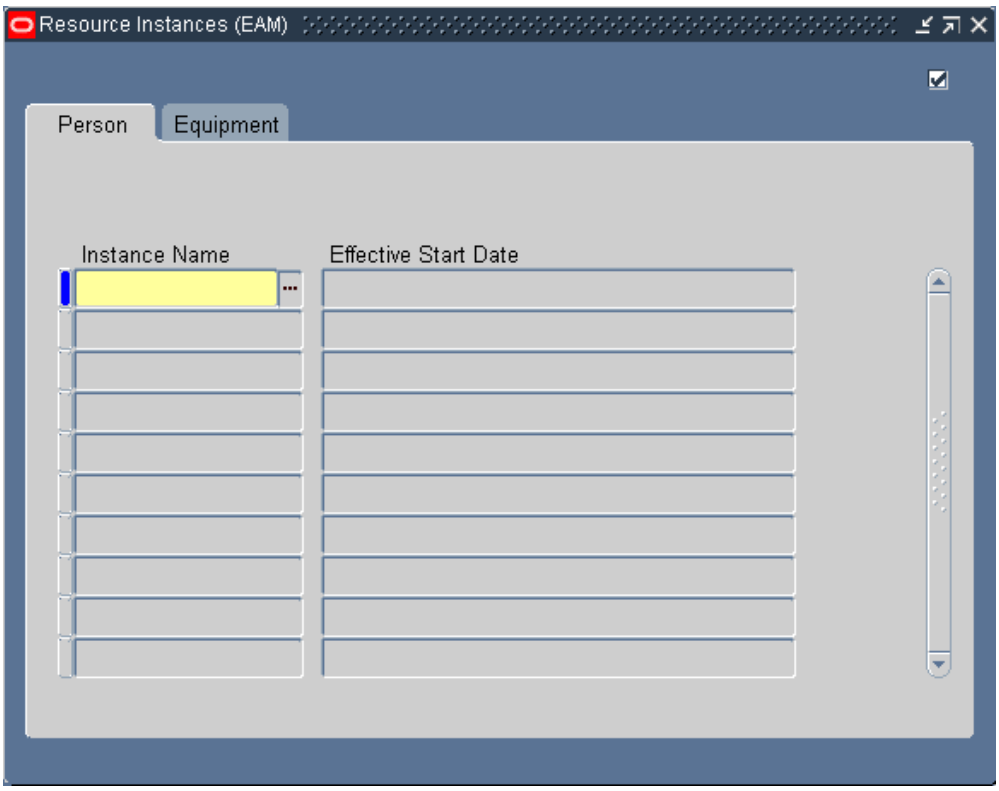
13. Optionally choose Instances to view or update a list of specific people or equipment assigned to this resource. The Person tab displays persons grouped in specific roles. The Equipment tab displays similar types of equipment grouped by resource. You can define specific machines to any of your machine type resources and you can define specific employees to any of your labor type resources. When a resource has instances defined, you can view the resource load and capacity in the Scheduler Workbench (See: Using the Scheduler Workbench, page 5-7).

    For example, you can define all machines belonging to the resource, GRINDERS. An individual grinder machine can then be a specific resource requirement and scheduled, and can have its own unique capacity definition.

    This information defaults from your current resource definition. You can add people and equipment that are associated with the current resource.

See: Defining a Resource, *Oracle Bills of Material User's Guide*.

Resource Instances



14. Save your work.

Related Topics

Defining a Resource, *Oracle Bills of Material User's Guide*

Viewing Resource Requirements

You can view resource requirements for a Work Order. Resources define the time an assembly spends at an operation and the cost you incur for the operation. A resource is an employee, piece of equipment, or contractor service, used to perform an operation. A resource and usage rate for all scheduled Activities are required in a routing.

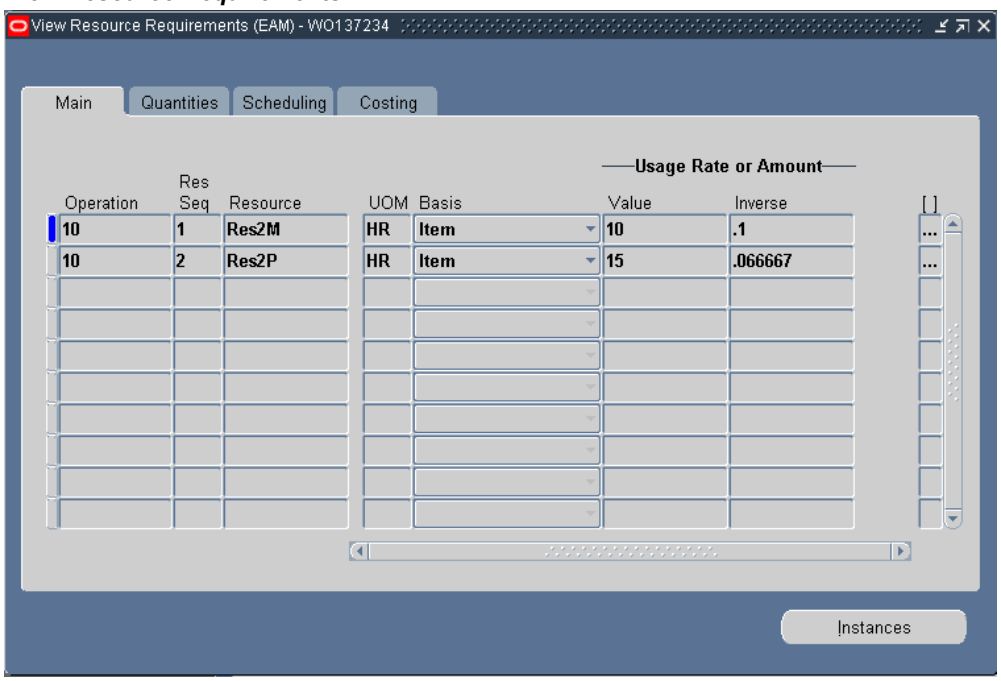
To view resource requirements:

1. Navigate to the View Resource Requirements window.

2. From the Select Work Order window, select a Work Order.

3. Choose Continue.

View Resource Requirements



4. View the list of operations and their resources associated to the current Work Order.

Related Topics

Preparing Work Order Operations, page 3-30

Defining Departments and Resources, page 2-17

Defining Resource Requirements, page 3-46

Defining a Resource, *Oracle Bills of Material User's Guide*

Work Order Relationships

Work Order Relationships enable you to manage a network of related Work Orders, enabling you to manage complex projects, such as planned or facility shutdowns. The different relationships provide separate scheduling rules that are used to manage large projects. A Gantt chart enables you to manage work by displaying Work Order schedules and a summary of Work Order details. The Gantt Chart's drag and drop functionality enables you to manage schedules with ease.

This section includes the following topics:

- Work Order Relationship Definition, page 3-52
- Parent-Child Relationship, page 3-52
- End to Start Dependency, page 3-54
- Cost Relationship, page 3-54
- Follow-up Work Relationship, page 3-56

Work Order Relationship Definition

Work Orders for different assets may associate to each other in a hierarchy. Valid relationships are Parent Child, End to Start Dependency, Cost, and Follow-up Work. Manage complex maintenance jobs through these four types of Work Order relationships. See: Routine Work Orders, page 3-3. A Gantt chart enables you to manage work by displaying Work Order schedules and a summary of Work Order details. The Gantt Chart's drag and drop functionality enables you to manage schedules with ease.

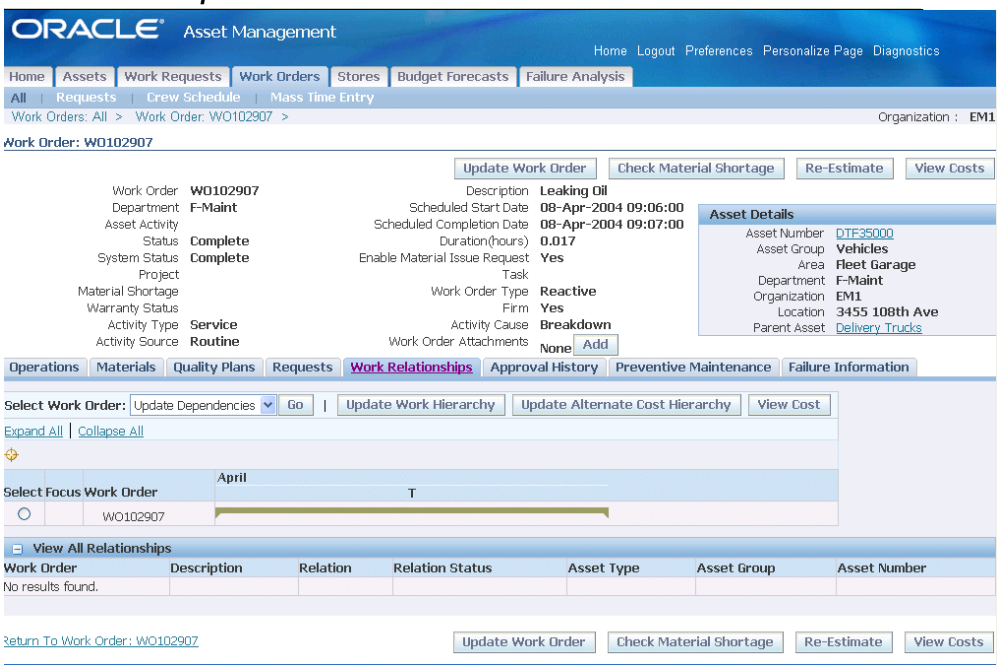
Parent-Child Relationship

The Parent-Child Relationship enables a network of Work Orders, which includes one top level Work Order that defines the time line of all its children Work Orders. The start and end dates of the child Work Orders are within the start and end dates of the parent Work Order. The parent Work Order dates are scheduled, while its child Work Orders automatically schedule, as well. A child Work Order can parent another Work Order. One parent can have multiple children, but one child can have a single parent. You can have an infinite number of parent-child Work Order levels.

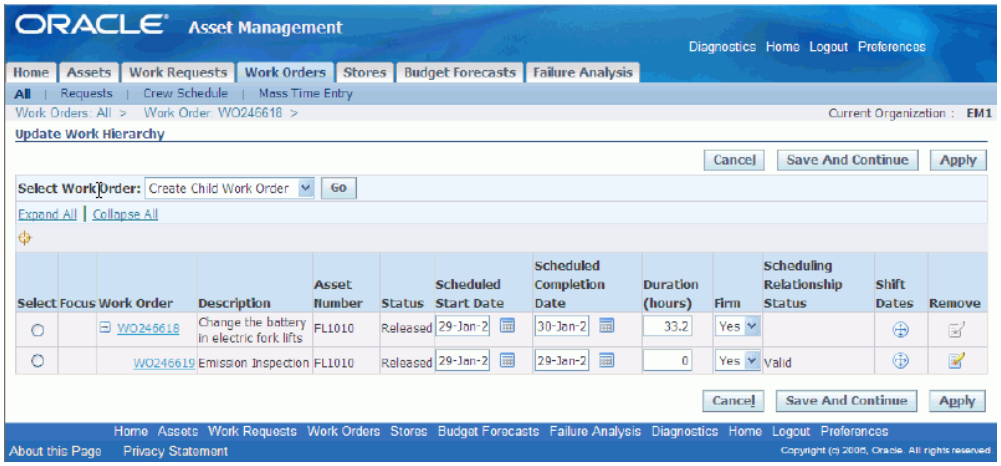
To create parent Work Orders:

1. Navigate to the Work Orders page (Maintenance Super User: Work Orders tab).
2. Query a Work Order (See: Viewing Work Orders, page 20-45).
3. Click on the work order and select the Work Relationships sub-tab. This page graphically displays the Work Order's schedule. The tab enables you to view the scheduling relationships for the Work Order in a graphical format and lists the Work Order's possible relationships.

Work Relationships



4. Select the work order for which you want to define a child work order, and click Update Work Hierarchy. Use the Update Work Hierarchy page to add a child work order.



5. In the Select Work Order field, depending on your requirement, select to either create a new child work order or add an existing work order as a child.

6. Give details of the new child order you want to create or add the existing work order that you are adding as a child.

7. Click Apply. A confirmation message displays that the work order has been added as a scheduling child.

End to Start Dependency

You can create Work Orders with scheduling dependency relationships (including child sibling Work Orders). For example, one Work Order's scheduled start date is dependent on another Work Order's completion. With this relationship, the next Work Order cannot start until the prior Work Order is completed. Note that to create an end to start dependency between two work orders, they should be siblings sharing a common parent.

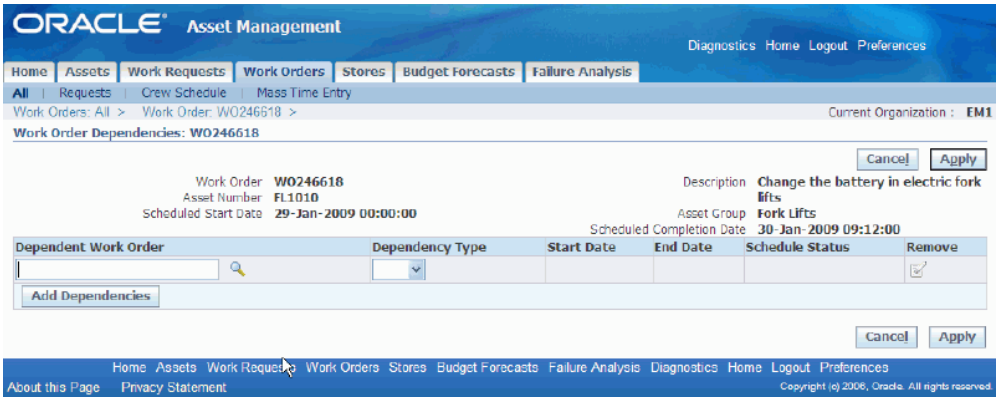
To create End to Start Dependencies:

1. Navigate to the Work Orders page (Maintenance Super User: Work Orders tab).

2. Query a Work Order. (See: Viewing Work Orders, page 20-45).

3. Click on the work order and select the Work Relationships sub-tab. Select a work order and in the Select Work Order field choose the option to Update Dependencies.

4. In the Work Order Dependencies page, click Add Dependencies. Select a work order in the Dependant Work Order field. In the Dependency Type field, select either Prior or Next.



5. Click Apply.

Cost Relationship

You can optionally roll a child Work Order's costs into the parent Work Order, for reporting purposes. You can perform cost roll ups on ad hoc Work Orders because the cost roll up is independent of scheduling relationships. You can base the cost roll up, within a hierarchy, on scheduling relationships, as well. Scheduling relationships are

not required to roll up costs within a hierarchy. You may create a cost reporting hierarchy that is different than the scheduling hierarchy.

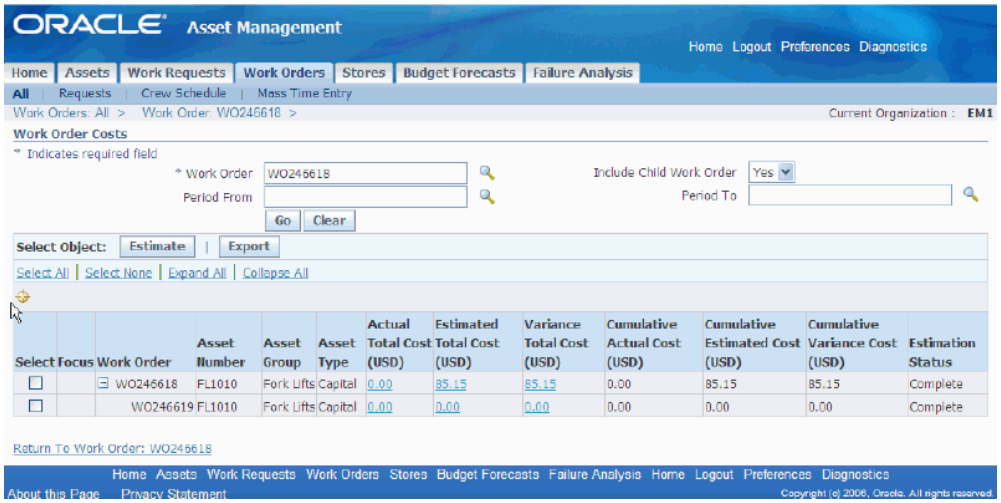
To create Work Order costing relationships:

1. Navigate to the Work Orders page (Maintenance Super User: Work Orders tab).

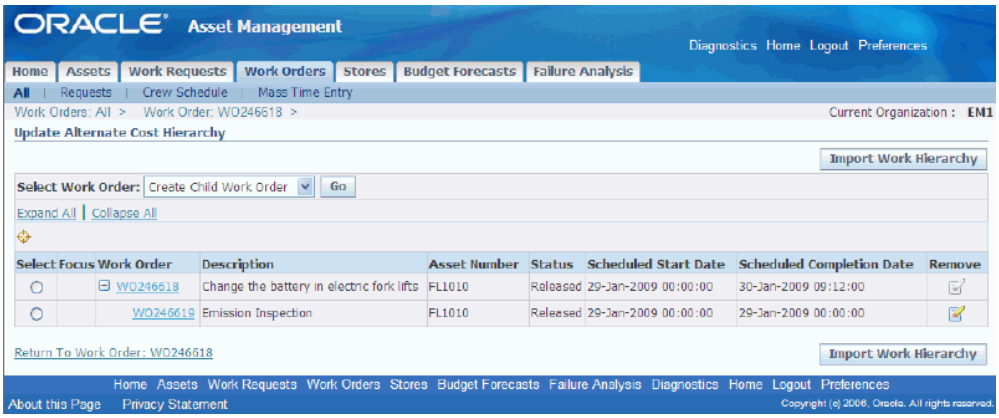
2. Query a Work Order (See: Viewing Work Orders, page 20-45).

3. Click on the work order and select the Work Relationships sub-tab.

4. To view cost roll up of a child work order, click View Costs.



5. To create a cost reporting hierarchy click Update Alternate Cost Hierarchy. You can either create new work orders or add existing work orders. Alternatively, to establish a cost reporting hierarchy by importing the parent-child work order hierarchy, click on Import Work Hierarchy.



6. A confirmation message displays and the work order is added as a cost child.

Follow-up Work Relationship

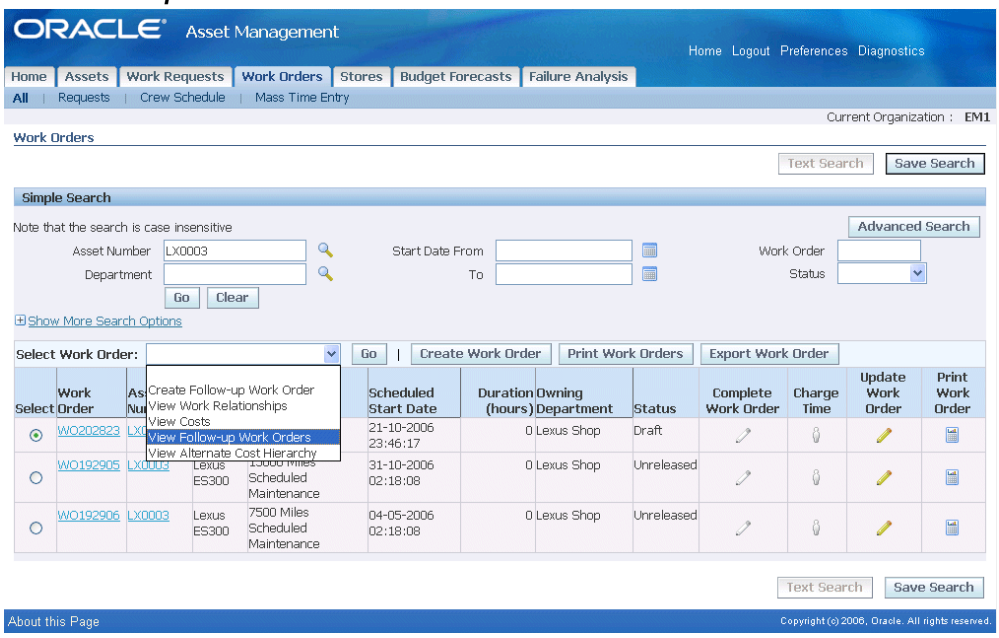
You can create a Work Order for a capital Asset Number or Rebuildable Item, while executing work for the asset on another Work Order. For example, a second problem with an asset is discovered while executing a Work Order. A Follow-up Work Order, associated with the original Work Order, is created for the issue. This is independent of scheduling or cost relationships.

To create and view follow-up Work Orders:

1. Navigate to the Work Orders tab (Maintenance Super User: Work Orders tab).

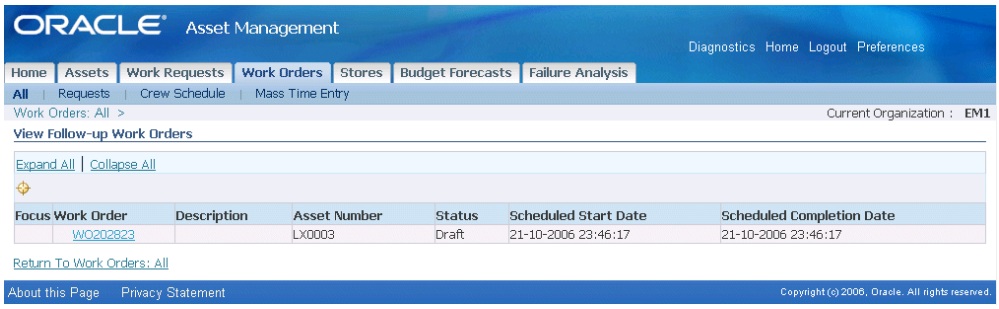
2. Query a Work Order (See: Viewing Work Orders, page 20-45).

View Follow-up Work Orders:



3. Select View Follow-up Work Orders from the Select Work Order list of values.

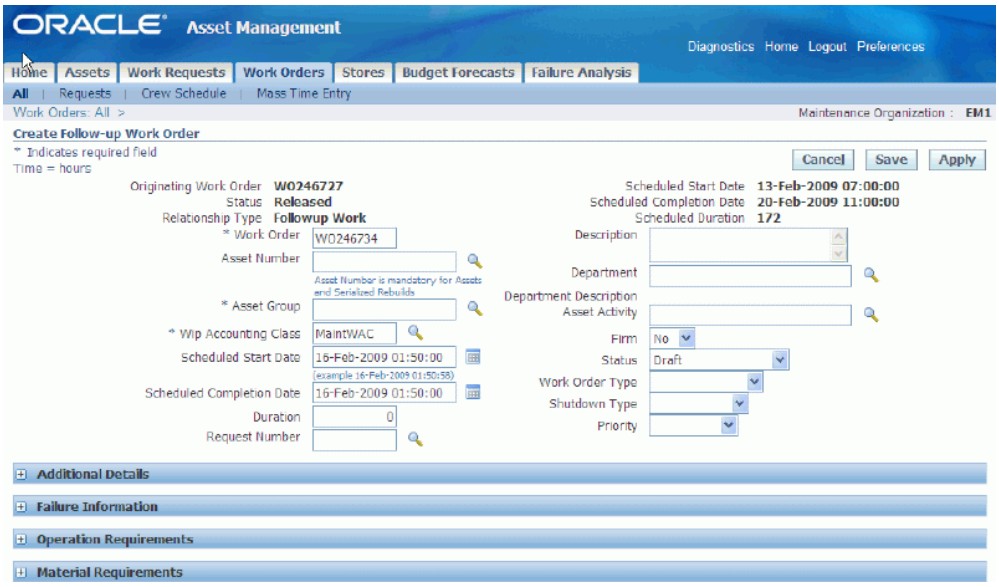
4. Choose Go.



5. To create a Follow-Up work order, select create a follow-up work order from the Select Work Order field list of values.

6. Click Go.

7. Use the Create Follow-Up Work Order page to give details of the follow-up work you are creating.



8. Click Apply. A confirmation message displays that a follow-up work order has been created.

Related Topics

eAM Scheduling, page 2-151

eAM Work Order Transactions

There are two types of Enterprise Asset Management Work Order transactions: material and resource. A material transaction is utilized when you issue material from inventory to a Work Order. A resource transaction is utilized when you charge resources (for example labor, or equipment) to a Work Order.

This section includes the following topics:

- Operation Completion, page 3-59
- Work Order Completion, page 3-60
- Rebuild Work Order Completion, page 3-63
- Transacting Material, page 3-65
- Viewing Resource Transactions, page 3-65
- Closing Work Orders, page 3-67

Operation Completion

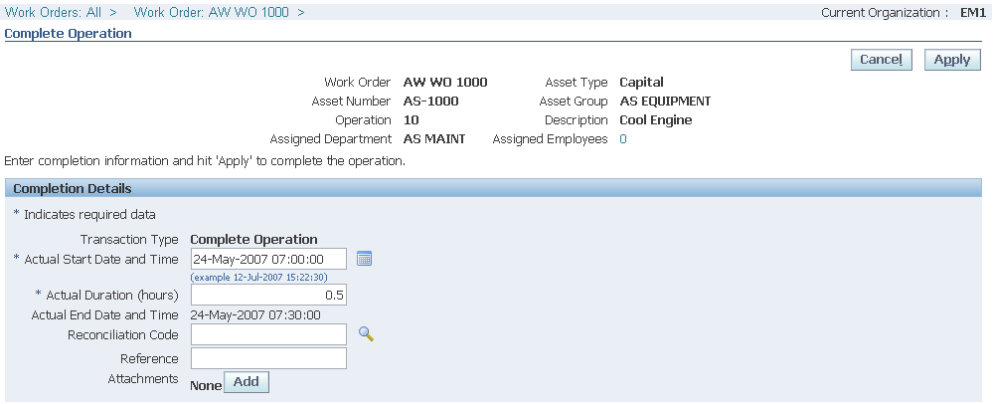
Operations are the instructions or tasks to perform a repair. Every operation is assigned to a department (See: Defining Departments and Resources, page 2-17), associated with assigned resources (trades people, contractor services, and equipment). When you enter a Work Order for an Asset Number, the Asset Number's associated Activity (See: Associating Asset Numbers with Activities, page 2-96) attaches to the Work Order, delivering its related maintenance route (See: Defining Maintenance Routes, page 2-99) and BOM. The maintenance route is comprised of operations necessary to complete the Activity. You can Complete and Uncomplete operations. After an operation is complete, you can perform an Operation Uncompletion. If an operation is dependent upon another operation, you cannot uncomplete that operation's dependency if the current operation is complete. For example, operation 20 is dependent on operation 10 completing. You cannot uncomplete operation 10 after operation 20 has been completed.

You can complete or uncomplete an operation via Maintenance Super User.

To complete an operation:

1. Navigate to Maintenance Super User responsibility.

Operations



2. Select the Work Order tab.

3. Query work orders and select a Work Order from the list.

4. Select an Operation and choose Complete/Uncomplete (See: Defining Maintenance Routes, page 2-99 and Preparing Work Order Operations, page 3-30). This is the operation you wish to complete.

5. The Actual Start Date and Time of transaction defaults as the system date, but you

can optionally change this.

6. Optionally enter a Reconciliation Code. This is a simple description of why you are completing this operation. For example, Operation Completed or Operation Partially Completed.

7. Enter Duration information.

8. The Actual End Date defaults as the current system date. You cannot change this value.

9. Choose Apply.

To uncomplete an operation:

1. Navigate to Maintenance Super User responsibility.

2. Select the Work Order tab.

3. Query work orders and select a Work Order from the list.

4. Select an Operation and choose Complete/Uncomplete (See: Defining Maintenance Routes, page 2-99 and Preparing Work Order Operations, page 3-30). If the operation was previously completed, then you can Uncomplete the operation.

5. Click Apply to Uncomplete the Operation.

Related Topics

Preparing Work Order Operations, page 3-30

Defining Maintenance Routes, page 2-99

Operation Completion Moves, *Oracle Work in Process User's Guide*

Work Order Completion

Enterprise Asset Management Work Orders are created against assets. They are defined manually, or generated automatically based on a scheduled Activity. If you attach a manually created Work Order to an Activity (normally the role of a Planner), the Work Order inherits the Activity's attributes, such as the Asset BOM, Asset Route (operations), attachments, quality plans, cost information, and scheduling rules.

The operations within a Work Order do not need to be complete to complete a Work Order. However, the date you complete a Work Order must be greater than (later) or equal to the end date of the operation that has the latest end date. Likewise, the date you start a Work Order must be earlier than or equal to the start date of the operation with the earliest start date. You can uncomplete a Work Order after it is completed to

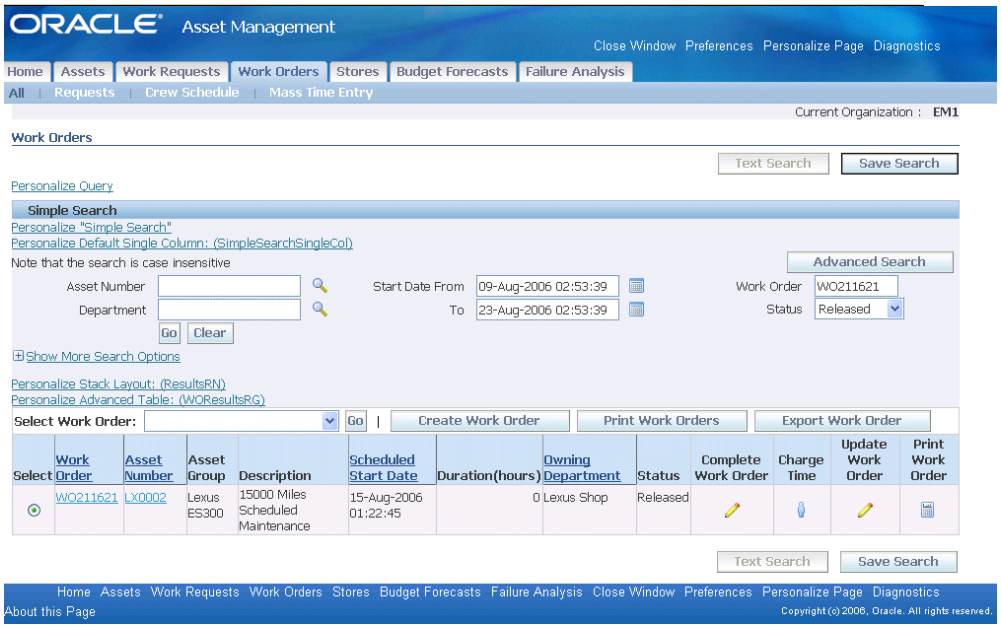
transition it to a Released status (See: eAM Work Order Statuses, page 3-23).

Planners or Crew Supervisors can complete or uncomplete Work Orders, using the Maintenance workbench (See: Using the Maintenance Workbench, page 3-71), from the Work Plan tab in Maintenance User, or by accessing the Work Order Completion menu option. After completing a Work Order, the completion transaction record is created with your electronic signature (User Name). A record is created with this signature, during completion, for any mandatory collection plan results or mandatory meter readings, as well.

To complete a Work Order:

1. Navigate to the Work Order Completion window (Maintenance Super User or Maintenance User Workbench: Work Orders tab OR Enterprise Asset Manager: Work Order Planning > Maintenance Workbench).

Work Order Completion



2. Select a Work Order.

3. Select the Complete Work Order icon.

4. Optionally enter a Reconciliation Code. This is a simple description of why you are completing this Work Order. For example, Work Order Completed or Work Order Partially Completed.

5. Optionally enter Duration information. You must enter two values within this region: Actual Duration and Actual Start Date and Time. The value that you do not

enter is automatically calculated.

Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the Scheduled Start Date and Scheduled End Date.

6. The Meters region enables you to enter readings for meters associated with this Asset Number. Readings for meters defined as mandatory must be entered. You can optionally enter non-mandatory readings.

   At Work Order completion, meter readings are mandatory for Work Orders generated by the Preventive Maintenance scheduling engine. After a Work Order is completed, meter readings are required for all runtime interval meters associated with the Asset Number in the Preventive Maintenance scheduling definition. See: Preventive Maintenance Scheduling, page 2-134. If there is a meter associated with this Asset Number, you are prompted to enter a Current Reading or a Reading Change. If you enter a Current Reading, the Reading Change defaults. If you enter a Reading Change, the Current Reading defaults. See: Entering Meter Readings, page 4-3.

   - Select the Reset check box to indicate if you would like to Reset the Current Reading to zero.

7. Oracle Quality collection plans associated with the current Work Order's Asset Number and requiring completion appear in the Quality Plans region. When the collection plan was created, it was specified if the collection plan required completion. Also, during the Enterprise Asset Management collection plan creation process, triggers might have been specified to make only certain assets eligible for the collection plan. See: Quality Setup, page 2-157.

   Required fields are dependent on the Collection Plan's collection element specifications. See: Quality Setup, page 2-157.

8. Choose Apply to save your work.

To uncomplete a Work Order:

1. Navigate to the Work Order Completion window.
2. Select a completed Work Order.
3. Select the Complete Work Order icon to uncomplete this work order.
4. Optionally enter a Reconciliation Code. This is a simple description of why you are uncompleting this Work Order.
5. Optionally enter an Actual Duration or Actual Start Date and Time. Actual Duration identifies the total elapsed time of the Work Order. It is automatically

calculated as the difference between the Estimated Start Date and Estimated End Date. Changing the times and duration affects resource usage for employees and equipment.

6. Choose Apply to save your work.

Related Topics

Entering Meter Readings, page 4-3

Rebuild Work Order Completion

There are two ways to create rebuild Work Orders. In the scenario that a new rebuildable item is issued from inventory to be placed into the asset, a rebuild Work Order creates for the rebuildable item that was taken out with a need for repair, given the required information was entered into the material transaction (See: Transacting Material, page 3-65). This child Work Order of the parent Work Order can complete, independent of the parent Work Order. However, if the rebuildable item needing repair is removed from the asset, repaired, then reinstalled, that manually created child, rebuild Work Order must first be completed before the parent Work Order can complete. In this scenario, first complete all rebuild/children Work Orders (See: Rebuild Work Orders, page 3-14) before you can complete a parent Work Order (See: Work Order Completion, page 3-60). The operations within a Work Order do not need to be complete in order to complete a Work Order. However, the date you complete a Work Order must be greater than (later) or equal to the end date of the operation that has the latest end date. Likewise, the date you start a Work Order must be earlier than or equal to the start date of the operation with the earliest start date. You can uncomplete a Work Order after it is completed, transcending it to a Released status (See: eAM Work Order Statuses, page 3-23).

Planners or Crew Supervisors can complete or uncomplete Work Orders using the Maintenance workbench (See: Using the Maintenance Workbench, page 3-71), from the Work Plans tab in Maintenance User (See: Work Plans, page 20-80), or by accessing the Rebuildable Work Order Completion menu option. After completing a Work Order, the completion transaction record is created with your electronic signature (User Name). A record is created with this signature, during completion, for any mandatory collection plan results or mandatory meter readings, as well.

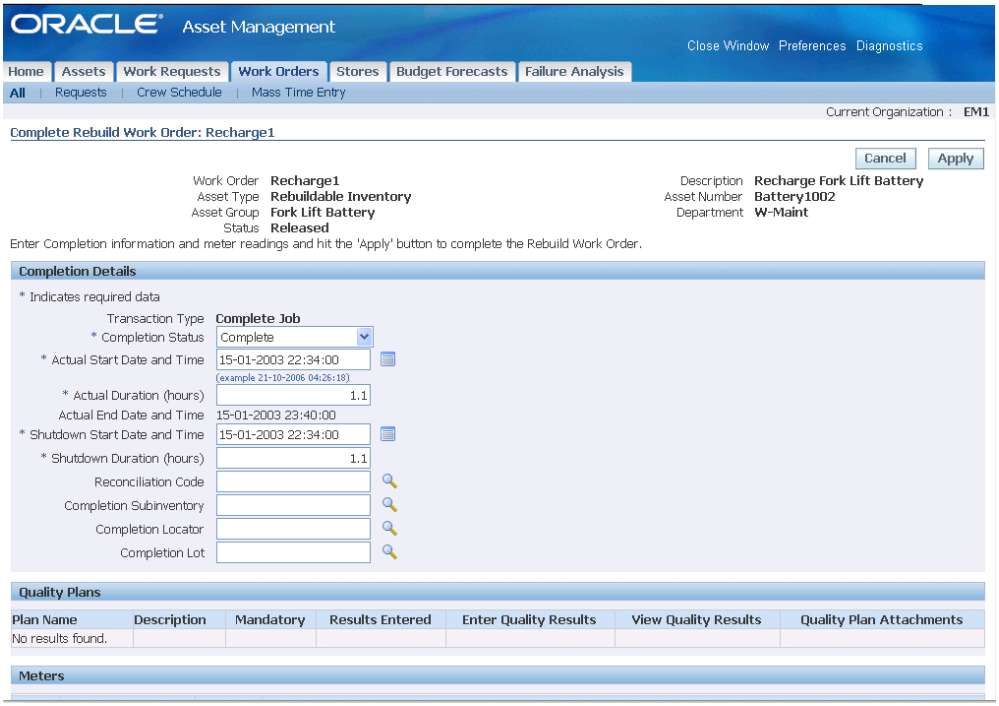
To complete a rebuild Work Order:

1. Navigate to the Rebuild Completion window (Maintenance Super User or Maintenance User Workbench: Work Orders tab OR Enterprise Asset Manager: Work Order Planning > Maintenance Workbench).

2. Query and select a rebuild Work Order.

3. Select the Complete Work Order icon.

Rebuild Work Order Completion



4. Select a rebuild Work Order. Only rebuild Work Orders are available.

5. Optionally enter a Reconciliation Code. This is a simple description of why you are completing this Work Order. For example, Work Order Completed or Work Order Partially Completed.

6. Enter an actual Duration and Actual Start Date and Time. Actual Duration identifies the total elapsed time of the Work Order. It automatically calculates as the difference between the Scheduled Start Date and Scheduled End Date. Changing the times and duration affects resource usage for employees and equipment.

7. If the rebuild Work Order is generated from a material issue or is a standalone rebuild Work Order for a Rebuildable Item's serial number that resides out of inventory, then enter the Completion Location information.

    1. Enter the Completion Subinventory. For Rebuild Work Orders that are created from a material transaction, this must be an expense subinventory.

    2. If the rebuildable item is locator controlled, enter a Completion Locator. See: Inventory Attribute Group, *Oracle Inventory User's Guide*.

    3. If the rebuildable item is lot controlled, enter a Completion Lot. See: Inventory

Attribute Group, *Oracle Inventory User's Guide*.

8. Choose Apply to save your work.

To uncomplete a rebuild Work Order:

1. Navigate to the Rebuild Completion window.
2. Select a completed rebuild Work Order.
3. Select the Complete Work Order icon to uncomplete the work order.
4. Optionally enter a Reconciliation Code. This is a simple description of why you are uncompleting this Work Order.
5. Choose Apply to save your work.

Related Topics

Defining Subinventories, *Oracle Inventory User's Guide*

Transacting Material

You might need to issue a rebuildable item or asset from inventory to a maintenance Work Order. For example, a Work Order was issued for the inspection of a pump. During the pump inspection, you found that the motor, one of the components of the pump, is problematic. You can replace the rebuildable item by issuing a new motor rebuildable item from inventory. If you choose to perform a material issue from inventory, the old motor rebuildable item attaches to the Work Order, automatically creating the child, rebuild Work Order number associated to the parent Work Order. In this case, the Asset Number genealogy automatically updates to identify this new item number. See: Overview of Inventory Transactions, *Oracle Inventory User's Guide*.

You can execute a material issue transaction from the Stores tab page, within Maintenance Super User (See: Stores, page 20-95).

Related Topics

Issuing and Returning Specific Components, *Oracle Work in Process User's Guide*

Viewing Resources Transactions

Resource transactions define the time an assembly spends at an operation and the cost you incur for an operation. There are two types of resources: person and machine. You can transact both person and machine resources. A resource is an employee, piece of

equipment, or contractor service, used to perform an operation. You can charge resources to a specific Work Order. You can view all transactions that have charged against a specific resource.

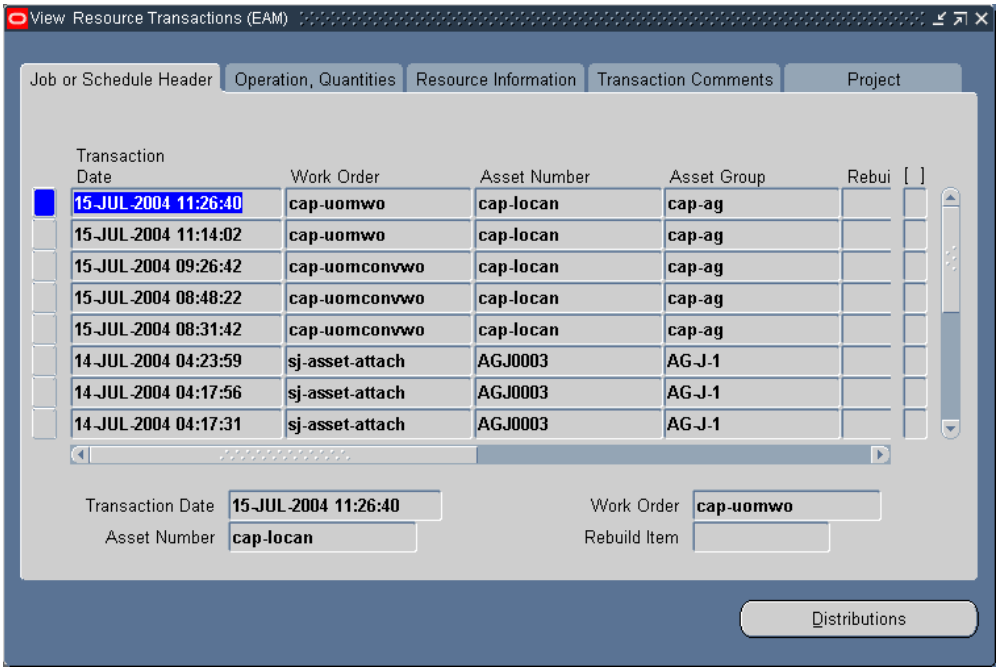
To view a completed resource transaction:

1. Navigate to the Find Resource Transactions window.

   You can narrow your selection of transactions by any field within this window. For example, you can view all resource transaction information charged during a specific period, or view all transaction information transpired for a specific Work Order number.

2. Choose Find.

View Resource Transactions



3. View resource transaction information specific to a Work Order by selecting the Job or Schedule Header tab.

4. View resource transaction information specific to a Work Order operation by selecting the Operation, Quantities tab.

5. View resource transaction information specific to a resource by selecting the Resource Information tab.

Closing Work Orders

You can close a maintenance work order only if it has a status of Complete or Complete - No Charges. (See: eAM Work Order Statuses, page 3-23). You can close one or many work orders at once. After a work order or a period is closed, cost variances are posted to the asset's WIP accounting Class code accounts, if the work order is associated with an asset route. Variances are posted to the WIP account for every asset within the asset route, when the work order is Released. These accounts are charged, even if one or more assets on the asset route move between organizations before the work order is Closed.

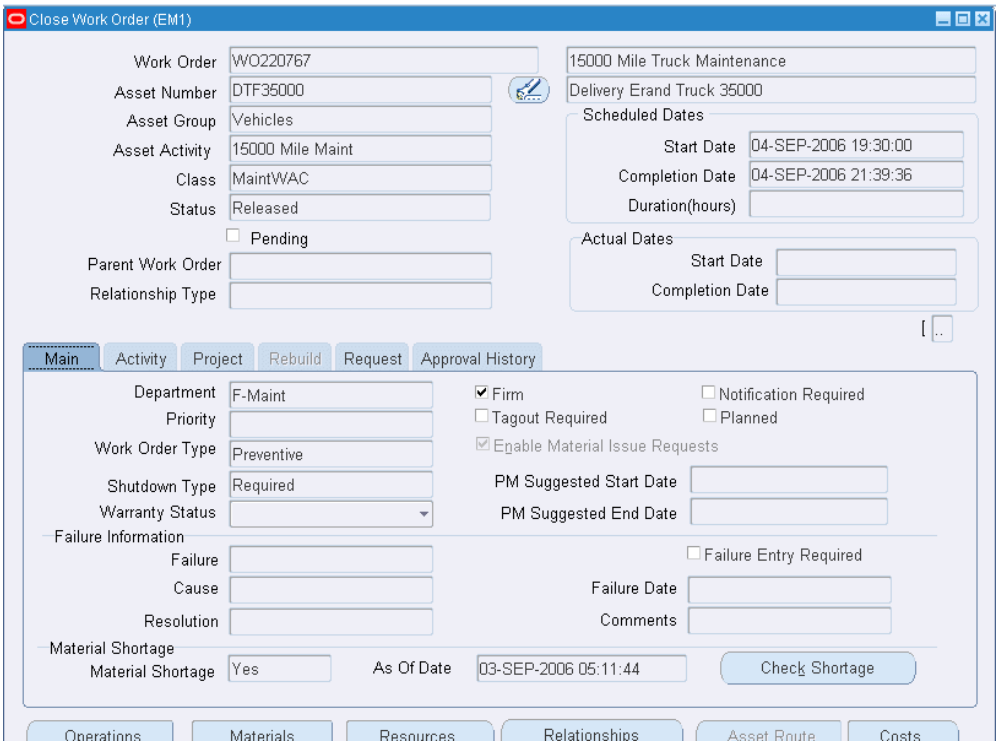
> **Note:** If you want to update the quality results for a work order with a status of Closed, you must unclose the work order.

If a work order was at a Released status at the time of closing it, you can unclose the work order to transition it to a Released status. If a work order was at a Complete status at the time of closing it, you can unclose the work order to transition it to a Complete status. For all other statuses during the closing of a work order, unclosing the work order transitions it to an Unreleased status.

To close a work order:

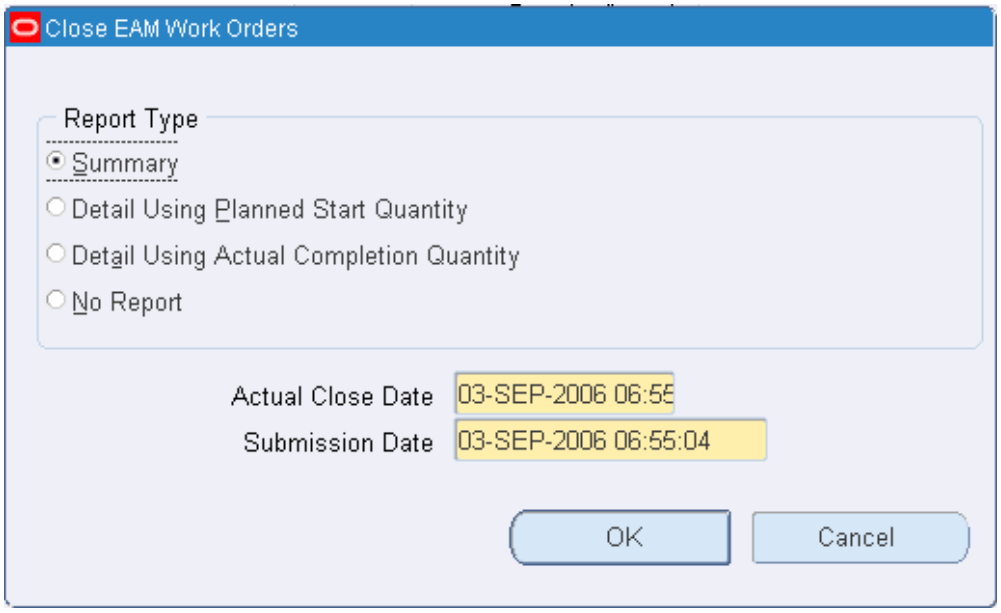
1. Navigate to the Find Work Orders window.
2. Select a Work Order. You can optionally enter other data selection information.
3. Choose Find. The Close Work Order window appears.

Close Work Order



4. From the Tools menu, select Close Work Orders. The Close EAM Work Orders window appears.

Close EAM Work Orders



5. Select a Report Type. Your selection determines the type of information presented on the report that is produced by the concurrent process (Close Discrete Jobs) closing the work order. The report presents project information, the work orders closed, status information, and quantity information.

6. Select an Actual Close Date. This date must be greater than or equal to the system date.

7. Select a Submission Date. This date must be greater than or equal to the system date.

8. Choose OK.

To unclose a Work Order:

1. Navigate to the Find Work Orders window.

2. Select a closed Work Order. You can optionally enter other data selection information.

3. Choose Find. The Close Work Order window appears.

4. From the Tools menu, select Unclose Work Orders.

5. Save your work.

To close a rebuild Work Order:

1. Navigate to the Find Rebuild Work Orders window.
2. Select a Work Order. Only rebuild work orders are available.
3. Choose Find. The Close Rebuild Work Order window appears.
4. From the Tools menu, select Close Rebuild Work Orders. The Close EAM Work Orders window appears.
5. In the Report Type region, select a report type. Your selection determines the type of information presented on the report that is produced by the concurrent process (Close Discrete Jobs) closing the work order. The report presents project information, the work orders closed, status information, as well as quantity information.
6. Select an Actual Close Date. This date must be greater than or equal to the system date.
7. Select a Submission Date. This date must be greater than or equal to the system date.
8. Choose OK.
9. Select a closed rebuild work order from the list of values.
10. Choose Find. The Close Rebuild Work Order window appears.
11. From the Tools menu, select Unclose Rebuild Jobs.
12. Save your work.

Related Topics

Closing Discrete Jobs Using Submit Requests, *Oracle Work in Process User's Guide*

eAM Work Order Planning

A planner performs several functions, including purchasing required material for Work Orders, approving Work Requests, creating Work Orders, releasing Work Orders, and completing Work Orders. This section includes the following topics:

- Using the Maintenance Workbench, page 3-71

Using the Maintenance Workbench

Using the Maintenance Workbench, a Planner can mass release and mass complete work orders. You cannot complete mass work orders that have mandatory meter readings and mandatory quality plans associated with a work order (See: Work Order Completion, page 3-60). A planner can also procure direct items (See: Overview of Direct Item Procurement for eAM Work Orders, page 5-1) for work orders, without having to leave the Maintenance Workbench. You can generate work orders from suggested work orders, manage work order required material, resources, and update work order operations as necessary.

You can forecast multiple assets at once. You can select multiple assets to forecast, and then execute the forecast. After execution, you can create a work order, associate the work order with a project and task for capital expenditures, and associate the work order with a parent work order. This is useful for shutdowns. When an organization knows that they will be shutting down a portion of their plant or facility, they can add the preventive maintenance work orders to the shutdown and using Oracle Projects, capitalize the costs into fixed assets.

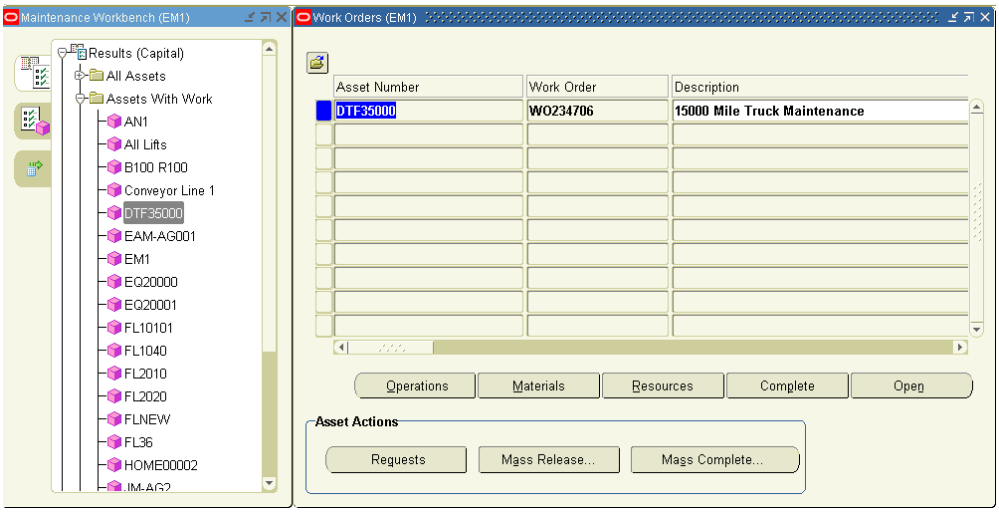
To use the maintenance workbench:

1. Navigate to the Maintenance Workbench window (Enterprise Asset Management responsibility > Maintenance Workbench).

2. You can narrow your data selection using any of the fields available. For example, select an asset number, to view all work orders related to that asset number. In addition, you can search by construction estimate ID to view all work orders related to a specific construction unit.

3. Choose Launch.

Maintenance Workbench



4. Optionally in the Maintenance Workbench pane, select the Results (Capital) tab, Results (Rebuildable Inventory) tab, or the Forecast Work tab.

   Selecting the Results (Capital) tab displays Asset Number information (See: Defining Asset Numbers, page 2-65) in a tree structure format. If you expand the Results (Capital) branch, the tree details Asset Number information into three lower branches, including All Assets, Assets With Work, and Routes.

   - *All Assets:* All assets, associated with the data selection entered in Step 2, appear under the expanded All Assets branch.

   - *Assets With Work:* All assets with work orders (See: eAM Work Orders, page 3-3), associated with the data selection entered in Step 2, appear under the expanded Assets With Work branch.

   - *Routes:* All assets with an associated Asset Route (See: Defining Asset Routes, page 2-74), associated with the data selection entered in Step 2, appear under the expanded Routes branch.

   Selecting the Results (Rebuildable Inventory) tab displays rebuildable item information (See: Defining Rebuildable Items, page 2-105) in a tree structure format. If you expand the Results (Rebuildable Inventory) branch, the tree details rebuildable item information into three lower branches, including All Rebuildables, Rebuildables with Work Orders, and Instance Numbers.

   - *All Rebuildables:* All rebuildables, associated with a rebuild work order, appear.

   - *Rebuildables with Work Orders:* All rebuildable items with work orders (See: eAM Work Orders, page 3-3), associated with the data selection entered in Step 2,

appear.

- *Instance Numbers:* All Instance Numbers appear.

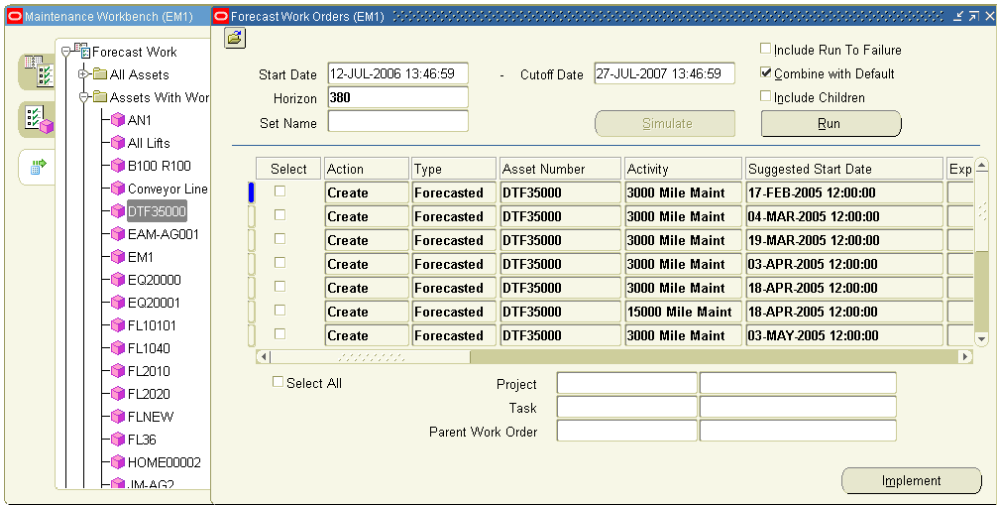
Selecting the Forecast Work tab displays the Forecast Work Orders window, associated with asset number information in the Maintenance Workbench pane. You can forecast and/or implement for multiple assets at once. If you expand the Forecast Work branch, the tree details asset number information into three lower branches, including All Assets, Assets With Work, and Routes.

- *All Assets:* All assets, associated with the data selection entered in Step 2, appear under the expanded All Assets branch.

- *Assets With Work:* All assets with work orders (See: eAM Work Orders, page 3-3), associated with the data selection entered in Step 2, appear under the expanded Assets With Work branch.

- *Routes:* All assets with an associated asset route (See: Defining Asset Routes, page 2-74), associated with the data selection entered in Step 2, appear under the expanded Routes branch.

Forecasted Work Orders



1. Enter a Cutoff Date to indicate how far out you would like the work orders to be created from the suggested dates. The Horizon defaults as the difference between the Start Date and Cutoff Date.

2. Optionally select a Set Name. If a Set Name (See: Defining Set Names, page 2-124) is entered, the Simulate and Run buttons are enabled. If you select Simulate, then you cannot implement work orders. If Run is selected, you can implement work orders only for forecasted suggestions from default (The

Default check box is selected in the Preventive Maintenance (PM) Schedule definition. See: Entering Preventive Maintenance Schedule Definitions, page 2-134) PM Schedules in the current PM Set; default PM Schedules are chosen from that PM set for work order generation.

3. Optionally select the Include Run To Failure check box to indicate that the scheduling process should include suggested Work Orders for Run To Life Asset Number/Activity associations. If this check box is cleared, manual work orders can be created. Run To Life items are typically items that cost more to maintain than the item itself. For more information on Run To Life items, See: Preventive Maintenance Scheduling, page 2-134.

4. Choose Run to generate work order suggestions for the specified date period. The Expected Start Date is calculated if you are using backward scheduling, and the Expected End Date is calculated if you are using forward scheduling (See: Information on the Rescheduling Point region in Preventive Maintenance Scheduling, page 2-134).

5. Optionally choose Implement to release the selected (indicated by the check box on the left side of the window) forecasted work orders. The work orders are created at the status specified in the Preventive Maintenance Schedule definition. (See: eAM Work Order Statuses, page 3-23and Preventive Maintenance Scheduling, page 2-134).

   Note: You can Forecast Work for assets, but not rebuildable items.

5. If you selected the Results (Capital) or Results (Rebuildable Inventory) tab, you can optionally, choose Operations to view the tasks associated with a specific work order (See: eAM Operations and Tasks, page 3-28). You can view and update the material and resources associated with a specific operation.

6. Optionally choose Materials to view and update the material requirements associated with a selected work order (See: Defining a Material Requirements Plan Name, page 2-153).

   1. Optionally you can view or update the item list for the associated asset number by choosing Select Materials. The current asset BOM items are available to add to the required material. See: Setting Up Asset Bills of Material, page 2-77.

   2. Optionally choose Direct Item to select direct items from supplier catalogs, create requisitions, and add them to your items list. Direct Items are one time non-inventoried items that are purchased directly from a supplier. Oracle Self Service Purchasing defaults the work order number and operation number, as well as the class code information for correct expensing. After you choose Direct Item, the current work order and operation reference values are passed

to the requisition created using Self Service Purchasing. If the work order is project related, then the project and task information is captured in the purchase requisition (See: Overview of Direct Item Procurement for eAM Work Orders, page 5-1). You can exit Self Service Purchasing and return to the Maintenance Workbench by selecting Return To Portal.

Note: Upon re-inquiry of this work order, the Direct Items region reflects any Requisition and Purchase Order details.

Note: You must have Oracle Self Service Purchasing installed for this functionality. You can purchase direct items from a Requisition or Purchase Order window if you have Oracle Purchasing installed (See: Entering Purchase Orders for Direct Items, page 7-19).

3. Choose Copy to Asset to dynamically update the BOM associated to the Asset Group with any items list changes (See: Setting Up Asset Bills of Material, page 2-77).

7. Optionally choose Resources to view, update, add, or delete resource requirements for a selected work order (See: Defining Resource Requirements, page 3-46).

   - Optionally choose Instances to view or update a list of specific people or equipment assigned to this resource. The Person tab displays persons grouped in specific roles. The Equipment tab displays similar types of equipment grouped by resource. You can define specific machines to any of your machine type resources and you can define specific employees to any of your labor type resources. When a resource has instances defined, you can view the resource capacity and load in the Scheduling Workbench (See: Using the Scheduler Workbench, page 5-7).

     For example, you can define all machines belonging to the resource, GRINDERS. An individual grinder machine can then be a specific resource requirement and scheduled, and can have a unique capacity definition.

     This information defaults from your current resource definition. You can only add persons and equipment that are associated with the current resource.

8. Optionally select the Complete button to complete a selected work order (See: Work Order Completion, page 3-60).

9. Optionally select the Open button to open the work order details of a specified work order See: eAM Work Orders, page 3-3).

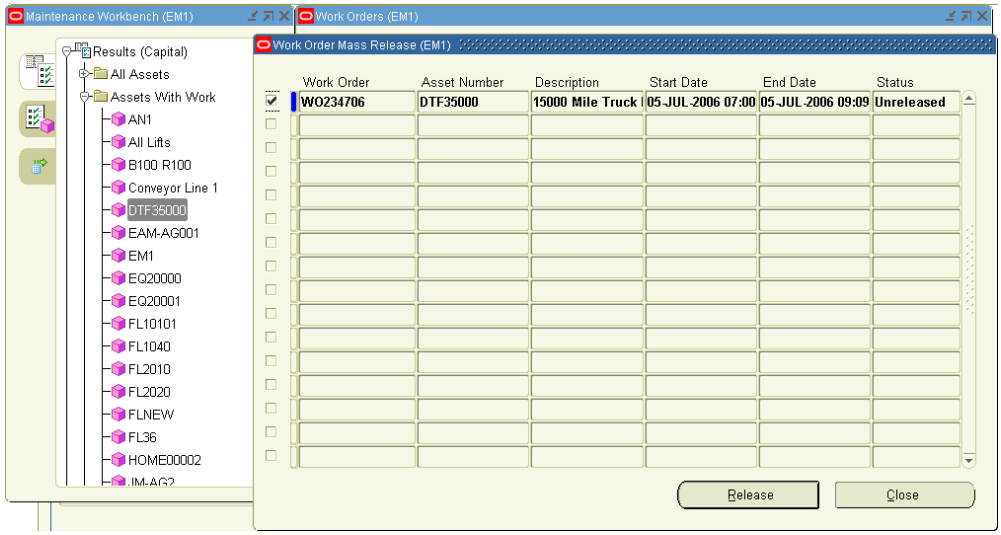
10. Optionally select the Requests button to view all open service and work requests for

the current asset number.

> **Note:** You can view work requests for assets, but not rebuildable spares. The Results (Capital) tab must be selected to view work requests.

11. Optionally select the Mass Release button to release multiple work orders at once. Work orders at the status specified in the Preventive Maintenance Schedule definition appear. See: Preventive Maintenance Scheduling, page 2-134.

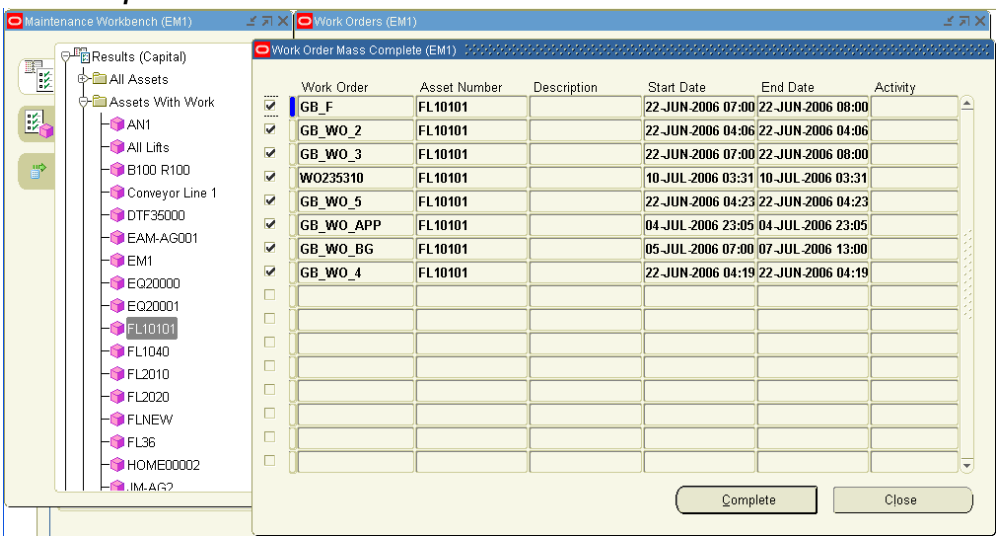
Mass Release



Select the check boxes next to the work orders to release, then choose Release. Because you cannot complete mass work orders that have mandatory meter readings and mandatory quality plans associated, you cannot release the work order if these conditions exist.

12. Optionally choose Mass Complete to complete multiple work orders at once (See: Work Order Completion, page 3-60 and eAM Work Order Statuses, page 3-23). Choose Complete to complete all work orders selected.

Mass Complete



13. Save your work.

Related Topics

Defining a Resource, *Oracle Bills of Material User's Guide*

Capitalizing Work Orders

You can capitalize part or all of the costs incurred, while maintaining an asset. The asset's book value and useful life increment with the additional value, within Oracle Fixed Assets. Accountants analyze the maintenance cost history to decide which costs to capitalize. You can identify the work orders that increase an asset's value. You can capitalize only the costs of work orders at the *Complete - No Charges* or *Closed* statuses.

When defining a maintained asset number, you can optionally enter Fixed Asset information to associate a Fixed Asset Category and Fixed Asset number with the maintained asset number, if Oracle Fixed Assets is installed. See: Defining Asset Numbers, page 2-65.

To capitalize work order costs:

1. Navigate to the Find Work Orders window (Billing and Capitalization > Work Order Capitalization).

2. Query one or more work orders to capitalize.

    1. You can narrow your search criteria, using the fields at the top of the window.

For example, you can enter a specific work order, asset number, or specify if you want to display only work orders at a Closed status.

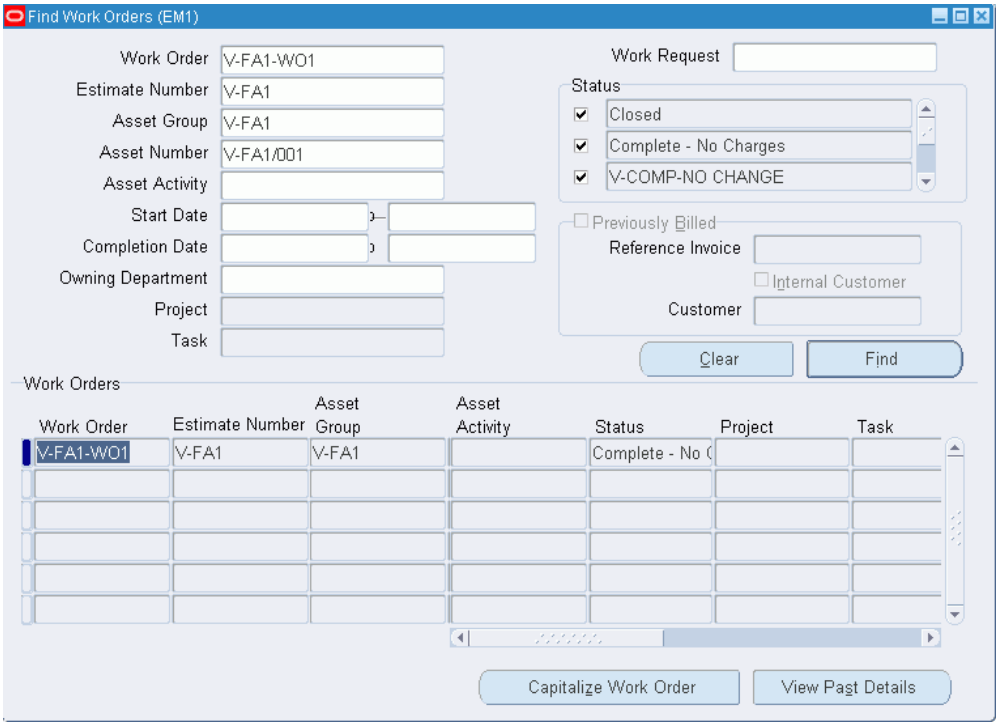
2. Optionally choose **Clear** to reset the search criteria to the default search criteria (all fields are cleared and the Closed and Complete - No Charges **Status** check boxes are selected).

3. Choose **Find**. The Work Orders region displays queried work orders, dependent on your search criteria.

3. Select a work order.

You can search using a number of search parameters such as Work Order and construction Estimate Number. If you search by estimate number, the values available for selection are only the construction estimates that have work orders created for them.

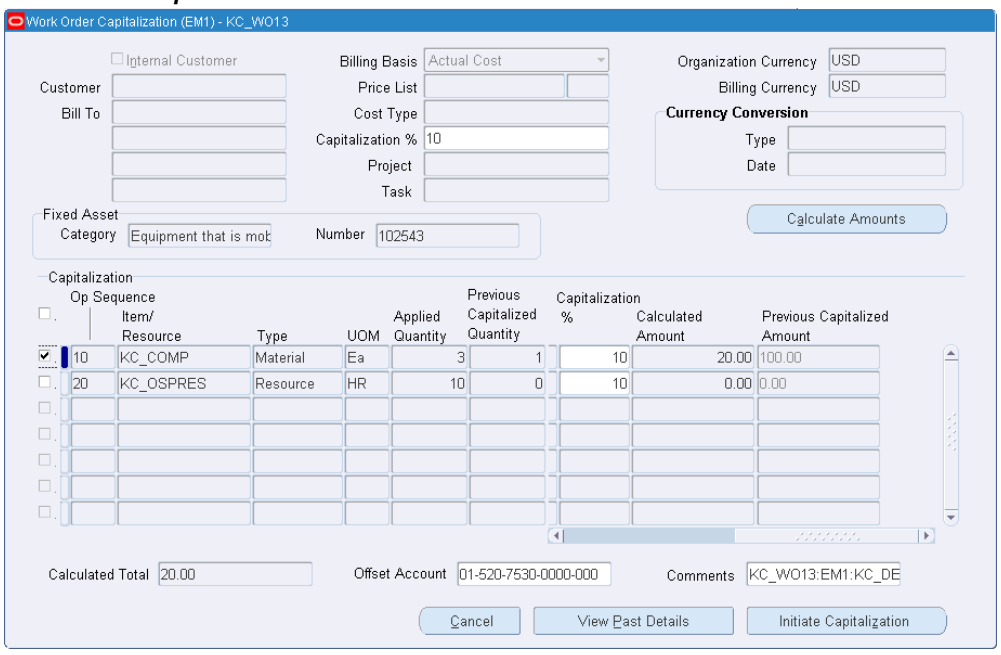
Find Work Orders



4. Click the **Capitalize Work Order** button.

This button is enabled for only those work orders that have amounts available to capitalize.

Work Order Capitalization



5. Enter a **Capitalization** %. The costs associated with the selected items and resources within the Capitalization region are capitalized by this percentage.

6. After selecting items or resources to capitalize within the Capitalization region, choose **Calculate Amounts** to view the projected amount to capitalize, based on what you had entered within the Capitalization % field. The asset's book value and useful life will increment with this additional value within Fixed Assets.

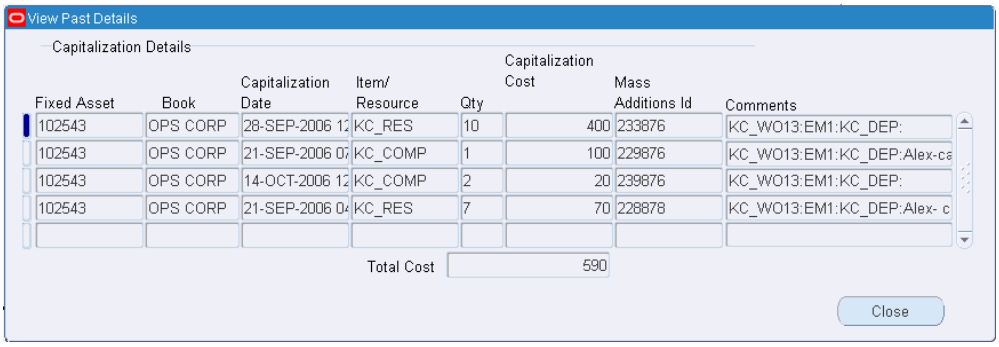
7. Optionally change the defaulted **Offset Account**. Capitalized maintenance costs are credited to their associated maintenance expense accounts, while this Offset Account is debited by the same amount within Fixed Assets. Maintenance expenses that are capitalized are considered capital asset value and not maintenance expenses, within the General Ledger.

8. The **Comment** field contains the work order number, Asset, and Asset Description, concatenated together.

9. Choose **Initiate Capitalization** to execute a concurrent process that capitalizes the calculated amounts for the fixed asset.

10. Optionally choose **View Past Details** to view all past capitalization transactions for the fixed asset.

View Past Details



- Choose **Close**.

11. Close the windows.

4

Preventive Maintenance

This chapter covers the following topics:

- Introduction
- Preventive Maintenance Overview
- Meters
- Entering Meter Readings
- Preventive Maintenance Scheduling
- Generating Work Orders

Introduction

This chapter discusses how Work Orders are created automatically using preventive maintenance schedules. The following topics are necessary when setting up preventive maintenance:

- Preventive Maintenance Overview, page 4-1
- Meters, page 4-2
- Preventive Maintenance Scheduling, page 4-5

Preventive Maintenance Overview

eAM generates Work Orders automatically based on meter readings, runtime and/or calendar days. An example of meter-based preventive maintenance is your car's oil changes. Most car manufacturers recommend that you change your engine oil every 3,000 miles or six months, whichever comes first.

To set up the above scenario, define your car's odometer as a meter. Next, associate that meter to an asset (your car), using the Asset Meter Association window. After you have associated the meter to the asset, associate the Maintenance Activity (oil change) that

should occur, based on the meters you defined. This is performed via Preventive Maintenance Scheduling.

Preventive Maintenance includes the following topics:

- Meters, page 4-2
- Project and Task Setup, page 2-118
- Defining Meter Templates, page 2-118
- Defining Meters, page 2-121
- Associating Meter Templates with Asset Groups, page 2-120
- Associating Meters with Asset Numbers, page 2-123
- Entering Meter Readings, page 4-3
- Preventive Maintenance Scheduling, page 2-126
- Defining Set Names, page 2-124
- Defining a Preventive Maintenance Template, page 2-126
- Entering Preventive Maintenance Schedule Definitions, page 2-134
- Generating Work Orders, page 4-6

Meters

Meters are defined and associated with Asset Numbers to measure an asset or rebuildable item's usage. Examples include odometers or counters. Meters are used in Preventive Maintenance Scheduling to schedule and generate Preventive Maintenance Work Orders.

Meter related tasks include the following topics:

- Project and Task Setup (Setting Up chapter)
- Oracle Seiban Setup (Setting Up chapter)
- Defining Meter Templates, page 2-118
- Defining Meters, page 2-121
- Associating Meter Templates with Asset Groups, page 2-120
- Associating Meters with Asset Numbers, page 2-123

- Entering Meter Readings, page 4-3

Entering Meter Readings

After a Work Order is completed, meter readings are required for all meters, associated with the Work Order's current Asset Number, that appear in the Runtime Interval rules in the Preventive Maintenance Scheduling Definition window (See: Entering Preventive Maintenance Schedule Definitions, page 2-134 and Work Order Completion, page 3-60). You can enter standalone meter readings at any time.

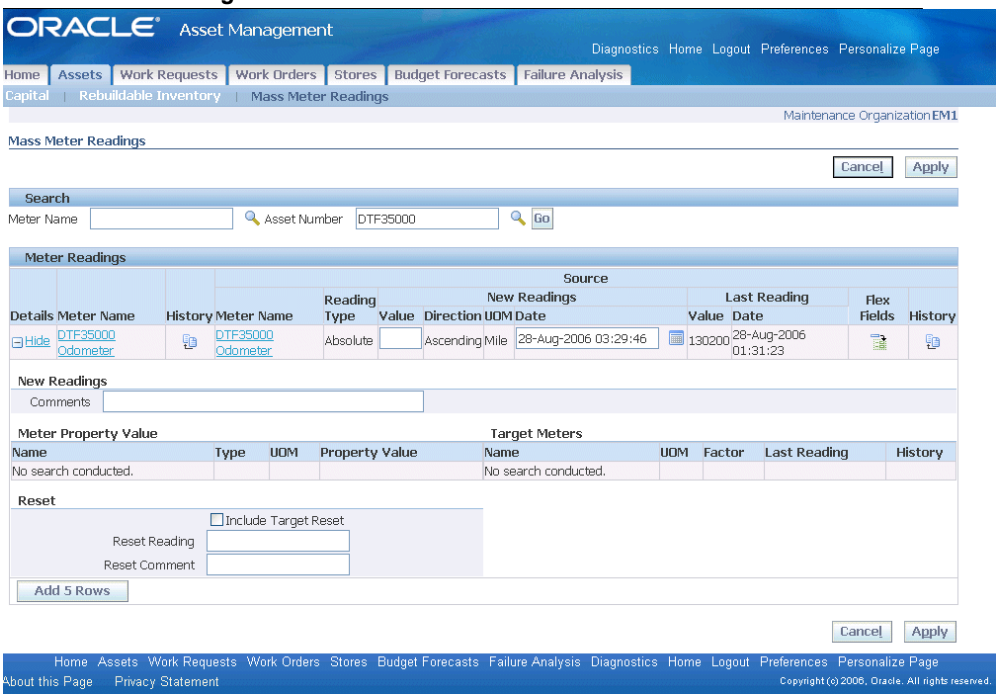
> **Note:** To enable the Preventive Maintenance Scheduler process, an initial meter reading needs to have already been entered. This might have been performed by entering an initial reading during the Meter's definition.

The Meter Reading window invokes with a Disable button based on the Disable Meter Reading function security setting. If you do not have access to the function security, eAM Disable Meter Reading, then the Disable button does not display and you cannot disable a meter reading.

To enter mass meter readings:

1. Navigate to the Mass Meter Readings page (Assets tab > Mass Meter Readings sub-tab).

Mass Meter Readings



2. Optionally enter a Meter Name and then choose Go.

3. Optionally enter an Asset Number and then choose Go. All meters that are associated with this asset appear (See: See: Associating Meters with Asset Numbers, page 2-123).

4. Enter a Value or Change Reading value for new meter readings, depending on the meter type. If the meter is an Absolute type, the Value column is enabled. If the meter is a Change type, the Change column is enabled. The Change field indicates the difference between the last reading and the current reading; it defaults when the Value field is populated. The Change field indicates the difference between the last reading and the current reading. The Change value is used to calculate the Life To Date Reading, within the Latest tabbed region.

5. Optionally enter any necessary Comments.

6. Optionally enter Reset information.

    1. If you enter a Reset Reading value, you are resetting the source meter to this value. For example, if a motor must be replaced, you can reset the meter reading value of the pump, associated with the motor.

        Companies can associate a Source Meter to an Asset Number/Meter association. The Source Meter reading subsequently feeds corresponding meters that are

associated with assets within the Meter Hierarchy (See: Defining Meters, page 2-121 for more information on Meter Hierarchies).

2. Optionally select the Include Target Reset check box to reset the current asset's target meter to the source meter's Reset Reading.

3. Optionally enter a Reset Comment.

   Note: You cannot reset past meter readings if a meter reading is entered after the reading date.

7. Choose Apply to save your work.

8. Optionally select the History icon to view all meter readings for the selected meter and current Asset Number. This helps you to make logical decisions when entering and updating meter readings. For example, you can view the last meter reading, enabling you to make a logical choice when entering the next meter reading.

   1. The Life To Date field displays the accumulated meter readings, which is usually the same as the current meter reading. The current meter reading and Life To Date values are different if you have previously entered a Reset Reading. For example, before the reset, both the current meter reading and the Life To Date value were 17,000. You then reset the meter to 3,000. The Life To Date value continues to increase from 17,000, while the current meter reading increases from 3,000. The system uses the Life To Date meter reading to calculate the Usage Rate and includes the initial reading.

   2. Optionally select the Disable icon to disable a past meter reading for the current Reading. If meter readings are entered before resetting the meter, you cannot disable those meter readings. The most current reading before the meter is reset cannot be disabled, unless the meter reset reading entry is disabled.

      Note: Preventive Maintenance Scheduling does not use any disabled information. After a meter reading is disabled, you cannot re-enable it

Preventive Maintenance Scheduling

eAM enables you to generate Work Orders automatically using a preventive maintenance schedule, based on Runtime Rules, Day Interval Rules, and List Dates. For example, a forklift might need servicing after 100 motor running hours, or 90 days, whichever comes first. Meters are used to keep track of asset usage.

Preventive Maintenance Scheduling tasks include the following topics:

- Defining Set Names, page 2-124
- Defining a Preventive Maintenance Template, page 2-126
- Creating Suppression Templates (Setting Up chapter)
- Entering Preventive Maintenance Schedule Definitions, page 2-134
- Generating Work Orders, page 4-6

Generating Work Orders

After you have established Preventive Maintenance Scheduling definitions, you can generate Work Orders. There are two ways to generate Work Orders. You can execute the Generate Preventive Maintenance Work Orders process, or you can implement forecasted Work Orders from the Maintenance Workbench.

When executing the Generate Preventive Maintenance Work Orders process, the program creates suggested Work Orders, based on the date or meter rules that are associated with the scheduling definitions that you defined. See: Entering Preventive Maintenance Schedule Definitions, page 2-134. You should schedule this process to periodically execute, automatically. You can execute this program manually at any time, by accessing the menu option.

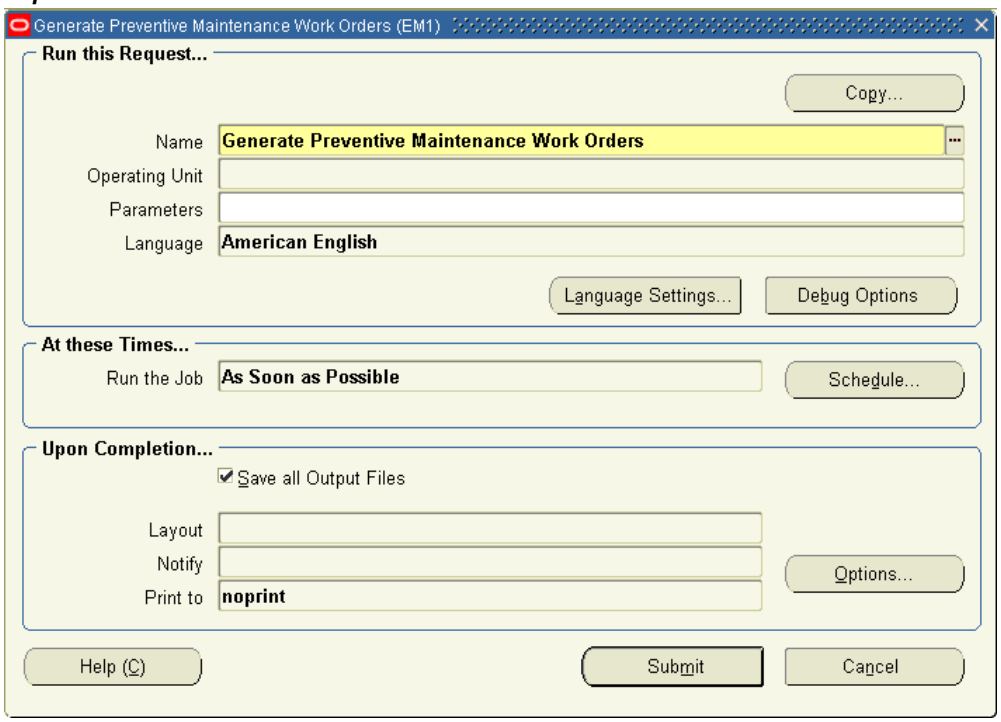
If you want to review and optionally select Work Orders that create using this process, you can access the Maintenance Workbench. This enables you to view the Work Orders before actually creating them. You can launch the Preventive Maintenance Scheduler to implement forecasted Work Orders. See: Using the Maintenance Workbench, page 3-71.

The following are instructions to invoke the process from the menu:

To generate work orders:

1. Navigate to the Generate Preventive Work Orders window.

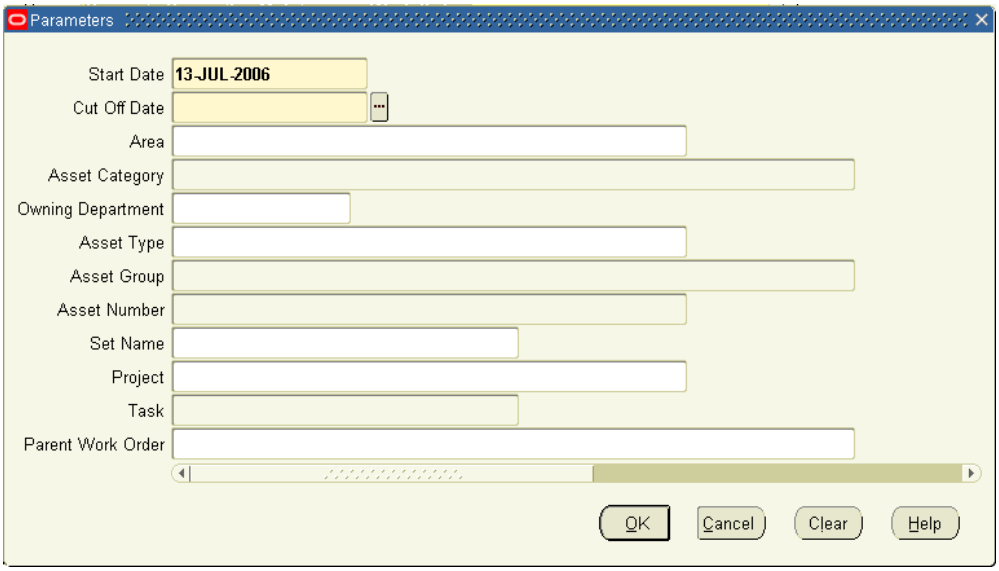
Import Jobs and Schedules



2. In the Parameters window, select a Start Date.

3. Select a Cut Off Date.

Parameters Window



To further narrow down the data selection, you can enter any of the following parameters:

4. Optionally select an Area. Areas are where your assets reside.

5. Optionally select an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR.

6. Optionally select an Owning Department.

7. Optionally select an Asset Type from the list of values. Valid values are Capital and Rebuildable Inventory.

8. Optionally select an Asset Group if you previously selected an Asset Type.

9. Optionally select an Asset Number if you previously selected an Asset Type.

10. Optionally select a Set Name to implement Work Orders that are forecasted against default Preventive Maintenance Schedules in this set. If a Set Name is specified, you will only pick default Preventive Maintenance Schedules from that PM Set for Work Order generation.

11. Optionally select a Project.

12. Optionally select a Task if you previously selected a Project.

13. Optionally select a Parent Work Order.

14. Choose OK.

15. On the Generate Preventive Maintenance window, choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

5

eAM Planning and Scheduling

This chapter covers the following topics:

- Introduction
- Overview of eAM Planning and Scheduling
- eAM Planning
- Launching the Planning Process
- Viewing Suggested Demand
- eAM Scheduling
- Using the Scheduler Workbench

Introduction

Oracle Enterprise Asset Management utilizes Oracle Manufacturing Scheduling and Oracle Material Requirements Planning to ensure cost savings and work management efficiencies, by generating predictive work activities. These work activities use a planning process to balance the work load for resource management. This chapter contains the following topics:

- Overview of eAM Planning and Scheduling, page 5-1
- eAM Planning, page 2-150
- eAM Scheduling, page 2-151

Overview of eAM Planning and Scheduling

Oracle Enterprise Asset Management utilizes Work Orders to create demand for asset maintenance. Work Order operations are completed using the Work Orders' associated material and resource requirements (See: Overview eAM Work Management, page 3-2). Cost savings and work management efficiencies are achieved by generating future,

planned work activities, and then using a planning process to balance the work load for resource management.

First, a Master Demand Schedule is created. This Master Demand Schedule is attached to Material Requirements Planning (MRP) options. MRP is launched, creating planned Work Order suggestions. You can use the Planner Workbench to implement the suggestions into purchase requisitions or maintenance Work Orders. Using the Purchasing AutoCreate feature, purchase orders are automatically created from the requisitions. After the purchase orders receive into inventory, you can issue material to a maintenance Work Order.

This section includes the following topics:

- eAM Planning, page 2-150
- eAM Scheduling, page 2-151

eAM Planning

Oracle eAM utilizes Material Requirements Planning (MRP) to calculate net material requirements from gross material requirements by evaluating the following:

- Master schedule
- Bills of material
- Scheduled receipts
- On-hand inventory balances
- Lead times
- Order modifiers

Material Requirements Planning plans material replenishments by creating a set of recommendations to release or reschedule orders for material, based on net material requirements. MRP assumes infinite capacity is available to meet the material requirements plan.

The following illustration depicts how eAM uses Material Requirements Planning. First, a Master Demand Schedule (MDS) is created. This schedule is then attached to MRP Plan Options. Next, the MRP is launched, creating suggestions for purchasing requisitions. Finally, these suggestions are implemented, purchased, and then received into inventory. After the material is in inventory, you can issue it to a maintenance work order.

eAM Material Requirements Planning

eAM Planning includes the following topics:

- Defining a Master Demand Schedule Name, page 2-152
- Defining a Material Requirements Plan Name, page 2-153
- Defining Plan Options, page 2-154
- Launching the Planning Process, page 5-3
- Viewing Suggested Demand, page 5-5

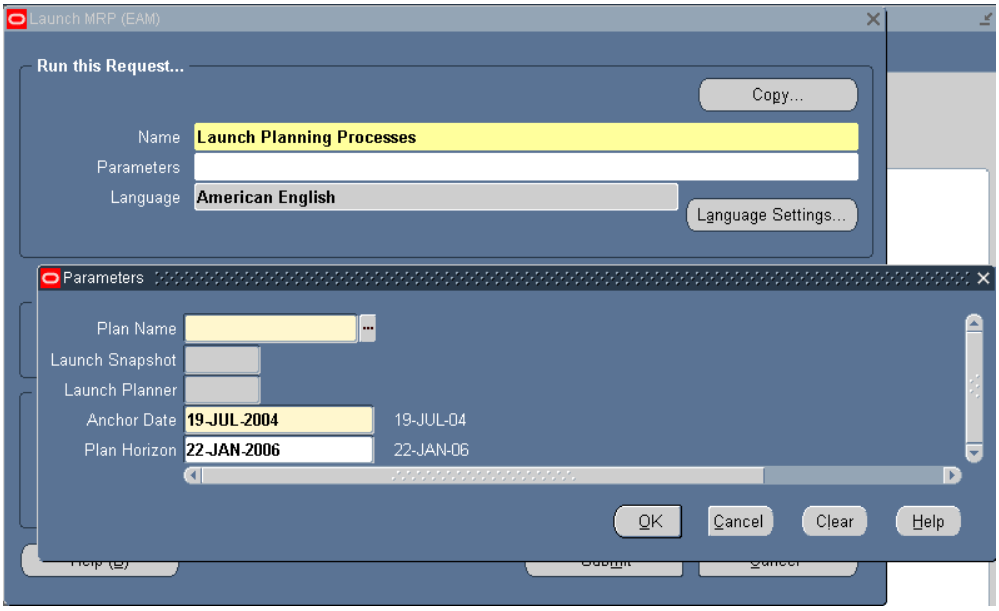
Launching the Planning Process

Launch the planning process for a material requirements plan (MRP) from a master demand schedule to generate planning recommendations for all planned items. You can launch the planning process for a material requirements plan (MRP) or a master production schedule (MPS). The planning process involves three phases for defining the MRP or MPS. The process uses the input from a master demand schedule or master production schedule to determine the quantities and timing of the items to purchase.

To launch the planning process:

1. Navigate to the Launch MRP window.

Launch MRP



2. Enter the following parameters:

   Plan Name: Select the MRP Plan Name to launch.

   Launch Snapshot: Valid values are Yes and No. Select Yes to launch the Snapshot.

   Launch Planner: You must launch the planner if you selected Yes to launch the Snapshot.

   Anchor Date: Enter an Anchor Date, earlier or equal to the current date, that acts as a start date for repetitive planning periods.

   Plan Horizon: Enter a date, greater than the current date, up to which the planning process creates an MRP or MPS. The default horizon is the current date plus the number of offset months set in the profile, MRP: Cutoff Date Offset Months (See: Implementing Profile Option Summary, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

3. Choose OK.

4. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

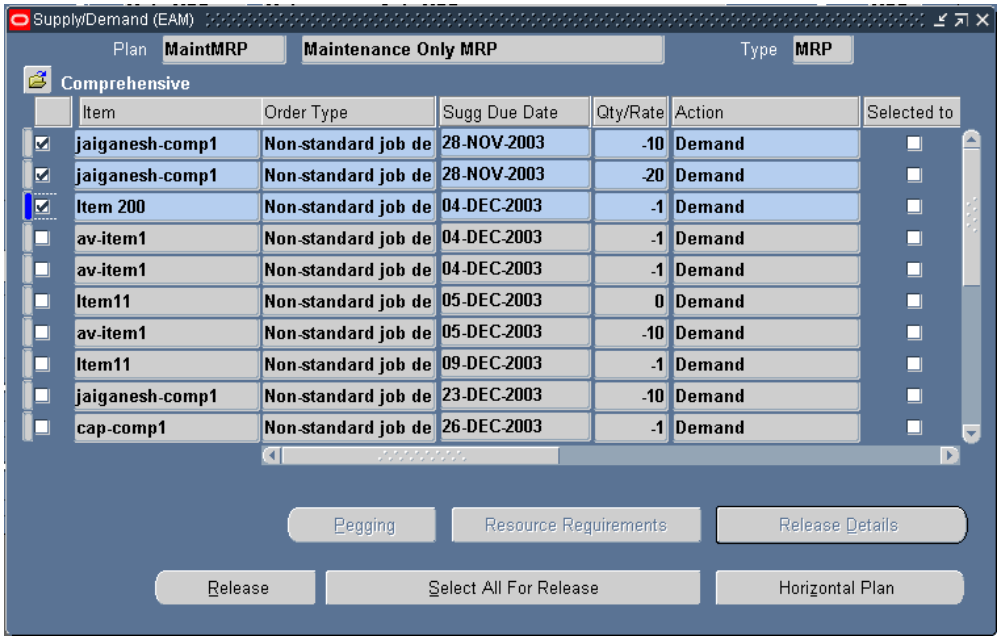
Viewing Suggested Demand

After the MRP is launched, you can view the purchase requisition suggestions created by the launched MRP plan.

To view suggested purchase requisitions:

1. Navigate to the Supply/Demand window.

Supply/Demand



2. Review the supply/demand details. See: Supply and Demand Fields, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.

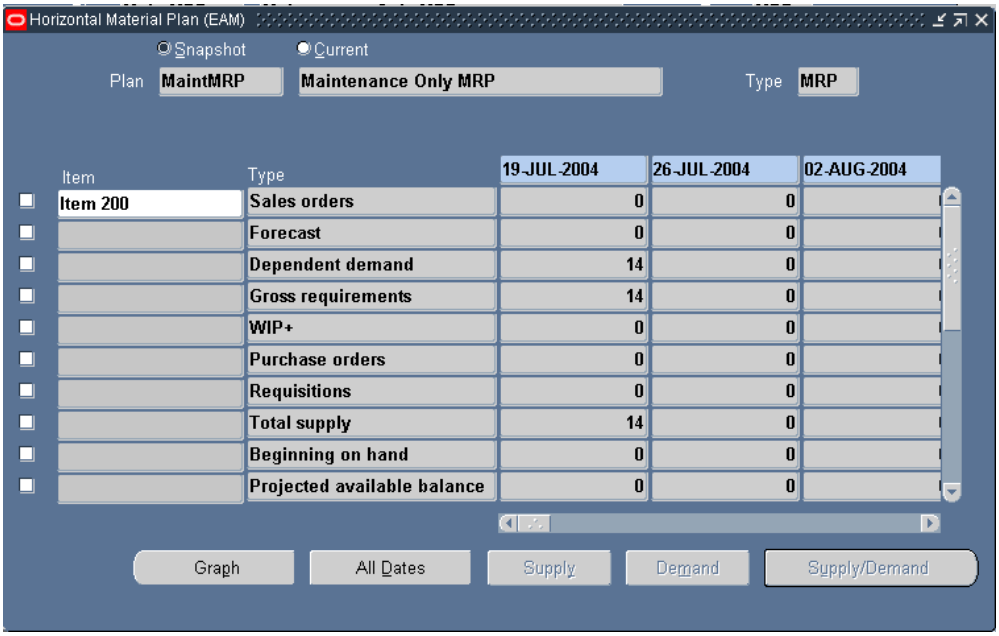
To view the horizontal plan:

You can view bucketed horizontal planning information, based on your selected display preferences. MRP provides two ways of viewing this information: snapshot and current. Snapshot information is the information produced by your original planning execution. Current information includes all modifications after the planning execution.

1. Navigate to the Supply/Demand window.

2. Choose Horizontal Plan.

Horizontal Material Plan



3. Indicate if you would like to view Snapshot or Current information.

Related Topics

Reviewing Supply and Demand, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

Reviewing the Horizontal Plan, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

eAM Scheduling

Oracle Enterprise Asset Management (eAM) shares the Scheduler Workbench, used in Oracle Manufacturing, to schedule work orders and operations.

The Scheduler Workbench enables a planner to graphically view and reschedule work orders. It provides you with a visual display of work orders, operations, and resources. You can interactively reschedule work orders, operations, and resources by dragging and dropping them at a new date and time. Any sequencing requirements defined for the Work Order are displayed and maintained during scheduling changes. Resource availability and requirements display so that you can graphically view the impact of scheduling changes.

Important: You have the Infinite Scheduler available to you; this

scheduler is not constraint-based.

The scheduling process calculates the work order and operation scheduled durations and dates, based on the forward or backward scheduling goal (See: Routine Work Orders, page 3-3), and Work in Process parameters. The concurrent program is triggered after a work order is released (See: eAM Work Order Statuses, page 3-23). The work order automatically transitions to a Pending Scheduling status, until the concurrent program finishes scheduling. At that time, the work order transitions back to a Released status.

Additional Information: Oracle eAM uses the Infinite Scheduler for automatic scheduling. The Infinite Scheduler considers only the calendar setup and will not consider further finite exceptions. It does not consider shift exceptions or take the resource loads and availability into consideration. The Resource Availability form is a view to display information on the availability and considers exceptions so that you can perform manual scheduling accordingly.

This section includes the following topics:

- Defining Scheduling Rules for Work Order Relationships (Setting Up chapter)
- Using the Scheduler Workbench, page 5-7

Using the Scheduler Workbench

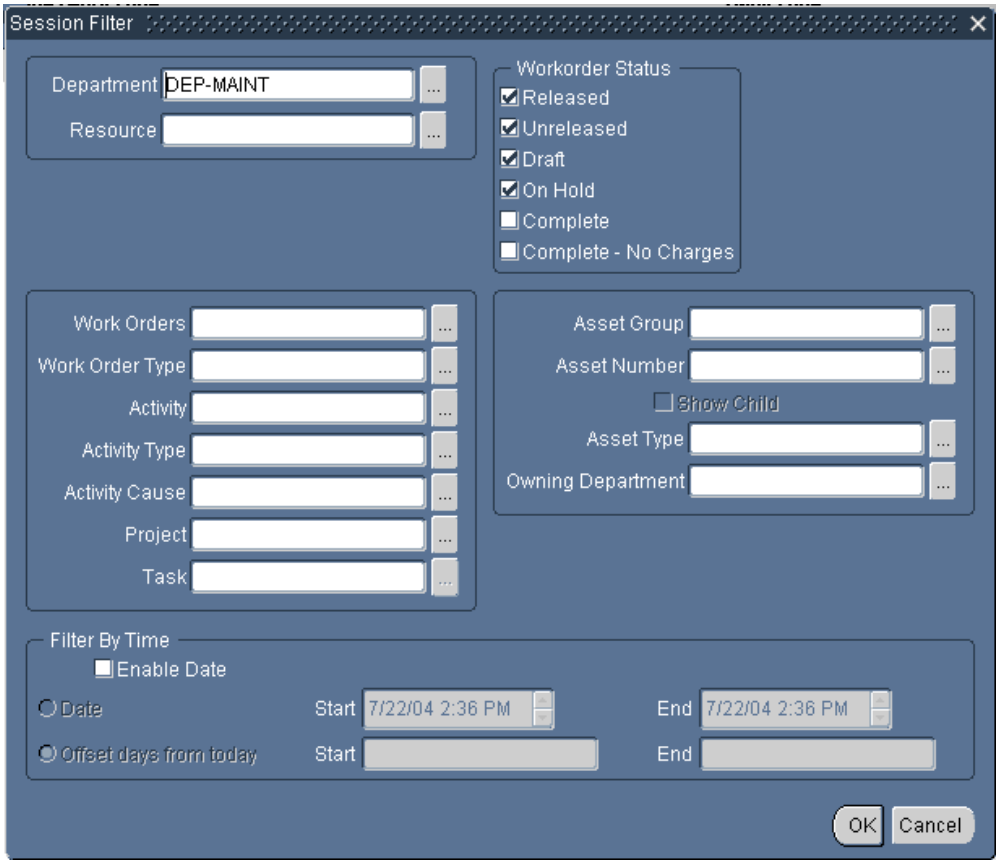
Use the Scheduler Workbench to select specific work orders, expand, and collapse work orders and operations, using a tree hierarchy structure. A Gantt Chart graphically displays both firmed and unfirmed work orders (See: Routine Work Orders, page 3-3). You can view and update start and end dates for each resource.

In automatic mode, the Scheduler process creates start and end times for operations and resources. By default, you are in manual mode.

To use the scheduler workbench:

1. Navigate to the Scheduler Workbench.
2. Choose Filter to limit the information displayed. You can display information by Department, Resource, Asset Information, filter by time, or a combination of this information. You can view information for work orders at Released, On Hold, Unreleased, Cancelled, and Complete statuses.

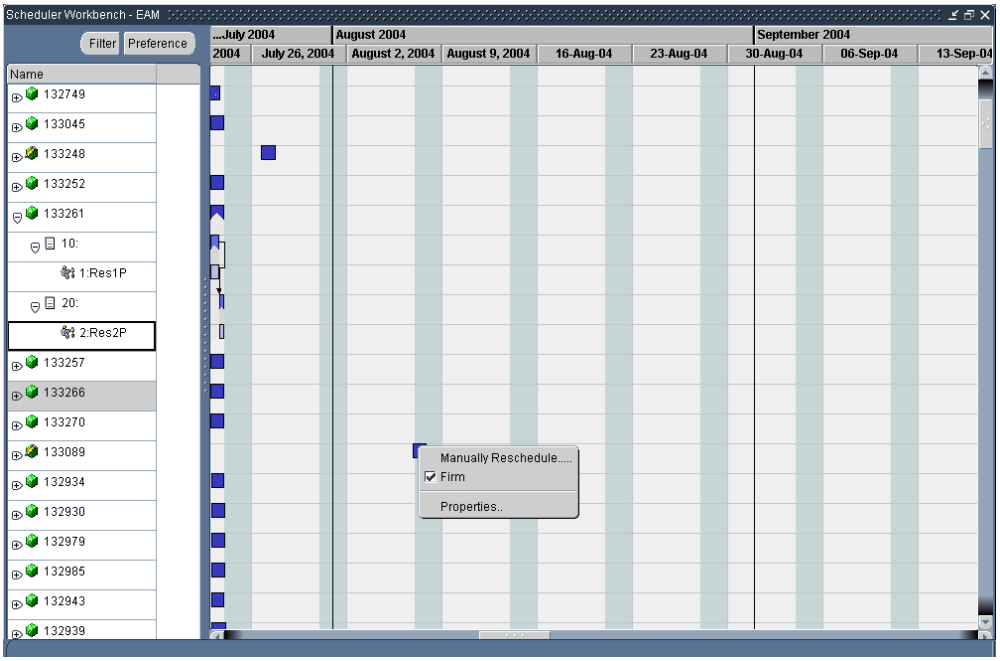
Filter



3. Choose OK to filter information entered (See: Filtering Jobs, Oracle *Manufacturing Scheduling User's Guide*).

   Work Orders appear on the left side of the window, with their associated operations' resources, in a tree hierarchy format. On the right, bars spanning between calendar days represent associated schedules for the current operation resources. If dependent operations exist, you can see dependency links; the Scheduler process considers these dependencies. You can drag and drop the bars between different calendar days to dynamically adjust schedules.

Scheduler Workbench



4. Optionally firm or unfirm Work Orders by selecting Create/Modify Work Orders from the Tools menu. The Find Work Orders window appears (See: Routine Work Orders, page 3-3). You can also right click on a schedule, symbolized by a bar.

   - You can view resource load versus capacity, using the Scheduler Workbench. For information on viewing work order properties, operation properties, and resource properties, See: Viewing a Property Window, *Oracle Manufacturing Scheduling User's Guide*.

   - For information on displaying resources and resource load versus capacity, See: Showing Select Resources and Resource Load Versus Capacity Panes, *Oracle Manufacturing Scheduling User's Guide*.

   - Normally, Work Order rescheduling takes place within the Work Order window, but you can also reschedule them within the Gantt Chart. For information on how to reschedule Work Orders, operations, and resources within the Gantt Chart, See: Rescheduling Jobs, Operations, and Resources in the Gantt Chart, *Oracle Manufacturing Scheduling User' Guide*.

Related Topics

Overview of Workbench, *Oracle Manufacturing Scheduling User's Guide*

Launching the Workbench, *Oracle Manufacturing Scheduling User's Guide*

Filtering Jobs, *Oracle Manufacturing Scheduling User's Guide*

6

eAM Cost Management

This chapter covers the following topics:

- Introduction
- Overview of eAM Cost Management
- eAM Cost Estimation
- Viewing Cost Information
- Asset Cost Rollup
- Parent-Child Hierarchy Cost Rollup
- Alternate Cost Hierarchy Rollup
- Transferring Invoice Variances to Maintenance Work Orders
- Viewing Simulated Transfer Details
- Transferring Invoice Variances

Introduction

Costs generate as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies defined within eAM. This chapter contains the following topics:

- Overview of eAM Cost Management, page 6-1
- Transferring Invoice Variances to Maintenance Work Orders, page 6-17

Overview of eAM Cost Management

Costs generate as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies, defined within Enterprise Asset Management, and can roll up to any level within an asset hierarchy. Labor, Material, and Equipment

charges further classify into several maintenance cost categories.

Enterprise Asset Management captures and retains all work. You can reference completed work to review operations, resources, and costs. This information provides the scope of work and the process by which it is completed.

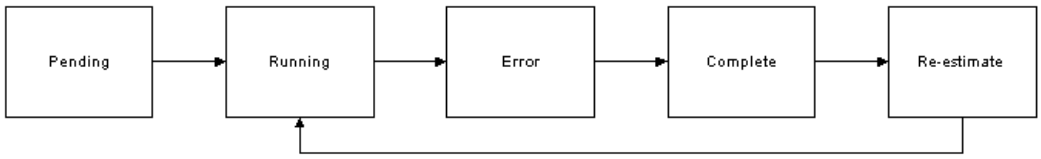
Managing costs in eAM includes the following topics:

- eAM Costing Methods and Mappings, page 2-179
- Setting Up Cost Categories, page 2-180
- Setting Up eAM Cost Management, page 2-183
- eAM Cost Estimation, page 6-2
- Viewing Cost Information, page 6-4
- Asset Cost Rollup, page 6-12
- Parent-Child Hierarchy Cost Rollup, page 6-14
- Alternate Cost Hierarchy Rollup, page 6-16

eAM Cost Estimation

Estimating the costs of maintenance Work Orders is often necessary for planning and assessing purposes. The Work Order Cost Estimate Processor estimates the costs of all materials and resources exploded or entered on a maintenance Work Order, enabling you to plan and assess your costs. A Work Order's estimated and actual costs might differ because all materials or resources, associated with a Work Order, might not actually be used when the Work Order executes. For example, a required material was not issued to the maintenance Work Order.

Cost Estimation Lifecycle



The Work Order Cost Estimate Processor can continually execute or launch manually via a concurrent request. Work Orders have one of the following Estimation Statuses:

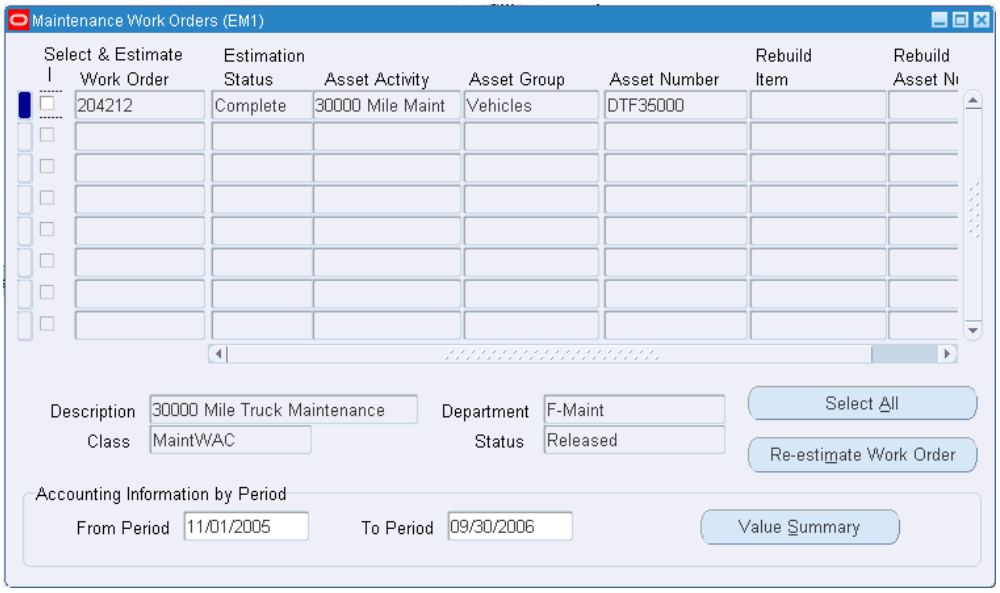
- *Pending - The Work Order is waiting to be selected by the Work Order Cost Estimate Processor.*

- *Running - The Work Order Cost Estimate Processor is currently estimating the costs of the Work Order.*
- *Error - The Work Order Cost Estimate Processor attempted to estimate the Work Order's costs, but there was an error.*
- *Complete - Work Order Cost Estimate Processor successfully completed estimating the Work Order's costs.*
- *Re-estimate - The Work Order is waiting to be picked up by the Work Order Cost Estimate Processor, for re-estimation. In this case, the Work Order was estimated at least once.*
- *Running and Re-estimate - Changes were made to a Work Order's requirements, while the Work Order Cost Estimate Processor was executing. These Work Orders are then re-estimated by the Work Order Cost Estimate Processor.*

To view the status of the Work Order Cost Estimation process:

1. Navigate to the Maintenance Work Orders window.

Maintenance Work Orders



2. Select the Work Orders to estimate/re-estimate by selecting the individual Select & Estimate check boxes. You can choose Select All to automatically select all Work Orders listed for re-estimation.
3. Choose Re-estimate Work Order to estimate/re-estimate all selected Work Orders.

   The Estimation Status field displays the status of the Work Order Cost Estimation

process.

Related Topics

Viewing Cost Information, page 6-4

Viewing Cost Information

You can view the Material, Labor, and Equipment costs of Asset Numbers, Activities, and Work Orders. You can see detailed or summarized views of actual, estimated, or variance cost information. When viewing the parent Asset Number, you can view just the parent Asset Number's costs or the costs of the parent and child Asset Numbers that are rolled up to the Parent level.

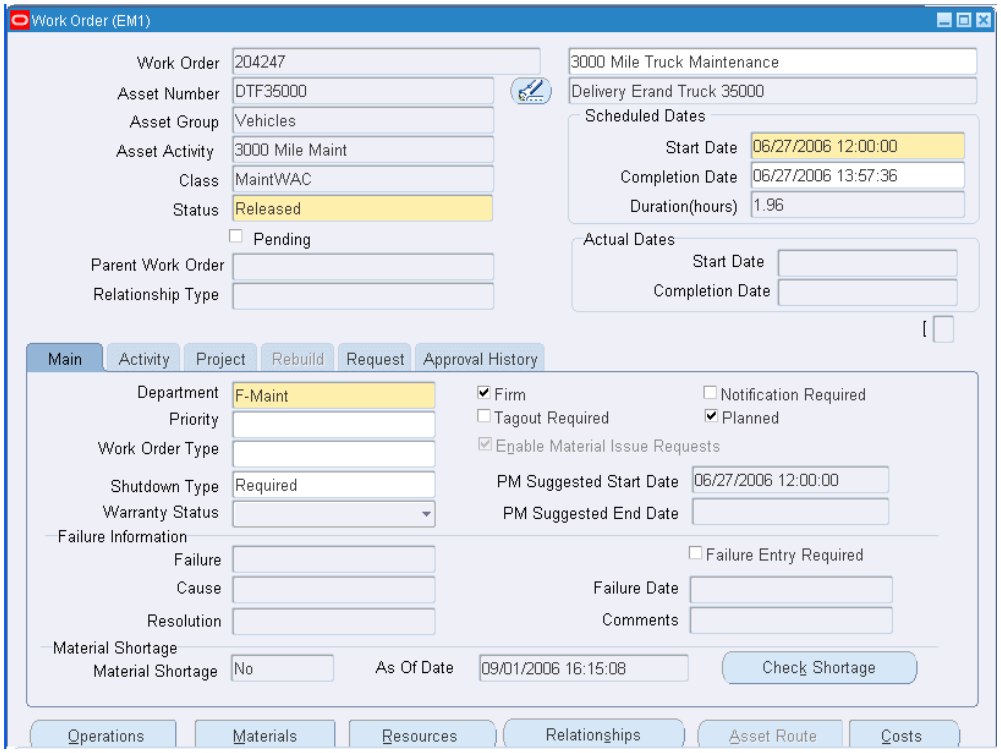
Within both the forms application and Maintenance User profile, different costs are viewable. In the forms application, you can view Work Order and Activity costs. In the Maintenance User profile, you can view Work Order and Asset Number costs.

For assets that transferred from one organization to another, each organization can view only the Work Order costs on those assets that were incurred by itself.

To view cost information within the forms application:

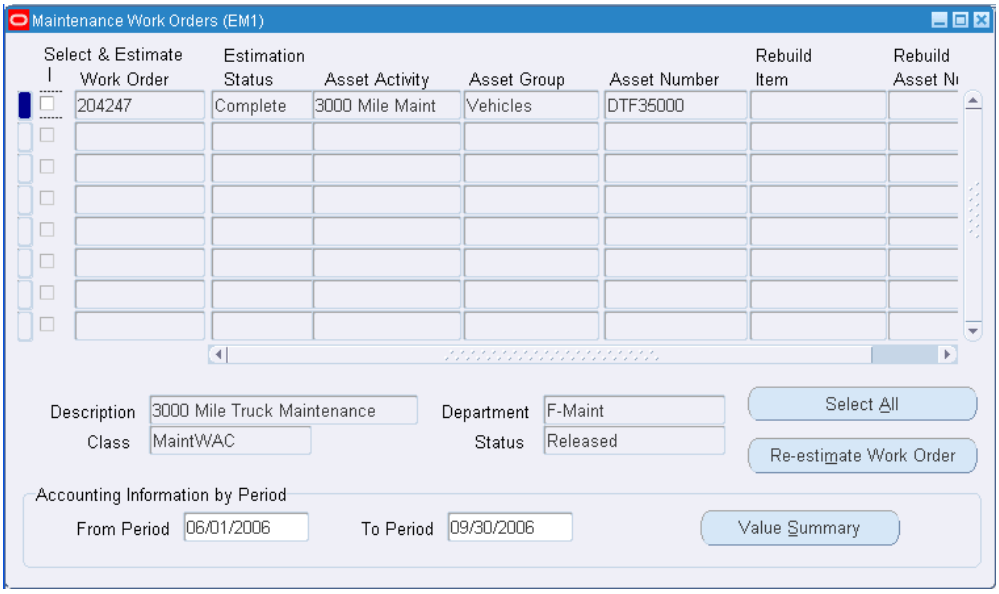
1. Navigate to the Work Order window. Find a Work Order to view costs for.

Work Order



2. Choose Costs.

Maintenance Work Orders

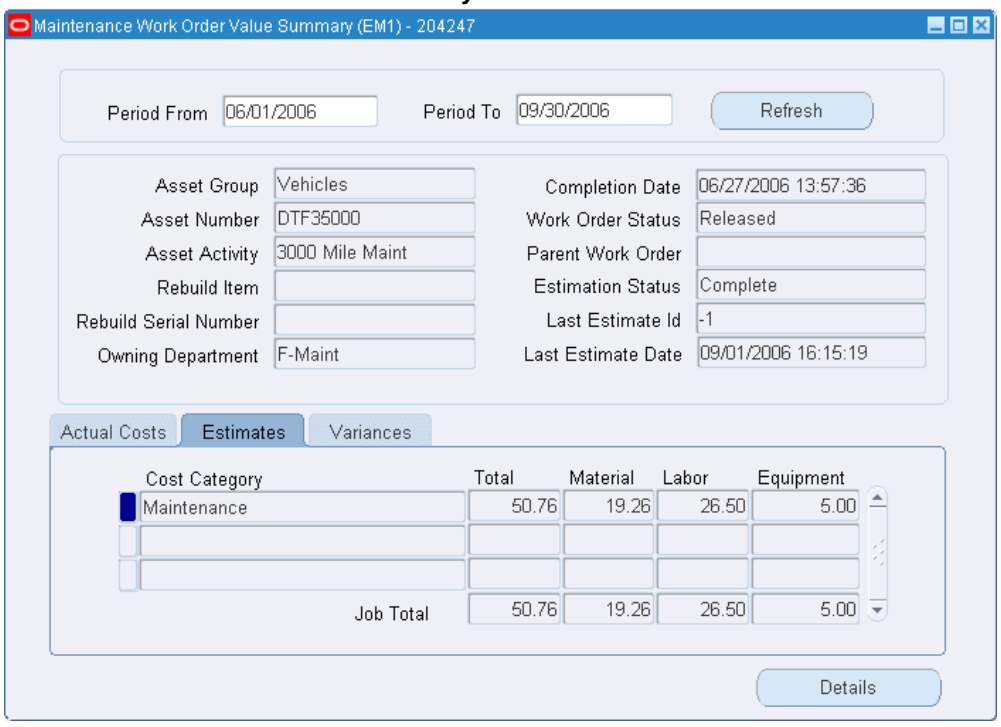


3. Optionally re-estimate selected Work Orders' costs by choosing Re-estimate Work Order. After chosen, the Work Order Cost Estimation process executes to re-estimate the costs for all selected Work Orders. See: eAM Cost Estimation, page 6-2. You can optionally first choose Select All to automatically select all Work Orders to re-estimate.

4. In the Accounting Information By Period region, choose the dates that identify the accounting period you want to view.

5. Choose Value Summary.

Maintenance Work Order Value Summary



6. You can view total Material, Labor, and Equipment costs for the cost categories associated with the current Work Order. You can view totals for actual, estimated, or variance costs, depending on the tab you select.

   Actual Costs: The Actual Costs tab displays the current Work Order's accumulation of material and resource transaction costs, based on the specified period(s).

   > **Note:** The Cost Manager process executes to provide updated, actual cost information.

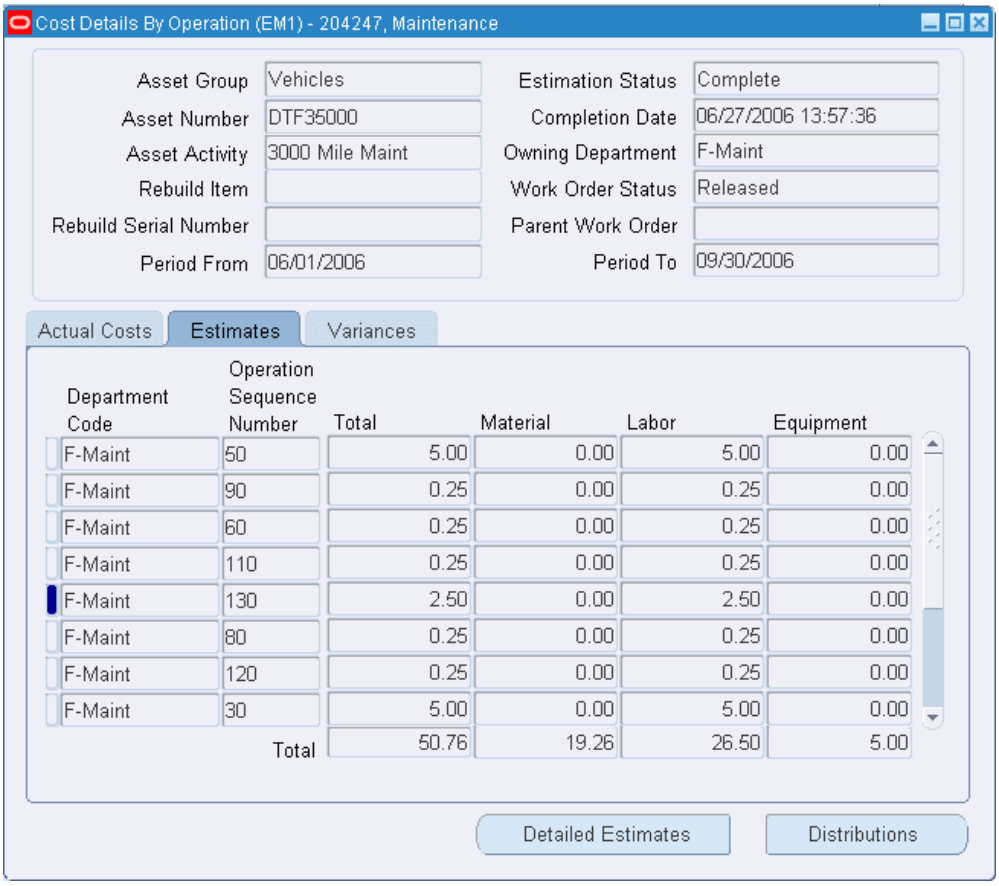
   Estimated Costs: The Estimates tab displays the current Work Order's material and resource requirements' estimated costs. The Work Order Cost Estimate Processor executes to provide updated, estimated cost information. You can also manually launch this process via a concurrent request. See: Viewing Cost Information, page 6-4

   Variance Costs: The Variances tab displays the difference between the actual costs and estimated costs.

7. For the selected cost category, choose Details to view the Material, Labor, and Equipment costs for individual operations on the current Work Order's routing. You can view totals for actual, estimated, or variance costs, depending on the tab you select.

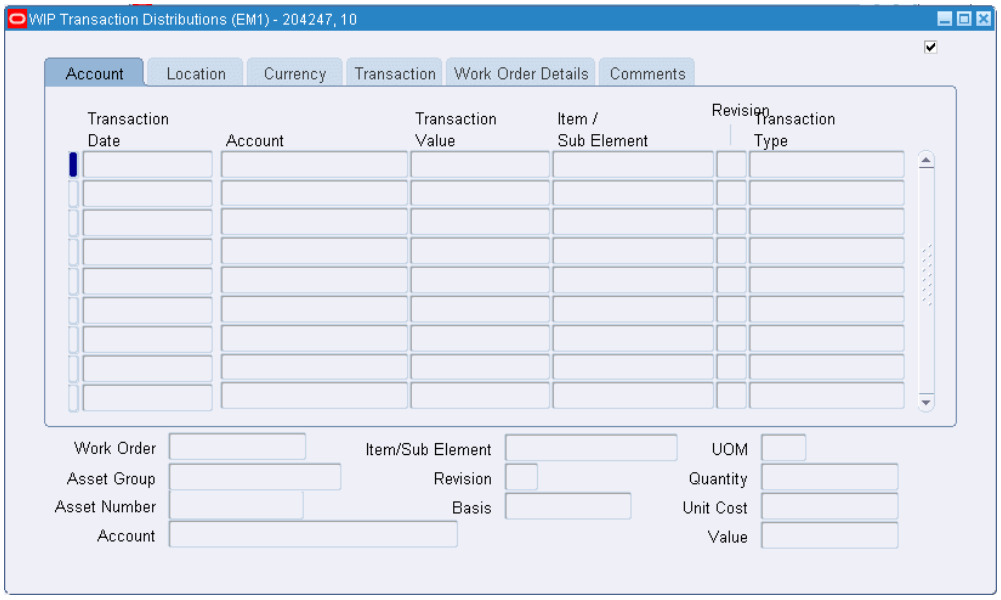
Note: To see if there are any changes to the selected Work Order's costs, choose Refresh. For example, if the Work Order's Estimation Status is Reestimate, choosing Refresh indicates if the Work Order Cost Estimate Processor has picked up the Work Order and re-estimated the costs. If, after choosing Refresh, the Estimation Status is changed to Complete, the maintenance Work Order has the latest estimation costs.

Costs Details By Operation



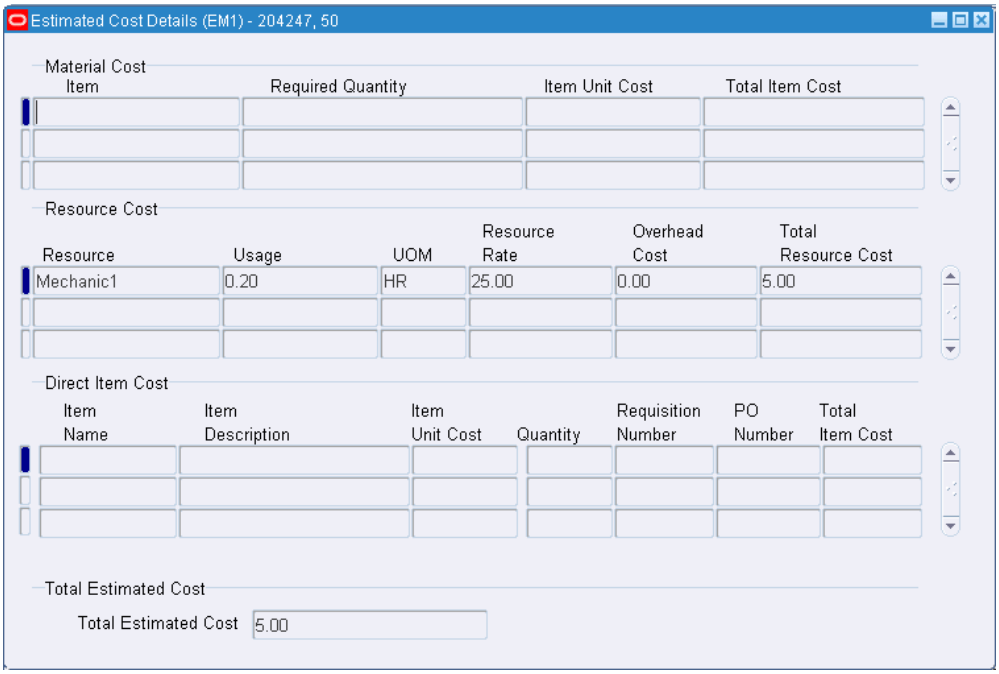
8. Choose Distributions to view the specific accounts charged for an individual operation.

WIP Transactions Distributions



9. Return to the Cost Details by Operation Window. Choose Detailed Estimates to display the details of the Work Order's required material and resources, and any direct items associated with the Work Order.

Estimated Cost Details

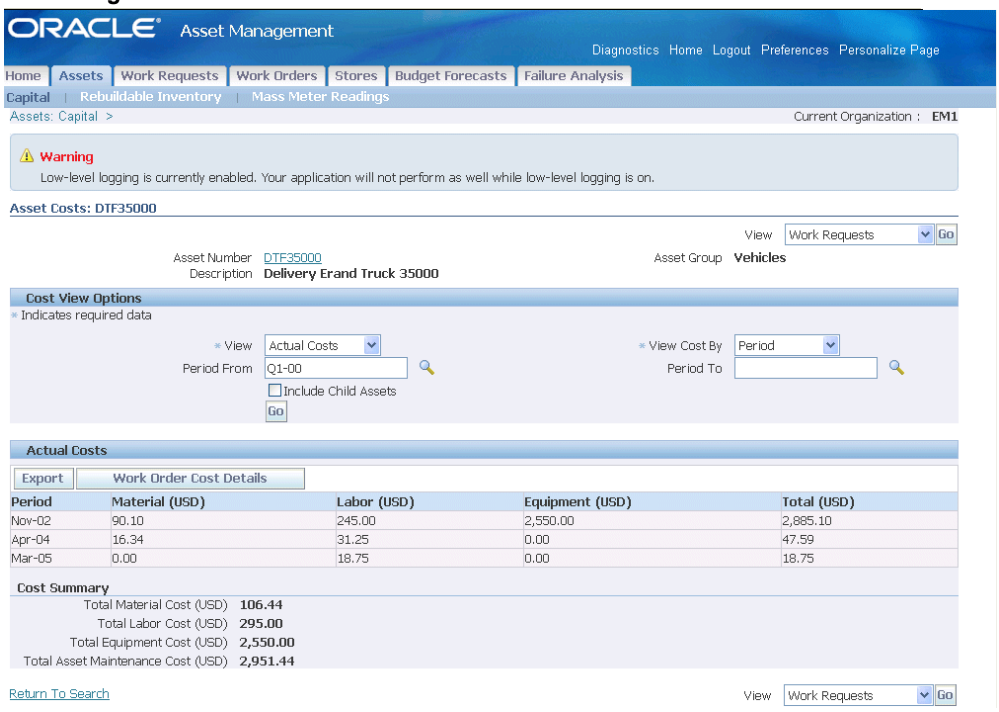


To view cost information within Maintenance Super User:

1. Navigate to the Asset Numbers page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.

2. Select the Asset Number, and then choose Costs.

Costs Page



3. In the Cost View Options region, you can narrow your selection criteria.

    1. From the View drop down list, select the type of cost information to view. Valid values are Actual Costs, Estimated Costs, Variance Costs, and Cost Summary.

        Actual Costs: The Actual Cost option displays the selected Asset Number's actual costs, by period, of the material and resource transactions.

        > **Note:** The Cost Manager process executes to provide updated, actual cost information.

        Estimated Costs: The Estimated Costs option displays the estimated costs, by period, of the required material and resources associated with the selected Asset Number.

        > **Note:** The Work Order Cost Estimate Processor executes to provide updated, estimated cost information. You can also execute the Work Order Cost Estimate Processor manually via a concurrent request.

        Variance Costs: The Variance Cost option displays the difference between the actual and estimated costs within a period.

Cost Summary: The Cost Summary option displays a summary of the actual, estimated, and variance cost information, associated with the Asset Number, for the specified period(s).

2. From the View Cost By drop down list, select how you would like to view your cost information. Valid values are Period and Cost Category.
   - If you select Cost Category, you can view cost information by the cost categories.
   - If you select Period, you can view cost information by periods. Optionally enter the Period From and Period To. Accounting Periods are defined within Oracle Inventory (See: Maintaining Accounting Periods, *Oracle Inventory User's Guide*).

4. Select the Include Child Assets check box to view the rolled up costs for the current Asset Number and its children. See: Defining Asset Numbers, page 2-65 to review how Asset Number hierarchies are created.

5. Choose Go to view cost element information. The information is broken down into the three cost elements: Material, Equipment, and Labor.

6. Optionally choose Export to save or export your cost information to a spreadsheet.

Related Topics

Overview of Cost Management, *Oracle Cost Management User's Guide*

Submitting a Request, *Oracle Applications User's Guide*

Asset Cost Rollup

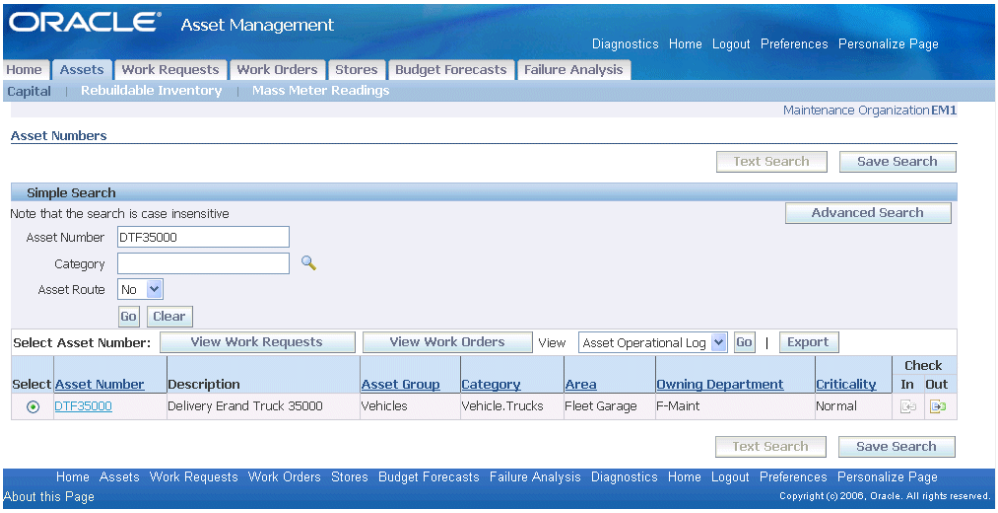
You can optionally roll a child asset's costs into its parent asset, for reporting purposes.

To view an asset hierarchy cost rollup:

1. Navigate to the Asset Numbers page.

2. Query an Asset.

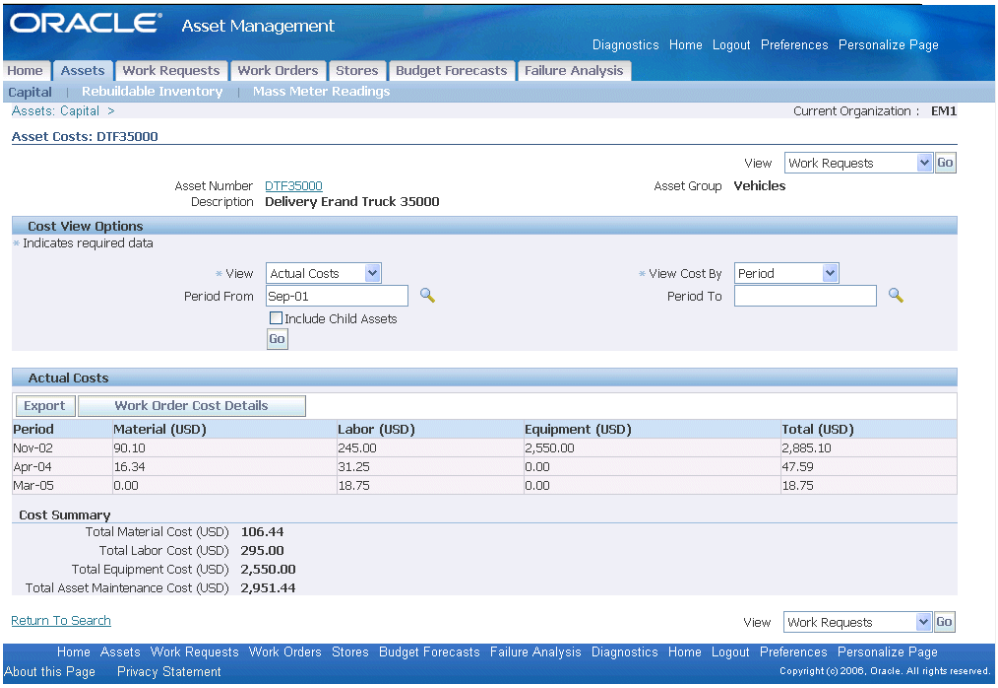
Asset Numbers



3. Select the Asset to view its details.

4. Select Costs from the View drop down list, and then choose Go.

Asset Details



5. Select the Include Child Assets check box to roll the costs of the current asset's child assets.

6. Choose Go.

Parent-Child Hierarchy Cost Rollup

You can optionally roll a child Work Order's costs into the parent Work Order, for reporting purposes.

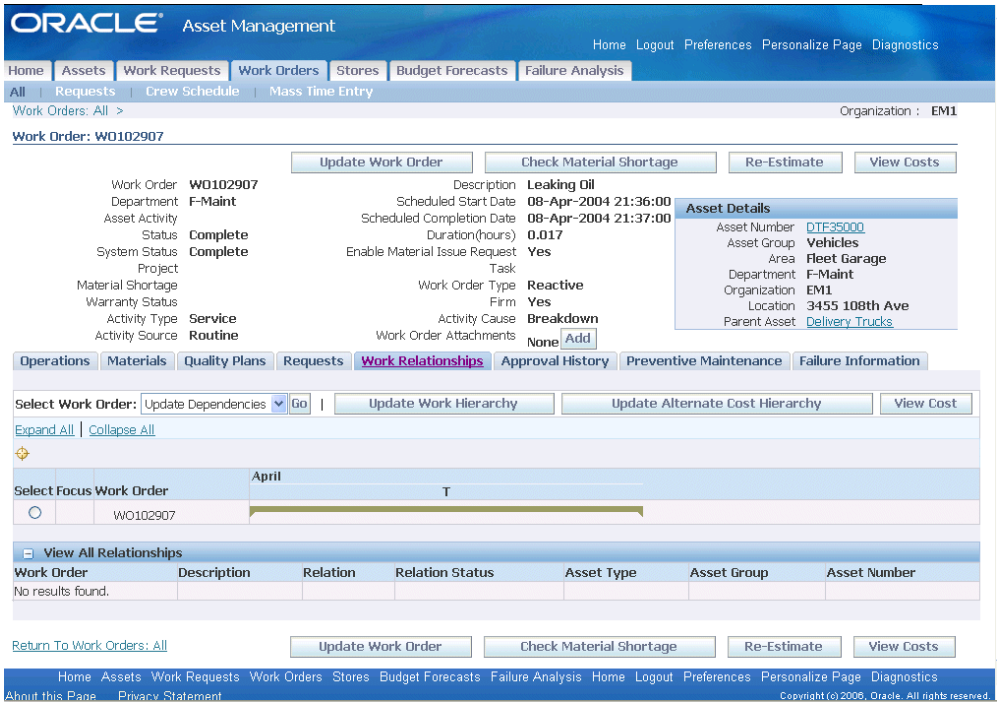
To view a parent-child hierarchy cost rollup:

1. Navigate to the Work Orders page.

2. Query a Work Order.

3. Select the Work Order to view its details.

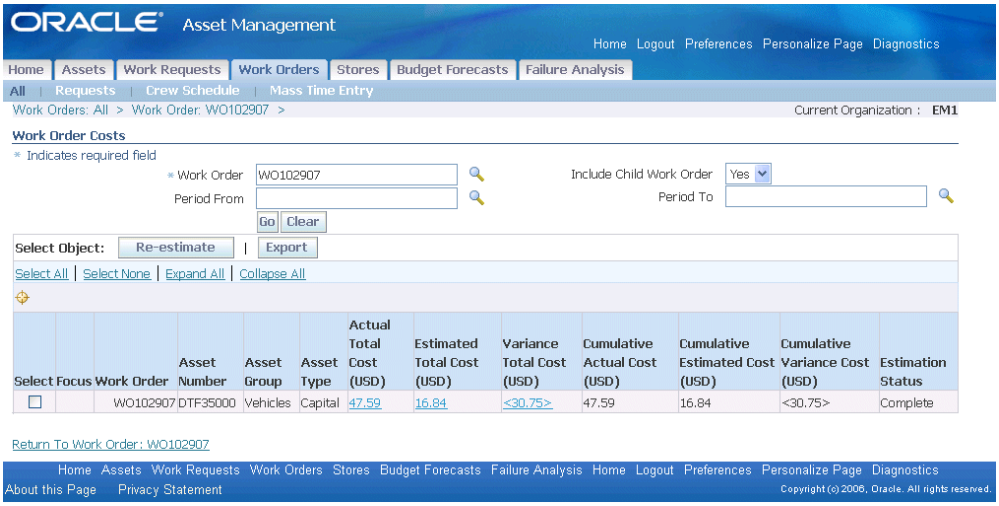
Work Orders



4. Select the Work Relationships tab to view all relationships, related to the current Work Order, in the View All Relationships region. See: Work Order Relationships, page 3-51.

5. Choose View Cost.

Work Order Costs



6. Select Yes from the Include Child Work Order list of values to view costs for all children rolled up to the current Work Order.

7. Choose Go.

Alternate Cost Hierarchy Rollup

You can view parent-child Work Order hierarchy costs, rolled up to the parent level. You might want to view costs for Work Orders outside of the hierarchy network.

To view an alternate hierarchy cost rollup:

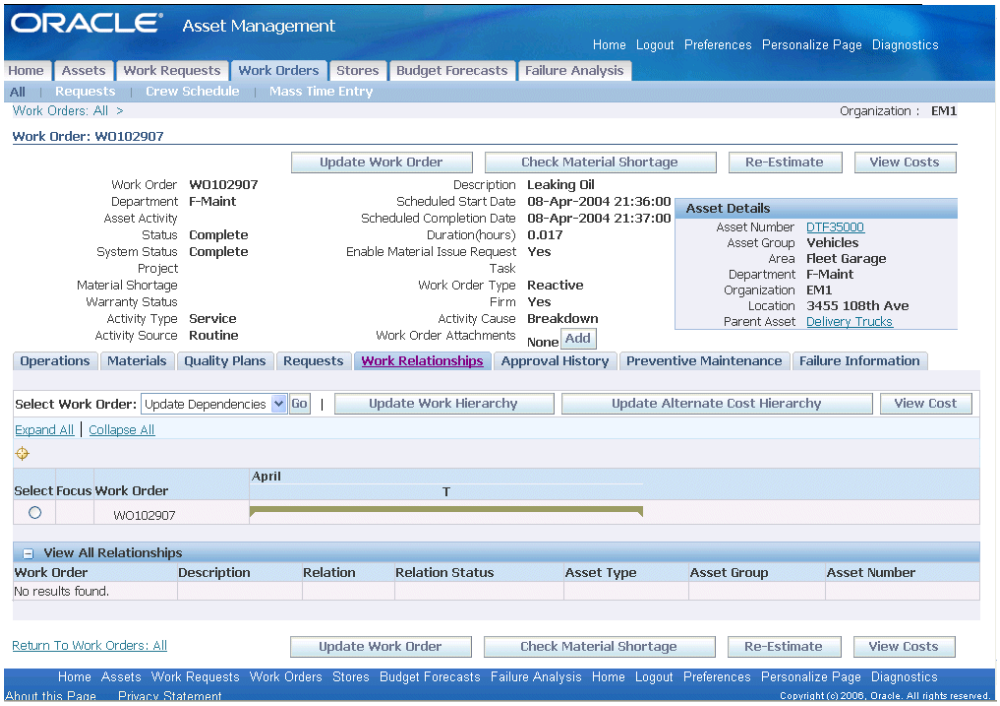
1. Navigate to the Work Orders page.

2. Query a Work Order.

3. Select the Work Order to view its details.

4. Select the Work Relationships sub-tab to view all relationships, related to the current Work Order, in the View All Relationships region. See: Work Order Relationships, page 3-51.

Work Orders



5. Choose Update Alternate Cost Hierarchy to view Work Order costs outside of the hierarchy network.

6. Choose Import Work Hierarchy.

7. Select the Work Order.

8. Select View Cost from the *Select Work Order:* list of values.

9. Choose Go.

Transferring Invoice Variances to Maintenance Work Orders

You can transfer variances, between purchase order price and invoice price, to a maintenance Work Order, from your user-defined adjustment account. This process (Transfer Shop Floor Invoice Variance) is available for both direct items and outside services and enables you to value your maintenance costs at the actual costs.

Transferring invoice variance tasks include the following:

- Viewing Simulated Transfer Details, page 6-18
- Transferring Invoice Variances, page 6-18

Related Topics

Overview of Direct Item Procurement for eAM Work Orders, page 5-1

Overview of eAM Contractor Services, page 8-1

Defining WIP Accounting Classes, *Oracle Work in Process User's Guide*

Viewing Simulated Transfer Details

You can generate the Simulate Transfer Shop Floor Invoice Variance report to display the details of each invoice variance and a summary total of the variance amount that may transfer. The report format is similar to the Shop Floor Invoice Variance Report. View this report to determine if you want to execute the variance transfer. Complete this task before you execute the Shop Floor Invoice Variance Report.

Related Topics

Simulate Transfer Shop Floor Invoice Variance, page 27-14

Transferring Invoice Variances

The Transfer Shop Floor Invoice Variance process transfers the invoice variance from your specific adjustment account (See: Defining WIP Accounting Classes, *Oracle Work in Process User's Guide*) to the maintenance Work Orders. This process generates account distribution entries that add the invoice variance amount back to the maintenance Work Order WIP accounts. This transfer executes for one organization, and one adjustment account at a time. For each execution, the process creates a unique batch number.

When the process completes successfully, you can generate the Shop Floor Invoice Variance Report to view your transfer details (See: Shop Floor Invoice Variance Report, page 27-15). Each execution completed by the transfer process is identified by a batch id number, generated by the process itself.

The accounting distribution created by the process is as follows:

Account Distributions Generated

Account	Debit	Credit
WIP accounting class valuation accounts	XXX	-
Invoice variance adjustment account	-	XXX

To execute the Transfer Shop Floor Invoice Variance process:

1. Navigate to the Shop Floor Invoice Variance window.

2. Select Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters

- **Transfer Description**

  Optionally enter a description for the invoice transfer.

- **Specific Work Order**

  Optionally view the variance transfer details for a Specific Work Order. Maintenance Work Orders with statuses of Cancelled, Closed, and Complete - No Charges are not available.

- **IPV Item Type**

  You can transfer invoice variances for:

  - *Direct Shop Floor Delivery items only*
  - *Outside Processing and Direct Shop Floor Delivery items*
  - *Outside Processing items only*

- **Item Range**

  If you chose *Outside Processing items only* as the value for the IPV Item Type parameter, you can specify an item range for your transfer.

- **Specific Item**

  If you chose *Outside Processing items only* as the value for the IPV Item Type parameter, you can specify an item for your transfer.

- **Category Set**

  If you chose *Outside Processing items only* as the value for the IPV Item Type parameter, you can specify a Category Set for your transfer.

- **Specific Category**

  If you previously selected *Outside Processing items only* as the value for the IPV Item Type parameter and a value in the Category Set parameter, you can specify a specific category from the previously selected category set.

- **Specific Project**

  You can choose to transfer invoice variances for items associated to a specific

project.

- **Adjustment Account**

  You can enter an adjustment account from which the invoice variance is transferred.

- **Invoice Cutoff Date**

  Enter a date. Approved and posted invoices through this date are included in your transfer.

3. Choose OK.

4. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

7

Direct Item Procurement for eAM Work Orders

This chapter covers the following topics:

- Introduction
- Overview of Direct Item Procurement for eAM Work Orders
- Enabling Direct Item Procurement
- Automatically Creating Requisitions for Direct Items
- Manually Entering Requisitions for Direct Items
- Creating Purchase Orders from Requisitions
- Manually Entering Purchase Orders for Direct Items
- eAM Direct Procurement Accounting

Introduction

Enterprise Asset Management (eAM) Direct Item Procurement enables you to order items directly to your maintenance organization. This chapter contains the following topics:

- Overview of Direct Item Procurement for eAM Work Orders, page 5-1
- Enabling Direct Item Procurement, page 7-3
- Automatically Creating Requisitions for Direct Items, page 7-4
- Manually Entering Requisitions for Direct Items, page 7-11
- Creating Purchase Orders from Requisitions, page 7-16
- Manually Entering Purchase Orders for Direct Items, page 7-19

- eAM Direct Procurement Accounting, page 7-23

Overview of Direct Item Procurement for eAM Work Orders

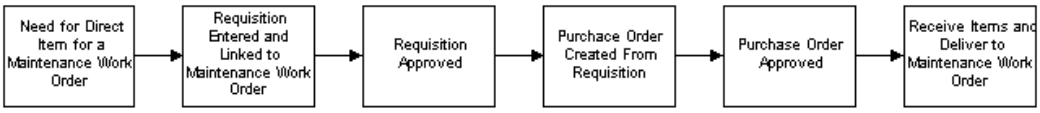
One of the most important features included in Enterprise Asset Management (eAM) is Work Management (See: Overview of eAM Work Management, page 3-2). Work Management enables you to create Work Requests when an asset is problematic. After the Work Request is approved, a Work Request can associate with a Work Order. A Work Order includes a listing of all maintenance activities are performed on an asset. Material requirements for a Work Order (See: Defining Material Requirements, page 3-37) may include stocked, non-stocked direct items, services, and direct items (description-based items). Stocked items are those that are either used frequently, or the criticality of short lead time to obtain replacement parts mandates that they be stocked in inventory. Non-stock direct items can be included in the internal catalog, but the decision is made to not maintain an inventory balance. These items are not transactable, not stockable, but you can procure them. Direct items are either non-stock or description-based. Non-Stock Direct Items can represent items that are not stocked in inventory, or services that need to be purchased from a supplier. Non-Stock Direct Items are not stocked in inventory but are defined in the Item Master as an inventory item, purchaseable, and purchase but not stockable (See: Inventory Attribute Group, *Oracle Inventory User's Guide*). Direct Items are contrived as "one-off", bought directly from a vendor for a specific Work Order and Operation. They are delivered directly to the Shop Floor from maintenance Work Order execution. You can add Planned Direct Items to a Work Order's Bill of Material (BOM) or an Activity BOM. Planned Direct Items must first be created in the Item Master as Non-Stockable and Purchasable inventory items (See: Non-Stock Direct Item Setup, page 2-116). A purchase requisition is optionally automatically created for these items, when the Work Order is released.

If you have Oracle iProcurement installed, all item types may be included in your internal catalog. A planner can procure Direct Items from the Maintenance Workbench (See: Using the Maintenance Workbench, page 3-71). Purchase requisitions and purchase orders of such items capture the Work Order for which they are required. If the Work Order is project related, then the project and task information is captured in the purchase requisition. You can procure Non-Stock and Description-based Direct Items, without accessing iProcurement, as well.

The following diagram illustrates the integration between Enterprise Asset Management and Procurement. First, a maintenance Work Order is created. If the Asset and/or Maintenance BOM that is associated with the asset includes Direct Items, those Direct Items are automatically part of the Work Order's material requirements. You can also manually add Direct Items (Non-Stock, Description-based, and Services) to a Work Order. When the Work Order is released, a purchasing requisition is created for the Direct Items that are included in the material requirements and that have the Auto Request Material check box selected. This check box setting defaults from the Asset and/or Maintenance BOM setup, but you can update it on the Work Order. The requisition is linked to the Work Order, and then approved. A purchase order is created

from the requisition, and then approved. You can create a purchase order manually, without first creating a requisition. In both cases, the purchase order needs approval. The items are received using a standard receipt routing, and delivered to the maintenance Work Order. The cost on the Work Order records as the actual purchase order price.

Direct Item Procurement for eAM Work Orders Process



This section includes the following topics:

- Enabling Direct Item Procurement, page 7-3
- Automatically Creating Requisitions for Direct Items, page 7-4
- Manually Entering Requisitions for Direct Items, page 7-11
- Creating Purchase Orders from Requisitions, page 7-16
- Manually Entering Purchase Orders for Direct Items, page 7-19
- eAM Direct Procurement Accounting, page 7-23

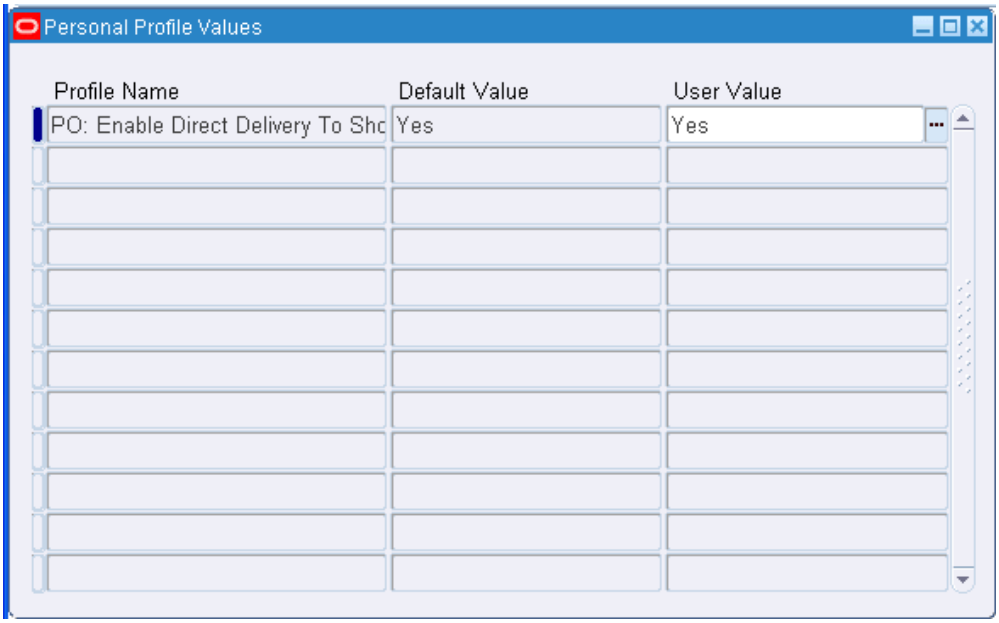
Enabling Direct Item Procurement

To enable direct item (both supplier catalog and non-catalog items) procurement for eAM Work Orders directly from an eAM Work Order, set the *PO: Enable Direct Delivery To Shop Floor* profile option to Yes. When this value is set to Yes, you can create an eAM-related requisition or purchase order. You can enter eAM specific information, such as Work Order and operation reference numbers, as well as identify a requisition line as having a Shop Floor destination. Requisitions are created automatically for Direct Items (Non-Stock and Description-based), after a Work Order with those Direct Items on its material requirements listing is released.

To enable direct item procurement:

1. Navigate to the Personal Profile Values window.

Personal Profile Values



2. Select *PO: Enable Direct Delivery To Shop Floor* from the Profile Name list of values.
3. Select Yes from the Default Value list of values.
4. Save your work.

Related Topics

Purchasing Profile Options, *Oracle Purchasing User's Guide*

Automatically Creating Requisitions for Direct Items

First, a maintenance work order is created. If the asset or maintenance BOM that is associated with the work order includes direct items, those direct items are automatically part of the work order material requirements. You can also manually add direct items (Non-Stock and Description-based) to a work order. When the work order is released, a purchasing requisition is created for the direct item that is included in the material requirements and that have the Auto Request Material check box selected. This check box setting defaults from the asset or maintenance BOM setup, but you can update it on the work order. The requisition is linked to the work order, and then approved. A purchase order is created from the requisition, and then approved. You can also create a purchase order manually, without first creating a requisition. In both cases, the purchase order needs approval.

Important: You cannot automatically create one requisition for multiple direct items on a work order. If a work order includes multiple direct items, you must manually create the requisition. You must clear the Auto Request Material check box on the Maintenance BOM or the work order direct item line.

To automatically create requisitions:

1. Navigate to the Work Orders window.
2. Choose New.

   The header information displays general information about the Asset Number and the type of work required.
3. The work order number is assigned, but you can update it.
4. Enter an Asset Number requiring maintenance. The Asset Group defaults (See: Defining Asset Numbers, page 2-65).
5. Select an Asset Activity. Asset activities associated with this asset number are available.

   Note: If this work order was previously created, you can add an asset activity, as long as the work order is at an Unreleased or Draft status, or an asset activity was not previously defined. If any tasks, material, or resource requirements exist, these must be deleted before adding an asset activity to a pre-existing work order.

   After selecting an asset activity, the associated maintenance BOM (material) (See: Setting Up Maintenance Bills of Material, page 2-93) and maintenance route (resources), associated with the activity (See: Defining Maintenance Routes, page 2-99), attach to the work order. After an asset activity is saved to a work order, you can no longer change or delete it.
6. Enter a Class code to represent the charge (expense) accounts associated with the Asset Number. This defaults from the Asset Number (See: Defining Asset Numbers, page 2-65); you can update it.
7. Enter the Status. For example, Unreleased, Released, On Hold, and Draft. Certain transactions update this status automatically, including Work Order Completion, for example (See: eAM Work Order Statuses, page 3-23).
8. If this is a child work order in a work order network and Parent Child is populated in the Relationship Type field, the parent work order is populated in this field.

9. In the Scheduled Dates region, enter the scheduled Start date for the work order if it is based on a forward schedule. The scheduling process uses this date as a starting point to calculate the scheduled end date and duration for allocated resources and material. If the material or resources are not available by this date, the scheduling process moves the start date forward (See: eAM Scheduling, page 2-151).

10. Enter a scheduled Completion date for backward scheduling. This date indicates the requested end by date for the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and material. If the material and resources are not available by that date, the scheduling process moves the start date backwards to ensure completion by the required end date (See: eAM Scheduling, page 2-151).

11. Within the Main tab, the Department defaults from the selected Asset Number (See: Defining Asset Numbers, page 2-65). This indicates the persons or department responsible for this Asset Number.

12. Optionally select a Priority. For example, High, Medium, or Low.

13. Optionally select a Work Order Type. Work order types enable you to differentiate work orders, for example, Routine, Preventive, Rebuild, Emergency, or Facilities. Maintenance management can use this information to sort and monitor work activities for reporting and budgeting. Work order types are referenced in the work order. For information on how to create valid values, See: Work Order Types, page 2-45.

14. The Shutdown Type defaults from the activity. This helps the planner group work orders that may require shutdowns, so that they are planned together.

15. If the Firm check box is selected, planning and scheduling does not adjust the schedule, regardless of material or resource availability (See: Overview of Planning and Scheduling). This check box defaults as selected or cleared, depending on the Auto Firm On Release check box setting, established in the Enterprise Asset Management Parameters setup for the current organization (See: Defining eAM Parameters, page 2-11). This defaults after the work order is released.

    If the check box is selected, the end date is calculated, based on the work order duration. The scheduler automatically calculates the duration based on the operations (resource duration setup) on the work order. You can update this check box for Work Orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: eAM Work Order Statuses, page 3-23).

16. Optionally select the Notification Required check box.

17. Optionally select the Tagout Required check box to indicate that the area needs to be secured for operations required to execute this work order. Tags are generally printed and placed on an asset, warning the plant that it is shutdown and should

not be started. This check box helps the planner isolate those jobs that require a tagout.

To store tagout documents using the Attachments feature

18. Select the paperclip Attachments icon to attach relevant tagout documents. You can attach URL, file, or text attachments. See: Defining Work Order Documents, page 3-27.

19. The Planned check box is selected if the current work order was created from forecasted work orders (See: Preventive Maintenance Work Orders, page 3-13).

20. Optionally select the Enable Material Issue Requests check box to enable eAM to manage material availability for the current work order. Material is physically available to a work order via the material request and verification process. This check box is selected by default if it is selected on the eAM Parameters window. This check box is disabled when the work order is at a Released status.

21. Optionally select the Activity tab.

    1. Optionally select an Activity Type. This code indicates the type of maintenance for this Activity and is used when defining a job or a standard job, for example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This value defaults from the Activity (See: Defining Activities, page 2-81).

    2. Optionally select an Activity Cause to specify what situation caused this work to generate, for example, Breakdown, Vandalism, Normal Wear, or Settings. This value defaults from the Activity (See: Defining Activities, page 2-81).

    3. Optionally select an Activity Source to specify reasons Activities need execution, for example, Warranty Compliance, OSHA Compliance, or Military Specification Requirements. This value defaults from the Activity (See: Defining Activities, page 2-81).

22. Optionally select the Project tab. This tab is enabled if Project Manufacturing is installed and enabled.

    1. Optionally select a Project.

    2. Optionally select a Task.

23. You can select the Rebuild tab if this work order is created for a rebuildable item. See: Rebuild Work Orders, page 3-14.

24. Optionally select the Maintenance Request tab to display service and work requests associated with this work order. You can add service and work requests to a work order by selecting a service request or request number, respectively. Work requests

at an Awaiting Work Order status and Maintenance Type Service Requests at an Open status are available for association. You may associate multiple work requests to a single work order, and one work order can associate with a service request. You can associate a service request to multiple work orders. You can dissociate a work and service request from a work order.

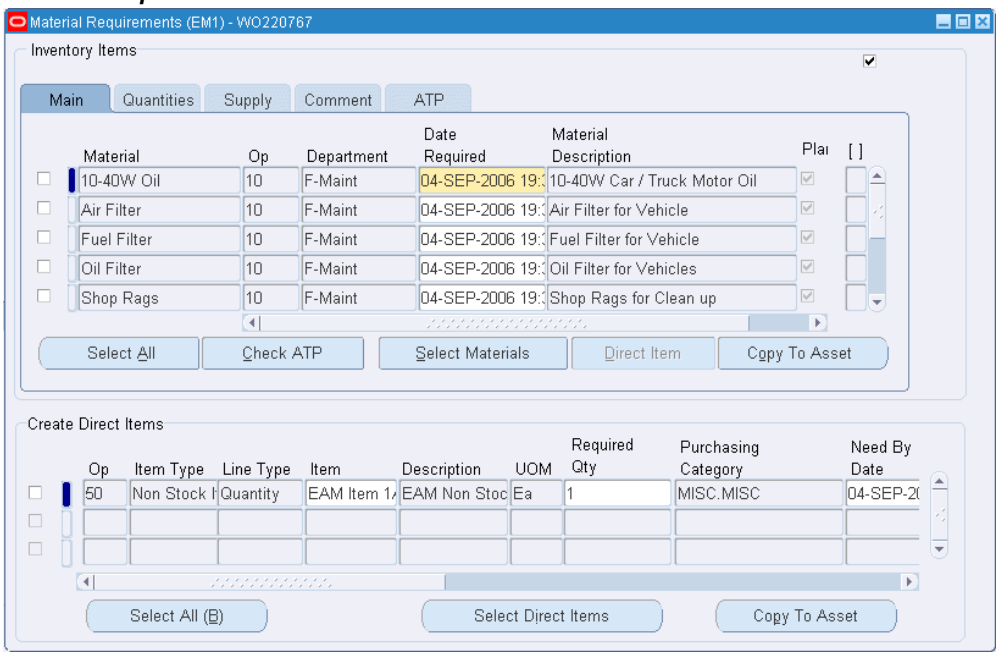
25. Select the Bill, Routing tab to select alternate, predefined BOMs and Routings. See: Setting Up Maintenance Bills of Material, page 2-93and Defining Maintenance Routes, page 2-99.

    After the alternate BOM and routing are selected, the system uses the associated items and assigns the associated resources needed to execute the work order.

26. Optionally choose Operations to prepare necessary operations. These operations default from the maintenance route (See: Defining Maintenance Routes, page 2-99) associated with the current Activity, but you can update and add to them (See: Preparing Work Order Operations, page 3-30).

27. Optionally choose Materials to view or update the material requirements for this purchase order (See: Defining Material Requirements, page 3-37). When this work order is Released, purchase orders or requisitions are created for the material requirements' Direct Items if the Auto Request Material check box is selected (viewed by scrolling right). These items defaulted from the Maintenance BOM; they are referenced in the Direct Items region. The Supplier and Price information was established within the Bills of Material window when adding the direct items to the asset or maintenance BOMs. This information defaults into the work order.

Material Requirements



28. Optionally choose Resources to view, add, or update the resources assigned to each operation. See: Defining Resource Requirements, page 3-46.

29. Optionally choose Relationships to manage work order schedules and view work order details. See: Work Order Relationships, page 3-51.

30. Optionally choose Asset Route to view the asset route associated with the asset group for the current work order. You might need to perform one activity on multiple asset numbers. To eliminate the possibility of creating multiple work orders for the same activity, you can define asset routes. See: Defining Asset Routes, page 2-74.

    You can choose Asset Route if an Asset Route is associated with the current Asset Number.

31. Optionally choose Costs to view the costs of work orders falling in the specific accounting periods, specified in the Accounting Information by Period region. Accounting Periods are defined within Oracle General Ledger. See: Defining Period Types, *Oracle General Ledger User's Guide* and Defining Calendars, *Oracle General Ledger User's Guide*.

    1. Optionally select a work order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and material against the current work order.

- *Actual Costs:* This is the accumulation of all costs for material and resource transactions for the associated maintenance work orders based on a specified period.

- *Estimates:* A BOM (material parts list) and routing (resources) can associate with a work order. When you select the Estimates tab, the estimated costs of all material and resources associated with a work order appear, enabling you to budget costs. Direct Items that are included in the material requirements are considered.

- *Variances:* The difference between the actual costs recorded and estimated costs.

- *Material:* All material and material overhead transaction costs.

- *Labor:* All employee resource and resource overhead transaction costs.

- *Equipment:* All material resource and resource overhead transaction costs.

2. Optionally choose Details to view actual, estimated, and variance costs for labor hours, equipment hours, and material for specific operations of the current work order.

32. Save your work.

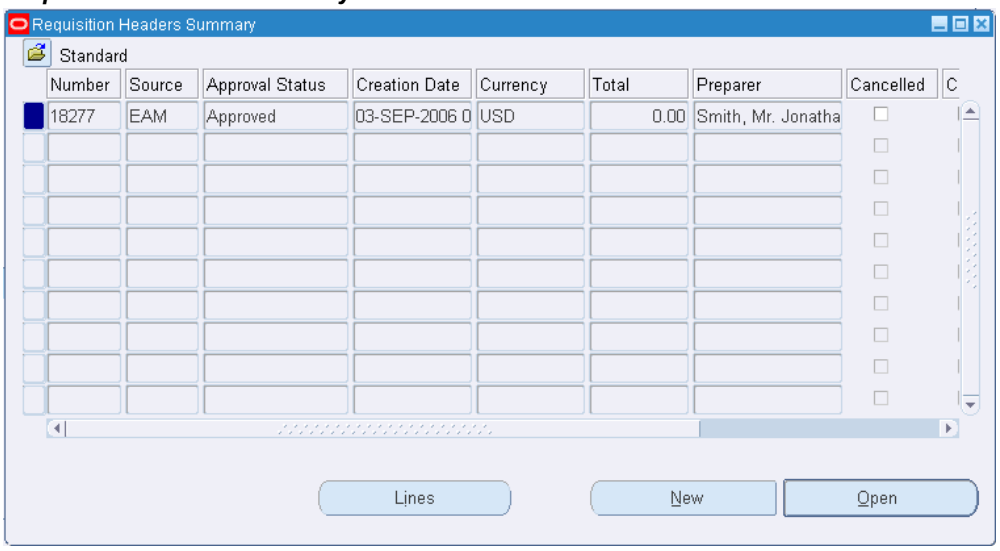
To view the purchasing requisition created:

1. Navigate to the Find Requisitions window (Purchasing > Requisitions > Requisition Summary).

2. Select the maintenance Work Order number from the Reference Num list of values.

3. Choose Find. The maintenance work order appears. The Source reads EAM.

Requisition Headers Summary



Additional Information: You can also create requisitions automatically using the web-based user interface, See: Work Orders, page 20-35.

Manually Entering Requisitions for Direct Items

You can manually create requisitions for Direct Items within iProcurement or Purchasing. If you have Oracle iProcurement installed, you can access supplier catalog items directly from an eAM Work Order. If you create a requisition within iProcurement, the Work Order and operation information generates as you proceed to checkout. You can access a link to Direct Items using the Maintenance Workbench (See: Using the Maintenance Workbench, page 3-71), or within the Work Order window. You can procure Non-Stock and Description-based Direct Items, without accessing iProcurement, as well. You can also create requisitions using the web-based user interface. See: Work Orders, page 20-35.

Important: You cannot automatically create one requisition for multiple direct items on a work order. If a work order includes multiple direct items, you must manually create the requisition.

To enter requisitions for direct items using Oracle iProcurement:

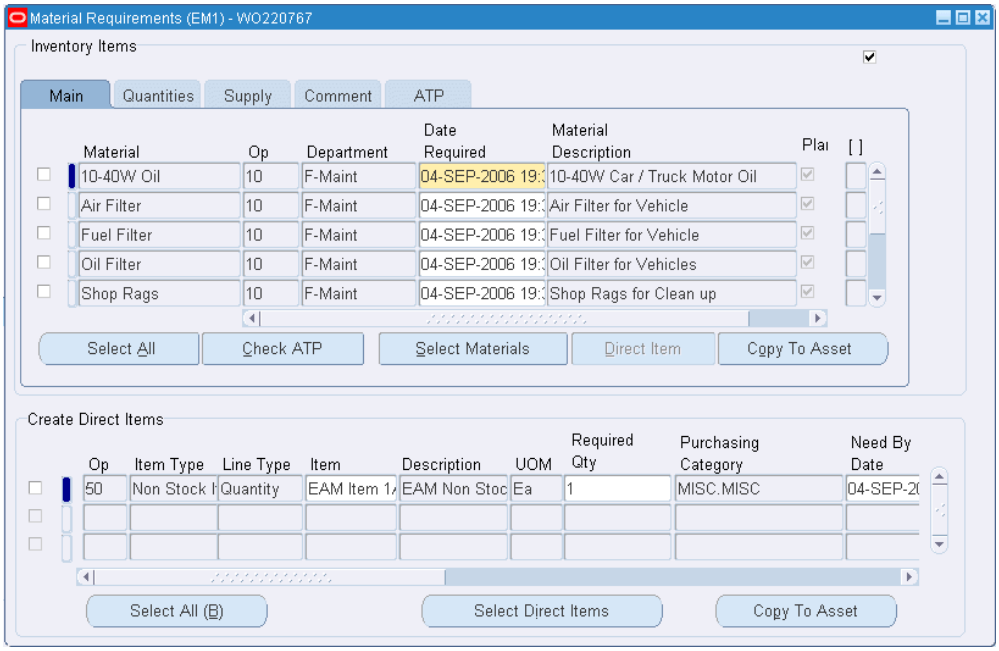
1. Navigate to the Work Orders window.

2. Select a Work Order number (See: eAM Work Order Statuses, page 3-23).

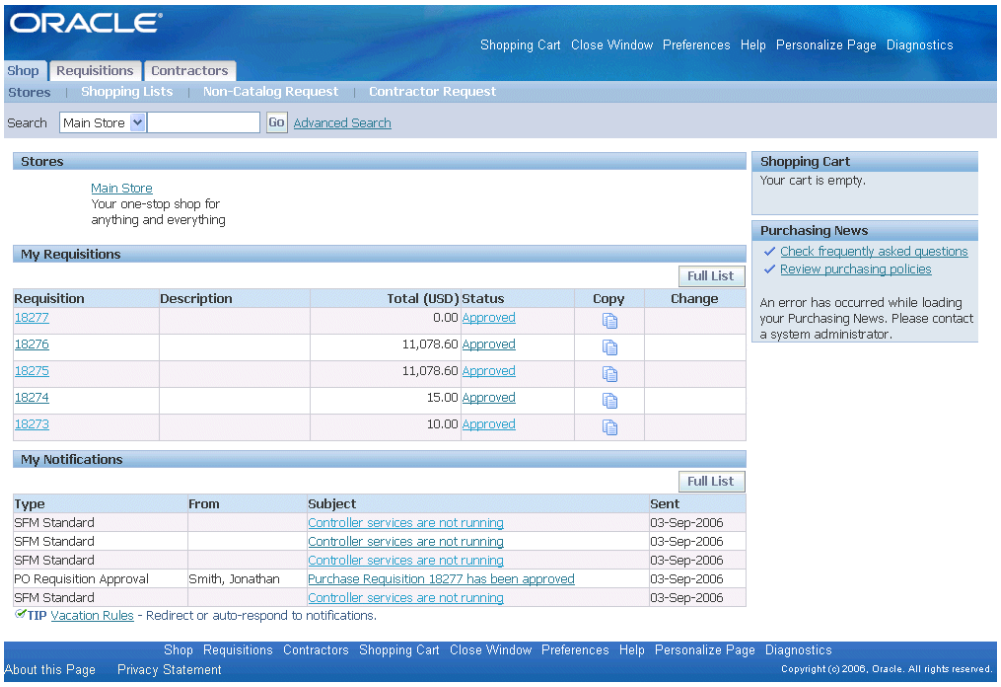
3. Choose Materials to view or update the material requirements for this purchase order (See: Defining Material Requirements, page 3-37). After purchase orders or requisitions related to Direct Items are created for this Work Order, they are referenced in the Direct Items region.

> **Note:** Purchase orders and requisitions are not referenced within the forms application. You can reference them using the Maintenance Super User responsibility. See: Work Orders, page 20-35.

Material Requirements



4. Choose Direct Item to purchase items directly from supplier and non-supplier catalogs, using Oracle iProcurement, or enter the direct items to purchase within the Create Direct Items region (See: Defining Direct Item Material Requirements, page 3-43).



All procured Non-Stock, Service, and/or Description-based requisition numbers appear in the My Requisitions region.

5. Buy necessary items and check out. These items are automatically associated with your Work Order.

6. Save your work.

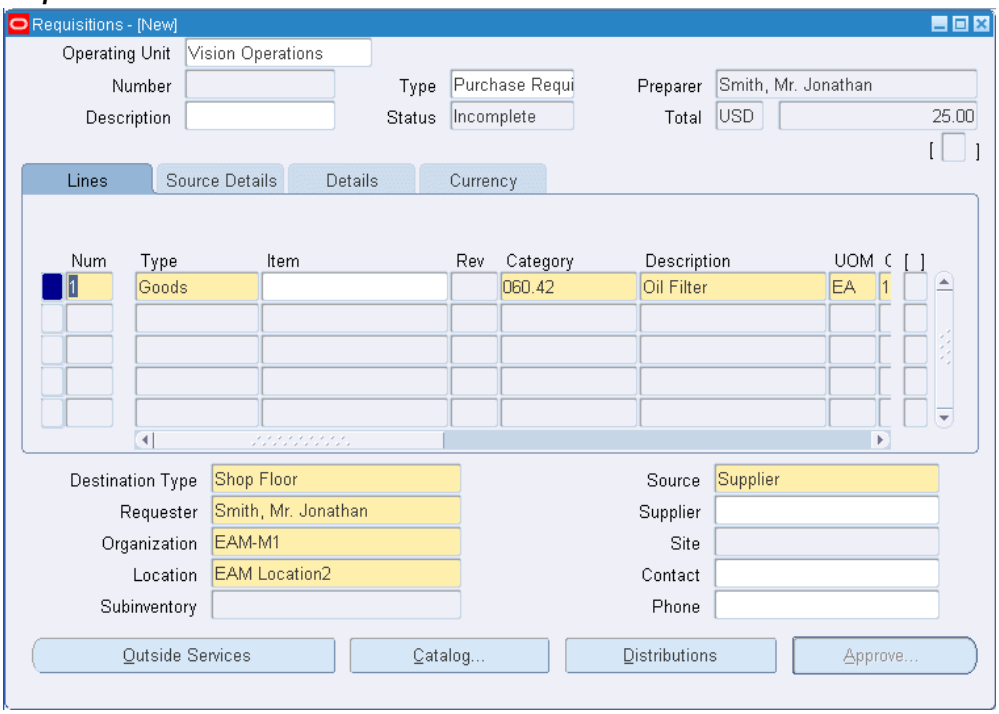
To manually enter requisitions for direct items via Oracle Purchasing:

In addition to procuring Direct Items directly from a Work Order (See: Defining Direct Item Material Requirements, page 3-43), you can access Direct Item procurement functionality using Purchasing. This functionality is available if you have Enterprise Asset Management installed.

You can enter a requisition within both the forms application and Maintenance User. When entering a requisition within the forms application, this is performed directly within the Requisitions window, and not from the eAM Work Order, as in Maintenance User. See: Work Orders, page 20-35

1. Navigate to the Requisitions window (Purchasing > Requisitions > Requisitions).

Requisitions



2. Optionally enter a requisition Description.

3. Select the Lines tab.

4. Select Goods or Services from the item Type list of values.

5. Optionally select an Item to purchase. Items that are defined in Inventory, with the Stockable check box cleared, are available for selection. See: Inventory Attribute Group, *Oracle Inventory User's Guide*

6. Select the purchasing Category of the item you want to purchase. See: Defining Categories, *Oracle Inventory User's Guide*. You can specify labor or equipment, as well as material accounts, to charge on a Work Order by assigning the category to the requisition line. This enables you to bypass the outside processing setup if the outside resource service is a one-time situation. The purchase order can include several cost elements.

7. Enter the item's Description. This description should be meaningful because it is used to procure the item. If this item is not inventoried, this is how an internal person understands what item you are attempting to procure.

8. Select a UOM. The unit of measure qualifies the quantity you enter on the purchase order line. When you choose a line type, its default unit of measure populates this

field. If you choose an item, its default unit of measure overwrites the line type default. You can change the UOM until the item is received, billed, or encumbered.

9. Enter a Quantity to purchase.

10. Select a Need-By date.

11. Select Shop Floor from the Destination Type list of values, for all direct item and non-stock item, eAM related requisitions. You can select a destination type of Shop Floor for all purchasable items that are not selected as Stockable in the Item Master (See: Defining Items, *Oracle Inventory User's Guide*).

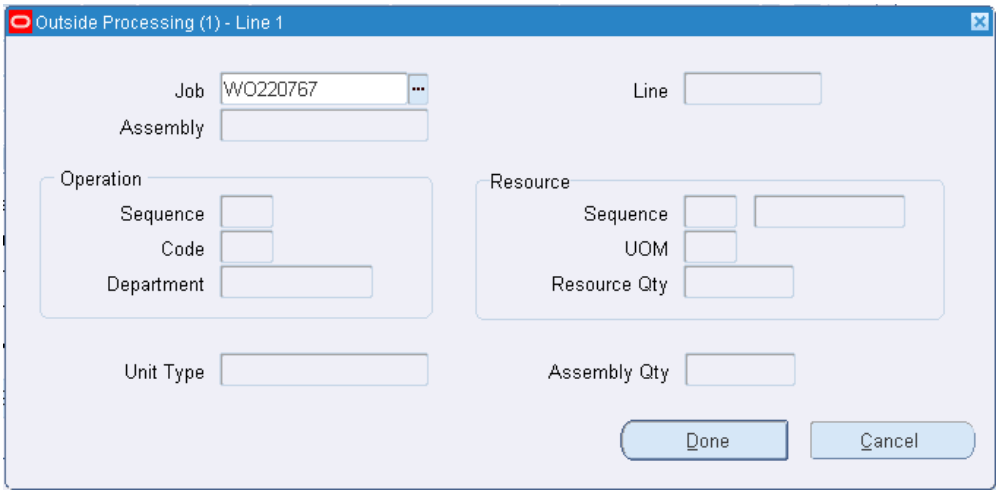
    When you select a destination type of Shop Floor, eAM recognizes this as a requirement to deliver the direct item to the maintenance Work Order.

12. The Destination Organization list of values displays those organizations where the item is non-stockable, if the Destination Type is Shop Floor.

    Note: For information on all remaining fields on this window, See: Entering Requisition Lines, *Oracle Purchasing User's Guide*.

13. Choose Outside Services. You can access this window from the Requisition, Purchase Order, and Release windows. This is enabled if the Destination Type previously specified is Shop Floor.

Outside Services



14. Select a Work Order from the Job list of values. Released maintenance Work Orders are available. After you select a Work Order, any eAM project and task information associated with the Work Order is copied to the corresponding Project and Task fields, within the Project tab in the requisitions or purchase order Distributions

window.

15. Select an Operation Sequence. The purchased material is associated with this operation on the current Work Order. Purchasing displays the operation Code and the Department.

16. Choose Done.

    Note: For information on all remaining fields on the Outside Processing window, See: Entering Outside Processing Information, *Oracle Purchasing User's Guide*.

17. Save your work.

18. The requisition needs approval (See: Creating Process Definitions in Oracle Workflow Builder, *Oracle Workflow Guide*). After the requisition is approved, it appears on the eAM Work Order and is viewed in Purchasing.

Related Topics

Entering Requisition Headers, *Oracle Purchasing User's Guide*

Entering Requisition Lines, *Oracle Purchasing User's Guide*

Entering Requisition Distributions, *Oracle Purchasing User's Guide*

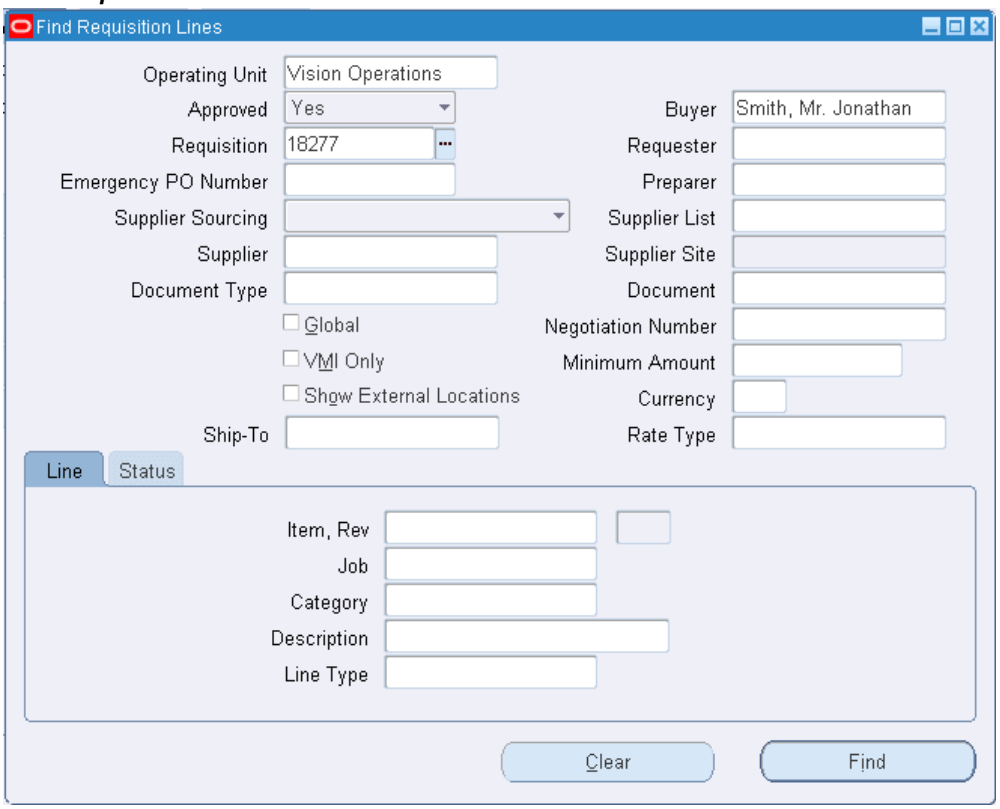
Creating Purchase Orders from Requisitions

After a requisition is created and approved, you can execute an AutoCreate process to create purchase orders.

To create purchase orders:

1. Navigate to the Find Requisition Lines window (Purchasing > AutoCreate).

Find Requisition Lines

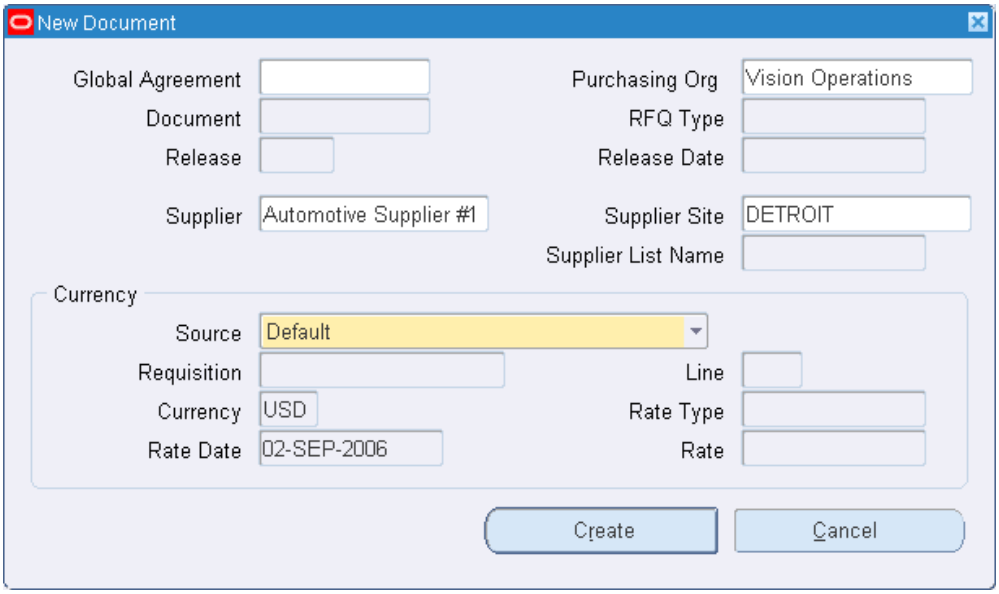


2. Enter the Requisition number. This requisition is created into a purchase order.

3. Choose Find.

4. Choose Automatic.

New Document



5. Select a Supplier.

6. Choose Create, and then make a note of the purchase order number created.

7. Verify that the item is of Type Goods.

8. Choose Shipments.

9. Choose Receiving Controls.

10. Select a Receipt Routing. This is the receipt routing to which you are assigning the procured items: Direct Delivery, Standard Receipt, or Inspection Required. See: Receiving Controls, Options, and Profiles, *Oracle Purchasing User's Guide*.

11. Choose OK.

12. From the Shipments window, choose Distributions. Verify that the destination Type field is populated with Shop Floor, and the Subinventory is blank.

13. Choose Outside Services. Verify the Job and Operation Sequence.

    Note: For information on all remaining fields within the Outside Processing window, See: Entering Outside Processing Information, See: Entering Outside Processing Information, *Oracle Purchasing User's Guide*.

14. Choose Done.

15. Save your work.

16. Choose Approve.

17. Within the Approve Document window, choose OK. After the purchase order is approved, the purchase order is received within Purchasing.

Related Topics

Entering Purchase Order Distributions, *Oracle Purchasing User's Guide*

Manually Entering Purchase Orders for Direct Items

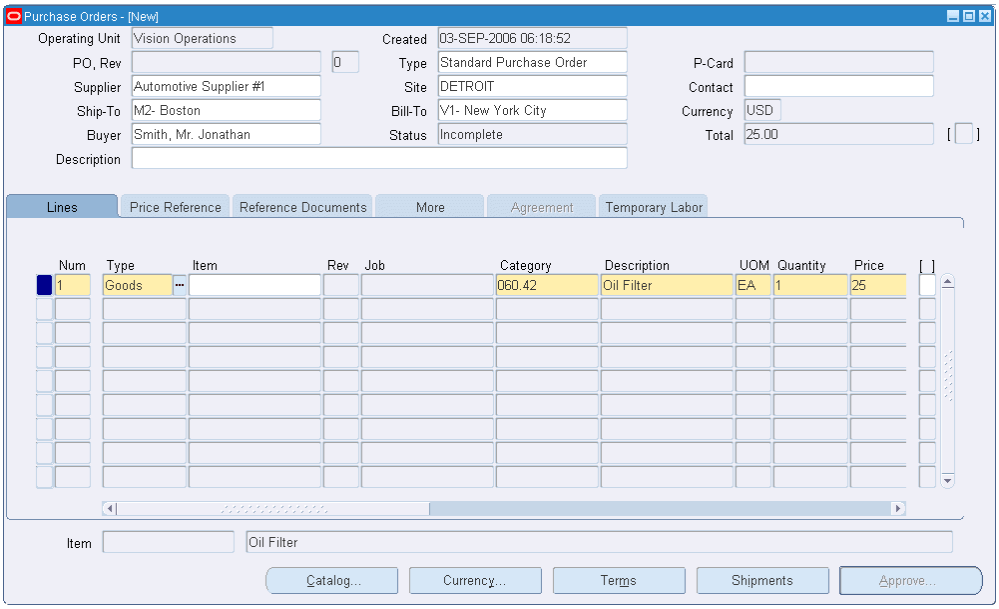
You can create purchase orders for direct items within Purchasing.

You must manually create requisitions or purchase orders for work orders that require multiple direct items.

To enter purchase orders for direct items via Oracle Purchasing:

1. Navigate to the Purchase Orders window.

Purchase Orders



2. If you did not choose automatic purchase order generation in the purchasing options (Numbering tab), enter a unique PO (purchase order) number. Otherwise, the number generates when you save your work. See: Defining Purchasing Options, *Oracle Purchasing User's Guide*. The Rev (revision) appears to the right of the number.

3. Select Standard Purchase Order from the Type list of values. You can modify the document type names in the Document Types window (See: Defining Document Types, *Oracle Purchasing User's Guide*).

4. Optionally select a Supplier. A supplier must be provided for approval.

5. Select the supplier Site. A site must be provided for approval. After the purchase order is approved, you can change the supplier site if the PO: Change Supplier Site profile option is set to Yes (See: Purchasing Profile Options, *Oracle Purchasing User's Guide*).

6. Optionally select a Contact. This is the name of the contact at the supplier site.

7. Optionally enter the Ship-To and Bill-To locations for the purchase order. If you entered a supplier site, the location values you assigned to the supplier or supplier site default into these fields. See: Purchase Order Defaulting Rules, *Oracle Purchasing User's Guide*

8. If the Enforce Buyer Name option in the Purchasing Options is set to yes, your name appears as the Buyer. Otherwise, you can enter the name of any buyer. See:

Defining Control Options, *Oracle Purchasing User's Guide*

9. Enter a Description for the purchase order. This description does not print on the purchase order, and is for internal use. If you want to add unlimited notes, use the attachments feature (See: Attaching Notes to Purchasing Documents, *Oracle Purchasing User's Guide*

10. Select the Lines tab. For new purchase order lines, Purchasing displays the next sequential line Num (number) available. You can accept this number or enter any line number that does not already exist. This number is used for all tabs in this window.

11. Select the a Goods or Services line Type. Purchasing automatically copies the corresponding defaults, based on the selected line type. See: Defining Line Types, *Oracle Purchasing User's Guide*.

12. Optionally select an Item to purchase. Items that are defined in Inventory, with the Stockable check box cleared, are available. See: Inventory Attribute Group, *Oracle Inventory User's Guide*.

13. Select the purchasing Category of the item you want to purchase. See: Defining Categories, *Oracle Inventory User's Guide*.

14. Enter the Description of the item. This description should be meaningful, because it is used to procure the item. If this item is not inventoried, this how an internal person understands what item you are attempting to procure.

15. Enter the Quantity you are purchasing.

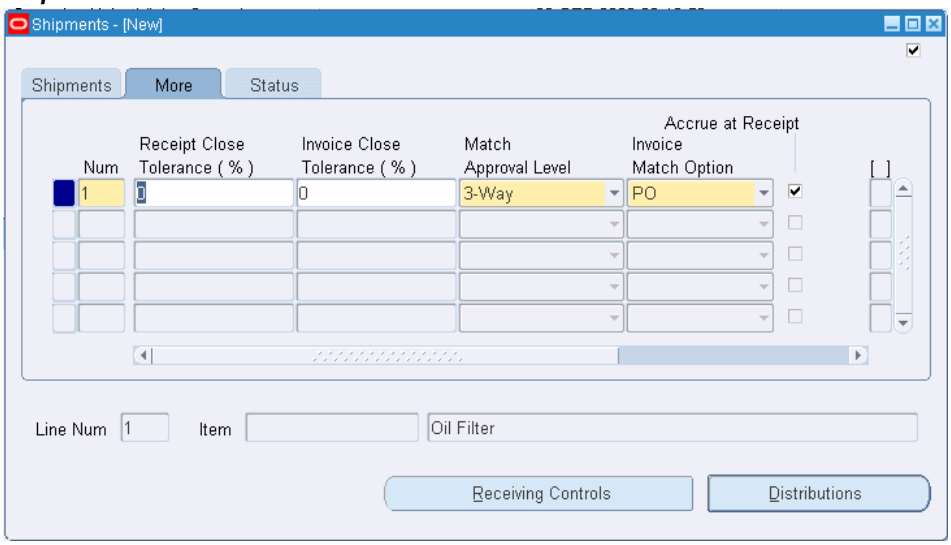
16. Select a UOM. The unit of measure qualifies the quantity you enter on the purchase order line. When you choose a line type, its default unit of measure populates this field. If you previously chose an item, its default unit of measure overwrites the line type default. You can change the UOM until the item is received, billed, or encumbered.

17. Enter the unit Price for the item.

18. Choose Shipments to enter multiple shipments for standard and planned purchase order lines, and to edit shipments Purchasing automatically created for you (See: Entering Purchase Order Shipments, *Oracle Purchasing User's Guide*).

    1. Select the More tab.

Shipments Window



2. Select the Accrue at Receipt check box to indicate that the items on this purchase order line accrue at receipt.

19. Choose Distributions to enter distribution information for purchase order shipments, or to view distributions that Purchasing automatically created for you. You can enter multiple distributions per shipment line, and enter information regarding paper requisitions (See: Entering Purchase Order Distributions, *Oracle Procurement User's Guide*).

20. Choose Outside Services to associate this purchase order with a maintenance Work Order.

21. Select a maintenance Work Order from the Job list of values. After a Work Order is selected, any eAM project and task information associated with the Work Order copies to the corresponding Project and Task fields within the Project tab in the requisitions or purchase order Distributions window.

22. Select an Operation Sequence. The purchased material is associated with this operation on the current Work Order. Purchasing displays the operation Code and the Department.

23. Choose Done.

24. Save your work.

25. The purchase order needs to be approved (See: Creating Process Definitions in Oracle Workflow Builder, *Oracle Workflow Guide*). After the purchase order is

approved, it will appear on the eAM Work Order, and is viewed in Purchasing.

Related Topics

Entering Purchase Order Headers, *Oracle Purchasing User's Guide*

Entering Outside Processing Information, *Oracle Purchasing User's Guide*

Entering Purchase Order Lines, *Oracle Purchasing User's Guide*

eAM Direct Procurement Accounting

You can charge Direct Items (Non-Stock and Description-based) to a selected appropriate Purchasing Cost Elements by selecting a Purchasing Order Category. To bypass the outside processing setup because the outside resource service is a one-time event (See: Setting Up Outside Service Processing, page 2-168), you can charge labor, equipment, and material accounts to a Work Order by assigning a category to the requisition line (See: Setting Up Purchase Order Category Associations for Direct Items, page 2-181).

For all requisition or purchase order distribution lines with a destination type of Shop Floor (not related to outside processing), the amount (quantity * purchase price * exchange rate) charges to the eAM Work Order Material account.

The receiving process creates the following accounting entries:

Receiving Process Entries

Account	Debit	Credit
Receiving Inspection	XXX	-
Accounts Payable Accrual	-	XXX

The material delivery process creates the following entries:

Account	Debit	Credit
Work Order Material	XXX	-
Receiving Inspection	-	XXX

8

Contractor Services

This chapter covers the following topics:

- Introduction
- Overview of eAM Contractor Services
- Setting Up Outside Service Processing

Introduction

Enterprise Asset Management (eAM) integrates with Outside Service Processing, enabling your maintenance environment to track outside service purchasing transaction and costing information for maintenance Work Orders. This chapter contains the following topics:

- Overview of eAM Contractor Services, page 8-1
- Setting Up Outside Service Processing, page 2-168

Overview of eAM Contractor Services

Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work based on an agreed upon contract or agreement. For example, a contractor service may be a painting service. It is also important to associate the purchasing transactions, such as the requisition and purchase order, to the Work Order. In order for this to be executed, the appropriate steps must be completed in Purchasing and Enterprise Asset Management.

Outside Service Processing provides the functionality to create items that are contractor services, such as landscaping, include these items on a Work Order, and execute the related purchasing transactions as the Work Order is released. By creating a contract service as an Outside Service Processing item, the purchasing requisition is created when the Work Order is Released. The additional purchasing transaction, including the

creation of the purchase order, the approval, and invoicing process, are then managed by Purchasing. This optional process ensures that the actual charges are applied to the Work Order. The supplier accesses the purchase order and maintenance Work Order via iSupplier Portal. Within iSupplier Portal, the supplier can view all open and closed outside service operations and their associated maintenance Work Orders. The supplier can enter mandatory collection plan results, before completing the outside operation (See: Oracle iSupplier Portal, *Oracle iSupplier Portal User's Guide*).

The other option is to enable Standard Rate. This applies pre-determined standard rates, for contractor services, to the Work Order, without invoking the purchasing transaction.

Outside Processing Setup tasks for Enterprise Asset Management include the following:

- Setting Up Outside Service Processing, page 2-168

Setting Up Outside Service Processing

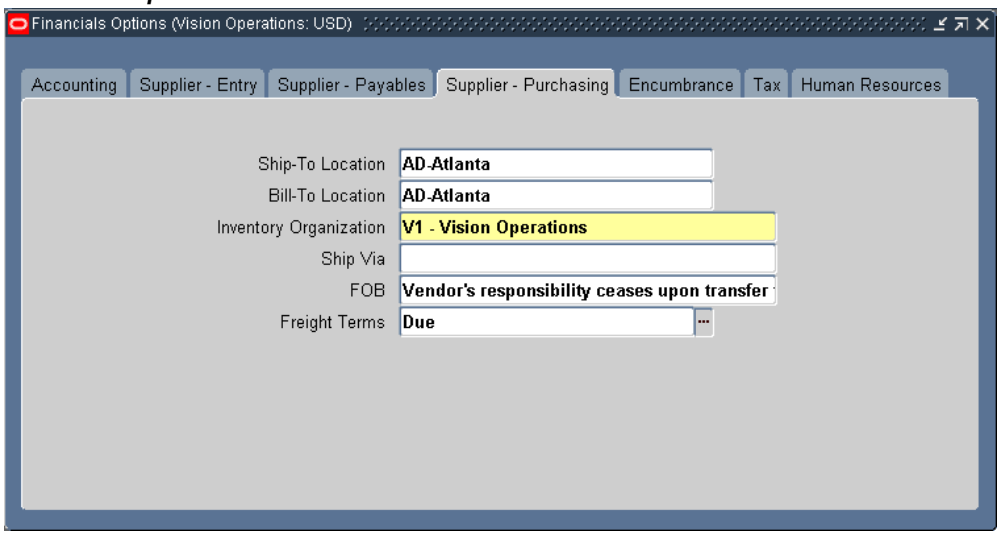
Purchasing recognizes items, while eAM recognizes resources. As a result, the contractor service item must be linked to a resource for the purchase order to be tied to the Work Order. This is associated via the Resources window. Additionally, the resource must be associated with a department. The department must specify the location where the services are to be delivered. This must be a valid location for the organization.

For each contractor service resource, you can determine whether the rate charged to the Work Order will be a standard rate or the actual amount, based on the purchase order price. This is set up within the Resources window, and may vary for each resource.

To set up purchasing information:

1. Navigate to the Financials Options window.
2. Select the Supplier-Purchasing tab.

Financials Options



The options you define in this region, except for Inventory organization, are used as default values for the Purchasing region of the Suppliers window (See: Suppliers, *Oracle Payables User's Guide*). The supplier values default to new supplier sites for the supplier, which default to new purchasing documents for the supplier site.

3. Select Ship-To and Bill-To Locations. These are the names of the ship-to/bill-to location for the system default values. If the name you want does not appear in the list of values, use the Location window to select a new location (See: Setting Up Locations, *Using Oracle HRMS - The Fundamentals*).

4. Select an Inventory Organization. You can associate each of your purchasing operating units with one inventory item master organization. Your eAM Organization should point to this item master. When you associate your purchasing operating unit with an inventory organization, items you define in this organization are available in Purchasing. You can choose an inventory organization that uses the same set of books as your Purchasing operating unit. Do not change the inventory organization after you have already assigned one to Purchasing.

5. Optionally, select a Ship Via code. This is the freight carrier you use with suppliers. If the type of freight carrier you want is not available, use the Freight Carriers window to define a new shipping method. The value you enter is the value in the Description field of the Freight Carriers window, within Purchasing.

6. Select an FOB. If the type of FOB you want is not available, use the Oracle Purchasing Lookups window to define a new FOB.

7. Select a Freight Terms code. The fright terms for a supplier identify whether you or your supplier pay for freight charges on goods you receive. You can define new

freight terms in the Oracle Purchasing Lookups window.

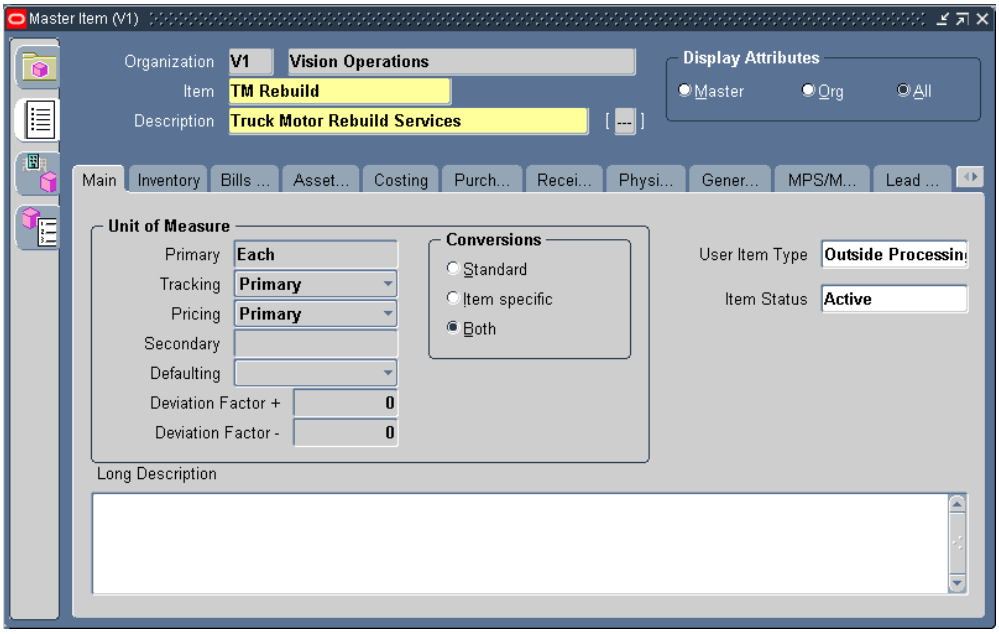
8. Save your work.

To set up outside services as items:

Create an item for each outside service, such as landscaping services.

1. Navigate to the Master Item window.

Master Item



2. Enter the item Name for the contractor service. For example, Landscape Service.

3. Select Copy From within the Tools menu.

4. Select @Outside Processing Item from the Template list of values.

5. Choose Apply.

6. Choose Done.

7. Within the Purchasing tab, ensure that the Outside Processing Item check box is selected.

8. Select the Resource Unit Type.

   Resource: Costs are based on the resource standard rate.

9. Select a Default Buyer.

10. Enter a List Price for this contractor service.

11. Select Each for the Unit of Issue. This is the unit of measure you use to issue the item from inventory.

12. Within the Receiving tab, select Direct from the Receipt Routing list of values.

13. Save your work.

14. Select the Organization Assignment tab on the left side of the window, and then assign this item to the eAM organization.

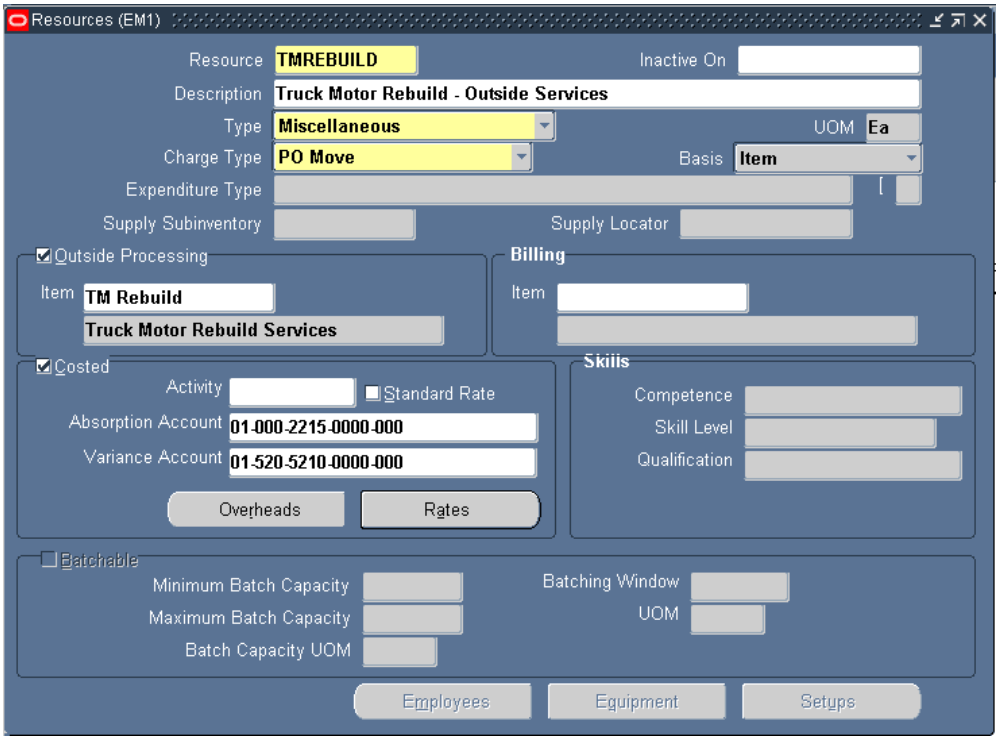
15. Save your work.

To link outside service items to resources

You must define outside resources and link them to outside items in order to automatically generate purchase requisitions for outside services. When you assign outside resources to a department, you also specify a usage rate or amount that determines the quantity you are requisitioning and/or charging to Work Orders.

16. Navigate to the Resources window.

Resources



17. Select Miscellaneous from the Type list of values.

18. Select a UOM. This value is the default unit of measure for all transactions, for the current resource.

19. Select the PO Receipt Charge Type.

20. Verify that the Enabled check box is enabled for outside processing.

21. Enter the outside services Item that was entered in Inventory (See: To set up outside services as items:, page 8-4), and associate it with the eAM resource.

22. Select the Costed check box to include this outside resource in your Work Order cost. When you define a resource with a charge type of PO Receipt, Cost Management automatically defaults Outside Processing as the cost element.

23. Enter an Absorption Account. You must define an absorption account for each outside resource. The absorption account defaults from the organization's receiving account, which is debited when an outside processing item is received and is subsequently credited when the item is delivered to eAM. The debit goes to the outside processing account associated with the accounting class of the Work Order when the item is delivered to eAM.

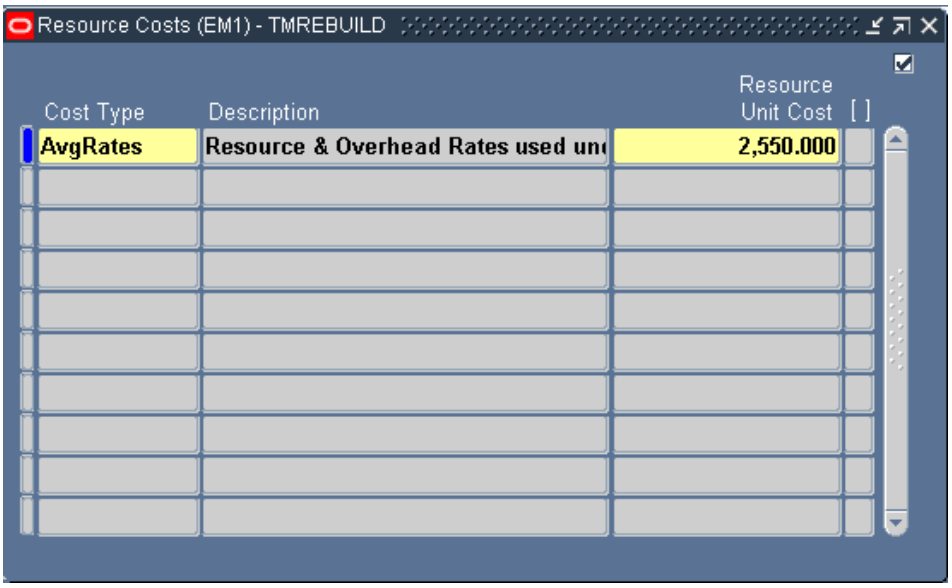
24. Optionally enter a Variance Account. You must define a purchase price variance account for each outside resource you define. This account defaults from the organization's purchase price variance account.

    If you select the Standard Rate check box while performing the next step, the Variance Account is mandatory.

25. Optionally select the Standard Rate check box to charge the standard, non-purchase order amount to the Work Order. Clear the Standard Rate check box to charge the Work Order with the actual purchase order amount.

    1. If you selected the Standard Rate check box, choose Rates to enter your standard rates.

Resource Costs



    2. Enter a Cost Type of Value. This is dependent on the costing method defined for your eAM organization.

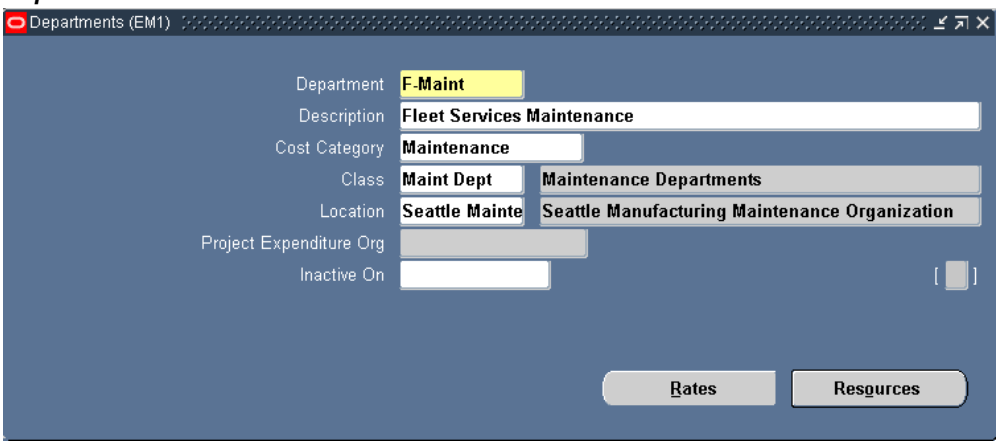
    3. Enter a Resource Unit Cost.

    4. Save your work and close the window.

To link the outside service resource to a department:

1. Navigate to the Departments window.

Departments



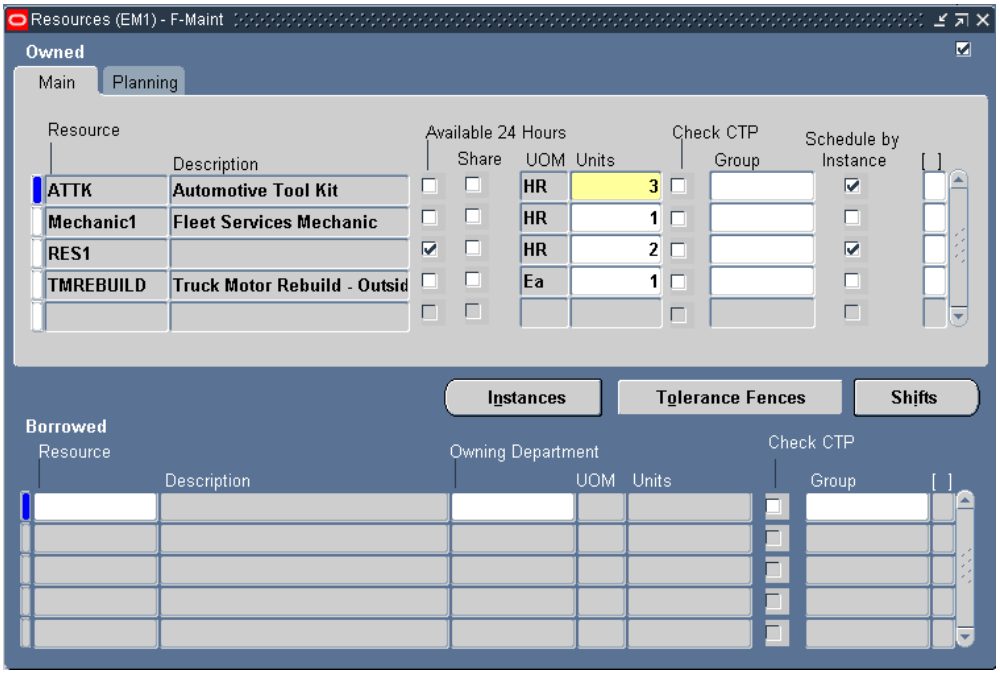
2. Select the Department to associate with the outside service resource.

3. Select a Cost Category for this department. If this is left blank, then the costs related to this department are charged, based on the eAM parameter settings (See: Defining eAM Parameters, page 2-11).

4. Select a valid Location.

5. Choose Resources.

Resources



6. Select the outside service Resource.

7. Optionally, indicate whether this resource is Available 24 Hours a day. You cannot assign shifts to a resource that is available 24 hours a day.

8. Optionally, indicate whether this department can share this resource and capacity with other departments.

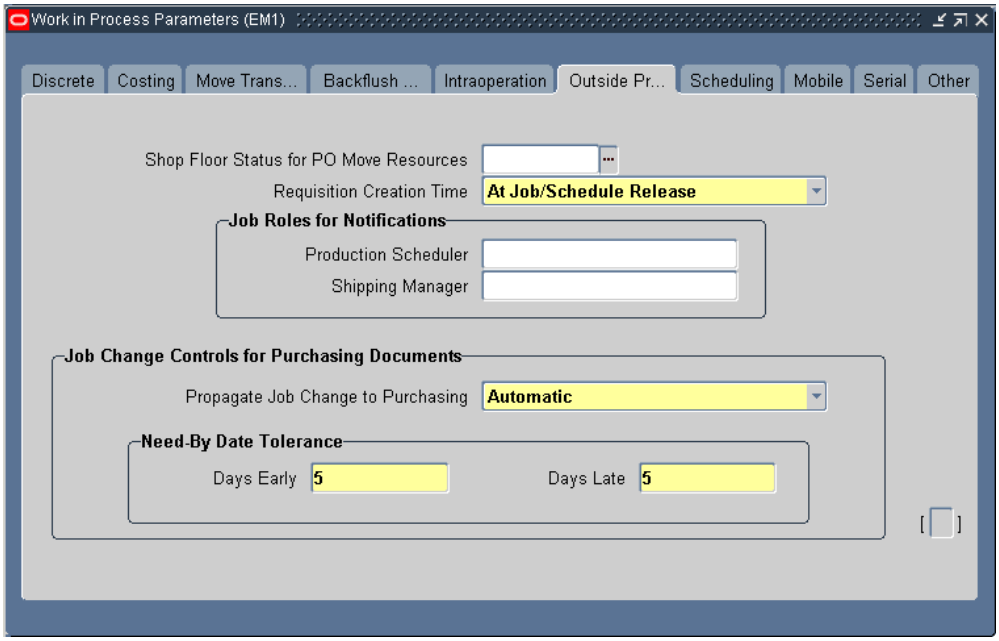
9. Enter the number of capacity Units (resource units) available for this department.

10. Save your work.

To define WIP parameters:

1. Navigate to the Work in Process Parameters window.

Work in Process Parameters



2. Select the Outside Processing tab.

3. Select a value for Requisition Creation Time.

   At Job/Schedule Release - This enables automatic creation of a purchase order requisition, for contractor services, when the Work Order is Released.

   Manual - Choose Manual to manually create requisitions. With this selection, requisitions are not automatically created.

   At Operation - Oracle recommends that you do not select At Operation. Within eAM, At Operation is equivalent to selecting Manual.

4. Save your work.

Related Topics

Supplier - Purchasing Financials Options, *Oracle Payables User's Guide*

Defining a Resource, *Oracle Bills of Material User's Guide*

9

eAM Property Manager

This chapter covers the following topics:

- Introduction
- Overview of eAM Property Manager
- Property Manager Integration

Introduction

The eAM and Property Manager integration enables properties defined in Property Manager to import as assets in eAM. This chapter contains the following topics:

- Overview of eAM Property Manager, page 9-1
- Property Manager Integration, page 9-2

Overview of eAM Property Manager

The eAM and Property Manager integration enables eAM assets to correspond with locations defined in Property Manager. The information transferred from Property Manager are the three-level land or building hierarchies, and the associated Location Codes within Property Manager. eAM also provides user-defined Area codes, enabling you to logically sort assets by where they are physically located. Area codes in eAM do not equal locations in Property Manager. See: Setting Up Areas, page 2-16.

A concurrent request process transfers locations defined in Property Manager into eAM assets, associating eAM assets with locations. During this process, the Organization ID, Asset Group, and the Owning Department parameters are specified. These entities are set up before the process is executed.

This seamless, one-way integration from Property Manager into eAM is invoked within the Property Manager concurrent process. The eAM and Property Manager integration includes the following topics:

- Property Manager Integration Setup, page 2-195
- Executing the Export Process
- Executing the Asset Number Interface, page 2-198
- Property Manager Integration, page 9-2

Property Manager Integration

Property Manager can store three-level land or building hierarchies, providing a parent/child location hierarchy. eAM provides a parent/child asset hierarchy. The integration enables locations defined in Property Manager to import into eAM as Asset Numbers. The process also imports the land or building hierarchy, while respecting its current structure.

Locations are set up in Property and exported to Enterprise Asset Management (eAM) via a two-step process, enabling you to modify data before it exports to eAM. First, push the location records from Property Management to eAM. (See: Executing the Export Process). After submission of the concurrent process, the Property Management Location information is entered into the EAM Asset Interface table and are accessed via the Pending Asset Number window within eAM. You can update all relevant information, including Asset Group, Asset Number, Owning Department, and WIP Accounting Class, for this information, before submitting the interface process (See: Executing the Asset Number Interface, page 2-198). You can use this window to update the information multiple times.

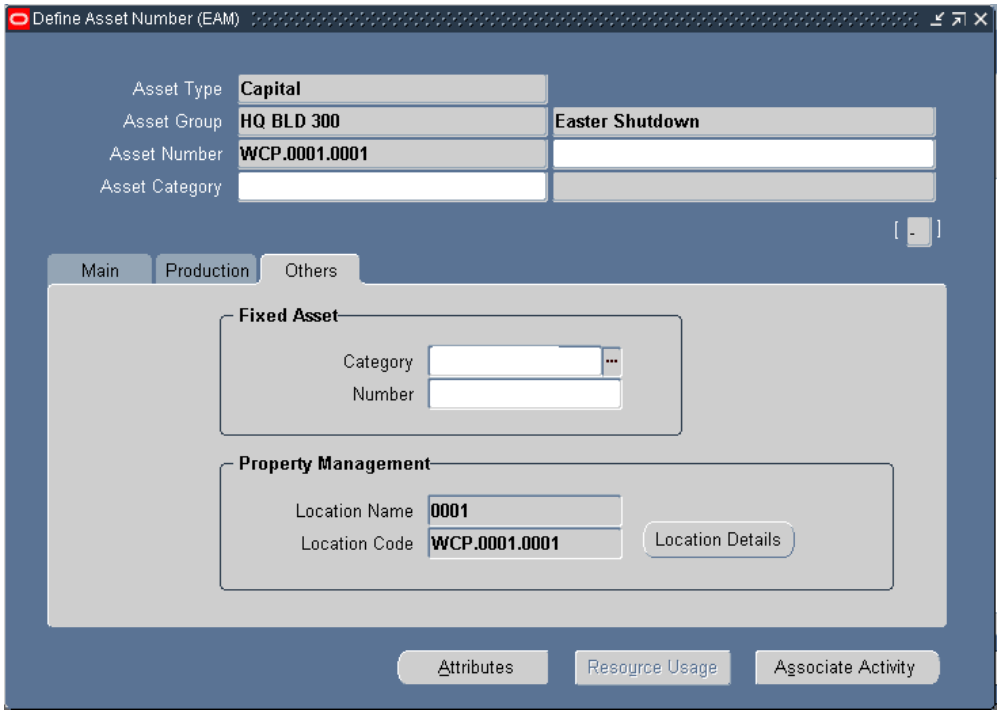
You can view this integration when viewing assets. Location information imports into fields within the Define Asset Number window.

> **Note:** If you make changes to locations within Property, run the export process again. You can run the export process to push location records to eAM multiple times. See: Executing the Export Process.

To view and update assets:

1. Navigate to the Find Asset Numbers window.
2. Within the Others tab, select a Location Code. This location code was exported from Property Manager into eAM.
3. Choose Find. The Define Asset Number window appears. Notice that the asset is the same as the location code.

Define Asset Number



4. Optionally associate this Asset Number with an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes, page 2-47.

5. Within the Main tab, optionally select a Criticality code, indicating the importance of the asset to the organization. This field is for information purposes.

6. You can optionally select a WIP Accounting Class to identify the Expense cost elements associated with the work performed, such as material, labor, and resources.

7. Optionally select the Area where this Asset Number resides. This is a user defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See: Setting Up Areas, page 2-16).

8. Indicate if this Asset Number is Maintainable. If the Maintainable check box is selected, you can create Work Requests, Service Requests, and Work Orders for this asset.

9. Within the Others tab, optionally enter the Fixed Asset region information if Oracle Fixed Assets is installed. This is eAM's integration with Fixed Assets.

    1. To associate the asset/location with a fixed asset, select a Category, which is a

grouping of fixed assets, defined within Oracle Fixed Assets. This category is associated with a set of books, and must be the same set of books that is assigned to the current eAM organization. See: Setting Up Category Codes, page 2-47.

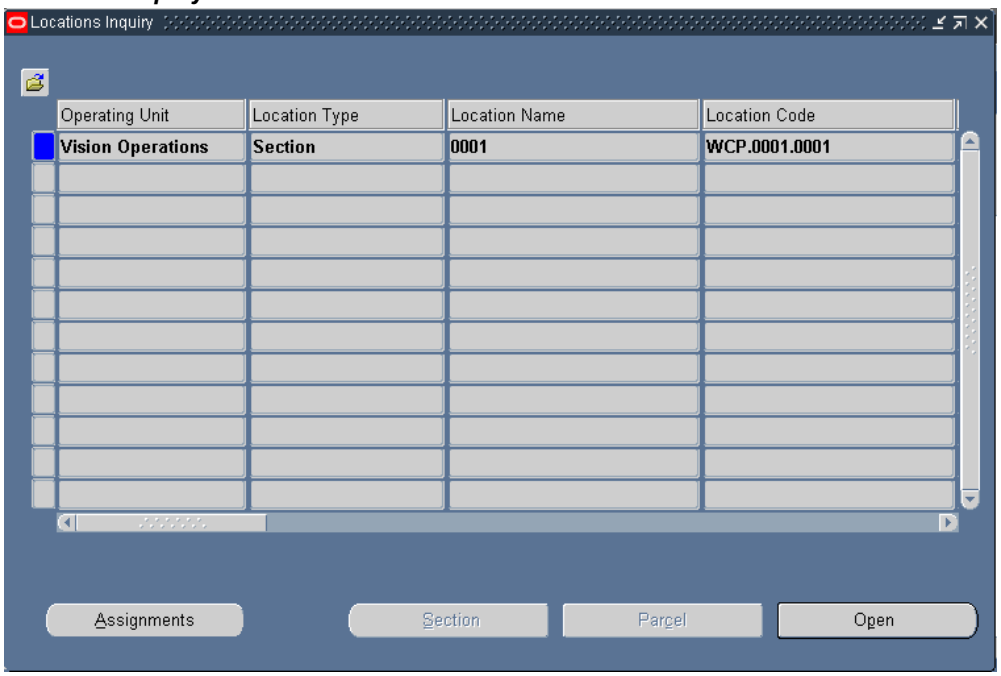
2. Optionally enter the Number if Oracle Fixed Assets is installed. This represents a fixed asset number that belongs to a fixed asset category, associated with the asset.

10. The Property Management fields, Location Name, and Location Code, default from a Property Manager export process (Export Locations to Enterprise Asset Management) if Oracle Property Management is installed. These fields are disabled. The Location Code and Asset Number fields display the same number, and cannot be changed.

    Note: Before the above information can pass from Property Manager into eAM, Asset Groups are first established. See: Defining Asset Groups, page 2-50 and Property Manager Integration Setup, page 2-195.

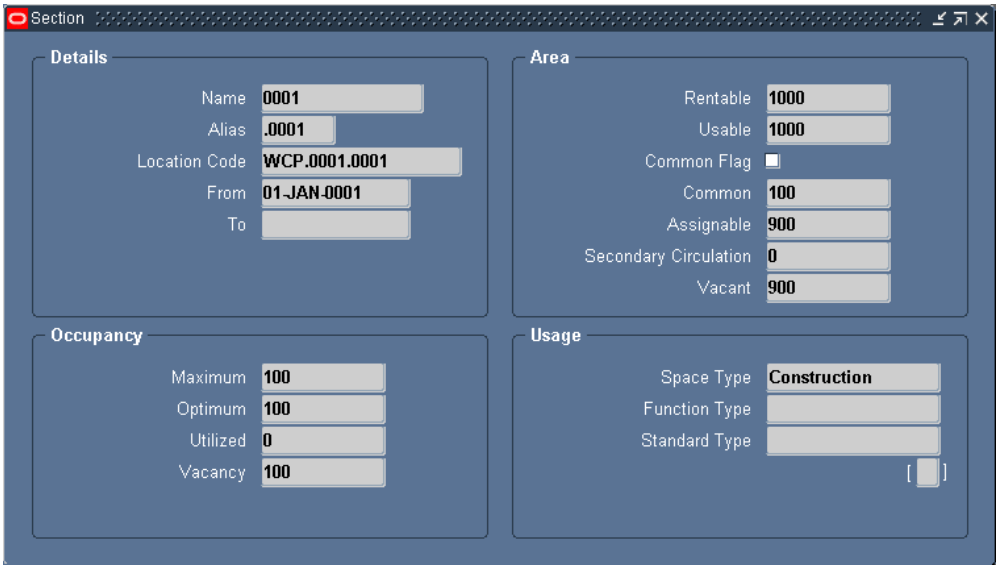
11. Optionally choose Location Details to view the current location details.

Locations Inquiry



12. Choose Open. Location attributes are visible with Enterprise Asset Management. You can view Occupancy, Area, and Usage information.

Section



13. Close the window to return to the Define Asset Number window.

14. You can select Resource Usage if the fields in the Production Equipment region are populated. This enables you to view production work orders and resources associated with this equipment.

15. Optionally select Attributes to directly apply an attribute group template to this asset. See: Setting Up Attributes, page 2-61

    Existing, enabled attribute groups appear (See: Setting Up Attributes, page 2-61). These attribute templates are optional; you do not need to enter values for all existing attribute groups. From this window, you cannot generate attribute groups.

16. Optionally select Associate Activity to directly associate this Asset Number with an Activity. See: Activity Association Templates, page 2-58.

17. Optionally create file, URL, or text attachments to this asset by selection the paperclip Attachments icon.

18. Save your work.

Related Topics

Defining Asset Numbers, page 2-65

Properties Overview, *Oracle Property Manager User's Guide*

Setting Up Oracle Property Manager, *Oracle Property Manager User's Guide*

10

Process and Discrete Manufacturing Integration

This chapter covers the following topics:

- Introduction
- Overview of the Process and Discrete Manufacturing Integration
- Viewing Resource Usage
- Production Equipment Downtime

Introduction

Enterprise Asset Management (eAM) integrates with process and discrete manufacturing, enabling your maintenance environment to identify eAM asset relationships with production equipment. This chapter contains the following topics:

- Overview of the Process and Discrete Manufacturing Integration, page 10-1
- Viewing Resource Usage, page 10-2
- Production Equipment Downtime, page 10-5

Overview of the Process and Discrete Manufacturing Integration

Enterprise Asset Management integrates with Process and Discrete Manufacturing, enabling your maintenance environment to identify Enterprise Asset Management asset relationships with production equipment. This feature associates an asset or many assets to the production equipment located in a discrete or process manufacturing organization. After establishing, you can view the resource usage (jobs, batches, or FPOs) emanating from production, associated with a maintainable asset. In discrete manufacturing organizations, you can view maintenance equipment downtime requirements and their affect on capacity during production planning and scheduling.

Oracle Process Manufacturing (OPM) retrieves maintenance downtime information for a resource from maintenance Work Orders. OPM loads this information into OPM's resource calendar; it is visible within Advanced Planning and Scheduling and Manufacturing Planning.

This integration includes the following topics:

- Organization Setup, page 2-187
- Associating Assets with Production Equipment, page 2-188
- Viewing Resource Usage, page 10-2
- Production Equipment Downtime, page 10-5

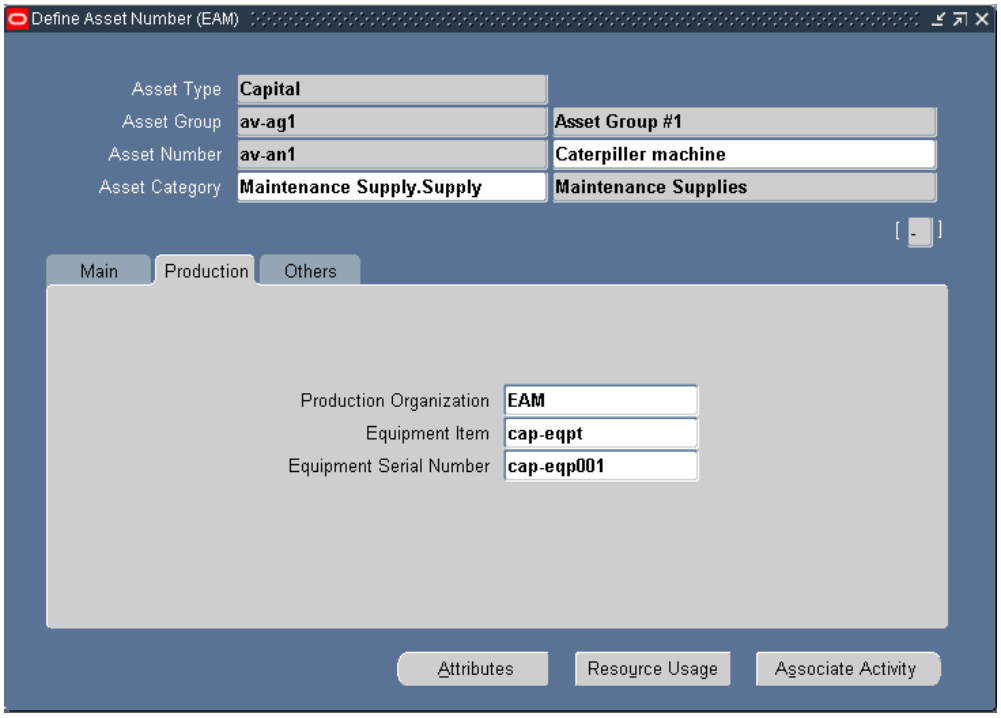
Viewing Resource Usage

You can view the resource usage, associated with a specific Asset Number, created by discrete work orders, batches, or FPOs. You can view resource usage in both forms and Maintenance User applications.

To view resource usage from the forms application:

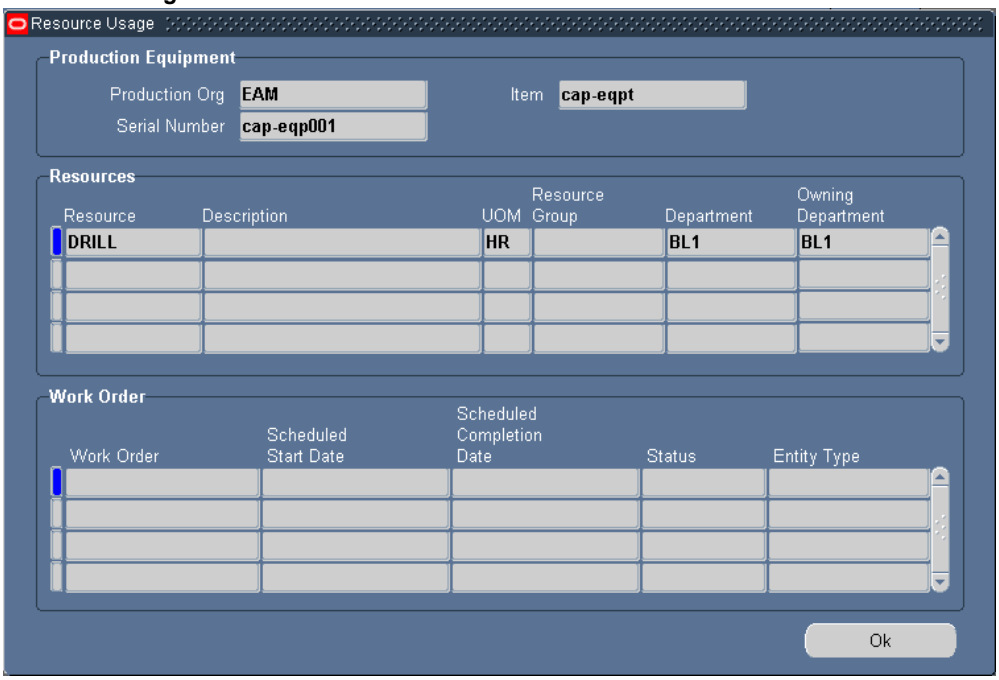
1. Navigate to the Define Asset Number window.
2. Choose the flashlight icon (Find) to display the Find Asset Number window.
3. Find an Asset Number to view that has associated production equipment.
4. Choose Find to display the Define Asset Number window.

Define Asset Number



5. Choose Resource Usage.

Resource Usage



This window enables you to view resource demand (discrete work orders, batches, or FPOs) associated with the current Asset Number. All Work Orders that use the asset as a resource appear.

6. Choose OK to return to the Define Asset Number window.

To view resource usage from the Asset Numbers page:

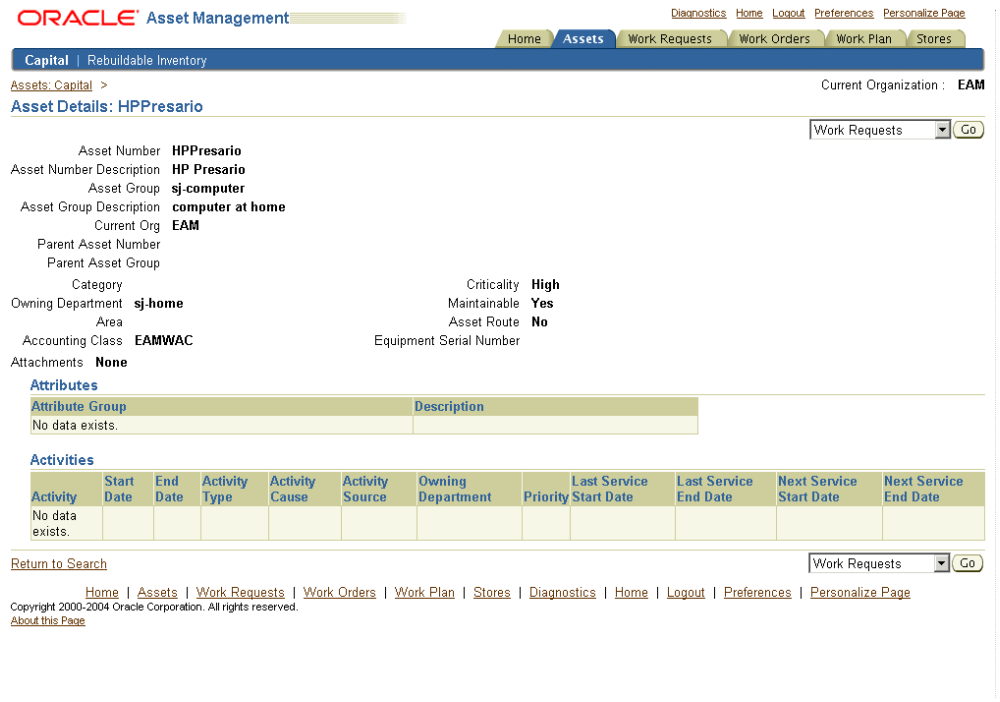
You can view resource demand within Maintenance Super User.

1. Navigate to the Asset Management page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.

2. Choose Go.

3. In the Results region, select the radio button next to your Asset Number, then select Details from the *Select Asset Number:* list of values to view associated Asset Number, Attributes, and Activity details.

Asset Numbers Page



4. Optionally select View Equipment Details if the current Asset Number has associated equipment details. This link is next to the Equipment Serial Number field, and is available if there are associated equipment details. You can view all equipment details in the production organization to which this Asset Number is linked.

   You can also view resource demand (Work Orders) associated with the Asset Number. This information is the integration with Process and Discrete Manufacturing.

5. Optionally select the View Resource Usage glasses icon to view all Work Orders created against the current Asset Number for the current equipment resource. This enables you to view resource demand (discrete work orders, batches, or FPOs) associated with the Asset Number. This information is eAM's integration with Process and Discrete Manufacturing.

Production Equipment Downtime

You can view equipment downtime, associated with a specific resource, caused by maintenance Work Orders. To view resource downtime, execute the Load Production Equipment Maintenance Downtime process to load downtime information into a simulation set. Resource downtime is viewed within the Department Resource Capacity

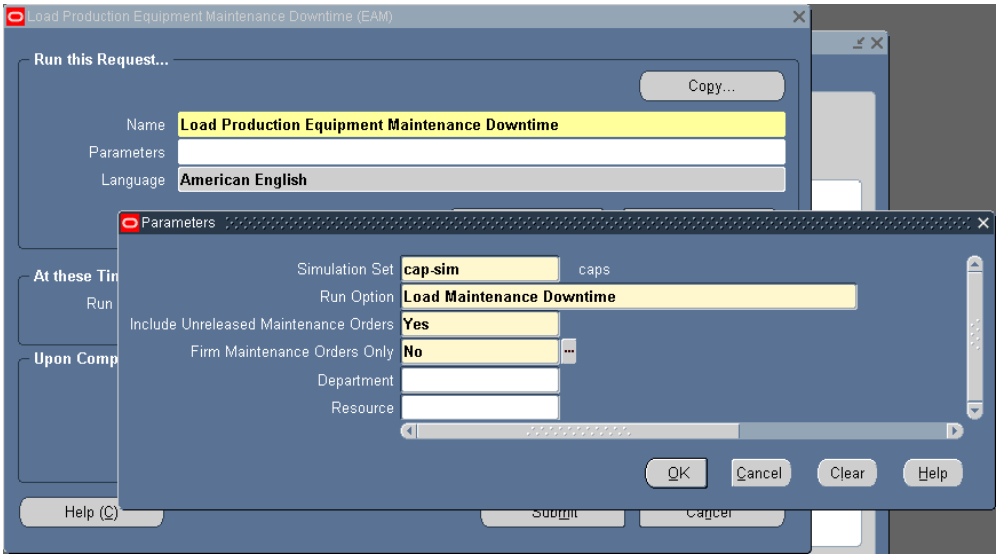
Change window.

To generate production equipment downtime:

Note: If your manufacturing and maintenance organizations are separate, execute this process within the manufacturing organization.

1. Navigate to the Load Production Equipment Maintenance Downtime window.

Load Production Equipment Maintenance Downtime



2. Enter the following parameters:

   - *Simulation Set:* Select a Simulation Set.
   - *Run Option:* You can optionally load or purge maintenance downtime information.
   - *Include Unreleased Maintenance Work Orders:* Select whether to include Unreleased maintenance Work Orders. Valid values are Yes and No.
   - *Firm Maintenance Work Orders Only:* Select whether to include firmed maintenance work Orders. Valid values are Yes and No.
   - *Department*: Optionally select a Department to indicate that Work Orders associated with the selected department are included. See: Defining Departments and Resources, page 2-17.
   - *Resource*: Optionally select a Resource to indicate that Work Orders associated

with the selected Resource are included. See: Defining Departments and Resources, page 2-17.

3. Choose OK.

4. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

11

eAM Project Manufacturing

This chapter covers the following topics:

- Introduction
- Overview of eAM Project Manufacturing
- Project Definition
- Associating a Work Order with a Project
- Creating Requisitions or Purchase Orders
- Viewing the Requisition within the Maintenance Work Order
- Updating the Commitments for a Project
- Viewing Commitments

Introduction

Enterprise Asset Management integrates with Project Manufacturing, enabling a seamless, integrated business solution for program management, configuration management, financial project management and reporting, project supply chain management and execution, and business intelligence. This chapter contains the following topics:

- Overview of eAM Project Manufacturing, page 11-2
- Project Definition, page 2-191
- Associating a Work Order with a Project, page 11-6
- Creating Requisitions or Purchase Orders, page 11-7
- Viewing the Requisition within the Maintenance Work Order, page 11-13
- Updating the Commitments for a Project, page 11-15

- Viewing Commitments, page 11-16

Overview of eAM Project Manufacturing

Enterprise Asset Management supports a variety of ways to define work breakdown structures. The methods include, using third party project management systems (with on-line integration), project templates, Seiban number wizard, copy, and manual entry. Work breakdown structures are commonly needed for program management. To support financial project management an reporting, the combination of Oracle Projects and Oracle Project Manufacturing enables budgeting, project costing and tracking, project billing, project revenue recognition, project cash forecasting, and project cost collection, including multi-currency and tax regulations.

To support project supply chain management and execution, Project Manufacturing provides functionality for project sales management, project advanced supply chain planning, project procurement, project execution, and project quality management.

The following diagram illustrates the eAM Project Manufacturing process. First, a maintenance Work Order is linked to a project or task. If a requisition or purchase order is created for that Work Order, the commitments for the Work Order's associated project or task are updated. The Project Cost Collector process (See: Project Cost Collector, *Oracle Cost Management User's Guide*) then passes the costs to the Work Order's associated project WIP accounting class accounts, rather than the WIP accounting class associated with the eAM asset or eAM organization.

eAM Project Manufacturing

This section includes the following topics:

- Project Definition, page 2-191
- Associating a Work Order with a Project, page 11-6
- Creating Requisitions or Purchase Orders, page 11-7
- Viewing the Requisition within the Maintenance Work Order, page 11-13
- Viewing Commitments, page 11-16
- Updating the Commitments for a Project, page 11-15

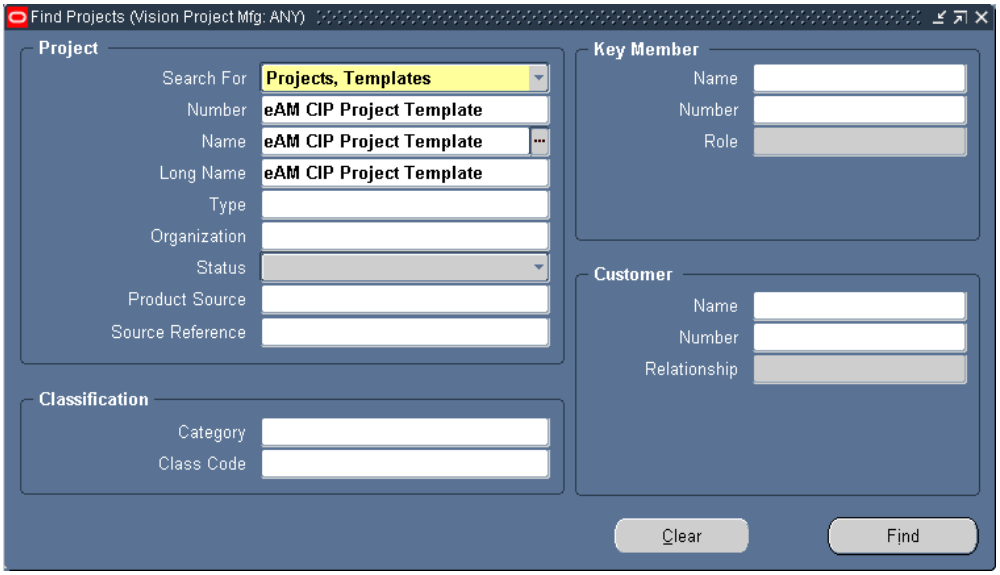
Project Definition

You can inquire on an existing, or copy a new project from a template or existing project. To create a new project, See: Project Definition (Assigning Project Parameters), *Oracle Project Manufacturing User's Guide*. You need to associate this project number with a planning group, a cost group, and a default WIP accounting class.

To inquire on an existing project:

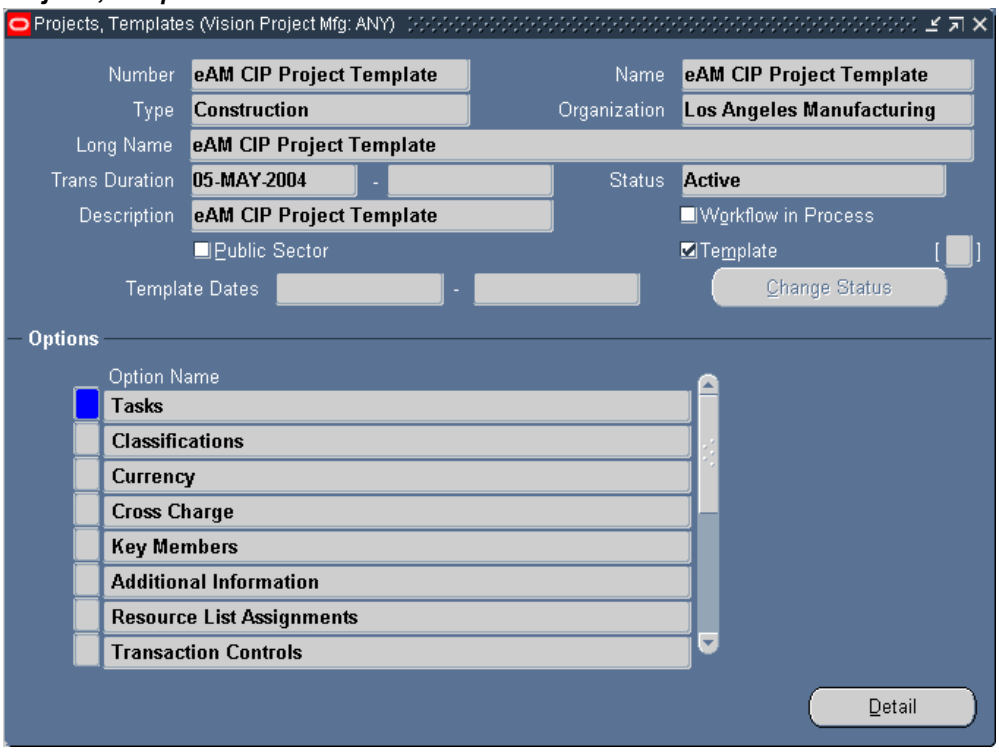
1. Navigate to the Find Projects window.

Find Projects



2. Select a project Number.
3. Choose Find.
4. Choose Open.

Projects, Templates

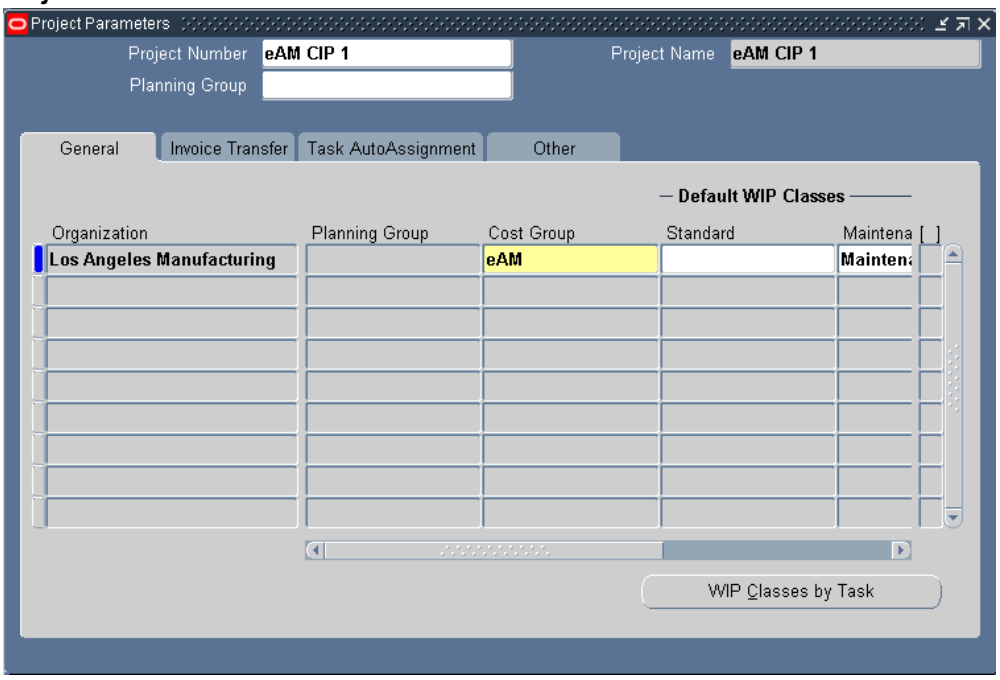


5. Optionally, you can view detailed task information by choosing Detail (See: Viewing Project Details, *Oracle Project Manufacturing User's Guide*).

To assign project parameters:

1. Navigate to the Project Parameters window.

Project Parameters



2. Select a valid Project Number.

3. Optionally, select the name of the Planning Group with which you want to associate your project.

   If you plan material requirements by a group of projects, rather than each individual project, you need to define a planning group and assign all projects to this planning group. If you plan material requirements by a single project, you do not need to associate the project with any planning group (See: Defining Planning Group Lookups, *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

4. Select an eAM enabled Organization.

5. Select a Cost Group.

   If the current organization contains Average as its primary costing method, in the Organization Parameters window, the Cost Group field is required. The Common Cost Group and user defined cost groups are available. The list of user defined cost groups includes those cost groups with valid accounts and with Project selected in the Cost Group window (See: Project Cost Groups, *Oracle Cost Management User's Guide*). You must assign the project to its own Cost Group to keep weighted average costing at the project level.

   If the current organization contains Standard as its primary costing method, in the

Organization Parameters window, the Cost Group field is disabled.

6. Optionally, select a Maintenance WIP Accounting Class.

   If the current organization is a Standard costing organization, you can choose any discrete WIP accounting class.

   If the current organization is an Average costing organization, you can choose any WIP accounting class that has been associated with the selected cost group in the WIP Accounting Classes for Cost Groups window within Cost Management (See: Defining Project Cost Groups, *Oracle Cost Management User's Guide*).

   When you create maintenance Work Orders for a project, this WIP accounting class is defaulted. It can be overwritten, but with another accounting class that is assigned to the cost group.

7. Select the Other tab.

8. Save your work.

Related Topics

Associating a Work Order with a Project, page 11-6

Creating Purchase Orders from Requisitions, page 11-7

Updating the Commitments for a Project, page 11-15

Viewing Commitments, page 11-16

Project Definition, *Oracle Project Manufacturing User's Guide*

Assigning Project Parameters, *Oracle Project Manufacturing User's Guide*

Project Cost Groups, *Oracle Cost Management User's Guide*

Defining Project Cost Groups, *Oracle Cost Management User's Guide*

WIP Accounting Classes, *Oracle Work in Process User's Guide*

Project Manufacturing Parameters, *Oracle Project Manufacturing User's Guide*

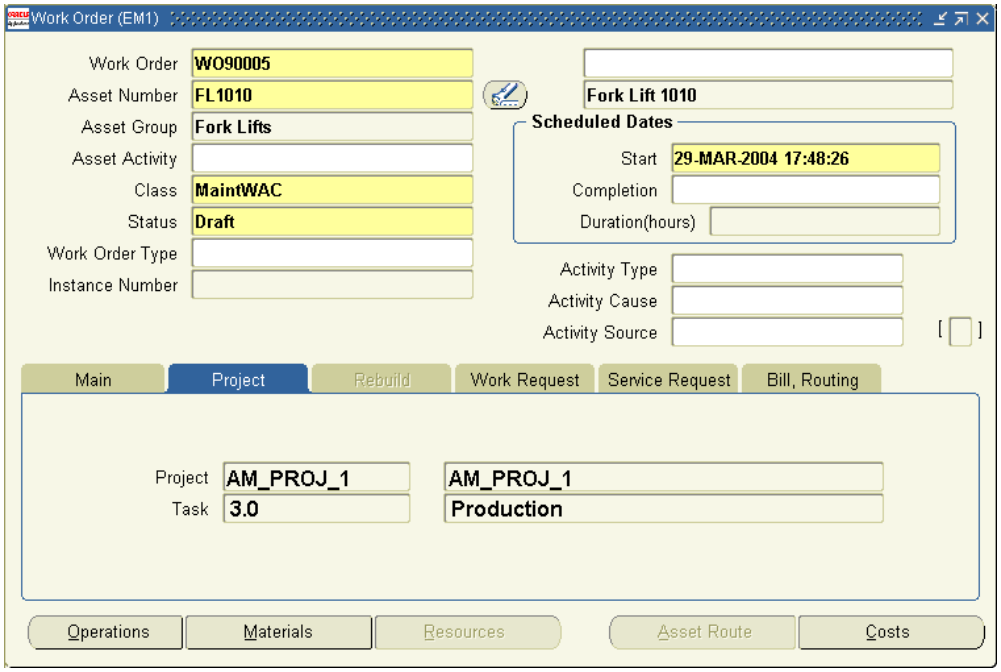
Associating a Work Order with a Project

You can create a maintenance Work Order for a project. The project number enables the correct cost group and default WIP accounting class to associate with the Work Order.

Creating a project maintenance work order:

1. Navigate to the Work Order window.

Work Order



2. Enter necessary work order information. See: eAM Work Orders, page 3-3.

3. Select the Project tab.

4. Select a Project. You can associate a Work Order to a project at any status of the Work Order (See: eAM Work Order Statuses, page 3-23).

5. Optionally, select a specific Task.

6. Save your work.

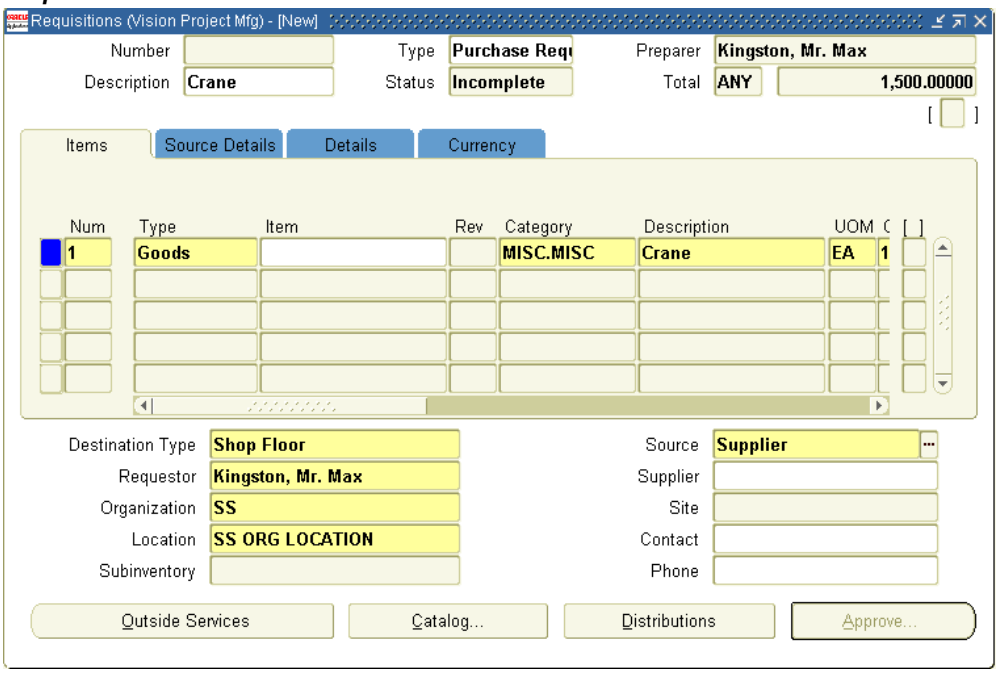
Creating Requisitions or Purchase Orders

You can create a requisition or purchase order for a project, maintenance Work Order. You can update the commitments for the Work Order's associated project or task. You can create requisitions and purchase orders using either Oracle iProcurement, if you have it installed, or Oracle Purchasing.

To create a requisition using Oracle Purchasing:

1. Navigate to the Requisitions window.

Requisitions



2. If automatic requisition number generation is active, you do not need to enter a requisition Number. See: Defining Numbering Options, *Oracle Purchasing User's Guide*. Otherwise, enter a unique requisition Number.

3. The Type will default as Purchase Requisition. The requisition lines are usually satisfied from an outside supplier by means of a purchase order.

4. Select the Items tab.

5. Select the line Type of Goods for the requisition line. Line types help you to define how you want to categorize your items. The default for this field is the Line Type from the Purchasing Options window (See: Defining Default Options, *Oracle Purchasing User's Guide*). If you change this field, defaults from the Line Types window appear in the Category, UOM, and Price fields (See: Defining Line Types, *Oracle Purchasing User's Guide*).

6. Select the purchasing Category.

7. Enter the item Description. This description should be detailed because this is how someone in your organization will know what is being requested.

8. Enter the Quantity you want to request for the item. You can enter decimal quantities, but you must enter a value greater than zero.

9. Enter the UOM you want to use for your requisition line. If you change this value, the quantity is rounded again if appropriate, and the price is recalculated. If you enter a line type that is amount based, Purchasing uses the unit of measure that you assign to that line type in the Line Types window (See: Defining Line Types, *Oracle Purchasing User's Guide*).

10. Enter the unit Price for the item. You can enter the price in decimal format. You must enter a value greater than or equal to zero. Unit prices are in functional currency.

11. Enter the Need By date for the requested item. This is required for planned items. You must enter a date greater than or equal to the requisition creation date.

12. The Charge Account rolls up from a single distribution after the distribution is created. If more than one distribution is created for the line, Multiple appears.

13. Select Shop Floor from the Destination Type list of values for all direct item and non-stock item, eAM related requisitions. You can select a destination type of Shop Floor for all purchasable items that are not selected as Stockable in the item master (See also: Defining Items, *Oracle Inventory User's Guide*).

    When you select a destination type of Shop Floor, eAM recognizes this as a requirement to deliver the direct item to the maintenance work order.

14. Enter the name Requestor (employee) who is requesting the item. You must provide a Requestor before the requisition can be approved. The default is the requisition creator.

15. Enter the Organization.

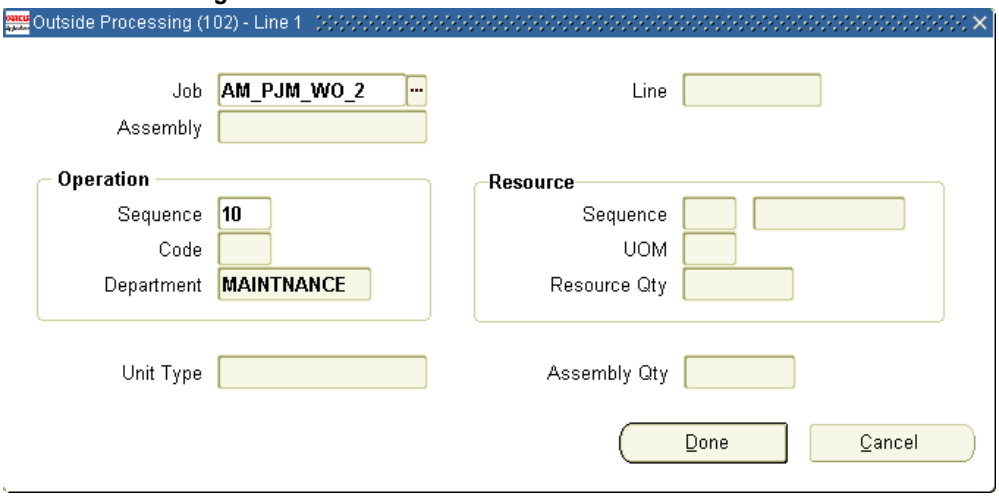
16. Enter the delivery Location for the requested items. Purchasing defaults the deliver-to location that you assign to the employee.

17. Enter the Source type. The source type determines the source of the requisitioned items. The choices you have for this field is dependent on the PO: Legal Requisition Type profile option (See: Purchasing Profile Options, *Oracle Purchasing User's Guide*).

    - For the Supplier source type, enter the suggested Supplier, Supplier Site, Contact, and Phone.

18. Choose Outside Services to select the work order you previously created.

Outside Processing



1. Select the maintenance project work order, you previously created, from the Job list of values.

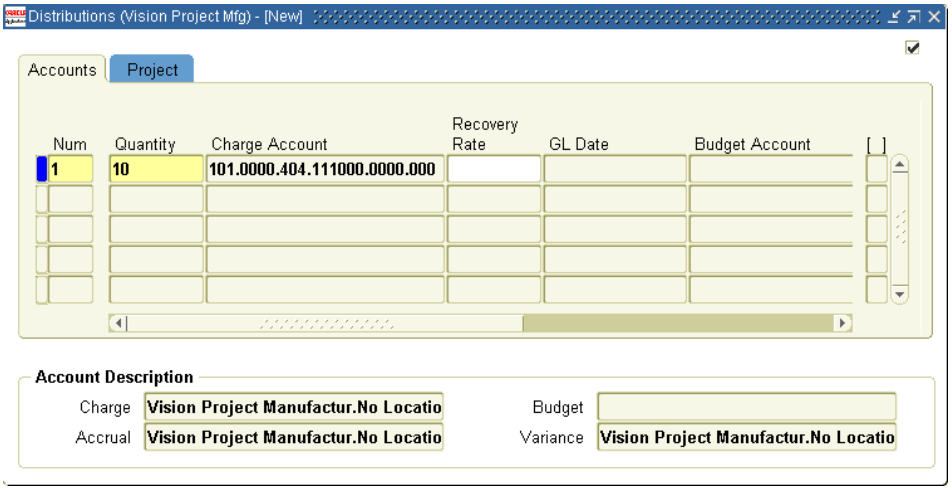
2. Select a specific Operation Sequence from the Sequence list of values. This enables you to procure directly to the operation on the maintenance work order. The Department will default from the department associated with the work order selected.

3. Choose Done.

19. Select a requisition line number, then choose Distributions to associate project and task information with that requisition line. You can charge the cost of this requisition line to multiple Accounting Flexfields or update the default values you provided in the Requisition Preferences window (See: Entering Requisition Preferences, *Oracle Purchasing User's Guide* and Entering Requisition Distributions, *Oracle Purchasing User's Guide*).

    1. Select the Accounts tab.

Distributions (Accounts tab)



- Enter the Quantity you want to distribute. Purchasing displays the quantity you have not yet assigned to an Accounting Flexfield. Multiple distribution quantities must total to the requisition line quantity.

- The Charge Account will default from the WIP accounting class of the cost group, associated with the project. Purchasing uses the Account Generator to create the following accounts for each distribution:

- *Accrual:* AP accrual account

- *Variance:* invoice price variance account

- If you are using encumbrance control (See: Financials Options, *Oracle Payables User's Guide*), Purchasing also creates the following account for each distribution:

- *Budget:* encumbrance budget account

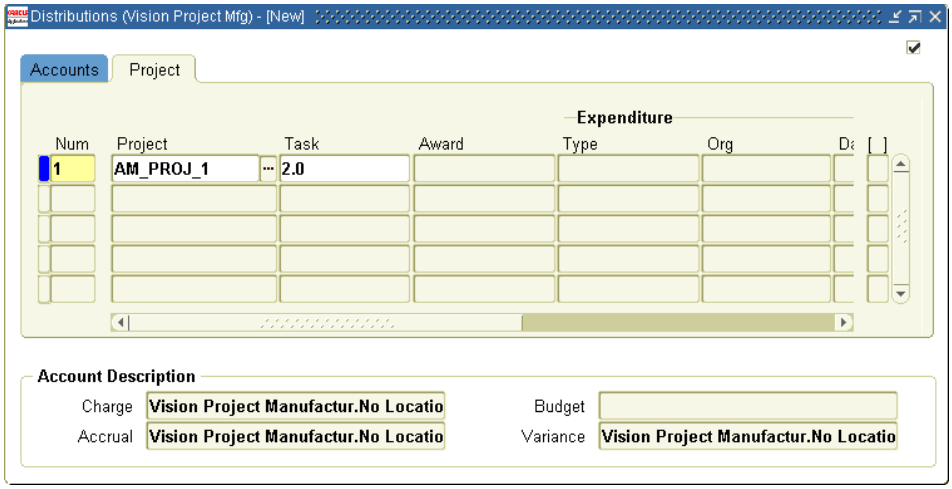
- Change or accept the default Recovery Rate for taxable items. The recovery rate is the percentage of tax your organization can reclaim for credit. This rate defaults in based on the Tax Code on the line in the Requisitions window and the setup in the Financial Options window (See also: Recoverable Tax, *Oracle Payables User's Guide*).

- If you are using encumbrance control for requisitions (See: Financials Options, *Oracle Payables User's Guide*), enter the GL Date that you want to use to reserve funds.

- Save your work.

2. Select the Project tab. Oracle Project Manufacturing must be installed with the Enable Project References check box selected in the Project Manufacturing Parameters window (See also: Project Manufacturing Parameters, *Oracle Project Manufacturing User's Guide*).

Distributions (Project tab)



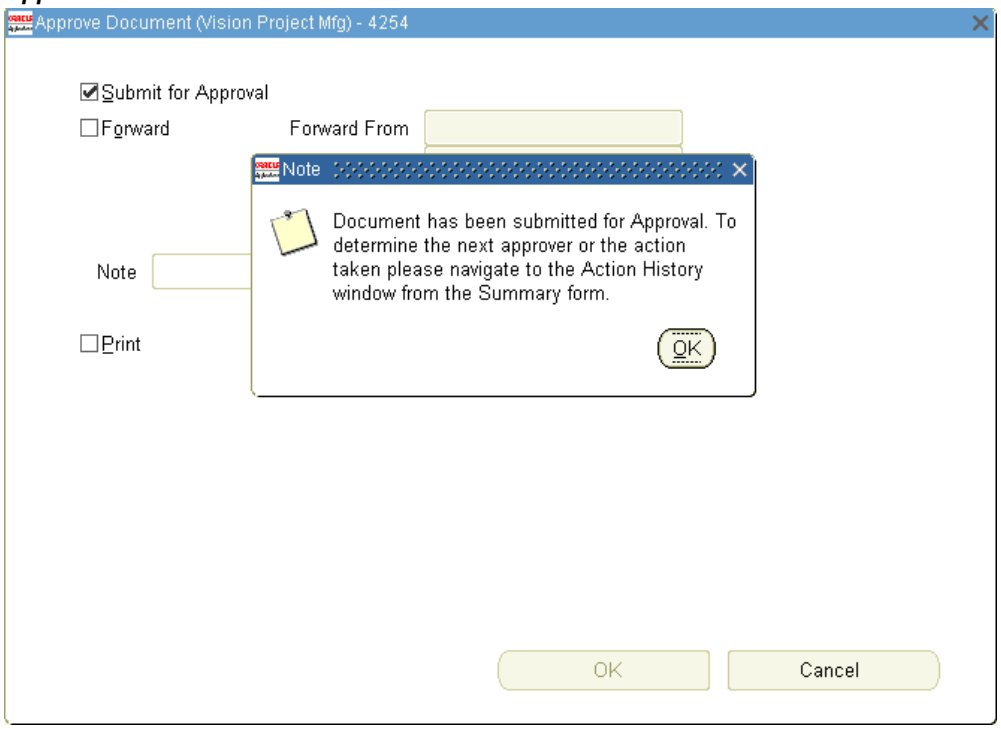
3. Select the Project.

4. Select a Task.

20. Save your work.

21. Choose Approve to submit the requisition for approval.

Approve Document



22. Choose OK.

23. Choose OK.

Related Topics

Entering Requisition Headers, *Oracle Purchasing User's Guide*

Entering Requisition Lines, *Oracle Purchasing User's Guide*

Requisitions, *Oracle iProcurement Implementation Guide*

Setting Up Project Manufacturing Costing, *Oracle Cost Management User's Guide*

Viewing the Requisition within the Maintenance Work Order

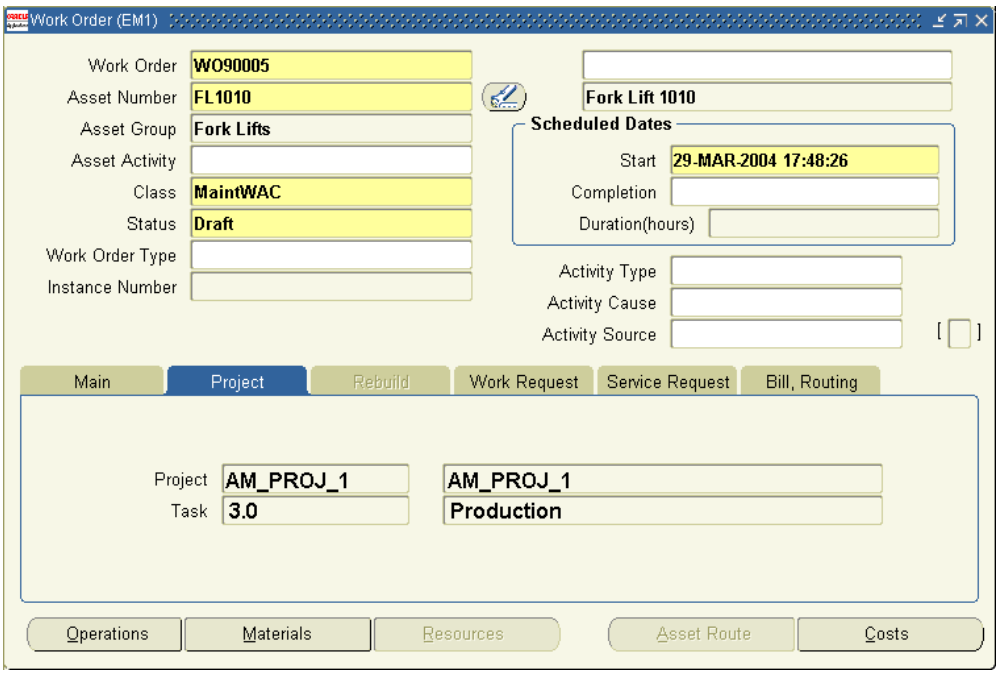
After the purchase requisition is created and associated with a maintenance Work Order, the requisition appears on the maintenance Work Order.

To view purchase requisition information on a maintenance work order:

1. Navigate to the Find Work Orders window, and select the project, maintenance Work Order number, you previously created.

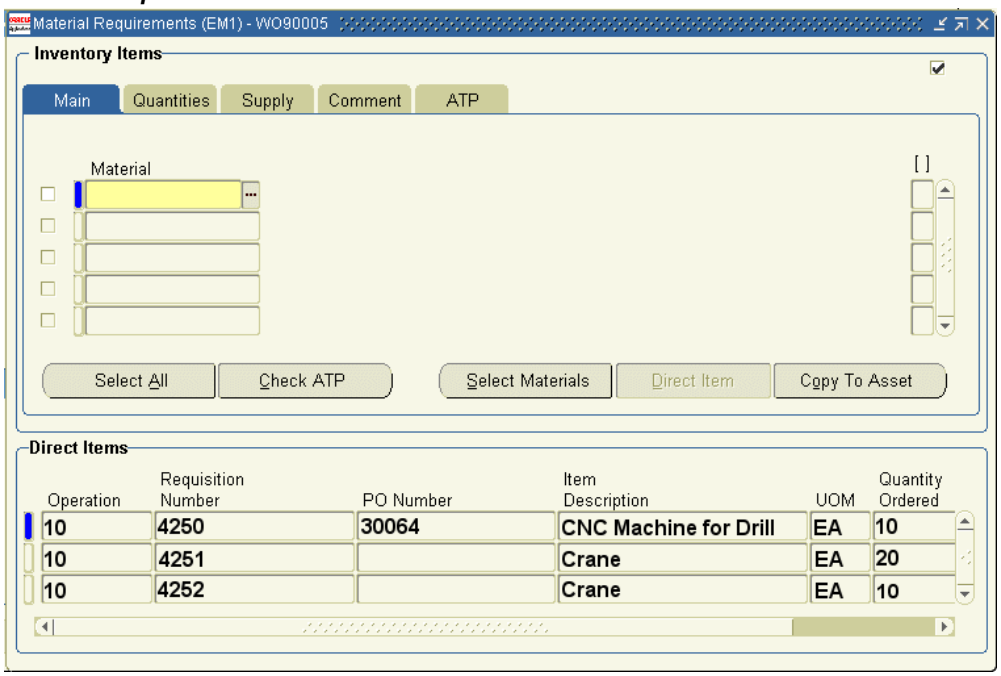
2. Choose Find.

Work Orders



3. Choose Materials to display the requisition created in the Material Requirements window.

Material Requirements



The requisition number appears in the Direct Items region. After a purchase order is created from this requisition, the PO Number field populates with that related purchase order number.

Updating the Commitments for a Project

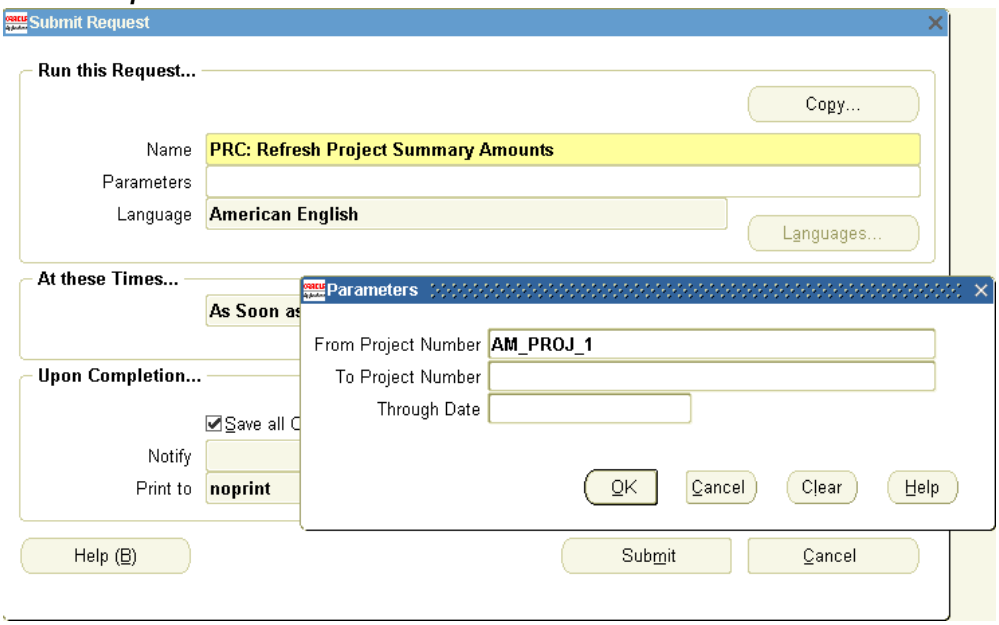
After the requisition is created and approved, the project's accounting commitments can be updated. This is performed by executing the Refresh Project Summary Amounts concurrent process. This process is normally set up to automatically execute, periodically.

To update project commitments:

1. Navigate to the Find Requests window using the Project Manufacturing responsibility. Choose Submit a New Request.

2. Choose OK to run a Single Request.

Submit Request



3. Select PRC: Refresh Project Summary Amounts from the Name list of values.

4. Enter the following parameters:

    1. Optionally, enter a From and To Project Number to execute the process over a range of projects.

    2. Optionally, enter a Through Date to narrow the data selection based on a specific end date.

5. Choose OK.

6. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

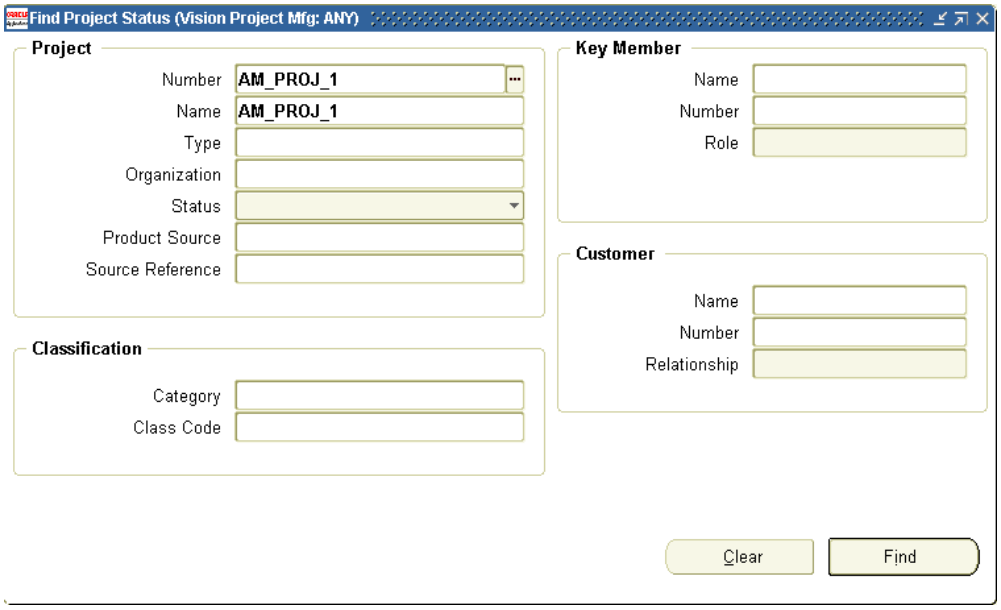
Viewing Commitments

You can view commitments for specific projects. After the Refresh Project Summary Amounts process executes (See: Updating the Commitments for a Project, page 11-15), the commitment amounts for your project increase.

To view commitments for a project:

1. Navigate to the Find Project Status window.

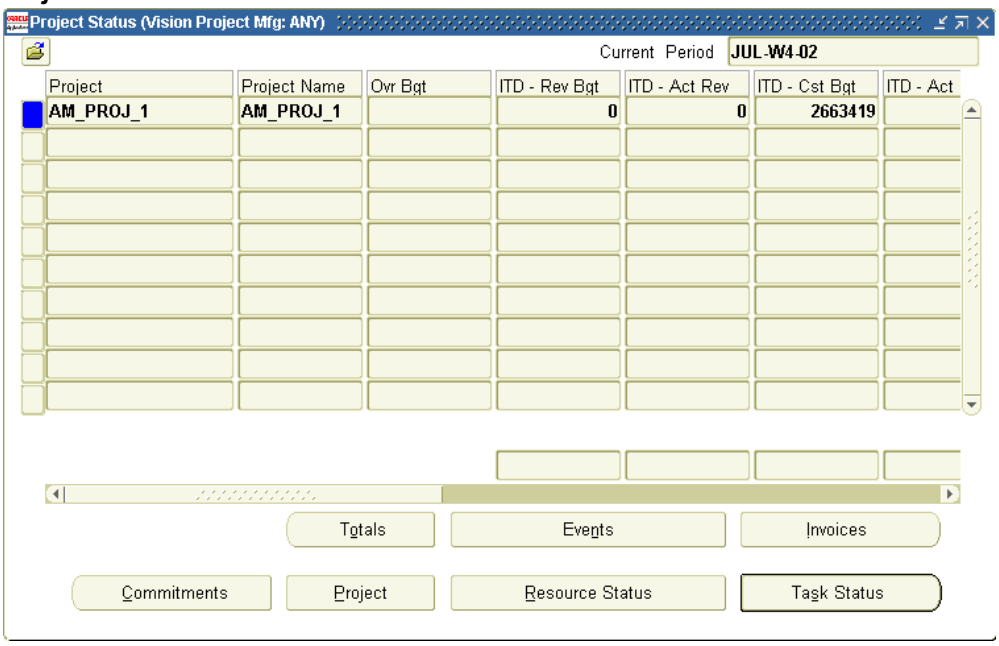
Find Project Status



2. Select your project Number.

3. Choose Find.

Project Status

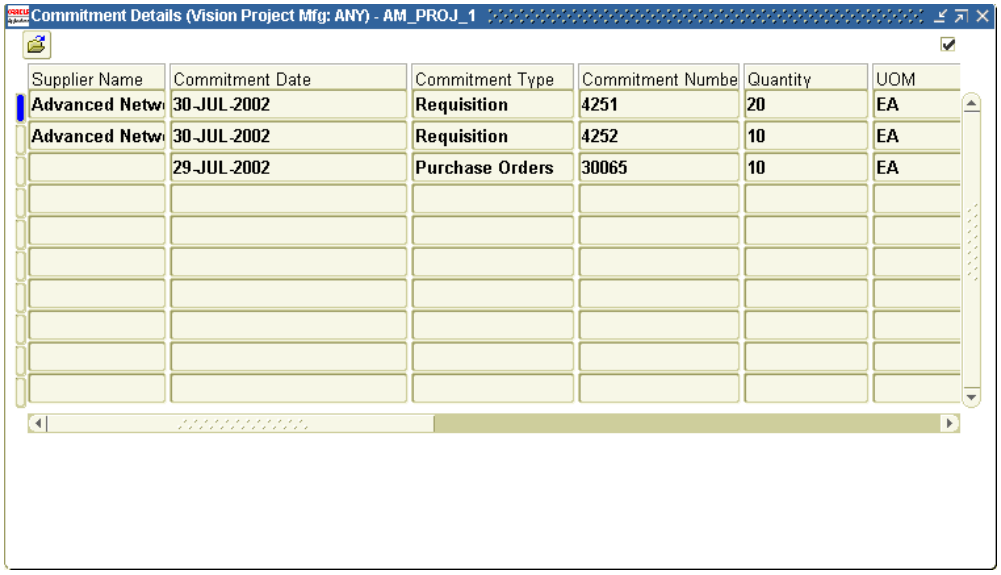


This window displays the commitments by a specific project number. The Commit Amt (commitment amount) field has increased in value in comparison to before you entered the requisition.

4. Optionally, choose Totals to add up commitment totals for multiple projects.

5. Choose Commitments, and then choose Find to view commitment details for the current project. All requisitions and purchase orders associated with the current project appear.

Commitment Details

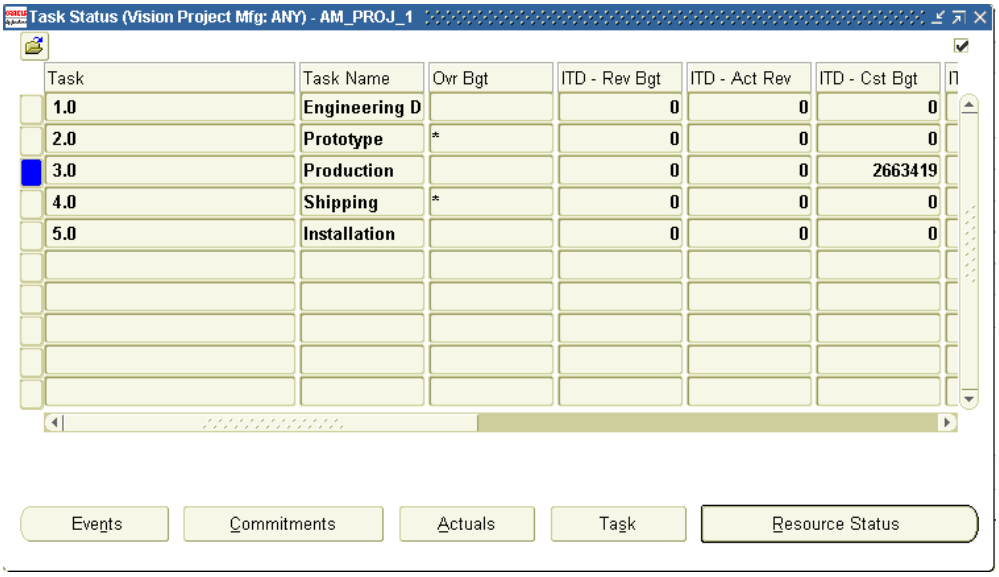


- The Commitment Number is the requisition or purchase order number. After a purchase order has been created from a requisition, the Commitment Number field value changes from the requisition number to the purchase order number.

- The Project Raw Cost is the cost of the individual requisition or purchase order. The Project Raw Costs are added together to obtain the total commitment amount for the project.

6. Close this window, and then choose Task Status to display commitment information at the task level. All tasks associated with the current project appear.

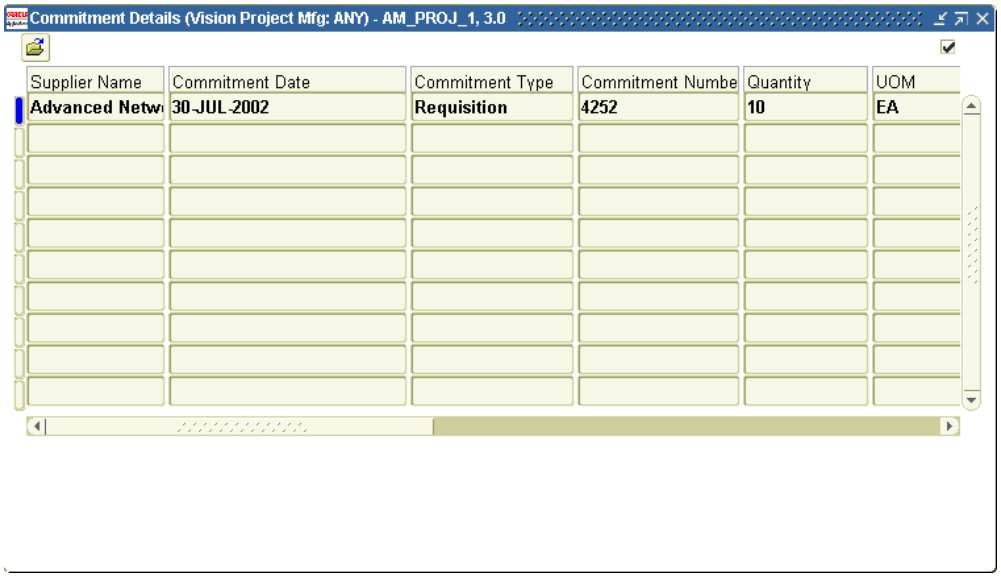
Task Status



7. Select a Task, then choose Commitments.

8. Choose Find to view the commitment details for the specific task.

Commitment Details



Related Topics

Viewing Project Details, *Oracle Project Manufacturing User's Guide*

Setting Up Project Manufacturing Costing, *Oracle Cost Management User's Guide*

Project Cost Collector, *Oracle Cost Management User's Guide*

12

Integration with Oracle Time and Labor

This chapter covers the following topics:

- Introduction
- Integration with Oracle Time and Labor Overview
- Setting Up the Integration
- Time and Expenses
- Entering Timecard Information
- Extracting Information to Enterprise Asset Management
- Executing the Cost Manager Process

Introduction

This chapter provides the necessary information to set up and use the integration between Oracle Enterprise Asset Management and Oracle Time and Labor.

Integration with Oracle Time and Labor Overview

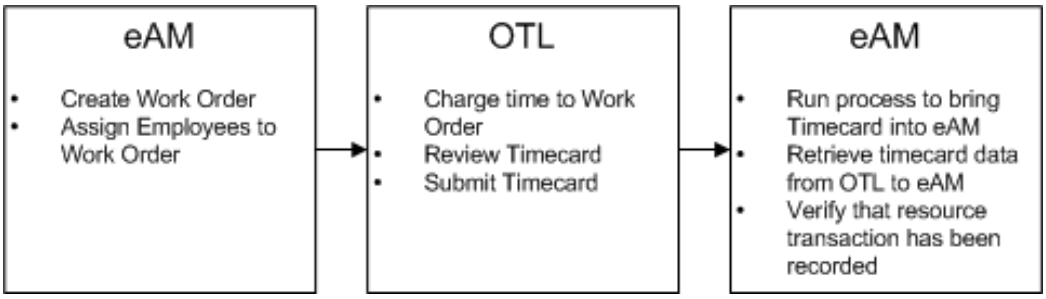
Oracle Time and Labor (OTL) is the repository in which time is entered by employees working in a particular organization. Employees working on Oracle Enterprise Asset Management (eAM) work orders enter their time using OTL Self-Service. Information collected is stored in OTL Time Store, and is composed of a series of business rules and processes. eAM extracts information from the Time Store and charges eAM work orders for the time spent by employees that work on them.

There are multiple steps within the integration flow. First, timecard information is entered for a specific Work Order, within Oracle Time Store (a piece of Oracle Time and Labor). That information is then extracted from Oracle Time Store to Oracle Enterprise Asset Management. This extraction dynamically creates a resource transaction within Oracle Enterprise Asset Management. Finally, the Cost Manager process is executed. This process charges the resource transaction. After this process executes, you can view

the actual costs for the period that you charged, within the Work Order.

The process is as follows:

OTL Process Flow



This chapter contains the following topics:

- Setting Up the Integration, page 12-2
- Time and Expenses, page 12-2

Setting Up the Integration

There are two required setup procedures for this integration. The first is to establish employees needing to use this functionality as Persons within Oracle Human Resources (See: *Oracle Human Resources User's Guide*). Once established, those Persons are assigned to respective Users, within Enterprise Asset Management. The second setup procedure consists of creating Preference Values, and then linking those values to eligibility criteria.

This section contains the following topics:

- Defining Persons as Users, page 2-204
- Creating Eligibility Criteria, page 2-205

Time and Expenses

There are multiple steps within the integration flow. First, timecard information is entered for a specific Work Order, within Oracle Time Store (a piece of Oracle Time and Labor). That information is then extracted from Oracle Time Store to Oracle Enterprise Asset Management. This extraction dynamically creates a resource transaction within Oracle Enterprise Asset Management. Finally, the Cost Manager process is executed. This process charges the resource transaction. After this process executes, you can view the actual costs for the period that you charged, within the Work Order.

This section includes the following topics:

- Entering Timecard Information, page 12-3
- Extracting Information to Enterprise Asset Management
- Executing the Cost Manager Process, page 12-5

Entering Timecard Information

You can enter timecard information and expenses to a work order. When you enter time on a Work Order, the information is stored in Oracle Time Store, a piece of Oracle Time and Labor (OTL). Oracle Enterprise Asset Management (eAM) extracts this information and applies it to the appropriate Work Order.

To enter timecard information:

1. Navigate to the Timecard. All timecards that the current user has entered and submitted appear.
2. Select a Period. The current period defaults.

   Note: You cannot submit time for a future period.

3. Choose GO.
4. Select a Work Order. Work Orders with a status of Released or Complete, and that have operations assigned to a department that the current user (you) is assigned to, appear. If you are not assigned to a Work Order's operation but are a resource associated to the department on the Work Order's operation, you can see the Work Order in the list of values. After you charge time and submit the timecard, and the retrieval process is executed, you are assigned to the Work Order's operation.
5. The Asset Number associated with the current Work Order defaults in the Asset Number field.
6. Select an Operation. Operations associated with the current Work Order are available.
7. Select a Resource. Resources associated with the current operation are available.
8. Optionally, select a Charge Department. For example, if the current resource is borrowed, you might want to charge the department that owns the resource. The value defaults with the current operation's assigned department.
9. Use the remaining date fields to enter your time in hours.
10. Optionally, choose Calculate to view the Total hours calculated for both the period,

and specific days.

11. Optionally, to quickly remove information entered, choose Delete.

12. Optionally, choose Save For Later.

    For example, you might need to work again on Friday. Save For Later enables you to do this. If this is chosen, the Timecard is given a Working status. Oracle Enterprise Asset Management cannot extract the information, within timecards with a Working status, from Oracle Time and Labor.

13. When you are ready to submit the current timecard, choose Review.

14. To submit the current timecard, choose Submit. The current timecard has a Submitted status.

15. Optionally, choose Return to Activities to view your timecards. All timecards that are at Working and Submitted statuses appear.

16. Optionally, select the Update icon to make changes to the current timecard.

17. Optionally, select the Delete icon to delete a specific timecard.

18. Optionally, select the Details icon to review the current timecard information.

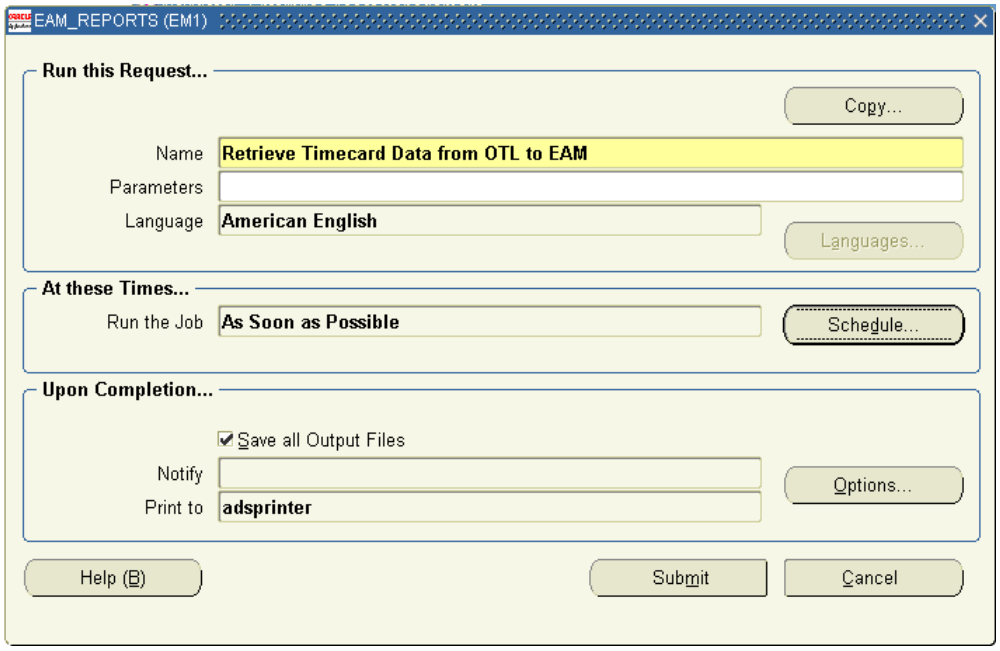
Extracting Information to Enterprise Asset Management

You can extract all timecard information at a Submitted status from Oracle Time and Labor (OTL) to Oracle Enterprise Asset Management (eAM). A concurrent process executes in the background and performs time charge extractions. After extracted, a resource transaction dynamically generates within eAM. Most organizations set this process to periodically execute, automatically.

To extract information from OTL to eAM:

1. Navigate to the Submit Request window.

Retrieve Timecard Data from OTL to EAM



2. Select Retrieve Timecard Data from OTL to EAM.

3. A range of dates must be entered in the Parameters window to specify information to extract from OTL.

   Note: The decision to extract timecard information once is defined in OTL preferences. By default, the preference is set to NO. The US OTL Administrator can change this preference to YES in the OTL Preferences window (for example, a timecard is submitted with erroneous charges).

4. Choose OK.

5. Choose Submit. A resource transaction has dynamically created in eAM. The timecard information is now in the Resource Transaction Interface table.

6. Choose No to return to the menu.

Executing the Cost Manager Process

Finally, you need to execute the Cost Manager process. Most organizations set this process to periodically execute, automatically. This process charges the resource transaction. After this process runs, you can see the actual costs for the period that you

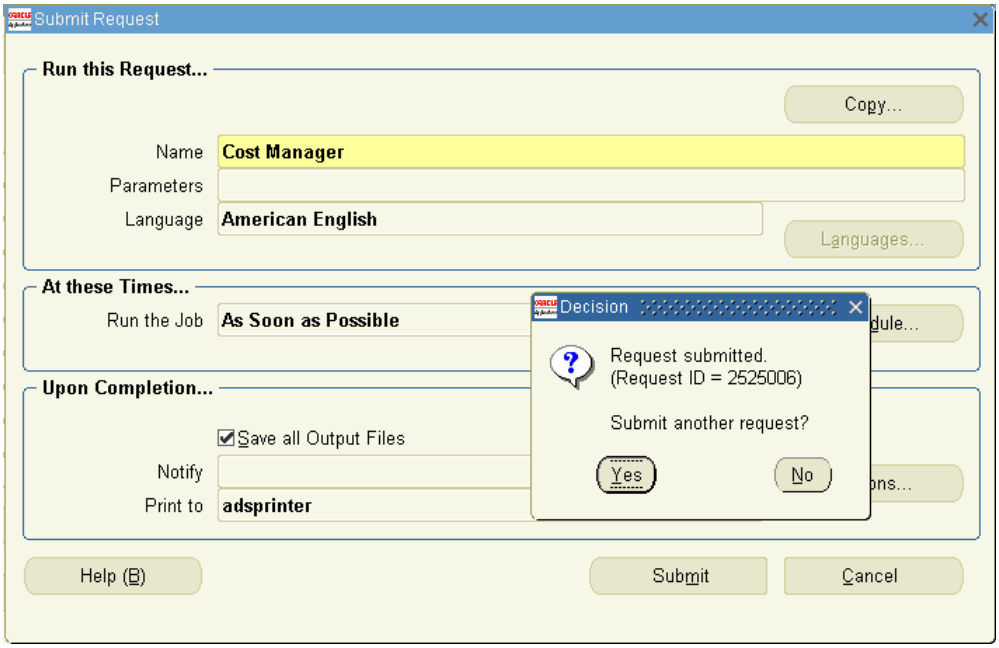
charged, within the Work Order.

> **Note:** Set up the Cost Manager Interface Manager to execute in the background, before executing the Cost Manager process. See: Windows and Navigation Paths for information on how to access this process.

To execute the Cost Manager process:

1. Navigate to the Submit Request window.
2. Select Cost Manager.
3. Choose Submit. The previously created resource transaction is now charged, and you can view the actual resource costs within the Work Order that the timecard was initially charged to; the information exists in the cost tables. To view the resource cost information from within the Work Order, See: Viewing Cost Information, page 6-4.

Cost Manager Process



4. Choose No to return to the menu.

13

eAM Quality

This chapter covers the following topics:

- Introduction
- Quality Setup
- Using eAM Quality
- Adding Collection Plan Attachments
- Triggering a Work Request
- Triggering a Work Order
- Entering Quality Results

Introduction

eAM integrates with Quality, enabling you to collect quality results on your assets. If an asset is not up to the required standards, a Work Request can automatically generate. This chapter contains the following topics:

- Quality Setup, page 13-2
- Using eAM Quality, page 13-2
- Adding Collection Plan Attachments, page 13-3
- Triggering a Work Request, page 13-4
- Triggering a Work Order, page 13-7
- Entering Quality Results, page 13-10

Quality Setup

A maintenance Work Order transitions through various steps in its lifecycle (See: eAM Work Order Statuses, page 3-23). One of the steps in the lifecycle is Completion. Certain quality plans might apply to the transaction, depending on the quality plan's setup and its association to transactions and triggers. A list of quality collection plans that applies to the completion transaction appears during the completion process. If a quality plan is specified as mandatory, results are entered before the transaction can finish. Otherwise, results entry is optional or can defer.

While creating a collection plan, you have the option of adding collection triggers to the plan. Triggers are restrictions that you define for a collection plan. For example, Work Orders for assets that belong to the TRUCK Asset Group require quality results entry for the collection plan. Data collection is initiated if all collection trigger conditions are satisfied.

Quality Setup tasks for Enterprise Asset Management include the following:

- Creating eAM Collection Elements, page 2-157
- Creating eAM Quality Collection Plans, page 2-161
- Creating eAM Quality Collection Plans for a Supplier, page 2-165

Related Topics

Creating eAM Quality Collection Plans, page 2-161

Creating Collection Elements, page 2-157

Creating eAM Quality Collection Plans for a Supplier, page 2-165

Using eAM Quality

You can attach illustrative or explanatory files in the form of text, images, word processing documents, spreadsheets, video, graphics, OLE objects, and so on, to collection plans and specifications.

For each collection element, you can specify that Quality initiates an action based on the quality data that you collect. The condition that you specify and the resulting action comprise an Action Rule. Action Rules are evaluated and executed during the quality data collection process. For example, eAM enables you to specify that a Work Request or a Work Order is created automatically, based on certain conditions of the asset, determined by the quality data collected. The Action Rule is defined within the collection plan definition.

This section includes the following topics:

- Adding Collection Plan Attachments, page 13-3
- Triggering a Work Request, page 13-4
- Triggering a Work Order, page 13-7
- Entering Quality Results, page 13-10

Adding Collection Plan Attachments

You can attach illustrative or explanatory files in the form of text, images, word processing documents, spreadsheets, video, graphics, OLE objects, and so on, to collection plans and specifications. You can also attach files to quality results, as you enter them.

You can view collection plan attachments as you enter, view, and update quality results. You can view specification attachments as you enter quality results. You can view quality results line attachments as you update and view quality results. See Viewing Attachments Associated with Quality Results, *Oracle Quality User's Guide*.

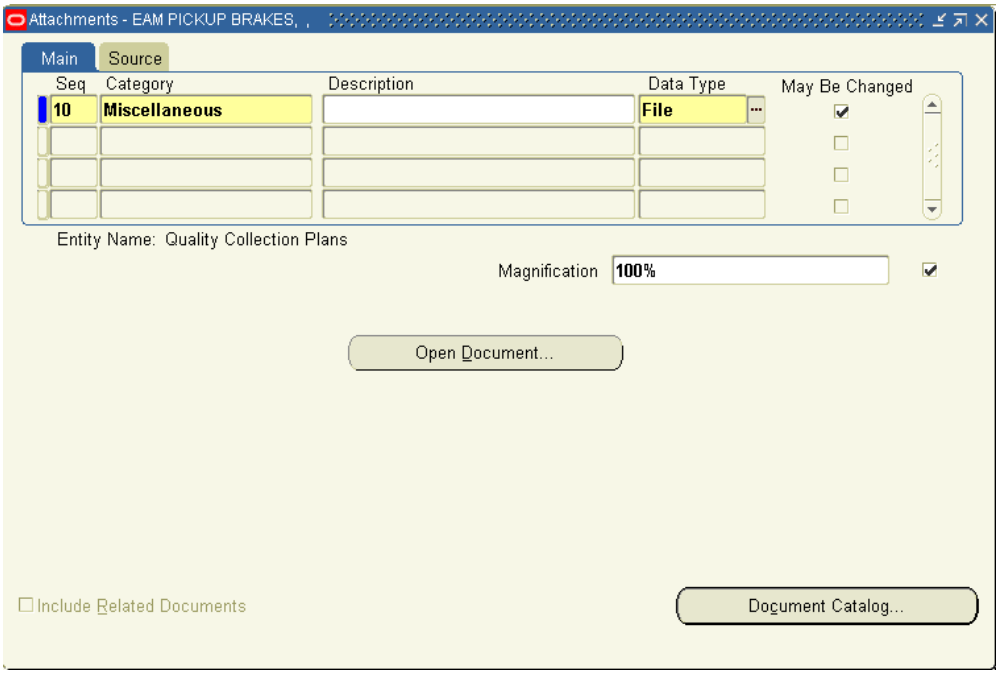
To add collection plan attachments:

1. Navigate to the Collection Plans or Specifications (See: Overview of Specifications, *Oracle Quality User's Guide*) window. See: Creating eAM Quality Collection Plans, page 2-161 and Defining Specifications, *Oracle Quality User's Guide*.

   Note: You must save the collection plan or specification before you can add an attachment to it.

2. Choose the Attachments icon or choose attachments from the View menu. The Attachments window appears.

Attachments



To add attachments to quality results lines:

1. Navigate to the Enter Quality Results window. See: Entering Quality Results Directly, *Oracle Quality User's Guide*.

2. Select a quality results line.

3. Choose the Attachments icon or choose attachments from the View menu. The Attachments window appears.

Related Topics

Working With Attachments, *Oracle Applications User's Guide*

Attachments for Collection Plans, Specifications, and Results Lines, *Oracle Quality User's Guide*

Triggering a Work Request

For each collection element, you can specify that Quality initiates an action based on the quality data that you collect. The condition that you specify and the resulting action comprise an Action Rule. Action Rules are evaluated and executed during the quality data collection process. For example, eAM enables you to specify that a Work Request is

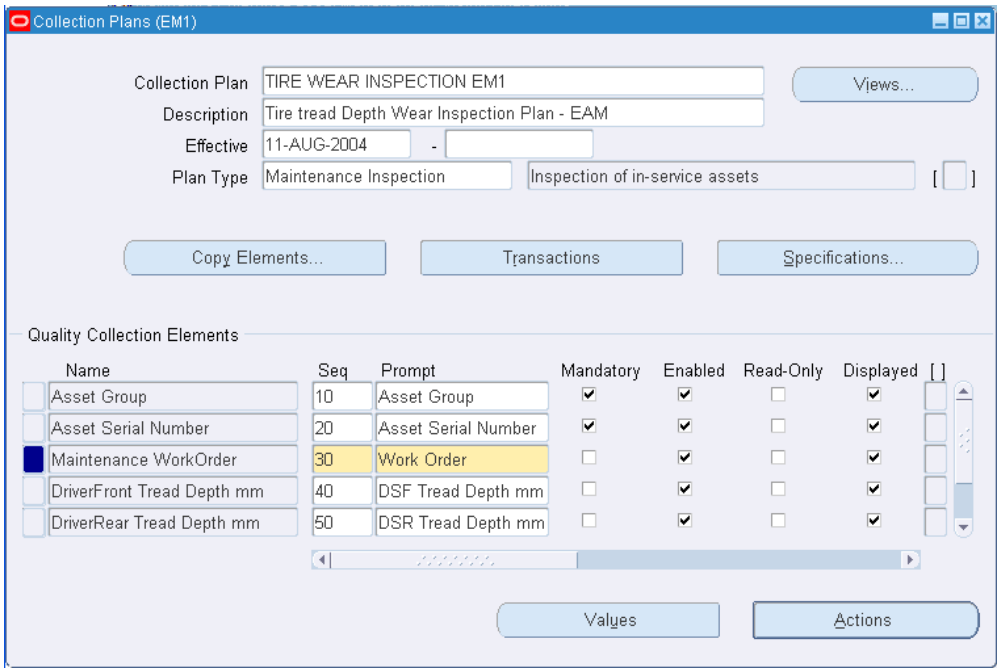
created automatically, based on certain conditions of the asset, determined by the quality data collected. The Action Rule is defined within the collection plan definition.

A Work Request is used to request work on an asset. A Work Request is not a Work Order, but is referenced by the Work Order that is ultimately created because of the Work Request.

To set up work request triggers:

1. Navigate to the Collection Plans window.

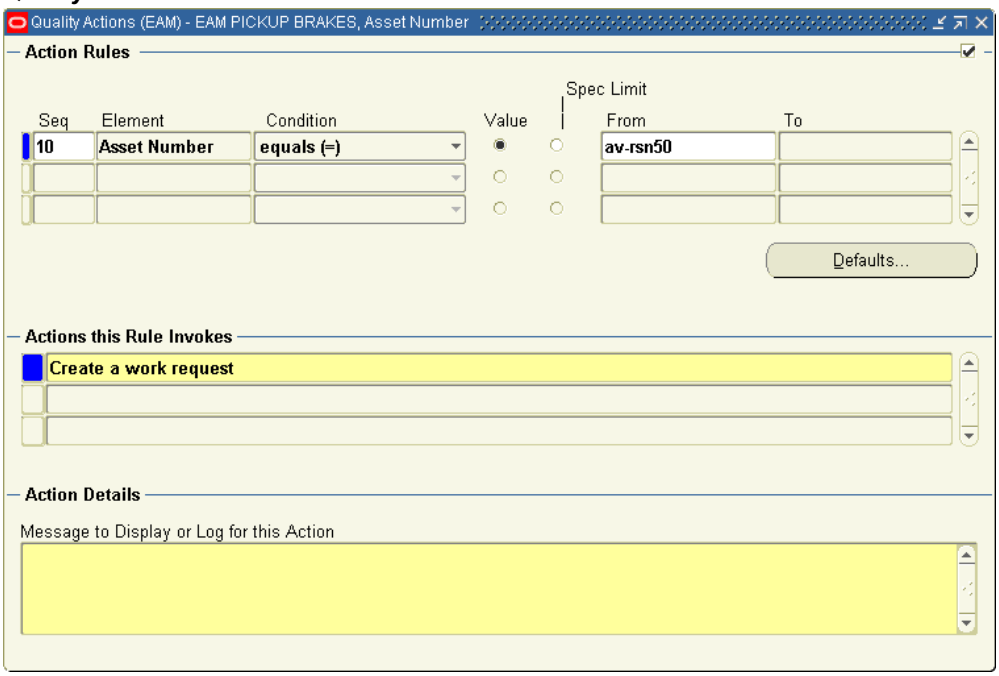
Collection Plans



2. Select a valid Collection Plan. To create a new collection plan, See: Creating Collection Plans, *Oracle Quality User's Guide*.

3. In the Quality Collection Elements region, select the collection element to create an action rule for. Choose Actions.

Quality Actions



4. In the Action Rules region, enter the Sequence number for the action rule. See: Action Rule Sequencing, *Oracle Quality User's Guide*.

   The sequence number establishes the order in which action rules are evaluated as data is collected. The sequence number can be from 0 to 99999.

5. Select the Condition that must be met to invoke the action. For example, when the brake pad thickness wears to less than .2, a Work Request is automatically created. See: Query Operators, *Oracle Quality User's Guide*.

6. Choose either Value or Spec Limit to specify the evaluation method.

   Value: If you choose Value, as quality data is collected, the action rule is evaluated using the results value and the value entered. If you have defined a list of values for the collection element, you must choose a value from this list. If you have not defined a list of values for the collection element, you can enter any value.

   Spec Limit: If you choose Spec Limit, as quality data is collected, the action rule is evaluated using the quality results value and either the specification limit target value (collection element level), the upper or lower user-defined range limits, or the upper or lower specification range limits. Specification limits are defined at the collection element level.

   Spec Limits can be used to define action rules that evaluate numeric results.

7. If the selected Condition requires a range of values, enter both the From and To

value. If the selected Condition requires a single value, enter the From value.

Note: Some conditions (for example, is entered and is empty) do not require values.

If you have chosen the Values, and a list of values has been defined for the collection element, you can select values from this list. If you have not defined a list of collection element values, you can enter any value. See: Defining Collection Element Values, *Oracle Quality User's Guide*.

8. In the Actions this Rule Invokes region, select *Create a work request*.
9. In the Action Details region, enter a Message to Display or Log for this Action. See: Message Actions, *Oracle Quality User's Guide*

   If the selected action requires a status code, enter the status code in the Action Details region. See: Application Specific Actions, *Oracle Quality User's Guide*.
10. Save your work.

Related Topics

Associating Output Variables with Actions, *Oracle Quality User's Guide*

Defining a Launch a Workflow Action, *Oracle Quality User's Guide*

Defining Collection Plan Element Alert Actions, *Oracle Quality User's Guide*

Defining Collection Element Actions, *Oracle Quality User's Guide*

Quality Actions, *Oracle Quality User's Guide*

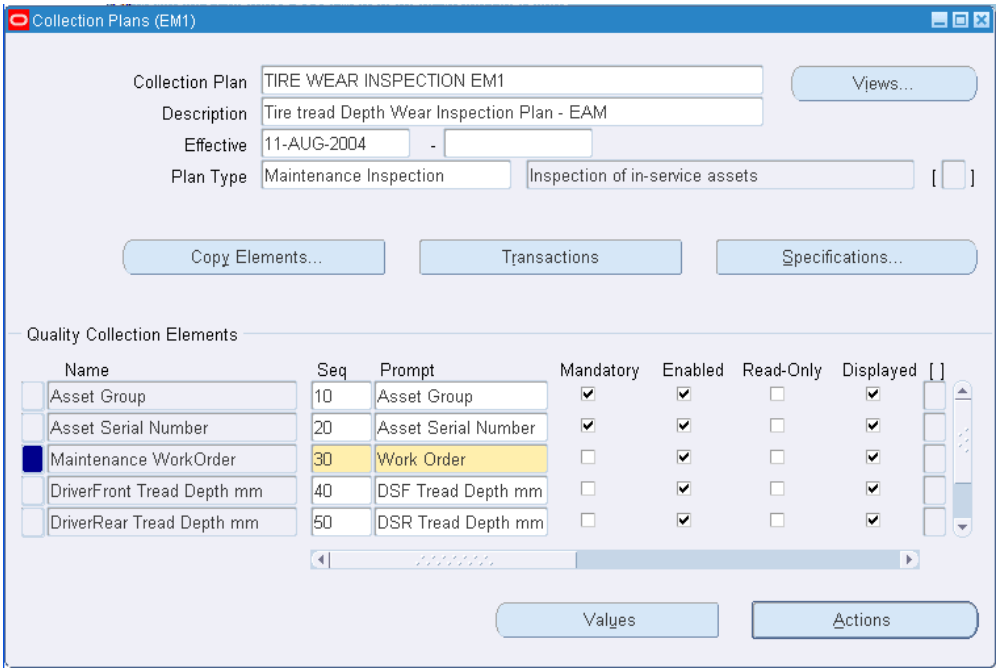
Triggering a Work Order

For each collection element, you can specify that Quality initiates an action based on the quality data that you collect. The condition that you specify and the resulting action comprise an Action Rule. Action Rules are evaluated and executed during the quality data collection process. For example, eAM enables you to specify that a Work Order is created automatically, based on certain conditions of the asset, determined by the quality data collected. The Action Rule is defined within the collection plan definition.

To set up work request triggers:

1. Navigate to the Collection Plans window.

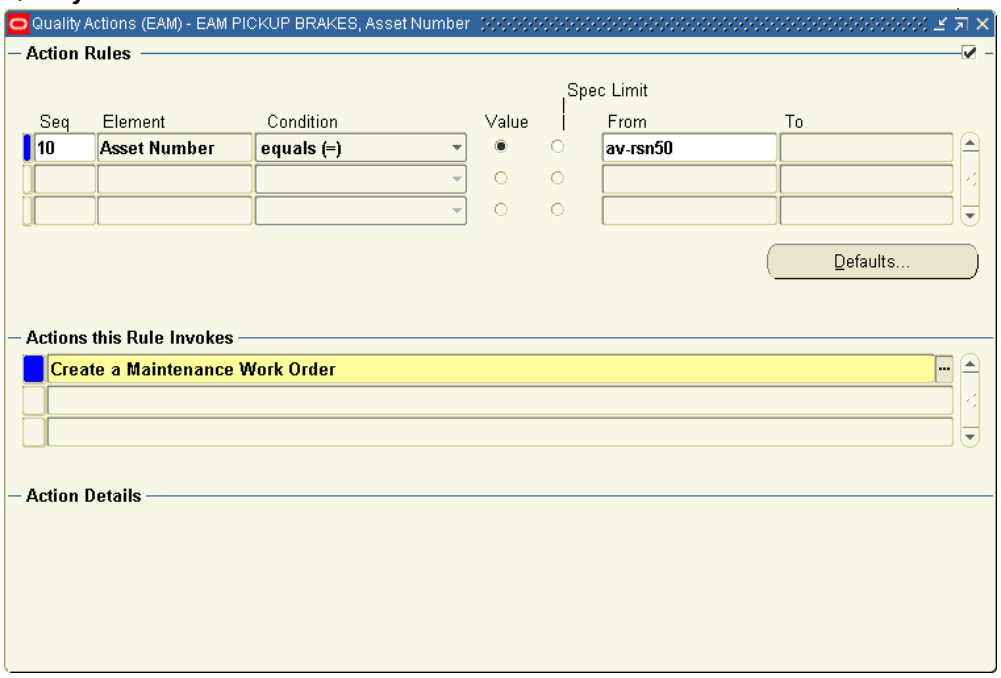
Collection Plans



2. Select a valid Collection Plan. To create a new collection plan, See: Creating Collection Plans, *Oracle Quality User's Guide*.

3. In the Quality Collection Elements region, select the collection element to create an action rule for. Choose Actions.

Quality Actions



4. In the Action Rules region, enter the Sequence number for the action rule. See: Action Rule Sequencing, *Oracle Quality User's Guide*.

   The sequence number establishes the order in which action rules are evaluated as data is collected. The sequence number can be from 0 to 99999.

5. Select the Condition that must be met to invoke the action. For example, when the brake pad thickness wears to less than .2, a Work Request is automatically created. See: Query Operators, *Oracle Quality User's Guide*.

6. Choose either Value or Spec Limit to specify the evaluation method.

   Value: If you choose Value, as quality data is collected, the action rule is evaluated using the results value and the value entered. If you have defined a list of values for the collection element, you must choose a value from this list. If you have not defined a list of values for the collection element, you can enter any value.

   Spec Limit: If you choose Spec Limit, as quality data is collected, the action rule is evaluated using the quality results value and either the specification limit target value (collection element level), the upper or lower user-defined range limits, or the upper or lower specification range limits. Specification limits are defined at the collection element level.

   Spec Limits can be used to define action rules that evaluate numeric results.

7. If the selected Condition requires a range of values, enter both the From and To

value. If the selected Condition requires a single value, enter the From value.

> **Note:** Some conditions (for example, is entered and is empty) do not require values.

If you have chosen the Values, and a list of values has been defined for the collection element, you can select values from this list. If you have not defined a list of collection element values, you can enter any value. See: Defining Collection Element Values, *Oracle Quality User's Guide*.

8. In the Actions this Rule Invokes region, select Create a Maintenance Work Order or Create a Maintenance Work Order.

9. In the Action Details region, enter a Message to Display or Log for this Action. See: Message Actions, *Oracle Quality User's Guide*.

   If the selected action requires a status code, enter the status code in the Action Details region. See: Application Specific Actions, *Oracle Quality User's Guide*.

10. Save your work.

Related Topics

Associating Output Variables with Actions, *Oracle Quality User's Guide*

Defining a Launch a Workflow Action, *Oracle Quality User's Guide*

Defining Collection Plan Element Alert Actions, *Oracle Quality User's Guide*

Defining Collection Element Actions, *Oracle Quality User's Guide*

Quality Actions, *Oracle Quality User's Guide*

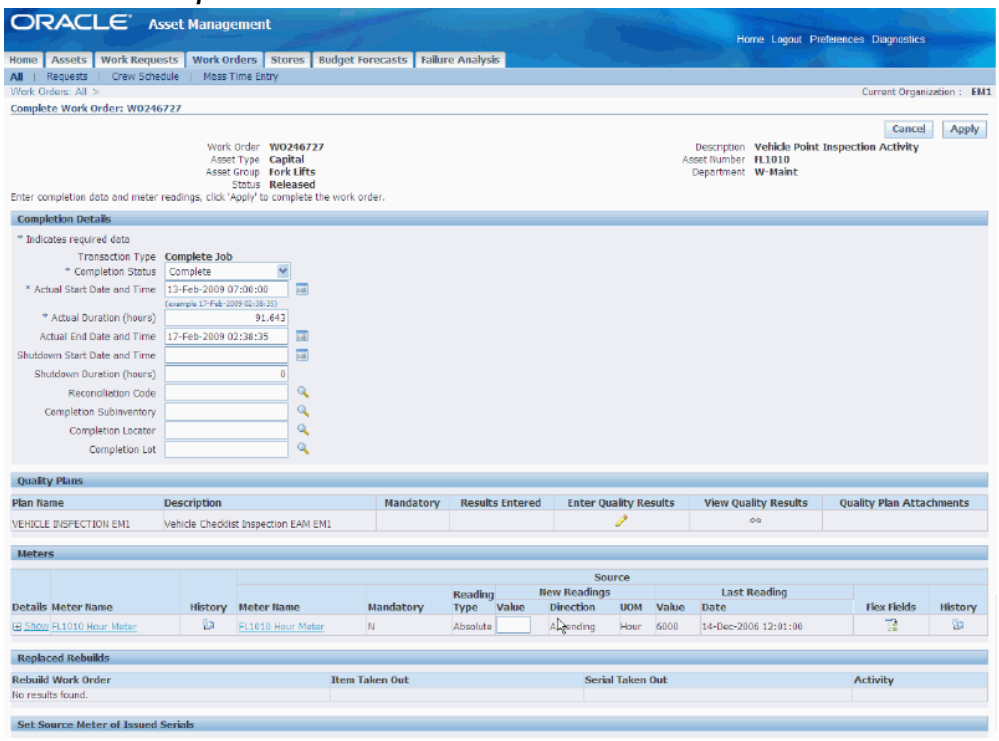
Entering Quality Results

You might need to enter Quality results when completing a Work Order, Operation, or Supplier Operation. Quality results entry is mandatory if you selected the Mandatory check box, when creating the collection plan (See: Creating eAM Quality Collection Plans, page 2-161).

To enter quality results when completing a Work Order:

1. Navigate to the Work Order Completion window.

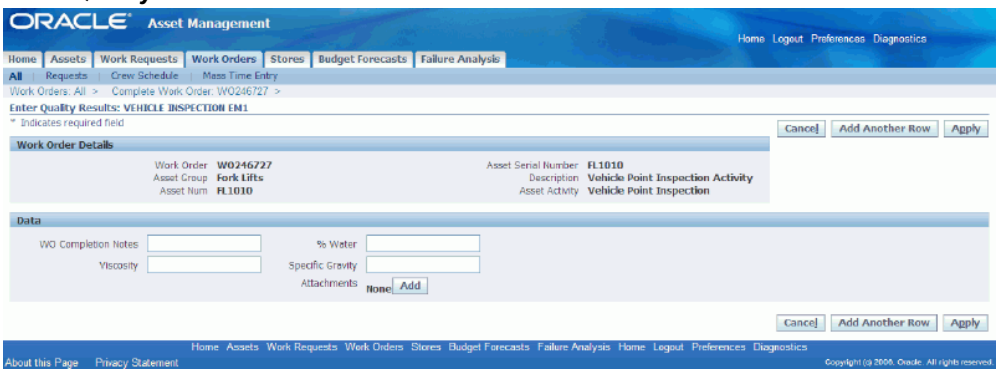
Work Order Completion



2. Select the Work Order.

3. Save your work. If the collection plan that is triggered requires quality results entry, the Quality Results Entry window appears. If not, select Enter Quality Results from the Tools menu or select the Enter Quality Results icon. A collection plan is triggered if its Transaction Description reads, *EAM Work Order Completions (Oracle Enterprise Asset Management)*. See: Creating eAM Quality Collection Plans, page 2-161.

Enter Quality Results



4. Enter the required information.

5. Save your work.

To enter quality results when completing an operation:

1. Navigate to the Work Order window.

2. Select a Work Order.

3. Choose Operations.

4. Complete an Operation. See: Operation Completion, page 3-59.

5. Save your work. If the collection plan that is triggered requires quality results entry, the Quality Results Entry window appears. If not, select Enter Quality Results from the Tools menu or select the Enter Quality Results icon. A collection plan is triggered if its Transaction Description reads, *EAM Operation Completions (Oracle Enterprise Asset Management)*. See: Creating eAM Quality Collection Plans, page 2-161.

   Note: If you want to update the quality results for a work order with a status of Closed, you must unclose the work order.

6. Enter the required information.

7. Save your work.

To enter quality results via iSupplier Portal:

eAM enables you to create Quality collection plans that are optionally mandatory for a supplier to enter crucial Quality data, via iSupplier Portal, before the supplier can

complete an Outside Service operation. A supplier will complete an Outside Service operation when the outside service is performed or shipped to the eAM organization.

1. Navigate to the iSupplier Portal.
2. Select the Orders tab.
3. Select Work Orders sub-tab.
4. Query a Work Order by PO, Work Order, From/To Need by Date, or From/To Promise Date.
5. Select a Work Order. The Work Order Detail page appears.
6. Choose Complete Operations.
7. Enter necessary information and Quality Results.

Related Topics

Entering Quality Results, *Oracle Quality User's Guide*

14

Work Order Billing

This chapter covers the following topics:

- Introduction
- Setting Up Work Order Billing
- Billing Work Orders
- Creating a Billable Work Order
- Associating Items and Activities to a Price List
- Initiating Billing
- Creating an Invoice

Introduction

While maintaining an asset or servicing a customer request, you can bill a third party customer for the work that they performed. This chapter discusses Work Order Billing, including the following topics:

- Setting Up Work Order Billing, page 14-1
- Billing Work Orders, page 2-209
- Creating an Invoice, page 14-12

Setting Up Work Order Billing

While maintaining an asset or servicing a customer request, you can bill a third party customer for the work that they performed. The cost of the work performed is based on the material and resource requirements (Bill of Material) of the Work Order, or the cost of the Activity associated with the Work Order.

This section includes the following topics:

- Work Order Billing Setup, page 2-209
- Setting Up Parameters, page 2-209
- Setting Up Costs for the Cost Plus Billing Basis, page 2-210
- Setting Up Prices for the Price List Billing Basis, page 2-213
- Service Attribute Setup, page 2-215
- Setting Up Billable Material, page 2-216
- Setting Up a Billable Resource, page 2-217
- Setting Up a Billable Activity, page 2-219

Billing Work Orders

After the setup tasks are complete (See: Setting Up Work Order Billing, page 14-1), you can bill third parties and customers the work performed, while maintaining an asset or servicing a customer request. The cost of the work performed is based on the Work Order's material and resource requirements (Asset Bills of Material and Asset Routes), or the cost of the Activity that is associated with the Work Order.

This section includes the following topics:

- Creating a Billable Work Order, page 14-2
- Associating Items and Activities to a Price List, page 14-4
- Initiating Billing, page 14-4

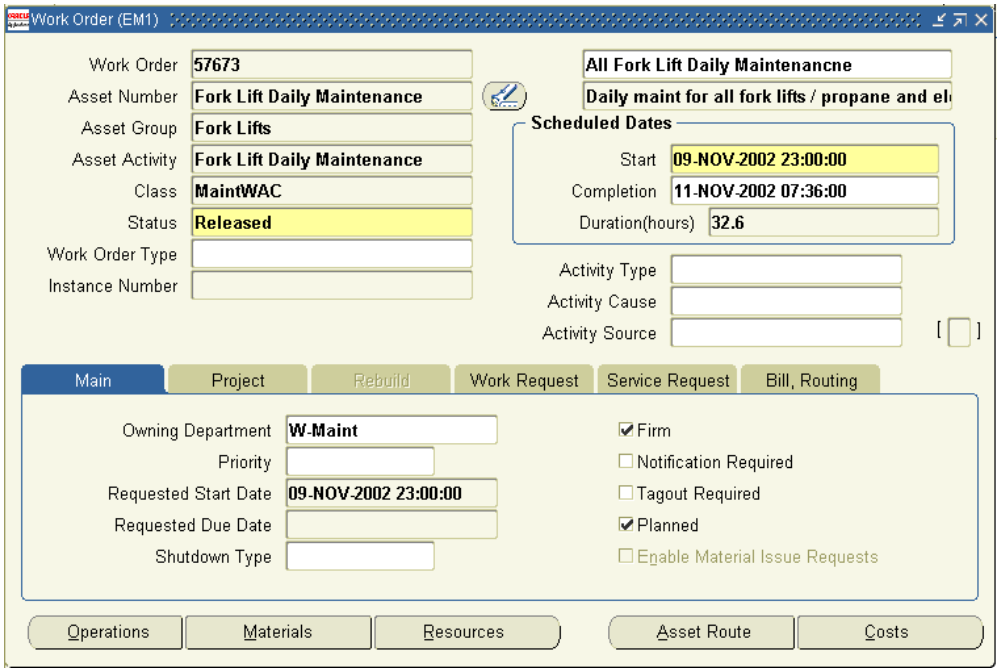
Creating a Billable Work Order

Work Order Billing requires completed, billable Work Orders. First, create a Work Order that is associated with billable material, resources, and/or a billable Activity. After the Work Order is released, you can apply material and resources to it. Finally, after the Work Order is completed, the status is changed to Complete - No Charges. The Work Order is ready to bill.

To set up a billable work order:

1. Navigate to the Work Orders window and create a Work Order.

Work Orders



2. If you are billing by requirements, add the previously defined billable material to the current Work Order's Bill of Material, as operation 10. See: Setting Up Billable Material, page 2-216 and Defining Inventory Material Requirements, page 3-37. Add the previously defined billable resource to the current Work Order's routing, as operation 10. See: Setting Up a Billable Resource, page 2-217 and Defining Resource Requirements, page 3-46.

3. If you are billing by activity, add the previously defined Activity to this Work Order. See: Setting Up a Billable Activity, page 2-219.

4. Release the current Work Order. See: eAM Work Order Statuses, page 3-23.

5. Issue some material (not all) and charge some resources (not all) to the current Work Order (See: Transacting Material, page 3-65 and Transacting Resources, page 20-64, respectively).

6. Complete the current Work Order. See: Work Plans, page 20-80.

7. Update the status of the Work Order to Complete - No Charges. See: eAM Work Order Statuses, page 3-23. You can bill Work Orders at a Closed status, as well.

8. Save your work.

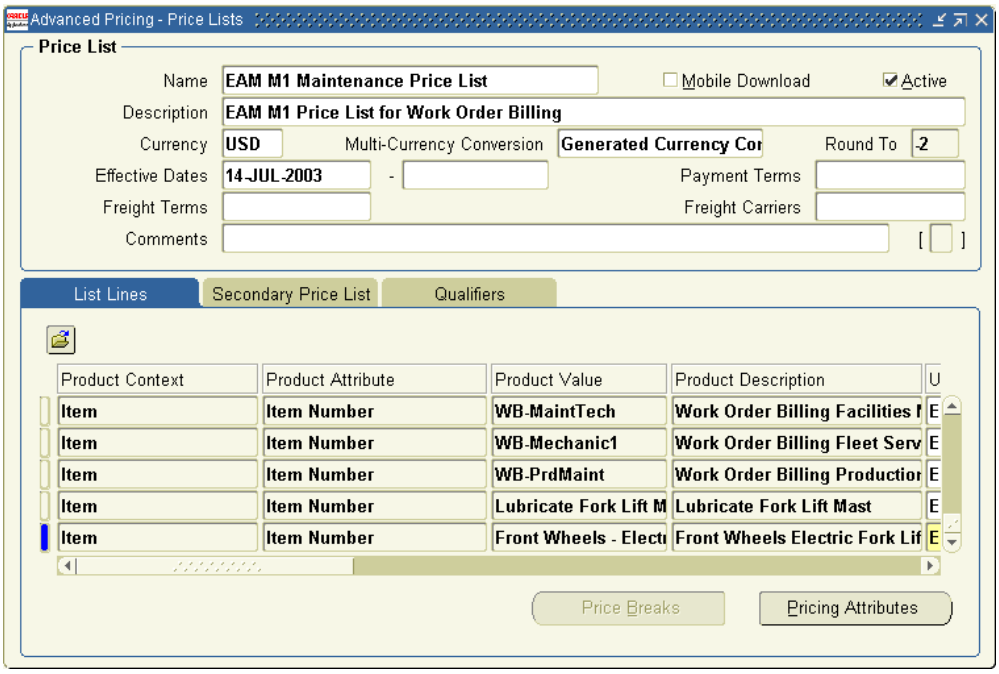
Associating Items and Activities to a Price List

Material, Resources, and Activities require association with a price list, before you can bill them.

To add items and activities to a price list:

1. Navigate to the Advanced Pricing - Price Lists window.

Advanced Pricing - Price Lists



2. Add your material and resource items and/or your Activities to the price list.

3. Save your work.

Related Topics

Setting Up Item Costs and Prices, page 2-209

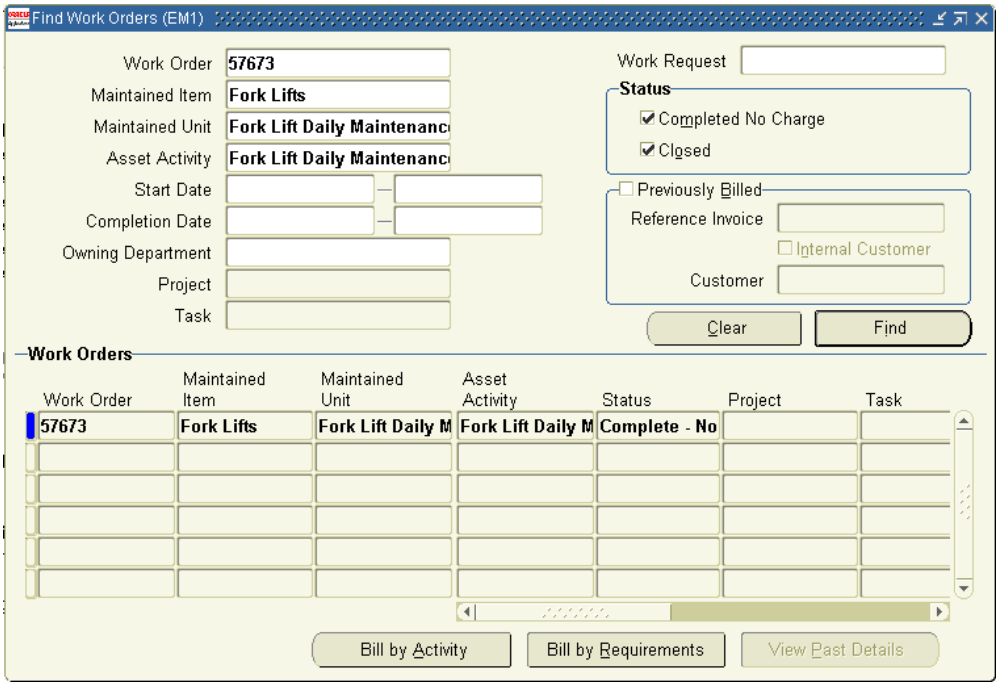
Initiating Billing

If a Work Order is at a Complete - No Charges or Closed status, you can select it for billing.

To bill by requirements:

1. Navigate to the Find Work Orders window.

Find Work Orders

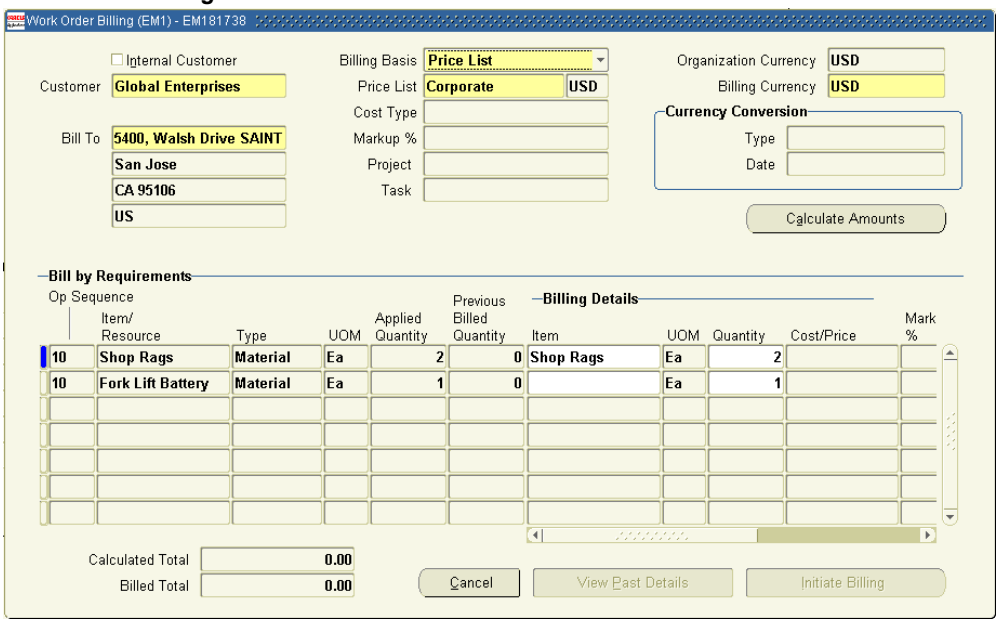


2. Select the Work Order you wish to bill.

3. Choose Find.

4. Choose Bill by Requirements.

Work Order Billing



5. Within the Work Order Billing window, select a Customer.

6. Select a Bill To for the current customer.

7. Select a Billing Basis. Valid values are Price List and Cost Plus.

   - If you select Cost Plus, select a Cost Type and Markup %. For example, choose a Frozen Cost Type, if you defined a frozen cost for the material and resource items. See: Setting Up Item Costs and Prices, page 2-209. The Markup % defaults with a 0% value, but you can optionally update it.

   - If you select the Price List Billing Basis, select a Price List. All billable items appear on the selected price list, if they are Customer Order enabled (See: Setting Up Item Costs and Prices, page 2-209).

8. Choose Calculate Amounts. The unit rates are calculated for each billable item. The total amount of each billable item is a function of the unit rate, and the billed quantity.

   - If you previously chose a Cost Plus Billing Basis, the unit rate is calculated from the item cost and markup.

   - If you previously chose a Price List Billing Basis, the unit rate is retrieved from the price list that is associated with the item (See: Associating Items and Activities to a Price List, page 14-4). If multiple rates exist for the item, the system defers to the Price List setup (See: Setting Up Item Costs and Prices,

page 2-209).

9. Within the Bill by Requirements region, enter the Quantity to bill, for each billable item. This quantity should be no greater than the difference between the Applied Quantity and Previous Billed Quantity.

   The Applied Quantity is what the Work Order used; for material, the Applied Quantity is the material issued to the Work Order. For resources, the Applied Quantity equals the resources charged to the Work Order.

10. Optionally enter the Markup %, for each billable item.

11. To indicate the lines that you want to bill, for each billable item, you can optionally select the individual Bill check boxes. To bill all lines, select the top check box; this automatically selects all check boxes.

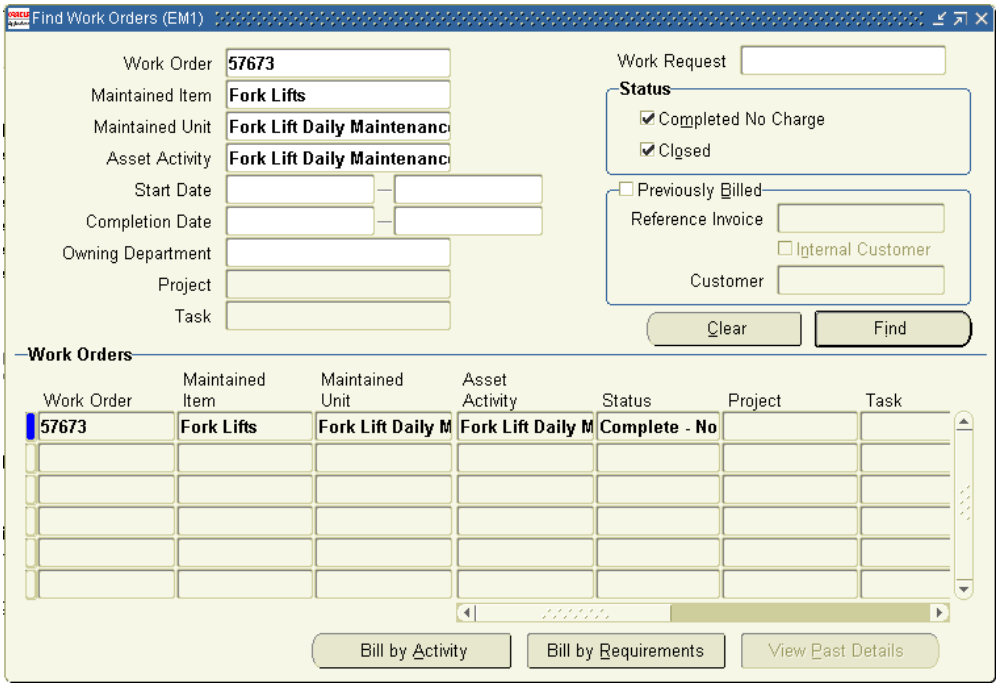
12. Choose Initiate Billing to execute the billing process and populate the billing information within the Accounts Receivables interface tables.

13. Choose OK on the confirmation note, indicating that billing has successfully completed.

To bill by an activity:

1. Navigate to the Find Work Orders window.

Find Work Orders

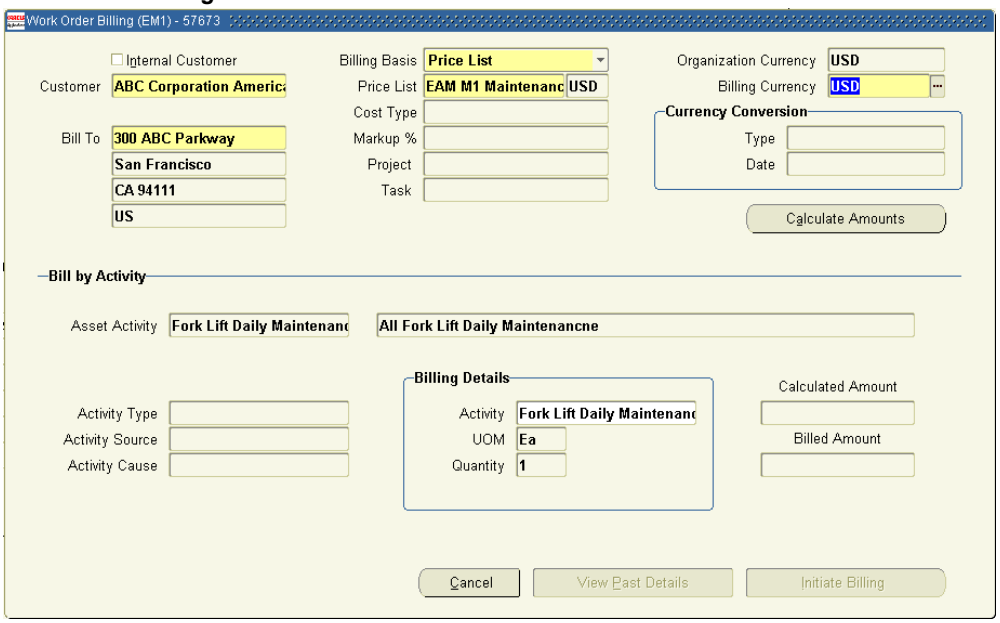


2. Select the Work Order you wish to bill.

3. Choose Find.

4. Choose Bill by Activity.

Work Order Billing



5. Within the Work Order Billing window, select a Customer.

6. Select a Bill To for the current customer.

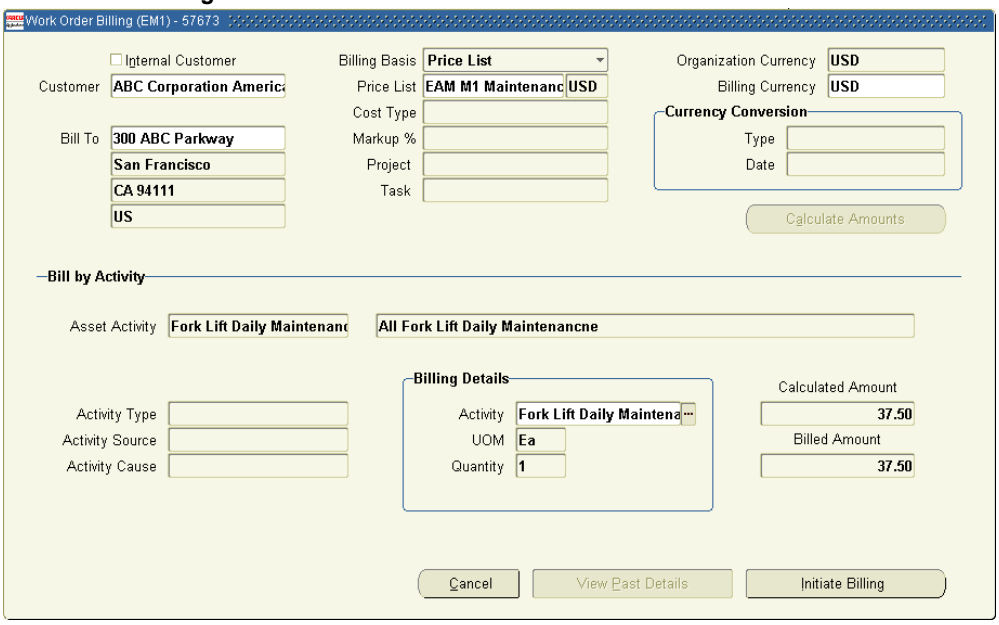
7. Select a Billing Basis. Valid values are Price List and Cost Plus.

   - If you select Cost Plus, select a Cost Type and Markup %. For example, choose a Frozen Cost Type, if you defined a frozen cost for the material and resource items. See: Setting Up Item Costs and Prices, page 2-209. The Markup % defaults with a 0% value, but you can optionally update it.

   - If you select the Price List Billing Basis, select a Price List. All billable items appear on the selected price list, if they are Customer Order enabled (See: Setting Up Item Costs and Prices, page 2-209).

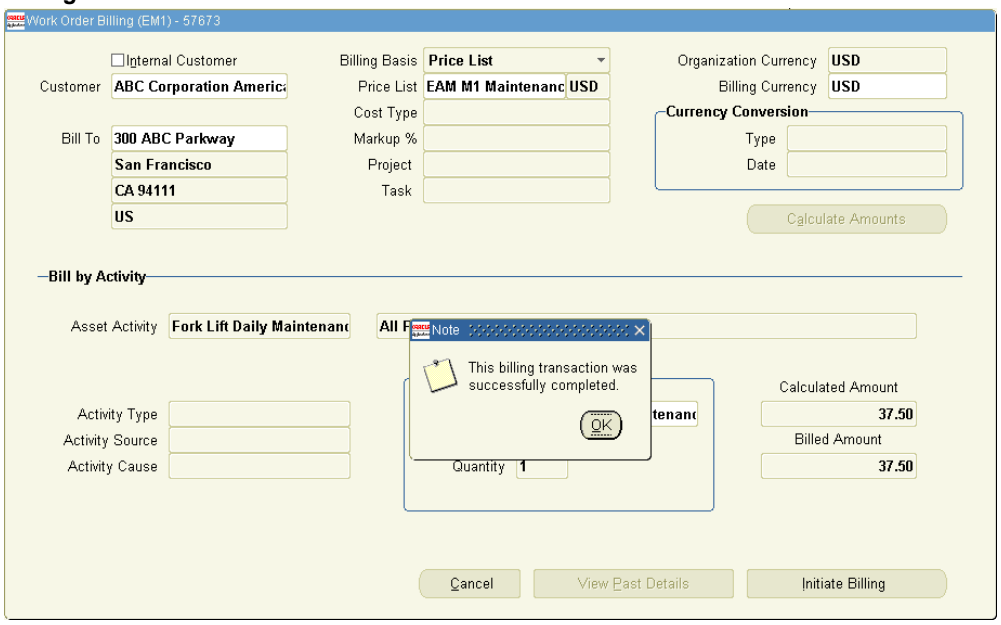
8. Choose Calculate Amounts. The unit rates are calculated for each billable item. The total amount of each billable item is a function of the unit rate and the billed quantity.

Work Order Billing



9. Choose Initiate Billing.

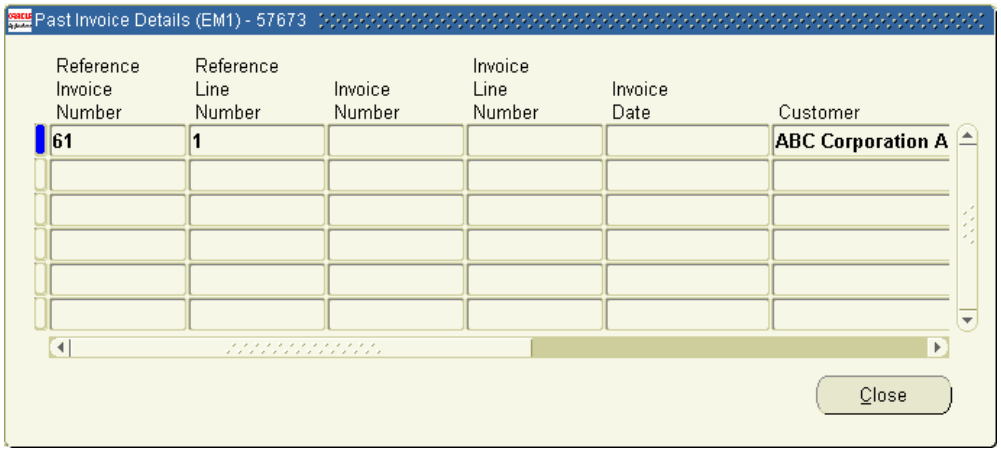
Billing Initiated



10. Choose OK.

11. Optionally choose View Past Details to view what was billed.

Past Invoice Details



If you billed by Activity, one line appears. If you billed by requirements, multiple lines may appear.

12. Choose Close to return to the Find Work Orders window.

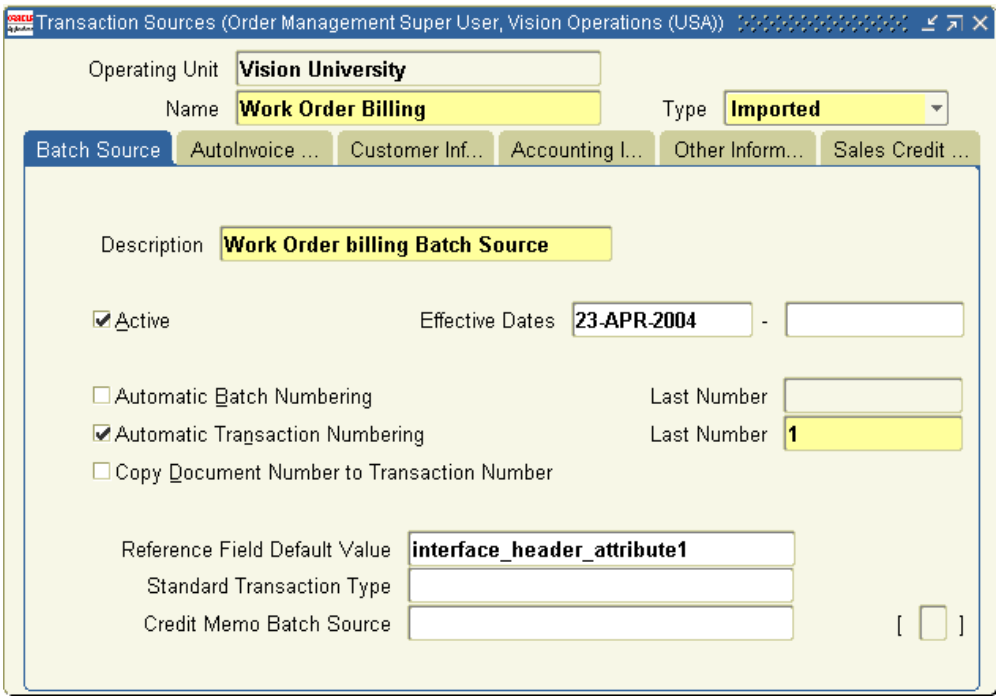
Creating an Invoice

After billing is initiated, you can create invoices. First, a source is defined in Oracle Receivables to identify where your invoicing activity originates. The batch source also controls invoice defaults and invoice numbering. Next, ensure that a Work Order Billing flexfield code exist. Finally, you can run the AutoInvoice concurrent process to create invoices. You can set this program to automatically run, or execute it from the menu.

To ensure a batch source exists:

1. Navigate to the Transaction Sources window.

Transaction Sources



2. Query on Work Order Billing in the Name field, to ensure that it exists. If it does not exist, perform the following steps:

    1. Enter Work Order Billing in the Name field.

    2. Select Imported from the Type list of values. Because this is an Imported transaction batch source, the system automatically numbers the batch with the batch source name - request ID.

    3. Enter a Description.

4. Enter the range of Effective Dates. The start date defaults as the current date, but you can change it. If you do not enter an end date, this transaction batch source is active indefinitely.

5. To automatically number new transactions created using this source, check the Automatic Transaction Numbering check box and enter a Last Number. You can use automatic transaction numbering with both Imported and Manual sources.

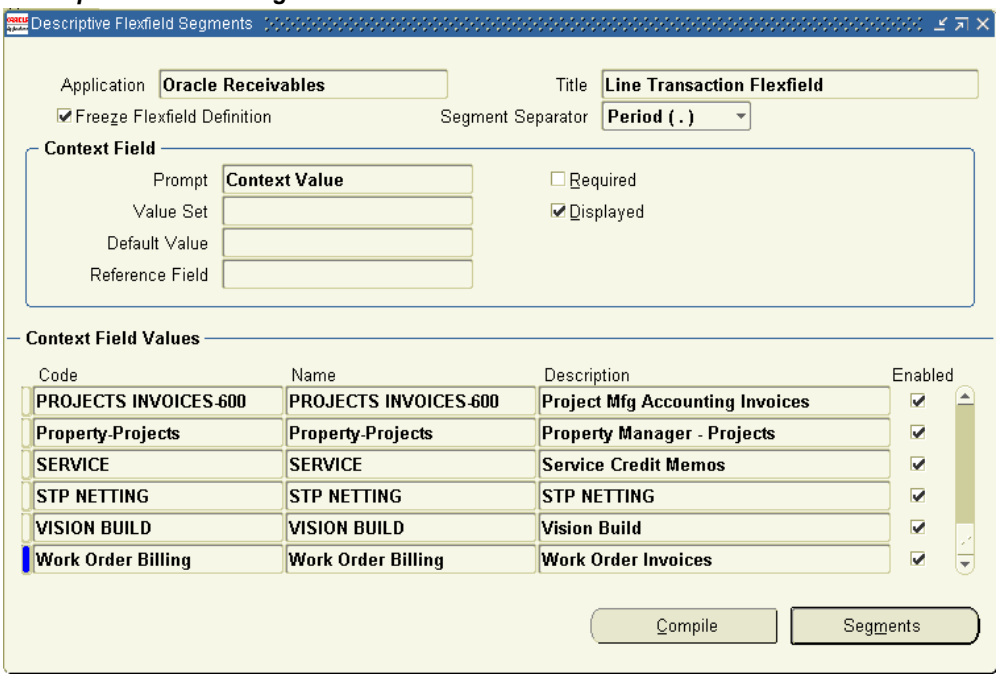
6. Optionally, to assign the same number to both the document and transaction, for transactions assigned to this source, check the Copy Document Number to Transaction Number check box.

7. Save your work. For information on all remaining fields, See: Transaction Batch Sources, *Oracle Receivables User's Guide*.

To ensure a Work Order Billing flexfield code exists:

1. Navigate to the Descriptive Flexfield Segments window.

Descriptive Flexfield Segments

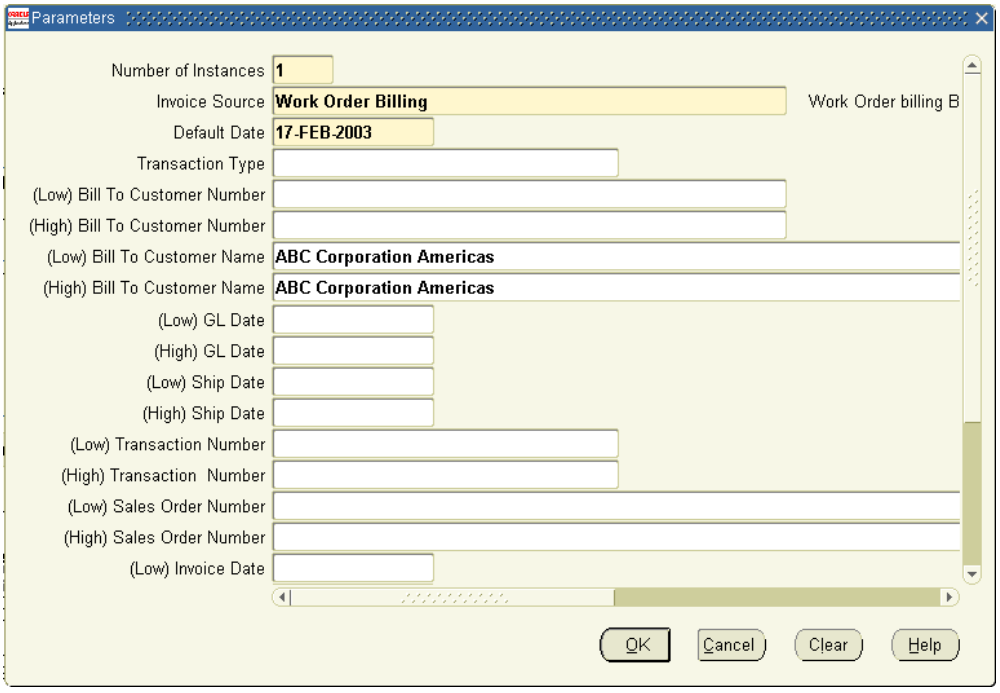


2. Query on the Line Transaction Flexfield within the Oracle Receivables Application. If Work Order Billing does not exist as a Code within the Context Field Values region, perform the following steps:
    1. Enter Work Order Billing in the Code field.
    2. Enter Work Order Invoices in the Description field.
    3. Select the Enabled check box.
    4. Choose Segments.
    5. Ensure that, at least, the following segments are defined: Work Order, Work Order Id, Invoice Number, and Line Number.
    6. Save your work.

To create invoices:

1. Navigate to the Run AutoInvoice window.
2. Select AutoInvoice Master Program, from the Name list of values.

Parameters



3. Enter the Number of Instances. An instance refers to how AutoInvoice groups and processes your transactions. Submitting a greater number of instances enables you to import transactions into Receivables faster. You can submit a maximum of 15 instances.

   Tip: Enter a number of instances based on how many CPUs are available. Use the following formula to determine the number of instances to enter:

   (Number of Available CPUs) – 1 = Number of Instances

   For example, if you have five CPUs, submit four instances of the AutoInvoice Master program.

4. Select the Work Order Billing Invoice Source.

5. Enter a Default Date. The Default Date must be in an open or future period. Depending on how you defined your transaction batch source, AutoInvoice uses the Default Date if the GL date is not provided or if the date provided is in a closed period. See: Determining Dates, *Oracle Receivables User's Guide*.

6. Choose OK.

7. Choose Submit.

Related Topics

Transaction Batch Sources, *Oracle Receivables User's Guide*

Running AutoInvoice, *Oracle Receivables User's Guide*

15

Oracle Service Integration

This chapter covers the following topics:

- Introduction
- Oracle Service Integration Overview
- Creating Service Requests
- Service Requests and eAM Work Orders

Introduction

If you have Oracle Service installed, you can use Service Requests to report and request maintenance service. This chapter contains the following topics:

- Oracle Service Integration Overview, page 15-1
- Service Request Statuses, page 15-1
- Creating Service Requests, page 15-2
- Service Requests and eAM Work Orders, page 15-3

Oracle Service Integration Overview

Service Request functionality provides organizations that utilize call centers the tools necessary to capture and track maintenance Service Requests. You can create Service and Work Requests on both eAM capital assets and rebuildable inventory and both request types can simultaneously exist within one eAM organization.

Service Requests for eAM maintenance are classified as type Asset Maintenance and Service Requests that are created as an Asset Maintenance type are directed to, and viewable within eAM. You can view a maintenance Service Request's work in progress and associated eAM Work Orders' pertinent information within Oracle Service; use the Work Order tab within the Service Requests window. You can optionally customize a

workflow to send Service Request notifications, such as sending a notification to a maintenance planner that a Service Request was created for an asset.

An eAM work page enables easy review of all eAM maintenance Service and Work Requests. You can create maintenance Work Orders from the Service and/or Work Requests, or associate the requests to existing Work Orders.

The following topics are pertinent to the Oracle Service integration:

- Service Integration Setup, page 2-199
- Service Request Statuses, page 15-1
- Creating Service Requests, page 15-2
- Service Requests and eAM Work Orders, page 15-3

Service Request Statuses

You can assign Work Orders to Service Requests with any status, except Final. Enterprise Asset Management does not change a Service Request status, when assigning Work Orders to it.

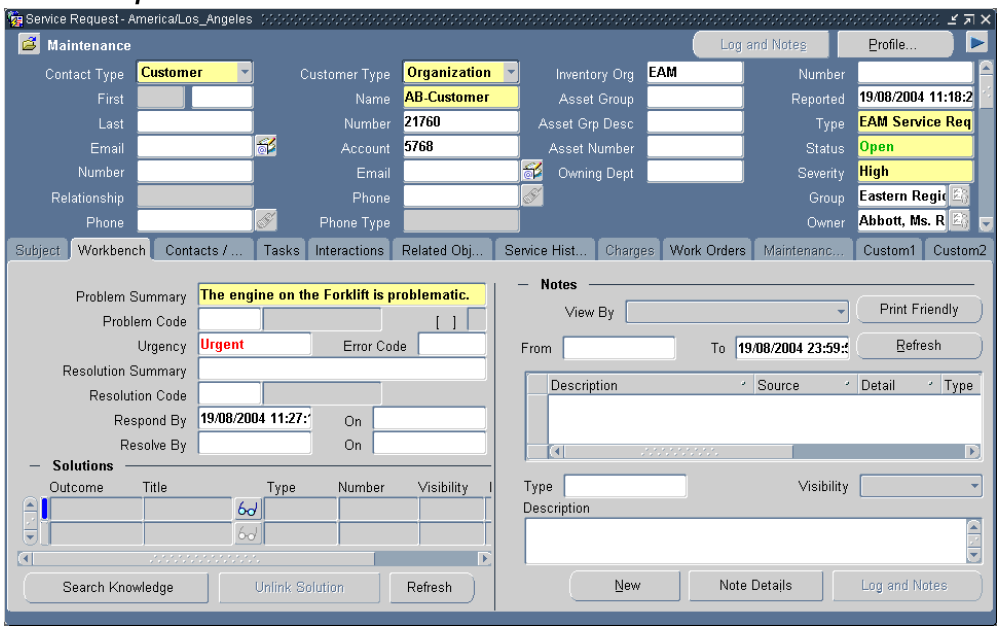
Creating Service Requests

Call center operators can create a Service Request within the Service Request window. Call center operators can also view the details of associated maintenance Work Orders, within the Work Orders tab. They can relay this information to the customer, as needed.

To create a service request:

1. Navigate to the Service Request window.
2. From the Folder menu, select Open. Select the Folder that displays eAM-specific fields. See: Enabling eAM Specific Fields, page 2-202.

Service Request



3. Select a Contact Type. Valid values are Customer and Employee.
4. Select a Customer Type.
5. Select an eAM enabled Inventory Organization. See: Enabling Organizations for Enterprise Asset Management, page 2-7.
6. Select a maintenance request Type. See: Creating Maintenance Service Request Types, page 2-200.
7. Select an Open Status. See: Service Request Statuses, page 15-1.
8. Select the request Severity.
9. Within the Workbench tab, enter the Problem Summary.
10. In the Notes region, optionally select a note Type.
11. Optionally enter the Description of the note type.
12. Save your work. See: *Oracle Service User's Guide*

Service Requests and eAM Work Orders

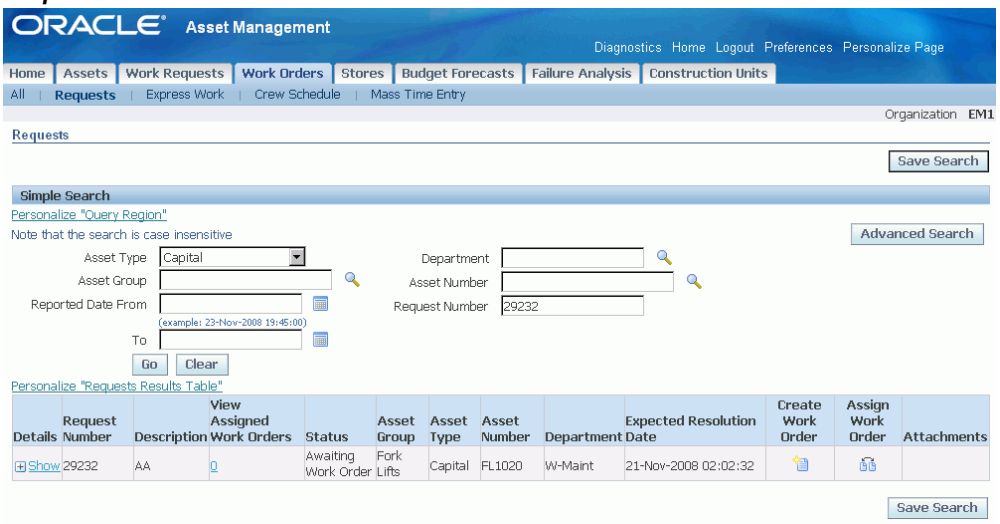
Using the Maintenance Super User responsibility, you can create Work Orders from

Service Requests, or associate a Service Request with an existing Work Order. Because more than one Work Order might be needed to complete a Service Request issue, a Service Request can associate with multiple Work Orders. Because Service and/or Work Requests can be used to report the same maintenance problem, Service and Work requests can associate with the same Work Order. The Show/Hide functionality enables you to display details of a Service Request.

To create a work order from a service request:

1. Navigate to the Work Orders tab.
2. Select the Requests sub-tab.
3. Populate at least one of the following fields:
    1. Optionally, if you know the specific Service Request number to view, select a Request Number.
    2. To narrow your selection, optionally select an Asset Type. If you select Capital, Service and Work Requests that are created for Asset Numbers appear. If you select Rebuildable Inventory, Service and Work Requests that are created for Rebuildable Items appear.
    3. Optionally select an Assigned Department.
    4. Optionally select a Status.
    5. Optionally select an Asset Number to search for related Service Requests and Work Orders.
4. Choose Go.

Requests

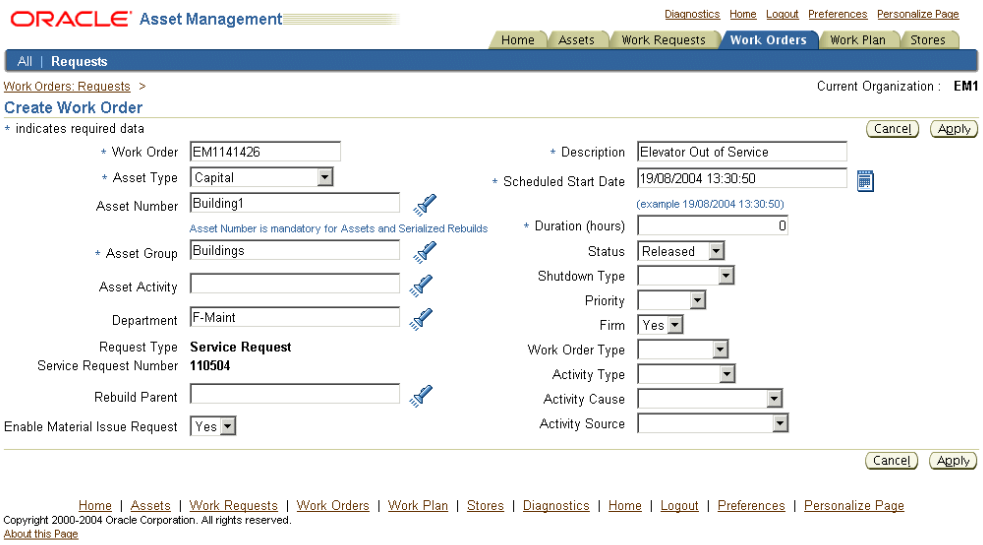


5. To create a Work Order associated with the current Service Request, click the Create Work Order icon.

   You can also view or add work request attachments. In the Attachments column, click the Add or View buttons to add an attachment, or to view a list of existing attachments currently associated with the service request.

   > **Important:** If you are creating a work order, you must first save the work order before you can add a work request attachment.

Create Work Order

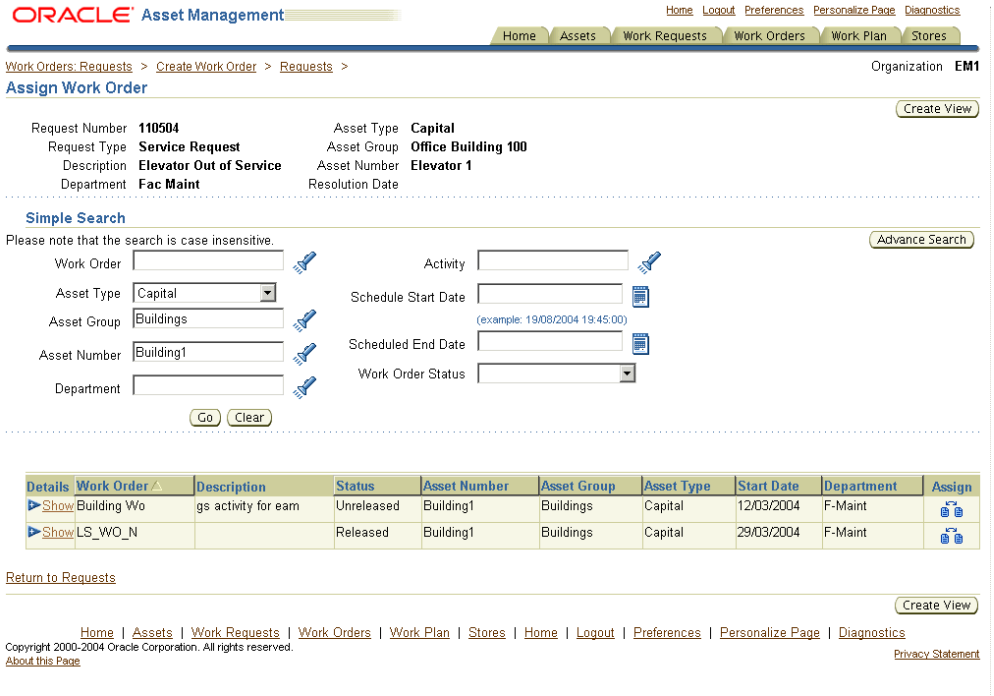


6. Enter the required Work Order information (See: Routine Work Orders, page 3-3).

7. Choose Apply.

8. To assign an existing Work Order to the current Service Request, choose Assign Work Order.

Assign Work Order



9. Query for existing Work Orders.

10. Choose the Assign icon next to the Work Order(s) you wish to associate with the current Service Request.

To obtain service requests using the advanced search:

1. Navigate to the Work Orders tab.

2. Select the Requests sub-tab.

3. Choose Advanced Search.

4. Populate at least one of the following fields:

    1. To narrow your selection, optionally select an Asset Type. If you select Capital, Service and Work Requests that are created for Asset Numbers appear. If you select Rebuildable Inventory, Service Requests that are created for Rebuildable Items appear.

    2. Optionally select an Asset Group. An Asset Group is a grouping of similar Asset Numbers. See: Defining Asset Groups, page 2-50.

3. Optionally select an Asset Number to search for related Service Requests and Work Orders.

4. Optionally select an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes, page 2-47.

5. Optionally select an Add Another value.

    - Optionally select Area. This is a user-defined listing of logical areas of work. Areas are where the assets reside. For example, North Plant, East Wing, or Area 1. See: Setting Up Areas, page 2-16.

    - Optionally Assigned Department to view all Service Requests associated with a specific department.

    - Optionally if you know the specific Service Request number to view, select Request Number.

    - Optionally select Request By Date.

    - Optionally select a Status.

    - Optionally select a Priority. See: Work Order and Work Request Priority Codes, page 2-43.

    - Optionally select Request Type. Request Types describe and categorize Service Requests. For example, Manual, System, Routine, Capital, and Furniture. Service Request Types are user-defined (See: Work Request Types, page 2-41).

    - Optionally select Work Order to display all Service Requests associated with that Work Order. An unlimited number of Service Requests can associate with a Work Order.

    - Optionally select Creation Date to view Service Requests created on a specific date.

    - Optionally select Created By to view Service Requests created by a specific user.

    - Optionally select Requested For to view Service Requests requested for a specific user.

    - Optionally select *Include children from hierarchy*. If Asset Number is populated and Yes is selected, then Service Requests for the Asset Number and all of its children appear. If Asset Number is not populated and Yes is

selected, all Service Requests in the system appear. If Asset Number is not populated, Yes is selected, and additional criteria are entered, this additional criteria is ignored; all Service Requests in the system appear.

5. Choose Go.

16

Secure Enterprise Search for Asset Lifecycle Management

This chapter covers the following topics:

- Supporting Secure Enterprise Search for Asset Lifecycle Management

Supporting Secure Enterprise Search for Asset Lifecycle Management

Oracle E-Business Suite Secure Enterprise Search provides a centralized search capability, enabling you to search text on applications content without compromising the security and context sensitive information. To enable SES search for Assets, the global grants have been modified to Role Based Grants. A new role, EAM SES Asset Search Role, has been created and has to be assigned to each user who explicitly wants to perform the Asset Search using SES.

Through a secure text search, you get the immediate search results with accuracy, easily refine the search by narrowing down the results or tracing back to original results in an efficient way.

Before you can search on applications content, searchable objects must be set up first, constructed with secure context, and indexed into a full text search engine by SES in order to be ready for query. To accomplish this goal, Oracle E-Business Suite Secure Enterprise Search uses a flexible mechanism to help analyze these searchable objects, group related objects into categories, and build security rules around them for easier, secure search and fast result display.

Searchable objects are business objects that are made available for text search. For example, a purchase order is a searchable object that can be defined as a set of searchable properties or business attributes along with its relationship to other searchable objects. This abstraction allows searchable objects to be bound to different context at runtime and grouped into searchable categories.

Refer to the *Oracle Applications User's Guide* and *Oracle Applications System Administrator's Guide - Maintenance* for more details on how to build the searchable objects database.

Refer to Chapter 5 Administering Oracle E-Business Suite Secure Enterprise Search of *Oracle Applications System Administrator's Guide - Maintenance* for details on the setups and how to administer Secure Enterprise Search.

At design time, application developers create view objects first and then update them by adding searchable attributes which enable them become searchable objects or metadata.

At crawl time, the SES search engine starts a crawling job for a specific business object type. Based on an object type, searchable business objects or attributes get retrieved, indexed, and stored in the SES index store.

At query time, when a search is performed through the centralized user interface, it is searched against a pre-indexed store that contains numerous objects or metadata that has been preprocessed with indexes at crawl time. The search engine queries the results enforced by security rules and constructs the hits returning as search results.

To enable and support EBS Applications-based Secure Enterprise Search (SES) for Asset Lifecycle Management, the following new profiles were added by Applications and are supported for ALM as well:

- SES Search Enabled
- SES URL
- SES Username
- SES Password
- SES MLS Supported

Refer to the Oracle Applications User's Guide and Oracle Applications System Administrator's Guide – Maintenance for more details on Using Oracle E-Business Suite Secure Enterprise Search feature.

After the enhancement, you set the SES Search Enabled profile to Yes to use the Enterprise Search capability. The following search is supported:

- Search for Assets like a Google free text search
- Search for Assets within an organization's domain
- Navigate to asset details page
- Synchronize real time data with SES instance

Searching Assets in a Free Text Search

Previously, Enterprise Asset Management and Install Base products supported transaction-based search. You had to know minimum values and input right value in

the fields for search. With this enhancement, you can search by entering any value from the centralized Applications Search region to obtain desired results.

The current scope in this release includes only search for assets or instances that are maintainable.

You can perform free text searches using the following set of attributes:

- Asset Number
- Asset Serial Number
- Asset Number Description
- Asset Number DFF
- Asset Group
- Asset Description
- Category
- Category Description
- Extensible Attribute values
- Owning Department
- Area
- Criticality
- Accounting class code
- Asset attachments

Searching Assets within the Organization's domain

You can search assets within an organization's domain view results. From Release 12, eAM supports organization concept. When you search assets from Applications Secure Enterprise Search (SES) region of Oracle EBS, you can see:

- Assets owned and maintained by eAM-enabled organizations to which you have access.
- Assets owned by production organization but maintained by eAM-enabled organizations to which you have access.

Navigating to the Asset Details page

After search results are displayed for Assets, you can navigate to Asset details page available in the Maintenance Super User responsibility.

Synchronizing Real Time Assets Information with SES Instance

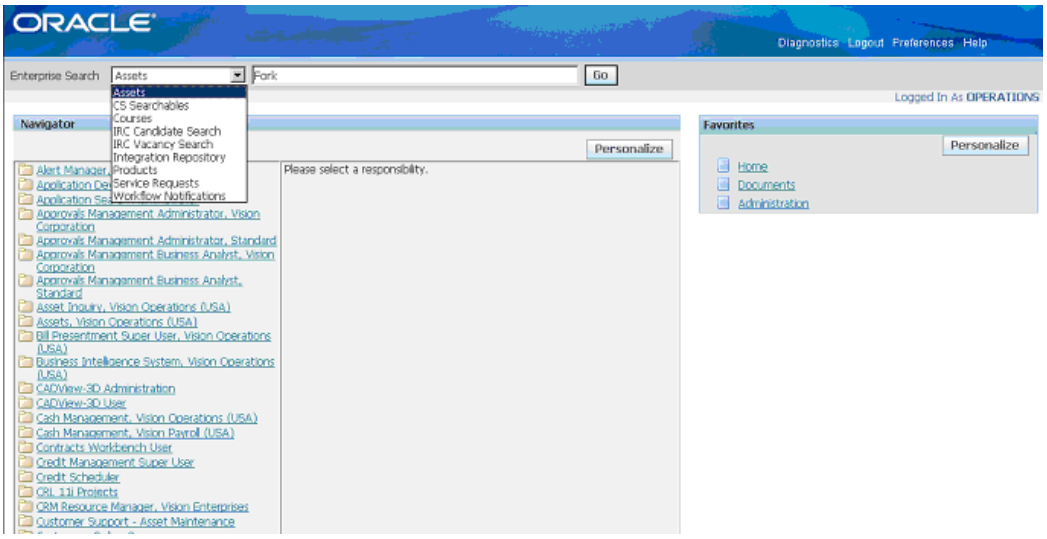
Enables initial and incremental crawl for synchronizing Asset information with Secure Enterprise Search (SES) instance.

- Initial - Crawl View Object for Assets.
- Incremental - Uses Date-based incremental crawl mechanism to synchronize real-time Asset information with the SES instance.

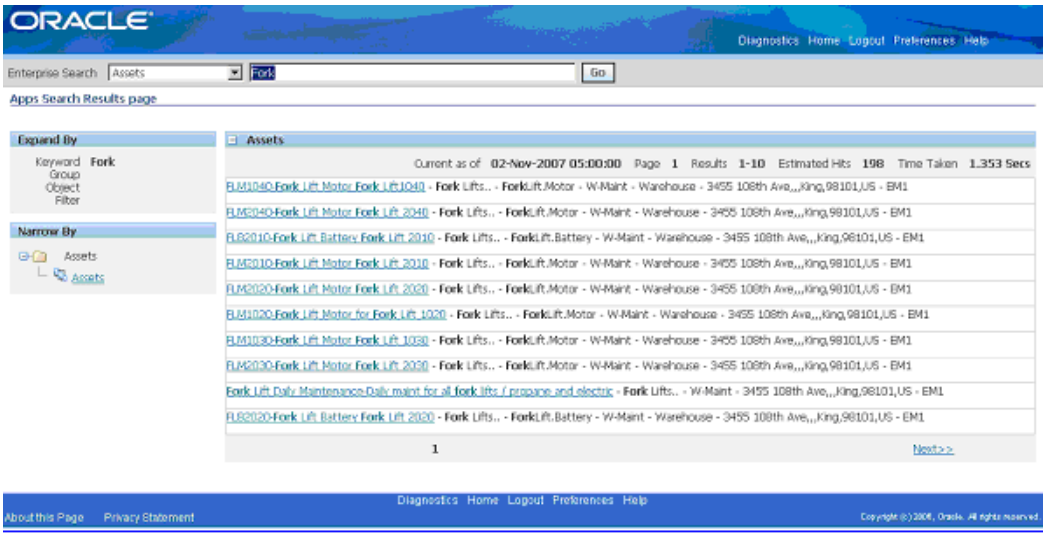
Searchable Page Regions

Based on the SES Search Enabled profile option setting, the Search Region is embedded and displayed on the Oracle Application Home Page. The Enterprise Search list of values display a list of searchable objects enabled based on the user-security context. If you have access to Maintenance Super User responsibility, then Assets searchable object is enabled. Once you select Assets and enter a value, then the system retrieves values from Assets searchable business object and displays the results along with a link to run the search on the Search Results page. If no search results are returned, then a link displays using a synonym.

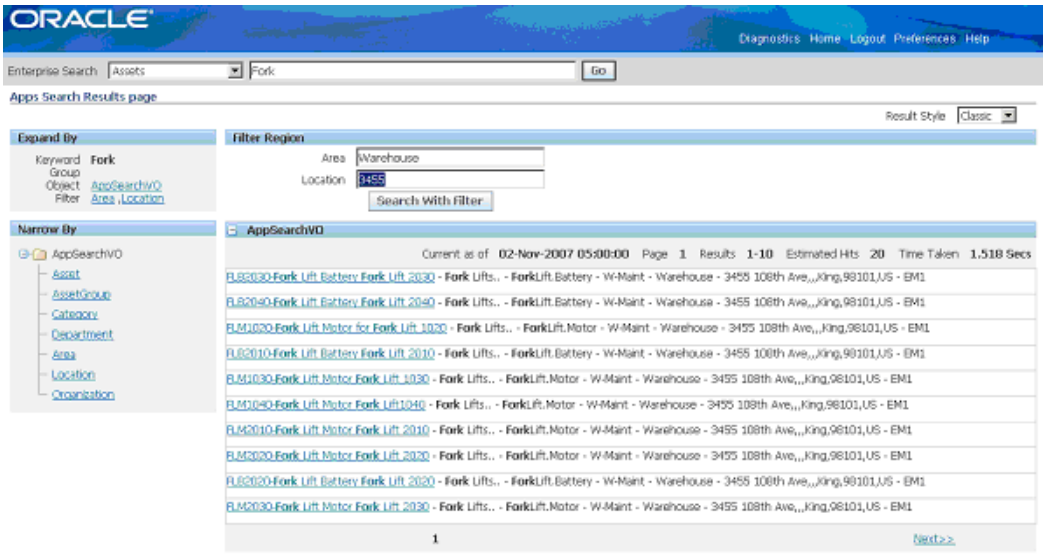
The subsequent paragraph and graphic show the Central Search Region with the Assets Search Group. Select Assets Search Group and give query criteria and click go.



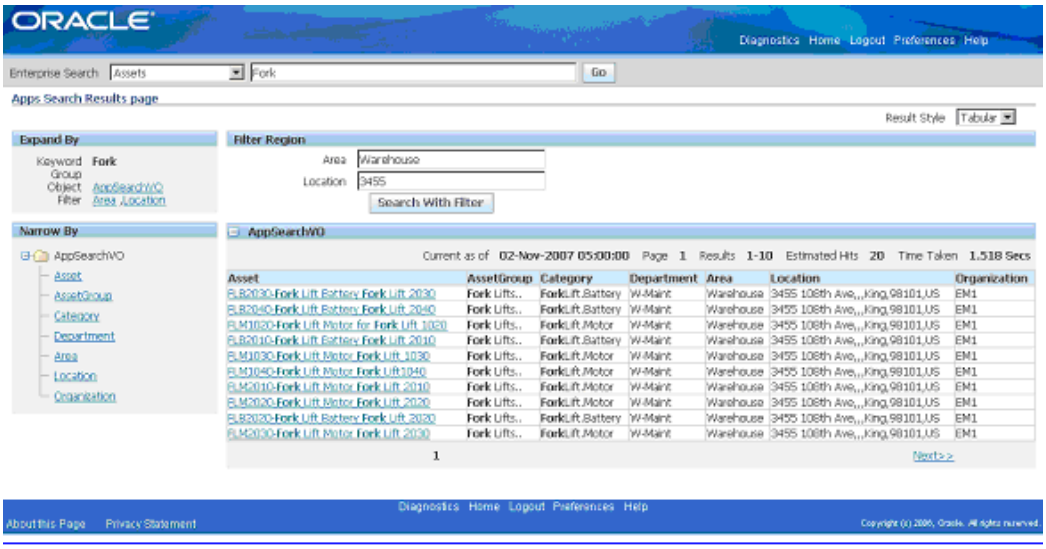
The application searches the SES Repository for the Assets based on the query criteria (Fork) and displays the results.



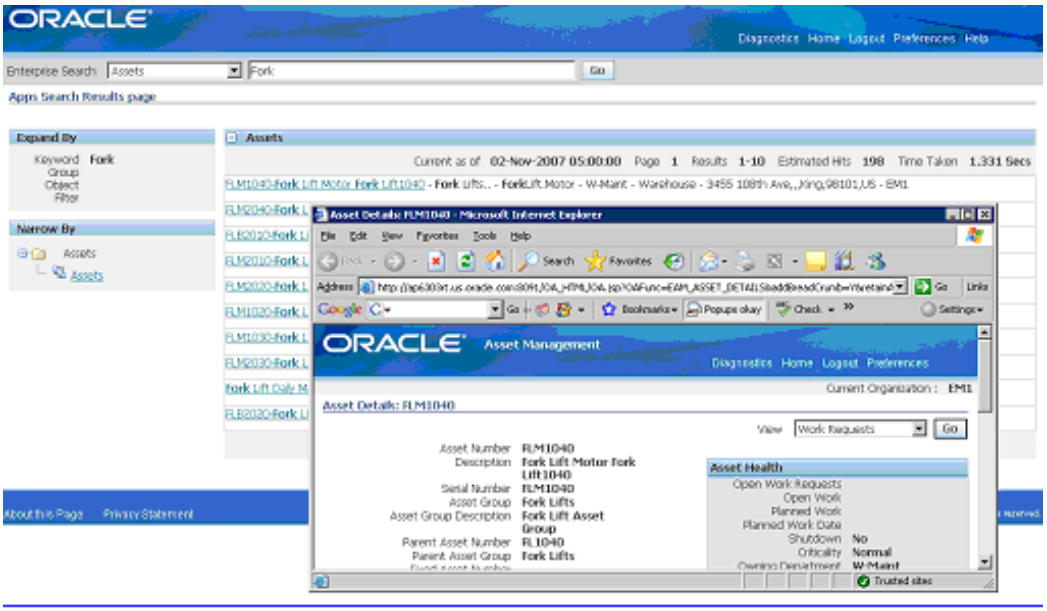
You can narrow the search by attributes of the underlying Asset Searchable Object as shown.



Query Results style can be changed to Classic as shown in the above graphic or as shown in the following graphic:



Form the Results region, navigate to the Asset Details Page.


ORACLE
Diagnostics Home Logout Preferences Help
Enterprise Search Assets Fork Go
Apps Search Results page
Expand By
Keyword Fork
Group
Object
Filter
Narrow By
Assets
Assets
Current as of 02-Nov-2007 05:00:00 Page 1 Results 1-10 Estimated Hits 198 Time Taken 1.331 Secs
Asset Details: FLM1040 - Microsoft Internet Explorer
ORACLE Asset Management
Diagnostics Home Logout Preferences
Current Organization : EM1
Asset Details: FLM1040
View Work Requests Go
Asset Number FLM1040
Description Fork Lift Motor Fork Lift1040
Serial Number FLM1040
Asset Group Fork Lifts
Asset Group Description Fork Lift Asset Group
Parent Asset Number FL1040
Parent Asset Group Fork Lifts
Asset Health
Open Work Requests
Open Work
Planned Work
Planned Work Date
Shutdown No
Criticality Normal
Owning Department W-Maint
About this Page Privacy Statement

Part 4

Self-Service Work Requests User

The Self-Service Work Requests User is a person in an organization, often an employee (not involved in the maintenance department), who uses Work Requests to report maintenance problems. This person also uses Work Requests to check the statuses of problems that he/she has reported.

This part contains the following chapter:

- Chapter 17, "Self Service Work Requests", page 17-1

17

Self Service Work Requests

This chapter covers the following topics:

- Overview of Work Requests
- Work Request Statuses
- Obtaining Work Request Information
- Creating and Updating Work Requests

Overview of Work Requests

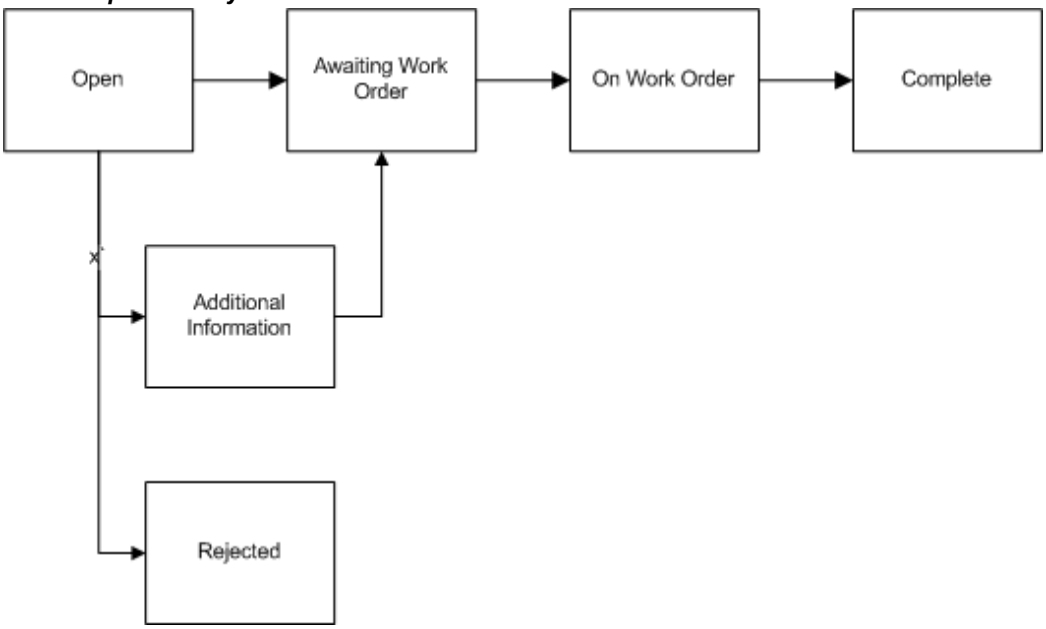
A work request serves a different function than a work order: it is a request for maintenance on an asset (Capital or Rebuildable Inventory). eAM enables operations and maintenance staff to report any problems with an asset. A supervisor can approve, request additional information, or reject a work request. A work request requires approval before it is generated into a Work Order. The Work Requests tab enables you to query existing, and create new work requests for an asset. This section's tasks include:

- Work Request Statuses, page 17-1
- Obtaining Work Request Information, page 17-3
- Creating and Updating Work Requests, page 17-6

Work Request Statuses

A work request transitions through several statuses during its lifecycle. The work request lifecycle is as follows:

Work Request Lifecycle



Open - A work request is created in an Open status.

Awaiting Work Order - The work request status changes from Open to Awaiting Work Order if the individual on the approval route has approved it. If the Auto-Approve Work Request functionality is enabled for the current organization, the status is automatically Awaiting Work Order (See: Defining eAM Parameters, page 2-11).

On Work Order - After a work request is associated with a Work Order, the status changes to On Work Order.

Rejected - The individual on the approval route rejected the work request.

Additional Information - If the work request's status is Additional Information, the originator needs to add the requested information. During the approval process, the system adds the information to the work request notes and does not transfer the work request back using Workflow.

Complete - The work request status transitions to Complete when the Work Order associated with the request is completed.

Requesting Information Through Work Request Workflow Notifications

You can request more work request information by clicking one of the following action buttons on the workflow notification received:

- **Request Information**: Click this button to obtain additional input from any specified user. The Requested Information text will appear in the notification's Action History region only, and will not update the work request log. Also, the

status of the work request is not changed during this request process.

- **Additional Information**: Click this button to alternatively request more information and to obtain additional input from the work request originator. The text entered in the notifications response comments are updated to the Work Request Log and to the notification's Comments region. Also, the status of the work request is changed to 'Additional Information' during this process.

See Defining EAM Parameters, page 2-11 for more information regarding Oracle Workflow and eAM notifications.

Obtaining Work Request Information

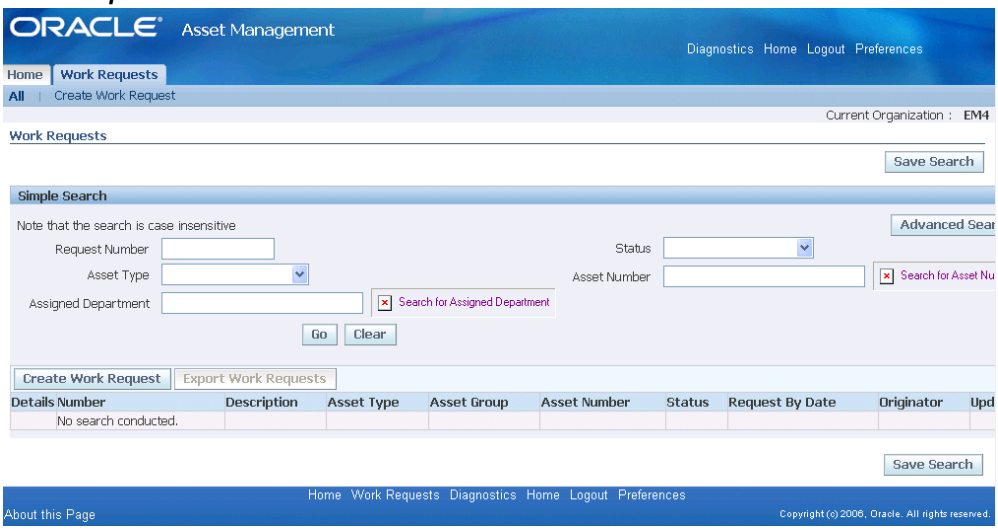
Query for work requests using either the personalized, simple, or advanced search modes. The personalized mode enables you to select specific fields that you like to search with. The simple search mode displays commonly used fields that are normally used for searching. The advanced search mode provides more search criteria options. From the results table, you can view, update, and create work requests.

To obtain work request information using the simple search:

1. Navigate to the Work Requests tab (Self Service Work Requests: Work Requests tab).

2. Choose Simple Search.

Work Requests



3. Populate at least one of the following fields:

    1. Optionally, if you know the specific work request number to view, select a Request Number.

    2. To limit your selection, optionally select an Asset Type. If you select Capital, work requests that are created for Asset Numbers appear. If you select Rebuildable Inventory, work requests that are created for Rebuildable Items appear.

    3. Optionally select an Assigned Department.

    4. Optionally select a Status. See: Work Request Statuses, page 17-1.

    5. Optionally select an Asset Number to search for related work requests.

4. Choose Go.

To obtain work request information using the advanced search:

1. Navigate to the Work Requests tab.

2. Choose Simple Search.

3. Choose Advanced Search to narrow your selection criteria. Populate at least one of the following fields:

    1. To narrow your selection, optionally select an Asset Type. If you select Capital,

work requests that are created for Asset Numbers appear. If you select Rebuildable Inventory, work requests that are created for Rebuildable Items appear.

2. Optionally select an Asset Group. An Asset Group is a grouping of similar Asset Numbers. See: Defining Asset Groups, page 2-50.

3. Optionally select an Asset Number to search for related work requests.

4. Optionally select an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: Setting Up Category Codes, page 2-47.

5. Optionally select an Add Another value.

    - Optionally select Area. This is a user-defined listing of logical areas of work. Areas are where the assets reside. For example, North Plant, East Wing, or Area 1. See: Setting Up Areas, page 2-16.

    - Optionally select an Assigned Department to view all work requests associated with a specific department. See: Defining Departments and Resources, page 2-17.

    - Optionally, if you know the specific work request number to view, select Request Number.

    - Optionally select Request By Date.

    - Optionally select a Status. See: Work Request Statuses, page 17-1.

    - Optionally select a Priority. See: Work Order and Work Request Priority Codes, page 2-43.

    - Optionally select Request Type. Request Types describe and categorize work requests. For example, Manual, System, Routine, Capital, and Furniture. Work Request Types are user-defined (See: Work Request Types, page 2-41).

    - Optionally select Work Order to display all work requests associated with that Work Order. An unlimited number of work requests can associate with a Work Order.

    - Optionally select Creation Date to view work requests created on a specific date.

    - Optionally select Created By to view work requests created by a specific user.

- Optionally select Requested For to view work requests requested for a specific user.
- Optionally select *Include children from hierarchy*. If there are populated search criteria, they are applied (or effective) on the results of all the current Asset Number's work requests and its children. If Asset Number is not populated and Yes is selected, the *Include children from hierarchy* check box setting is neglected and other search criteria are considered.

4. Choose Go.

Creating and Updating Work Requests

You can create a work request within the simple or advanced search pages.

To create a work request:

1. Navigate to the Work Requests tab.
2. Select the Create Work Request Sub-tab.
3. If it is indicated as a required field, select an Asset Number; otherwise, optionally select an asset number.

   This determination is based on a setting in the eAM parameters. See: Defining eAM Parameters, page 2-11 and Defining Asset Numbers, page 2-65.
4. Select a Priority. See: Work Order and Work Request Priority Codes, page 2-43.
5. Select a Requested By Date.
6. Select an Assigned Department.

   See: Defining Departments and Resources, page 2-17.
7. Optionally select a work request type.

   See: Work Request Types, page 2-41.
8. Optionally select a Requested For value.
9. Enter an Additional Description for the work request.

   You can enter a maximum of 240 characters in this field.
10. Save your work.

    You must first save the work request before you can add attachments in the Request

Attachment region.

11. Optionally enter your phone number.

12. Optionally select a Contact Preference; values are E-mail or Phone Number.

13. Optionally enter your email address.

14. Optionally select a Context Value.

15. Click the **Apply** button.

16. Click the **OK** button.

17. Save your work.

    The status of the work request changes to Awaiting Work Order if the individual on the approval route has approved it. If the Auto-Approve Work Request functionality is enabled for the current organization, the status is automatically Awaiting Work Order.

Adding Attachments to Work Requests:

You can add attachments such as breakdown photos, work instructions, and so on when you create work requests.

> **Important:** You must first save the work request before you can add attachments.

In addition, you can add attachments when you update a work request.

To add attachments when you create work requests:

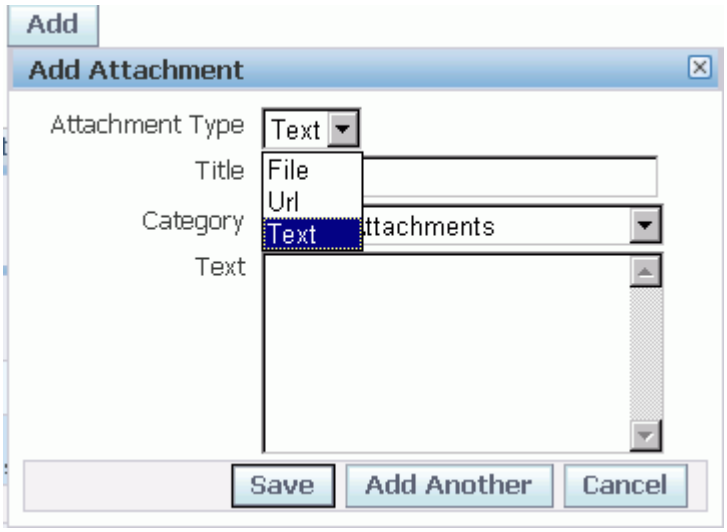
1. After you have saved the work request, click the Return to Work Requests link.

2. Click or hover over the **Add** button in the Request Attachments region of the work request.

   If you want to view the attachments, hover or click the View button.

   The Add Attachment page appears.

   You can attach file, URL, and text attachments.



3. In the Add drop-down list, select one of these values:
   - Desktop File/Text/URL
   - From Document Catalog
4. Enter a title for the attachment.
5. Enter a description of the attachment.
6. Select a category.

   You can add attachments with a type of Miscellaneous or Work Request Attachments.
7. In the Define Attachment group box, select the Type of attachment that you want to add.
   - If you are adding a File, browse to select the file.
   - If you are adding a URL, type in the URL address.
   - If you are adding plain Text, type the text in the field.
8. When you are finished, select one of these buttons:
   - Cancel - if you do not want to add the attachment to the work request.
   - Add Another - this action saves the current attachment to the work request and enables you to add another attachment.

- Apply - this action adds the attachment to the work request.

  You will receive a confirmation that the attachments have been added successfully.

To update a work request:

1. Navigate to the Work Requests tab.
2. Populate at least one of the following fields:
   1. *Request Number*
   2. *Asset Type:* If you select Capital, work requests that are created for asset numbers appear. If you select Rebuildable Inventory, work requests that are created for rebuildable items appear.
   3. *Assigned Department*
   4. *Status:* See: Work Request Statuses, page 17-1.
   5. *Asset Number:* Select in order search for related work requests and work orders.
3. Click the **Go** button.
4. Click the Update icon next to the work request you want to update.
5. Optionally add an Additional Description.

   You can enter a maximum of 240 characters in this field.
6. Optionally add an attachment to the work request by clicking the **Add** button in the Request Attachments region.

   If there are existing attachments associated with the work request, the Attachments icon appears. Click the Attachments icon to view the list of existing work request attachments.

   See "To add attachments when you create work requests."
7. Optionally update the values in the Creation Information region.
8. Click the **Apply** button.
9. Click the **OK** button.

To view a list of work request attachments:

1. Navigate to the Work Requests tab.

2. Enter the search criteria for your work request to view the list of attachments.
3. Click the **Go** button.
4. Click the View icon in the Attachments column for the work request.

   The Attachments page appears and displays the list of all attachments for the work request.
5. Optionally click the Add Attachment button to add more attachments.
6. If the View link is enabled, you can click this link to view the list of existing attachments associated with the work request.
7. Click the attachment link to view the attachment.

   You can also save the attachment to a location on your computer.

To delete a work request attachment:

1. Navigate to the Work Requests tab.
2. Enter the search criteria for your work request to view the list of attachments.
3. Click the **Go** button.
4. Click the View link in the Request Attachments group box.

   The Attachments page appears and displays the list of all attachments for the work request.
5. Click the Delete icon for the attachment that you want to delete from the work request.
6. Click Yes if you want to delete the attachment.

Part 5

Maintenance User

The Maintenance User is a maintenance person who is generally responsible for completing tasks that are assigned on a Work Order. This person reports maintenance problems using Work Requests, troubleshoots on jobs, and works on a team with other maintenance workers.

This part contains the following chapters:

- Chapter 18, "Maintenance User Workbench", page 18-1
- Chapter 19, Wireless Maintenance User Workbench, page 19-1

18

Maintenance User Workbench

This chapter covers the following topics:

- Overview of the Maintenance User Workbench
- Viewing and Managing Your Work

Overview of the Maintenance User Workbench

You can quickly access your daily work information. After selecting Maintenance User Workbench, you are automatically logged into your own personalized user interface.

You can quickly access your daily work information, such as Work Orders and execution processes. After selecting the Maintenance User Workbench role, you are automatically logged into your own personalized user interface. The Maintenance User Workbench provides the information needed for you to evaluate the list of work that you need to complete, and to determine how to organize your workday.

A Key Performance Indicator dashboard displays a summary of your work today, overdue work, and open work. You can view your Open, Past Due, and/or yesterday's work, as well as your Work Orders lined up for tomorrow. You can also view all of your department's and/or Resource's unassigned Work Orders. You can view attachments, Work Order details, asset details, material requirements, and other employees assigned to your Operations. You can enter quality results, meter readings, complete Operations, Work Orders, charge resources, handover work, add notes, and assign yourself to Work Orders that are not yet assigned to an employee.

This section's tasks include:

- Viewing and Managing your Work, page 18-1

Viewing and Managing Your Work

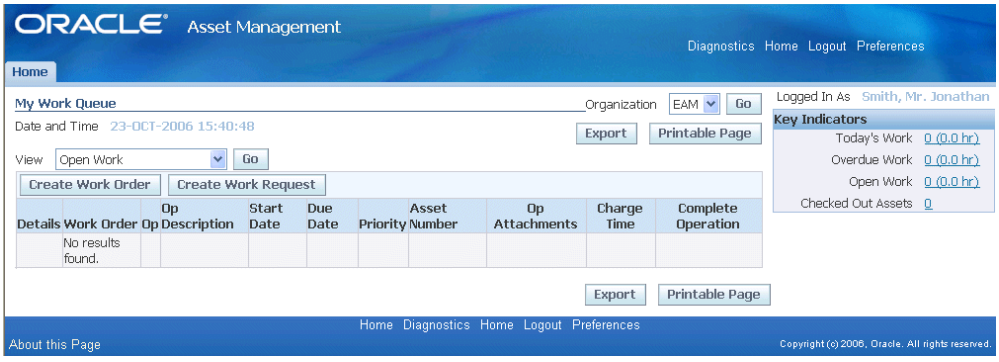
You can view your current workload, including all Operations and work orders that you are assigned to. You can view your Open, Past Due, and-or yesterday's work, as

well as your work orders lined up for tomorrow. You can also view all of your department's and-or resource's unassigned work orders. You can view attachments, work order details, asset details, material requirements, and other employees assigned to your operations. You can enter quality results, meter readings, complete operations, work orders, charge resources, add notes, and assign yourself to work orders that are not yet assigned to an employee.

To view your work:

1. Navigate to the My Work Queue page (Maintenance User Workbench).

My Work Queue



2. Select an Organization.

3. Choose Go.

4. Optionally select a View value.

   - *Open Work*: View all open work orders that are assigned to you.
   - *Overdue Work*: View all work orders that are overdue, based on their scheduling rules.
   - *My Department's Work*: View all work orders that are assigned to your department.
   - *Today's Work*: View all work orders that are assigned to you for today.
   - *Tomorrow's Work*: View all work orders that are assigned to you for tomorrow.
   - *Yesterday's Work*: View all work orders that were assigned to you yesterday.
   - *Work Pending Completion*: View all work orders that you have worked on and that are pending completion.

5. Choose Go.

   All work orders appear, according to what is populated in the View field.

6. The Key Indicators region displays current workload personal performance indicators, such as Today's Work, Overdue Work, and Open Work.

   Optionally, select a link to display the respective work orders.

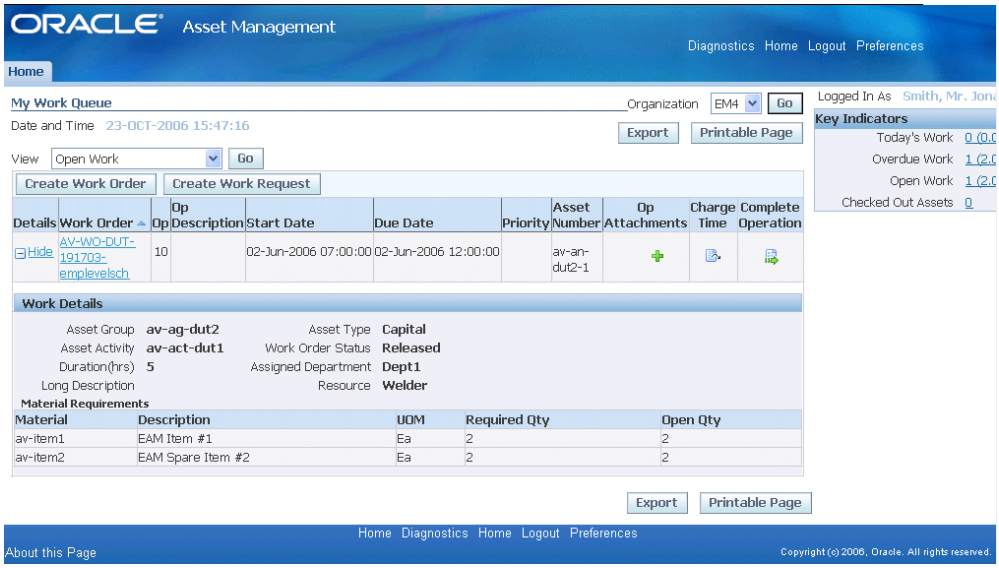
7. The Shortcuts region enables you to quickly create a Work Request and/or work order.

   Optionally, select Create Work Request or Create Work Order, respectively. See: eAM Work Orders, page 20-35 and Creating and Updating Work Requests, page 17-6.

8. In the My Work Queue region, you can optionally select show or hide work order details, by selecting Show or Hide, respectively.

   You can view a summary of operation details, including material requirements and material request statuses.

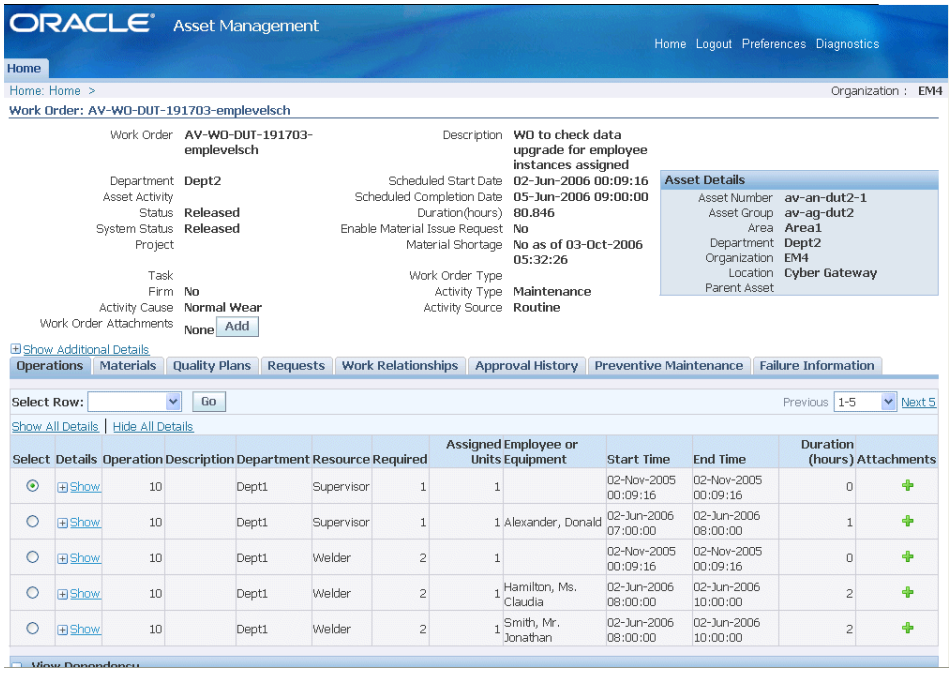
Work Details



9. Optionally select a work order number to view its details.

   The Operations sub-tab defaults as selected.

   1. This sub-tab enables you to view Operations on the current work order, and the operations' dependencies in the View Dependency region. Operations are scheduled to run in parallel, sequence, or through dependent steps.



- It is important in asset management to capture both estimated and actual time spent on each operation of a work order. When resources are identified on a work order, there is a time estimate of how long it takes to perform the work. In many cases, the extent of the work load is unknown until the work starts. Resource charging enables you to post actual usage time for employees, equipment, and miscellaneous materials for specific operations on a work order.

  To charge resources, select an Operation and then select Charge Time from the Select Operation list of values.

- Choose Go.

- Select a Resource Sequence.

  The Resource, Unit of Measure, and Quantity (reflects the number charged, normally in hours) default, based on the selected resource sequence and the resources associated with the work order. For information on Resource Sequence, Resource, and Unit of Measure, See: Defining Resource Requirements, page 3-46

- Optionally select the Work Performed Date to indicate the actual date the work was performed.

- Optionally select the Employee that performed the work.

- Optionally select the Equipment used to perform the work.

- Optionally select the Charge Department to identify which department is charged for the employee or equipment usage.

  You can display the list of values if the Employee name or Equipment serial number fields are populated. The list of values displays all departments that the person or equipment is assigned to (See: Defining Department Resources, page 2-17). If you enter a Charge Department manually, the system validates that the department matches the current operation's assigned department. If it does not, you will receive an error.

- Optionally select a Reason code to indicate the reason the resource is used.

- Optionally enter a Reference.

- Choose Apply to save your work and return to the Work Order page.

10. Optionally choose Check Material Shortage.

    The Material Shortage field updates to display whether there is a shortage of the material (at that moment in time) that is needed to complete the work order operations. This status helps you to determine when to start work. For example, if there is a material shortage, you typically would not start work. The process that populates this field considers both stocked and direct items. For stocked items, the Work Order Material Shortage process determines whether all of the inventoried material within the associated BOM for the work order is available to transact (ATP is not considered). For direct items, the Work Order Material Shortage process determines if all of the direct items that are included within the associated BOM for the work order are received into inventory. This process is normally set to automatically execute periodically, but you can execute it from the menu at any time.

11. Optionally select the Materials sub-tab to view or add items from the associated Asset Number's items list. When you enter a work order for an Asset Number, the Asset Number's associated Activity attaches the required material (See: Setting Up Maintenance Bills of Material, page 2-93) and resources to complete its operations. The Inventory and Direct Item requirements display. You can update, add, view, and delete material requirements for a specific operation.

    1. You can optionally Request New Inventory Items.

       - Select an Item.

       - Enter a Required Quantity.

       - Select a Date Required.

         The system date and time defaults.

- Optionally select a Supply type.
- Optionally select an Auto Select Material value.

  If you select Yes, Requisitions/Purchase Orders are created automatically, for the current Inventory Item, when the work order is Released.
- Optionally enter a Description.
- Optionally enter a Comment.
- Select whether to include this Inventory Item in the MRP Net.
- Choose Apply to add the Inventory Item to the operation's material requirements.

2. Optionally choose One Step Material Issue. A one-step material issue is a substitute for the Material Issue Request and Material Issue Verification activities; a separate request is not created.
   - Optionally select the specific Operation to view results on existing One Step Material Issues that were issued to that operation. Operations existing within the selected work order are available.
   - Optionally select a specific Material if your query is to view existing One Step Material Issues.
   - Choose Go. All planned material appears in the Select Material(s) region. Planned material is material that exists in the material requirements for the work order. See: Defining Inventory Material Requirements, page 3-37.
   - Within the Select Material(s) region, optionally select unplanned Material (material not part of the material requirements for the work order) to issue to the current work order.
   - Select an Operation to issue the material. The UOM defaults to the current Material's UOM.
   - Select the Quantity of the material that you are issuing to the work order.
   - Optionally select a Subinventory to pull the material from in Inventory.
   - If you previously selected a Subinventory requiring a Locator, select a Locator.
   - If the current material is lot controlled, select a Lot.

- If the current material is serial controlled, select From and To Serial numbers.

- Optionally select a Revision.

- If the material is Rebuildable Inventory, optionally choose the Replaced Rebuild Details icon to specify the replacement Rebuildable Item information for the current Rebuildable Item. After selected, you can indicate the following within the Replaced Rebuild Details page:

  Rebuild Item - defaults as the current Rebuild Item; you can update it.*Rebuild Serial Number* - optionally enter if you know what serial number is coming out (for serialized rebuilds).*Rebuild Activity* - the activity you want to associate with the created rebuild work order*Rebuild Work Order* - the name of the work order created for the replaced Rebuildable Item. If you specify a replaced rebuildable item, a work order generates for the replaced rebuildable item because it is most likely problematic and you can have it repaired. If a serial number is provided for the replaced Rebuildable Item, it is removed from the asset's hierarchy and the configuration history updates. If nothing is specified within the Replaced Rebuild Details page, the replaced rebuild defaults as the same rebuild item that you are issuing. A work order is created for the replaced rebuild item.

- Optionally, select the Details Show/Hide toggle icon.

  Optionally select a Reason for the current issue. Select the Date required for the material to the work order. Today's date and time defaults. Optionally enter a Reference.

- Select the Select check box next to the lines you are issuing to the current work order.

- Choose Issue.

3. You can optionally choose Request New Direct Items to add Direct Items to the operation's material requirements. Direct Items represent items with infrequent use or criticality; they are not included in the internal catalog as stocked items. These items are considered "one off", bought directly from a vendor for a specific work order and Operation. These items are delivered directly to the Shop Floor for maintenance work order execution. See: Defining Direct Item Material Requirements, page 3-43.

   - Select a Direct Item Type.

     Description Based Item: This direct item type is not stored in Oracle Inventory.*Non Stock Item:* This direct item type is stored in Oracle Inventory. Its Master Item record's Stockable check box is cleared.

- If you selected a Non Stock Item Type, select an Item. This field is disabled if a Description Based Item Type was previously selected.
- Enter a Description, if you previously selected a Description Based Item Type.
- Enter a UOM. If you previously selected a Non Stock Item Type, this value defaults from the Master Item.
- Enter a Need By Date. The system date defaults.
- Optionally enter a Purchasing Category. See: Setting Up Purchase Order Category Associations for Direct Items, page 2-181.
- Choose Apply.

4. Optionally select the Update icon to update the current material requirement information.
5. Optionally select the Request More icon to request more of the current material requirement to the operation.
6. Optionally choose Delete to delete the current material requirement.
7. To access iProcurement, choose Search Catalog.

12. Optionally select the Resources sub-tab to view or update the employee and equipment resource requirements for the current work order. When you enter a work order for an asset number, the associated activity attaches the required material to the work order (See: Setting Up Maintenance Bills of Material, page 2-93) and resources to complete its operations.

    For Employee Resources, you can optionally choose Charge Time to charge time to the current resource.

    1. - Select a Resource Sequence. The Resource, Unit of Measure, and Quantity (reflects the number charged, normally in hours) default, based on the selected resource sequence and the resources associated with the work order. For information on Resource Sequence, Resource, and Unit of Measure, See: Defining Resource Requirements, page 3-46.
       - Select a Resource to charge.
       - Select a Unit of Measure. The value defaults as the current Resource's Unit of Measure.
       - Enter a Quantity.

- Optionally select the Work Performed Date to indicate the actual date the work was performed.
- Optionally select the Employee that performed the work.
- Optionally select the Equipment used to perform the work.
- Optionally select the Charge Department to identify which department is charged for the employee or equipment usage.

  You can display the list of values if the Employee name or Equipment serial number fields are populated. The list of values displays all departments that the person or equipment is assigned to. If you enter a Charge Department manually, the system validates that the department matches the current operation's assigned department. If it does not, you will receive an error.
- Optionally select a Reason code to indicate the reason the resource is used.
- Optionally enter a Reference.
- Choose Apply.

2. For Employee Resources, you can optionally choose the View Assigned Employees icon to view the specific employee numbers associated with the current resource.
3. Optionally choose the Delete icon to delete the current resource requirement.

13. Optionally choose the Quality Plans sub-tab to view the current work order and operation-quality collection plans. Collection plans appear that are associated the asset number for the current work order. When a collection plan is created, it is specified whether the collection plan requires completion. Triggers might have been specified to make specific assets eligible for the collection plan. See: Quality Integration Setup, page 2-157.
    1. Optionally select the Enter Quality Results icon. Required Data fields depend on the Collection Plan's collection element specifications. See: Quality Integration Setup, page 2-157.
        - Optionally choose Add to attach any necessary files, URLs, or text to the current Quality results. Each results entry can have an unlimited number of attachments. Choose Apply.
        - Choose Apply to save the results entry.
    2. Optionally select the View Quality Results icon to view or update existing

Quality results already entered. Select Return to Work Order Details.

14. Optionally select the Requests sub-tab to view any Service and/or Work Requests associated with the current work order.

15. Optionally select the Purchasing sub-tab to Direct Items or Outside Services for the current work order.

    1. Optionally select a specific Requisition Number to view its details.

    2. Optionally view a specific Line's Details. Choose OK to return to the Requisition page.

    3. Choose OK.

16. Optionally select the Work Relationships sub-tab to view the schedules and details for the work order. Work Order Relationships enable you to manage a network of related work orders, enabling you to manage complex projects, such as planned or facility shutdowns. The different relationships provide separate scheduling rules that are used to manage large projects. A Gantt chart enables you to manage work by displaying work order schedules and a summary of work order details. See: Work Order Relationships, page 3-51.

17. Optionally select the Approval History sub-tab to view the work order approval history.

    A work order might require approvals or notifications at different stages of its lifecycle. For example, organizations typically want an approval process in place before a work order is released. Workflow automates this process. You can initiate Workflow to generate notifications, approvals, transactions, and update a work order status. You can enable Workflow for Work Orders within the eAM Parameters (See: Defining eAM Parameters, page 2-11). You can set up Business Events and Event Subscriptions (or use seeded events and subscriptions) within Oracle Workflow to indicate what events trigger Workflow. Seeded events that you can enable to trigger Workflow are: Work Order creation, Work Order release approval, Work Order completion, Work Order status change, and Operation completion. See: Setting Up Oracle Workflow, *Oracle Workflow User's Guide* and Setting Up the Business Event System, *Oracle Workflow User's Guide* and Planning Your Organization's Approval Process, *Oracle Approval Management User's Guide*).

18. Optionally select the Op Attachments View icon to view the operation attachments. This icon appears if there are existing attachments.

    1. Optionally view an attachment by selecting the File Name. If the attachment has a Text Type, the View Attachment page appears. Otherwise, the specific file type opens.

- Optionally update an attachment by selecting the Update icon.
- After making changes, choose Apply to save them, or Cancel to return to the Attachments page.

2. Optionally delete an attachment by selecting the Delete icon.
3. Optionally choose Add Attachments to attach any necessary files, URLs, or text to the current operation. Each operation can have an unlimited number of attachments.
4. Choose Apply.
5. Select Return to My Work Queue.

19. Optionally select the Op Attachments Add icon to attach any necessary files, URLs, or text to the current operation. Each operation can have an unlimited number of attachments.
20. Optionally select the Charge Time icon to charge resource time to the current Operation. See: Transacting Resources, page 20-64.
21. Optionally select the Complete Operation icon to complete the current Operation. See Operation Completion, page 3-59.
    1. The Actual Start Date and Time defaults; you can optionally update it.
    2. Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the operation's Scheduled Start and End Dates.
    3. Optionally select a Reconciliation Code to describe why you are completing this operation. For example, Operation Completed or Operation Partially Completed.
    4. Optionally select a Reconciliation Code to describe why you are completing or uncompleting this operation.
    5. Optionally enter a Reference.
    6. Optionally choose Add to attach any necessary files, URLs, or text to the current operation. Each operation can have an unlimited number of attachments.
    7. Optionally select a Context Value.
    8. Enter a segment1 flexfield value.

9. The Quality Plans region displays collection plans that are associated with the current Work Order's Asset Number. When a collection plan is created, it is specified whether the collection plan requires completion. Triggers might have been specified to make specific assets eligible for the collection plan. See: Quality Integration Setup, page 2-157. If results entry is required for the collection plan, you are prompted to enter Quality results upon completing the operation.

10. Optionally select the Enter Quality Results icon. Required Data fields depend on the Collection Plan's collection element specifications. See: Quality Integration Setup, page 2-157.

11. Optionally select the **Add** button to attach any necessary files, URLs, or text to the current Quality results.

    Each results entry can have an unlimited number of attachments. Select the **Apply** button.

12. Select the **Apply** button to save the results entry or Cancel to return to the Complete Operation page.

13. Optionally select the View Quality Results icon to view or update existing Quality results already entered.

    - Optionally select the Update icon to update the current quality results.

14. Select the Return to Complete Operation link.

15. Select the **Apply** button to complete the operation or Cancel to return to the Work Order page.

22. If you belong to the resource department on the Work Order, you can assign the current Operation to you by selecting the Self Assign icon. This is useful if your maintenance organization schedules operations at the employee resource level and not the employee level.

Related Topics

Defining Inventory Material Requirements, page 3-37

Defining Direct Item Material Requirements, page 3-43

19

Wireless Maintenance User Workbench

A Maintenance User can log on to a mobile device and view all work that is assigned to him/her. You can view today's Work Orders, overdue work, and Work Orders that you are assigned to you in the future.

This chapter covers the following topics:

- Using the Wireless Maintenance User Workbench

Using the Wireless Maintenance User Workbench

A Maintenance User can log on to a mobile device and view all work that is assigned to him/her. You can view today's work orders, overdue work, and work orders that you are assigned to in the future.

To use the wireless maintenance user workbench:

1. Log on to your mobile device.

This page defaults to display your scheduled work today.

2. Optionally search for work that is specific to an asset.
    1. Optionally select a specific Asset Number from the *Search Asset* list of values.
    2. Choose Go.
3. Optionally view work assigned to you, within different views.

1. Select one of the following:
    - Today's Work - work assigned to you that is due to start today
    - Yesterday's Work - work assigned to you that is due to start yesterday
    - Tomorrow's Work - work assigned to you that is due to start tomorrow
    - Overdue Work - work assigned to you that is due in the past
    - Open Work - all work that is assigned to you
    - My Department Work - all unassigned work that is assigned to your department. From this view, you can assign work to yourself

- Work Pending Completion - work orders that have completed operations but not completed work
- Completed Work - all of your completed work

2. Choose Show.

4. You can perform actions on the displayed Work Order/Operation combinations.
    1. Select a Work Order/Operation's radio button.
    2. Select one of the following actions from the *Select and...* list of values.
        - Complete Operation - complete the selected operation/work order combination

          You can fill in the actual operation dates, reconciliation codes, and add attachments. When you completing an operation, you are prompted to enter any mandatory collection plan results that were not entered during work execution. Only mandatory collection plans appear. From the Complete Operation screen, you can optionally select the Full List hypertext link to view all associated collection plans.

          After completing the operation, you can optionally select to complete the work order, if all operations on the work order are complete. You can fill in the actual work order start and end dates, shutdown information,

reconciliation code, and add attachments. When you completing a work order, you are prompted to enter any mandatory collection plan results that were not entered during work execution. Only mandatory collection plans appear. From the Complete Work Order screen, you can optionally select the Full List link to view all associated collection plans.

- Charge Time - charge time against the selected operation/work order combination
- Enter Quality Results - enter collection plan results for the selected operation/work order combination
- Create Followup Work - create a follow-up work order for the selected operation/work order combination
- Issue Materials - issue material for the selected operation/work order combination
- Create Work Order
- Create Work Request

3. Choose Go.

5. Optionally view details of an operation listed, by selecting an operation's link.

You can scroll down to view the required materials for the operation. Within the Operation Details, you can view the current operation's assigned list of employees and/or list of equipment.

To perform an action from the Operation Details screen

1. From the Operation Details, screen you can return to your work queue, complete an operation, view collection plans, and hand work over to another department. Select an action from the list of values:

    - Return to Work Queue - return to your list of work
    - Complete Operation - complete the current operation
    - View Quality Plans - view the current operation/work order combination's collection plans
    - Handover - hand work over to another department, if you are unable to finish it. You can optionally hand work over to a specific employee in another department.

2. Choose OK.

You can express issue any selected material or request new material, including Inventory, Non-stock Direct, or Description Direct Items.

1. Select one of the following options:
   - Express Issue Material
   - Inventory Item
   - Direct Nonstock Item
   - Direct Description Item
2. Choose Go.

6. From the Home Page work list, click a work order link to view work order details.

7. From the Home Page work list, you can optionally complete a work order.
   1. Select Complete Operation.

   2. Choose Go.

You can fill in the actual operation dates, reconciliation codes, and add attachments. When you completing an operation, you are prompted to enter any mandatory collection plan results that were not entered during work execution. Only mandatory collection plans appear. From the Complete Operation screen, you can optionally select the Full List hypertext link to view all associated collection plans.

8. From the Home Page work list, after completing all operations on the work order, you can optionally complete a work order by selecting Complete Work Order.

   You can fill in the actual work order start and end dates, shutdown information, reconciliation code, and add attachments. When you completing a work order, you are prompted to enter any mandatory collection plan results that were not entered during work execution. Only mandatory collection plans appear. From the Complete Work Order screen, you can optionally select the Full List hypertext link to view all associated collection plans.

9. Optionally complete multiple work orders at once by selecting Express Complete.

   You can update details on the work order or operation, before performing the express completion. You can also scroll down to enter any mandatory collection plan results that were not entered during work execution.

10. From the Home Page work list, you can optionally select Charge Time to enter the amount of time spent on an operation.

11. From the Home Page work list, you can optionally select View Checked Out Assets to view the assets that you have checked out.

If a particular asset is not checked out, you can check out the asset. You can check in an existing asset that you previously checked out. You can record quality plans and meter readings as part of the check in/check out process. If you select Yes from the Create Work Request drop-down list, the check in/check out transaction saves, and you are prompted to report a new problem.

Related Topics

For information on setting up Check In and Check Out collection plan transactions, see: Creating eAM Quality Collection Plans, page 2-161.

Asset Operational Logging, page 20-8

Part 6

Maintenance Super User

The Maintenance Super User is generally a Maintenance Planner or Supervisor and is often defined as a "super user". A Maintenance Planner plans and schedules maintenance jobs, manages and balances workloads over time, manages preventive maintenance strategy and scheduling, manages material requirements, monitors availability, and coordinates strategies with other departments, such as Operations, Purchasing, and Inventory. A Supervisor manages a crew of maintenance workers, assigns jobs based on workers' abilities and availability, inspects and verifies work, communicates with other departments, knows the current status of all jobs and assets, and is responsible for environmental health and safety.

This person has extensive knowledge of the Enterprise Asset Management system and is responsible for creating and scheduling work orders, including Preventive Maintenance work orders. This person updates work orders, orders parts, and completes operations and work orders.

This part contains the following chapters:

- Chapter 20, "Maintenance Super User", page 20-1
- Chapter 21, "Google Maps Integration", page 21-1
- Chapter 22, "ESRI Integration", page 22-1
- Chapter 23, "GIS: Custom Mapviewer", page 23-1
- Chapter 24, "Stores", page 24-1
- Chapter 25, "Safety Management", page 25-1
- Chapter 26, "Failure Analysis", page 26-1
- Chapter 27, "Reports and Processes", page 27-1

20

Maintenance Super User

This chapter covers the following topics:

- Introduction
- Home
- Assets
- Obtaining Asset Number Information
- Viewing Asset Number Information
- Entering Mass Meter Readings
- Using the Asset Move Workbench
- Work Requests
- Work Orders
- Work Plans
- Construction Units
- Stores
- Budget Forecasts
- Safety Management
- Failure Analysis

Introduction

This chapter discusses eAM's Maintenance Super User role, and its web based user-interface.

Maintenance Super User is an internet based user-interface for maintenance personnel. It introduces you to an easier approach of entering and searching for information from any browser. Its step-by-step process requires minimal training and is intuitive enough for you to find and update information.

Maintenance Super User is designed for the casual maintenance user (for example, trades people, such as fitters, mechanics, and electricians), in a plant or facility. Responsibilities can be assigned by employee or by role. This determines the information you can view and update.

Home

The Maintenance Super User's Home tab enables you to change organizations, as well as view and transact purchase order and work request notifications.

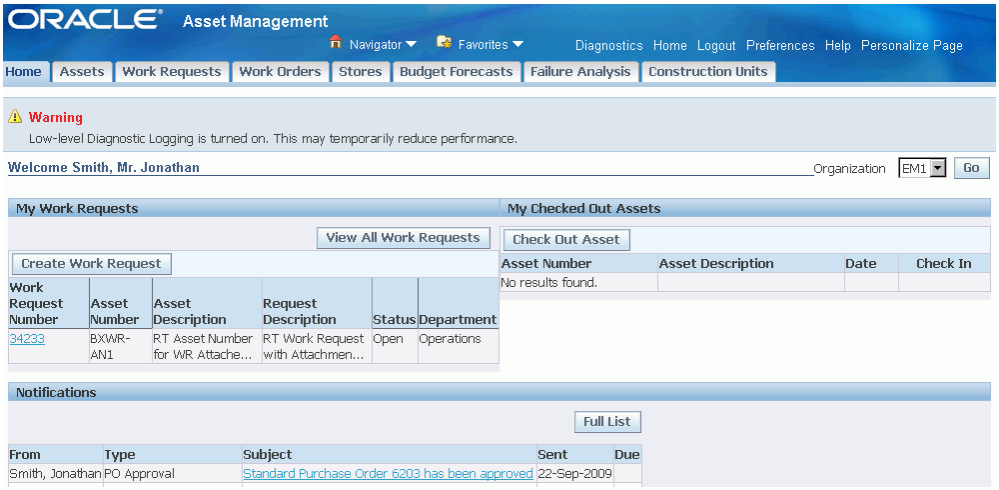
You can indicate whether Work Requests are automatically approved upon creation. Within the eAM Parameters, if the Auto Approve check box is selected, work requests are created in an Awaiting Work Order (approved) status (See: Defining eAM Parameters, page 2-11). Otherwise, if the check box is not selected, work requests are created in an Open status. If an organization has selected Work Request Approval through Oracle Workflow Management, the system will notify all users that belong to that approval group to take action on the work request created (See: Defining Department Approvers, page 2-20). After an individual has taken action, the notification is removed from other approvers' notification lists belonging to that same approval group.

From the Home Page tab of Maintenance User, an approver can select a work request and view its details. You can see any notification routed for your responsibility (See: Defining Department Approvers, page 2-20).

To select an organization to view notifications:

1. Navigate to the Home tab (Maintenance Super User: Home tab).

Home



2. Within Subject column, select the Work Request or Purchase Order notification to open and view.

3. You can Approve, Reject, Reassign a notification, or you can Request Information from the originator by choosing the appropriate buttons, respectively.

   Choose Reassign to reassign the work request approval to another approval group.

4. Optionally close the approval request by choosing Return to Worklist.

> **Note:** First choose an eAM organization before you can select additional tabs. See: Organization Setup, page 2-5.

Assets

The Assets tab enables you to identify asset numbers using capital and Rebuildable Inventory navigators. By obtaining detailed asset number information, you can either view details or launch pages to view current or historical configurations of the Asset Number. As Serialized Rebuildables are installed and removed from a particular asset, the genealogy automatically updates.

You can also access the Mass Geocode Entry tab which enables you to enter geocode information for the assets. This information is used to display assets and work on the chosen map viewer.

This section's tasks include:

- Obtaining Asset Number Information, page 20-4

- Viewing Asset Number Information, page 20-6
- Entering Mass Meter Readings, page 20-30
- Using the Asset Move Workbench, page 20-32

Obtaining Asset Number Information

You can query Asset Numbers that you would like to view associated details, hierarchal information, cost information, associated work and service requests, enter and view meter readings, and Quality information. You can use a Simple or Advanced Search to obtain your desired Asset Numbers.

For assets that transferred from one organization to another, each organization can view only the Work Order costs on those assets that were incurred by itself.

To obtain Asset Number Information:

1. Navigate to the Assets tab.
2. Select either the Capital or the Rebuildable Inventory sub-tab to view information on Capital Asset Numbers or Serialized Rebuildable Asset Numbers, respectively.
3. If you have previously saved some search criteria, the Views mode appears. You might use this mode if you frequently search for Asset Number information with specific criteria, such as Owning Department or Asset Group, among many. You can personalize a View to narrow your search criteria.
    1. The View list of values contains already existing Views. You can optionally select an existing View.
    2. Optionally choose Go to display the Asset Number information that applies to the current View's search criteria rules.
    3. Optionally choose Personalize to update, delete, or duplicate an existing View. You can also create a new View.
    4. Optionally select a View Name and then choose Duplicate to default all of the selected View's values to a new View.
    5. Optionally choose Create View to create a new view.
        - Enter a View Name.
            - Optionally select the Number of Rows Displayed.
            - Optionally select the Set as Default check box to indicate that this view

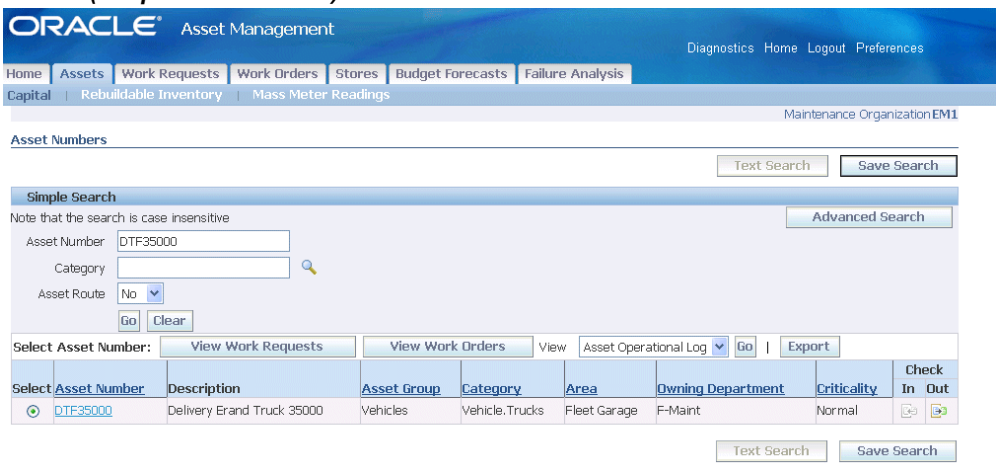
is the default view.

- Optionally enter the View's Description.
- Specify whether the search results for the current View must contain all of, or may contain any one of, the following values entered, by selecting the appropriate radio button, respectively.
- Optionally enter an Asset Number.
- Optionally select an Asset Group.
- Optionally select whether the Asset Numbers have an associated Asset Route.
- Optionally select an Owning Department.
- Optionally select additional search criteria from the Add Another list of values.
- Choose Cancel, Revert, Apply and View Results, or Apply.

6. The Display List value determines whether the current View exists within the View list of values.
7. Optionally select the Update icon to update the values for the current View.
8. Optionally select the Delete icon to delete the current View.
9. Optionally choose Cancel to exit the Personalize Views page, without selecting a View
10. Optionally select one or many Views to add to the Views drop down list, and then choose Apply to exit the Personalize Views page.

4. By default, you are in the Simple Search mode.

Assets (Simple Search Mode)



5. Optionally enter an Asset Number.

   You can enter a portion of an Asset Number and append a % (wildcard) to display multiple Asset Numbers with similar names.

6. If the Capital sub-tab is selected, you can optionally select a Category to narrow your selection criteria.

7. If the Rebuildable Inventory sub-tab is selected, you can optionally select an Asset Group.

8. If the Capital sub-tab is selected, you can optionally select whether to display Asset Numbers with associated Asset Routes (tasks). Valid values are Yes and No. See: Defining Asset Routes, page 2-74.

9. Optionally choose Advanced Search to further narrow your selection criteria, to values such as Asset Group, Asset Route, Owning Department, Category, Area, Accounting Class, Fixed Asset Number, Criticality, Maintainable, Description, Attributes, Production Organization, Equipment Item, Equipment Serial Number, Property Location Code, and/or Property Location Name. For information on these values, See: Defining Asset Numbers, page 2-65.

10. Choose Go.

Viewing Asset Number Information

You can display specific details about an Asset Number, such as an asset's configuration history, costs, hierarchy information, associated meter readings, quality information, associated work orders, and associated Work Requests. You can also view the Asset

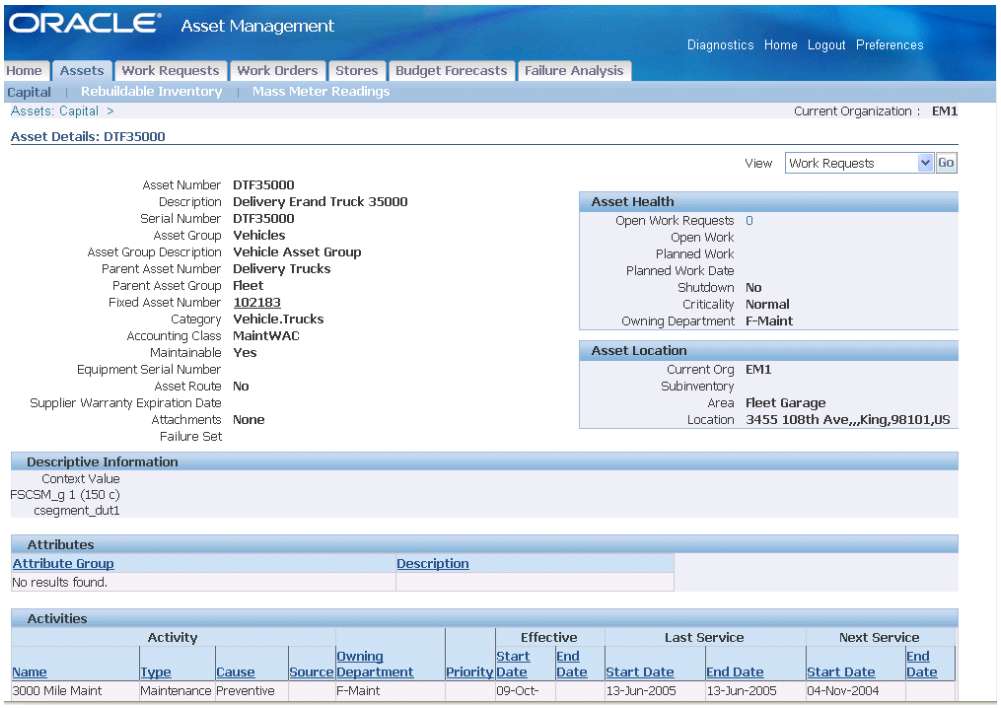
Number's associated Asset Group, parent, parent group, Category, Owning Department, Area, Accounting Class, Criticality, maintainability, the associated equipment serial number, attachments, associated Activities, and asset attributes.

The asset number, description, criticality and work order priority are copied (in a concatenated format) from the work order to the Justification field on the purchase requisition.

To display asset number details:

1. Navigate to the Asset Numbers page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.

Asset Details



2. Select an asset number to view.

3. You can select the specific asset number or you can select Details from the View list of values, to view associated asset number information, attributes, and activities.

4. Optionally choose View Equipment Details if the current Asset Number has associated equipment details. This link is next to the Equipment Serial Number field, and is available if there are associated equipment details. You can view all equipment details in the production organization.

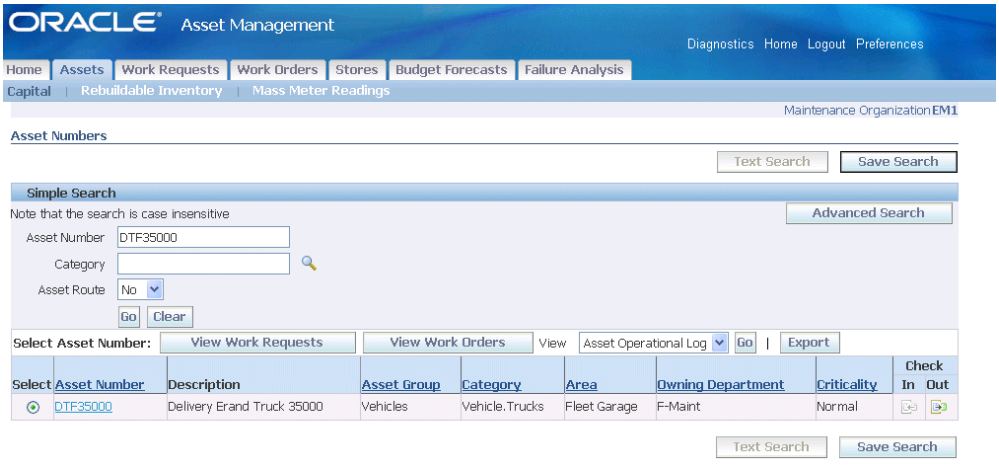
    - Optionally choose the View Resource Usage glasses icon to view all Work

Orders created against the Asset Number for the current equipment resource. This enables you to view resource demand (Work Orders) associated with the Asset Number. This information is eAM's integration with Process Manufacturing.

To track asset operational statuses:

Maintenance organizations must track current and past operating statuses of their equipment, such as asset maintenance downtime and Check In and Check Out statuses. Maintenance organizations must track operational downtime and other critical information about an asset for a better understanding of its operations statuses and history. You can view current statuses, show operation and shutdown history, check in and check out assets, and view an Asset Operational log for analysis.

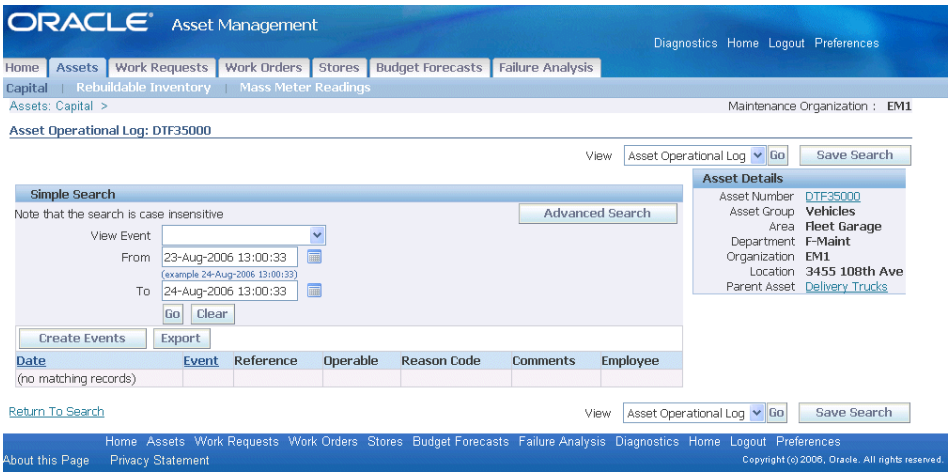
1. Navigate to the Asset Numbers page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.



2. Select Asset Operational Log from the View list of values to view all current and past asset operational information, such as Check Out, Check In, associated Work Requests and Work Orders. You can remove or add a child asset, remove a parent asset, activate or deactivate the asset, transfer the asset to another location, and receive or issue the asset into/from Inventory. By default, logging is turned off for an asset (See: Defining Asset Numbers, page 2-65 and Defining eAM Parameters, page 2-11).

    1. Select *Asset Operational Log* from the View drop down list.

    2. Click the **Go** button.

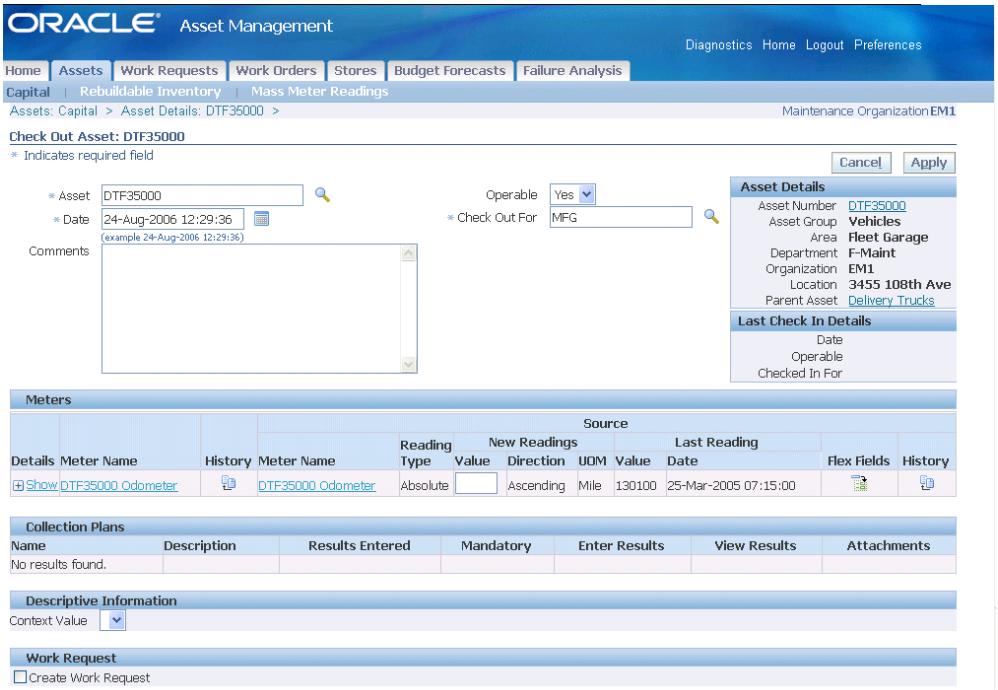


3. Optionally query information by a date and time period or Event. Choose Go.

4. Optionally choose Create Events to create events that occur for the asset. This information is important and needed to help you analyze the asset's lifecycle. Choose Apply when finished. These events are extensible; you can add to them.

5. Select the *Return to Search* hypertext link to return to the Asset Numbers page.

3. Optionally select the Check Out icon to check out an asset from the Asset Search page. You can view asset details, enter collection plan data, enter meter information, and optionally create a Work Request from this page.



4. Choose Apply.

5. Optionally choose the Check In icon to check this asset in. You can view asset details, enter collection plan data, enter meter information, and optionally create a Work Request from this page.

6. Choose Apply.

To display configuration history:

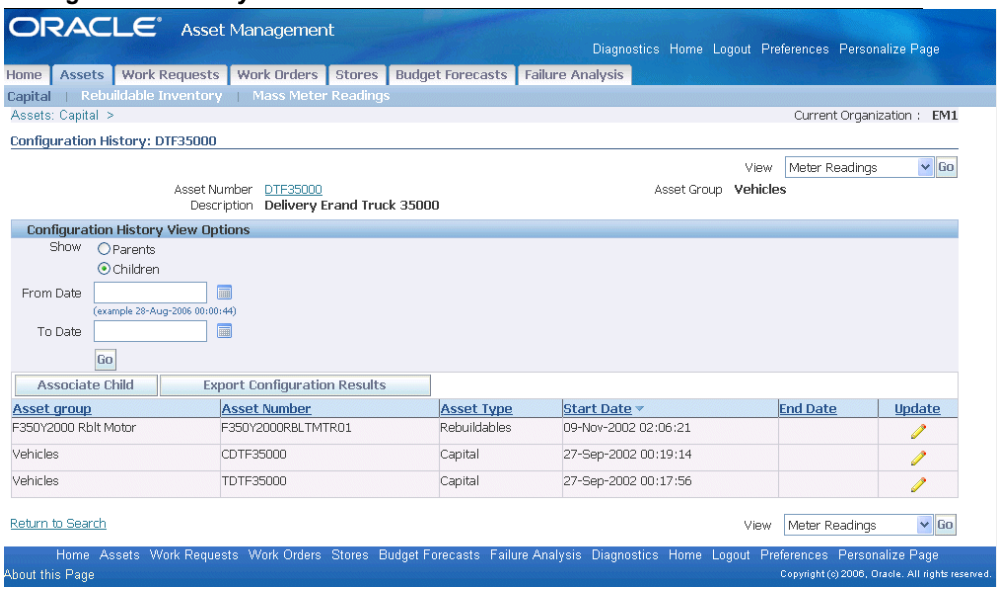
You can view specified parent and child information in a tabular format, as well as dynamically add parents and children to a hierarchy.

1. Navigate to the Asset Numbers page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.

2. Select Configuration History from the View list of values.

3. Choose Go.

Configuration History



4. Select whether to show the current Asset Number's Parents or Children information. The page defaults showing Children information. If you select Parents, choose Go to display the associated information.

5. Optionally narrow your selection criteria by selecting a date range.

6. Optionally choose Associate Child or Associate Parent (depending on whether you are showing Parent or Children information) to dynamically add a Child or Parent to the current Asset Number's hierarchy.

    1. Select an Asset Number.

    2. Enter a Start Date that this new configuration is effective. The system date defaults.

    3. Optionally enter an End Date.

    4. Choose Apply to save your work.

    5. Choose Cancel to return to the Configuration History window.

7. Optionally select the Update icon to update configuration history information for the current Asset Number.

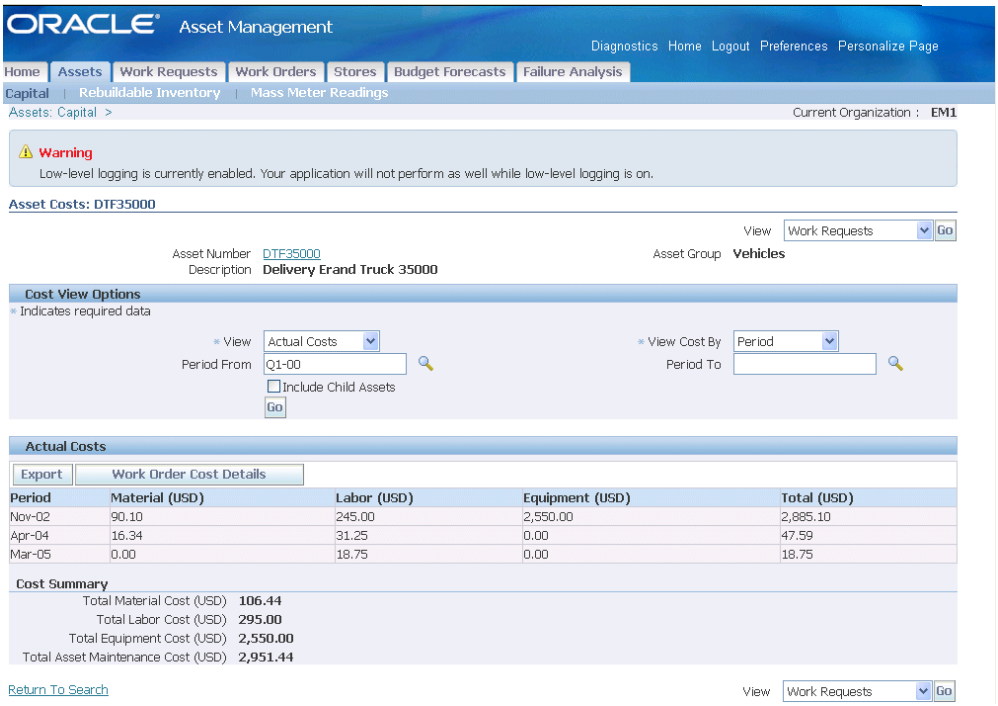
8. Optionally save and export your configuration results to a spreadsheet by selecting Export Configuration Results.

To view asset cost information:

eAM integrates with Oracle Cost Management, honoring all costing rules set at the organization level, for example, the costing method used. You can view the costs of Material, Labor, and Equipment for maintenance Work Orders, associated with the current Asset Number. You can view different types of transactional cost information, including actual, estimated, variance, and summary. eAM maintains the hierarchy integrity. For example, when viewing the parent Asset Number, you can view just the parent's costs, or the costs of the parent, including all child costs rolled up to the parent level.

1. Navigate to the Asset Numbers page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.
2. Select Costs from the View list of values.
3. Choose Go.
4. Select an Asset Number.
5. Choose Go.

Asset Costs



6. In the Cost View Options region, you can narrow your selection criteria.

    1. From the View drop down list, select the type of cost information to view. Valid values are Actual Costs, Estimated Costs, Variance Costs, and Cost Summary.

        Actual Costs: This is the accumulation of all cost for material and resource transactions for associated maintenance Work Orders, based on a specified period, or any specified selection criteria you entered in the Cost View Options region. When you select the Actual Costs from the list of values, the actual cost information for your specified criteria is provided. The Cost Manager process runs in the background to provide updated, actual cost information at user defined, periodic intervals, and/or when it is launched from the menu.

        Estimated Costs: A BOM (material parts list) and routing (resources) can be associated with a Work Order. When you select Estimated Costs, the estimated costs of all materials and resources associated with a work order display, enabling you to budget costs. The Work Order Cost Estimation process runs in the background to provide updated, estimated cost information at user defined, periodic intervals, and/or when it is launched from the menu. Estimated and actual costs might differ because all materials or resources associated with a Work Order might not actually be used when the Work Order is executed.

        Variance Costs: When you select Variance Cost, the difference between the actual and estimated costs appear.

Cost Summary: When you select Cost Summary type, the cost information from all work orders associated with the current asset appear.

2. From the View Cost By drop down list, select how you would like to view your cost information. Valid values are Period and Cost Category.

   - If you selected Cost Category, you can view cost information by defined categories, such as Maintenance, Contract, or Operations.

     *Material:*All material and material overhead transaction costs appear

     Labor: All employee resource and resource overhead transaction costs appear.

     Equipment: All material resource and resource overhead transaction costs appear.

   - If you selected Period, optionally enter the Period From and Period To. Accounting Periods are defined within Oracle Inventory (See: Maintaining Accounting Periods, *Oracle Inventory User's Guide*).

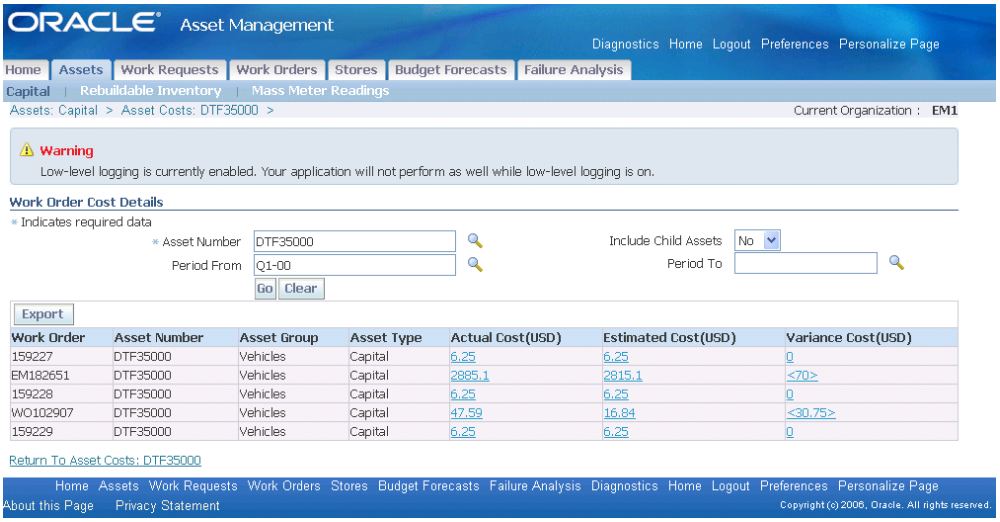
7. Select the Include Child Assets check box to roll up all costs for the current Asset Number and its children. See: Defining Asset Numbers, page 2-65 to review how hierarchies are created.

8. Choose Go to view cost element information. Summary totals, of material, labor, and equipment costs, appear.

9. Optionally save and export your cost information to a spreadsheet by choosing Export.

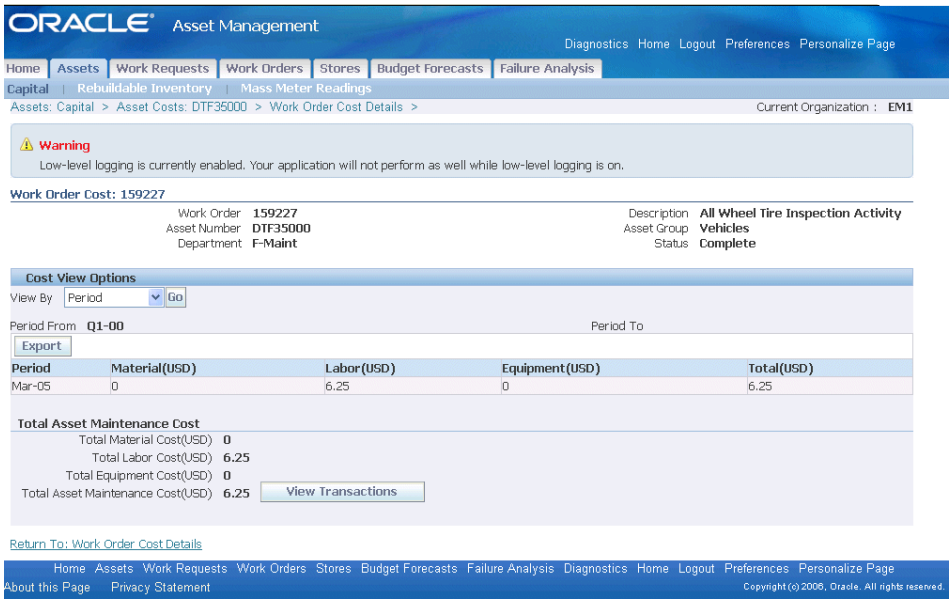
10. Optionally view asset cost information, broken down by specific Work Order, by choosing Work Order Cost Details.

Work Order Cost Details



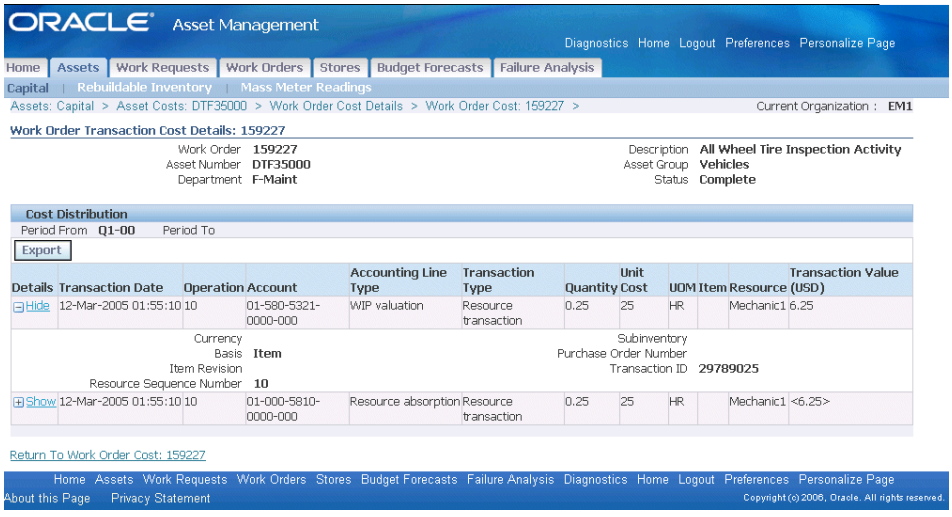
1. Optionally select the Actual Cost link to view the Work Order's actual cost details by Period/Cost Category.

Work Order Actual Cost Details



2. Optionally choose View Transactions to view the transaction details.

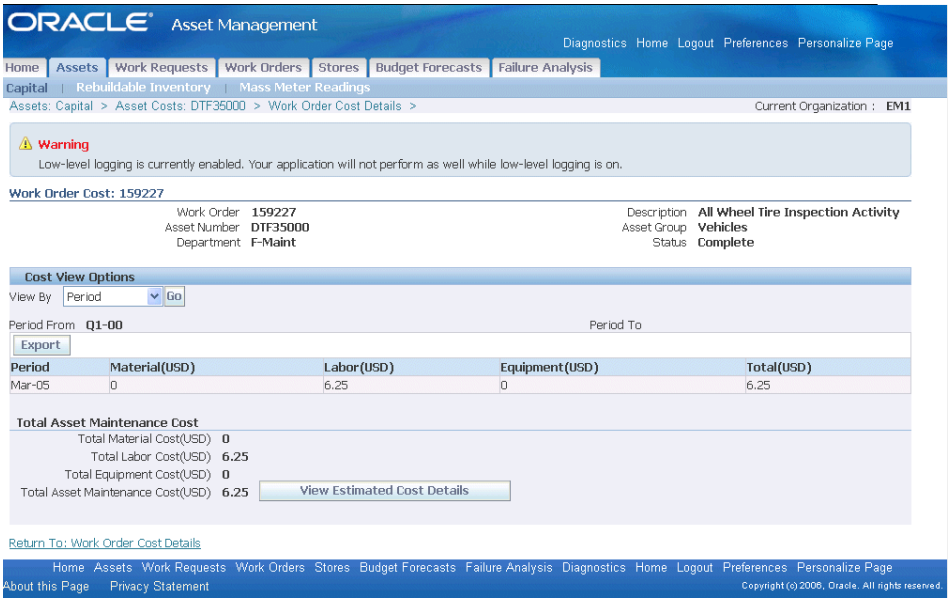
Actual Cost Distributions



3. Optionally select the Work Order Cost Details hypertext link at the top of the page.

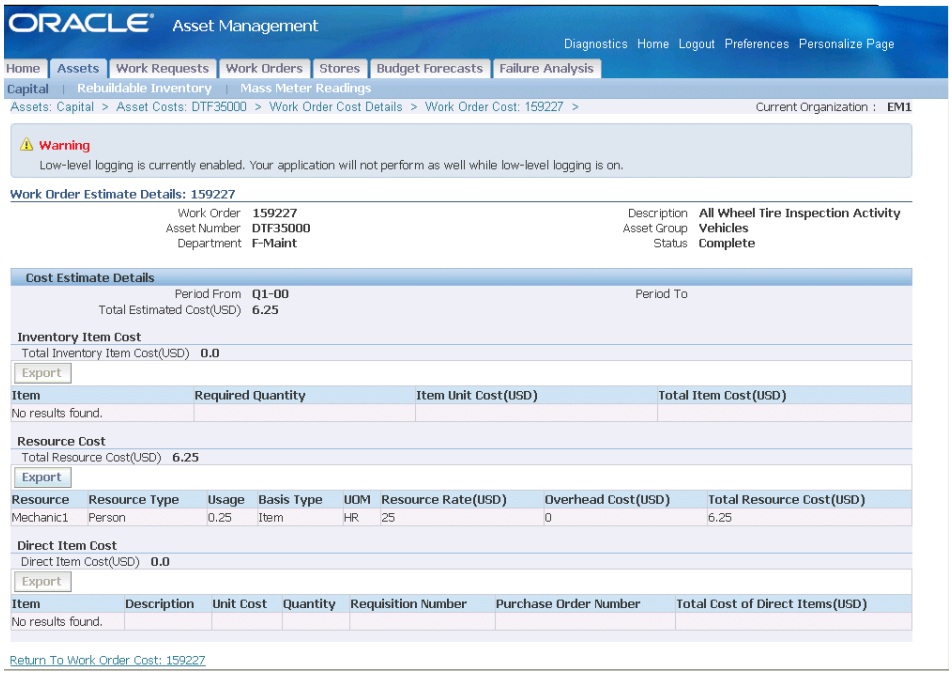
4. Optionally select the Estimated Cost link to view the Work Order's estimated cost details by Period/Cost Category.

Work Order Estimated Cost



5. Optionally choose View Estimated Cost Details to view the Work Order's estimated cost details by Period/Cost Category.

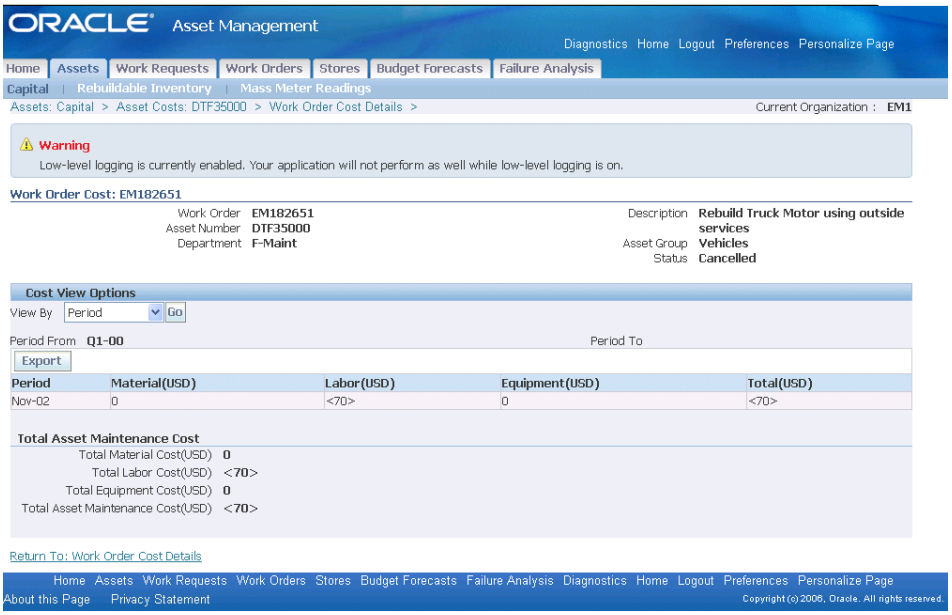
Work Order Estimate Details



6. Select the Work Order Cost Details hypertext link, at the top of the page, to exit.

7. Optionally select the Variance Cost link to view the variance between the estimated and actual costs.

Variance Cost



To display the asset hierarchy:

You can view Asset Number hierarchy information, enabling you to identify Asset Numbers using a navigator and the details of each Asset Number belonging to the hierarchy.

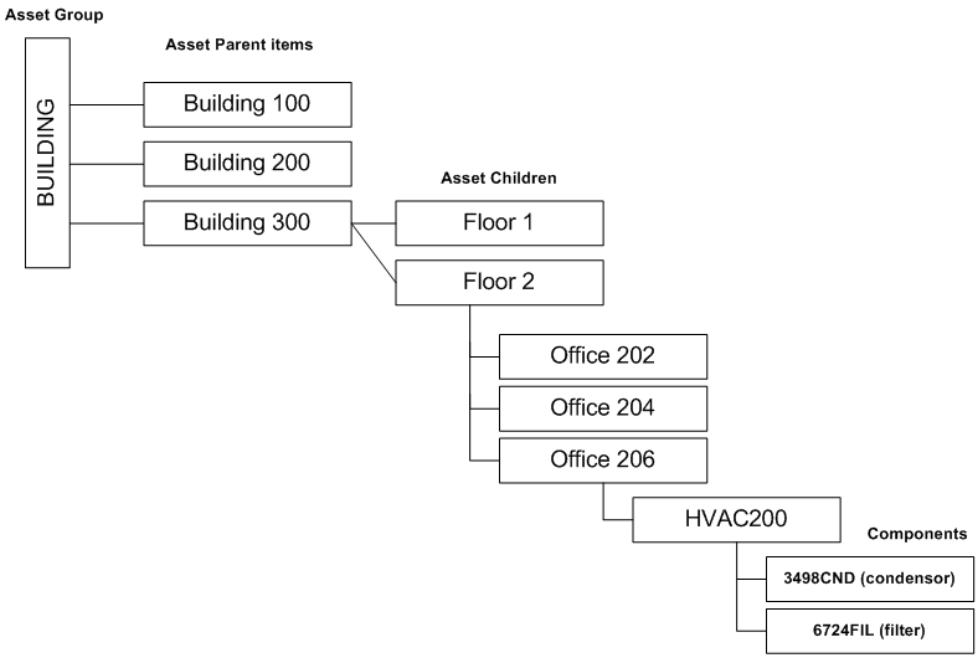
As Serialized Rebuildables are added and removed from a particular hierarchy, the asset genealogy is dynamically updated.

1. Navigate to the Asset Numbers page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.

2. Select Hierarchy from the View list of values.

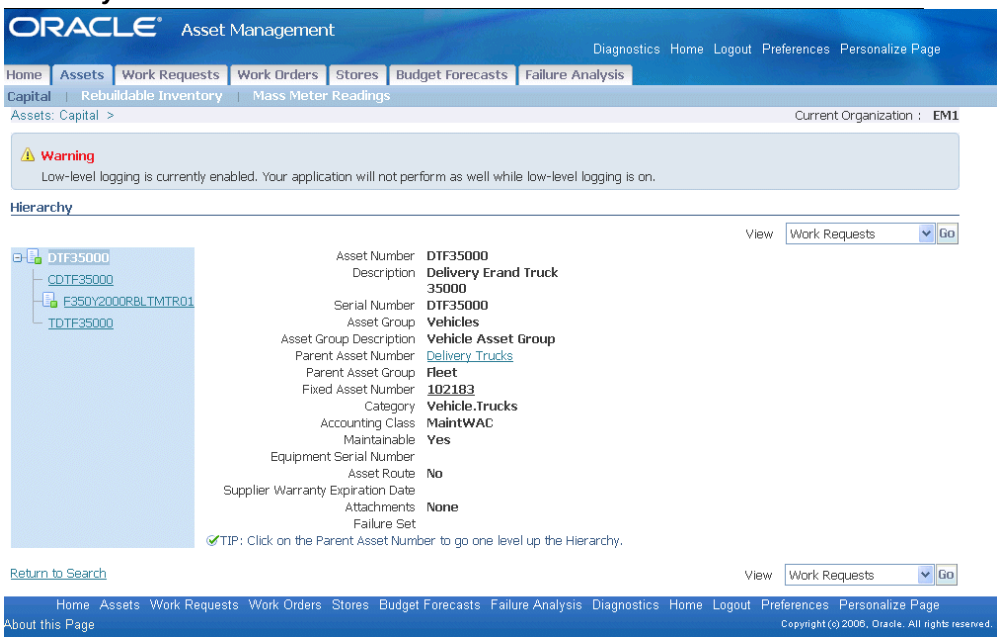
3. Choose Go. The associated hierarchy for the current Asset Number appears in the shaded region.

Asset Hierarchy Example



4. Optionally select any Asset Number in the hierarchy to view its details.

Hierarchy



5. Optionally select the Parent Asset Number to view the complete hierarchy at the parent level.

6. Choose Return to Search to exit.

To view asset relationships graphically:

You can view asset relationships in a graphical format using Oracle eAM.

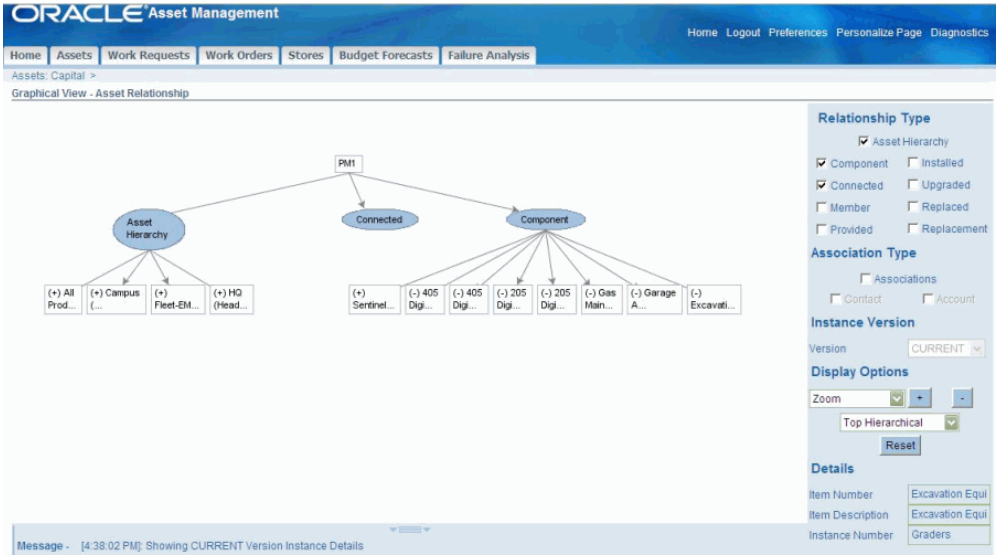
Use this procedure to view asset relationships graphically:

1. Navigate to the Asset Search page, and query for a specific asset.

2. Select Graphical Hierarchy from the View list of values.

3. Click the **Go** button.

   The Viewer appears displaying the asset relationship in a graphical format.



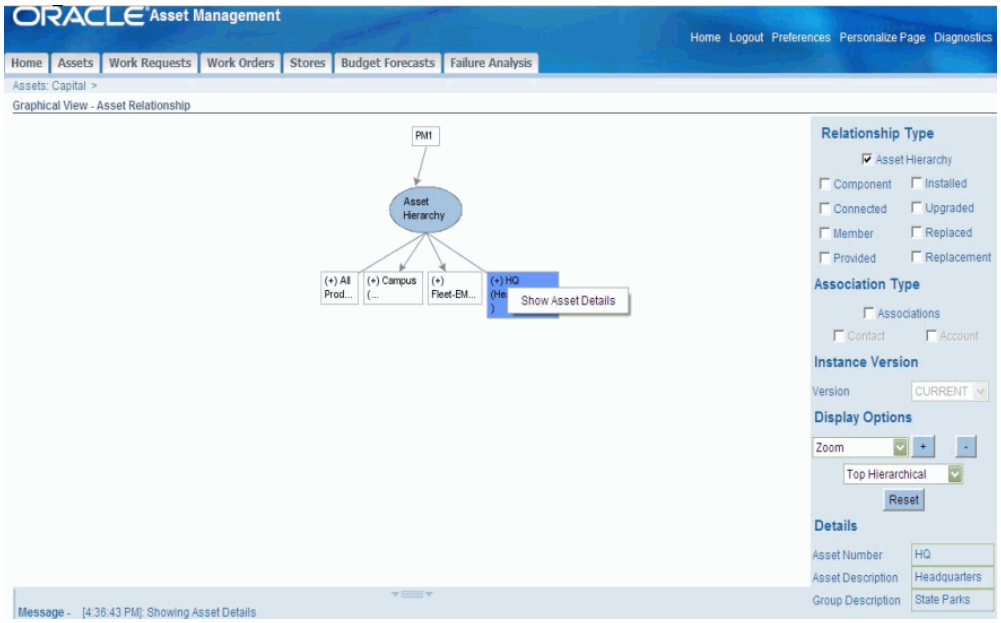
4. View the asset relationships.

   You cannot view instance relationships.

   > **Note:** You can only view asset relationships using this navigation. If you want to add child assets or create other relationships for the asset, you must access the asset through Oracle Asset Tracking or Oracle Install Base.

   For more information about viewing asset relationships, see Viewing Item Instance and Asset Network Relationships, *Oracle Install Base User's Guide*.

5. Right-click an asset relationship node to view the asset details.



To enter or view meter readings:

Meters are defined and associated with Asset Numbers to measure an asset or rebuildable item's usage. Examples include odometers or counters. Meters are used in Preventive Maintenance Scheduling to schedule and generate Preventive Maintenance Work Orders.

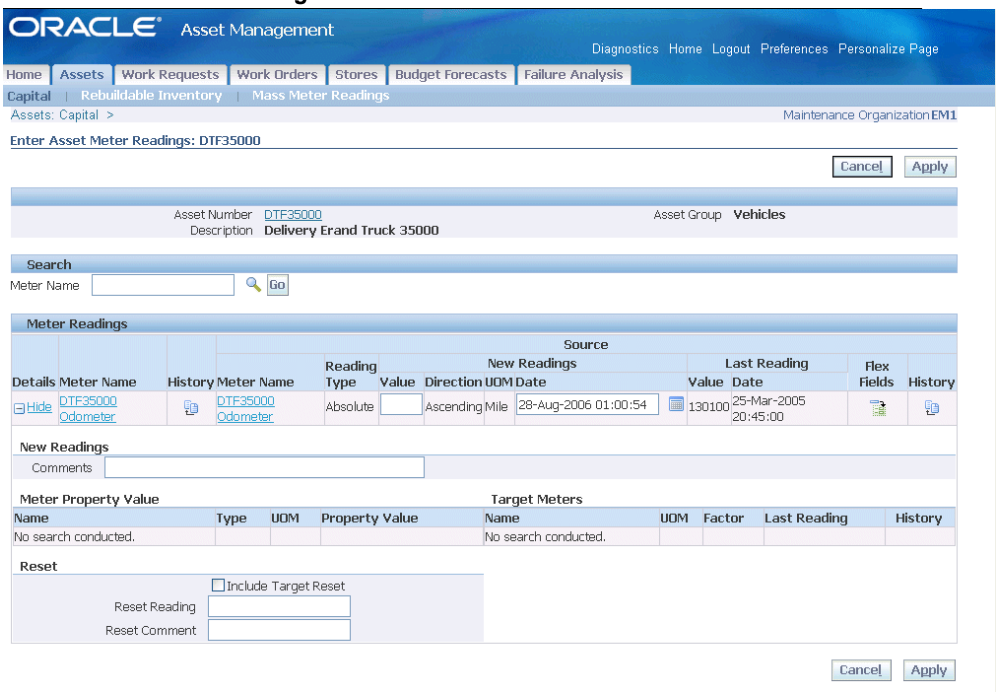
You can enter and view Meter Readings for the current Asset Number.

1. Navigate to the Asset Numbers page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.

2. Select the Asset Number, and then select Meter Readings from the View list of values.

3. Choose Go. Meters that are associated with the current Asset Number appear. See: Associating Meters with Asset Numbers, page 2-123.

Enter Asset Meter Readings



4. Enter a Value or Change Reading value for new meter readings, depending on the meter type. If the meter is an Absolute type, the Value column is enabled. If the meter is a Change type, the Change column is enabled.

5. Optionally enter any necessary Comments.

6. Optionally enter Reset information.

    1. If you enter a Reset Reading value, you are resetting the source meter to this value. For example, if a motor must be replaced, you can reset the meter reading value of the pump, associated with the motor.

        Companies can associate a Source Meter to an Asset Number/Meter association. The Source Meter reading subsequently feeds corresponding meters that are associated with assets within the Meter Hierarchy (See: Defining Meters, page 2-121 for more information on Meter Hierarchies).

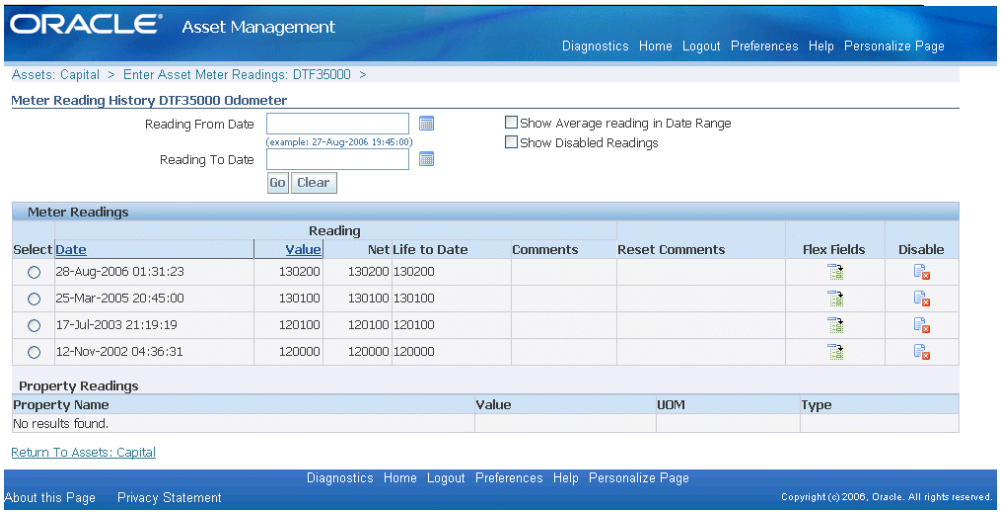
    2. Optionally select the Include Target Reset check box to reset the current asset's target meter to the source meter's Reset Reading.

    3. Optionally enter a Reset Comment.

7. Choose Apply to save your work.

8. Optionally select the History icon to view all meter readings for the selected meter and current Asset Number. This helps you to make logical decisions when entering and updating meter readings. For example, you can view the last meter reading, enabling you to make a logical choice when entering the next meter reading.

Meter Reading History



9. Optionally select the Disable icon to disable a past meter reading for the current Reading. If meter readings are entered before resetting the meter, you cannot disable those meter readings. The most current reading before the meter is reset cannot be disabled, unless the meter reset reading entry is disabled.

> **Note:** Preventive Maintenance Scheduling does not use any disabled information. After a meter reading is disabled, you cannot re-enable it.

To view quality information:

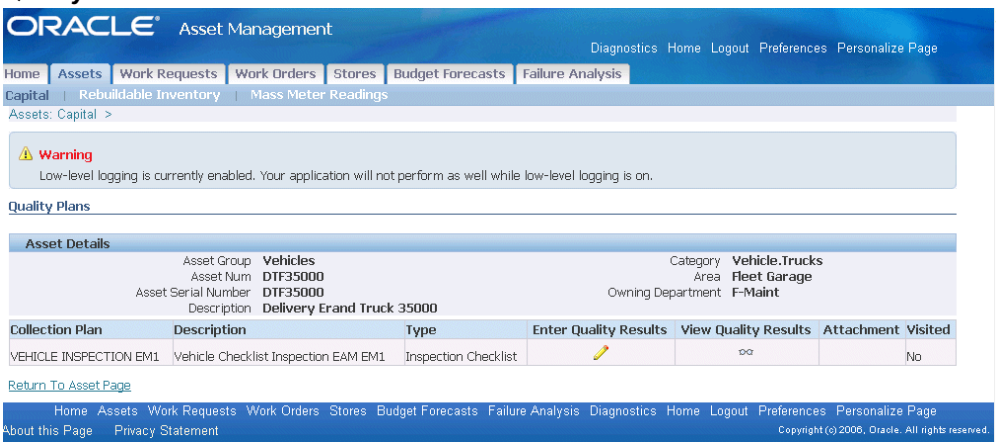
You can view a list of Quality collection plans and enter quality results for the current Asset Number.

1. Navigate to the Asset Numbers page, and query an Asset Number. See: Obtaining Asset Number Information, page 20-4.

2. Select the Asset Number, and then select Quality from the View list of values.

3. Choose Go.

Quality Plans



4. A list of collection plans, associated with the current Asset Number and requiring completion, appear (See: Creating eAM Quality Collection Plans, page 2-161 When the collection plan was created, it was specified whether the collection plan required completion. Also, during the eAM collection plan creation process, triggers are specified to make specific Asset Numbers eligible for the collection plan (See: Creating eAM Quality Collection Plans, page 2-161). See: Quality Integration Setup, page 2-157

5. Optionally enter quality results by selecting the Enter Quality Results icon. You can enter quality results for a collection plan or update a collection plan's quality results multiple times.

    1. Required fields depend on the Collection Plan's collection element specifications (See: Creating eAM Quality Collection Plans, page 2-161).

    2. Optionally choose Add to attach any necessary files, URLs, or text to the chosen collection plan. Each collection plan can have an unlimited number of attachments.

    3. Choose Apply to save your work or Cancel to return to the Quality Plans page.

6. Select the View Quality Results icon to view or update any results entered for the current collection plan.

    1. Select either the *Show table data when all conditions are met* or *Show table data when any condition is met*radio button.

        - *Show table data when all conditions are met:* Quality results containing all of the following entered parameters appear in the results set table.

        - *Show table data when any condition is met:* Quality results containing any of

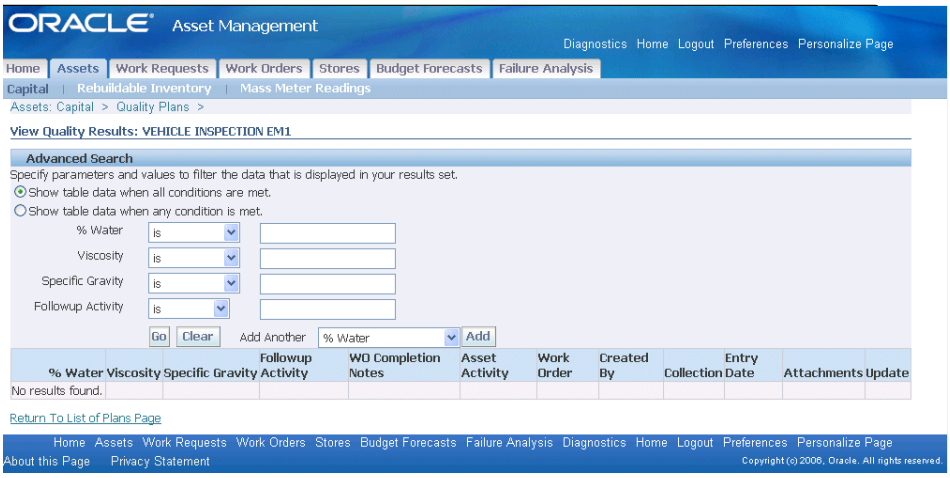
the following parameters appear in the results set table.

2. Optionally specify parameters to filter the data displayed. The parameters are the collection elements defined for the current collection plan. See: Creating eAM Quality Collection Plans, page 2-161.

3. Optionally select an additional parameter from the Add Another list of values. Choose Add.

4. Choose Go to view the entered parameters' results. Optionally choose Clear to enter new parameters.

View Quality Results



5. Optionally select the Attachments icon to attach any necessary files, URLs, or text to the chosen collection element (result entry). Each collection element in the collection plan can have an unlimited number of attachments.

6. Optionally select the Update icon to update the current entry.

7. Select the Return To List Of Plans Page link at the bottom of the page to return to the list of quality collection plans.

7. The Visited column indicates whether the associated collection plan has been updated.

> **Note:** Quality results are entered at Work Order Completion for an Asset Number's required collection plans.

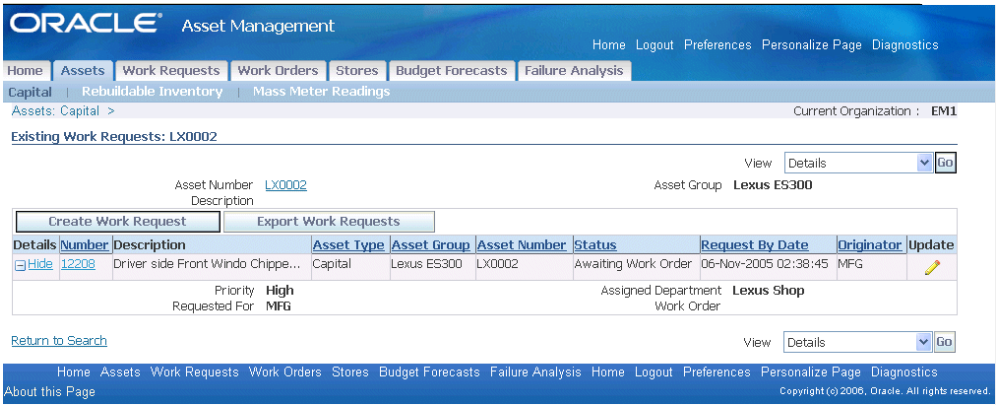
To view or create work requests for an asset:

You can view an asset's associated Work Requests, create new Work Requests, or update existing Work Requests for the current asset.

1. Navigate to the Asset Numbers page, and query an asset. See: Obtaining Asset Information, page 20-4.

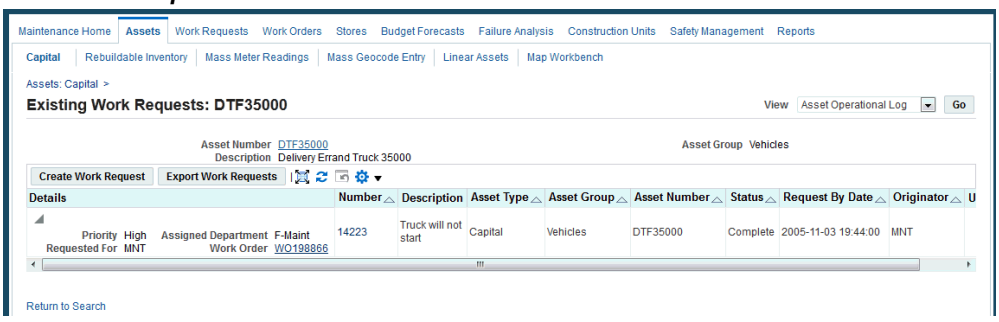
2. Select an Asset Number, and then choose View Work Requests.

Existing Work Requests



3. Optionally select a work request Number to view its details, such as the log explaining the issue reported and priority code.

View Work Request



4. Optionally choose Update if you are within the details of the Work Request, or you can select the Update icon on the Existing Work Requests page.

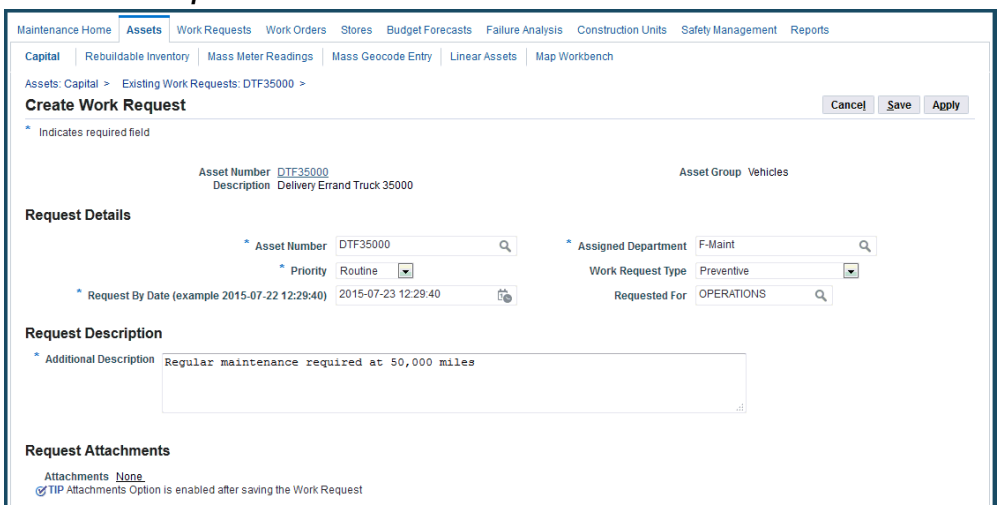
    1. Update fields as needed.

    2. Choose Apply to save your work.

3. Choose Cancel to return to the Existing Work Requests page, without updating the Work Request.

5. Optionally choose Create Work Request to create a new Work Request, or choose Create if viewing an existing request's details.

Create Work Request



1. If required, select an Asset Number. Depending on the current organization's parameter, defining an Asset Number on Work Requests is required or optional. See: Defining eAM Parameters, page 2-11.

2. Select a Priority, for example High, Medium, or Low.

3. Select a Request By Date. The system date defaults.

4. Select an Assigned Department. The current Asset Number's associated Assigned Department defaults. See: Defining Asset Numbers, page 2-65.

5. Optionally select a Work Request Type.

6. Optionally select the user the Work Request is Requested For. The current user defaults.

7. Enter the detailed information about the work requested in the Additional Description field.

8. Enter your Creation Information, such as Phone Number, E-Mail address, and Contact Preference.

9. Optionally select a Context Value.

10. Choose Apply to create the Work Request.

11. Choose Cancel to return to the Existing Work Requests page, without creating a Work Request.

6. Optionally select Show in the Details column to display Work Orders linked to the current Work Request.

    1. Optionally select the Work Order number to view the Work Order's associated information.

    2. Choose Return to Existing Work Requests to return to the previous page.

7. Optionally save and export the Work Request information to a spreadsheet, by selecting Export Work Requests.

Related Topics

Viewing Resource Usage, page 10-2

Defining Asset Numbers, page 2-65

Meters, page 4-2

Entering Meter Readings, page 4-3

Overview of Cost Management, *Oracle Cost Management User's Guide*

Submitting a Request, *Oracle Applications User's Guide*, *Oracle Applications User's Guide*

Overview of Collection Plans, *Oracle Quality User's Guide*

Overview of Quality Self-Service, *Oracle Quality User's Guide*

Entering Mass Meter Readings

Meters are defined and associated with Asset Numbers to measure an asset or rebuildable item's usage. Examples include odometers or counters. Meters are used in Preventive Maintenance Scheduling to schedule and generate Preventive Maintenance Work Orders.

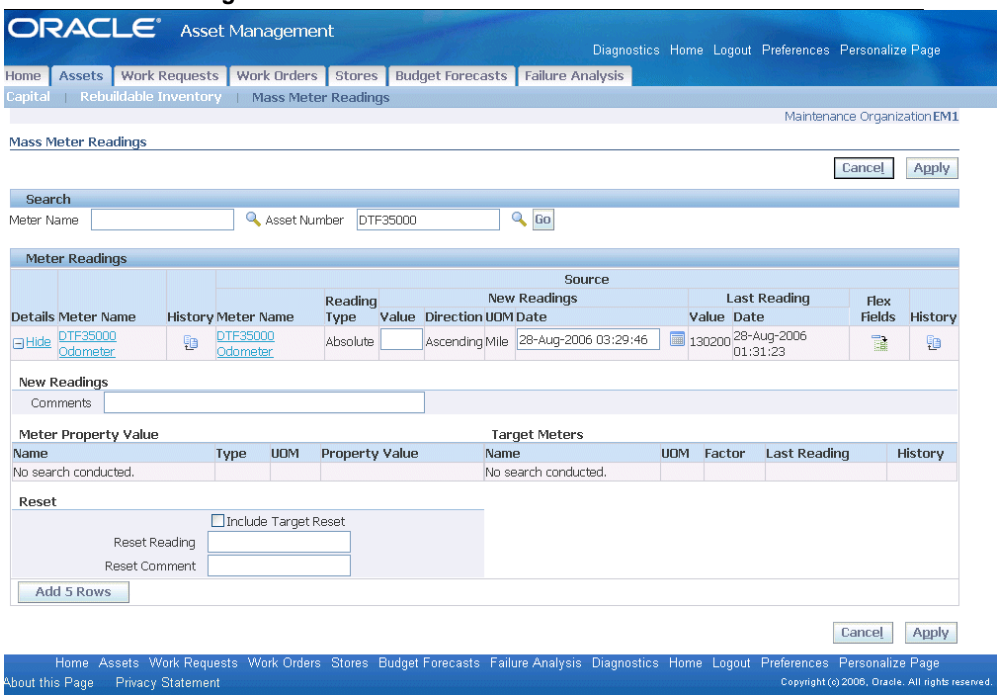
You can enter readings for all meters that are associated with an asset. You can enter readings for all assets that are associated with a queried meter. This page enables you to enter multiple readings from one screen.

The Meter Reading window invokes with a Disable button based on the Disable Meter Reading function security setting. If you do not have access to the function security, eAM Disable Meter Reading, then the Disable button does not display and you cannot disable a meter reading.

To enter mass meter readings:

1. Navigate to the Mass Meter Readings page (Maintenance Super User: Assets tab > Mass Meter Readings sub-tab).

Mass Meter Readings



2. Optionally enter a Meter Name and then choose Go.

3. Optionally enter an Asset Number and then choose Go. All meters that are associated with this asset appear (SeeAssociating Meters with Asset Numbers, page 2-123).

4. Enter a Value or Change Reading value for new meter readings, depending on the meter type. If the meter is an Absolute type, the Value column is enabled. If the meter is a Change type, the Change column is enabled. The Change field indicates the difference between the last reading and the current reading; it defaults when the Value field is populated. The Change field indicates the difference between the last reading and the current reading. The Change value is used to calculate the Life To Date Reading, within the Latest tabbed region.

5. Optionally enter any necessary Comments.

6. Optionally enter Reset information.

    1. If you enter a Reset Reading value, you are resetting the source meter to this

value. For example, if a motor must be replaced, you can reset the meter reading value of the pump, associated with the motor.

Companies can associate a Source Meter to an Asset Number/Meter association. The Source Meter reading subsequently feeds corresponding meters that are associated with assets within the Meter Hierarchy (See: Defining Meters, page 2-121 for more information on Meter Hierarchies).

2. Optionally select the Include Target Reset check box to reset the current asset's target meter to the source meter's Reset Reading.

3. Optionally enter a Reset Comment.

> **Note:** You cannot reset past meter readings if a meter reading is entered after the reading date.

7. Choose Apply to save your work.

8. Optionally select the History icon to view all meter readings for the selected meter and current Asset Number. This helps you to make logical decisions when entering and updating meter readings. For example, you can view the last meter reading, enabling you to make a logical choice when entering the next meter reading.

9. Optionally select the Disable icon to disable a past meter reading for the current Reading. If meter readings are entered before resetting the meter, you cannot disable those meter readings. The most current reading before the meter is reset cannot be disabled, unless the meter reset reading entry is disabled.

> **Note:** Preventive Maintenance Scheduling does not use any disabled information. After a meter reading is disabled, you cannot re-enable it

Using the Asset Move Workbench

You may need to move assets from one organization (often a different location) to another organization for different reasons, to replace a failed asset , or to borrow an asset for a particular job or project.

The Asset Move Workbench enables you to transfer an asset and its child assets from one maintenance organization to another as a single unit, and the parent child asset relationships are preserved.

This feature also enables you to move assets using the EAM user interface by minimizing the dependency on the Inventory user interface to carry out asset transfer transactions. You can perform a miscellaneous receipt of the assets within EAM, using

the Asset Move page. EAM performs a miscellaneous receipt of an asset if there is no quantity available in the expense subinventory. This process does not track the quantity for the asset. These miscellaneous receipts are done at zero cost, and are placed in an expense intermediate subinventory.

The following entities will also move with the asset:

- Activities: if the Activity Definition is assigned to the destination organization. If not, you will need to use the Activity Workbench to assign an activity to the new organization.
- PM schedules
- Meters
- Failure history and setup

These entities do not move with the asset:

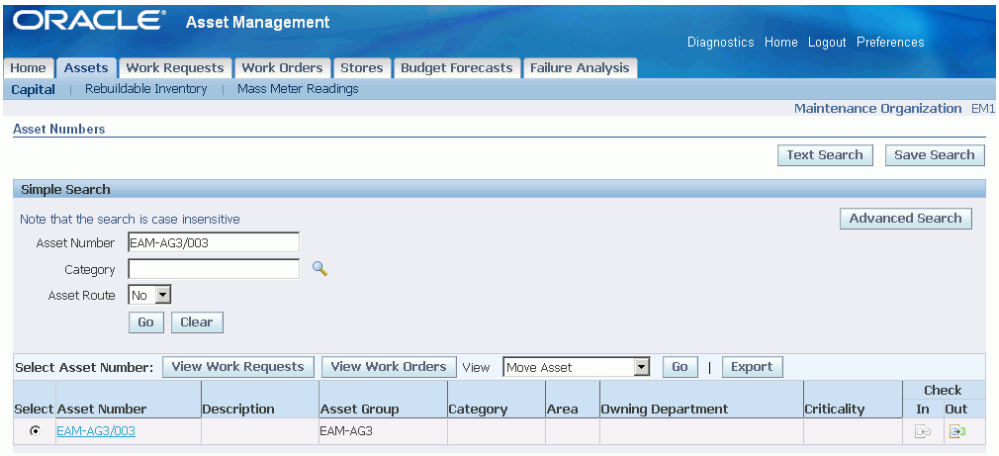
- Work orders
- Routing
- Cost history
- Collection plans

You can move assets, including any child assets, between organizations and sub-inventories only.

After you have performed the asset move, you can manually adjust the asset hierarchy using the Asset Hierarchy page or the Graphical Network Page.

To move assets using the Asset Move Workbench:

1. Navigate to the Maintenance Super User Home page.
2. Select a value from the Organization drop-down and click the **Go** button
3. Click the Assets tab.
4. Enter search criteria for the asset to be moved, and click the **Go** button.



5. Select the Move Asset value in the View drop-down list, and click the **Go** button.

6. Select a value from the Move Type field, Inter-Org Transfer or Sub-Inventory Transfer. This a required field.

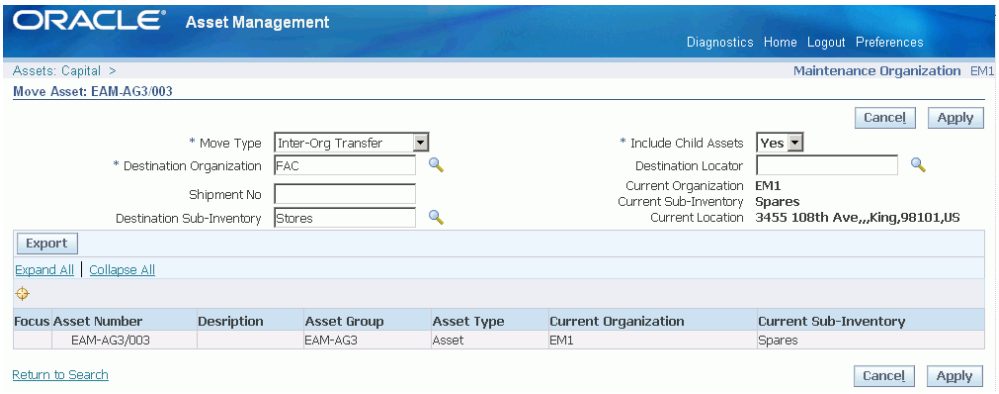
7. Enter the destination organization (required).

8. Enter a destination sub-inventory.

9. Select Yes or No in the Include Child Assets field (required).

10. Optionally select a destination locator.

    Note: The current asset information relating to the organization, sub-inventory, and location displays.



11. Click the **Apply** button.

12. You will receive a confirmation message that the assets have been moved.

Work Requests

A work request serves a different function than a work order; it is a request for maintenance on an asset (Capital or Rebuildable Inventory). eAM enables operations and maintenance staff to report any problems with an asset. A supervisor can approve, request additional information, or reject a work request. A work request requires approval before it is generated into a work order. The Work Requests tab enables you to query existing, and create new work requests for an asset. See: Overview of Work Requests, page 20-35 and Creating and Updating Work Requests, page 17-6.

Work Orders

The Work Orders tab is designed for users, such as crew supervisors, who execute work plans generated by a planner. You can manage operations on a work order. You can search for skills across departments, assign employees to a work order, adjust crew schedules, complete operations, hand work over to another department, complete a work order, request material, and enter quality plan information, such as inspection data. The Work Orders tab enables you to query and create work orders, view and update work order details, and create relationships among work orders (See: Work Order Relationships, page 3-51). After executing a work order search, you can drill into a specific work order. The Work Order page contains content containers, providing work order header information, asset details information, and work order details information.

You can query Service and Work Requests, view the requests' associated work orders, and create and assign work orders to the requests.

This section's tasks include:

- Creating Work Orders, page 20-36
- Creating Express Work Orders, page 20-42

- Adding Completion Details to Work Orders, page 20-44
- Viewing Work Orders, page 20-45
- Completing Work Orders, page 20-65
- Updating Work Orders, page 20-69

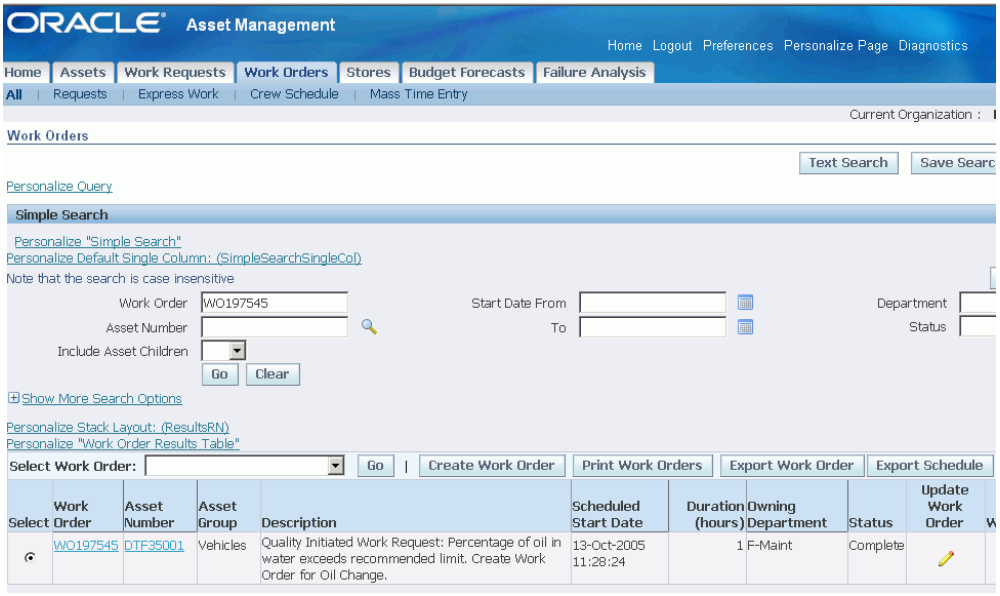
Creating Work Orders:

Work orders are normally created by a planner from the Maintenance Workbench (See: Using the Maintenance Workbench, page 3-71), and are also created within the Maintenance Super User responsibility. Material and resource planning (See: Overview of Planning and Scheduling, page 5-1) is used at each status of the routine work order (See: eAM Work Order Statuses, page 3-23).

1. Navigate to the Work Orders page.
2. Click the Create Work Order button.

> **Note:** This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.

The header information displays general information about the Asset Number and the type of work required.



3. The work order number is assigned, but you can update it.

4. Enter an asset number (or Serialized Rebuild) requiring maintenance. The Asset Group (or Rebuildable Item) defaults (See: Defining Asset Numbers, page 2-65).

5. Enter the Scheduled Start Date for the work order if it is based on a forward schedule. The scheduling process uses this date as a starting point to calculate the Scheduled Completion Date and duration for allocated resources and material. If the material/resources are not available by this date, the scheduling process moves the start date forward (See: eAM Scheduling, page 5-6).

   Note: Actual dates are entered at operation and work order completion. Scheduled dates are calculated by the Manufacturing scheduler if you have Oracle Manufacturing Scheduling enabled (See: Overview of Setting Up, *Oracle Manufacturing Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

6. Enter a Scheduled Completion Date for backward scheduling. This date indicates the requested end by date for the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and material. If the material and resources are not available by that date, the scheduling process moves the start date backwards to ensure completion by the required completion date (See: eAM Scheduling, page 2-151).

   Note: Actual dates are entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset

Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: Overview of Setting Up, *Oracle Manufacturing Scheduling User's Guide*). Otherwise, the EAM scheduler calculates the dates.

7. Enter a WIP Accounting Class code to represent the charge (expense) accounts associated with the Asset Number. This defaults from the current Asset Number (See: Defining Asset Numbers, page 2-65); you can update it.

8. Optionally select a Request Number to associate a Work Request/Service Request with this work order. After selected, the Description updates to this Work Request's Description.

9. Optionally enter a Description for this work order.

10. The Department defaults from the selected asset number (See: Defining Asset Numbers, page 2-65). This indicates the persons or department responsible for this asset number.

    You can change the department at the operation level if no transactions have been recorded for the work order.

11. After selecting an Asset Activity, the associated maintenance BOM (material) (See: Setting Up Maintenance Bills of Material, page 2-93) and maintenance route (resources), associated with the Activity (See: Defining Maintenance Routes, page 2-99), attach to the work order. After an asset activity is saved to a work order, you cannot change or delete it.

    Select an Asset Activity. Only Asset Activities associated with this Asset Number are available.

    Note: If this work order was previously created, you can add an Asset Activity, as long as the work order is at an Unreleased or Draft status, or an Asset Activity was not previously defined. If any tasks, material, or resource requirements exist, these must be deleted before adding an Asset Activity to an existing work order.

12. If you select Yes from the Firm list of values, planning and scheduling does not adjust the schedule, regardless of material or resource availability (See: Overview of eAM Planning and Scheduling, page 5-1). This value defaults as Yes or No, depending on the Auto Firm on Release and Auto Firm on Create checkbox settings, established in the Enterprise Asset Management Parameters setup for the current organization (See: Defining eAM Parameters, page 2-11). This defaults after the work order is Released, if you select the Auto Firm on Release checkbox, and defaults immediately if you selected the Auto Firm on Create checkbox.

If you select No from the Firm list of values, the completion date is calculated based on the work order duration. The scheduler automatically calculates the duration based on the operations (resource duration setup) on the work order. You can update the Firm setting for work orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: eAM Work Order Statuses, page 3-23).

If Firm is set to Yes, you can still manually reschedule a resource on the work order, thereby updating the dates on its corresponding operation and work order.

13. Optionally select the Status of the work order.

    The list of values includes all system and user-defined statuses. If you select a user-defined status, however, the validation and the work order behavior remain unchanged, because they are based on the system status that is associated with the user-defined status. If the work order is changed to a status that requires approval (See: Workflow for Work Orders, page 3-10), the Pending flag is selected until an action, such as approval or rejection, occurs. If the status change is approved, the new status remains, and the Pending checkbox is cleared. If rejected, the status of the work order is changed to *Canceled by Approver* and the Pending checkbox is also cleared.

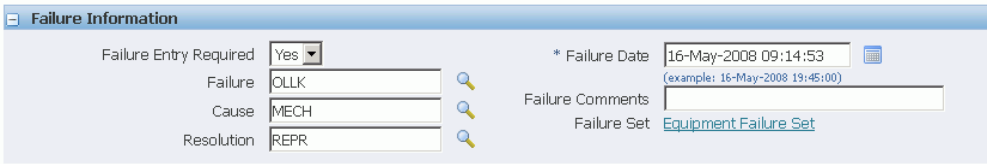
14. The Shutdown Type defaults from the current Asset Activity. This setting helps the planner group work orders that might require shutdowns, so that they are planned together.

15. Optionally select a Priority, for example, High, Medium, or Low.

16. Optionally enter information within the Additional Details region. The Warranty field values default from the current asset's definition, but you can update the Warranty Status and Warranty Active fields here.

    If you are creating a work order from a work request and if the work request has attachments, you can view the list of attachments by clicking the View link in the Request Attachments field.

17. Optionally open the Failure Information region to enter Failure Analysis information (See: Failure Analysis Overview, page 26-1).



    1. The Failure Entry Required setting indicates whether failure code entry is required during work order completion. This setting defaults from the value set when you assign the Asset Group to the Failure Set. However, you can update this setting as needed (See: Defining Failure Codes and Sets, page 26-2).

2. Valid codes that are available are dependent on the associated Failure Set and defined Failure Codes. A Failure Set defaults, if one is associated with the current Asset Group (See: Defining Failure Codes and Sets, page 26-2).

> **Note:** You cannot associate one failure occurrence with multiple work orders. For example, if you report failure data for the same asset on two different work orders, two failures are created, regardless of the failure date. When MTBF is calculated, the failure count would be two. Similarly, you can associate one combination of failure tracking codes (failure/cause/resolution) to a work order.

18. Optionally open the Operation Requirements region to prepare necessary operations. Operations (also known as tasks) are the instructions to perform maintenance activities.

> **Important:** Since operation 1 is reserved for system use, we recommend that you begin the operation sequence numbering at 2 or above, and use operations in multiples of 10.

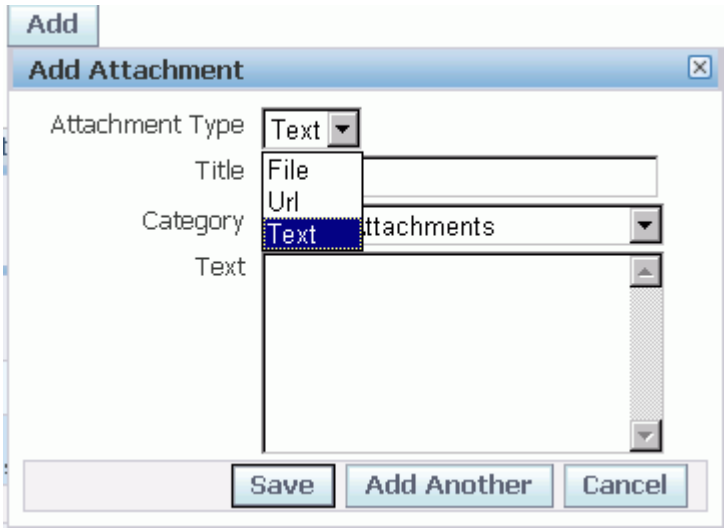
Each operation is assigned to a department (See: Defining Departments and Resources, page 2-17), associated with assigned resources (trades people, outside service providers, and equipment). When you create a work order for an Asset Number, you can attach the Asset Number's associated Activity (See: Associating Asset Numbers with Activities, page 2-96) to that work order, bringing its related maintenance route and BOM. The maintenance route is comprised of operations necessary to complete the Activity. You can view and update these operations from the work order. After creating the work order, you can view operations that default from the maintenance route (See: Defining Maintenance Routes, page 2-99) associated with the current Activity.

When you query for an existing work order, you can update and add to its operations. You can also assign and schedule specific employees or equipment to each operation. There are two sub-tabs within the Operations tab: Detail and Summary. The Summary sub-tab displays information at the Resource line level and assigned employees appear in the Hide/Show region. The Detail sub-tab displays the operation-resource-instance. You can remove the 'EAM_OP_SUMMARY' function from the menu to hide the Summary sub-tab, or remove the 'EAM_OP_DETAILS_TAB' function to hide Details sub-tab (See: Preparing Work Order Operations, page 3-30 and Updating Work Orders, page 20-69).

You can change the department or resources at the operation level if no transactions have been recorded for the work order.

Click or hover over the Add or View button to add or view attachments. You can attach file, URL, and text attachments. If you want to view the attachments, hover

or click the View button.



19. Optionally open the Material Requirements region to view or add items. After creating the work order, you can view the associated Asset Number's items list (See: Setting Up Maintenance Bills of Material, page 2-93 and Defining Material Requirements, page 3-37). You can add both stocked and non-stocked material from the Asset BOM to the material requirements for this work order.

20. **Adding Work Permits to Work Orders**

    Click the Work Permits region to create work permits or add existing work permits to this work order:

    - Select the **Create** check box to create a new work permit, and enter the following information (all fields are required except the Description field):
        - Work Permit name (or number)
        - Description (optional)
        - Permit status
        - Status (Draft is the default value, but you can change it)
        - Valid From Date
        - Valid To Date
        - Flexfields
    - Click the **Work Permits** field to search and add an existing work permit from the list of values.

21. Optionally click the **Save** button to save data entered, without applying it to the database.

22. Click the **Apply** button to create the work order.

Creating Express Work Orders:

If you need to capture work that has already been completed, use the Express Work Order feature. You can access this page through the Maintenance Super User responsibility:

- Home > Work Orders > Express Work
- Home > Work Orders >Work Orders > One Step Material Release

> **Note:** You cannot create an express work order that contains direct items.

1. Select an organization from the drop-down, and then click the **Go** button.
2. Select the Work Orders tab.
3. Click the Express Work hyperlink.

   The system defaults the following information on the page, but you can change the values:

   - Work Order Number - if your organization is automatically generating work order numbers
   - Start Date - the current system date and time
   - Status - Released. This is the default status for the work order
   - WIP Accounting Class
   - Completion Date - default value is the same as the Start Date

4. Optionally enter an asset number.

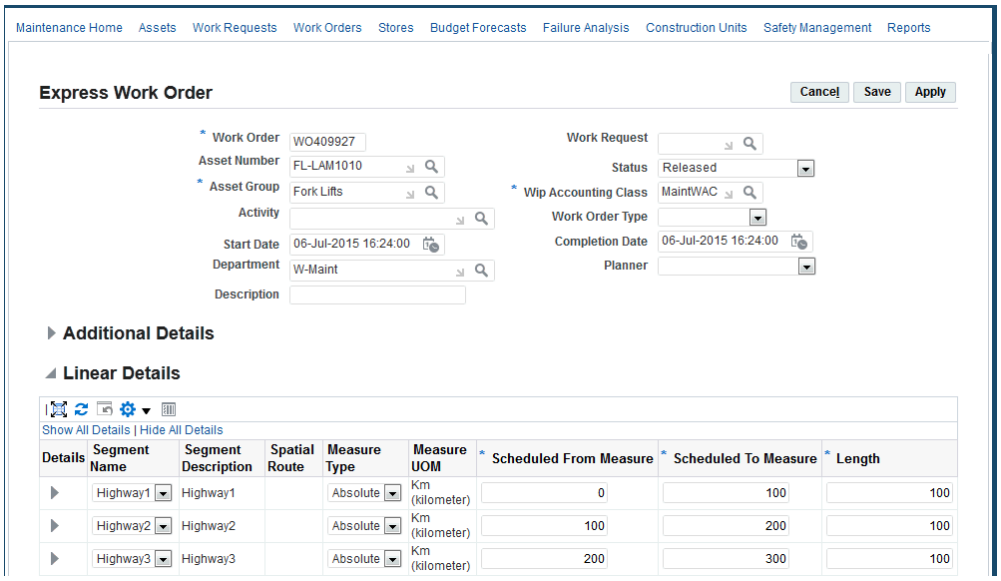
   When you select an asset number, the default value for the Department field appears.

5. Enter an asset group; this is a required field.
6. Optionally enter an asset activity for the work order.

   When you click the Save button, the asset activity and any material and resource

requirements are populated on the page.

7. Optionally enter a department number. If a department has been set up for the asset, the default department value appears.



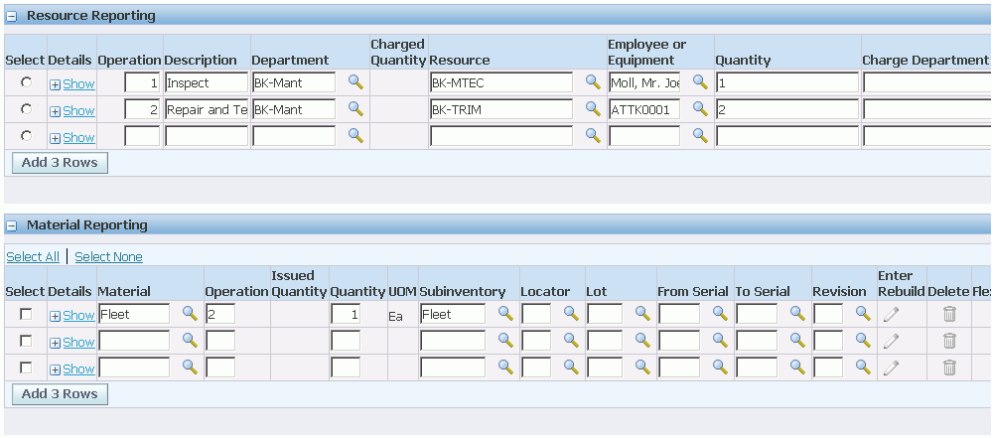
8. Optionally add details in the Additional Details group box.

9. Optionally add details the Resource Reporting group box such as resources, quantities used, departments to charge, and whether you want to complete any operations. If you want to complete the work order, select the Complete checkbox.

   You will enter the completion details using the Debrief Work Order page. This page is available after you save the work order.

10. Optionally add details in the Material Reporting group box.

    Note: Any direct items in the BOM for the activity will not display.



11. Optionally add details in the Failure Information group box.

12. Optionally add any quality plans.

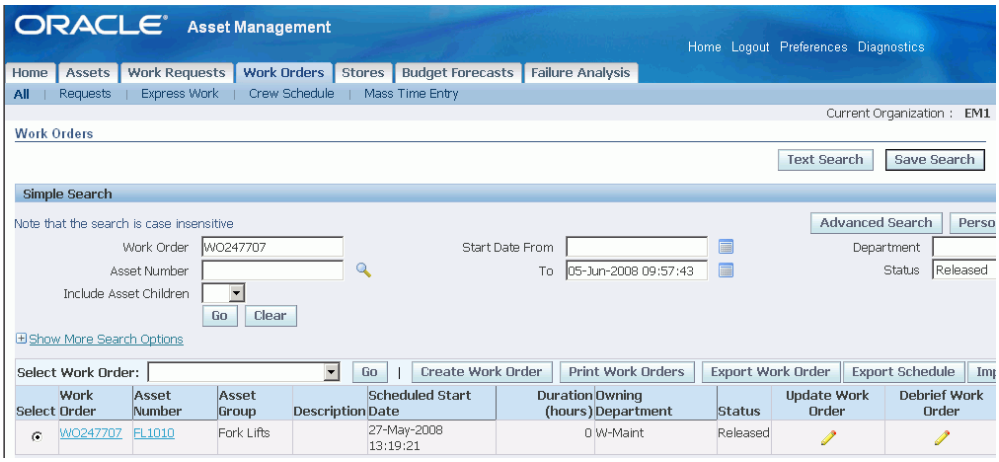
13. Click the **Save** button.

Adding Completion Details to Work Orders:

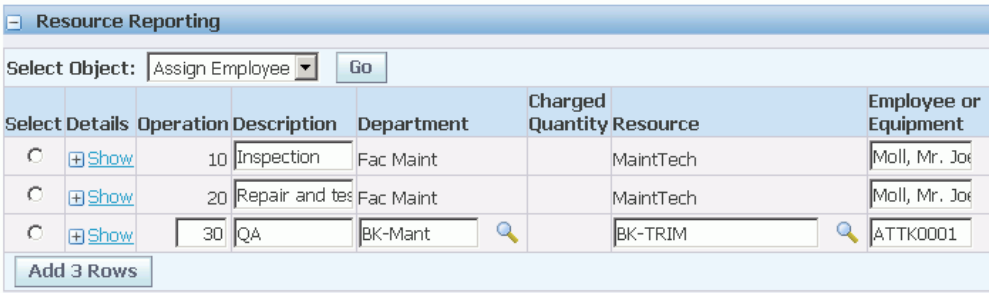
You can add completion details to existing work orders by clicking the Debrief Work Order icon from the Work Orders page.

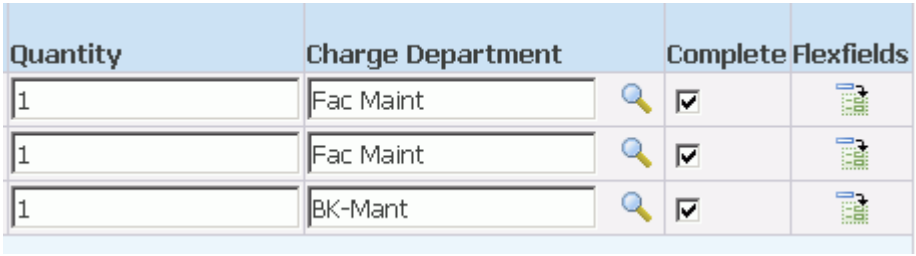
1. Navigate to the Work Orders page, and select an existing work order.

2. Click the Debrief Work Order icon for the work order to which you want to add completions information.



3. Expand the Resource Reporting section to add resource information.

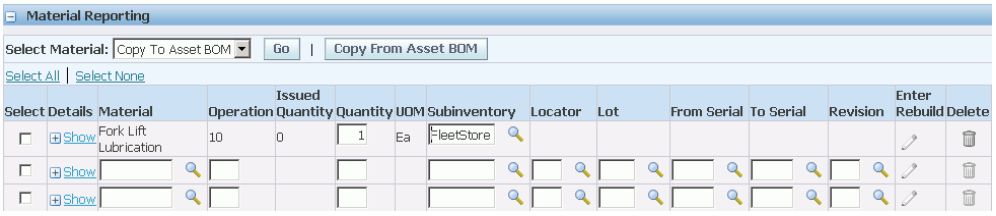




4. Expand the Material Reporting section to add material information.

   You can manually add material to the operations, add the material to an asset BOM, or copy the material associated with the asset BOM.

   > **Note:** If you are adding material information for an Express Work Order, bear in mind that the material was issued out of inventory when you created the work order, and you are simply reporting these actions. Therefore, no allocations are necessary.



5. When you are finished, click the **Save** button to save your changes.

6. Click the **Apply** button if all the information associated with the work order is complete.

Viewing Work Orders:

To view work orders, you can use either the Simple or Advanced Search modes. To view work orders for assets that were transferred to another organization, perform an Advanced Search within the originating organization. You can enter an Asset Group to

view all work orders for the transferred assets, in the current Asset Group, that were created in the originating organization. A Simple Search filters out the transferred assets, and does not include them in the search results. You can charge resources and material, and complete open work orders for transferred assets. You can execute a Simple Search on a transferred asset, within its destination organization, to view only work orders that were created in that destination organization.

If you perform an Advanced Search, you can search for work orders based on other criteria such as Asset Group, construction Estimate Number, Creation By, Created Date, Estimate Number, Estimation Status, and so on.

You can also save search criteria to personalize your search.

After executing the search, you can drill into a specific work order. The Work Order page contains content containers, providing information relating to the work order header, asset details, and work order details.

1. Navigate to the Work Orders tab. The All sub-tab is selected.

   Note: By default, you are using the Simple Search mode. To switch to the Advanced Search mode, choose Advanced Search. Choose Advanced Search to view work orders for assets that were transferred to another organization.

2. Optionally select an Asset Number to search for its related work orders.

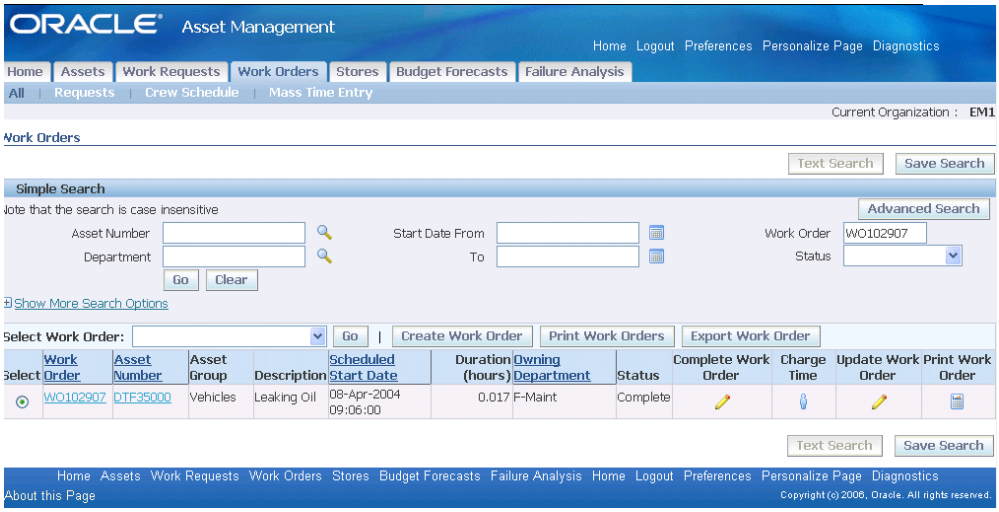
   You can execute a Simple Search on a transferred asset, within its destination organization, to view only work orders that were created in that destination organization.

3. Optionally select a specific work order.

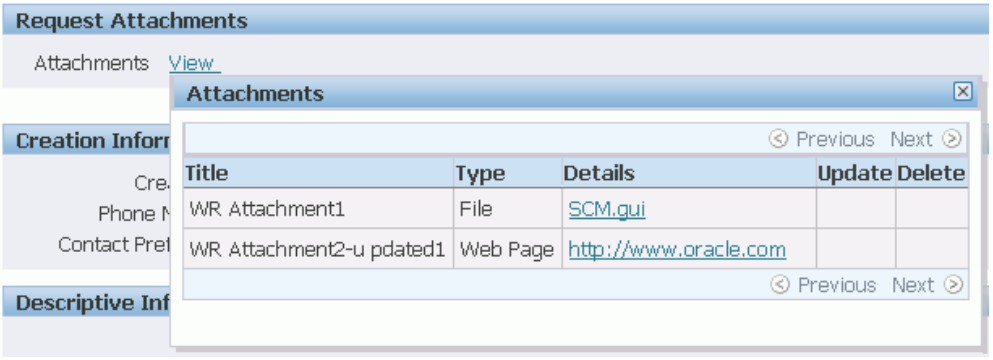
4. Optionally select Start Date From and To values to display work orders that fall within the specified date range.

5. Choose Go to display all work orders associated with the current search criteria.

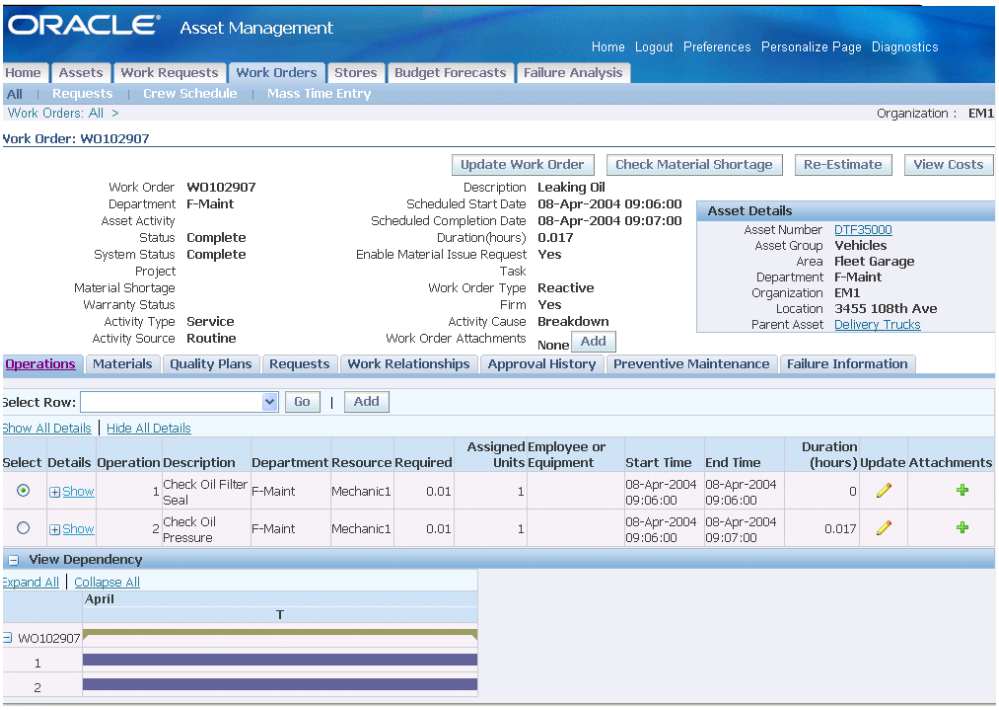
Work Orders



6. Optionally select a work order number to view its details such as attachments. Click or hover over the View button to view the attachments.



Work Order



7. Optionally choose Check Material Shortage.

   The Material Shortage field updates to display whether there is a shortage of the material (at that moment in time) that is needed to complete the work order operations. This status helps you to determine when to start work. For example, if there is a material shortage, you typically would not start work. The process that populates this field considers both stocked and direct items. For stocked items, the Work Order Material Shortage process determines whether all of the inventoried material within the associated BOM is available to transact (ATP is not considered). For direct items, the Work Order Material Shortage process determines if all of the direct items that are included within the associated BOM are received into inventory. You should set this process to automatically execute periodically by scheduling the Check Material Shortage concurrent process, but you can execute it from the menu at any time.

8. The Operations sub-tab defaults as selected.

   This sub-tab enables you to view Operations on the current work order, and the operations' dependencies in the View Dependency region. Operations are scheduled to run in parallel, sequence, or through dependent steps.

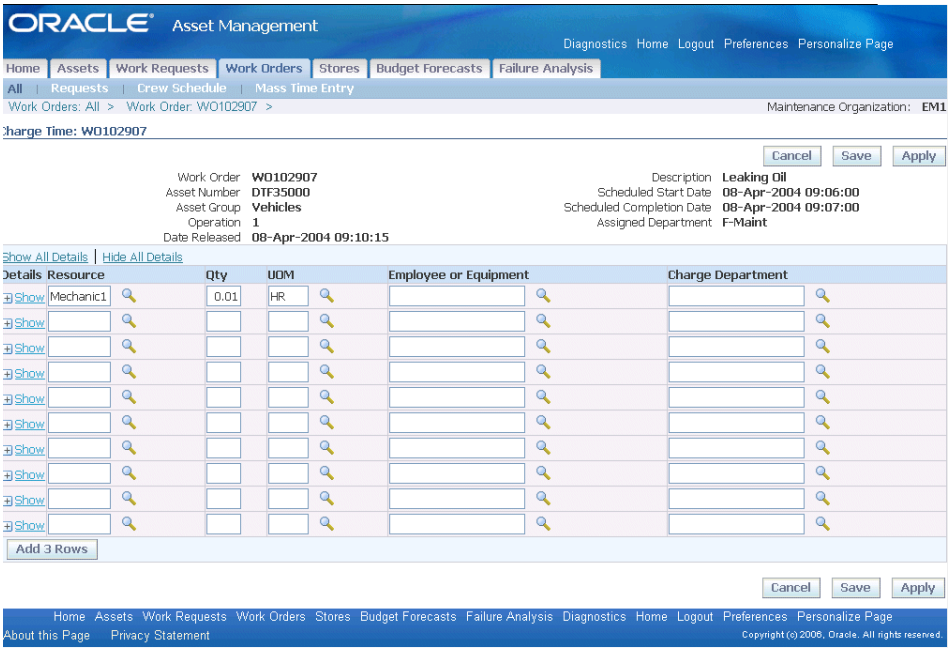
   1. It is important in asset management to capture both estimated and actual time spent on each operation of a work order. When resources are identified on a work order, there is a time estimate of how long it takes to perform the work. In

many cases, the extent of the work load is unknown until the work starts. Resource charging enables you to post actual usage time for employees, equipment, and miscellaneous materials for specific operations on a work order.

To charge resources, select an Operation, and then select Charge Time from the *Select Row:* list of values.

2. Choose Go.

Charge Resource



- Select a Resource Sequence. The Resource, Unit of Measure, and Quantity (reflects the number charged, normally in hours) default, based on the selected resource sequence and the resources associated with the work order. For information on Resource Sequence, Resource, and Unit of Measure, See: Defining Resource Requirements, page 3-46

  You can change the resource at the operation level if no transactions have been recorded for the work order.

- Optionally select the Work Performed Date to indicate the actual date the work was performed.

- Optionally select the Employee that performed the work.

- Optionally select the Equipment used to perform the work.

- Optionally select the Charge Department to identify which department is charged for the employee or equipment usage.

  You can display the list of values if the Employee name or Equipment serial number fields are populated. The list of values displays all departments to which the person or equipment is assigned. If you enter a Charge Department manually, the system validates that the department matches the current operation's assigned department. If it does not, you will receive an error.

- Optionally select a Reason code to indicate the reason the resource is used.

- Optionally enter a Reference.

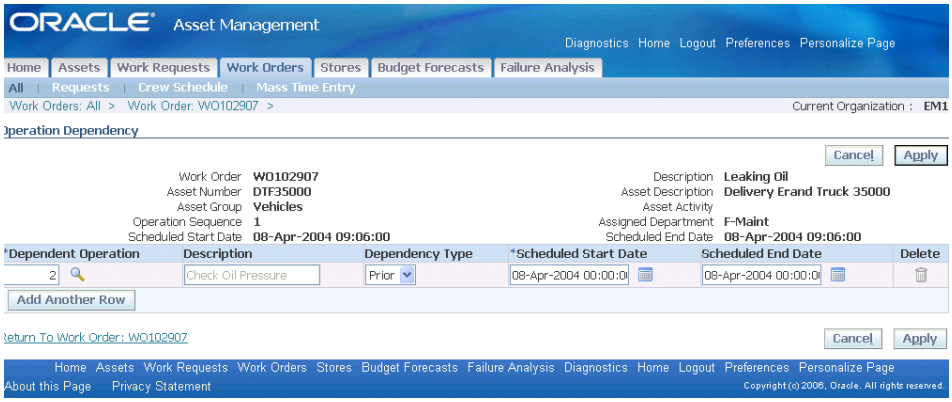
- Choose Apply to save your work and return to the Work Order page.

3. Operations are scheduled to run in parallel, sequence, or through dependent steps. For example, Operation 20 is dependent on Operation 10; Operation 20 cannot be performed until Operation 10 is complete. Operations 30 and 40 run in parallel to each other. Operation 40 is independent; it can be performed at any time.

   To add an operation dependency, select an Operation, and then select Add Dependency from the *Select Row:* list of values. After the dependency is added, you can view the dependency within

4. Choose Go.

Operation Dependency



- Select the Dependent Operation.

- Select the Dependency Type.

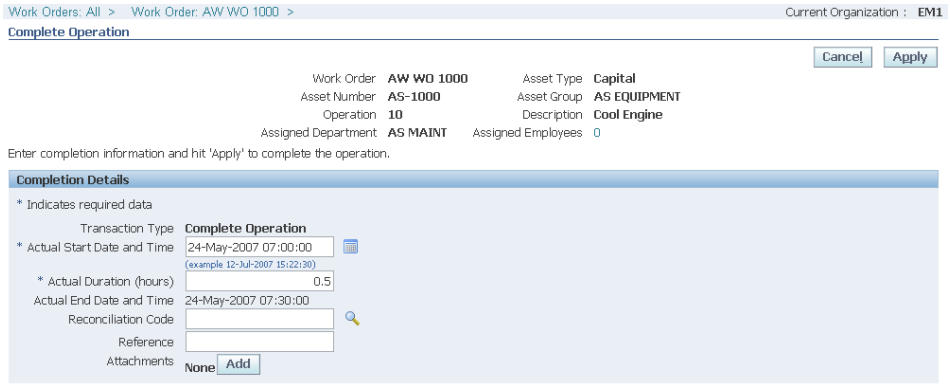
- Optionally delete existing dependencies by selecting the Delete icon.
- Choose Apply to create the dependency or Cancel to return to the Work Order page.

5. You can Complete and Uncomplete operations. After an operation is complete, you can perform an Operation Uncompletion. If an operation is dependent upon another operation, you cannot uncomplete that operation's dependency if the current operation is complete. For example, operation 20 is dependent on operation 10 completing. You cannot uncomplete operation 10 after operation 20 is complete.

   To Complete or Uncomplete an operation, select an Operation, and then select Complete/Uncomplete from the *Select Row:* list of values.

6. Choose Go.

Complete Operation



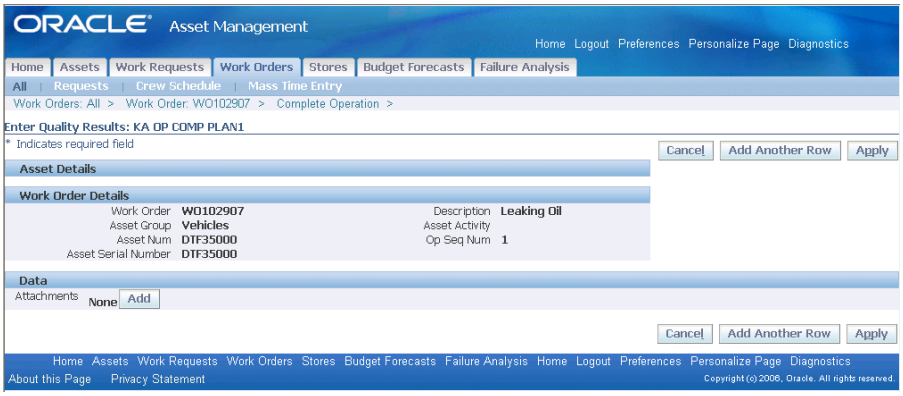
- The Actual Start Date and Time defaults; you can optionally update it.
- Optionally enter a Reconciliation Code to describe why you are completing this operation. For example, Operation Completed or Operation Partially Completed.
- Actual Duration identifies the total elapsed time of the work order. It is automatically calculated as the difference between the operation's Scheduled Start and End Dates.
- Optionally select a Reconciliation Code to describe why you are completing or uncompleting this operation.
- Optionally enter a Reference.

- Optionally choose Add to attach any necessary files, URLs, or text to the current operation. Each operation can have an unlimited number of attachments.

- The Quality Plans region displays collection plans that are associated with the current asset number. When a collection plan is created, it is specified whether the collection plan requires completion. Triggers might have been specified to make specific assets eligible for the collection plan. See: Quality Integration Setup, page 2-157. If results entry is required for the collection plan, you are prompted to enter Quality results upon completing the Operation.

  Optionally select the Enter Quality Results icon. Required Data fields depend on the Collection Plan's collection element specifications. See: Quality Integration Setup, page 2-157.

Enter Quality Results



- Optionally choose Add to attach any necessary files, URLs, or text to the current Quality results. Each results entry can have an unlimited number of attachments. Choose Apply.

- Choose Apply to save the results entry or Cancel to return to the Complete Operation page.

- Optionally select the View Quality Results icon to view or update existing Quality results already entered. Select Return to Complete Operation.

- Choose Apply to complete the operation or Cancel to return to the Work Order page.

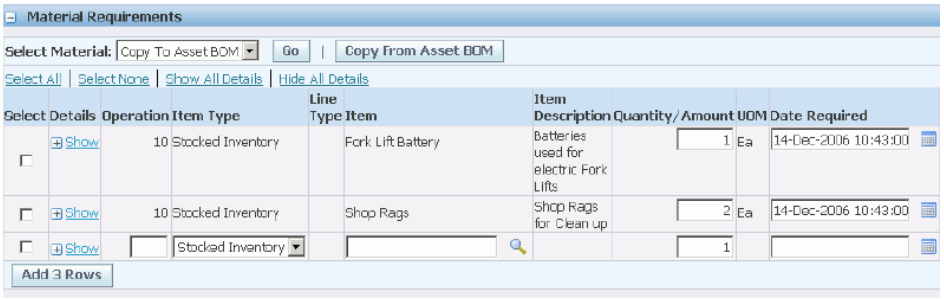
- Optionally update the operations for the current work order. These operations default from the maintenance route (See: Defining Maintenance Routes, page 2-99) associated with the current Activity, but you can update

and add to them (See: Preparing Work Order Operations, page 3-30).

9. Optionally select the Materials sub-tab to view or add items from the associated Asset Number's items list. When you enter a work order for an Asset Number, the Asset Number's associated Activity attaches the required material (See: Setting Up Maintenance Bills of Material, page 2-93) and resources to complete its operations. The Inventory and Direct Item requirements appear. For Direct Items, the requirement entered in the work order, as well as the items directly procured in Purchasing that have not been received yet, are included in the display. You can update, add, view, and delete material requirements for a specific work order.

    1. You can optionally request new inventory items.

Request New Inventory Items

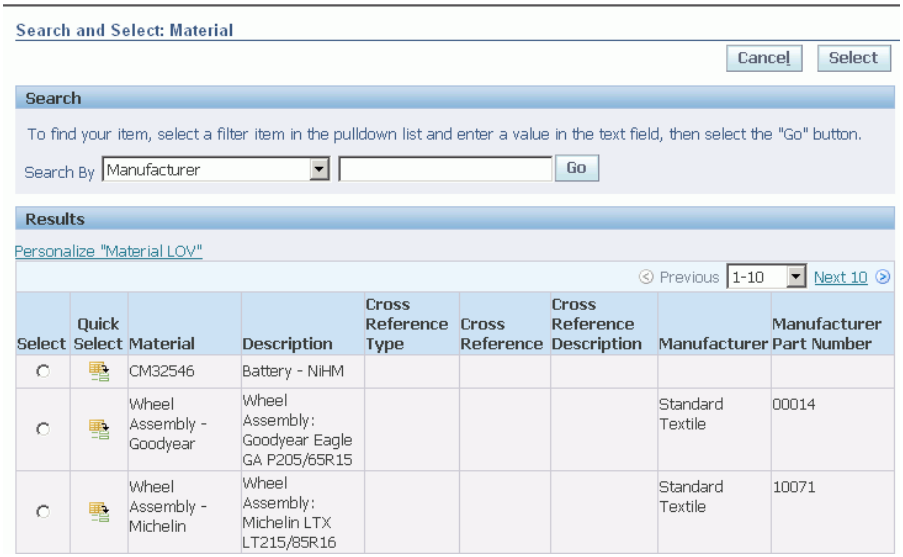


- Enter an operation.
- Select an Item to search for and add a new inventory item.

  You can search for new inventory items by using one of these options:

  - Item
  - Description
  - Cross Reference
  - Cross Reference Description
  - Manufacturer
  - Manufacturer Part Number

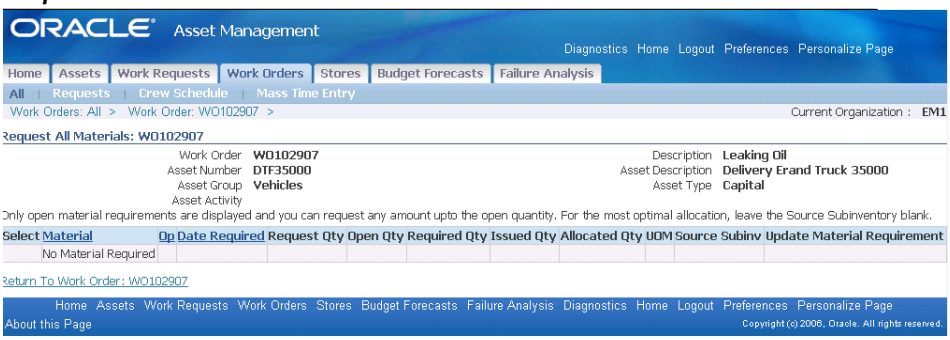
  1. Query for the item to be added to the work order.
  2. Click the **Select** radiobutton for the inventory item to be added.



- Enter a required Quantity.
- Select a Date Required. The system date and time defaults.
- Optionally select a Supply type. You can optionally select a subinventory location and source locator for the material.
- Optionally select whether an Auto Request Material value. If you select Yes, requisitions and purchase orders are created automatically for the current inventory item when the work order is released.
- Optionally enter a Comment.
- Select whether to include this Inventory Item in the MRP Net.
- Click the **Apply** button to add the inventory item to the material requirements.

2. Optionally choose Request All to deliver all required material from stores to the work order. A material issue request is generated (move order in Inventory) to request the material associated with a work order. This process is automated upon the work order release, by selecting a checkbox in the Enterprise Asset Management Parameters (See: Defining eAM Parameters, page 2-11).

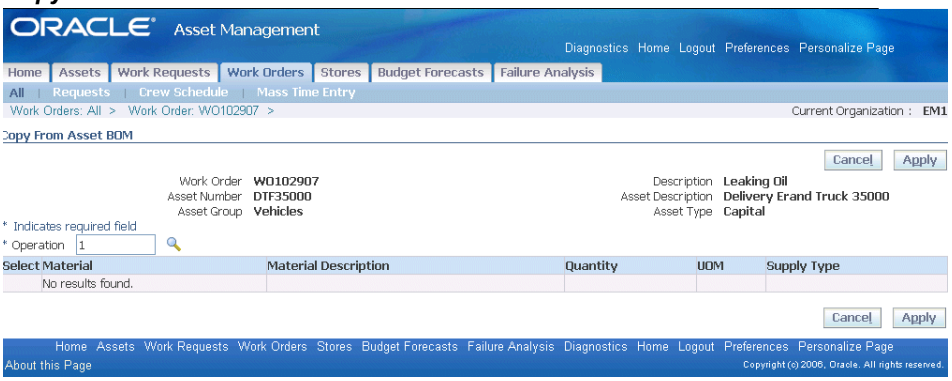
Request All Materials



- Choose Request to allocate the material requirements to the work order.

3. Optionally choose Copy From Asset BOM to update the BOM associated with the Asset Group with any items list changes (See: Setting Up Asset Bills of Material, page 2-77

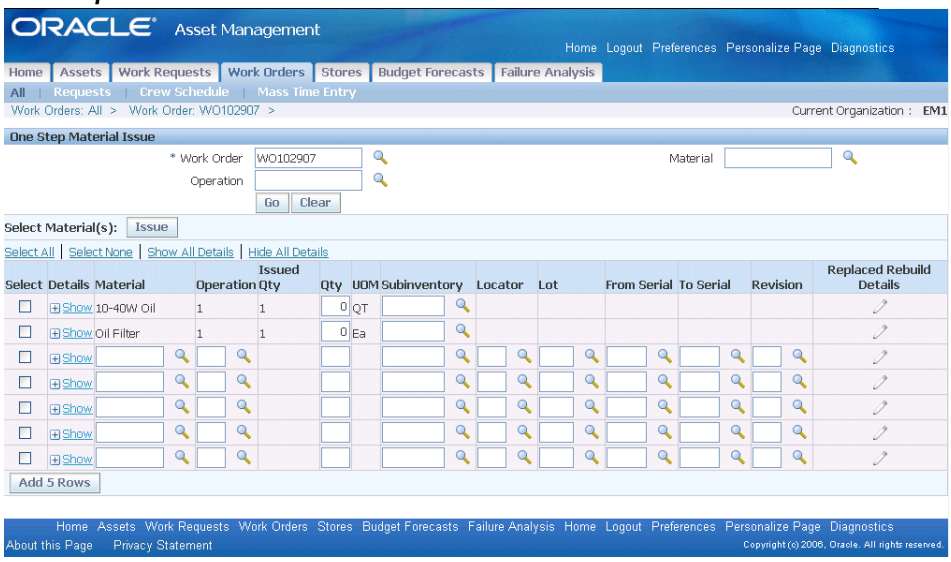
Copy From Asset BOM



- Select the necessary Material, and then choose Apply.

4. Optionally choose One Step Issue. A one-step issue is a substitute for the Material Issue Request and Material Issue Verification activities; a separate request is not created.

One Step Issue



- Select the work order that you wish to issue material. It must be enabled for material issue requests. The current work order defaults. See: Routine Work Orders, page 3-3.

- Optionally select the specific Operation to view results on existing One Step Material Issues that were issued to that operation. Operations existing within the selected work order are available.

- Optionally select a specific Material if your query is to view existing One Step Material Issues.

- Choose Go. All planned material appears in the Select Material(s) region. Planned material is material that exists in the material requirements. See: Defining Inventory Material Requirements, page 3-37.

- Within the Select Material(s) region, optionally select unplanned Material (material not part of the material requirements) to issue to the current work order.

- Select an Operation to issue the material. The UOM defaults to the current Material's UOM.

- Select the Quantity of the material that you are issuing to the work order.

- Optionally select a Subinventory to pull the material from in Inventory.

- If you previously selected a Subinventory requiring a Locator, select a

Locator.

- If the current material is lot controlled, select a Lot.
- If the current material is serial controlled, select From and To Serial numbers.
- Optionally select a Revision.
- If the material is Rebuildable Inventory, optionally choose the Replaced Rebuild Details icon to specify the replacement Rebuildable Item information for the current Rebuildable Item. After selected, you can indicate the following within the Replaced Rebuild Details page:

  Rebuild Item- defaults as the current Rebuild Item; you can update it.

  Rebuild Serial Number - optionally enter if you know what serial number is coming out (for serialized rebuilds).

  Rebuild Activity - the activity you want to associate with the created rebuild work order

  Rebuild Work Order - the name of the work order created for the replaced Rebuildable Item

  - If you specify a replaced rebuildable item, a work order generates for the replaced rebuildable item because it is most likely problematic and you can have it repaired. If a serial number is provided for the replaced Rebuildable Item, it is removed from the asset's hierarchy and the configuration history is updated. If nothing is specified within the Replaced Rebuild Details page, the replaced rebuild defaults as the same rebuild item that you are issuing. A work order is created for the replaced rebuild item.

- Optionally, select the Details Show-Hide toggle icon.

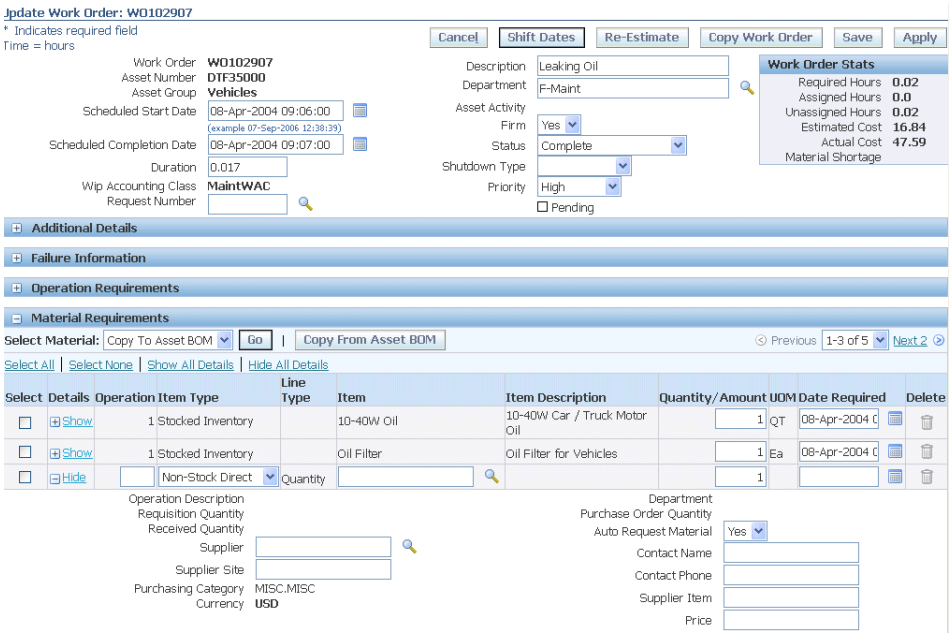
  Optionally select a Reason for the current issue. Select the Date required for the material to the work order. Today's date and time defaults. Optionally enter a Reference.

- Select the Select checkbox next to the lines you are issuing to the current work order.
- Choose Issue.

5. You can optionally choose Request Item, within the Direct Items region, to add Direct Items to the material requirements. Non-stock direct items can be included in the internal catalog, but the decision is made to not maintain an inventory balance. These items are not transactable, not stockable, but you can procure them. Direct items are either non-stock or description-based. Non-Stock

Direct Items can represent items that are not stocked in inventory, or services that need to be purchased from a supplier. Non-Stock Direct Items are not stocked in inventory but are defined in the Item Master as an inventory item, purchaseable, and purchase but not stockable (See: Inventory Attribute Group, *Oracle Inventory User's Guide*). Direct Items are contrived as "one-off", bought directly from a vendor for a specific work order and Operation. They are delivered directly to the Shop Floor from maintenance work order execution. See: Defining Direct Item Material Requirements, page 3-37. You can add Planned Direct Items to a work order BOM or an activity BOM. Planned Direct Items must first be created in the Item Master as Non-Stockable and Purchasable inventory items (See: Non-Stock Direct Item Setup, page 2-116). A purchase requisition is optionally automatically created for these items, when the work order is released.Inventory Attribute Group, *Oracle Inventory User's Guide*

Request New Direct Items



- Select an Operation.
- Select an Item Type.

  *Description Direct:*This direct item type is not stored in Oracle Inventory.

  *Non-Stock Direct:*This direct item type is stored in Oracle Inventory. Its Master Item record's Stockable checkbox is cleared.

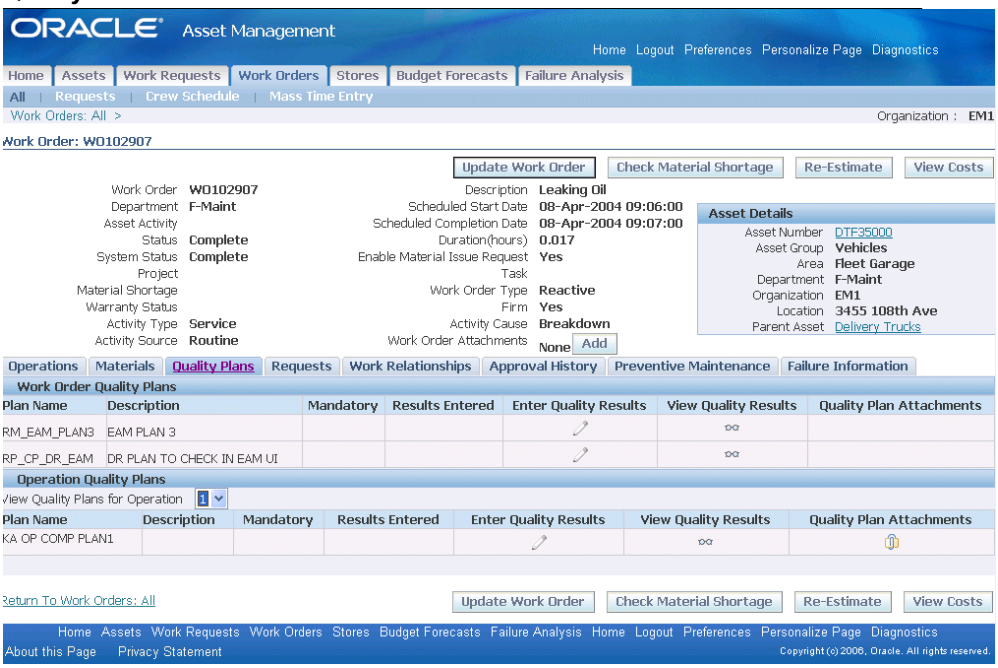
- If you selected a Non-Stock Direct item type, select an Item. This field is disabled if a Description Direct item type was previously selected.

- Enter a Description, if you previously selected a Description Direct item Type.
- Enter a Date Required. The system date defaults.
- Optionally enter a Purchasing Category. See: Setting Up Purchase Order Category Associations for Direct Items, page 2-181.
- Choose Apply.

6. Optionally select Check ATP from the *Select Material(s):* list of values to check available to promise information for all selected Material.
   - Choose Go.
7. Optionally select Copy To Asset BOM from the *Select Material(s):* list of values, to copy any selected Material to the current Asset Number's Asset BOM.
   - Choose Go. Both stocked and non-stocked inventory items are copied.
8. Optionally select the Update icon to update the current material requirement information.
9. Optionally select the Request More icon to request more of the current material requirement to the work order.
10. Optionally choose Delete to delete the current material requirement.

10. Optionally choose the Quality Plans sub-tab to view the current work order and operation-specific Quality collection plans. Collection plans appear that are associated with the current asset number. When a collection plan is created, it is specified whether the collection plan requires completion. Triggers might have been specified to make specific assets eligible for the collection plan. See: Quality Integration Setup, page 2-157.

Quality Plans



1. Optionally select the Enter Quality Results icon. Required Data fields depend on the Collection Plan's collection element specifications. See: Quality Integration Setup, page 2-157.

    - Optionally choose Add to attach any necessary files, URLs, or text to the current Quality results. Each results entry can have an unlimited number of attachments. Choose Apply.

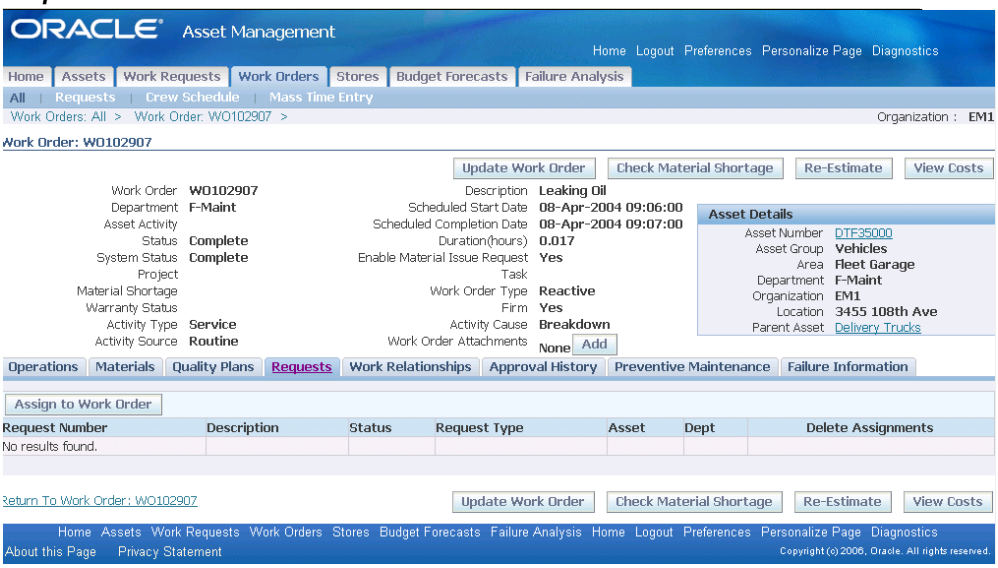
    - Choose Apply to save the results entry.

2. Optionally select the View Quality Results icon to view or update existing Quality results already entered. Select Return to Complete Operation.

3. Choose Update Work Order to update the current work order.

11. Optionally select the Requests sub-tab to view any Service and/or Work Requests associated with the current work order.

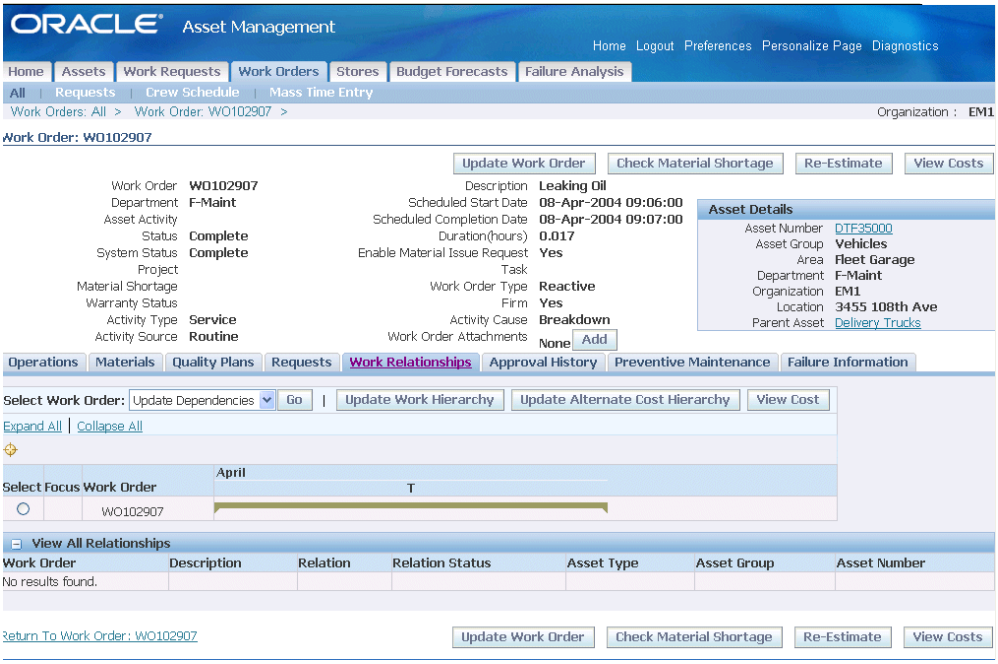
Requests



- Choose Assign to Work Order to associate the selected requests to the current work order.

12. Optionally select the Work Relationships sub-tab to manage work order schedules and view work order details. Work order relationships enable you to manage a network of related work orders, enabling you to manage complex projects, such as planned or facility shutdowns. The different relationships provide separate scheduling rules that are used to manage large projects. A Gantt chart enables you to manage work by displaying work order schedules and a summary of work order details. The Gantt Chart's drag and drop functionality enables you to manage schedules with ease. See: Work Order Relationships, page 3-51.

Work Relationships



1. Optionally choose Update Work Hierarchy to view and or update the Scheduling Relationship.

    - Select Create Child Work Order from the *Select Work Order:* list of values to create a Parent Child Relationship. See: Work Order Relationships, page 3-51.

    - Select Add Existing Work Orders from the *Select Work Order:* list of values to add Scheduling children to the current work order.

    - Choose Apply.

    - Optionally choose Shift Dates to shift the scheduling dates.

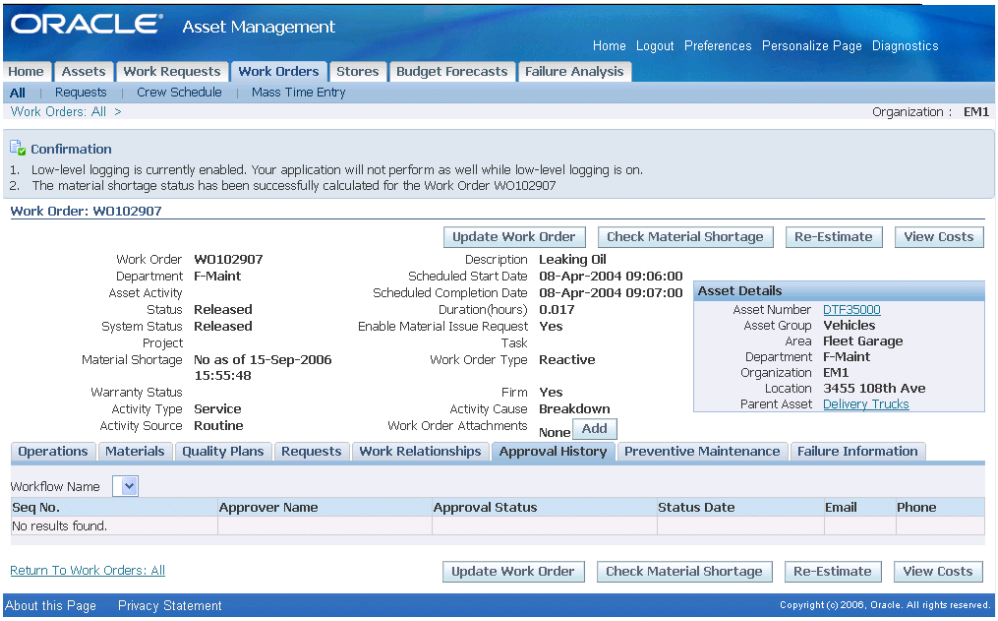
    - Optionally choose Remove to remove the selected work order from the hierarchy.

2. Optionally choose Update Alternate Cost Hierarchy to view and or update the Cost Relationship. See: Work Order Relationships, page 3-51. You can optionally create child work orders, add existing work orders, and view cost information for the current Cost Relationship.

3. Optionally choose View Costs to view the current cost information.

13. Optionally select the Approval History tab to view the work order approval history.

Approval History



A work order might require approvals or notifications at different stages of its lifecycle. For example, organizations typically want an approval process in place before a work order is released. Workflow automates this process. You can initiate Workflow to generate notifications, approvals, transactions, and update a work order status. You can enable Workflow for Work Orders within the eAM Parameters (See: Defining eAM Parameters, page 2-11). You can set up Business Events and Event Subscriptions (or use seeded events and subscriptions) within Oracle Workflow to indicate what events trigger Workflow. Seeded events that you can enable to trigger Workflow are: work order creation, work order release approval, work order completion, work order status change, operation completion. See: Setting Up Oracle Workflow, *Oracle Workflow User's Guide*, Setting Up the Business Event System, *Oracle Workflow User's Guide*, Planning Your Organization's Approval Process, *Oracle Approval Management User's Guide*, and Defining Work Order Statuses, page 3-23).

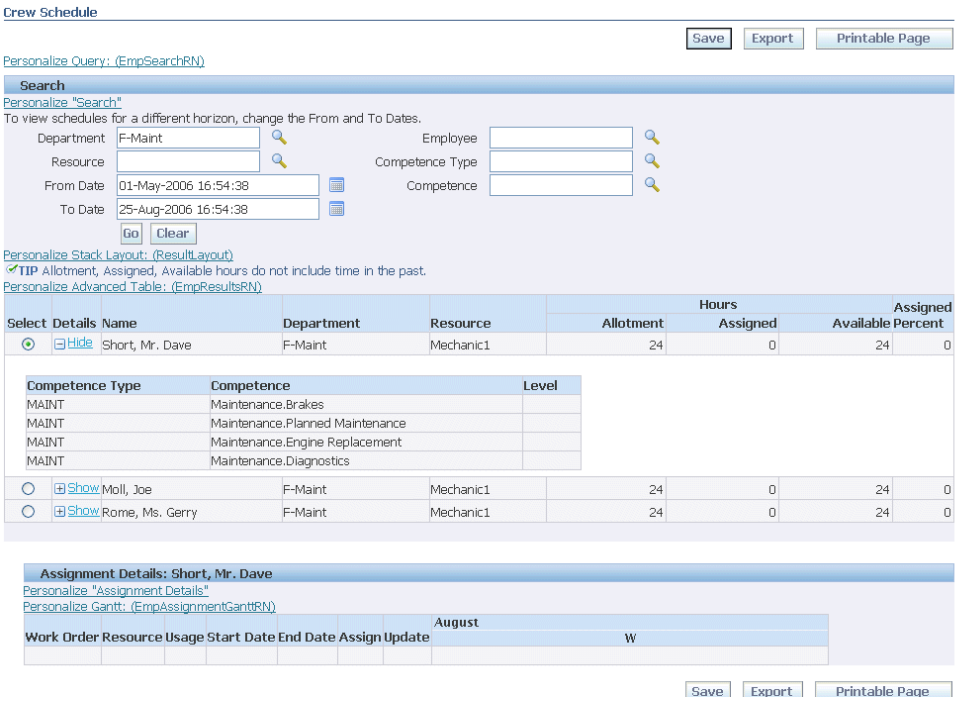
14. Optionally select the Preventive Maintenance tab to view Preventive Maintenance information. Enterprise Asset Management enables you to generate work orders automatically based on meter readings, runtime intervals, and calendar days. Preventive maintenance Activities reduce the probability of failure or degradation of the assets' physical conditions. These Activities are executed periodically, by usage, or based on the condition of an Asset Number (asset or rebuildable serial number). Meters are entered to measure any Asset Number that needs to be measured and periodically serviced, based on the measurement (See: Preventive Maintenance Overview, page 4-1).

15. Optionally select the Failure Information tab to view Failure Analysis information for this work order (See: Failure Analysis Overview, page 26-1).

Viewing Crew Schedules:

You can perform a comprehensive view of employee schedules by department or resource. Planners can determine their crews' workload details. Planners may also modify and change their employees' workloads.

1. Navigate to the Crew Schedule page (Work Orders tab > Crew Schedule sub-tab).



2. Using the fields in the Search region, you can select the list of employees in which to view or update work loads. You can specify a date range for which employee workload details appear.

3. Choose Go to display a list of employees, based on the results of the entered search criteria.

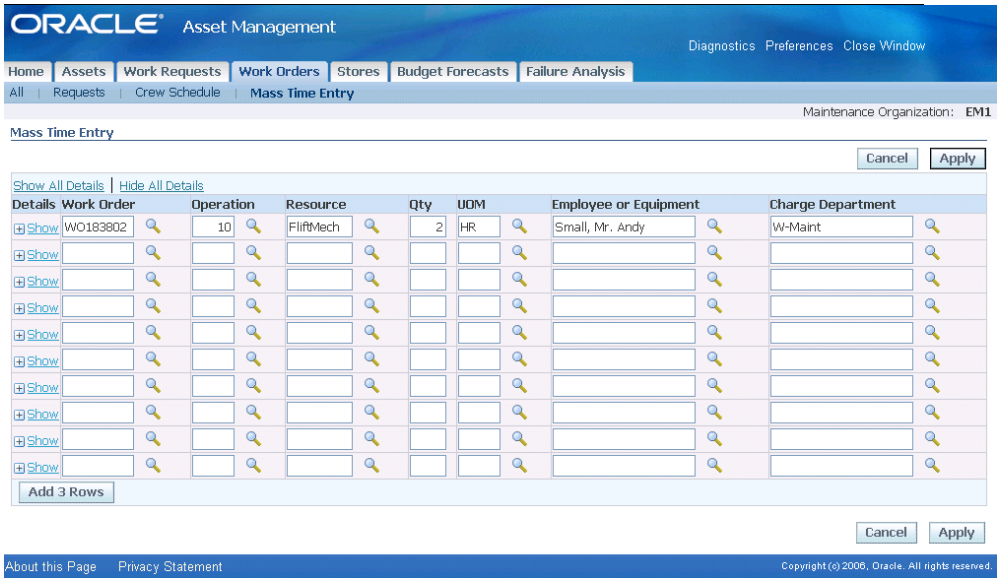
Entering Time for Multiple Work Orders:

Resource transactions define the time an assembly spends at an operation and the cost you incur for an operation. There are two types of resources: person and machine. You can transact both person and machine resources. A resource is an employee, piece of equipment, or contractor service, used to perform an operation. You can charge resources to a specific work order

You can enter time for one or multiple orders at once, using the Mass Time Entry page.

See Also: Resource Transactions, *Oracle Work in Process User's Guide*.

1. Navigate to the Mass Time Entry page (Maintenance Super User: Work Orders tab > Mass Time Entry sub-tab).



2. Select a valid work order.

3. Enter the Operation sequence of the current work order routing to charge (See: Preparing Work Order Operations, page 3-30).

4. Enter the Resource sequence to charge (See: Defining Resource Requirements, page 3-46).

5. Enter the Quantity to charge.

6. Select a UOM to measure the quantity charged. This defaults from the current resource's department setup (See: Defining Departments and Resources, page 2-17).

7. Select an Employee or Equipment resource to charge.

8. Select a Charge Department.

9. Optionally, in the Hide region, enter Resource Sequence, Reason, Reference, and Work Performed Date information.

10. Choose Apply to save your work.

Completing Work Orders:

Enterprise Asset Management work orders are created against assets. They are defined

manually, or generated automatically based on a scheduled Activity. If you attach a manually created work order to an activity (normally the role of a Planner), the work order inherits the Activity's attributes, such as the Asset BOM, Asset Route (operations), attachments, quality plans, cost information, and scheduling rules.

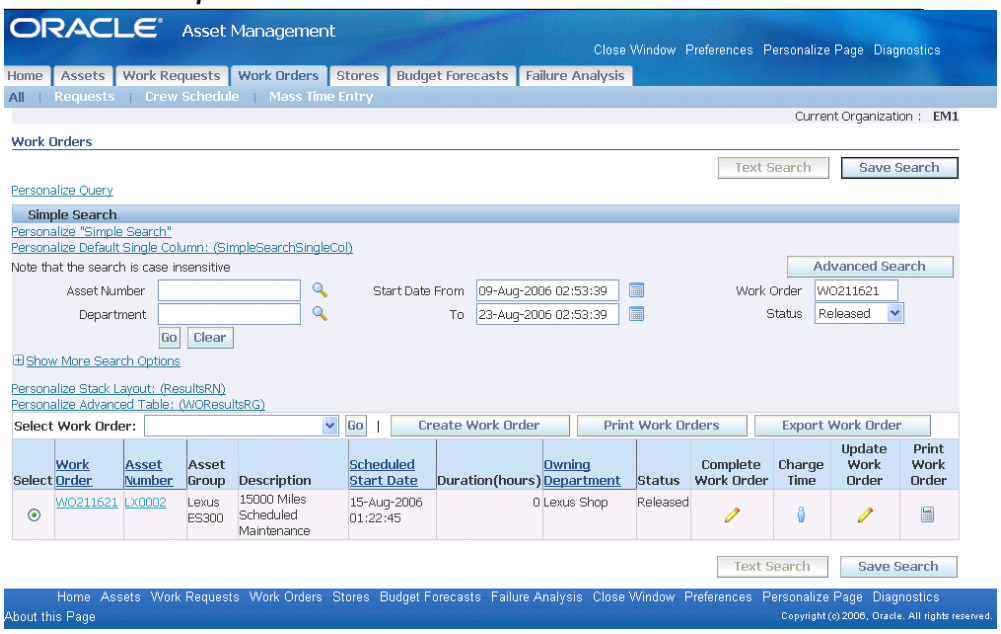
The operations within a work order do not need to be complete to complete a work order. However, the date you complete a work order must be greater than (later) or equal to the end date of the operation that has the latest end date. Likewise, the date you start a work order must be earlier than or equal to the start date of the operation with the earliest start date. You can uncomplete a work order after it is completed to transition it to a Released status (See: eAM Work Order Statuses, page 3-23).

Planners or Crew Supervisors can complete or uncomplete work orders, using the Maintenance Workbench (See: Using the Maintenance Workbench, page 3-71), or from the Work Plan tab in Maintenance User. After completing a work order, the completion transaction record is created with your electronic signature (User Name). A record is created with this signature, during completion, for any mandatory collection plan results or mandatory meter readings, as well.

> **Note:** You can complete associated work permits at the same time that you complete work orders. However, the associated work permit must have a status of Released or a user-defined equivalent.

1. Navigate to the Work Orders page.

Work Order Completion



2. Enter a work order number.

3. Choose Go.

4. Choose the Complete Work order pencil icon.

5. Enter a duration value: Actual Duration or Actual Start Date and Time. The Actual Start Date and Time defaults as the system date, but you can optionally update it. The value that you do not enter is automatically calculated.

   Actual Duration identifies the total elapsed time of the work order. It is automatically calculated as the difference between the Scheduled Start Date and Scheduled End Date.

6. Optionally enter a Reconciliation Code. This is a simple description of why you are completing this work order, for example, Work Order Completed or Work Order Partially Completed.

7. Oracle Quality collection plans associated with the current asset number and those requiring completion appear in the Quality Plans region. When the collection plan was created, it was specified if the collection plan required completion. Also, during the Enterprise Asset Management collection plan creation process, triggers might have been specified to make only certain assets eligible for the collection plan. See: Quality Setup, page 2-157.

   Required fields are dependent on the Collection Plan's collection element

specifications. See: Quality Setup, page 2-157.

8. Open the Meters region to enter readings for meters associated with this Asset Number. Readings for meters defined as mandatory must be entered. You can optionally enter non-mandatory readings.

   At work order completion, meter readings are mandatory for work orders generated by the Preventive Maintenance scheduling engine. After a work order is completed, meter readings are required for all runtime interval meters associated with the Asset Number in the Preventive Maintenance scheduling definition. See: Preventive Maintenance Scheduling, page 2-134. If there is a meter associated with this Asset Number, you are prompted to enter a Current Reading or a Reading Change. If you enter a Current Reading, the Reading Change defaults. If you enter a Reading Change, the Current Reading defaults. See: Entering Meter Readings, page 4-3.

   - Enter Reset Reading value to indicate that you would like to Reset the Current Reading.

9. Open the Failure Information region to enter Failure Analysis information (See: Failure Analysis Overview, page 26-1). The Failure Information region appears if the *Failure Code Required* value is set to *Yes*, within the Failure Set definition (See: Defining Failure Codes and Sets, page 26-2).

   Failure information entry is mandatory during work order completion if the Failure Entry Required checkbox was selected when this work order was created. However, if the Failure Entry Required checkbox is was clear, you can still enter failure information at work order completion (See: Creating Work Orders, page 20-36).

10. Choose Apply to complete the work order.

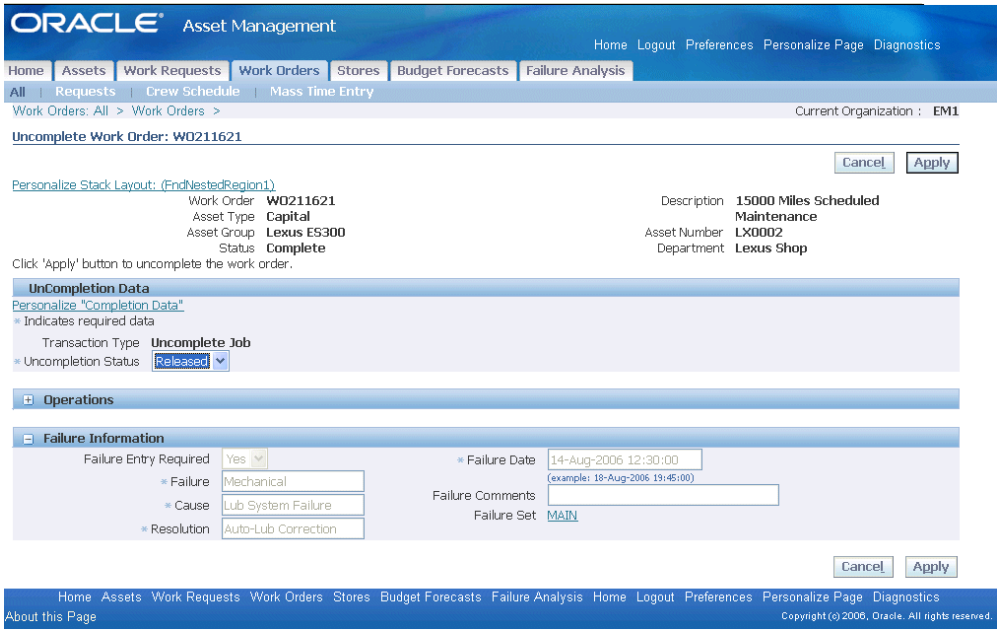
Uncompleting Work Orders:

1. Navigate to the Work Orders page.

2. Enter a work order number (with a Complete status).

3. Click the **Go** button.

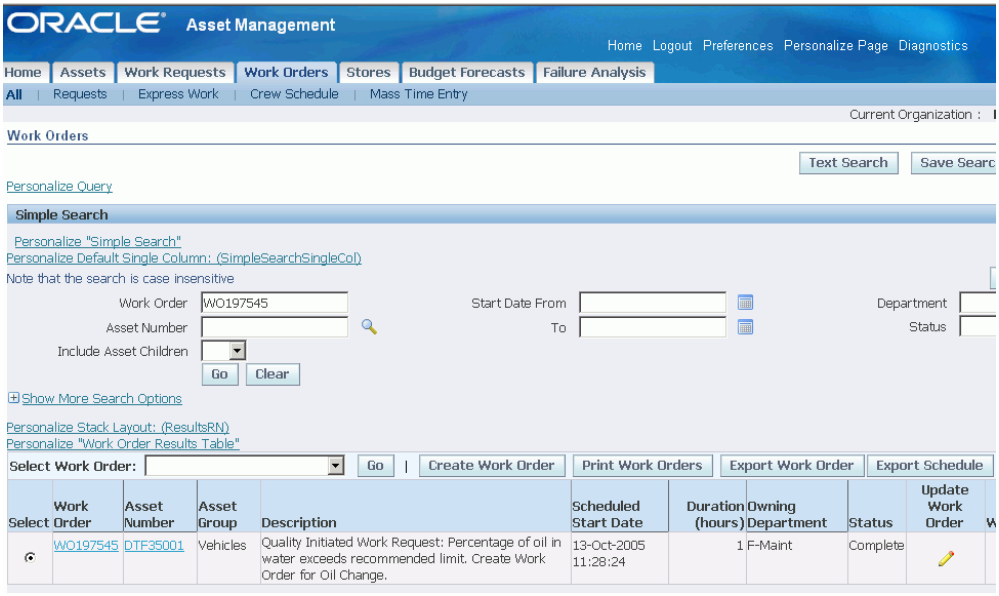
4. Choose the Uncomplete Work Order pencil icon.



5. Choose Apply to uncomplete this work order. When you uncomplete a work order, entered failure information is not reversed. However, when you re-complete the work order, you can update your failure information.

Updating Work Orders:

1. Navigate to the Work Orders page.
2. Enter a work order number.
    1. Optionally, indicate whether you want to include the child assets associated with the work order.
3. Click the **Go** button.



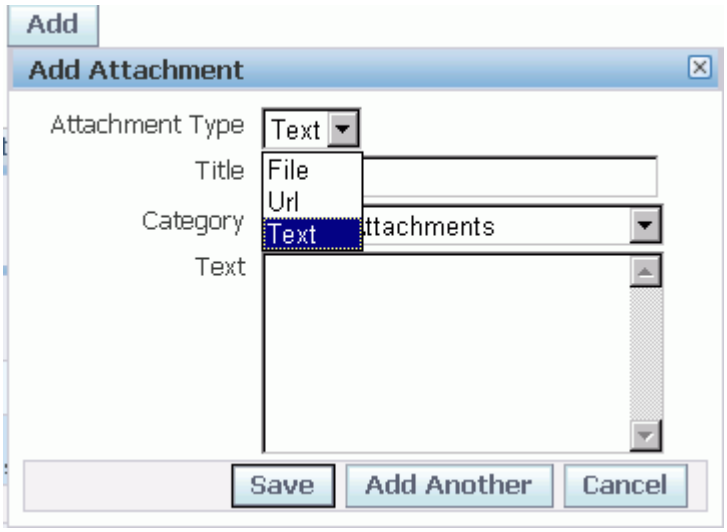
4. Click the Update Work Order button.

   Note: This function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. Otherwise, you can only view work orders, and cannot update associated asset hierarchy, work order hierarchy, material, resource, operation, cost, collection plan results, work request, and attachment information. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.

5. Update the necessary information.

   You can change the department at the operation level if no transactions have been recorded for the work order.

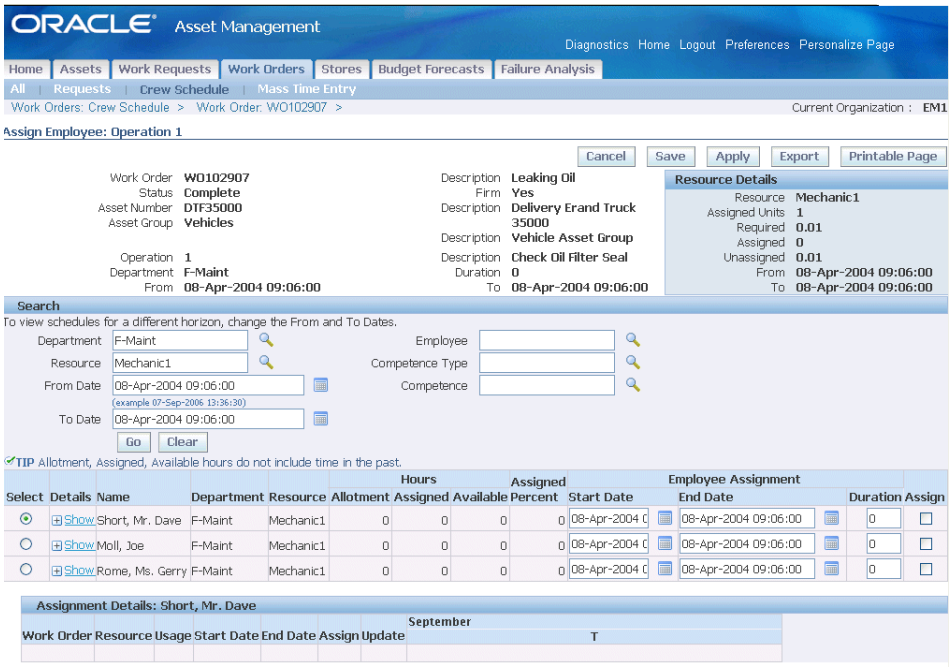
6. Optionally select or hover over the paperclip Attachments icon to attach relevant documents, such as drawings, standard procedures, and reference guides. You can attach file, URL, and text attachments. If you want to view the attachments, hover or click the **View** button.



Note: The Estimate Number field is display-only and cannot be updated.

To assign employees or equipment to an operation for scheduling

1. Open the Operation Requirements region.
2. Select the operation in which to assign the employee or equipment resource.
3. Select Assign Employee from the *Select Row:* drop-down list.
4. Choose Go.



The header region displays information about the current work order and the specific operation. You can assign employees to a work order operation and work order resource. Employee assignments result in the creation of new employee or equipment Instances that are assigned to the chosen Resource code and the creation of a new resource requirement. The Resource Details content, within the header, displays all information about the resource.

Using the fields in the Search region, you can search for employees, based on their eligibility or availability, and assign one or more to the work order. All employees who belong to the current operation's department and who are assigned to the Resource code appear. The employees' start and end times default to the Resource start and end time.

5. Optionally select a different department. Available departments are all departments within the current organization.

   Additional Information: You can only view employees and their schedules from other departments; they are not available for assignment. If you want to assign employees from other departments, you can perform this within the Update Work Order page by adding another operation, assigning that department to it, and then accessing this Assign Employee page.

6. Optionally select a Resource. All resources, within the current operation's

department, are available.

You can change the resource at the operation level if no transactions have been recorded for the work order.

7. Optionally specify a date range for which employee workload details are displayed.

8. Optionally select an Employee. All employees who are assigned who are assigned to the work order operation are available.

9. Optionally select a Competence Type.

10. Optionally select a Competence.

11. Choose Go. A list of employees appears, based on your search criteria. You can view employee availability information to decide which employee to assign to the current operation.

    - *Allotment*: Total hours an employee is available for work, based on shift and specified Date Horizon (From and To Date in the Search region of the Assign Employee page).

    - *Assigned Hours*: Total time an employee is scheduled for any work orders during the same Date Horizon. Assigned Hours does not account for work that is at Complete-No Charges, Complete, Cancelled, or Closed statuses.

    - *Available Hours*: Alloted Hours – Assigned Hours

    - *Assigned Hours*: Total time an employee is schedule for any work orders during the same Date Horizon. Assigned Hours do not account for work that might be at Complete-No Charges, Complete, Cancelled, or Closed statuses.

    - *Assigned %*: Assigned Hours/Available Hours

    You can update the employee schedules on existing work orders, or dissociate them using the links in this section. The region displays work orders across departments and organizations that an employee is assigned to. If the work order is from a different organization, you cannot drill down or modify it.

    Note: You can modify employee schedule dates only if the work order is firm.

    Additional Information: You can update the employee's start and end dates within the previous Update Work Order page by

selecting the Update Work Order link at the top of the page. You can stagger employee start and end times on the Update Work Order page, as well, by adding a new employee row and providing the staggered employee's start and end times.

12. The Assignment Details region displays the list of work orders, at any status, that the employee is assigned to. You can update employees' schedules on existing work orders, or unassign them using the links in this section. This region also displays work orders across departments and organizations that an employee is assigned to. If a work order is from a different organization, you cannot drill down or modify it.

    Note: You can modify employee schedule dates only if the work order is firm.

13. Select the Assign checkbox next to the employee to assign to this operation.

14. Choose Apply.

7. Optionally choose **Shift Dates** to shift the work order dates forward or backward by a specified number of days. You can also enter a new scheduled start date or end date. All other work order dates, including operations, resource, and resource instance dates, are shifted and synchronized accordingly.

8. Optionally choose **Estimate** to estimate your work order costs. The newly updated estimated costs appear in the work order Content container.

9. Optionally choose **Copy Work Order** to copy all work order details, including asset number, activity, operation, resource, resource instance, and materials, to a new work order. You can change any fields before creating the new work order.

10. Optionally choose **Save** to save the updated information, without leaving the current screen.

11. Choose **Apply** to save all updates and return to the Work Orders page.

Using Microsoft Projects to Change Work Order Dates:

You can use Microsoft Projects to change the dates on asset work orders. You may want to use this feature to perform 'what if' scenarios without actually changing the data in Oracle eAM. After you have made revisions to the dates associated with the work order, you can import the revised data back into Oracle eAM.

Note: You can use Microsoft Projects 2003 with this feature.

By using this feature, you can:

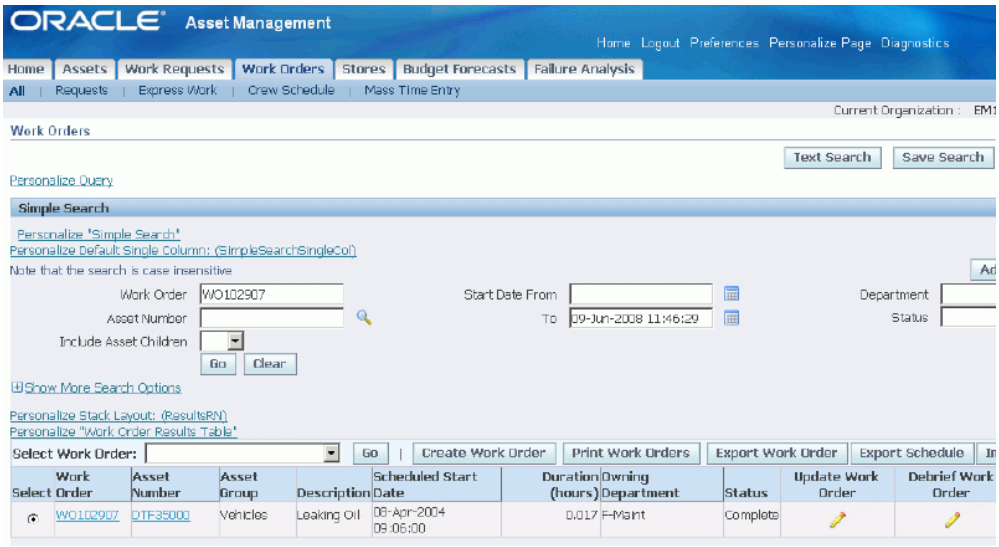
- Export the work order data in an XML format into Microsoft Projects.
- Change the dates associated with the work order.

  Note: You can only change the dates associated with tasks associated with a work order. You cannot change or add resources.

- View Gantt charts reflecting the date changes while creating and updating the tasks.
- Access multiple views of the revised schedule such as resource graphs, resource usage charts and so on.
- Print the revised reports and views.
- Import the revised work order data back into Oracle Enterprise Asset Management.

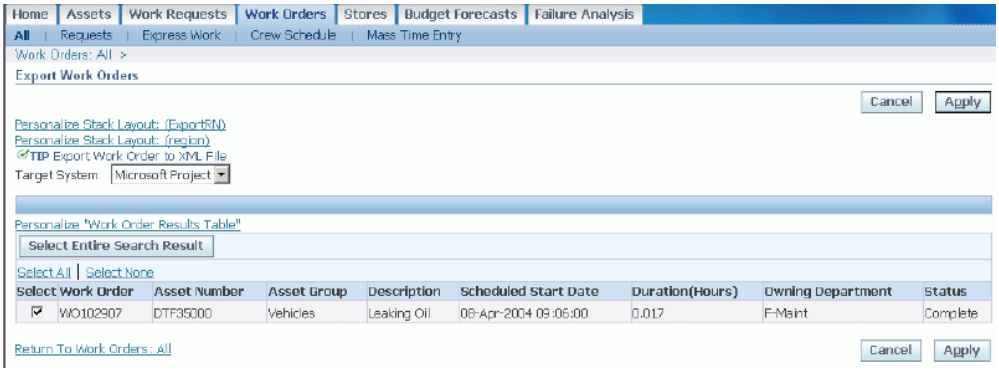
To use Microsoft Projects to change the dates associated with a work order:

1. Navigate to the Work Orders page and query for the asset work order to which you want to make changes.
2. Click the **Go** button.
3. Select the radiobutton for the work order, and then click the **Export Schedule** button.

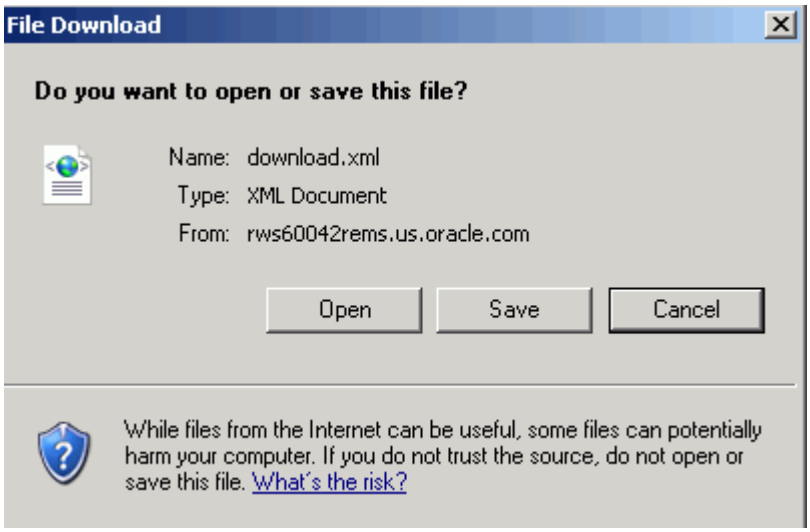


4. On the Export Work Orders page, select Microsoft Project in the Target System field.

5. Select the check box for the work order, and click the **Apply** button.



6. Click the **Open** button to edit the file immediately, or click the **Save** button to save the document and edit it at a later time.



7. Open Microsoft Projects and then select the document.

8. Make your date changes in Microsoft Projects.

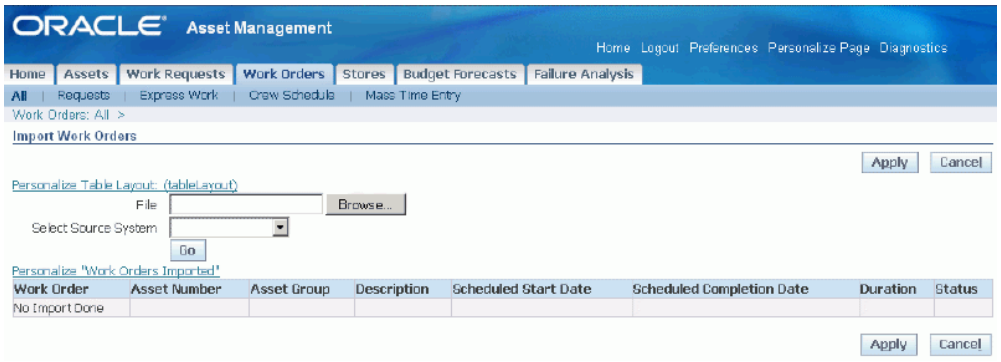
9. Review the changes and when you are finished, save the project.

10. Access the Work Orders search page and click the **Import Schedule** button.

11. On the Import Work Orders page, select the file that you revised and now want to import.

12. In the Select Source System field, select Microsoft Project, and click the **Go** button.

13. Click the **Apply** button to import the revised data.



Using Primavera to Change Work Order Dates:

You can also use Primavera to change the dates on asset work orders. You may want to use this feature to perform 'what if' scenarios without actually changing the data in

Oracle eAM. After you have made revisions to the dates associated with the work order, you can import the revised data back into Oracle eAM.

Primavera retains any work hierarchy and parent-child relationships that may exist in Oracle eAM.

Important: You can export only employee resources to Primavera.

Field Mappings from Oracle eAM to Primavera

Oracle eAM	Primavera
Work order scheduled start and end dates	Start and Finish milestones
Operations	Activities
Departments and Resources on an operation	Roles (concatenated)
Resources (employees)	Resources
Parent-child relationships	WBS relationships

By using this feature, you can:

- Export work order data in an XML format into Primavera.
- Change the dates associated with the work order.

  Note: You can only change the dates associated with tasks associated with a work order. You cannot change or add resources.

- Import the revised work order data back into Oracle eAM.

To use Primavera to change work order dates:

1. Navigate to the Work Orders page and query for the asset work order to which you want to make changes.
2. Click the **Go** button.
3. Select the radiobutton for the work order, and then click the **Export Schedule** button.
4. On the Export Work Orders page, select Primavera in the Target System field.

5. Select the check box for the work order, and click the **Apply** button.

6. Click the **Open** button to edit the file immediately, or click the **Save** button to save the document and edit it at a later time.

7. Open Primavera and then select the document.

8. Make changes to the work order dates.

9. Save your work in Primavera.

10. Access the Work Orders search page and click the **Import Schedule** button.

11. On the Import Work Orders page, select the file that you revised and now want to import back into eAM.

12. In the Select Source System field, select Primavera, and click the **Go** button.

13. Click the **Apply** button to import the revised work order schedule.

Printing Work Orders:

After you receive the list of work orders from the Work Order Search page, you have two options to print the work order:

- A **Print Work Order** icon at the work order level enables you to print a selected work order

- The **Print Work Order** button at the Result table level enables you to print multiple work orders.

Both options navigate to the Work Order Report page.

1. Navigate to the Work Orders page (Maintenance Super User > Work Orders).

2. If you choose the **Print Work Order** icon at the work order level from the Search page, only one work order appears. If you choose the **Print Work Orders** button from the Search page, a list of work orders appears. You can then selectively specify the work orders or select all work orders to print.

3. The Select Parameters region provides print content options. Items that are checked are printed.

4. You can select a work order print Template. Maintenance Work Order Report is the seeded template, but you can define your own XML templates.

5. Select a language from the **Locale** list of values, to specify the language to print.

6. Select a Format for the work order print. The supported formats are: EXCEL,

HTML, PDF, and RTF.

7. Choose **Run** to print your work orders.

Related Topics

Defining Inventory Material Requirements, page 3-37

Defining Direct Item Material Requirements, page 3-43

Entering Meter Readings, page 4-3

Work Plans

By using the Work Orders tab, crew supervisors can execute work plans generated by a planner. The Materials tab enables you to manage operations on a work order. You can skill search across departments, assign employees to a work order, adjust crew schedules, complete operations, hand work over to another department, complete a work order, request material, and enter quality plan information, such as inspection data.

Using the simple or advanced search modes, a supervisor can query on existing work orders, assigned to a department or employee to view, update, or manage operations. The Managing Operations tab enables you to search skills, assign employees to work orders, hand over work to other departments, charge resources, and complete or uncomplete an operation.

The following tasks are performed, using the Work Orders tab:

- Work order viewing
- Resource charging
- Handovers
- Employee assignment to operations
- Completion and uncompletion of operations

Executing Work Plans

You can execute work plans for any scheduled work in your organization.

The Work Orders tab enables you to do the following:

- Manage operations:
    - Complete operation/Un-complete operation - completing an operation does not complete the work order, however this can be done via the Work Order.

Construction Units

Construction units (specifically known as compatible units in the utility and telecommunications industry) are standardized repetitive units of work, which involve labor, material and equipment. An example of a construction unit is the erection of transmission towers, which involves the similar efforts of excavation, erection, and so on, and requires similar materials and equipment. Installing multiple towers includes performing the same repetitive work, while allowing for specific factors such as terrain, accessibility, and so on. One construction unit is used as a typical requirement of such work, including resources and equipment to be used repetitively. The use of construction units can reduce estimating and planning efforts.

By using this feature, you can:

- Define a construction unit and associate activities, operations and resources.
- Copy construction units.
- View and modify a construction unit.
- Group construction units to create construction estimates.
- Define difficulty codes.
- Generate construction estimates.
- View and modify a construction estimate.
- Generate work orders for the construction work, including estimates.
- Use the Estimation Workbench to create and modify work orders for construction units and estimates.
- Capitalize actual costs associated with construction estimates.

Prerequisites

❒ You must perform the following before you can create construction units:

1. Define activities to be used with the construction units, and associate the activities to your organization. See Defining Activities, page 2-53
2. Create material BOMs for the activities. See Setting Up Maintenance Bills of Material, page 2-93
3. Define operations for the construction units. See Preparing Work Order Operations, page 3-30

4. Assign resources to be used with the activities.

Creating Construction Units:

One construction unit is a collection of activities, as defined in the eAM Master Items table. You can also define a routing and bill of material for the construction unit.

Construction units are defined at the organization level, and can include only those activities that are assigned to the same inventory organization. However, you can query construction units associated with different organizations and copy them to another organization. You can search by name, description, and organization.

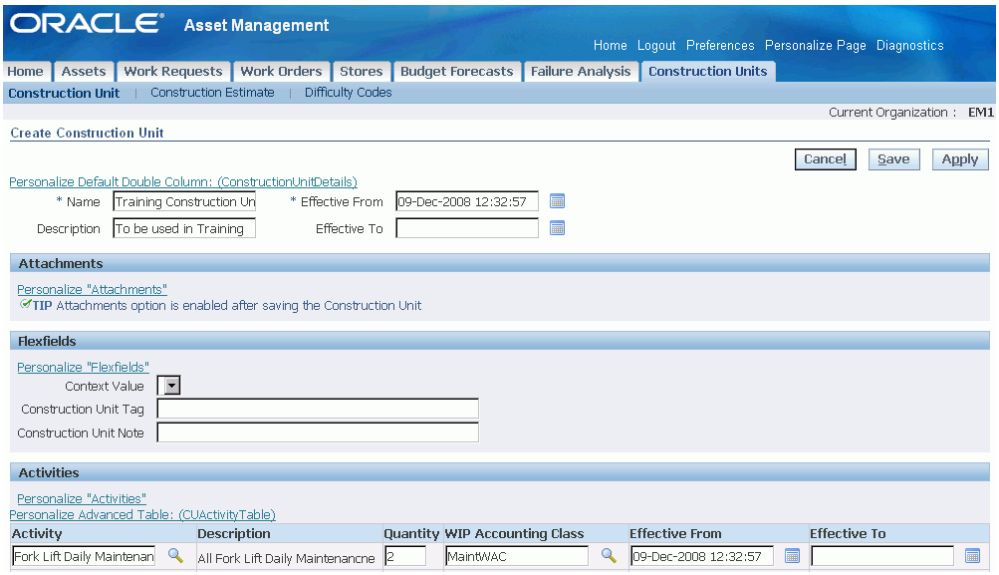
When you define a construction unit, you enter the activity quantities for materials, resources, and resource multipliers for the construction unit.

Perform the following steps to create construction units:

1. Navigate to the Maintenance Super User responsibility, enter EM1 in the Organization field, and then click the **Go** button.

2. Click the Construction Units tab, and then click the **Create Construction Unit** button.

   The Create Construction Unit page appears.



3. Enter a name for the construction unit (required).

4. Enter a description.

5. Enter a date in the Effective From (required) and Effective To fields.

   Note that the Effective From date is required.

6. Add at least one activity the construction unit.

7. Enter a Quantity to indicate the amount of the activity that is required for the construction unit.

   The quantities defined in the activity routing and material BOM would be multiplied with this quantity.

8. Optionally enter a WIP Accounting Class to identify the expense cost elements associated with the work performed, such as materials, labor, and resources.

9. Save your work.

Copying Construction Units:

You can copy an existing construction unit to create a new construction unit.

1. Navigate to the Maintenance Super User responsibility.

2. Click the Construction Units tab.

3. Enter the search criteria to query for construction units that you want to copy.

4. Click the **Go** button.

5. Select the construction units that you want to copy.

6. Click the Copy Construction Unit button.

   The Copy Construction Unit page appears.

7. Enter a name and a description for the new construction unit.

8. Optionally enter dates in the Effective From and Effective To fields.

9. You can revise the quantity, WIP Accounting Class and effective dates to apply to the new construction unit.

   The effective dates of the activities must occur after the effective date of the construction unit. You must enter an effective from date.

10. Optionally select the Assign to Org check box.

    Select this check box to assign the activities to the organization. If this check box is selected, the activity has been assigned to the organization, the check box is display only.

    > **Important:** Although an activity is assigned to a new organization, you must define the BOM and the routing for the activity.

11. Save your work.

Viewing and Modifying Construction Units:

You can search for construction units to add, delete or modify the activities, quantities, factors, and other related attributes. These attributes may require changes depending on the user requirements relating to specific construction projects.

1. Navigate to the Maintenance Super User responsibility, enter EM1 in the Organization field, and then click the **Go** button.

2. Click the Construction Units tab.

3. Enter the organization for the construction unit that you want to view or modify. By entering a value in the Organization field and leaving all the other fields blank will return all construction units that are associated with the organization. You an further refine your search by including values in the other fields such as Name, Description, and so on.

4. Click the **Go** button.

5. Click the hyperlink for the construction unit to view the details.

   The Construction Unit page appears.

6. To modify the construction unit, click the Update button for the construction unit.

   The Update Construction Unit page appears. Use this page to add attachments to the construction unit. You can hover or click the Add button to add new attachments to the construction unit, or hover over the View attachment link to view or update an existing attachment.

   > **Note:** You must first create and save a construction unit before you can add an attachment.

7. Make revisions to the construction unit such as adding attachments, flexfields, and additional activities.

8. Save your work.

Defining Difficulty Codes:

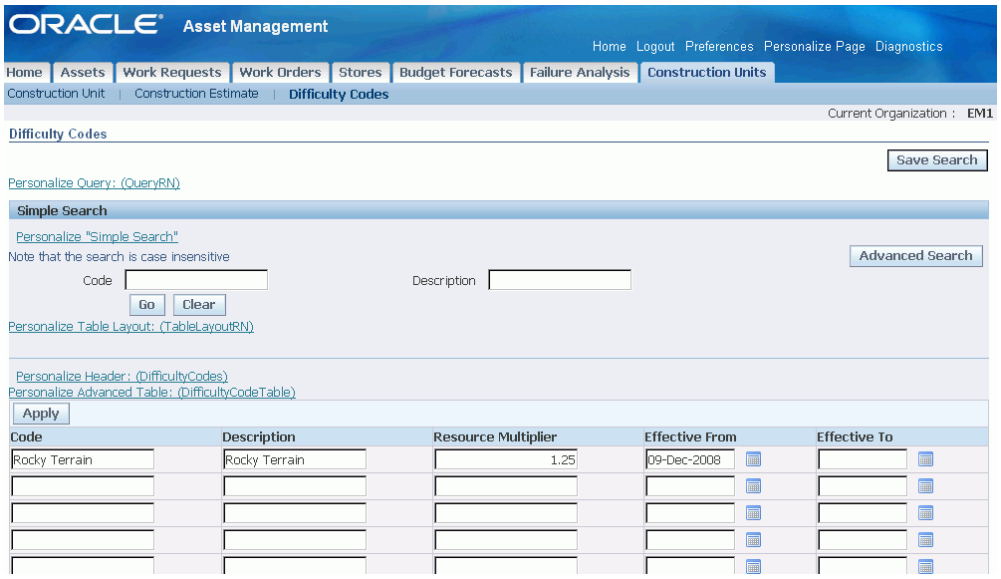
Difficulty codes are defined as a multiplier with resource quantities that specify the additional resource usage required relating to factors such as soil condition, accessibility of the work site, and so on. The quantities defined for resource and material requirements are multiplied with quantities on the construction unit for cost estimation and on work orders. Difficulty codes are defined with a value assigned with them (a number larger than zero), which gets multiplied with resource quantities.

1. Navigate to the Maintenance Super User responsibility, enter EM1 in the Organization field, and then click the **Go** button.

2. Click the Construction Units tab, and click the Difficulty Codes hyperlink.

   The Difficulty Codes page appears. You can use this page to search and define difficulty codes.

3. Click the **Add 5 Rows** button to define difficulty codes.



4. Add an alphanumeric name for your difficulty code.

5. Optionally add a description for the difficulty code.

6. Add a resource multiplier.

   You must enter a number larger than zero. This value which gets multiplied with the labor and equipment quantities derived from the BOM, routing, construction unit and estimate definitions.

7. Save your work.

Creating Construction Estimates:

You can group one or more construction units to create construction estimates and define work requirements. Grouping construction units enables you to combine various operations that are involved (and their resource and material requirements), and this assists in the design, planning and estimation of the costs.

You can also create a construction estimate and add activities directly, without adding any construction units.

You can use the construction estimates for cost estimation, planning and scheduling the work and creating work orders for execution. All the operations defined on the activities appear as default values in the Estimating Workbench, but you can make changes to the defaulted resources, materials, quantities, factors, and so on.

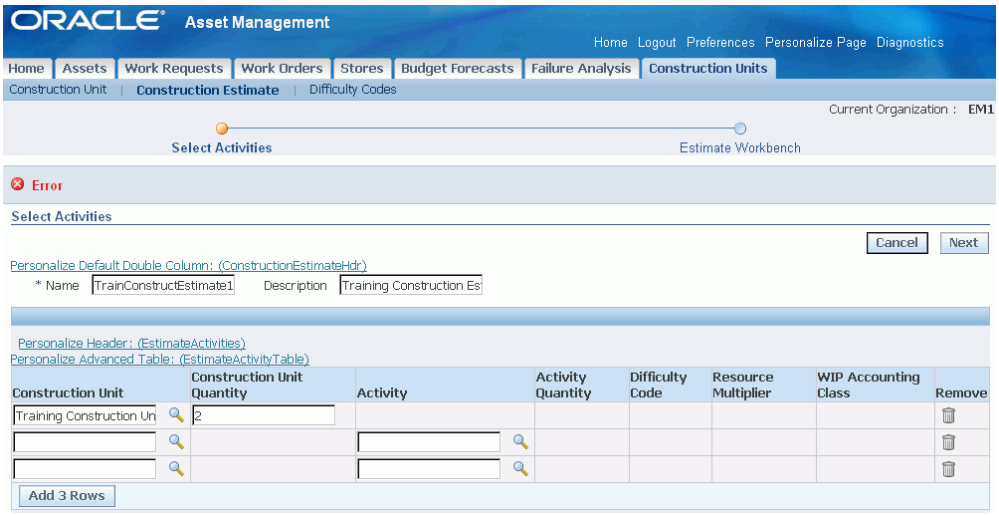
1. Navigate to the Maintenance Super User responsibility, enter EM1 in the Organization field, and then click the **Go** button.

2. Click the Construction Units tab, and then click the Construction Estimates link.

   The Construction Estimates page appears.

3. Click the **Create Construction Estimate** button.

   The Select Activities page appears.



4. Add a Name for the new construction estimate.

   This is a required field.

5. Optionally add a description.

6. Select the construction units and activities that you want to add to this construction estimate.

   You can add construction units, activities or a combination of both construction units and activities to the construction estimate.

7. Click the **Next** button to access the Construction Estimate Workbench where you can add other information such as:

   - Attachments
   - Descriptive Flexfields

- Work Order default information
- Model Work Order information

8. Make additional changes to the estimate, if required.
9. Optionally perform other tasks by clicking one of these buttons:
   - **Select Activities**: Click this button to revise or add other activities
   - **Estimate Costs**: Click this button to generate an cost estimate for the construction estimate.
   - **Save**: Click this button if you are finished to commit the construction estimate to the system.
   - **Cancel**: Click this button to delete all changes that you made.
   - **Create Work Order(s)**: Click this button to generate work orders for the construction estimate.

     See Generating Work Orders for Construction Estimates, page 20-90

Modifying Construction Estimates:

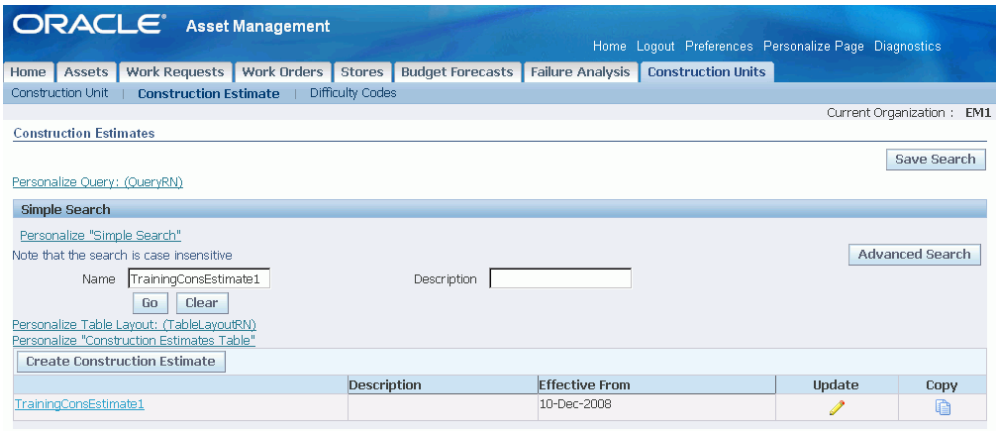
You can modify construction estimates. You may need to change the construction units or the quantity of the construction unit.

1. Navigate to the Maintenance Super User responsibility, enter EM1 in the Organization field, and then click the **Go** button.
2. Click the Construction Units tab, and then click the Construction Estimates link.

   The Construction Estimates page appears.
3. Enter the Name of the construction estimate that you want to modify.

   If you want to view a list of all the construction estimates associated with the current organization, leave the Name field blank.
4. Click the **Go** button.
5. Click the Update icon for the construction estimate that you want to modify.

   The Construction Estimate Workbench appears.



6. Modify the components of the construction estimate.

7. Save your work.

Viewing Construction Estimates:

You can view a construction estimate.

Construction estimates are organization specific.

1. Navigate to the Maintenance Super User responsibility, enter EM1 in the Organization field, and then click the **Go** button.

2. Click the Construction Units tab, and then click the Construction Estimates link.

   The Construction Estimates page appears.

3. Enter a construction estimate in the Name field.

   If you want to retrieve all the construction estimates assigned to the current organization, leave the Name field blank.

4. Click the **Go** button.

5. Select a construction estimate that you want to view by clicking the link for the construction estimate.

6. View the details of the construction estimate such as:

   - Cost estimate
   - Model work order details such as Work Order Number, Asset Number, Cost
   - Parent Work Order details such as Asset Number, Status

Copying a Construction Estimate to Create a New Construction Estimate:

You can copy existing construction estimates to create new construction estimates. This can eliminate the need for manual entry of information for a construction project that has similar costs associated to it.

1. Navigate to the Maintenance Super User responsibility, enter EM1 in the Organization field, and then click the **Go** button.

2. Click the Construction Units tab, and then click the Construction Estimates link.

   The Construction Estimates page appears.

3. Enter the Name of the construction estimate that you want to copy.

   If you want to view a list of all the construction estimates associated with the current organization, leave the Name field blank.

4. Click the **Go** button.

5. Click the Copy icon for the construction estimate that you want to use for the new construction estimate.

   The Construction Estimate Workbench appears.

6. Enter a name in the Construction Estimate field.

7. Optionally add a description.

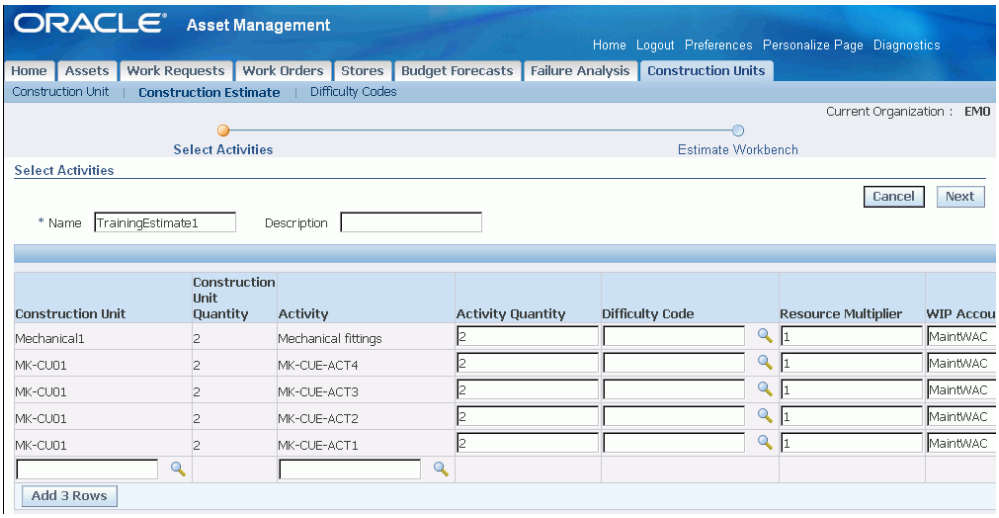
8. Optionally add attachments by clicking the Add button.

   The Add Attachment page appears. You can add a Desktop File, Text or URL or a file from the Document Catalog. Add a title and description for the attachment. Select and enter information in the Define Attachments region of the page.

   If you are finished, click the Apply button. Click Add Another to add other attachments to the construction estimate.

9. Click the Select Activities button to add activities.

   The Select Activities page appears.



10. Enter a construction unit.
11. Select activities.
12. Enter a value in the Activity Quantity field for each activities.
13. Optionally enter difficulty codes for each activity.
14. Enter a number in the Resource Multiplier field for each activity.
15. Optionally enter a WIP Accounting Class.
16. Click the **Next** button.
17. Click one of these buttons:
    - **Select Activities** - to add or delete activities by using the Estimation Workbench.
    - **Estimate Costs** - to run the cost estimation
    - **Save** - save the construction estimate
    - **Cancel** - to discard the entire new construction estimate
    - **Create Work Order(s)** - to create work orders for the construction estimate

    See Generating Work Orders for Construction Estimates, page 20-90

Generating Work Orders for Construction Estimates:

1. Navigate to the Maintenance Super User responsibility, enter EM1 in the

Organization field, and then click the **Go** button.

2. Click the Construction Units tab, and then click the Construction Estimates link.

   The Construction Estimates page appears.

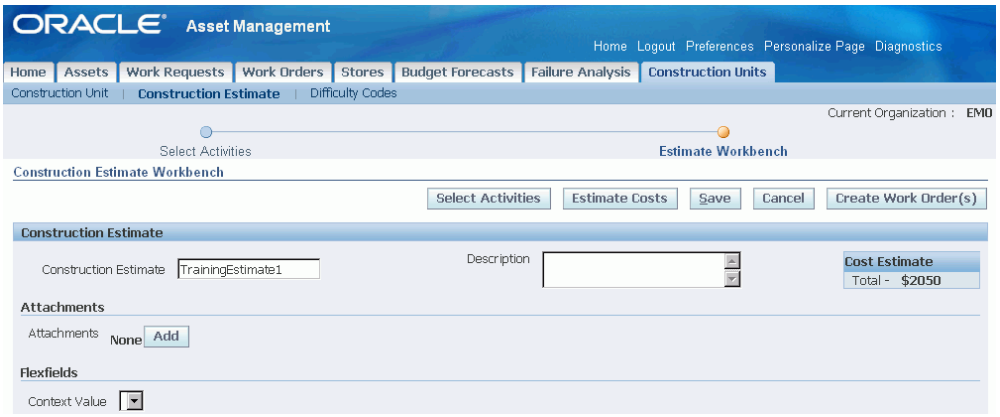
3. Enter the Name of the construction estimate that you want to view.

   If you want to view a list of all the construction estimates associated with the current organization, leave the Name field blank.

4. Click the **Go** button.

   The Construction Estimate Workbench page appears.

Construction Estimate Workbench



5. Optionally select a value in the Group Rows By drop-down list.

   Values are None, Activity, Construction Unit, Single Work Order and WIP Accounting Class.

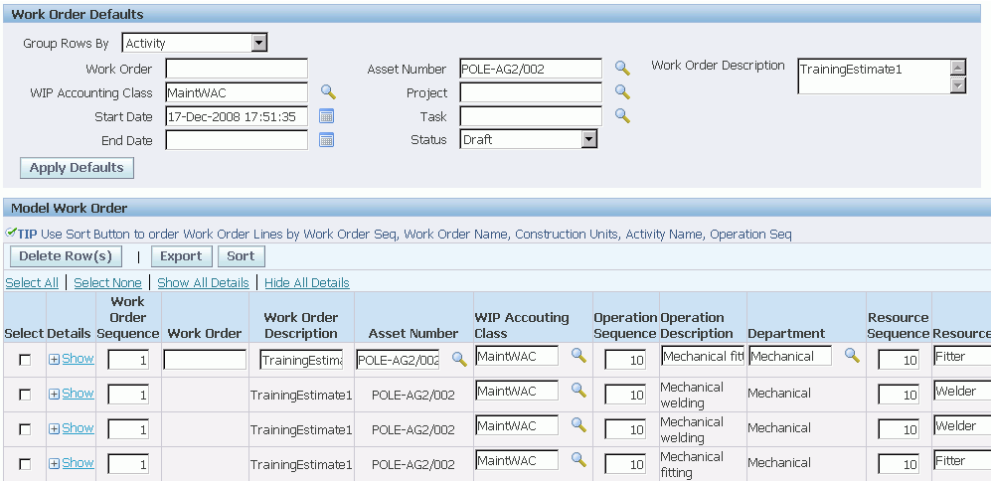
   If you want specific information to default into the fields in the Model Work Order region, optionally enter values for these fields:

   - **Work Order**
   - **WIP Accounting Class**
   - **Start Date**
   - **End Date**
   - **Asset Number**
   - **Department**

- **Project**
- **Task**
- **Status** - Unreleased, Awaiting Scheduling, Released, On Hold or Draft

6. Click the **Apply Defaults** button to populate the default values in the Model Work Order fields.

7. Enter the Work Order Sequence to indicate the order in which each work order should be executed.



8. You can optionally perform these actions:
   - **Delete Row(s)** - Select the rows that you want to delete from the work order and then click this button.
   - **Export** - Select the rows that you want to export and then click this button.
   - **Sort** - Click this button to sort the rows based on the **Group Rows By** field.

9. Optionally enter the **Operation Sequence** to indicate at which operation step the specific work order should be executed.

   The default value for the operation sequence comes from the activity.

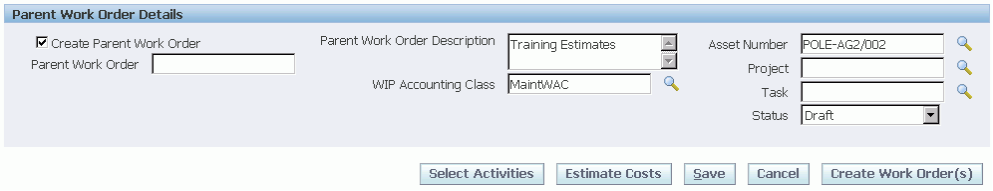
10. Optionally select the Parent Work Order check box to create a parent work order for the construction estimate work orders.

    Optionally enter a value for these fields:

    - Parent Work Order Description

- WIP Accounting Class
- Asset Number
- Project
- Task
- Status

11. If you want to link these work orders to an existing work order, enter a value in the Parent Work Order field.



12. Click the Create Work Order(s) button when you are satisfied with the work order estimate.

13. The system generates the work orders.

> **Note:** You cannot enter Descriptive Flexfields (DFFs) for Work Orders in the Construction Estimate Workbench. To enter DFFs, query the individual work order using the Work Order pages.

Using the Estimation Workbench:

You can use the Estimation Workbench to:

- Search and view the costs association with a construction estimate.
- View work order details associated with the construction estimate.
- Add components to the model work order such as work orders, work order sequence, asset number, WIP Accounting Classes, resources, resource descriptions, items and their required quantity, and so on.

1. Navigate to the Maintenance Super User responsibility, enter EM1 in the Organization field, and then click the **Go** button.

2. Click the Construction Units tab, and then click the Construction Estimates link.

   The Construction Estimates page appears.

3. Enter the Name of the construction estimate that you want to view.

   If you want to view a list of all the construction estimates associated with the current organization, leave the Name field blank.

4. Click the **Go** button.

5. View the details associated with the construction estimate such as:

   - Estimate Costs
   - Attachments
   - Work Order Details

6. Optionally click the **Update Estimate** button to make changes to the construction estimate.

7. Save your changes.

Capitalizing Actual Costs Associated with Construction Estimates:

Work executed using construction units results into the creation of new assets or value addition to the existing assets. This feature enables you to collect the costs on such work orders and post them for capitalization in Fixed Asset (FA) module through mass update.

If eAM asset numbers are not associated with FA serial numbers until work order completion, you can generate the asset numbers in the FA module and use them during capitalization.

Use the Work Order Capitalization process to capitalize the costs associated with construction estimates.

Before you can capitalize the costs associated with the construction estimate, you must first set up the EAM: FA Book Type profile. This profile enables the system to select the appropriate book when new fixed asset numbers are created.

1. Navigate to the System Administrator responsibility, and click the Define Profile Options link.

   The Profiles page appears.

2. Click the Search icon (Flashlight).

3. Select the EAM: FA Book Type Code option, and then click the **OK** button.

4. Make sure that the Hierarchy Type is set to Organization.

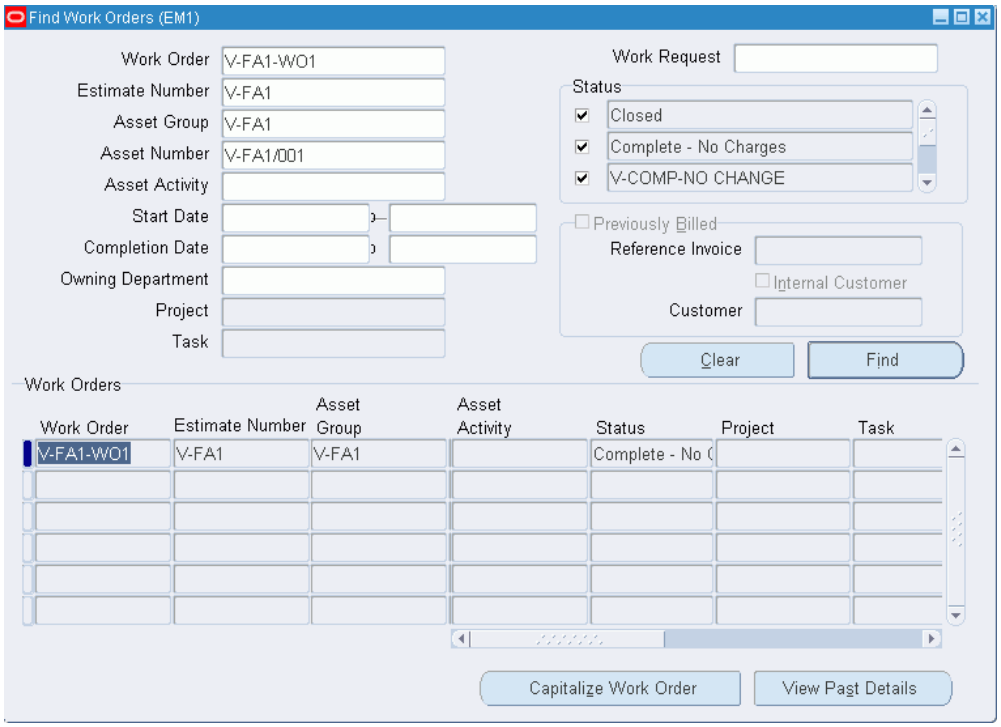
5. Enter a beginning effective date.

6. Click the **Save** button.

Capitalizing Work Order Costs for Construction Estimates:

1. Navigate to the Find Work Orders form in the Enterprise Asset Management responsibility (Billing and Capitalization > Work Order Capitalization).

2. Enter an Estimate Number to select a work order associated with a construction estimate.



3. Click the **Find** button.

4. Click the Capitalize Work Order button.

5. View the capitalized costs associated with the construction estimate.

6. Save your work.

Stores

Material issue to Work Orders and returns to Inventory are typical store room functions.

The Stores tab provides Material Issue Request and Verification functionality, and is used to manage a Work Order's material availability. A Work Order's material

requirements are defined on its Maintenance Bill of Material, and are available to the Work Order via the Material Issue Request and Verification process.

There are two activities involved in delivering material from stores to a Work Order. First, a Material Issue Request is generated (Move Order in Oracle Inventory) to request the material to a Work Order. This process is automated upon Work Order release, by selecting a check box in the Enterprise Asset Management Parameters (See: Defining eAM Parameters, page 2-11). The second activity involves Material Issue Verification (Move Order in Oracle Inventory), and is generated when you access the Stores tab and select material for a Work Order, based on available, unprocessed move orders. A one-step material issue is a substitute for these two activities; a request is not created.

You can return material to Inventory from a maintenance Work Order. If excess or defective material is issued to a Work order, it needs to return.

Related Topics

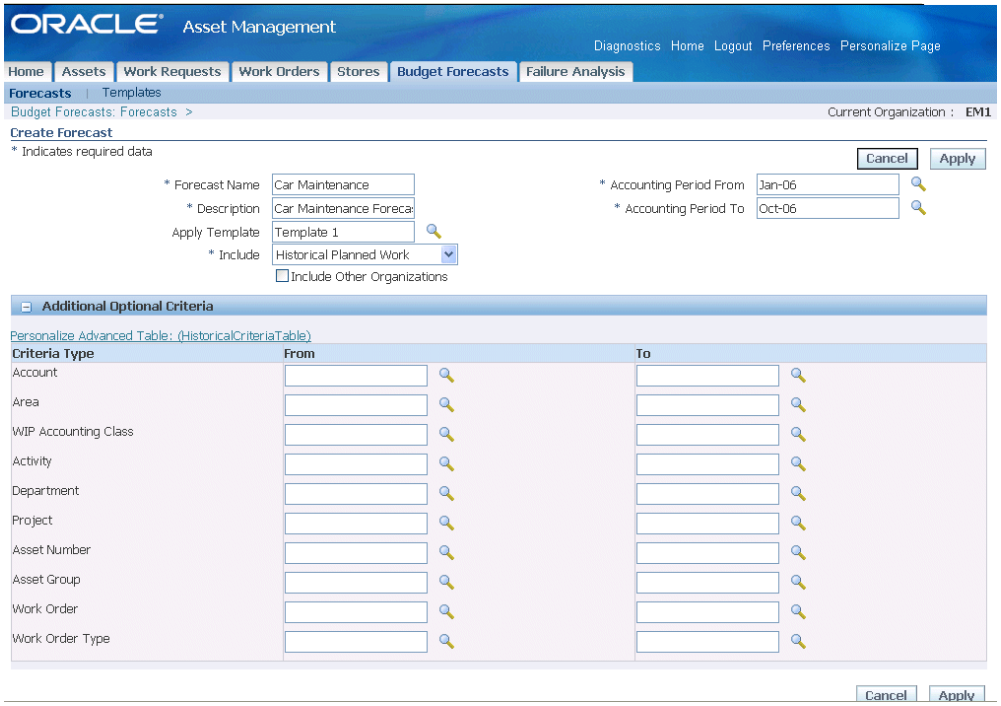
Stores, page 20-95

Budget Forecasts

You can extract work order cost information from Enterprise Asset Management to a spreadsheet. You can use the results as a base for creating organization budgets and forecasts. You can extract historical costs for past accounting periods, or estimated costs of future periods, based on Preventive Maintenance rules. A forecast contains criteria, along with filter options, based on work orders, assets, and costing information.

To create a forecast:

1. Navigate to the Forecasts page (Maintenance Super User > Budget Forecasts tab).
2. Choose *Create Forecast*.



3. Enter a **Forecast Name**.

4. Enter a **Description**.

5. Optionally select a template from the **Apply Template** list of values. This template indicates the type of information to include in your forecast. If you select a template, the template's associated work information is populated in the Include field, such as Historical Planned Work, Historical Non-Planned Work, All Historical Work, or Forecasted Work.

6. Optionally select the **Include Other Organizations** check box.

7. Enter the **Accounting Period From** and **To** values to indicate the accounting period in which to include information. For historical forecasts, you can select periods in the past or the current period. For future (Preventive Maintenance) forecasts, you can select periods in the future or the current period.

8. Optionally narrow the forecast to specific criteria, such as Account, Area, WIP Accounting Class, Activity, Department, Project, Asset Number, Asset Group, Work Order, and Work Order Type.

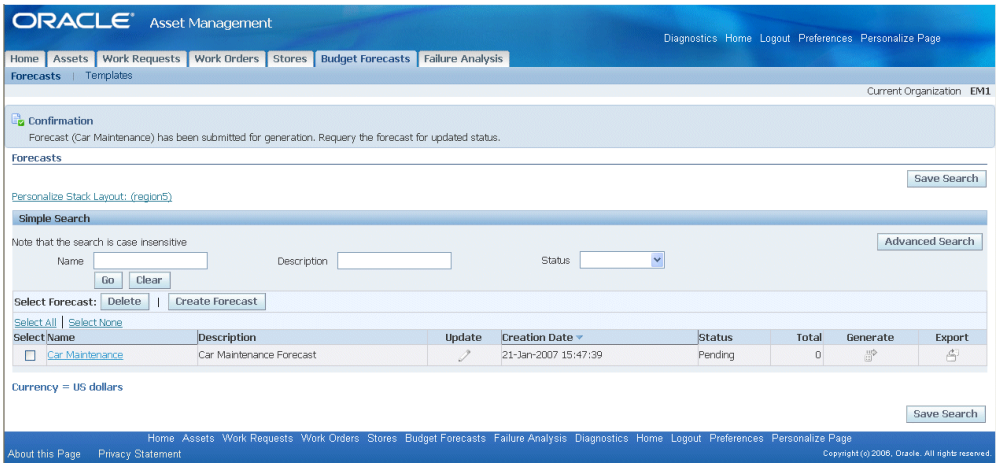
9. Choose Apply to save the forecast.

To generate a forecast:

After you save a forecast, you can generate Forecast entries by selecting the icon at the

Forecast level. After the forecast entries are generated for a selected forecast, you can view them by Accounts or Work Orders.

1. Choose the **Generate** icon.



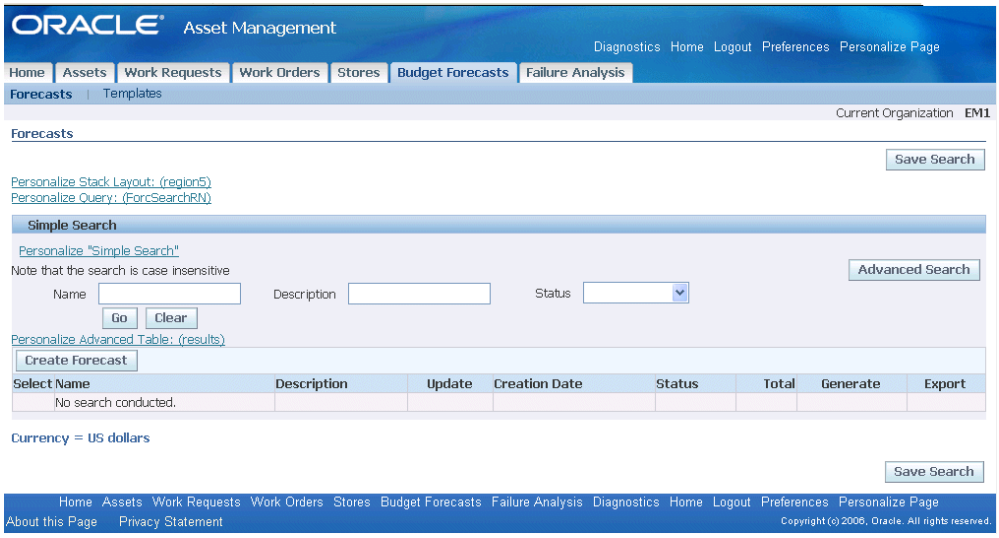
- *View By Accounts:* Forecast costs are aggregated by General Ledger accounts into Accounting Period buckets. Costs derived from historical work orders are aggregated, based on the actual period when they occurred. Costs derived from planned work orders are aggregated in the period of the forecasted completion date.

- *View By Work Orders:* Forecast costs for each work order appear. If it is a historical work order, the actual work order number appears. If it is a planned work order, the Work Order Number field is blank.

To manage existing forecasts:

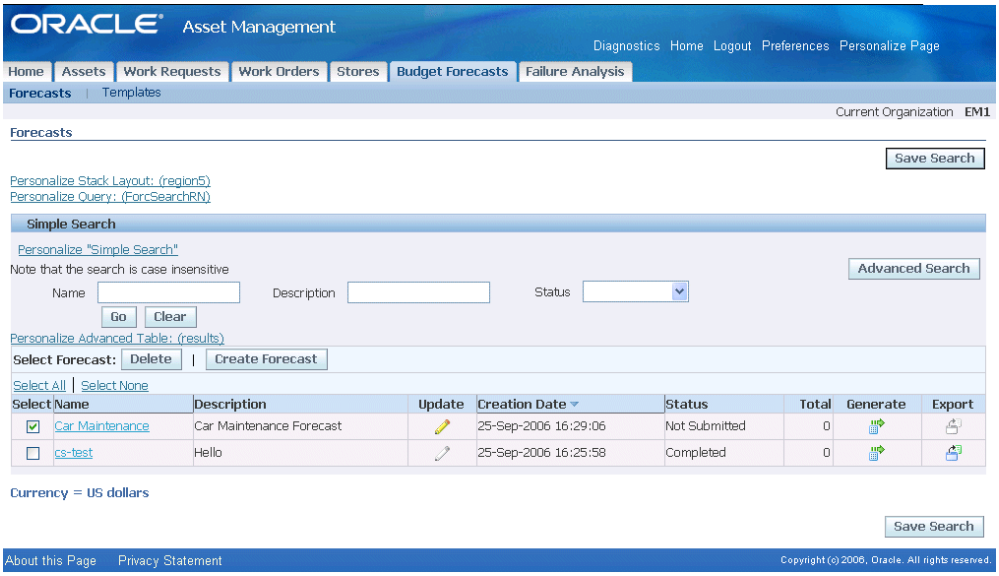
1. Navigate to the Forecasts page (Maintenance Super User > Budget Forecasts tab).

Forecasts



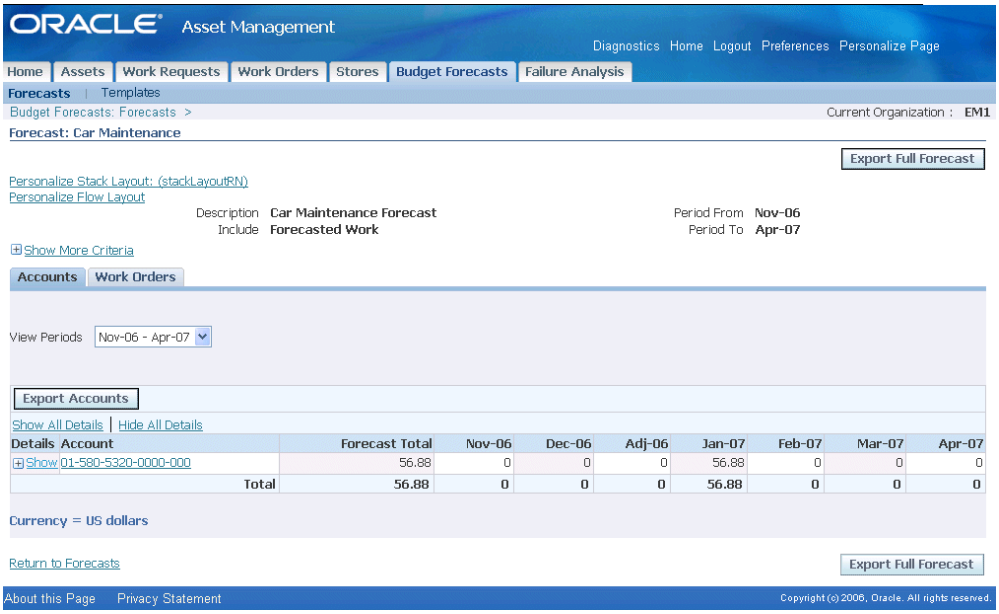
2. You can perform Simple or Advanced Searches for existing forecasts. Using the Simple Search mode, you can search on an existing forecast's Name, Description, and/or Status. You can optionally choose Advanced Search to add more search criteria.

3. Choose Go to display existing forecasts, based on entered search criteria. If you did not enter any search criteria, all existing forecasts appear.



4. If a forecast has a Not Submitted status, you can optionally update its Name, Description, Accounting Periods, and Criteria, by choosing the Update icon.

5. Optionally select a forecast's hypertext link to view its details.



1. The Accounts tab displays the forecast's affected accounts.

2. You can optionally export the displayed account information to an Excel spreadsheet, by choosing *Export Accounts*.

3. Optionally select the Work Orders tab to display work order information. Future, forecasted work orders appear, if the forecast's Include field value reads Forecasted Work. Historical work orders appear, if the Include field's value reads Historical Planned Work, Historical Non-Planned Work, or All Historical Work.

4. Optionally choose *Export Work Orders* to:

   - export only the selected work order information to an Excel spreadsheet, if the forecast includes historical work.

   - create new forecasted work orders for the selected work, if the forecast includes forecasted work.

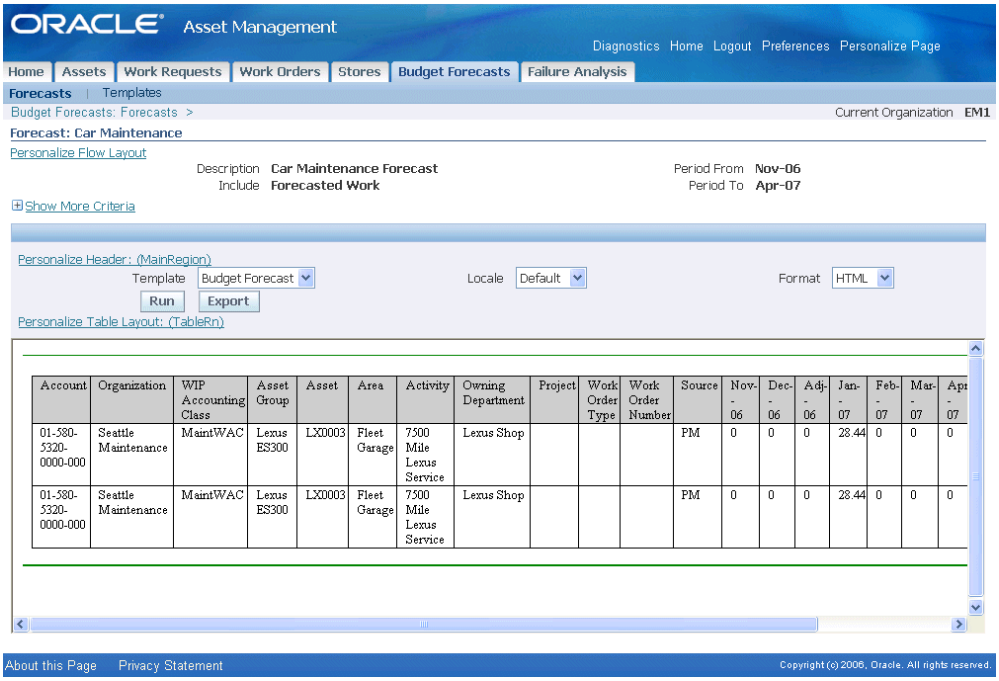
5. Optionally choose *Export Full Forecast* to:

   - export all work order cost information to an Excel spreadsheet, if the forecast includes historical work.

   - create new forecasted work orders for all displayed work, if the forecast includes forecasted work.

6. Optionally choose the Generate icon to generate the forecast, based on saved criteria. After the Generate icon is selected, the forecast's status transitions to a Pending status while it executes. After the forecast finishes executing, the forecast's status transitions to Completed. You can generate the forecast an unlimited number of times.

7. Optionally choose the Export icon to export the completed forecast to an Excel spreadsheet, HTML, PDF, or RTF file.



1. Select a Template.
2. Select a Locale.
3. Select the Format. This choice indicates whether you are exporting information to an Excel spreadsheet, HTML, PDF, or RTF file.
4. Choose Run to display the cost information.
5. Choose Export to export the cost information to the file type populated in the Format field.

Safety Management

This feature enables you to create work permits mandated by regulatory agencies to be followed by operations, maintenance and safety personnel during maintenance of assets which require work permits before the assets can be repaired.

Related Topics

See Safety Management, page 25-1

Failure Analysis

Failure Analysis enables you to track an asset failure from the time it is reported until its resolution. Statistics from your collected failure data provide you with information on why an event occurs and causes your asset failure. You can then take the necessary steps to eliminate that event. Additionally, you can use the failure statistics, among others, to help you formulate your Reliability-Centered Maintenance (RCM) program. Failure hierarchies that support multiple-level failure reporting provide effective root cause and reliability analysis. For specific Asset Groups or Rebuildable Items, each failure (problem) has a defined number of root causes, with each root cause having a defined number of resolutions (remedies).

When failure is reported, each work order represents one single failure occurrence (event) for the asset specified on the work order. The cost to repair an asset that fails to a normal, operational state is assumed to be the charges accumulated in the work order that is associated with the failure. If the repair is outsourced to an external party and requisitioned on a purchase order, a work order must be created to collect the repair costs for Failure Analysis to pick it up.

Related Topics

Failure Analysis, page 26-1

21

Google Maps Integration

This chapter covers the following topics:

- Google Maps Integration Overview
- Google Maps Integration with EAM
- Viewing Assets on Google Maps
- Entering and Viewing Geocode Information Using the EAM Responsibility

Google Maps Integration Overview

Oracle Enterprise Asset Management can integrate with the web based source map viewer of Google Maps. Oracle Enterprise Asset Management assets can be geocoded and displayed in the map viewer based on user entered search criteria.

> **Note:** Only those assets that have geocode information associated to them will display on the map.

You cannot geocode asset routes or non-serial rebuildables

Google Maps Integration with EAM

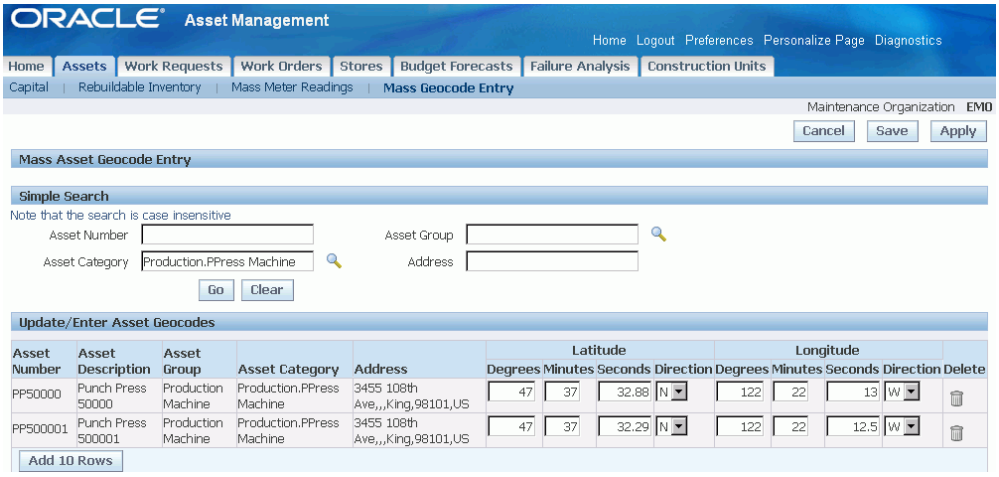
From the Maintenance Super User responsibility, when the user selects any asset icon on the map viewer, details such as asset number, description, asset group, owning department, asset location and geocodes will be displayed in a popup window. You can also access other pages to perform the following actions:

- Create a work order.
- Create a work request.
- View open work orders.

- View open work requests.
- View the graphical asset hierarchy for the asset.

Entering Geocodes for EAM Assets:

1. Navigate to the Maintenance Super User responsibility, and click the Assets tab.
2. Enter EM1 in the Organization field and then click the Go button.
3. Click the Mass Geocode Entry sub-tab.
4. Enter search criteria to retrieve the assets, and click the Go button.



5. In the Update/Enter Asset Geocodes region, enter values such as
   - Latitude values for the asset:
     - Degrees - Enter a numeric value, do not use decimals, and you can enter a negative value.
     - Minutes - Do not use decimals.
     - Seconds - Enter a numeric value and you can use decimals.
     - Direction - Select N (north) or S (south)
   - Longitude values for the asset:
     - Degrees - Enter a numeric value, do not use decimals, and you can enter a negative value
     - Minutes - Do not use decimals.

- Seconds. Enter a numeric value and you can use decimals.
- Direction - Select E (east) or W (west)

If the geocode information already exists for the queried asset, the information can be modified or deleted.

- Click one of these buttons:
  - **Cancel** - to discard any changes you have made
  - **Save** - to save the changes and stay on the current page
  - **Apply** - to save your changes to the system, and the system returns you to the Mass Asset Entry Geocode page

Viewing Assets on Google Maps

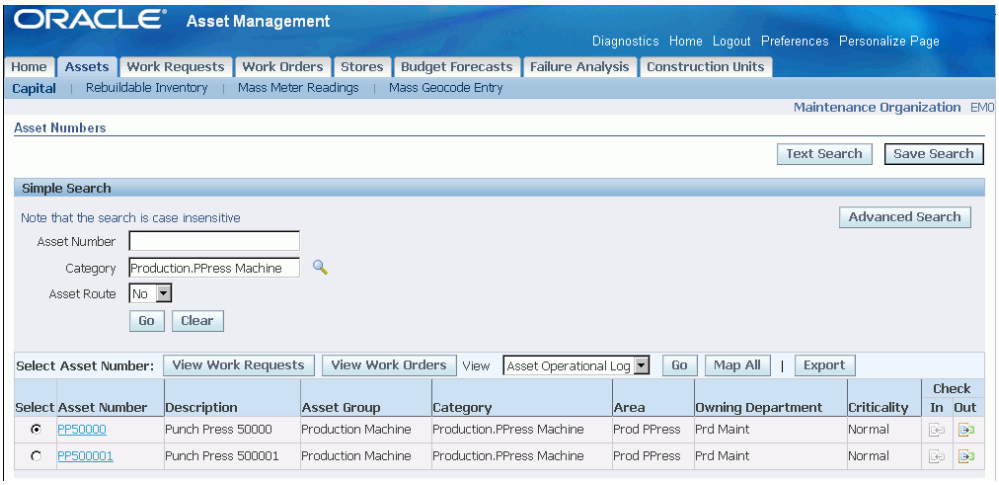
If a responsibility has the appropriate roles and security, users can view the geospatial locations of EAM assets by using the map viewer functionality that is built into Google maps.

Note: If you want to view more than 100 assets on a Google map at one time, use the Asset Search page to query for those assets. It is recommended that you do not view more than 50-100 assets on a Google map at one time.

To view EAM assets on Google maps:

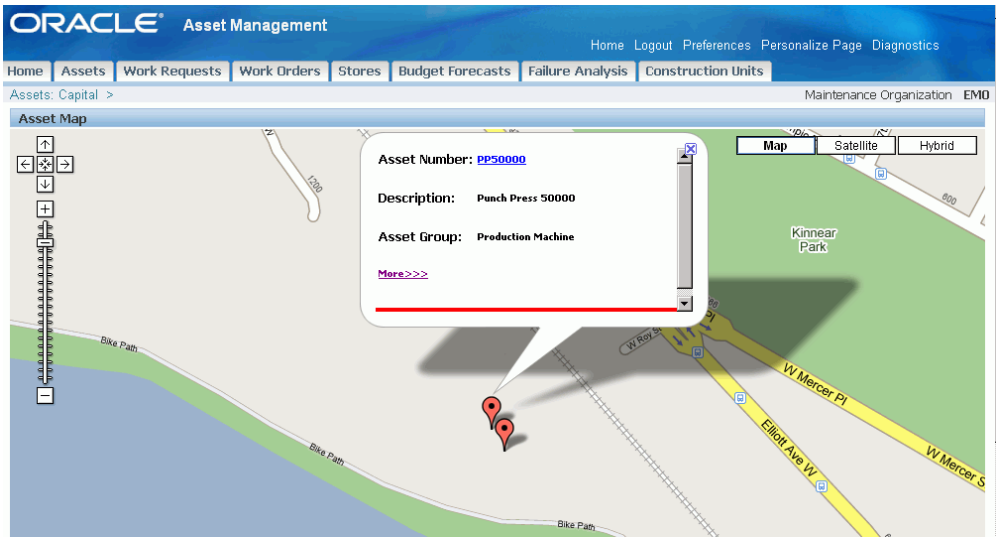
1. Navigate to the Maintenance Super User responsibility, and click the Assets tab.
2. Enter a value in the Asset Number or Asset Category fields, and click the Go button.

   The Asset Numbers Search page appears.



3. Click the **Map All** button.

   The Asset Map page appears, displaying the retrieved assets on a Google map using a map viewer.



4. Click an asset (balloon) icon to view asset details such as Asset Number, Description and Asset Group.

5. Click the More>>> link to view additional details such as:

   - Address of where the asset is located
   - Owning Department
   - Latitude

- Longitude

6. You can also access these other pages from the More>>> link to perform additional actions for the selected assets:
   - Create Work Order
   - Create Work Request
   - View Open Work Orders
   - View Open Work Requests
   - Graphical Hierarchy - to view the asset hierarchy
7. Optionally click the Asset Number links at the bottom of the page to view additional asset details, such as latitude and longitude.

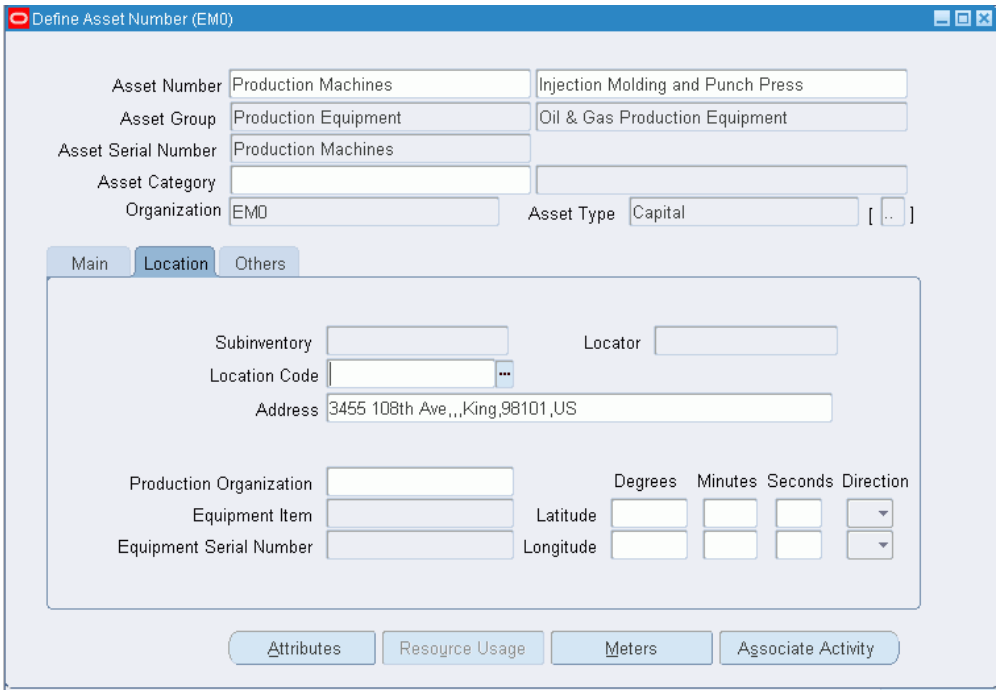
Entering and Viewing Geocode Information Using the EAM Responsibility

You can also enter and view geocode information using the EAM responsibility.

To enter or view geocode information using the EAM responsibility:

1. Navigate to the Enterprise Asset Management responsibility.
2. Click the Asset Numbers link and the Asset Numbers page appears.
3. Enter the search criteria for the asset to which you want to add or view geocode information.
4. Click the **Find** button.

   The Define Asset Numbers page appears.



5. Enter or view the geocode information of the asset in the Location sub-tab.

22

ESRI Integration

This chapter covers the following topics:

- ESRI Integration Overview
- ESRI Integration with Oracle Enterprise Asset Management
- Setting Up the ESRI Profile
- Selecting the ESRI Default Service
- Defining the ESRI Functions
- Entering Geocode Information for EAM Assets
- Locating and Viewing Assets Using the ESRI Map Viewer
- Viewing and Transacting Work Using ESRI

ESRI Integration Overview

You can integrate Oracle Enterprise Asset Management with ESRI to view assets and work spatially on an ESRI map viewer. You can also perform various actions on the assets.

Important: You must purchase a license from ESRI to use this feature.

By using the ESRI map viewer, you can:

- Search and locate geocoded assets on a map.
- Locate work orders associated with assets on a map.
- Perform actions on work orders located on a map.

Important: Mozilla Firefox is the recommended browser to use with the

ESRI integration feature.

ESRI Integration with Oracle Enterprise Asset Management

Prerequisites

❒ You must perform the following setup tasks before you can view and transact work using ESRI:

1. Purchase a license from ESRI for online or server access.
2. Set up the ESRI profiles using the System Administrator responsibility.
3. Enter the geocode information for assets.

   You can add the geocode information using one of the following options:

   - Mass Geocode Entry page (Maintenance Super User > Assets > Mass Geocode Entry)
   - Define Asset Numbers page (Enterprise Asset Management > Asset Numbers > Asset Numbers > Define Asset Number)
   - Mass Geocode Import API

Related Topics

See Setting Up ESRI Profile, page 22-2

See Entering Geocodes for EAM Assets, page 21-1

For more information regarding adding geocode information using the EAM responsibility, see Entering and Viewing Geocode Information Using the EAM Responsibility, page 21-5.

For more information regarding the Mass Geocode Entry API, see Import Geocode API, eAM Open Interfaces and APIs, *Oracle Enterprise Asset Management Implementation Guide* .

Setting Up the ESRI Profile

Perform the following steps to setup the ESRI profile. You must perform this step in order to use the ESRI map viewer.

Important: You must purchase a license to use the online or server

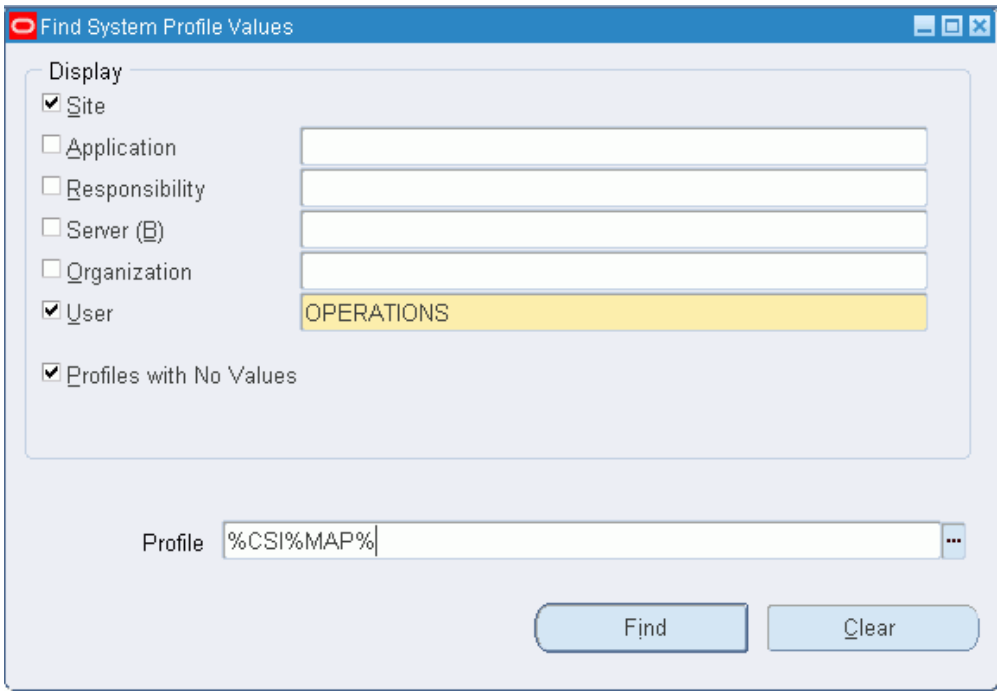
version of the ESRI map viewer to use this feature.

Important: Mozilla Firefox is the recommended browser to use with the ESRI integration feature.

To set up the ESRI profile value:

1. Navigate to the System Administrator responsibility, and access the Find System Profile Values page (System Administrator > System Profiles Values > Find System Profile Values).

2. Perform a query to search for <CSI%MAP%.



3. Select the CSI:Mapviewer Name profile option name.

   The System Profile Values page appears.

4. Select the ESRI value in the User column.

   By default the profile can be updated at the seed level only. You can use the Application Developer responsibility to set the profile as updatable at the User and Responsibility levels.

5. Click the **Save** button.

Setting up the ESRI service

You will need to set up:

- CSI: ESRI Default Service profile option. See Oracle Install Base System Profile Options and Debug Information, *Oracle Install Base Implementation Guide*.
- The ESRI function name.

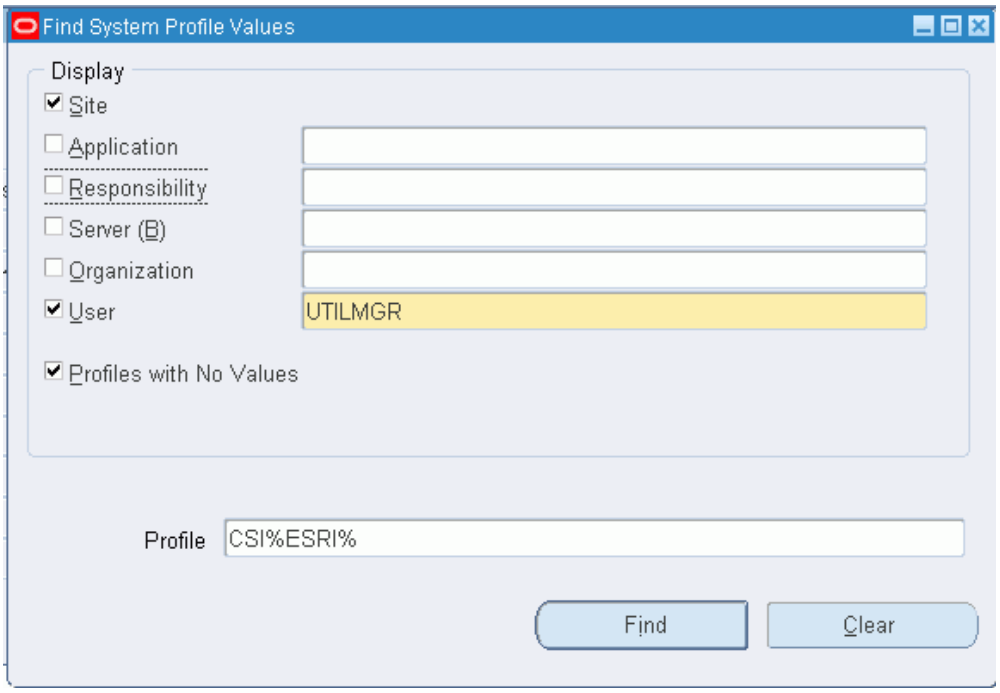
Selecting the ESRI Default Service

Follow these steps to specify the ESRI default service.

Selecting the CSI: ESRI Default Service

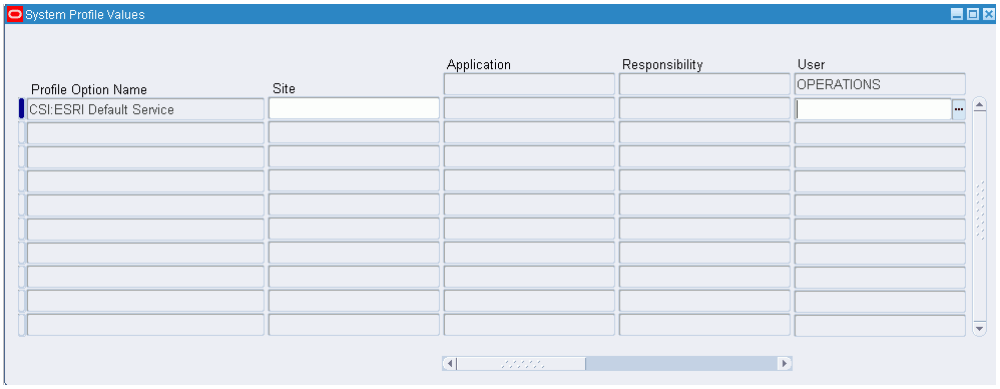
After you have set up the CSI: ESRI Default Service profile option, you must associate the profile to your site, responsibility or user.

1. Navigate to the System Administrator responsibility, and access the Find System Profile Values page (System Administrator > System Profiles Values > Find System Profile Values).

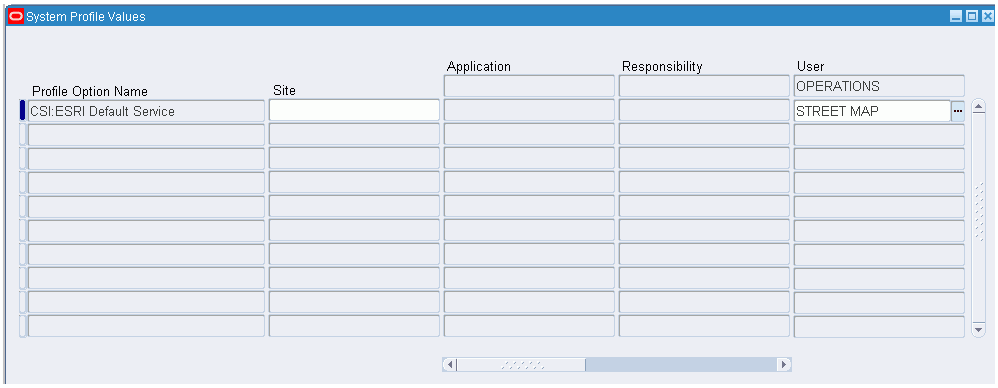


2. Perform a query for CSI%ESRI%.

   The System Profile Values page appears.



3. Select STREET MAP in the User column. This is the seeded service delivered with the application.



4. Save your work.

Defining the ESRI Functions

Follow these steps to define the ESRI functions.

Defining the ESRI Function Information:

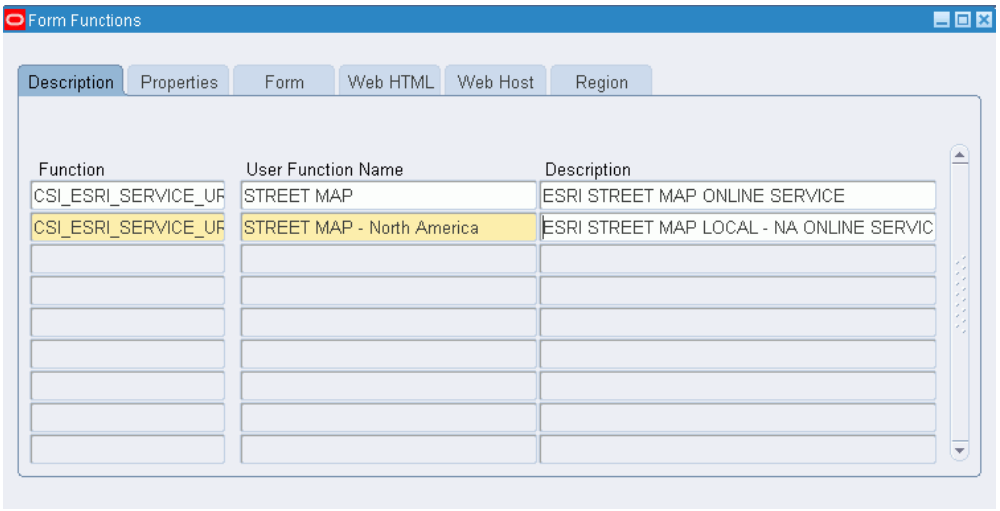
Use the FND functions to register the different services offered by ESRI with Oracle EAM and Oracle Asset Tracking.

1. Navigate to the System Administrator responsibility, and access the Find Functions page (System Administrator > Application > Function).

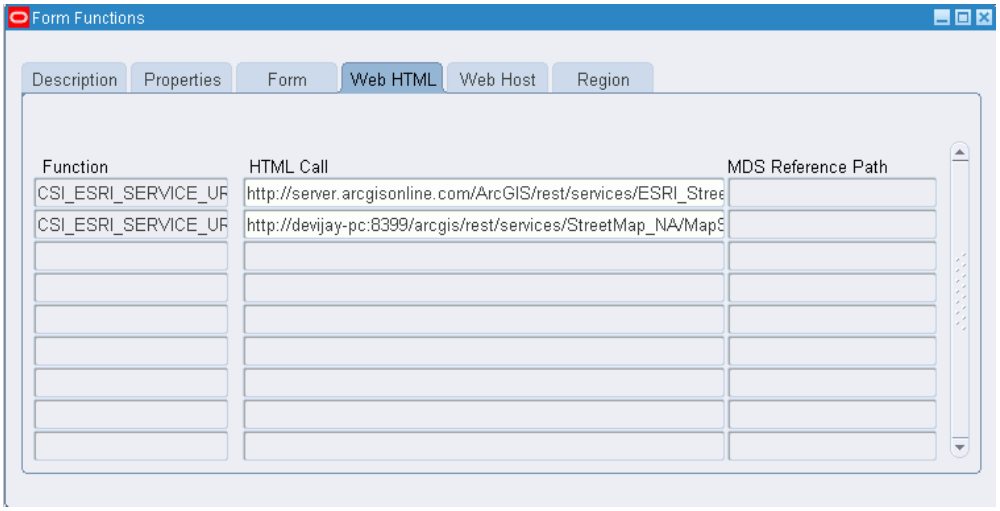
   The Form Functions page appears.

2. Enter a Function Name and User Function Name, such as CSI_ESRI_URL_1.

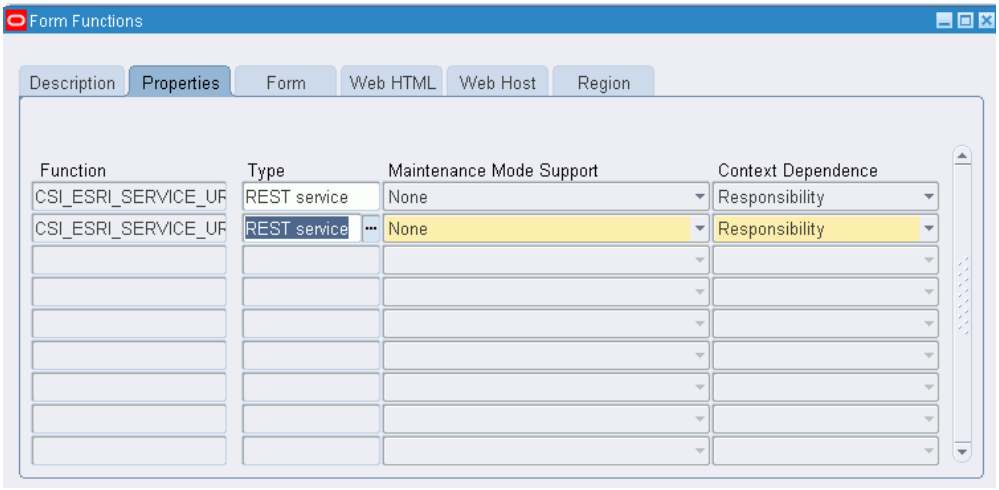
3. Add a Description for the function.



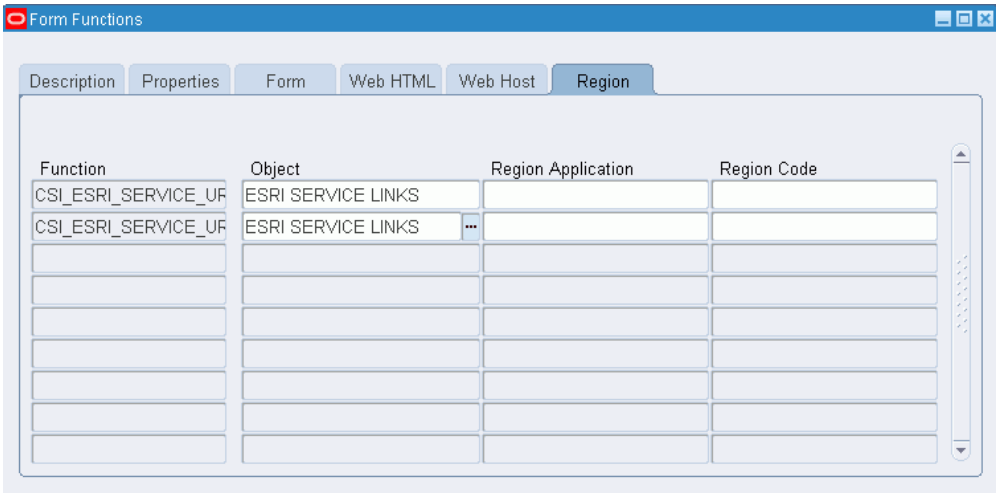
4. Click the Web HTML tab, and enter the ESRI service URL in the HTML Call field.



5. Click the Properties tab, and define the function as 'Rest Service.'



6. Click the Region tab, and associate the function to the object, ESRI Service Links.



7. Save your work.

Entering Geocode Information for EAM Assets

You can enter geocodes for EAM assets by using:

- Mass Geocode Entry page (Maintenance Super User > Home >Assets).

  See Entering Geocodes for EAM Assets, page 21-1.

- Define Asset Numbers page (Enterprise Asset Management > Asset Numbers > Asset Numbers > Define Asset Number).

  See Entering and Viewing Geocode Information Using the EAM Responsibility.,

page 21-5.

- Mass Geocode Import API

  See Import Geocode API, eAM Open Interfaces and APIs, *Oracle Enterprise Asset Management Implementation Guide*

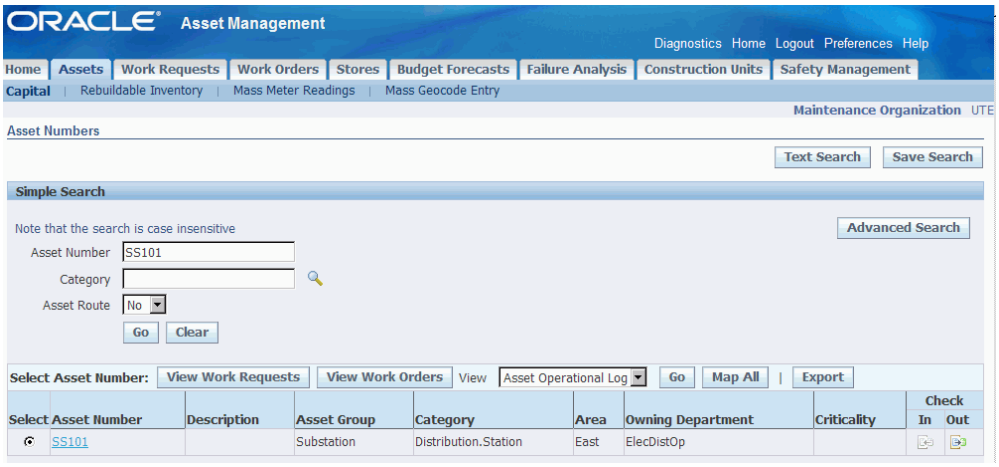
Locating and Viewing Assets Using the ESRI Map Viewer

Use the Asset Numbers page to locate and map assets using the ESRI map viewer.

To locate and map assets using the ESRI map viewer:

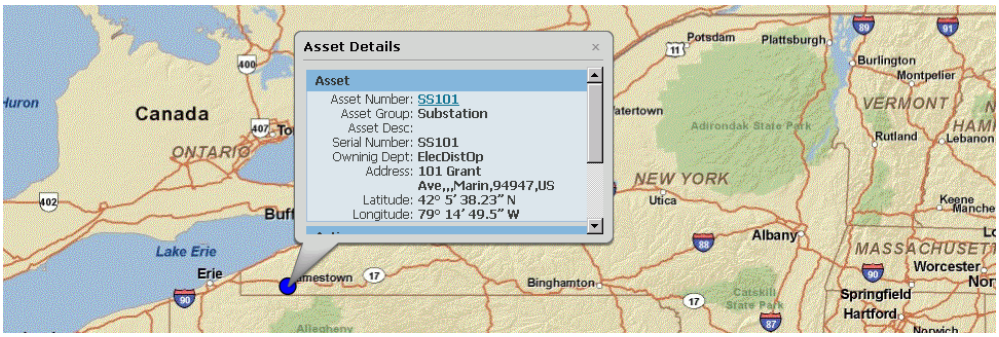
1. Navigate to the Maintenance Super User - Home page.
2. Select an organization, and then click the **Go** button.
3. Click the Assets tab, and then click the Capital link.

   The Asset Numbers page appears.
4. Search for assets that have geocoded location information.
5. Click the **Map All** button.



   A map is rendered with all the assets that met your search criteria. Assets appear as blue colored icons.
6. Double-click near an asset to zoom in.
7. Click an asset icon to view additional information.

   You can view additional asset information by clicking the asset number link.



8. Click the vertical scroll bar to access additional pages to perform actions such as:
   - Create Work Order
   - View Open Work Orders
   - Create Work Request
   - View Open Work Requests
   - Graphical Hierarchy

Viewing and Transacting Work Using ESRI

You can view and transact work when using the ESRI map viewer.

> **Important:** The assets associated with the work orders must have geocoded information in order to map the locations of the work orders using the ESRI map viewer.

You can perform the following tasks on work orders using the ESRI map viewer:

- View asset details.
- View work details.
- Update work orders
- Debrief work orders.
- Assign employees based on operations.

To view and transact work using the ESRI map viewer:

1. Navigate to the Work Orders page (Maintenance Super User > Home> Work

Orders).

2. Select the appropriate organization, and then click the **Go** button.

3. Search for work orders that you want to display using an ESRI map viewer.

   The Work Orders - All page appears.

4. Click the **Map All** button.

   All the work orders associated with geocoded assets are rendered on a map.

5. Click a work order icon to view additional information.

   Work orders displayed on the map are displayed in a table form below the map. You can view additional work order information by clicking the work order link.

6. Click the vertical scroll bar and select the Assign Employee link for an operation.

   The Assign Employee page appears.

7. Select an employee to assign to the operation.

8. Click the Assign Enabled check box.

9. Save your work.

   A confirmation message appears that indicates that the employee has been successfully assigned to the work order.

10. You can also update and debrief work orders, and view asset and work order details.

23

GIS Integration: Custom Mapviewer

This chapter covers the following topics:

- GIS Integration: Custom Mapviewer Overview
- Setting Up the Custom Mapviewer
- Setting Up the Custom Mapviewer Profile Value

GIS Integration: Custom Mapviewer Overview

In addition to using Google maps or ESRI to display assets in Oracle Enterprise Asset Management or Oracle Asset Tracking, you can also use a custom web-based HTML map viewer.

By using this custom map viewer, you can:

- Display geocoded assets on a map.
- Display work orders on a map (work orders must be associated with geocoded assets).
- Transact work orders using the mapviewer, for example, view and create work orders, view and create work requests.

Related Topics

Appendix A: CSI Integration, Implementing the Custom Mapviewer, *Oracle Enterprise Asset Management Implementation Guide*

Setting Up the Custom Mapviewer

Prerequisites

❒ You must perform the following setup tasks before using the custom mapviewer to display assets and transact work using the custom mapviewer.

1. Set up the profile value for the custom mapviewer using the System Administrator responsibility.

2. Define the CSI: Customized Mapviewer Class. See Appendix A: CSI Integration, Implementing the Custom Mapviewer, *Oracle Enterprise Asset Management Implementation Guide*.

3. Enter geocode information for the assets that you want to display on the mapviewer. See Entering Geocodes for EAM Assets, page 21-1 or Entering and Viewing Geocodes Using the EAM Responsibility, page 21-5.

Setting Up the Custom Mapviewer Profile Value

Follow these steps to define the profile value to use with the custom map viewer.

1. Navigate to the System Administrator responsibility, and access the Find System Profile Values page (System Administrator > System Profiles Values > Find System Profile Values).

2. Perform a query to search for <CSI%MAP%>.

3. Select the CSI:Mapviewer Name profile option name.

   The System Profile Values page appears.

4. Select the Custom value in the User column.

5. Save your work.

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Stores

This chapter covers the following topics:

- Stores
- Delivering Material from Stores to a Work Order
- Returning Material to Inventory

Stores

Material issue to Work Orders and returns to Inventory are typical store room functions and are provided by the Stores tab.

There are two activities involved in delivering material from stores to a Work Order. First, a Material Issue Request is generated to request the material to a Work Order. This process is automated upon Work Order release, by selecting a check box in the Enterprise Asset Management Parameters (See: Defining eAM Parameters, page 2-11). The second activity involves Material Issue Verification, and is generated when you access the Stores tab and select material for a Work Order, based on available, unprocessed move orders. A one-step material issue is a substitute for these two activities; a request is not created.

There are two primary methods used to issue material to a Work Order: One Step Issue and Two Step Issue. The One Step Issue method is used to issue one-off or ad hoc material to a work order; this does not involve the prior requesting of material and can execute for both planned and unplanned material. The Two Step Issue method involves two steps. The first step involves the maintenance planner or user requesting material from stores, and the second step involves the stores room person delivering the material to the Work Order.

You can return material to Inventory from a maintenance Work Order. If excess or defective material is issued to a Work order, it needs to return.

The section includes the following topics:

- Delivering Material from Stores to a Work Order, page 24-2

- Returning Material to Inventory, page 24-11

Delivering Material from Stores to a Work Order

There are two activities involved in delivering material from stores to a work order. First, a Material Issue Request is generated (Move Order in Oracle Inventory) to request the material to a work order. You may automate this process upon work order release by selecting the *Enable Material Issue Requests* and *Auto Request Material* check boxes in the Enterprise Asset Management Parameters (See: Defining eAM Parameters, page 2-11). You may override these settings at the work order level. The *Auto Request Material* check box is located in the Material Requirements window. (See: Routine Work Orders, page 3-3). The second activity involves Material Issue Verification (Move Order in Oracle Inventory), and is generated when you access the Stores tab and select material for a work order, based on available, unprocessed move orders. A one-step material issue is a substitute for these two activities; a request is not created.

If the Material Issue Request process is not automated, you can perform a manual request within the Request all Materials page, located on the Work Orders tab.

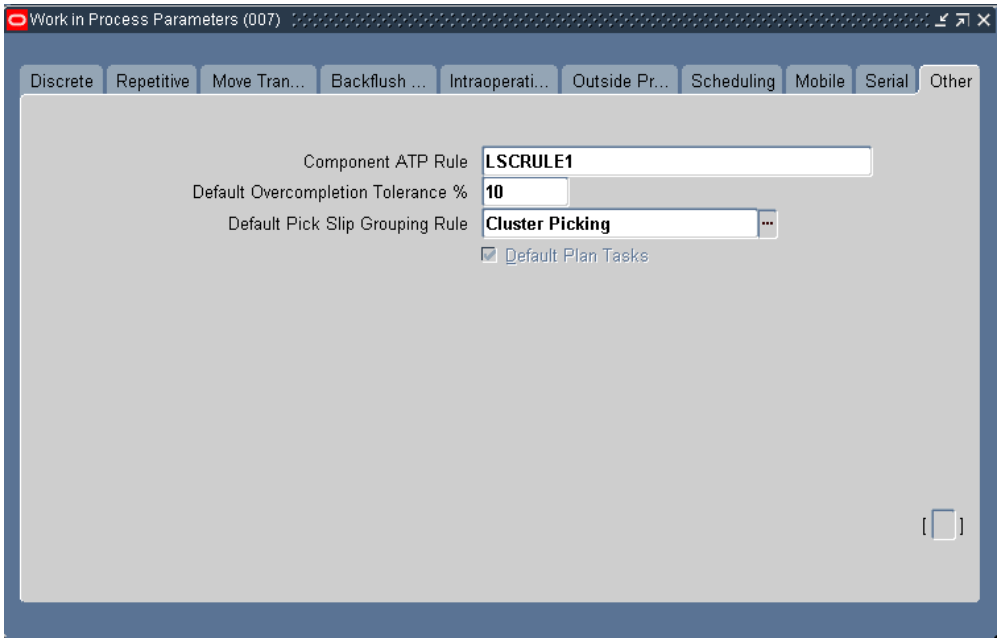
To perform the required setup steps for the two-step material delivery process:

First, define a *Default Pick Slip Grouping Rule* within the WIP Parameters window. This information is used when pick slips are created for the material issue requests, detailing subinventory and locator information. Next, decide if your organization wants to Allocate Serial Numbers. If the answer is no, the quantity of the material issued is allocated and no serial numbers are allocated. The picker enters the picked serial numbers and is not partial to any specific serial numbers. If the answer is yes, serial numbers are allocated during the material request, and then are not available for any other transaction.

1. Navigate to the Work In Process Parameters window.

2. Select the Other tab.

Work in Process Parameters



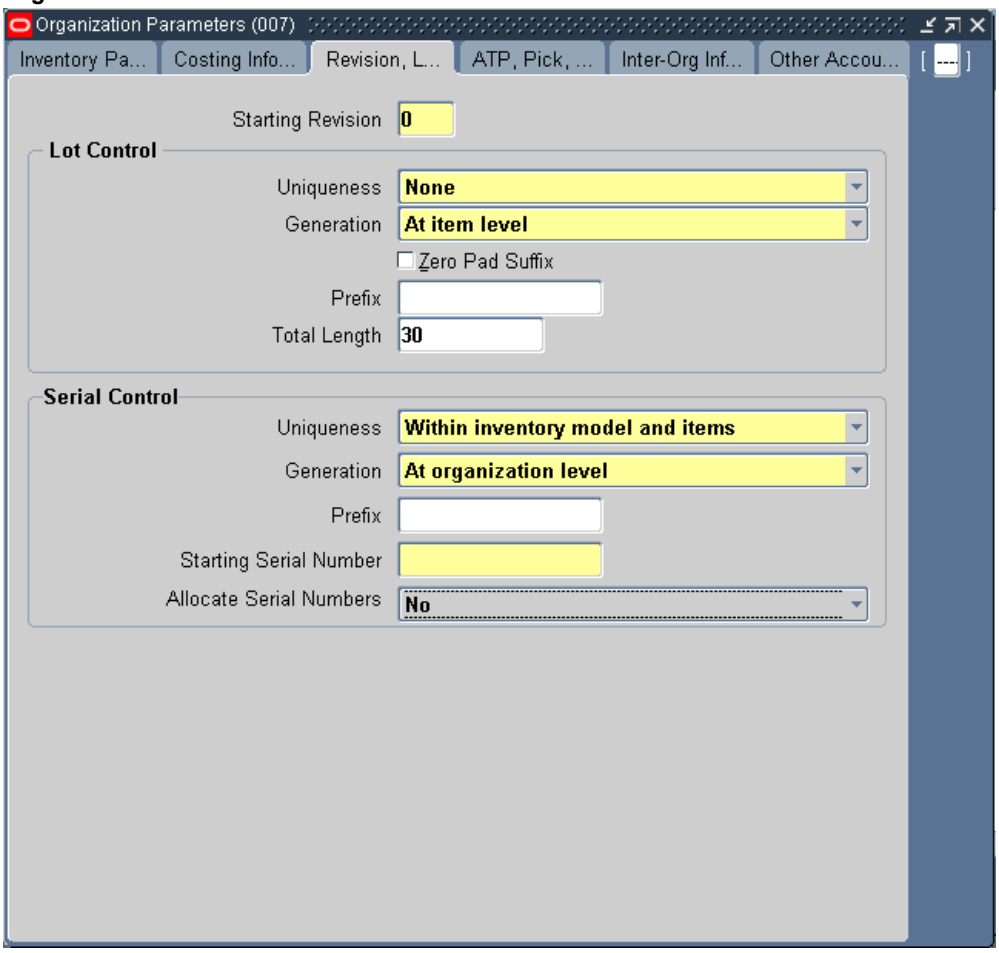
3. Select a Default Pick Slip Grouping Rule. This information is used when pick slips are created for the material issue requests, detailing subinventory and locator information.

4. Save your work.

5. Navigate to the Organization Parameters window.

6. Select the Revision, Lot, Serial tab.

Organization Parameters



7. Select an Allocate Serial Numbers value. If you select No, the quantity is allocated, but individual serial numbers are not. If you select Yes, you can allocate serial numbers when material requests are created. These serial numbers are not available to any other transaction.

   Organizations typically select No, enabling the picker to enter the picked serial numbers. In most cases, the requestor is not partial to specific serial numbers.

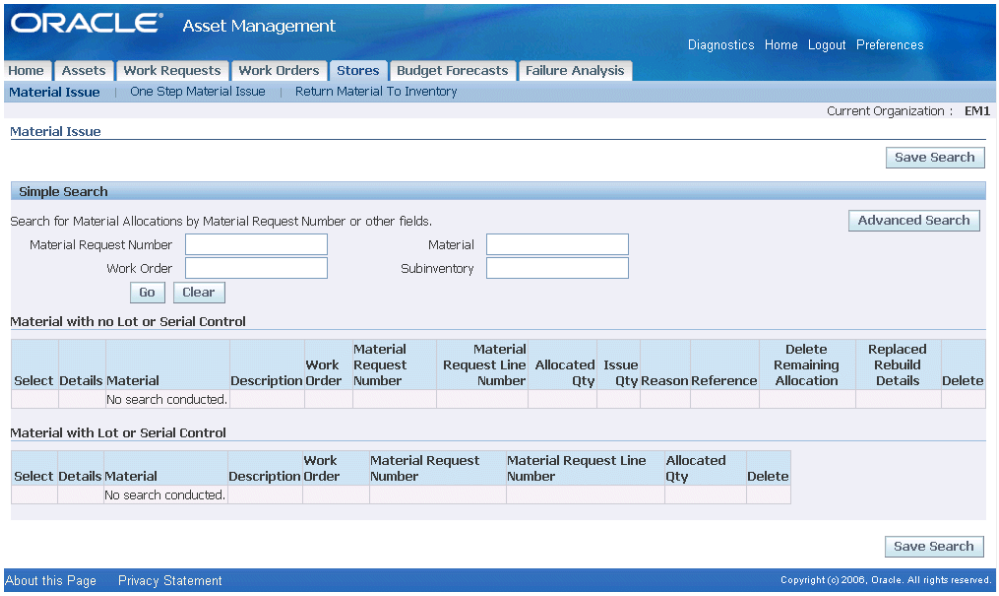
8. Save your work.

To generate a Material Issue Verification:

Assuming that you have set the eAM Parameters to automatically create a Material Issue Request upon work order release, the following procedures execute the Material Issue Request; they physically allocate material to a work order.

1. Navigate to the Stores tab (Maintenance Super User: Stores tab).

Material Issue



2. The system defaults the Simple search mode. Enter at least one of the following fields in both the Simple and Advanced search modes.

   - Optionally enter a Material Request Number to narrow your results to that request.

   - Optionally enter a Work Order Number to narrow your results to only requests belonging to one work order.

   - Optionally enter a specific Material to narrow your results to only Material Issue Requests requiring that Material.

   - Optionally enter a Subinventory to narrow your results to a specific Subinventory.

   - Using the Advanced search mode (Advanced button), optionally enter a material request Line Number to narrow your results to only specified lines on a request.

   - Optionally enter an Operation number to narrow your results to only requests belonging to a specific operation on a work order.

   - Optionally select a value from the Add Another list of values, and then choose Add.

     - Optionally enter a Locator if a Subinventory was selected and requires a

Locator.

- Optionally entered a Created By value. This is the person that created the material request.

3. Choose Go to display Material Issue Request information in the Results region.

   The results region is divided between *Material with no Lot or Serial Control* and *Material with Lot or Serial Control.*

4. The Issue Qty value defaults from the material requirements. You can update it.

5. Optionally select a Reason for the Material Issue.

6. Optionally enter a Reference.

7. Optionally select the Delete Remaining Allocation check box to delete the remaining, unissued quantity, if the Issue Qty is lower than the allocated amount within the material requirements. Otherwise, it will save.

8. For results within the *Material with no Lot or Serial Control* region, optionally select the Replace Rebuild Details pencil icon to specify a Serialized Rebuildable to issue to the current work order. This icon is enabled if the associated work order is for Rebuildable Inventory maintenance. After selected, you can indicate the following within the Replaced Rebuild Details page:

   - *Rebuild Item* - defaults as the current Rebuild Item; you can update it.

   - *Rebuild Serial Number* - optionally enter if you know what serial number is coming out (for serialized rebuilds only).

   - *Rebuild Activity* - the activity you want to associate with the created rebuild work order

   - *Rebuild Work Order* - the name of the work order created for the replaced Rebuildable Item

   If you specify a replaced rebuildable item, a work order generates for the replaced rebuildable item because it is most likely problematic and you can have it repaired. If a serial number is provided for the replaced Rebuildable Item, it is removed from the asset's hierarchy and the configuration history is updated.

   If nothing is specified within the Replaced Rebuild Details page, the replaced rebuild defaults as the same rebuild item that you are issuing. A work order is created for the replaced rebuild item.

9. Optionally select the Delete icon to delete the current material allocation. You might want to use this feature if you wish to free material and use it within the One-Step

process.

10. Optionally for results within the *Material with Lot or Serial Control* region, select the Enter Serial Numbers pencil icon to specify a specific serial number to issue to the current work order.

11. Select the Select check box on the rows that you want to verify (allocate the material to the current work order), then choose Export. The material is now available for the work order.

    Note: Ensure that the requested material is available in subinventories that are enabled for picking. Enabled subinventories might be governed by picking rules. See: .Defining Picking Rules, *Oracle Inventory User's Guide*

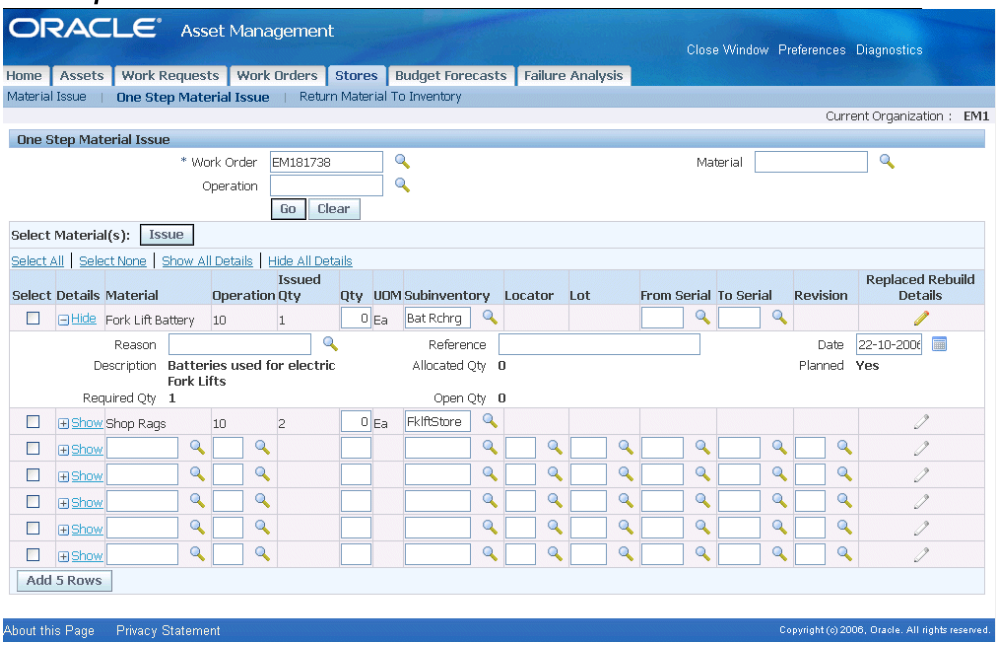
To perform a one step material issue:

A one-step material issue is a substitute for the Material Issue Request and Material Issue Verification activities; a separate request is not created. This is performed if the Enable Material Issue Requests check box is not selected in the eAM Parameters (See: Defining eAM Parameters, page 2-11).

1. Navigate to the Stores tab.

2. Select the One Step Material Issue sub-tab.

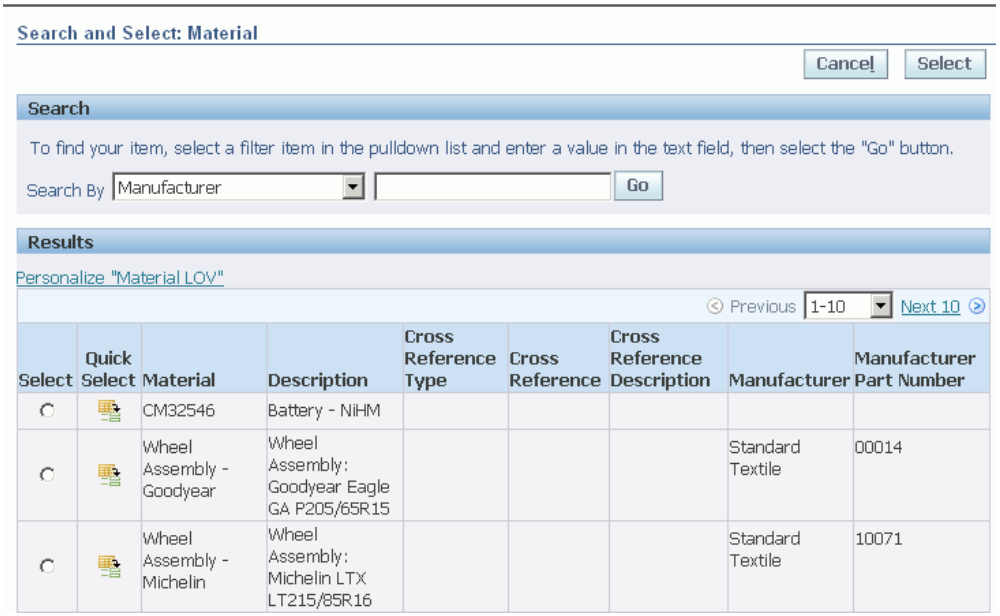
One Step Material Issue



3. Select the work order that you wish to issue material. It must be enabled for material issue requests. See: Routine Work Orders, page 3-3.

   You can search for new inventory items by using one of these options:

   - Item
   - Description
   - Cross Reference
   - Cross Reference Description
   - Manufacturer
   - Manufacturer Part Number



Click the Select radiobutton for the item to be added.

Click the **Select** button.

4. Optionally select the specific Operation to view results on existing one step material issues that were issued to that operation. Only operations existing within the selected work order are available.

5. Optionally select a specific Material if your query is to view the existing one step material issues.

6. Choose Go. All planned material appears in the Select Material(s) region. Planned material is material that exists in the work order material requirements. See: Defining Inventory Material Requirements, page 3-37.

7. Within the Select Material(s) region, optionally select unplanned Material (material not part of the work order material requirements) to issue to the current work order.

   - Select an Operation to which to issue the material. The UOM defaults to the current Material's UOM.

8. Select the Quantity of the material that you are issuing to the work order.

9. Optionally select a Subinventory to pull the material from in Inventory.

10. If you previously selected a Subinventory requiring a Locator, select a Locator.

11. If the current material is lot controlled, select a Lot.

12. If the current material is serial controlled, select From and To Serial numbers.

13. Optionally select a Revision.

14. If the material is Rebuildable Inventory, optionally click the Replaced Rebuild Details button to specify the replacement Rebuildable Item information for the current Rebuildable Item. After selected, you can indicate the following within the Replaced Rebuild Details page:

    - *Rebuild Item* - defaults as the current Rebuild Item; you can update it.
    - *Rebuild Serial Number* - optionally enter if you know what serial number is coming out (for serialized rebuilds only).
    - *Rebuild Activity* - the activity you want to associate with the created rebuild work order
    - *Rebuild Work Order* - the name of the work order created for the replaced Rebuildable Item

    If you specify a replaced rebuildable item, a work order generates for the replaced rebuildable item because it is most likely problematic and you can have it repaired. If a serial number is provided for the replaced Rebuildable Item, it is removed from the asset's hierarchy and the configuration history is updated.

    If nothing is specified within the Replaced Rebuild Details page, the replaced rebuild defaults as the same rebuild item that you are issuing. A work order is created for the replaced rebuild item.

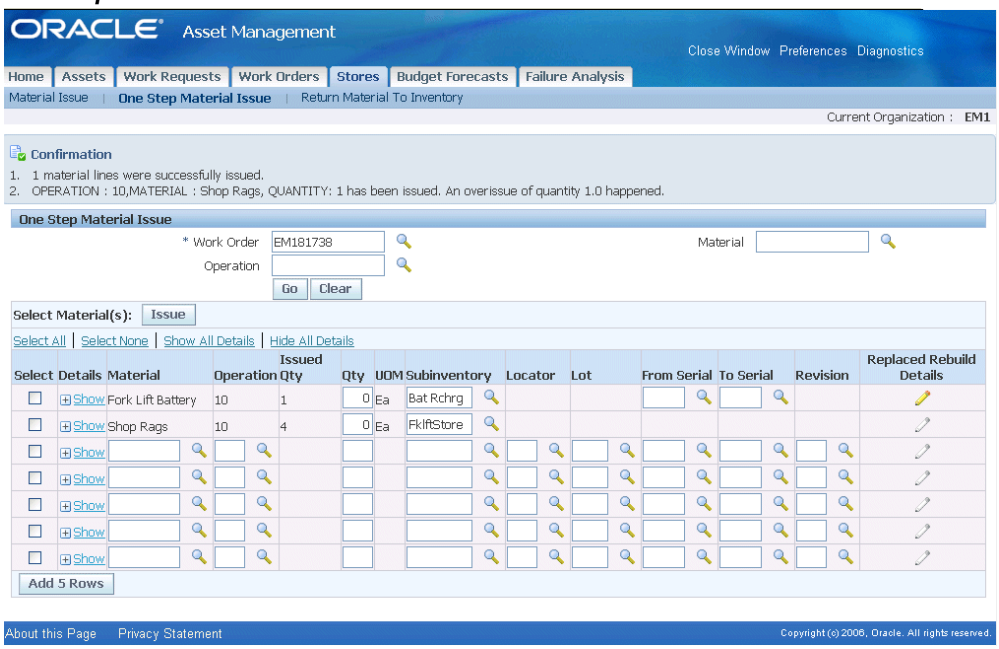
15. Optionally select the Details Show/Hide toggle button.

    1. Optionally select a Reason for the current issue.
    2. Select the Date required for the material to the work order. Today's date and time defaults.
    3. Optionally enter a Reference.

16. Select the Select check box next to the lines you are issuing to the current work order.

17. Choose Issue.

One Step Material Issue Confirmation



Related Topics

Overview of Move Orders, *Oracle Inventory User's Guide*

Returning Material to Inventory

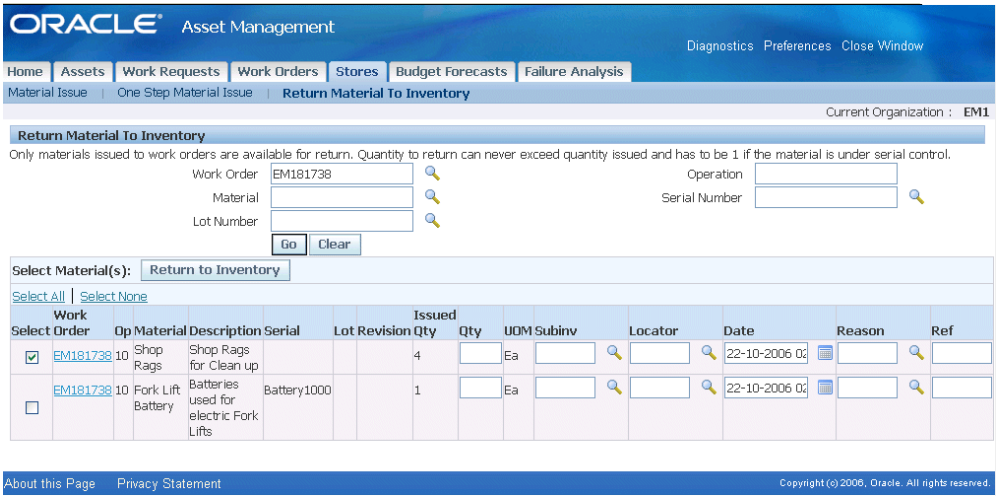
You can return material to Inventory from a maintenance Work Order. If excess or defective material is issued to a Work order, it needs to be returned. Only material issued to Work Orders can return to Inventory. The quantity returned cannot exceed the quantity issued; it must be one if the material is serial controlled.

To return material to Inventory:

1. Navigate to the Stores tab.

2. Select the Return Material To Inventory sub-tab.

Return Material to Inventory



3. Optionally select a Work Order to narrow your results to one Work Order.

4. Optionally select a Material to narrow your results to all Work Orders containing it as a material requirement.

5. Optionally select a Lot Number to narrow your results to all Work Order containing the previous Material with the current Lot Number.

6. Optionally select a specific Operation contained in the previously selected Work Order.

7. Optionally select a Serial Number to narrow your selection criteria to only Work Orders containing it as part of their material requirements.

8. Choose Go.

9. For each Work Order that you wish to return material from, enter a Quantity to return.

10. Select the Subinventory to return the material.

11. If the previous Subinventory requires a Locator, select a Locator.

12. Optionally select a Date to return the material. Today's date and time defaults.

13. Optionally select a Reason code to indicate the Reason the material is not needed.

14. Optionally enter Reference information.

15. Select the Select check box next to all Work Order rows from which material is being returned.

16. Choose Return to Inventory.

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Safety Management

This chapter covers the following topics:

- Safety Management Overview
- Using Safety Management with EAM
- Defining Work Permit Statuses
- Defining Work Permit Types
- Creating a Work Permit
- Updating a Work Permit
- Associating Work Orders to a Work Permit
- Viewing Work Permits
- Printing Work Permits
- Using the Work Permit Approval Workflow

Safety Management Overview

Use the safety management to create work permits mandated by regulatory authorities.

> **Note:** The phrases "work permit" and "safety permit "are used interchangeably.

By using safety management, you can:

- Define work permit statuses.
- Create a work permit.
- Using the Create Permit or Update Permit pages, create work permits or associate existing work permits to a work order.

- Print work permits.
- Use the Work Permit Workflow to route a work permit for approval.

Related Topics

See *Oracle Workflow User's Guide*

Using Safety Management with EAM

Before you can use safety management, you must perform some setup tasks.

Prerequisites

❒ You must perform the following setup tasks before you can use safety management with EAM:

- Verify that the Enable Workflow for Workorders option on the eAM Parameters page has been selected. See Defining eAM Parameters, page 2-11
- Define permit statuses.
- Define permit types.
- Create approval groups and approval rules for work permits, if you are using workflow. See *Oracle Workflow User's Guide*.

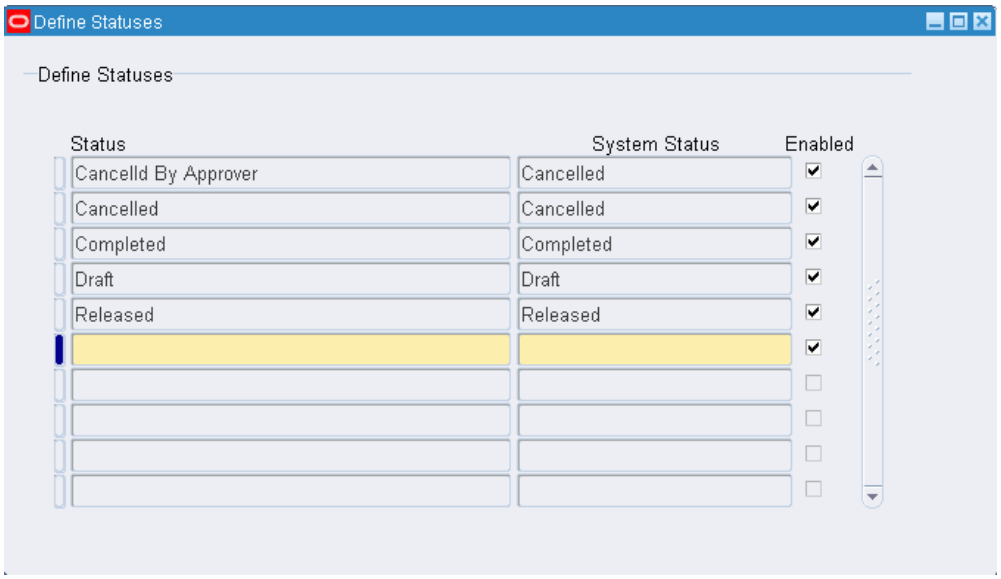
Defining Work Permit Statuses

Follow these steps to define a work permit status.

To define a work permit status:

1. Navigate to the Define Work Permit Status page (Enterprise Asset Management > Permit Statuses).
2. Click the **New** button to add a new status.

   The Define Statuses page appears.



3. Enter the name of the new permit status.
4. Select a System Status value to associate to the new work permit status (required).
5. Select the **Enabled** check box if you want users to be able to use the new work permit status.
6. Save your work.

Defining Work Permit Types

Follow these steps to define a work permit type.

To create work permit types:

1. Navigate to the Manufacturing Lookups page (Enterprise Asset Management > Lookups).

   The Manufacturing Lookups page opens in the add mode.
2. In the Access Level group box, select the **User** value.
3. In the Type field, enter the name of the permit type, WORK_PERMIT_TYPES.
4. In the Meaning field, enter Work Permit Types.
5. In the Application field, enter Enterprise Asset Management.
6. In the Code field, enter the name of the code to be associated with the permit type

such as HAZARD.

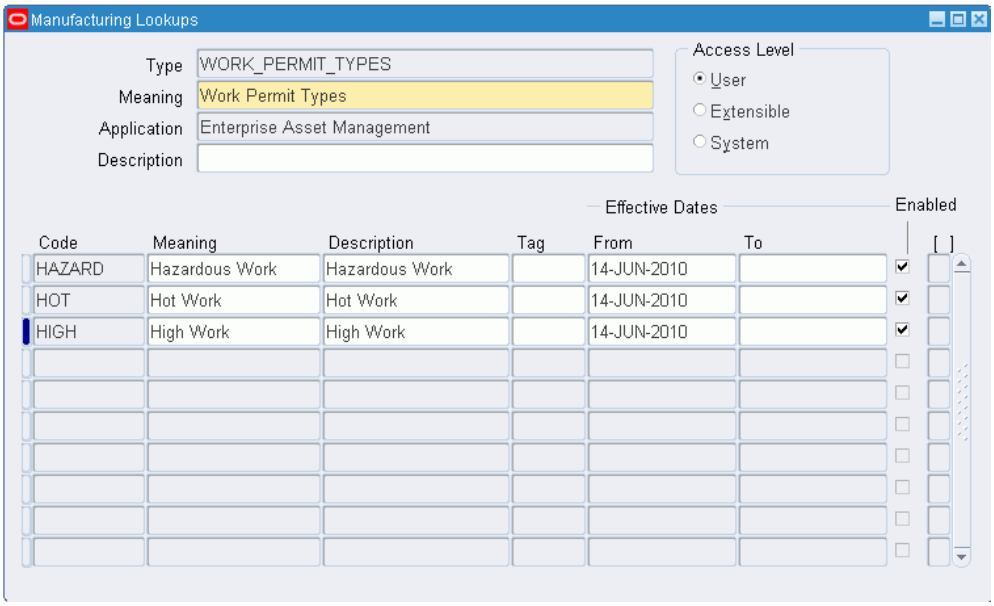
7. Enter the **Meaning** for the permit type such as Hazardous Work.

8. Enter the **Description** for the permit type such as Hazardous Work.

9. Enter the **Effective Dates** for the permit type.

   The **From** (beginning) date will default to the system date, but you can override this value. The **To** (ending) date is optional.

10. Select the **Enabled** check box if you want to enable users to select this permit type.



11. Save your work.

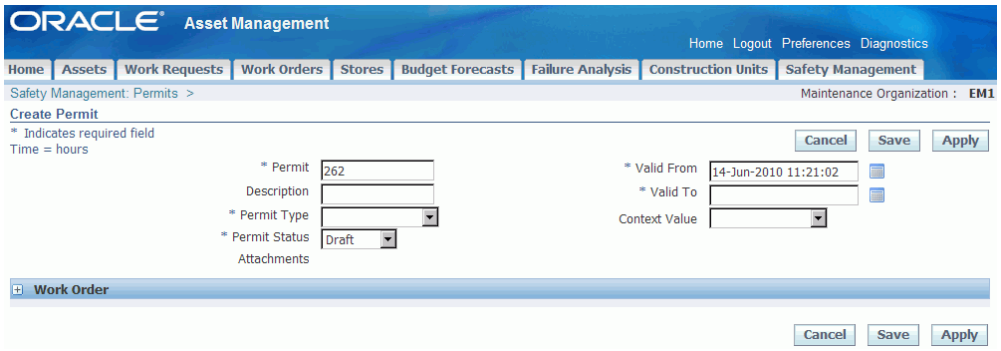
Creating a Work Permit

Use the Create Permit page to create a new work permit.

To create a new work permit:

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).

2. Click the **Create Permit** button and the Create Permit page appears.



3. Enter a permit number or accept the default number in the **Permit** field.

4. (Optional) Enter a description for the work permit.

5. Select a work permit type (required).

6. Select a work permit status (required).

   All new work permits are automatically created in the Draft status, but you can change this value.

7. Enter a date in the **Valid From** and **Valid To** fields (both are required fields).

   The default value in the **Valid From** field is the system date and time that you are creating the work permit, but you can override this value.

8. (Optional) Click the **FlexFields** button to select a flexfield to add to the page.

   See eAM Descriptive Flexfields, *Oracle Enterprise Asset Management Implementation Guide* and *Oracle E-Business Suite Flexfields Guide*.

9. Click the Work Order collapsible section to add work orders to the work permits.

10. Select the work orders to add.

    See Updating a Work Permit, page 25-5 for information regarding adding work orders to a work permit.

11. Click the **Apply** button.

12. You can add attachments to the work permit after you have saved the work permit.

    Click the **Attachments** button to add attachments.

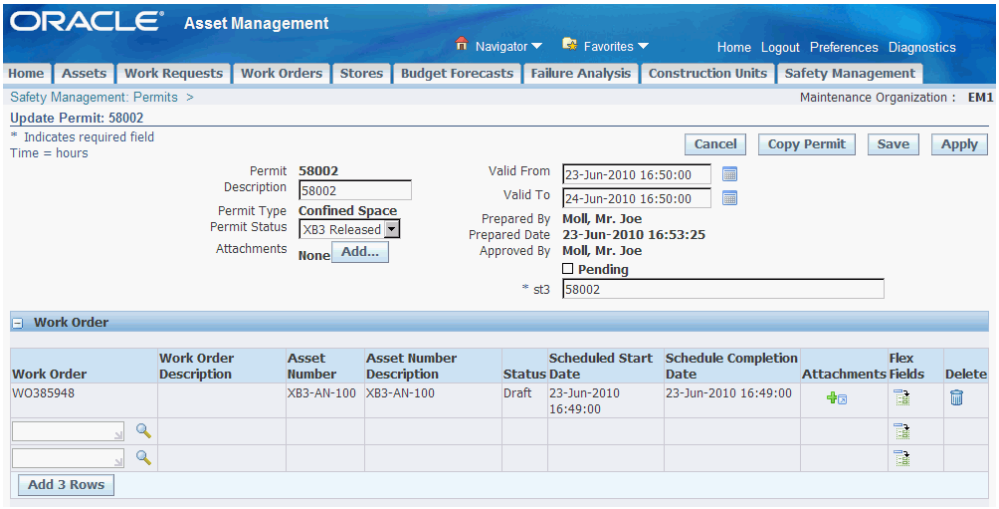
Updating a Work Permit

Use the Update Work Permit page to update a safety permit.

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).

2. Click the **Update Permit** button for the safety permit that you want to update.

   The Update Permit page appears.



3. Revise the permit details.

   You can revise the following information:

   - Description
   - Permit Status

     If you update a work permit to a status of Released (or a user-defined equivalent), a workflow notification is triggered upon save. The Completed status will open a new field in which you can enter the completion date and time.

   - Attachments (add)
   - Valid From and Valid To dates

4. Click the Work Order collapsible section to add work orders to the work permits.

5. Select the work orders to add.

6. (Optional) Click the **Flexfields** button to select additional flexfields to add to the page.

   See eAM Descriptive Flexfields, *Oracle Enterprise Asset Management Implementation Guide* and *Oracle E-Business Suite Flexfields Guide*

7. You can click one of these buttons to perform other actions:
   - **Cancel**: To return to the Safety Permits page without saving any changes.
   - **Copy Permit**: To copy the current work permit to a new permit.
   - **Save**: To save your changes and remain on the Update Permit page.
   - **Apply**: To save your changes and return to the Safety Permits page.

Associating Work Orders to a Work Permit

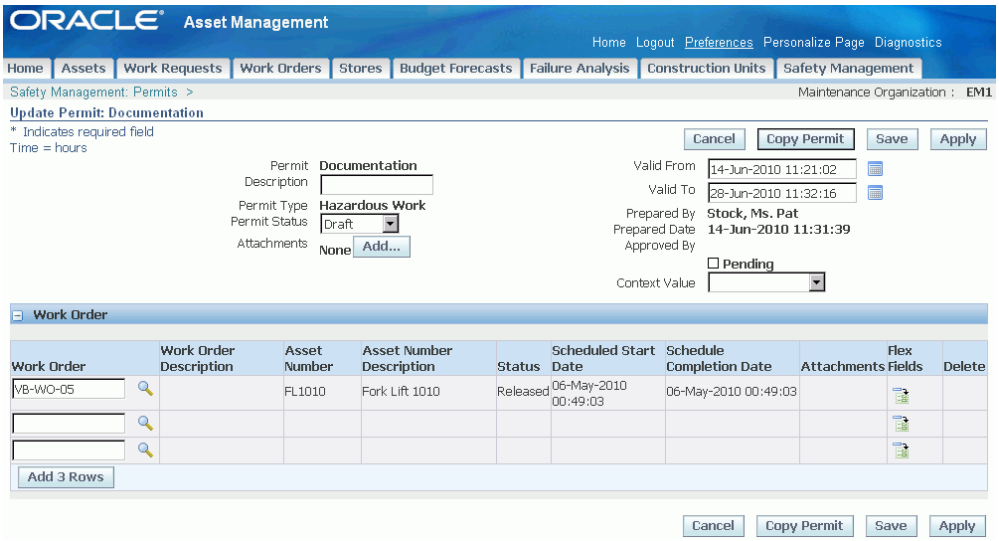
You can add (associate) one or more work orders to a work permit when you create the work permit or when you update the work permit.

> **Important:** You can add (associate) existing work orders only to a work permit. You cannot create a new work order through the work permit.

To associate (add) a work order to a work permit:

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).
2. Click the **Update Permit** button for the safety permit to which you want to add a work order.

   The Update Permit page appears.
3. Enter the work order number in the Work Order field, or click the search button.
4. Search and select the appropriate work order to add.



5. Repeat these steps to add additional work orders to the safety permit. Click the **Flexfields** button to add additional flexfields to the page.

   See eAM Descriptive Flexfields, *Oracle Enterprise Asset Management Implementation Guide* and *Oracle E-Business Suite Flexfields Guide*.

6. You can click one of these buttons to perform additional tasks on the safety permit:

   - **Cancel**: To return to the Safety Permits page without saving any changes.
   - **Copy Permit**: To copy the current work permit to a new permit.
   - **Save**: To save your changes and remain on the Update Permit page.
   - **Apply**: To save your changes and return to the Safety Permits page.

7. Save your work.

Viewing Work Permits

Use the View Work Permits page to view existing safety permits.

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).

2. Click the link for the safety (work) permit that you want to view.

   The View Permit page appears.

3. View the permit details.

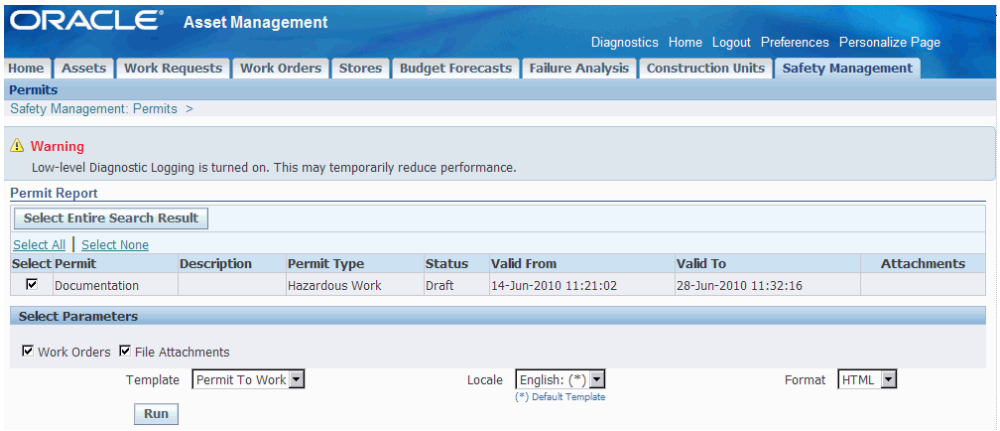
4. You can click one of these buttons to perform other actions:
   - **Cancel**: To return to the Safety Permits page.
   - **Update Permit**: To make changes to the permit.
   - **Copy Permit**: To copy the current work permit to a new permit.

Printing Work Permits

You can print a work permit.

1. Navigate to the Safety Permits page (Maintenance Super User > Home > Safety Management > Permits).
2. Click the **Print Permit** button for the work permit that you want to print.

   The Permit Report page appears.



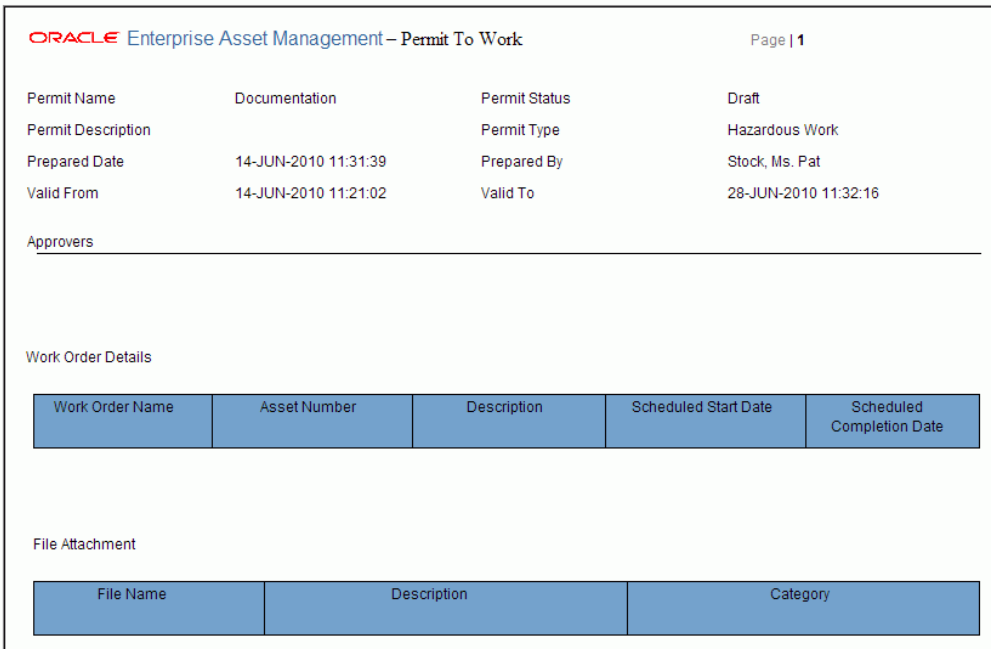
3. Select the report parameters that you want to include such as Work Orders and File Attachments.
4. Select a template (if applicable).
5. The Locale defaults to the template (if applicable), and this describes the language in which you want the permit to be printed.
6. Select one of the following report formats:
   - Excel
   - HTML
   - PDF

- RTF

7. Click the **Run** button to print the work permit.

8. View the printed work permit.

HTML Work Permit


ORACLE Enterprise Asset Management – Permit To Work

Page | 1

Permit Name	Documentation	Permit Status	Draft
Permit Description		Permit Type	Hazardous Work
Prepared Date	14-JUN-2010 11:31:39	Prepared By	Stock, Ms. Pat
Valid From	14-JUN-2010 11:21:02	Valid To	28-JUN-2010 11:32:16

Approvers

Work Order Details

Work Order Name	Asset Number	Description	Scheduled Start Date	Scheduled Completion Date

File Attachment

File Name	Description	Category

Using the Work Permit Approval Workflow

You can use Oracle Workflow to use the Work Permit Workflow.

Before you can use the Work Permit Workflow:

1. Verify that the Enable Workflow for Workorders option on the eAM Parameters page has been selected. See Defining eAM Parameters, page 2-11.

   This option will enable the Work Permit Workflow to be triggered for work permits. See

2. Create approval groups and approval rules for work permits. See *Oracle Workflow User's Guide*.

The following table details the types of notifications that are associated with the Work Permit Workflow:

Description	Notifies	Response	Message
Notification to approver	AME Approver	Approve/Reject/Reassign	Work Permit, Work Permit Name needs your approval for release.
Notification to originator when work order is approved	Originator	None	Work Permit, Work Permit Name has been approved for release.
Notification to originator when work order is rejected	Originator	None	Work Permit Work Permit Name has been rejected for release.

Related Topics

See Oracle Applications Workflow for more information about adding approval groups.

26

Failure Analysis

This chapter covers the following topics:

- Failure Analysis Overview
- Defining Failure Codes and Sets
- Collecting Failure Information
- Analyzing Failure Information

Failure Analysis Overview

Failure Analysis enables you to track an asset failure from the time it is reported until its resolution. Statistics from your collected failure data provide you with information on why an event occurs and causes your asset failure. You can then take the necessary steps to eliminate that event. Additionally, you can use the failure statistics, among others, to help you formulate your Reliability-Centered Maintenance (RCM) program. Failure hierarchies that support multiple-level failure reporting provide effective root cause and reliability analysis. For specific Asset Groups or Rebuildable Items, each failure (problem) has a defined number of root causes, with each root cause having a defined number of resolutions (remedies).

When failure is reported, each work order represents one single failure occurrence (event) for the asset specified on the work order. The cost to repair an asset that fails to a normal, operational state is assumed to be the charges accumulated in the work order that is associated with the failure. If the repair is outsourced to an external party and requisitioned on a purchase order, a work order must be created to collect the repair costs for Failure Analysis to pick it up.

Failure Analysis topics include the following:

1. Defining Failure Codes and Sets, page 26-2
2. Collecting Failure Information, page 26-5
3. Analyzing Failure Information, page 26-5

Defining Failure Codes and Sets

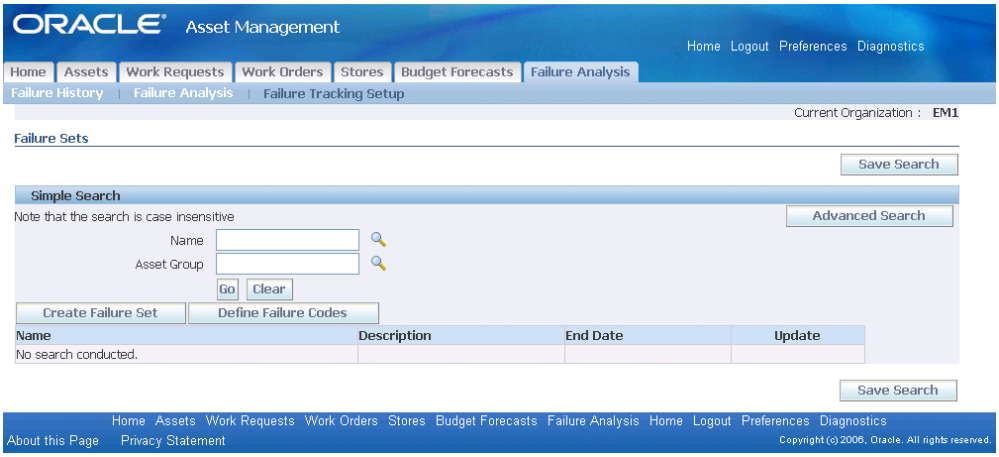
A Work Order represents one single failure occurrence (event) for the asset specified on the Work Order. There are three main Failure Code Types: Failure Code, Cause Code, and Resolution Code. When creating a Work Order, these Failure Codes are specified on the Work Order, such as Compressor Shaft Damage (Failure), Vibration (Cause), and Replacement and Re-calibration (Resolution), respectively.

> **Note:** You can optionally update these codes' meanings. See: Failure Code Types, page 2-39.

User-defined Failure codes, Cause codes and Resolution codes are organized into multiple tree structures called Failure Code Sets, which are then assigned to Asset Groups. Each set provides Asset Group-specific information on the possible failures of an Asset Group, the possible causes of each failure, and the possible resolutions for each cause. Assets within an asset group inherit the assigned Failure Code Set. At the work order level, Failure Tracking codes are entered to report a failure, its cause, and resolution. The assigned Sets provide a disciplined methodology to collect failure data on assets. Inquiries on failure data are performed, based on user-entered criteria, such as date range, asset groups or assets, departments, or areas. Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR) are calculated with each inquiry.

To define failure codes:

1. Navigate to the Failure Sets page (Maintenance Super User: Failure Analysis tab > Failure Tracking Setup sub-tab).



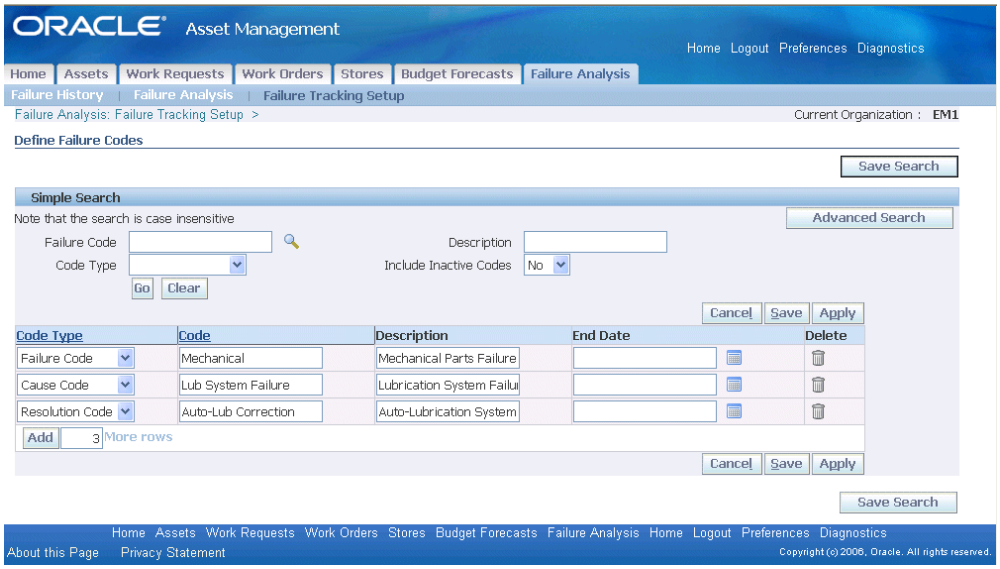
2. Choose Define Failure Codes.

3. Select the appropriate Code Type, such as Failure Code (See: Failure Code Types, page 2-39).

4. Enter the Code, for example, Mechanical.

5. Enter the Code's Description, for example, Mechanical Parts Failure.

6. Optionally enter an End Date, to apply an expiration for the current code.



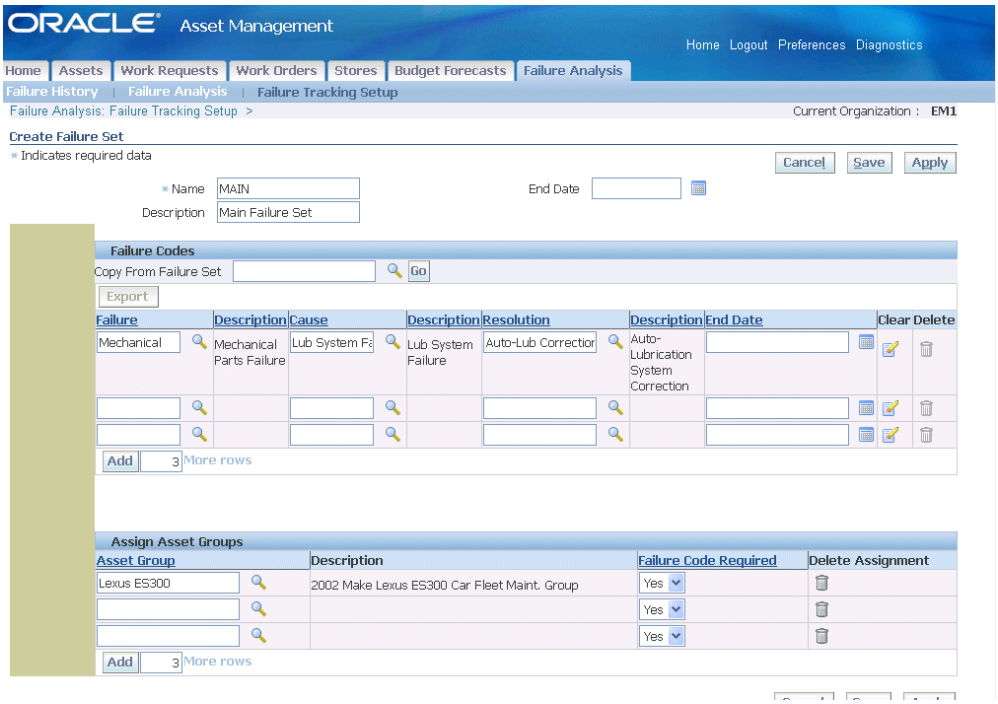
7. Optionally choose Save to create the codes and remain on the current page.

8. Choose Apply to create the codes and return to the previous page.

To define a failure set:

1. Navigate to the Failure Sets page.

2. Choose Create Failure Set.



3. Enter the Name for the Failure Set.

4. Optionally enter a Description for the Failure Set.

5. Optionally enter an End Date, to apply an expiration for the current Failure Set.

6. Optionally select an existing Failure Set from the *Copy From Failure Set* list of values. If the Failure Set that you are creating is similar to an existing Failure Set, you can copy failure codes from an existing Failure Set, aiding in multiple Failure Set entry. To copy the failure hierarchy from another Failure Set, you can use the *Copy From Failure Set* field. The list of values includes active Failure Sets. Click Go and the failure combinations of the selected Failure Set appear. You can delete any unwanted combinations.

7. Select a Failure code, and the Description default value appears. See: Defining Failure Codes and Sets, page 26-2.

8. Select a Cause code, and the description appears. See: Defining Failure Codes and Sets, page 26-2.

9. Select a Resolution code, and the description appears. See: Defining Failure Codes and Sets, page 26-2.

10. Optionally enter an End Date, to apply an expiration for the current group of codes.

11. Assign the current Failure Set to an Asset Group or Rebuildable Item. Asset Numbers or Rebuildable Serial Numbers within an Asset Group or Rebuildable Item, respectively, inherit the assigned Failure Code Set.

    1. Select an Asset Group from the list of values. The Asset Group's Description defaults from its definition.

    2. Select whether Failure Code entry is required on Work Orders created for assets within the current Asset Group. For example, select Yes from the *Failure Code Required* list of values to ensure that Failure Codes are entered when creating Work Orders for assets within the current Asset Group. The *Failure Code Required* value defaults to the work order, but you can optionally change it.

12. Optionally choose Save to create the Failure Set and remain on the current page.

13. Choose Apply to create the Failure Set and return to the previous page.

Collecting Failure Information

Failure reporting for an asset is performed by entering failure tracking codes, when creating the failure work order or when completing it. Asset failure history is available after the Work Order is completed. This information assists in the maintenance management decisions and provides data for reliability analysis.

Related Topics

Creating Work Orders, page 20-36

Completing Work Orders, page 20-65

Analyzing Failure Information

You can analyze failures that are reported against assets with the Failure History and Failure Analysis pages. The Failure History page displays detailed failure data, reported at the work order level. The Failure Analysis page aggregates failure data, based on the user-selected View By and displayed measures, such as Mean Time Between Failures (MTBF), and Mean Time To Repair (MTTR).

The three main measurements for asset maintainability and reliability are:

1. Mean Time Between Failures (MTBF): the average elapsed time between failures. MTBF is the duration in days between an asset's two failure dates, and is a reliability metric indicating how often an asset fails.

2. Mean Time To Repair (MTTR): the average time between when an asset fails (reported failure date) and when it is repaired to its normal operating condition

(actual work order completion date). MTTR is a maintainability metric, indicating how fast repair is completed after a failure is reported.

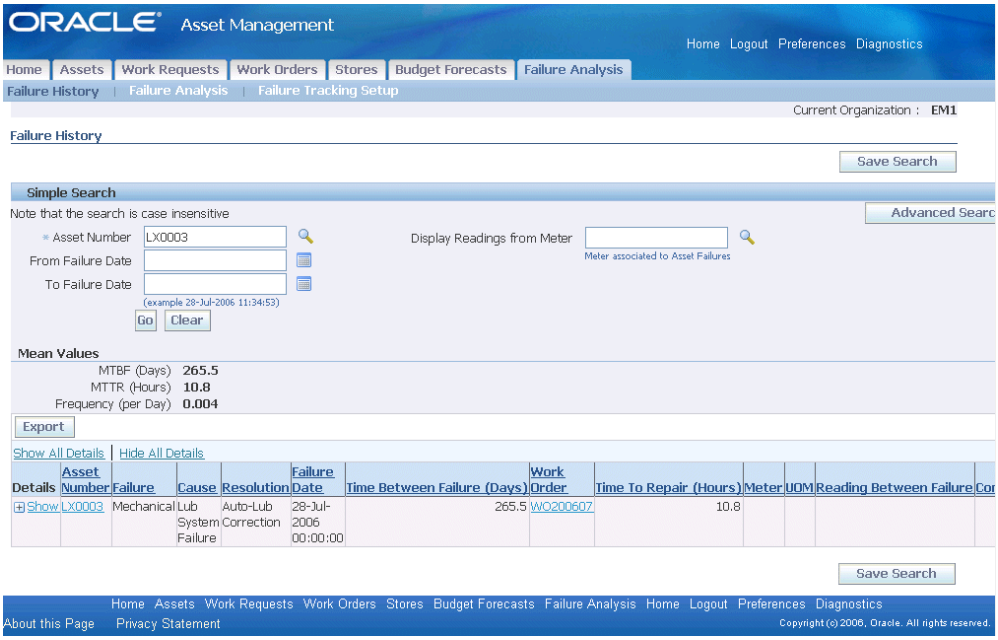
3. Mean Time Between Repairs (MTBR): the average duration when an asset is in acceptable functional condition. The calculation is as follows:

   MTBR = MTBF – MTTR

   Note: Only completed work orders are included in Failure History and Failure Analysis.

To analyze failure history information:

1. Navigate to the Failure History page (Failure Analysis tab > Failure History sub-tab).



2. Enter an Asset Number (or Rebuildable Serial Number).

3. Optionally enter a range of failure reporting dates.

4. If there is a Primary Failure Meter specified for the Asset, its readings automatically appear in the Search Result table. However, you can select any Required meters that are associated with the asset from the *Display Readings from Meter* list of values, to have the selected meter's readings appear in Failure History. This field is enabled only for the Simple Search, with a specified Asset Number.

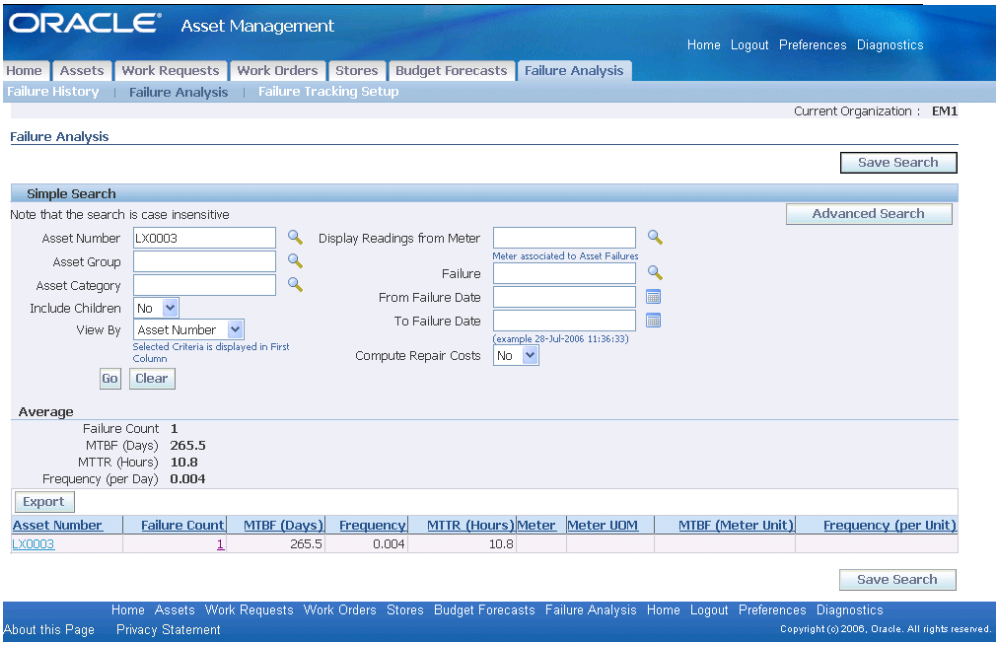
5. Choose Go.

Additional Information: When calculating Mean Costs to Repair, all work orders that are associated with the failure results are included, if their costs are in the same currency. An asset can move between organizations if work orders have multiple currencies. All work order costs that are expressed in a currency that is different than the current maintenance organization's primary currency are excluded. A warning icon appears, informing you that there are repair costs that are not included because they are not in the current maintenance organization's currency.

To analyze failure information:

Based on your search criteria, work order failure data is filtered for analysis. The *View By* selection determines how the failure data is aggregated for the MTBF, MTTR, and Mean Cost To Repair calculations. If there is a Primary Failure meter or if a Required meter is selected, the Mean Readings Between Failures are also calculated. You can compare MTBF, frequency, and MTTR calculations by Asset Number, Asset Group, Asset Category, or Failure.

1. Navigate to the Failure Analysis page (Maintenance Super User: Failure Analysis tab > Failure Analysis sub-tab).



2. Optionally enter an Asset Number (or Rebuildable Serial Number).

3. Optionally enter an Asset Group (or Rebuildable Item).

4. Optionally select an Asset Category of the selected Asset Group/Rebuildable Item that is assigned to the current organization

5. The Include Children option indicates whether children assets should also be included within the inquiry results, even if they do not fit the search criteria.

6. Optionally select a *View By* value. You can view failure information by Asset Number, Asset Group, Asset Category, or Failure Code.

   Note: Use Advanced Search if you want to search by other criteria such as Area. You cannot add additional View By values.

7. Optionally select a *Display Readings from Meter* value to display meter readings from a non-primary meter. Meters that are associated with the selected asset, having the Required check box selected, and that are identified as a non-primary meter, are available for selection. By default, readings from the primary meter, if it exists, appear. This field is enabled only for the Simple Search, with a specified Asset Number and if you *View By* Asset Number.

8. Optionally select a Failure code to further narrow your failure results by code.

9. Optionally enter a range of failure reporting dates.

10. Choose Go. The number of failure occurrences appear. A hyperlink from the Failure Count value provides a drill down to the Failure History information.

27

Reports and Processes

This chapter covers the following topics:

- Activity Cause Report
- Department Actual Cost Report
- Work Order Cost Report
- EAM Weekly Schedule Report
- Load Production Equipment Maintenance Downtime
- Maintenance Work Order Detail Report
- Material Issue Request Pick List Report
- Retrieve Timecard Data from OTL to EAM
- Simulate Transfer Shop Floor Invoice Variance
- Shop Floor Invoice Variance Report

Activity Cause Report

Use the Activity Cause Report to report on reasons for your assets' failures, reported by Department, or Asset Number. An Activity Cause is a reason for an asset's failure, for example, Preventive, Normal Wear, Rework, and Breakdown. This information enables you to understand the dynamics that affect an asset's ability to perform. They establish critical data that can be used for reporting and analysis of asset failure causes and the frequency of such conditions. Asset Cause Codes are referenced when setting up an Activity (See: Defining Activities, page 2-81 and Activity Causes, page 2-25).

Report Submission:

1. In the Submit Requests window, select Activity Cause Report from the Name list of values.

Report Parameters

Report Type

Select By Department or By Item Type (Capital Asset or Rebuildable Inventory) to indicate whether the report displays information relative to the Owning Department or Asset Group, respectively.

Period From

Enter the beginning period, for a data range, to indicate the starting point of time for which the report encompasses information. See: Period Types, *Oracle General Ledger User's Guide*, Defining Period Types, *Oracle General Ledger User's Guide* , and Adding Periods to a Calendar, *Oracle General Ledger User's Guide*.

Period To

Enter an ending period, for a data range, to indicate the ending point of time for which the report encompasses information. See: Period Types, *Oracle General Ledger User's Guide*, Defining Period Types, *Oracle General Ledger User's Guide*, and Adding Periods to a Calendar, *Oracle General Ledger User's Guide*, *Oracle General Ledger User's Guide*.

Currency

Select the Currency. See: Defining Currencies, *Oracle General Ledger User's Guide*.

Exchange Rate

Select the Exchange Rate. See: Understanding Multiple Reporting Currencies, *Oracle General Ledger User's Guide*.

Department From

Optionally, select a beginning department, for a data range, to indicate the beginning department for which the report encompasses information. This parameter is enabled if you selected By Department in the Report By parameter.

Department To

Optionally, select an ending department for a data range to indicate the ending department for which the report encompasses information. This parameter is enabled if you selected By Department in the Report By parameter.

Item Type

Select an Item Type. Valid values are Asset Items only, Rebuild Items only, and Asset and Rebuild Items.

Maintained Item From

Optionally select the Maintained Item From field to display a System Items window that provides Low and High fields. You can enter the Asset Item data range within the Low and High fields, which populates the Asset Item From and Asset Item To fields, respectively.

Maintained Item To

Optionally select the Maintained Item To field to display a System Items window that provides Low and High fields. You can enter the Asset Item data range within the Low and High fields, which populates the Maintained Item From and Maintained Item To fields, respectively.

Maintained Unit From

Optionally, select a beginning Maintained Group, for a data range, to indicate the beginning Maintained Group for which the report encompasses information.

Maintained Unit To

Optionally, select an ending Maintained Group, for a data range, to indicate the ending Maintained Group for which the report encompasses information.

2. Choose OK.

3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Department Actual Cost Report

Use the Department Actual Cost Report to determine the actual costs charged to an Owning Department for a specified period of time.

Report Submission:

1. In the Submit Requests window, select EAM Weekly Schedule report from the Name list of values.

Report Parameters

Report Type

Select Summary or By Department Total.

- *Summary:* The one report total reflects the actual cost for all Departments within the selected Department data range (Department From and Department To fields). If Departments were not selected within the Department From and Department To fields, the report total reflects the actual cost for all Departments.

- *Department Total:* The report reflects actual cost totals for all Departments, separately, within the selected Department data range (Department From and

Department To fields). If Departments were not selected within the Department From and Department To fields, the report totals reflect the actual costs for all Departments.

Department From

Optionally select a beginning department, for a data range, to indicate the beginning department for which the report encompasses information.

Department To

Optionally select an ending department for a data range to indicate the ending department for which the report encompasses information.

Period From

Enter the beginning period, for a data range, to indicate the starting point of time for which the report encompasses information. See: Period Types, *Oracle General Ledger User's Guide*, Defining Period Types, *Oracle General Ledger User's Guide*, and Adding Periods to a Calendar, *Oracle General Ledger User's Guide*.

Period To

Enter an ending period, for a data range, to indicate the ending point of time for which the report encompasses information. See: Period Types, *Oracle General Ledger User's Guide*, Defining Period Types, *Oracle General Ledger User's Guide*, and Adding Periods to a Calendar, *Oracle General Ledger User's Guide*.

Include OSP

Select No or Yes. If you select Yes, Outside Service Processing information is included in the report.

Currency

Select the Currency. See: Defining Currencies, *Oracle General Ledgers User's Guide*.

Exchange Rate

Select the Exchange Rate. See: Understanding Multiple Reporting Currencies, *Oracle General Ledger User's Guide*.

2. Choose OK.

3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Work Order Cost Report

Use the Work Order Cost Report to determine the costs charged to Work Orders for a

specified period of time, and optionally, a Department range.

Report Submission:

1. In the Submit Requests window, select Work Order Cost Report from the Name list of values.

Report Parameters

Report Type

Accept the default, High Cost Work Orders.

Department From

Optionally select a beginning department, for a data range, to indicate the beginning department for which the report encompasses information.

Department To

Optionally select an ending department for a data range to indicate the ending department for which the report encompasses information.

Cost Ceiling

Optionally enter an amount to indicate a work order cost limit for which the report encompasses.

Period From

Enter the beginning period, for a data range, to indicate the starting point of time for which the report encompasses information. See: Period Types, *Oracle General Ledger User's Guide*, Defining Period Types, *Oracle General Ledger User's Guide*, and Adding Periods to a Calendar, *Oracle General Ledger User's Guide*.

Period To

Enter an ending period, for a data range, to indicate the ending point of time for which the report encompasses information. See: Period Types, *Oracle General Ledger User's Guide*, Defining Period Types, *Oracle General Ledger User's Guide*, and Adding Periods to a Calendar, *Oracle General Ledger User's Guide*.

Include OSP

Select No or Yes. If you select Yes, Outside Service Processing information is included in the report.

Currency

Select the Currency. See: Defining Currencies, *Oracle General Ledger User's Guide*.

Exchange Rate

Select the Exchange Rate. See: Understanding Multiple Reporting Currencies, *Oracle General Ledger User's Guide*.

2. Choose OK.

3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

EAM Weekly Schedule Report

Use the EAM Weekly Schedule Report to display Work Order details, by specific owning department, within your crew's calendar week's starting dates. This report includes details, such as Work Order number, status, work description, start date, operation, department, resources, instance, priority, duration, estimated completion date, and the distribution of hours on a weekly basis.

Report Submission:

1. In the Submit Requests window, select EAM Weekly Schedule report from the Name list of values.

Report Parameters

Owning Department

Select an Owning Department to report for one Owning Department. This is the department that owns the responsibility for the Asset Number. This parameter is mandatory.

Assigned Department

Optionally, select an Assigned Department to narrow selection criteria to schedule information for one Assigned Department. This is the department that is currently assigned to the Asset Number.

Week Starting

Optionally select the starting date from which the user requires this report. The report displays information for seven days from the selected date. If this parameter is left blank, the report displays information starting from the first date of the current week.

Area

Optionally select an Area to narrow selection criteria to where a Asset Number is located.

Asset

Optionally select an Asset to narrow selection criteria to only the Work Orders that

are assigned to the selected Asset.

Rebuild Item

Optionally select a serialized Rebuildable Item to narrow selection criteria to only Work Orders that are assigned to the selected Rebuildable Item.

Shutdown Type

Optionally select a Shutdown Type to narrow selection criteria to only Work Orders that have the selected Shutdown Type required for its operations.

Resource

Optionally select a resource associated with the operations of the current Work Order. This parameter is optional.

Instance

The Person or Equipment used as the resource for an operation. This parameter is optional.

Sort By

Select a Sort By value to indicate how you want to display your schedule information. If you select Workorder, for example, the report displays scheduling information, sorted by Work Order number.

2. Choose OK.

3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Load Production Equipment Maintenance Downtime

Enterprise Asset Management (eAM) integrates with Process and Discrete Manufacturing, enabling your maintenance environment to identify Enterprise Asset Management asset relationships with production equipment. This feature associates an asset or many assets to the production equipment located in an Outside Processing organization. After establishing, you can view the resource usage (maintenance Work Orders, batches, or FPOs) emanating from production, associated with a maintainable asset. You can also use the Load Production Equipment Maintenance Downtime process to view or purge your maintenance production equipment downtime.

Report Submission:

1. In the Submit Requests window, select Load Production Equipment Maintenance Downtime from the Name list of values.

Report Parameters

Simulation Set

Select a valid Simulation Set.

Run Option

Select a Run Option. Valid values are Load Maintenance Downtime and Purge Maintenance Downtime.

- *Load Maintenance Downtime:* The process reports all production equipment downtime.
- *Purge Maintenance Downtime:* The process purges all production equipment downtime records from the appropriate tables.

Include Unreleased Maintenance Orders

Select Yes or No. If you select Yes, the report process includes Work Orders at an Unreleased Status when reporting or purging production equipment downtime records.

Firm Maintenance Work Orders Only

Select Yes or No. If you select Yes, only Work Orders that are firm (the dates on the Work Order cannot automatically reschedule) are considered.

Department

Optionally, select an Owning Department. Only Work Orders belonging to the selected Department are considered.

Resource

Optionally select a Resource. Only Work Orders containing the selected Resource are considered.

2. Choose OK.
3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Maintenance Work Order Detail Report

Use the Maintenance Work Order Detail Report to view and analyze all information related to a maintenance work order. You can create a report that displays user-defined values. For example, you can view all unreleased work orders for a specified date

range, or see material requirements for work orders in a specified area. You can filter reporting information according to work orders, start and end dates, assigned department, work statuses, asset area, and asset. You can display details on the report, including operations, resources, employees, materials, direct items, work requests, meters, and attachments.

> **Important:** The quality information relating to the work order does not appear on the report.

Report Submission:

1. In the Submit Requests window, select Maintenance Work Order Detail Report from the Name list of values.

Report Parameters

All report parameters are optional.

Work Order From

Enter the starting work order number to display a range of work orders.

To

Enter the ending work order number to display a range of work orders.

Scheduled Start Dates From

Enter the beginning scheduled date for a data range. This is the starting point to calculate the scheduled end date and duration for allocated resources and materials.

To

Enter the ending date for a date range. This indicates the requested end by date of the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and materials.

Work Order Status

Enter the status of the work order. Only work orders at this status appear on the report.

Assigned Department

Enter the assigned department (crew). This is the department associated with the asset on the work order.

Asset Area from

Enter the beginning asset area for a range of areas.

Asset Area to

Enter the ending asset area for a range of areas.

Asset Number

Enter an asset if you want to view only work order information associated with a specific asset.

Operations to be displayed

No - Operation level information does not appear.

Yes - Operation level information appears.

Resources to be displayed

No - Resource level information does not appear.

Yes - Resource level information appears.

Employee to be displayed

No - Employee specific information does not appear.

Yes - Employee specific information appears.

Materials to be displayed

No - Material level information does not appear.

Yes - Material level information appears.

Direct Items to be displayed

No - Material level information does not appear.

Yes - Material level information appears.

Work Request to be displayed

No - Work orders' associated work requests do not appear.

Yes - Work orders' associated work requests appear.

Meters to be displayed

No - Assets associated meters do not appear.

Yes - Assets associated meters appear.

Attachments to be displayed

No - Attachments do not appear.

Yes - Attachments appear.

2. Click the **OK** button.

3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Material Issue Request Pick List Report

Stocked inventory items may be necessary to perform work on maintenance Work Orders. Use the Material Issue Request Pick List Report to display all reserved stock for maintenance Work Orders, so that you can easily retrieve the necessary material.

Report Submission:

1. In the Submit Requests window, select Material Issue Request Pick List Report from the Name list of values.

Report Parameters

All report parameters are optional.

Request Number From

Optionally select a beginning Request Number, for a data range, to indicate the beginning Request Number for which the report encompasses information.

Request Number To

Optionally select an ending Request Number, for a data range, to indicate the ending Request Number for which the report encompasses information.

Date Required From

Optionally select a beginning date, for a data range, to indicate the starting date for which the report encompasses information.

Date Required To

Optionally select an ending date, for a data range, to indicate the ending date for which the report encompasses information.

Source Subinventory

Optionally select a Source Subinventory to indicate an exact subinventory for which to issue the material.

Source Locator

If you previously selected a subinventory that contains a Locator, select a Source Locator to indicate an exact Locator from which to issue the material.

Work Order

Optionally select a Work Order to indicate a specific Work Order for which to issue material.

Material

Optionally narrow your selection criteria by selecting a Material.

Requestor

Optionally select a Requestor.

Sort By

Optionally select a Sort By option to indicate how the report is sorted. Valid values are Request Number and Date Required.

2. Choose OK.

3. Choose Submit.

Related Topics

Submitting a Request, *Oracle Applications User's Guide*

Retrieve Timecard Data from OTL to EAM

Oracle Time and Labor (OTL) is the repository in which time is entered by employees working in a particular organization. Employees working on Oracle Enterprise Asset Management (eAM) Work Orders enter their time using OTL Self-Service. Information collected is stored in OTL Time Store, and is composed of a series of business rules and processes. eAM extracts information from the Time Store and charges eAM work orders for the time spent by employees that work on them.

There are multiple steps within the integration flow. First, timecard information is entered for a specific Work Order, within Oracle Time Store (a piece of Oracle Time and Labor). That information is then extracted from Oracle Time Store to Oracle Enterprise Asset Management. This extraction dynamically creates a resource transaction within Oracle Enterprise Asset Management. Finally, the Cost Manager process is executed. This process charges the resource transaction. After this process executes, you can view the actual costs for the period that you charged, within the Work Order.

The Retrieve Timecard Data from OTL to EAM process is the process that extracts timecard information, entered within OTL for specific Work Orders, from OTL to eAM.

Report Submission:

1. In the Submit Requests window, select Retrieve Timecard Data from OTL to EAM from the Name list of values.

Report Parameters

All report parameters are optional.

Start Date

Optionally select a beginning date, for a data range, to indicate the starting date for

which the process retrieves information.

End Date

Optionally select an ending date, for a data range, to indicate the ending date for which the process retrieves information.

Organization

Optionally, select an OTL Organization to determine only one organization for which the process retrieves information.

Asset Group

Optionally select a Asset Group.

Asset Number

Optionally select a Asset Number.

Project

Optionally select a Project, if the selected organization is a Project Manufacturing organization.

Task

If you previously selected a Project, you can optionally select a Task.

Resource

Optionally select a Resource.

Employee

Optionally select an Employee.

Owning Department

Optionally select an Owning Department.

Work Order

Optionally select a Work Order.

Operation

If you previously selected a Work Order, you can optionally select a specific Operation.

Change Department

Optionally select a Change Department.

Process Code

Optionally select a Process Code.

2. Choose OK.

3. Choose Submit.

Related Topics

Oracle Time and Labor Integration Setup, page 2-203

Submitting a Request, *Oracle Applications User's Guide*

Simulate Transfer Shop Floor Invoice Variance

You can transfer variances between purchase order price and invoice price, back to a maintenance work order, from your user-defined, adjustment account. This enables you to value your maintenance costs at the actual costs.

You can generate the Simulate Transfer Shop Floor Invoice Variance report to display the details of each invoice variance and a summary total of the variance amount that may transfer. The report format is similar to the Shop Floor Invoice Variance Report. You can view this report to determine whether or not you are executing the variance transfer. You should complete this task before you run the Shop Floor Invoice Variance Report (See: Shop Floor Variance Report, page 27-15).

Report Submission:

1. Navigate to the Shop Floor Invoice Variance window.
2. Select Simulate Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters

Transfer Description

Optionally enter a description for the invoice transfer.

Specific Work Order

You can view the variance transfer details for a specific work order by selecting a work order. Maintenance work orders with statuses of Cancelled, Closed, and Complete - No Charges are not available.

IPV Item Type

You can transfer invoice variances for:

Direct Shop Floor Delivery items only

Outside Processing and Direct Shop Floor Delivery items

Outside Processing items only

Item Range

If you chose Outside Processing items only as the value for the IPV Item Type

parameter, you can specify an item range for your transfer.

Specific Item

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify an item for your transfer.

Category Set

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify a Category Set for your transfer.

Specific Category

If you chose Outside Processing items only as the value for the IPV Item Type parameter and a value in the Category Set parameter, you can specify a specific category from the previously chosen category set.

Specific Project

You can choose to transfer invoice variances only for items associated to a specific project.

Adjustment Account

You can enter an adjustment account from which the invoice variance is transferred.

Invoice Cutoff Date

Enter a date. Approved and posted invoices through this date are included in your transfer.

3. Choose OK.

4. Choose Submit.

Related Topics

Transferring Invoice Variances to Maintenance Work Orders, page 6-17

Submitting a Request, *Oracle Applications User's Guide*

Shop Floor Invoice Variance Report

You can transfer invoice variances from your specific adjustment account to maintenance work orders (See: Transferring Invoice Variances, page 6-18). For each invoice variance transfer processed successfully, you can use the Shop Floor Invoice Variance Report to view the invoice variance transferred into your maintenance work orders. This report displays the adjustment account and the summary total amount transferred. It also displays the detail information for each work order, item, purchase order line, and invoice included in the transfer.

Report Submission:

1. Navigate to the Shop Floor Invoice Variance window.
2. Select Simulate Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters

Batch Date

Enter a date to filter out batches that you do not want to select. Only batches processed on or after this date are included in the Batch Id parameter's list of values.

Batch Id

Enter the identifier for the batch you would like to report on. The list of values displays the parameters entered when you run your transfer process, such as description, work order number, item number, etc.

3. Choose OK.
4. Choose Submit.

Related Topics

Transferring Invoice Variances to Maintenance Work Orders, page 6-17

Submitting a Request, *Oracle Applications User's Guide*

A

Windows and Navigation Paths

This appendix covers the following topics:

- Windows and Navigation Paths
- Default Navigation Paths for Standard Application Windows

Windows and Navigation Paths

This appendix provides the default navigator paths for the windows used in the Oracle Enterprise Asset Management. The following table provides the default navigation paths. Brackets [ ] indicate a button.

Default Navigation Paths for Standard Application Windows

eAM-Related Windows and Navigation Paths

Window Name	Navigation Path
Activity and Asset Number/Rebuildable Association	Enterprise Asset Manager: Asset Activities > Asset Activity Association
Activity Workbench	Enterprise Asset Manager: Activities > Activity Workbench
Advanced Pricing (Price Lists)	Order Management: Pricing > Price Lists > Price List Setup
Area	Enterprise Asset Manager: Setup > Area
Asset Genealogy Import	Interfaces > Import Asset Genealogy

Window Name	Navigation Path
Asset Meter	Enterprise Asset Manager: Meters > Asset Meter Association
Asset Number Import	Interfaces > Import Asset Number
Asset Status	Enterprise Asset Manager: Assets > Asset Statuses
Bills of Material (Activity BOM)	Enterprise Asset Manager: Asset Activities > Maintenance BOM
Bills of Material (Asset BOM)	Enterprise Asset Manager: Assets > Asset BOM
Bills of Material (Rebuildable BOM)	Enterprise Asset Manager: Rebuildables > Rebuildable BOM
Categories	Enterprise Asset Manager: Setup > Category > Category Codes
Category Sets	Enterprise Asset Manager: Setup > Category > Category Sets
Close Rebuild Work Order	Enterprise Asset Manager: Work Orders > Close Rebuildable Work Orders
Close Work Order	Enterprise Asset Manager: Work Orders > Close Work Orders
Collection Elements	Quality Manager: Setup > Collection Elements
Collection Plans	Quality Manager: Setup > Collection Plans
Define Asset Number	Enterprise Asset Manager: Assets > Asset Numbers
Define Asset Route	Enterprise Asset Manager: Assets > Asset Route
Define Rebuildable Serial Number	Enterprise Asset Manager: Rebuildables > Rebuildable Serial Numbers

Window Name	Navigation Path
Departments	Enterprise Asset Manager: Setup > Routing > Departments
Department Approvers	Enterprise Asset Manager: Setup > Department Approvers
Descriptive Flexfield Segments	Enterprise Asset Manager: Setup > Flexfields > Descriptive > Segments Order Manager: Setup > Flexfields > Descriptive > Segments
EAM Asset Documents	Enterprise Asset Manager: Assets > Asset Numbers > Documents
EAM Work Order Documents	Enterprise Asset Manager: Work Orders > Documents
Electronic Records	ERES Administrator: Setup
Enter Meter Readings	Maintenance Super User: Assets tab > Mass Meter Readings sub-tab
Enter Quality Results	Enterprise Asset Manager: Quality > Results > Entry > Enter Quality Results
Enterprise Asset Management Parameters	Enterprise Asset Manager: Setup > Parameters
Failure History	Maintenance Super User: Failure Analysis tab > Failure History sub-tab
Failure Sets	Maintenance Super User: Failure Analysis tab > Failure Tracking Setup sub-tab
Financials Options	Purchasing Manager: Setup > Organizations > Financial Options
Find Asset Number	Enterprise Asset Manager: Assets > Asset Numbers > Asset Number field > [Find] icon
Find Category Associations	Enterprise Asset Manager: Setup > Category Associations

Window Name	Navigation Path
Find Meter Readings	Enterprise Asset Manager: Interfaces > Pending Meter Readings
Find Pending Work Orders	Enterprise Asset Manager: Interfaces > Pending Work Orders
Find Preventive Maintenance Schedules	Enterprise Asset Manager: Preventive Maintenance > Schedule Template Definition
Find Projects	Project Manufacturing Manager: Projects > Project Definition > Projects
Find Project Status	Project Manufacturing Manager: Project Status > Project Status Inquiry
Find Rebuild Work Orders	Enterprise Asset Manager: Work Orders > Rebuild Work Orders
Find Requests (PRC: Refresh Project Summary Amounts)	Project Manufacturing Manager: Other > Requests > Run OR View menu > Requests
Find Requisition Lines	Enterprise Asset Manager: Purchasing > AutoCreate
Find Resource Transactions	Enterprise Asset Manager: Work Order Transactions > View Resource Transactions
Find Work Orders	Enterprise Asset Manager: Work Orders > Work Orders Enterprise Asset Manager: Billing > Work Order Billing
Forecasts	Maintenance Super User: Forecasts tab
Generate Preventive Maintenance Work Orders	Enterprise Asset Manager: Preventive Maintenance > Generate Work Orders
Import Items	Enterprise Asset Manager: Interfaces > Import Items

Window Name	Navigation Path
Import Jobs and Schedules	Enterprise Asset Manager: Interfaces > Import Work Orders or Import Meter Readings
Interface Managers	Enterprise Asset Manager: Inventory > Setup > Transactions > Interface Managers
Item Costs Summary	Enterprise Asset Manager: Inventory > Items > Master Items > (M) Tools, Item Costs
Launch MRP	Enterprise Asset Manager: Material Planning > MRP > Launch
Load Production Equipment Maintenance Downtime	Enterprise Asset Manager: Work Order Planning > Production Equipment Downtime
Maintenance Workbench	Enterprise Asset Manager: Work Order Planning > Maintenance WorkBench
Maintenance Work Orders	Enterprise Asset Manager: Work Orders > Work Orders
Maintenance Work Order Value Summary	Enterprise Asset Manager: Work Orders > Work Orders > [Costs] > [Value Summary]
Mass Time Entry	Maintenance Super User: Work Orders tab > Mass Time Entry sub-tab
Master Demand Schedules	Enterprise Asset Manager: Material Planning > MDS > Names
Master Item	Inventory: Items > Master Items
Material Requirements **Note:** This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.	Enterprise Asset Manager: Work Order Details > Material Requirements

Window Name	Navigation Path
Meters	Enterprise Asset Manager: Meters > Meter Definition
Meter Reading	Enterprise Asset Manager: Meters > Meter Readings
Miscellaneous Documents	Enterprise Asset Manager: Setup > Miscellaneous Documents
MRP Names	Enterprise Asset Manager: Material Planning > MRP > Names
My Work Queue	Maintenance User Workbench: sign in
Operations **Note:** This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.	Enterprise Asset Manager: Work Order Details > Operations
Organization	Enterprise Asset Manager: Inventory > Setup > Organizations > Organizations > [New]
Organization Parameters	Enterprise Asset Manager: Inventory > Setup > Organizations > Parameters
Oracle Manufacturing Lookups	Enterprise Asset Manager: Setup > Lookups
Pending Asset Number	Enterprise Asset Manager: Interfaces > Pending Asset Numbers
Pending Meter Reading	Enterprise Asset Manager: Meters > Meter Readings > Pending Meter Reading
Personal Profile Values	Enterprise Asset Manager: Setup > Profiles > Personal

Window Name	Navigation Path
Plan Options	Enterprise Asset Manager: Material Planning > MRP > Options
Purchase Orders	Purchasing Manager: Purchase Orders > Purchase Orders
Preferences	Time and Labor Administration: Preferences
Preventive Maintenance Schedules	Enterprise Asset Manager: Preventive Maintenance > Schedule Definition
Project Parameters	Project Manufacturing Manager: Projects > Project Definition > Project Parameters
Rebuild Completion	Maintenance Super User or Maintenance User Workbench: Work Orders tab Enterprise Asset Manager: Work Order Planning > Maintenance Workbench
Rebuild Work Orders **Note:** This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.	Enterprise Asset Manager: Work Orders > Rebuildable Work Orders
Requisitions	Enterprise Asset Manager: Purchasing > Requisitions > Requisitions

Window Name	Navigation Path
Resource Requirements **Note:** This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.	Enterprise Asset Manager: Work Order Details > Resource Requirements
Resource Usage	Enterprise Asset Manager: Assets > Asset Numbers > Asset Numbers
Routings	Enterprise Asset Manager: Asset Activities > Maintenance Routings
Run AutoInvoice	Order Manager: Receivables > Interfaces > AutoInvoice
Select Work Order	Enterprise Asset Manager: Work Order Details > Operations, Material Requirements, or Resource Requirements
Service Request	Service: Service Requests > Find Service Requests
Service Request Types	Service: Setup > Service Requests > Request Types
Scheduler Workbench	Enterprise Asset Manager: Work Order Planning > Scheduler WorkBench
Set Name	Preventive Maintenance > Set Name Definition
Shop Floor Invoice Variance	Enterprise Asset Management Cost > Work Order Shop Floor Invoice Variance
Submit Request	Enterprise Asset Manager: Reports

Window Name	Navigation Path
Supply/Demand	Enterprise Asset Manager: Material Planning > MRP > Workbench > [Supply/Demand] > [Find]
Time	Self-Service Time and Expenses: Time Entry
Transaction Sources	Order Manager: Receivables > Setup > Transactions > Sources
Users	System Administrator: Security > User > Define
View Operations	Enterprise Asset Manager: Work Order Details > View Operations
View Material Requirements	Enterprise Asset Manager: Work Order Details > View Material Requirements
View Resource Requirements	Enterprise Asset Manager: Work Order Details > View Resource Requirements
View Resource Transactions	Enterprise Asset Manager: Work Order Transactions > View Resource Transactions > [Find]
View Work Order	Enterprise Asset Manager: Work Order Details > View Work Orders
Work In Process Parameters	WIP Manager: Setup > Parameters
Work Order Capitalization	Enterprise Asset Manager: Billing and Capitalization > Work Order Capitalization
Work Order Completion	Maintenance Super User or Maintenance User Workbench: Work Orders tab > Complete Work Order icon Enterprise Asset Manager: Work Order Planning > Maintenance Workbench

Window Name	Navigation Path
Work Order **Note:** This menu function is available for those users with responsibilities and roles that include function, EAM_WO_DETAILS_MODE, with their associated menu. See: Implementing Function Security, *Oracle Applications System Administrator's Guide - Security*.	Enterprise Asset Manager: Work Orders > Work Orders
Work Orders tab	Maintenance Super User or Maintenance Workbench role: Work Orders tab

Glossary

activity

Identifies a maintenance activity for an asset. An oil change is an Activity for a car. An Activity is often preplanned and can be used repetitively to create Work Orders that require similar maintenance on Assets.

area code

User-defined lookup that can be utilized to logically sort assets by where they are physically located or typically maintained.

asset attributes

Unique information that describes the characteristics of an asset. Each asset can have unlimited asset attributes.

asset bills of material

A "parts list" of items and rebuildable spares that make up a particular asset item, and can be defined for each asset group. The items defined on an asset BOM are standard inventory items (set up in the Master Item window).

asset category

A standard naming convention that defines assets with familiar terms and establishes how to classify assets for reporting and analysis.

asset group

Represent the classification of equipment. Examples include Trucks, Pumps, Towers, Buildings, Storage Tanks, and Turbines. Assets that have similar physical configurations and maintenance requirements should belong to a single Asset Group.

asset hierarchy

A single structure that depicts assets and their constituent elements in parent/child relationships, as maintained by the maintenance organization. It provides information that enables a user to quickly identify the relationship via an Asset Navigator that displays appropriate asset details.

asset maintenance bill of material

BOM used to list all items and rebuildable spares needed to perform a particular asset activity, and can be defined for each asset activity. For example, you may have an asset activity titled, Oil Change. The items necessary to perform this activity include a filter, oil, etc. As Maintenance BOMs are created, they are associated to an asset activity.

asset number

A unique number that represents an asset or piece of equipment on which maintenance will be performed. An example of an asset number would be a Pump-101, or Toyota Truck 01.

asset route

A "virtual asset" that enables multiple assets to be associated to a single work order. It eliminates the need for creating multiple work orders for the same activity.

base interval

The minimum of a space of time (90 days), or meter reading (7,500 miles) between when PM activities included in one PM schedule should be performed. It can be considered a common denominator among the multiple activities included in one PM Schedule that share a common base interval.

breach based maintenance

Work generated by violating established tolerances, based on asset specifications. This can include changes to pressure, flow rates, or temperature. These violated tolerances can automatically generate work requests for further service.

CMMS (computerized maintenance management system)

A computerized system to assist with the effective and efficient management of maintenance activities through the application of computer technology. It generally includes elements, such as a computerized Work Order system, as well as facilities for scheduling Routine Maintenance Tasks, recording and storing Work Orders, Bill of Material and Application parts Lists, as well as other numerous features.

craft

Personnel performing maintenance tasks, such as "hands on tools". Personnel may include mechanics, electricians, instrumentation technicians, machinists, utilities and facilities workers, etc. For personnel performing both operation and maintenance functions (for example, roll grinder, boiler room, or air compressors) include in the numbers that percentage of time spent maintaining. Contract employees that are on-site, full time are included.

crew

A group of employees that work together, usually under one supervisor. Sometimes a

crew is in charge of a specific area and may have the same craft, such as general mechanics or they may have mixed crafts, such as electricians, and instrumentation technicians.

component (See: rebuildable spare)

A section, piece, or part of an asset that is removable, can be rebuilt or repaired, and interchangeable with other standard components (for example, engine).

condition based maintenance

The result of an assets's meter readings that may reflect the current condition of an asset. The results of such readings will affect the sequence of preventive maintenance work orders. Condition of an Asset can also be tracked by tracking its Quality Results.

current cycle

The current execution cycle of a Preventive Maintenance cycle for an asset. This field is automatically updated by the system when preventive maintenance work orders generated out of a given schedule are completed.

current interval count

The current execution interval within a current running cycle. This field is automatically updated by the system when preventive maintenance work orders generated out of a given schedule are completed. It is advisable not to change the current cycle and current interval count after initial definition, unless really required to do so. These fields can be disabled for edit by users through function based menu exclusions.

cycle

A complete round of maintenance activities performed on an asset that share a common base interval of a meter or time period, or both, or a multiple of the shared intervals. Once the cycle of activities is completed, the cycle should start over.

cycle interval

The duration of time or meter readings to complete the entire cycle.

dependent steps

Operations can be dependent upon another operation; you cannot uncomplete the operation's dependency if the current operation is complete. For example, operation 20 is dependent on operation 10 completing. You cannot uncomplete operation 10 once operation 20 has been completed.

direct items

Represent items with infrequent use or criticality; they are not included in the internal catalog as stocked items. These items are contrived as "one off", bought directly from a vendor for a specific Work Order and Operation.

downtime

Specifies the time the asset was unavailable to production due to maintenance.

duration (hours)

Identifies the total elapsed time of the Work Order. It has a unit of measure in hours. It is manually entered, or is calculated as the difference between the Estimated Start Date and Estimated End Date.

easy work order

Referred to as an unplanned work order, it enables quick entry of a work order; it is automatically created at a Released status, enabling you to execute work immediately.

equipment

All items of a durable nature, capable or continuing or repetitive utilization by an individual or organization, defined to the level at which maintenance is to be managed.

fixed asset

Identifies Accounting's Asset ID for reporting.

forecast

Projected work that is or will be required within a user defined period of time.

handover

Enables a supervisor to re-assign an operation to another supervisor, for the continuation of incomplete work.

intervals per cycle

The number of base intervals that comprise the complete cycle. For example, 12 monthly intervals would comprise a 1-year cycle, and four 7,500 miles base intervals would comprise a 30,000-mile cycle.

labor

Assignment of work to repair, inspect, or resolve a problem. It is expressed in hours, and can be divided by crafts or skills.

maintained group

Represents an Asset Group or Rebuildable Item.

maintained number

Represents an Asset Number or Serialized Rebuildable.

maintenance schedule

A list of planned maintenance tasks to be performed during a given period of time, together with the expected start times and duration of each of these tasks. Schedules can apply to different time periods (for example, Daily Schedule, Weekly Schedule, etc.).

maintenance user

An internet-based user interface for both maintenance and operations personnel. It provides an easy approach to entering and searching for information from any browser, and designated for the casual user (for example, tradespeople, such as fitters, mechanics, and electricians), in a plant or facility.

meters

Used to measure asset usage and periodically service the asset, based on the measurement. For example, an odometer. Another example is a pipe may start out at 12 millimeters, but when it wears to only four millimeters, it needs to be replaced.

non-stock items

These items are included in the internal catalog, but the decision has been made to not maintain them in an inventory balance or ordering policy, other than to purchase or make them as required.

operation completion

The completion of tasks/steps within a work order.

organization

A distinct entity in a company. It may include separate manufacturing facilities, warehouse distribution centers, and branch offices. Organizations often define boundaries within information sharing.

owning department

Identifies the role responsible for owning the work outlined within a Work Order.

planned work

Maintenance work for which a detailed work order has been written. All materials have been made available before the work order starts. The equipment to be maintained has been taken out of service, cleaned, and prepared, before the work starts, if required. Special tools, equipment, resources, and services have been scheduled for this work order. The work order must appear on a plan before the start of the period in which the work is to be carried out.

preventive maintenance

Maintenance carried out periodically, or by usage (throughput), that is intended to

reduce the probability of failure or degradation of physical condition of an asset. This can be based on a meter or time.

preventive maintenance (PM) work order

A work order referencing a maintenance activity, sometimes referred to as a PM work order, and is created by the PM Scheduling process.

RCM (reliability centered maintenance)

The predictive approach to maintenance that trends an asset's performance and captures data. This data will help the maintenance organization to better strategize their Preventive Maintenance programs.

rebuildable item

Represents the classification of serialized or non-serialized rebuildables.

routine maintenance work order

These are the work orders that result from inspection, requests, etc. There are two types: work orders referencing a maintenance activity but created manually, and work orders created manually and not referencing a maintenance activity.

scheduled start date

This date is manually entered and is used to communicate to the system the scheduled date for the current Work Order.

serialized items

Typically tracked, and are often times rebuilt and issued properly. They are tracked with a history of failure and repair data, that is maintained for each serialized instance, regardless of their location.

serialized or non-serialized rebuildable (See: component)

Items that are installed, removed, and refurbished. Examples of rebuildables include, motors, control boxes, and computer boards. These items are not assets, however, they need to be associated with work orders for maintenance purposes. They are inventory items, and can be serialized. They are also referenced as portables or "components".

shutdown type

Indicates if a shutdown is required of the asset when performing the work order. If it is associated with an asset activity, it will inherit the value from the asset activity.

stock items

Items for which either the frequency of use or equipment criticality/lead time to obtain replacement parts, mandates that they be stocked in Inventory. Therefore, they utilize planning parameters to generate replenishment orders.

tagout required

Indicates that the asset needs to be secured before carrying out the work order, usually for safety reasons. Tags are generally printed and placed on an asset, warning workers that the asset is shutdown and should not be started. This field is intended for future use in eAM.

work in process (WIP) accounting class

A set of accounts that you use to charge the production of an assembly. You assign accounting classes to discrete jobs, and repetitive schedules. Each accounting class includes distribution accounts and variance accounts, and they are used in cost reporting.

work order

A plan that defines the resources and material equipment needed to conduct work, and then associated start and end dates.

work order closure

A work order that is unavailable for charges or any type of transaction. Closing a work order calculates final costs and variances, creating history for the work order.

work order completion

The completion of the entire work order. The operations within a work order do not need to be complete in order to complete the work order.

work order duration

The duration of the work order. The difference between completion date and start date.

work order operation

Operations (also known as tasks/steps) that prepare the instructions to perform a single activity, within the context of the work order.

work request

A request to have work performed on a maintainable asset.

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