

Oracle® Complex Maintenance, Repair, and Overhaul

User's Guide

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Oracle Complex Maintenance, Repair, and Overhaul User's Guide, Release 12.1

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Oracle Complex Maintenance, Repair, and Overhaul User's Guide, Release 12.1

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Preface

Intended Audience

Welcome to Release 12.1 of the *Oracle Complex Maintenance, Repair, and Overhaul User's Guide*.

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

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Structure

- 1 Overview of Oracle Complex Maintenance, Repair, and Overhaul**
- 2 Managing Maintenance Requirements**
- 3 Managing Maintenance Routes**
- 4 Managing Maintenance Documents**
- 5 Working With Master Configurations**
- 6 Working With Unit Configurations**
- 7 Managing Product Classification**
- 8 Working With Unit Maintenance Plans**
- 9 Working with Maintenance Visits**
- 10 Material Marshalling**
- 11 Managing Long Term Planning**
- 12 Administration**
- 13 Production Planning and Production**
- 14 Maintenance Technician Roles**

Role based workbenches and pages supporting different types of maintenance tasks are described in this chapter.

- 15 Managing Outside Processing**
- A Windows and Navigation Paths**

Related Information Sources

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 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.

Oracle Install Base Concepts and Procedures Guide

This guide provides an introduction to the concepts, and explains how to navigate the system, enter data, and query information in the Oracle Installed Base interface that forms part of Oracle Complex Maintenance, Repair, and Overhaul.

Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide

Use this guide to set up Oracle Complex Maintenance, Repair, and Overhaul.

Oracle Customer Support Implementation Guide

This guide describes how to set up the list of values that you see in Oracle Customer Support. Oracle's service solution provides everyone in the organization - with a complete, real-time customer view that allows for immediate access to information on past interactions with the customer and also provides agents with knowledge of possible solutions to speed issue resolution. Additionally, the solution empowers customers to solve their own issues via a self-service portal with access to the same knowledge base that agents utilize for quick resolution.

Oracle Demand Planning User's Guide

This guide describes how to use Oracle Demand Planning, an Internet-based solution for creating and managing forecasts.

Oracle Quality User's Guide

This guide describes how Oracle Quality can be used to meet your quality data collection and analysis needs. This guide also explains how Oracle Quality interfaces with other Oracle Manufacturing applications to provide a closed loop quality control system.

Oracle Service Contracts Concepts and Procedures

This manual contains the information you need to implement and use Oracle Service Contracts.

Oracle Procurement Contracts Implementation and Administration Guide

This guide contains the information you need to implement and administer Oracle Procurement Contracts.

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.

Overview of Oracle Complex Maintenance, Repair, and Overhaul

This chapter covers the following topics:

- Overview of Complex Maintenance, Repair, and Overhaul
- Managing Maintenance Requirements
- Minimum Equipment List (MEL) and Configuration Deviation List (CDL)
- Integration and Dependencies
- Integration of Oracle Complex Maintenance, Repair, and Overhaul and Enigma 3C

Overview of Complex Maintenance, Repair, and Overhaul

Oracle Complex Maintenance, Repair, and Overhaul is an integrated, web-enabled, software application suite designed for complex equipment maintenance organizations. It supports typical maintenance processes such as scheduled and unscheduled maintenance visits, component monitoring, job scheduling and routing, labor time collection, cost collection, inventory management, and maintenance document management.

You can view maintenance practice improvement opportunities, and opportunities to improve fleet readiness. The application provides models for electromechanical systems and defines rules for assembling units. You can record unit-specific information, allowing quick access to the maintenance history of a product component. It provides maintenance organizations a means to reduce operational costs, and thereby to yield improved profitability.

Key Features

Oracle Complex Maintenance, Repair, and Overhaul enables maintenance organizations to meet customer expectations, and draw maximum benefit by improving the operational readiness of equipment. Key features include:

- Fleet Maintenance Program, page 1-2
- Route Management, page 1-3
- Document Index, page 1-3
- Enigma Integration, page 1-3
- Master Configuration, page 1-4
- Unit Configuration, page 1-4
- Product Classification, page 1-5
- Visit Work Package, page 1-5
- Material Marshalling, page 1-6
- Long Term Plan, page 1-6
- Administration, page 1-7
- Production Planning, page 1-7
- Outside Processing, page 1-7

Fleet Maintenance Program

- Maintenance requirements creation allowing maintenance personnel to create maintenance requirements with attributes uniquely defining the requirement
- Maintenance routes association by attaching appropriate routes created in the Route Management module to the maintenance requirement
- Maintenance documents association by attaching appropriate documents from Document Index to the maintenance requirement
- Effectivity definition allowing automatic notification to personnel of the maintenance requirements applicable to certain physical units within the database
- Interval and threshold definition enabling a schedule to be set that counts down until the maintenance requirement is due for a unit
- Maintenance requirements and dependent relationships management allowing use of group relationships for non-complicated parent child components where the parent maintenance requirement accomplishment includes the children
- Affected items listing providing a comprehensive view of the items that are covered

by a maintenance requirement's effectivity

Route Management

- Work card or route authoring
- Maintenance planning information helps organizations plan maintenance activities based on system, zone, process, skill of technician, and significant task
- Resource requirements definition providing a set of resource requirements such as estimated labor, tools, and material, associated with each maintenance operation
- Sign-off requirements definition allowing the association of Quality Plans in order to define sign-off requirements and accomplishment recordings for each work card and/or operation
- Resource collection check point definition allowing capture of resource utilization details at different maintenance operation levels

Document Index

- Receipt and registration of documents
- Upload and revision of electronic documents
- Document subscription control through supplier information recording and subscription status tracking
- Document revision control ensuring current and accurate information
- Document status lookup allowing document version verifications from multiple levels during maintenance operations
- Document Distribution Control ensuring authorization of a person (who requests a document) to receive a document

Enigma Integration

- Associate Aircraft Maintenance Manual (AMM) Tasks to Route Management
- Associate Enigma Configuration Information to Master Configurations
- Associate Enigma Configuration Information to Unit Configurations
- View and Print Enigma Content in Production

Master Configuration

- Assembly tree structure representing the positions of tracked or required components that make up a complex assembly
- Assembly qualification by identifying the components required to meet a certain specification
- Tracked parts positioning
- Definition of parent child relationships between components in an assembly
- Configuration template for unit configuration modeling the general characteristics of a fleet unit
- Cost roll up structure allowing division of maintenance cost by the modules of an assembly
- Definition of alternate parts allowable for each component position in an assembly
- Definition of position ratios for usage counter updates between positions in a master configuration hierarchy
- Maintenance document association to master configuration positions

Unit Configuration

- Unit composition providing information on the hierarchical positions of parts within a unit
- Physical location tracking of parts
- Recording of child unit installation and removal on or from parent assemblies
- Recording of utilization or age of parts in an assembly based on different parameters related to usage of parts and events that affect the parts
- Utilization population from parent to child units enabling determination of component aging as a result of attachment to other parts, or parent units, that gain utilization
- Unit maintenance history tracking through all previously accomplished maintenance requirement records
- Equipment ownership history tracking enabling analysis of impact on business procedures due to ownership change

- Temporary part identification allowing assignment of temporary serial numbers to parts in an acquired unit

Product Classification

- Hierarchy based product classification creation and maintenance.
- Association of maintenance requirements and documents to any level in the product classification using a tree based hierarchy in order to reduce the administration necessary with adding a new product to a maintenance program.
- Logical grouping of products across multiple levels.
- Primary and supplementary classification support which allows part and unit grouping from multiple viewpoint.

Unit Maintenance Plan

- Utilization forecast maintenance that provides the utilization forecast in terms of the applicable time based unit of measures for each unit in the fleet
- Serviceable time (UOM) of units viewing for the parent unit and all child units expressed in terms of appropriate UOM, such as hours, cycles, mileage, etc.
- Repetitive maintenance requirement modeling over a user defined period providing the UOM remaining for each occurrence of a maintenance requirement
- Due date calculation of maintenance requirements based on utilization forecasts and maintenance frequencies in the absence of a specified fixed due date
- Association of maintenance requirement groups to a visit

Visit Work Package

- Equipment based maintenance visit definition enabling an equipment item to be connected with a block of tasks, a location, and a period of time
- Maintenance visit template definition enabling a maintenance planner to develop a shop visit plan without access to a unit maintenance plan for the equipment
- Visit creation from a template allowing a planner to add attribute values like visit location, visit start date, and description to a template definition, and copy the template to a visit object
- Visit and task structure conversion to a template allowing a visit object, or the visit header, and all attached tasks that comprise the work package, to be transformed into a visit template

- Merging of imminent maintenance requirements with visits allowing a maintenance planner to select imminent maintenance requirements for an equipment unit based on an effective date range
- Addition of ad hoc repair tasks to visits allowing association of ad hoc tasks, not associated with a route, to a visit
- Visit task work breakdown structure definition enabling calculation of the labor, parts, and material costs incurred during a maintenance visit
- Visit task sequence definition permitting precise definition of the order of completion of all tasks that comprise a maintenance facility visit
- Visit work package export to Oracle Projects enabling export of the entire visit object to Oracle Projects, on completion of the visit definition, as a project record with equivalent tasks

Material Marshalling

- Searching unit and its visits. Viewing the progress and status of each visit.
- Viewing the material requirements of a visit. This view organizes the material requirements by their association within the associated configuration and positions of the visit.
- Issuing required materials from other subinventories when the visit subinventory and locator cannot accommodate the material requirement of a work order.

Long Term Plan

- Assessment of a maintenance base's work load capacity analysis of available labor by skill, available tooling/machinery, available materials and the location's capabilities—such as the list of units and requirements the location can support—balanced against known workloads.
- Visit creation in order to group together events for long and short term capacity planning and to facilitate scheduling to a maintenance base.
- Definition of a visit's resource requirements based on the unit, man hour requirements by skill, required tooling, required materials, duration and required completion times of the visit's maintenance requirements and routes.
- Visit appointment creation based on maintenance base resource forecasting and visit requirements.
- Resource balancing capacity versus work load requirements for scheduling purposes and efficiency assurance.

- Resource leveling on different simulation plans allowing identification of the best plan with regards to resource capacity.

Administration

- Departmental work shift schedule definition allowing maintenance planners to select shift schedules for the departmental workers who will accomplish the inspections and repairs
- Calculating spaces and space unavailability

Production Planning

- Job creation from visit tasks for Scheduled, Unscheduled, and Convenience maintenance
- Service Request creation for tracking reported problems
- Creation of Operations to Non-Routine Jobs for work definition and tracking
- Job maintenance through status, completion, and start/end date adjustments of the schedule.
- Operation maintenance by addition, removal, material and resource requirement updates, cost capture, and resource assignment review.
- Quality maintenance using Route Management.

Outside Processing

- Assign production jobs for third party service
- Add or remove production jobs to an existing OSP Work Order
- Determine how and when the parts will be shipped to the supplier
- Create and Approve Purchase Orders
- Create Purchase Requisitions for an OSP Order
- Receive shipments for an OSP Order

Managing Maintenance Requirements

The Fleet Maintenance Program module in Oracle Complex Maintenance, Repair, and Overhaul allows maintenance organizations to record, organize, and plan maintenance

requirements. The maintenance planner can create maintenance requirement records and attach attributes to these records. The attributes attached to the record enables maintenance planning, and increased operational efficiency while accomplishing a requirement. Maintenance planners can:

- Search the database for a specific maintenance requirement for reference, or for editing purposes.
- Create a maintenance requirement record in the database.
- Attach documents, maintenance routes, actions, effectivity, and maintenance requirement relationships to the record.
- Create revisions for maintenance requirements that are complete.
- View items that are affected by a maintenance requirement.

Working with Maintenance Routes

Maintenance personnel can:

- Search the database for a specific operation for reference purposes, or for editing purposes.
- Create an operation or define instructions for carrying out a maintenance task.
- Search for maintenance routes, for reference, or for editing route information.
- Create a maintenance route.
- Associate major and sub zones in a system to a product type to facilitate tracking of maintenance operations on complex electromechanical systems.

The intuitive user interface of Oracle Complex Maintenance, Repair, and Overhaul is designed to enable maintenance personnel handle operational needs as effortlessly and quickly as possible.

Managing Maintenance Documents

The Document Index module in Oracle Complex Maintenance, Repair, and Overhaul is the central place for managing all maintenance documents. The maintenance personnel can access an online catalog of documents used in maintenance, repair, and overhaul operations. The Document Index allows personnel to receive, distribute, and control revisions in technical documentation. Maintenance personnel can:

- Search the database to quickly refer to a document.
- Create new documents or document revisions.

- Associate subtypes to document types for easy identification.
- Upload electronic documents

Maintenance document management involves tracking documents and their revisions, validating document references from multiple levels of maintenance operations, and making them easily accessible to the maintenance personnel.

Minimum Equipment List (MEL) and Configuration Deviation List (CDL)

Minimum Equipment List (MEL) and Configuration Deviation List (CDL) functionality identifies equipment, as opposed to structural items, that can be inoperative or missing on aircraft—but still enable the aircraft to maintain airworthiness. This includes items such as radios, seats, lights, air conditioning, heaters, and indicators. These items, called provisos, can be inoperative under certain conditions. Limitations may be required as how the aircraft is operated. For example—there may be limitations regarding ice conditions, night flights, or altitude limits. When non-routine maintenance requirements are discovered during inspections, you can create a service request and determine if the requirement should be deferred to subsequent visits using MEL or CDL instructions.

MEL addresses defective equipment, and CDL addresses missing parts in an aircraft. This functionality includes:

- Definition of the lists is based on Air Transport Association of America (ATA) specification codes. MEL and CDL instructions are associated to a product classification. The applicable ATA codes are defined—along with the corresponding repair times, installed quantities and minimum required quantities. These ATA codes and minimum quantities are used to identify the eligibility of MEL and CDL deferrals for the unit based on the ATA code definitions in corresponding master configurations.
- Issues can be logged by a pilot, crew member, or technician—and flagged as a potential MEL or CDL item. The system automatically identifies applicable MEL/CDL instructions based on the associated configuration position.
- Maintenance requirements are deferred against associated MEL and CDL instructions. When a requirement is deferred against the MEL or CDL, applicable Maintenance and Operation (M) and (O) procedures are automatically added to the maintenance visit. These procedures are defined in engineering as maintenance requirements, and the applicability is determined based on effectivity definitions and defined ATA codes.

See: Minimum Equipment List (MEL) and Configuration Deviation List (CDL) Setup, page 8-9

Integration and Dependencies

Oracle Complex Maintenance, Repair, and Overhaul uses modules from other Oracle applications.

Oracle Counters

Organizations perform maintenance operations on an electromechanical system to maximize the service life of that asset. Maintenance operations require that the service life of a system, or the components comprising it, be measured. Timers and counters become important here. Car odometers, for example, are counters. Meters used to record the operating hours of power plants on aircraft and boats are timers. Maintenance is typically performed periodically, based on elapsed operating time. Oracle Complex Maintenance, Repair, and Overhaul meets these needs through its integration with Oracle Counters application.

Oracle Complex Maintenance, Repair, and Overhaul user will use an Oracle Counters instance to represent a timer when defining models for system configurations. The service life of a component is measured according to the nature of that component's role, and service life measurements are selected by failure mode analysis. Calendar time is of interest because of possible corrosive conditions resulting in damage over time. Counter instances are sufficiently flexible, and Oracle Complex Maintenance, Repair, and Overhaul users can define the counters using the appropriate unit of measurement associated with a component.

Oracle Install Base

Maintenance organizations gain many advantages by modeling a template for electromechanical system assemblies and individual fleet units. After an Oracle Complex Maintenance, Repair, and Overhaul user completes the definition of a master configuration, a framework that describes the general characteristics of the system including the engineering rules for assembly, exists. The user can then create a unit configuration.

Oracle Complex Maintenance, Repair, and Overhaul will invoke the Install Base methods to populate the database with a transaction representing the as-operated or unit configuration of an electromechanical system.

Oracle Inventory

Maintenance organizations can greatly improve operational efficiency by planning their material requirements. The Master Configuration module of Oracle Complex Maintenance, Repair, and Overhaul provides a template for the structure of an electromechanical system, and lists the components that are allowable in the different positions of a system configuration. The Unit Configuration module describes the as-installed configuration of a specific fleet unit. This helps organizations predict to an extent, the material requirement for maintaining operational readiness of fleet units.

Oracle Complex Maintenance, Repair, and Overhaul user will use instances of Oracle Inventory when defining the allowable parts in a master configuration for an electromechanical system, and when describing the components in a unit configuration.

Oracle Quality

Oracle Complex Maintenance, Repair, and Overhaul uses the setup from Route Management and the system profile options in Oracle Quality, to allow maintenance organizations to capture quality elements for operations, jobs, deferrals, scrap management, and capturing counter value snapshots. This gives maintenance facility the flexible integration required to maintain reliable products. Oracle CMRO provides seeded plan templates for routes, operations, job deferrals, MRB dispositions and counter reading capturing. These templates can either be used as-is or adjusted with additional quality elements, except the counter reading template which is used by CMRO in the background and cannot be changed.

Oracle Advanced Supply Chain Planning

Oracle Complex Maintenance, Repair, and Overhaul integrates with Oracle's Advanced Planning and Scheduling (APS) applications for supply chain management. Advanced Supply Chain Planning (ASCP), is used to schedule required materials from maintenance visits. Available to Promise (ATP), is used for material availability inquiries, as well as scheduling through ASCP. Demand Planning (DP), is used for creating material demand from three sources: global demand from forecasted requirements in Unit Maintenance Plan; scheduled demand from requirements scheduled to maintenance visits; and historical non -routine (and routine) demand from maintenance accomplished at specific faculties. Additionally, Oracle APS's Inventory Optimization (IO) application is required for complete supply chain planning.

Oracle Purchasing

Oracle Complex Maintenance, Repair, and Overhaul integrates with Oracle Purchasing to set up buyers, approvals, purchasing options, receiving options, financial options, and open accounting periods. Oracle Purchasing is directly integrated with CMRO's OSP module and enables the creation of Purchase Requisitions or Purchase Orders when required for outside vendor service.

Oracle Warehouse Management

Oracle Warehouse Management provides maintenance organizations, the functionality to control their inventory by status/condition and associate subinventories with a department.

Oracle Order Management

Oracle Complex Maintenance, Repair, and Overhaul integrates with Oracle Order Management to set up processing constraints and create customers. Oracle Order Management is directly integrated with CMRO's OSP module and enables the creation

of Service Orders with shipping lines for shipping and receiving items when required for outside vendor service.

Oracle Enterprise Asset Management

Oracle Complex Maintenance, Repair, and Overhaul uses the same work order system as Oracle Enterprise Asset Management (eAM). It also uses the Oracle eAM functionality to complete operations. Oracle CMRO benefits from Oracle eAM's enhanced integration with Oracle Costing.

Oracle Customer Support

Oracle Support provides Oracle Complex Maintenance, Repair, and Overhaul with the functionality to create and update service requirements in a maintenance organization. The association of a service request to a visit task and production job allows the maintenance organization to track the service difficulty (non-routine) to the associated progress or resolution performed by the maintenance personnel.

Integration of Oracle Complex Maintenance, Repair, and Overhaul and Enigma 3C

Integration of Oracle Complex Maintenance, Repair, and Overhaul and Enigma 3C
Oracle Complex Maintenance, Repair, and Overhaul delivers the total functionality to manage entire maintenance operations from configuration management and engineering to maintenance planning and execution for a maintenance organization.

Enigma 3C ® delivers a dynamic service index of maintenance, parts and diagnostic information, that captures operational expertise and connects to vital corporate systems to manage and optimize the service and support workflow.

The integration between Oracle's Complex Maintenance, Repair, and Overhaul and Enigma's 3C is to provide an unique solution for maintenance service providers to enable the technicians with a set of tools that connect Complex Maintenance, Repair, and Overhaul's extensive back office functionality for configuration management, engineering and maintenance planning with Enigma's flexible and easy to use documentation centric maintenance execution system in a wireless environment.

Managing Maintenance Requirements

This chapter covers the following topics:

- Overview
- Fleet Maintenance Program
- Creating Maintenance Requirement Records
- Attaching Documents to a Maintenance Requirement
- Associating Routes to a Maintenance Requirement
- Defining Maintenance Requirement Effectivity
- Defining Effectivity Details
- Defining Intervals and Thresholds
- Defining Maintenance Requirement Relationships
- Updating Maintenance Requirement Records
- Viewing Items Affected by a Maintenance Requirement
- Associating Visit Types with a Maintenance Requirement
- Creating Maintenance Requirement Revisions
- Viewing Maintenance Requirement Details
- Associating Program Sub Types to Program Types
- Service Requests
- Entering Service Requests

Overview

Ensuring the safety and readiness of machines, and the increase in component life of complex, safety sensitive, and expensive assets is crucial in today's industry. The Oracle Complex Maintenance, Repair, and Overhaul Fleet Maintenance Program module

enables organizations to manage a preventative maintenance program that accomplishes this need.

Key functions provide process-oriented, task based procedures for essential maintenance requirement management tasks. See:

- Creating Maintenance Requirement Records, page 2-5
- Attaching Documents to a Maintenance Requirement, page 2-9
- Setting Maintenance Route Dependencies, page 2-13
- Updating Maintenance Requirement Records, page 2-32
- Viewing Items Affected by a Maintenance Requirement, page 2-35
- Associating Visit Types to a Maintenance Requirement, page 2-38
- Creating Maintenance Requirement Revisions, page 2-40
- Viewing Maintenance Requirement Details, page 2-42
- Associating Program Sub Types to Program Types, page 2-43

Fleet Maintenance Program

Fleet maintenance manages the creation, organization, and planning of preventative maintenance tasks for an asset or group of assets. It is a repository for scheduled maintenance and associated information that organizes and streamlines planned maintenance tracking and execution.

Maintenance actions are called maintenance requirements; and originate from requirements applicable to a product, and organizing them in a way universally usable by all parties involved. The Fleet Maintenance Program module addresses the four major parts of a preventative maintenance requirement:

- Origin (why a maintenance action is required)
- Effectivity (what the maintenance requirement applies to)
- Frequency (when the maintenance requirement is to be performed)
- Work Cards or Routes (how the maintenance requirement is to be performed).

Fleet Maintenance Program targets the operator (Commercial and Military), third party maintenance service provider, simple assembly component shop, and complex assembly component shop in the maintenance, repair, and overhaul industry. It allows the association of maintenance requirements to the three groups of product types:

- **Top Units:** units that contain all the component parts, such as an aircraft, a motor vehicle, or a ship
- **Complex Assembly:** a complex component of the top unit, such as an engine, or an aircraft landing gear
- **Simple Component:** a component of the top unit or complex assembly

Maintenance requirements

Maintenance requirements are planned/scheduled when unit maintenance is planned. Maintenance requirements are associated to visits in the Unit Maintenance Plan module.

Maintenance requirements may also arise during maintenance and crew inspections or when the visit is in production. These requirements are of the unplanned or non-routine nature. Users can choose to accomplish these requirements in the same visit by creating non-routine work orders in the Production module. Optionally, users can define these requirements in Fleet Maintenance Program and plan them from FMP by adding these unplanned requirements directly to visits in Visit Work Package. If the user chooses to defer these requirements, it will appear in Unit Maintenance Plan and can be scheduled to other visits.

Users can also log service requests to track maintenance needs discovered during inspections or production. You can view these service requests as maintenance requirements with program type of non-routine. These requirements can be associated with visits the same way as other unplanned requirements.

Key Business Processes

Maintenance Requirements Creation

Maintenance requirements refer to planned maintenance actions that originate from directives from the FAA (Federal Aviation Administration) in the aircraft industry. The maintenance requirement recording process allows maintenance personnel to create maintenance requirements with attributes uniquely defining the requirement. You can link maintenance requirements to maintenance routes, define an effectivity clause describing the requirement applicability, and schedule the maintenance performance.

Maintenance Routes Association

You can search for routes applicable to a maintenance requirement, and to attach the appropriate routes to the maintenance requirement. Routes can then be set up with technical dependencies to each other within the maintenance requirement. These dependencies are validated against visit and planning information to assist in the scheduling order of the routes.

Documents Association

Maintenance personnel frequently refer to technical manuals during a maintenance

operation. Maintenance documents, such as technical manuals and regulatory directives, if attached to a maintenance requirement, improve operational efficiency. You can search for documents applicable to a maintenance requirement, attach appropriate documents to a maintenance requirement, and mark attached documents as reference or source.

Effectivity Definition

Effectivity refers to the applicability of a maintenance requirement. Fleet maintenance enables maintenance organizations to attach attributes to maintenance requirements, which automatically notifies personnel of the maintenance requirements applicable to certain physical units within the database. A master configuration node, a master configuration item, and a product classification node can be attached to a maintenance requirement. Maintenance requirements can also be associated to unit details such as serial number, and manufacturer.

You can set up multiple effectivity for one maintenance requirement allowing total flexibility and control. An effectivity owns a set of effectivity details, and a set of interval thresholds. Depending on these effectivity rows, details, and interval thresholds, actual items affected in inventory are selected, and then calculated for maintenance requirement due dates. You can also set up overlapping effectivity for the same maintenance requirement, in which case the Unit Maintenance Plan module will calculate more than one estimated due date, and then display only the earliest one. This is desirable because one effectivity can have its own set of applicable interval thresholds when an item is found according to specific criteria.

Interval and Threshold Definition

Intervals and thresholds are used to set a schedule that counts down until the maintenance requirement is due for a unit. Maintenance organizations can define interval and threshold values for maintenance requirements using the Fleet Maintenance Program. The number of interval and threshold values defined for a maintenance requirement can be unlimited, and maintenance personnel can select whether the combined intervals will come due for occurring first or last. The interval thresholds are directly related to the effectivity of a maintenance requirement, allowing a maintenance requirement to have several useful interval threshold sets depending on the effectivity.

Maintenance Requirements and Dependent Relationships Management

Maintenance organizations can use group relationships for non-complicated parent child components where the parent maintenance requirement accomplishment includes the children.

The Letter Check relationships in aviation maintenance is an example. An A check consists of X number of children components that are all tracked on the parent component's interval for maintenance requirement. An A Check will belong to a B Check, and the B Check will include all the A Check's children in addition to some of its own. The B Check will belong to a C Check and the C Check to a D Check. Each Check will be displayed in the Unit Maintenance Plan as a group with the same estimated due date eliminating a cluttered report. However, when a child component has a recurring

maintenance requirement frequency outside of its parent (more frequent), this will be displayed separately also.

A maintenance requirement is also sometimes linked up with the completion of another requirement. This creates a dependency between the two requirements. Fleet Maintenance Program accommodates such dependency with a maintenance requirement attribute that states another maintenance requirement as its prerequisite.

Affected Items Listing

Maintenance organizations gain a comprehensive view of the items that covered by a maintenance requirement's effectivity. Maintenance personnel can view all items in the database to which the maintenance requirement applies based on the current set of effectivity.

Create Service Requests and Associate with Maintenance Requirements

You can log problems that occurred with the unit, whether it occurs during operation, or is the result of a maintenance inspection. You can also diagnose the problem and identify the Fleet Maintenance requirement to resolve the problem.

Minimum Equipment and Configuration Deviation Deferrals, and Non-routine Requests

Minimum Equipment List (MEL) and Configuration Deviation List (CDL) instructions provide authorization for deferring certain maintenance requirements when performing line maintenance. This functionality identifies equipment and items that can be inoperative or missing, but still enable the aircraft to fly with limitations. For example, life preservers might be missing on an aircraft—the flight can be authorized to continue if it is not flying over bodies of water. Deferrals for the unit are based on the ATA code definitions in corresponding master configurations—based on associated repair times, installed quantities, and minimum required quantities. When a requirement is deferred against the MEL or CDL, applicable Maintenance and Operation (M) and (O) procedures are automatically added to the maintenance visit.

When non-routine maintenance requirements are discovered during inspections, you can create service requests in the Complex Maintenance, Repair, and Overhaul application. You can then determine if the requirement should be deferred to subsequent visits using MEL or CDL instructions.

See: Minimum Equipment List (MEL) and Configuration Deviation List (CDL) Setup, page 8-9, and Creating Non-routine Requests During Unit Maintenance, page 8-15

Creating Maintenance Requirement Records

To create maintenance requirement records:

1. Navigate to the Create Maintenance Requirement page.
2. Enter a value in the Title field to define the name of this maintenance requirement.

Any newly created maintenance requirement is at the Draft status. The status advances to Approval Pending when the requirement is sent for approval

3. You can enter a Revision Number, this is an optional field. And select a Category defined for this requirement, categorizations are based on equipment types.

Note: The Status value defaults to Draft and the Version value defaults to 1 when you create the record.

4. In the Program Type field, select a value used to classify or group maintenance requirements. Optionally, you can select a Program Subtype used with this program.

5. Select a Service Type value, choices are On or Off.

This field determines the service type needed to fulfill the maintenance requirement. For example, On wing can be accomplished at aircraft location, whereas Off wing requires being sent to the shop.

6. Select an Implement Status, choices are:

- **Mandatory:** Requirements with this status are forecasted in Unit Maintenance Plan (UMP).
- **Optional Implement:** These requirements are forecasted in UMP, but accomplished at the discretion of the planner.
- **Unplanned:** These requirements are not forecasted in the UMP. These are non-routine requirements, identified solutions, or inspections for issues discovered during maintenance process or selective maintenance not needed in the forecasted maintenance program.

Note: Child maintenance requirements use this status, that do not require their own forecast and threshold definitions, but are included under mandatory, forecasted parent material requirements.

All status are considered in processing maintenance requirements except Optional Do Not Implement.

7. Select a value in the Repetitive field indicating whether the maintenance requirement is one time or repetitive. Choices are Yes or No.
8. If this is a repetitive requirement, select a value for the Show flag. This field is only applicable to repetitive maintenance requirements. Choices are All or Next.

This value is taken into consideration when the unit maintenance plan calculates the Estimated Due Dates list. Based on the Show field value, the unit maintenance plan will either show all repeating occurrences, or only the next occurrence. This is useful in the case of maintenance requirements that are to be carried out frequently, and would otherwise clutter up a year long report.
9. Select a value for Whichever Comes.

This field determines whether to choose the first or the last due date calculated. It is based on all the interval thresholds defined for the maintenance requirement. Choices are:
 - First—indicates an OR condition for the interval threshold records
 - Last— indicates an AND condition for the interval threshold records
10. Select a value in the Effective From date field.
11. Optionally, select a Billing Item.

Billing items are set up Oracle Inventory, they are non-stockable and non-transactable items. Whenever a maintenance requirement with a billing item is added to a visit, the price of the billing item is taken into account when estimating the price of the visit.
12. Optionally, select a Quality Inspection Type, this is used for quality collection.
13. Optionally, select a Visit Category. When creating visits, planners can search for and add maintenance requirements to visits, based on the Visit Category.
14. Optionally, you can select a value in the Follows After Accomplishment field. This indicates the next requirement after the completion of this requirement.

15. Enter any description this requirement in the Description field, and any other descriptive text in the Comments field.
16. Optionally, enter a Down Time value.
Downtime is the total amount of time needed to complete the related maintenance requirement.
17. Select Apply to save your work.

To retrieve existing maintenance route records:

1. Navigate to the Search Maintenance Requirements page.
2. Select information in the applicable fields, and select Go to display the results of your search. .

You can select information in the following fields: Title, Originating Document, Program Type, Category, Associated Item, Revision, Status, Parent Title, Route Type, Description, and Route Number.

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MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Program Type Associations

Logged In As TSMITH

Search Maintenance Requirements

Title
Originating Document
Program Type
Program Subtype
Category
Associated Item

Revision
Status: Active
Parent Title
Route Type
Description
Route Number

Go Clear

Create

Select Maintenance Requirement: Create Revision Approve Approve And Calculate Due Date Delete Terminate Previous 1-10 of 29 Next

Select	Title	Description	Program Type	Status	Effective From	Effective To	Effectivity	Relationships	View Affected Items
<input type="radio"/>	VA-C70-21-40-00	Replace the electrical and electronic supply fan filter.	Routine Check	Complete	20-MAY-2005				
<input type="radio"/>	VA-C70-21-40-4C	VA C70 Phase 4C	Phase	Complete	20-MAY-2005				
<input type="radio"/>	M-21-22-01	M-21-22-01	(M) and (O) Procedure	Complete	20-SEP-2006				
<input type="radio"/>	C-Check	Maintenance group to be performed every 2000 operation hours.	Letter Check	Complete	11-NOV-2002				
<input type="radio"/>	28-020-01	Operationally check left surge tank relief valves.	Letter Check	Complete	13-NOV-2002				
<input type="radio"/>	29-020-02	Replace hydraulic pump filter.	Letter Check	Complete	13-NOV-2002				
<input type="radio"/>	VA-C70-1/2/3 A-Check	VA-C70-1/2/3 A Check	Block	Complete	20-MAY-2005				
<input type="radio"/>	VA-C70-24-01	Remove and Replace Main Battery	Routine Check	Complete	06-FEB-2007				
<input type="radio"/>	A-Check	*Maintenance Group to be performed every 500 operation hours.	Letter Check	Complete	11-NOV-2002				
<input type="radio"/>	VA-C70-21-150-00	Replace cabin temperature sensor	Routine Check	Complete	20-MAY-2005				

Select Maintenance Requirement: Create Revision Approve Approve And Calculate Due Date Delete Terminate Previous 1-10 of 29 Next

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3. To edit maintenance requirement details, attached routes, attached documents, actions, effectivity, and relationships, select a record and choose the appropriate link.
 - View Affected Items: To view items affected by a maintenance requirement record.
 - Create Revision: To revise a maintenance requirement, the Update Maintenance Requirement page appears.

Note: You can only create revisions for maintenance requirements that have the Complete status.

Note: Oracle CMRO enables you to render the Maintenance Requirements page in a view only mode, that is, you can query Maintenance Requirements, but cannot create any. You can do this by enabling the function AHL_FMP_VIEW.

Related Topics

Attaching Documents to a Maintenance Requirement, page 2-9

Defining Maintenance Requirement Effectivity, page 2-15

Defining Maintenance Requirement Relationships, page 2-26

Attaching Documents to a Maintenance Requirement

Source or originating documents identify the origin of a maintenance requirement. The Document Index module serves as the central location for these documents. Multiple originating documents can be applicable to one maintenance requirement. Reference documents refer to supporting documents. This enhances operational efficiency, providing maintenance personnel at all levels ready access to related documents during the maintenance process.

Note: You cannot edit the documents that are attached to a maintenance requirement flagged as Complete, Terminated, or Approval Pending. The system launches the View Attached Documents page (view-only mode) instead of the Update Attached Documents page when the maintenance requirement is in any of these states.

To attach documents to a maintenance requirement:

1. Select your maintenance requirement and navigate to the Update Attached Documents page.

ORACLE Oracle Complex MRO

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Document Index Route Management Fleet Maintenance Program

Overview | Program Type Associations

Details

Documents

Routes

Effectivities

Relationships

Affected Items

Update Attached Documents

Title **27-036-00** Status **Draft**
Revision
Category **AIRFRAME**
Program Type **Letter Check** Program Subtype **C**

Documents List

Cancel Associate Documents Revert Apply

Previous 1-1 of 1 Next

Remove	Association Type	Number	Title	Type	Revision	Chapter	Section	Subject	Page	Figure	Note
<input type="checkbox"/>	Reference	MEAH019	Aircraft 1								

Add More Rows

Previous 1-1 of 1 Next

Document Index | Route Management | Fleet Maintenance

Program | Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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If documents have already been attached to the maintenance requirement, the Documents List shows the attached documents. These attachments can be updated by altering the values in the Documents List fields if the maintenance requirement record is in the Draft or Approval Rejected state.

Use the information in the following table to enter values in the Update Attached Documents page.

2. Select an Association Type and Number.

Your choices for Association Type are either Source or Reference. A source type indicates that the attached document is the originating document of the maintenance requirement, and a reference indicates that the document is a supporting document.

Applicable values for Title, Type, and Revision fields display when you select a document number.

3. You can enter any descriptive text in the following fields:

- Chapter—the specific chapter information in the document.
- Section—the specific section in the document chapter.
- Subject—the specific subject within the document.
- Page—the specific page in the document Enter the page number.
- Figure—any figures in the document that are related to the maintenance requirement. Enter the figure detail.

- Note— text field where you can enter any additional information..
4. Select Apply to save your work.
 5. To select and associate multiple documents to an maintenance requirement, select Associate Documents to display the Search Document page.
 6. Retrieve the document references that match your requirement.
- You can search using the following fields: Source Title, Document Type, Operator, Media Type, Document Number, Status Sub Type, and Item Type.

[illegible]

- From the Search Results, select the document records using the Select check box, and click Associate to return this record to the Documents List in the Update Attached Documents page.
- Select Apply to save your work.

Associating Routes to a Maintenance Requirement

Fleet Maintenance Program allows maintenance organizations to search for maintenance route records, and to associate them to maintenance requirements. One maintenance requirement can be associated to multiple routes, and each route can be associated to multiple maintenance requirements. Fleet Maintenance Program module also allows you to set a dependency to the attached routes.

Note: You cannot edit the maintenance routes assigned to a

maintenance requirement flagged as Complete, Terminated, or Approval Pending. The system launches the Update Attached Routes page in a view-only mode when the maintenance requirement is in any of these states.

To associate maintenance routes to a maintenance requirement:

- 1. Navigate to the Update Attached Routes page.

ORACLE Complex MRO

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Overview Program Type Associations Logged In As TSMITH

Details Documents Routes Effectivities Relationships Affected Items Visit Types

Update Attached Routes

Title MR_1 Status Draft
Revision Program Type Routine Check Category OFFICE EQUIPMENT
Program Subtype

Cancel Revert Apply

Routes List

Attach Routes

Remove	Route Number	Route Description	Item Type	Operator	Revision Number	Stage	Dependency
<input type="checkbox"/>	00-000-00-00	Visual Inspection			1		

Add More Rows

Cancel Revert Apply

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If routes have already been attached to the maintenance requirement, the Routes List shows the associated maintenance routes. These routes can be updated by altering the values in the Routes List fields if the maintenance requirement record is in the Draft or Approval Rejected state.

- 2. To associate new maintenance routes to the maintenance requirement record, select Attach Routes. This launches the Search Route page.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Program Type Associations

Logged In As TSMITH

Search Route

Route Number

Title

Route Type

Item Type

Major Zone

Organization

Go Clear

Status Complete

System

Process

Operator

Sub Zone

Item

Cancel

Select Route: Associate

Previous 1-10 of 53 Next

Select	Route Number	Title	Route Type	Item Type	Major Zone	Sub Zone	System	Operator	Revision	Status	Start Date	End Date
<input checked="" type="checkbox"/>	00-000-00-00	Visual Inspection							1	Complete	07-NOV-2002	
<input type="checkbox"/>	21-040-00-00	E/E cooling supply fan filter	Aircraft		MRO Aircraft100 Lower Fuselage	Electrical & Electronics Compartment...			1	Complete	07-NOV-2002	
<input type="checkbox"/>	21-150-00-00	Cabin Temp Sensor Filters	Aircraft		MRO Aircraft200 Upper Fuselage	Cabin			1	Complete	07-NOV-2002	
<input type="checkbox"/>	24-030-01-00	Left IDG Oil Level	Engine		MRO Aircraft400 Engine & Nacelle #1 Engine				1	Complete	07-NOV-2002	
<input type="checkbox"/>	27-036-00-00	Aft rudder quadrant	Aircraft		MRO Aircraft300 Empennage	Vertical Stabilizer			1	Complete	07-NOV-2002	
<input type="checkbox"/>	27-073-00-00	Elevator Mechanical Control Path (RES@OP)	Aircraft		MRO Aircraft300 Empennage				1	Complete	07-NOV-2002	
<input type="checkbox"/>	28-020-01-00	Operationally check left surge tank relief valves	Aircraft		MRO AircraftWing	Left Wing			1	Complete	07-NOV-2002	
<input type="checkbox"/>	29-030-02-00	EMDP case drain filter	Aircraft		MRO Aircraft700 Landing Gear	Right Main Landing Gear			1	Complete	07-NOV-2002	
<input type="checkbox"/>	32-300-00-00	Brake Accumulator Precharge Pressure	Aircraft		MRO Aircraft700 Landing Gear	Left Main Landing Gear			1	Complete	07-NOV-2002	
<input type="checkbox"/>	C70-1/2/3, A Check	C70-1/2/3, A Check Summary	Aircraft						1	Complete	14-MAY-2005	14-MAY-2005

Select Route: Associate

Previous 1-10 of 53 Next

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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- Retrieve the desired maintenance route records. .
- From the Search Results, select the pertinent record using the Select check box.

ORACLE Complex MRO

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MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Program Type Associations

Logged In As TSMITH

Update Attached Routes

Cancel Revert Apply

Title MR_1

Revision

Program Type Routine Check

Status Draft

Category OFFICE EQUIPMENT

Program Subtype

Routes List

Attach Routes

Remove	Route Number	Route Description	Item Type	Operator	Revision Number	Stage	Dependency
<input type="checkbox"/>	00-000-00-00	Visual Inspection			1		
<input type="checkbox"/>	00-000-00-00	Visual Inspection			1		

Add More Rows

Cancel Revert Apply

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- Select a value in the Route Number field
- When this value is selected, applicable values display in the Route Description, Item Type, Operator, and Revision, fields.
- Optionally, you can enter a value in the Stage field.
- The maximum number of stages is set up during implementation. If there are two routes and one is dependent on the other, the dependent maintenance requirement route must be in a later or in the same stage as the first route. Stage information is carried over when maintenance requirements are assigned to visits.
- Select apply to save your work.

Setting Maintenance Route Dependencies

Fleet Maintenance Program permits maintenance organizations to attach existing maintenance route records to maintenance requirements, and to set an order in which the maintenance routes are to be performed.

The Route Dependencies page is accessible from the Update Associated Routes page. The values for Dependency can be chosen as Execute Before, or Execute After. Only Route Numbers corresponding to routes associated to the maintenance requirement will be displayed in the context.

Note: You cannot edit the maintenance route dependencies assigned to a maintenance requirement flagged as Complete, Terminated, or Approval Pending. The system opens the View Route Dependencies page (view-only mode) instead of the Update Route Dependencies page when the maintenance requirement is in any of these states.

To define maintenance route dependencies:

1. Associate the appropriate maintenance routes with the maintenance requirement record.
2. Choose the Dependency tree icon corresponding to the route that you want to set. This launches the Route Dependencies page with the maintenance requirement and route context information.

If other maintenance route dependencies have already been defined for the requirement record, the Route Dependencies List shows the existing dependencies. These dependencies can be updated if the maintenance requirement record is in the Draft or Approval Rejected state.

The screenshot displays the 'Route Dependencies' page in the Oracle Complex MRO system. The page header includes navigation links like 'Home', 'CMRO Home', 'Engineering', 'Configuration', 'Planning', 'Administration', 'Execution', 'Profile', 'Sign Out', and 'Help'. The user is logged in as 'TSMITH'. The main content area shows the 'Route Dependencies' section for a specific maintenance requirement. The requirement details include Title 'MR_1', Revision 'Routine Check', Program Type '00-000-00-00', and Operator. The status is 'Draft' for 'OFFICE EQUIPMENT' with Program Subtype '1', Revision Number '1', and Item Type. Below this, a 'Dependency List' table is shown with columns: RemoveDependency, Route Number, Route Description, Item Type, Operator, and Revision Number. The table contains three rows, each with a dropdown menu set to 'Executed Before'. There are 'Add More Rows', 'Cancel', 'Revert', and 'Apply' buttons at the bottom of the table.

3. Select a value in the Dependency Order field.

This is the order which maintenance routes are associated to a maintenance requirement. Choices are Execute Before and Execute After.

4. Select a Route Number value.

When you select this value, applicable information displays in the Route Description, Item Type, Operator, and Revision Number fields.

5. Select Apply to save your work.

Defining Maintenance Requirement Effectivity

Fleet Maintenance Program permits maintenance organizations to attach Oracle Complex Maintenance, Repair, and Overhaul attributes to maintenance requirements. This automatically notifies maintenance personnel about a maintenance requirement applicability on certain physical components existing in the database.

You can define maintenance requirement effectivity using the Fleet Maintenance Program for a Master Configuration position or alternate item, for an item in Inventory, or for a Product Classification node. You can also define effectivity based on Manufacturer, Serial Number or a range of Serial Numbers, Manufacturing Date, or Country of Origin.

Note: You cannot edit the effectivity definitions for a maintenance requirement flagged as Complete, Terminated, or Approval Pending. The system launches the View Effectivity page (view-only mode) instead of the Update Effectivity page when the maintenance requirement is in any of these states.

Prerequisites

- ☐ The maintenance requirement record for which you want to define effectivity must exist in the database. The maintenance requirement record must be in the Draft or Approval Rejected state.

To define maintenance requirement effectivity:

1. Retrieve the maintenance requirement records that match your needs. See Retrieving Existing Maintenance Requirement Records, page 2-8.
2. In the Search Results list, click the Title link of the pertinent record to launch the Update Maintenance Requirement page. The side navigation menu is accessible from this page.
3. On the side navigation menu, click Effectivity to launch the Update Effectivity page.

Update Effectivity page

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Update Effectivity

Title **27-036-00**
Revision
Program Type **Letter Check**

Status **Draft**
Category **AIRFRAME**
Program Subtype **C**

Effectivities List

Cancel Revert

Previous 1-1 of 1 Next

Remove	Effectivity	Item	Master Configuration Position	Master Configuration Item	Product Classification Node	Effectivity Details	Interval Threshold	Alt
<input type="checkbox"/>	C1600	MRO-C1600						

Add More Rows

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If you have already defined the effectivity for the maintenance requirement, the Effectivities List shows the existing effectivity definitions. These definitions can be updated by altering the values in the Effectivities List fields if the maintenance requirement record is in the Draft or Approval Rejected state.

Use the information in the following table to enter values in the Update Effectivity page.

Description of fields in the Update Effectivity page

Field Name	Description
Effectivity	User defined name for the effectivity. The name is unique across all effectivities for a given maintenance requirement, and can relate to the actual application of the effectivity or maintenance requirement further describing its purpose. For example, Boeing 737, MD 80, Cold Weather.
Item Number	The Inventory item identification number. This refers to the Part Number that the maintenance requirement is applicable to in the context of the effectivity.

Field Name	Description
Master Configuration Position	The master configuration position to which the maintenance requirement applies to in the context of the effectivity. This indicates that the maintenance requirement would apply to a part installed in a specific position of the configuration. For detailed instructions, see Retrieving Existing Master Configuration Records.
Master Configuration Item	points to the alternate item which can be installed in the specified master configuration position. The maintenance requirement applies to the item in this position.
Product Classification Node	The Product Classification node to which the maintenance requirement applies. Product Classification refers to the logical grouping of a product family. An Item or a Master Configuration Position must be defined for the maintenance requirement effectivity in addition to the product classification node. The maintenance requirement will then be applicable to the item when it is installed in the specified product classification only.

4. To define a new effectivity for the maintenance requirement, click Add More Rows. Rows with empty fields are displayed where you can enter required values.

Define New Effectivities - Update Effectivity page

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Update Effectivity

Title **27-036.00** Status **Draft**
Revision
Program Type **Letter Check** Category **AIRFRAME**
Program Subtype **C**

Effectivities List

Previous 1-1 of 1 Next

Remove	Effectivity	Item	Master Configuration Position	Master Configuration Item	Product Classification Node	Effectivity Details	Interval Threshold	View Affected Items
<input type="checkbox"/>	C1600	MRO-C1600						
		11475M95P05						

Add More Rows

Previous 1-1 of 1 Next

- Click Apply on the Update Effectivity page to record the changes.
- To remove an effectivity definition from the Effectivities List, select the Remove checkbox beside the record you want to remove, and click Apply.
- To update the details of an effectivity definition, click the Effectivity Details icon corresponding to the record you want to update. This launches the Update Effectivity Details page. For detailed instructions, see Defining Effectivity Details, page 2-18.
- To define intervals and thresholds for an effectivity, click the Interval Threshold icon corresponding to that record. For details, see Defining Intervals and Thresholds, page 2-22.
- To view the items affected by a maintenance requirement effectivity, click the View Affected Items icon corresponding to that effectivity definition. For details, see Viewing Items Affected by a Maintenance Requirement, page 2-35.

Defining Effectivity Details

You can define effectivity details, such as Serial Number Range, Manufacturing Details, Country of Origin, Item Owner, Item Location, and Item Additional Attributes after defining maintenance requirement effectivity. Specifying these item details further funnels down the maintenance requirement applicability to specific units.

Note: You cannot edit the effectivity definition details for a maintenance requirement flagged as Complete, Terminated, or Approval Pending. The system launches the View Effectivity Details page (view-only mode) instead of the Update Effectivity Details page when the maintenance requirement is in any of these states.

Prerequisites

- ☐ The maintenance requirement record for which you want to define effectivity details must be in the Draft or Approval Rejected state.

To define effectivity details:

1. Define the effectivity for the maintenance requirement. See Defining Maintenance Requirement Effectivity, page 2-15.
2. On the Update Effectivity page, click the Effectivity Details icon corresponding to the effectivity definition for which you want to specify details. This launches the Update Effectivity Details page with the maintenance requirement context information.

Effectivities List - Update Effectivity page

If other effectivity details have already been defined for the requirement effectivity record, the Effectivity Details List displays the existing details. These details can be updated by altering the values in the Effectivity Details List fields if the maintenance requirement record is in the Draft or Approval Rejected state.

Use the information in the following table to enter values in the Update Effectivity Details page.

Description of fields in the Update Effectivity Details page.

Field Name	Description
Serial Number From	Allows you to enter any context item serial number to define the start of the serial number range to which the maintenance requirement applies. You can use a lookup from existing inventory serial numbers to populate this field, or enter any value here to allow accommodation of unknown new inventory, not yet owned, but would be affected by the maintenance requirement.
Serial Number To	The serial number that ends the serial number range to which the maintenance requirement applies. You can use a lookup from existing inventory serial numbers to populate this field, or enter any value here to allow accommodation of unknown new inventory that is not yet owned, but would be affected by the maintenance requirement. The Serial Number To field value can be the same as the Serial Number From value if only one item serial number is affected by the maintenance requirement.
Manufacturer	The item manufacturer identity. The current validation against this field is not in effect as manufacturer has a one to one relationship with Item Number.
Manufacture Date From	denotes the starting item manufacturing date to which the maintenance requirement applies. This field value is used to define effectivity for items with manufacturing dates within a specified range.
Manufacture Date To	represents the ending item manufacturing date to which the maintenance requirement applies. This field value is used to define effectivity for items with manufacturing dates within a specified range.
Country	represents the country of origin. The current validation against this field is not in effect as country of origin is not stored against an instance of an item. Serial number range is often used for defining this item attribute.
Owner	This field enables you to define effectivity detail based on owner.
Owner Name	represents the name of the item owner.
Item Location Type	represents the item location. This field is used to define effectivity detail based on location.

Field Name	Description
Additional Attribute Code	The list of values enables you to select the code of additional attributes.
Attribute Value	This field enables you to define effectivity detail based on extended attributes.

- To enter a new effectivity detail row, click Add More Rows.
- Enter the field values as required.

Define Effectivity Details - Update Effectivity Details

- Click Apply to save the effectivity detail.
- To exclude an effectivity detail row from the maintenance requirement effectivity, select the Exclude checkbox corresponding to that row, and click Apply. The Exclude flag indicates whether the maintenance requirement effectivity includes or excludes an effectivity detail row.

For example, if you want to exclude from the effectivity, a range of part serial numbers within a serial number range for which the maintenance requirement applies, perform the following tasks:

- Click Add More Rows to open a new row.
- Enter the Serial Number From and Serial Number To values in this row, defining the range that you want to exclude from the effectivity.
- Select the Exclude checkbox beside the range that you want to exclude from the effectivity, and click Apply. The Exclude checkbox being selected serves as the flag to exclude the serial number range in that effectivity detail row from the maintenance requirement effectivity.
- To remove an effectivity detail row from the Effectivity Details List, select the

Remove checkbox beside the pertinent record, and click Apply.

Defining Intervals and Thresholds

Maintenance organizations use intervals and thresholds to set a schedule that will count down until a maintenance requirement is due for a unit. Fleet Maintenance Program allows organizations to set multiple intervals and thresholds for each effectivity. It links all intervals and thresholds directly to the affected unit's existing counters. You can choose the counter based on which to set an interval and threshold combination. You can choose between "Whichever Comes Last" and "Whichever Comes First" for each set of interval and threshold combination.

Note: You cannot edit the interval and threshold definitions for a maintenance requirement flagged as Complete, Terminated, or Approval Pending. The system launches the View Interval Threshold page (view-only mode) instead of the Update Interval Threshold page when the maintenance requirement is in any of these states.

Prerequisites

- ☐ The maintenance requirement record for which you want to define interval threshold must be in the Draft or Approval Rejected state.

To define intervals and thresholds:

1. Define the effectivity for the maintenance requirement. See Defining Maintenance Requirement Effectivity, page 2-15.
2. On the Update Effectivity page, click the Interval Threshold icon corresponding to the effectivity definition for which you want to define intervals and thresholds. This launches the Update Interval Threshold page with the maintenance requirement context information.

Update Interval Threshold page

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Update Interval Threshold

Title **27-036-00**

Revision

Program Type **Letter Check**

Status **Draft**

Category **AIRFRAME**

Program Subtype **C**

Effectivity **C1600**

Master Configuration Position

Product Classification Node

Item **MRO-C1600**

Master Configuration Item

Interval Threshold List

Repetitive **Yes**
Whichever Comes **FIRST**

[Cancel](#) [Revert](#) [Apply](#)

Remove	Start Date	Stop Date	Start Interval	Stop	Tolerance Before	Tolerance After	Reset Value	Counter Name	UOM
--------	------------	-----------	----------------	------	------------------	-----------------	-------------	--------------	-----

No records were found matching the given criteria..

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If other intervals and thresholds have already been defined for the requirement effectivity record, the Interval Threshold List displays the existing records. These intervals and thresholds can be updated by altering the values in the Interval Threshold List fields if the maintenance requirement record is in the Draft or Approval Rejected state.

Use the information in the following table to enter values in the Update Interval Threshold page.

Description of fields in the Update Interval Threshold page

Field Name	Description
Start Date	The start date of the range before which the interval specified is valid. This field value is mutually exclusive with the Stop Date, and begins the range for the interval in relation to the associated counter. This field does not apply for one time maintenance requirements.
Stop Date	The stop date of the range before which the interval specified is valid. This date is mutually exclusive with Start Date, and ends the range for the interval in relation to the associated counter. This field is not applicable for one time maintenance requirements.
Earliest Due	

Field Name	Description
Start	The start counter value of the range from which the interval specified is valid. Start value is mutually exclusive with the Stop value, and begins the range for the interval in relation to the associated counter. This field does not apply for one time maintenance requirements.
Interval	The interval value for repetitive maintenance requirements, and drop-dead counter values for one time maintenance requirements. When used with one time maintenance requirements, interval will be a count down of the associated counter. When used with repetitive maintenance requirements, interval will represent the frequency of occurrence according to the associated counter.
Stop	The stop counter value of the range before which the interval specified is valid. This value is mutually exclusive with the Start value, and ends the range for the interval in relation to the associated counter. This field does not apply for one time maintenance requirements.
Consider Interval	Defines whether the first occurrence of the MR includes the interval when calculating the due date. If the value of the column is set to Yes, the Building Unit Effectivity (BUE) process will calculate the first occurrence of the MR as interval start value + interval. If the value of the column is No, the BUE process will calculate the first occurrence of the MR as the interval start value without considering the interval. The default value is No.
Tolerance Before	The number of counter units of measure that is acceptable for maintenance requirement accomplishment before the specified interval. This aids in planning maintenance jobs.
Tolerance After	The number of counter units of measure that is permissible for maintenance requirement accomplishment after the specified interval. This value aids in planning maintenance jobs.
Reset Value	The value to which the counter reading needs to be reset.
Counter Name	The associated counter identifier. The associated counter is used for all the numerical values of the row including Interval, Tolerances, Start, and Stop.
UOM	The Unit of Measure as per the associated counter. This field value is returned when the counter is selected. This value is not editable.

- To enter a new interval threshold, click Add More Rows to open new rows.

4. Enter the field values as required.

Define New Interval Threshold

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


















Update Interval Threshold

Title 27-036-00	Status Draft
Revision	Category AIRFRAME
Program Type Letter Check	Program Subtype C
Effectivity C1600	Item MRO-C1600
Master Configuration Position	Master Configuration Item
Product Classification Node	

Interval Threshold List

Repetitive **Yes**
Whichever Comes **FIRST**

[Cancel](#)

Remove	Start Date	Stop Date	Start	Interval	Stop	Tolerance Before	Tolerance After	Reset Value	Counter
	 09-AUG-2004	 10-AUG-2004							
									
									
									
									

Note:

1. You can define a threshold only for one-time (non-repetitive) maintenance requirements. You cannot enter Start, Stop, Start Date, and Stop Date values for one-time maintenance requirements.
2. You can add only one interval per counter.
3. Start and Stop values cannot overlap.
5. Click Apply to save the interval threshold definition.

Save Interval Threshold Definition - Update interval Threshold page

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Update Interval Threshold

Title **27-036-00** Status **Draft**
Revision Category **AIRFRAME**
Program Type **Letter Check** Program Subtype **C**
Effectivity **C1600** Item **MRO-C1600**
Master Configuration Position Master Configuration Item
Product Classification Node

Interval Threshold List [Cancel](#) [Rev](#)

Repetitive **Yes**
Whichever Comes **FIRST**

Previous 1-1 of 1 Next

Remove	Start Date	Stop Date	Start	Interval	Stop	Tolerance Before	Tolerance After	Reset Value	Counter
<input type="checkbox"/>			0	20	100				CSI

[Add More Rows](#)

Previous 1-1 of 1 Next

- To remove an existing interval threshold definition from the Interval Threshold List for the maintenance requirement, select the Remove checkbox beside the definition you want to remove, and click Apply.

Defining Maintenance Requirement Relationships

Maintenance organizations use group relationships for non-complicated parent child components, where the maintenance requirement accomplishment on the parent component includes the child components. A maintenance requirement is also sometimes linked to the accomplishment of another requirement, creating a dependency between the two. For example, a maintenance requirement MR1 can have a dependency to another requirement MR2 that requires MR2 to be completed before MR1. Fleet Maintenance Program accommodates such dependencies using an attribute of the maintenance requirement that states another requirement as its prerequisite.

Note: You cannot edit the relationships defined for a maintenance requirement flagged as Complete, Terminated, or Approval Pending. The system launches the Relationships page in a view-only mode when the maintenance requirement is in any of these states.

Use the following procedure to create maintenance requirement groups, and define their relationships.

Prerequisites

- ❑ The maintenance requirement record for which you want to create groups and define relationships must exist in the database. The maintenance requirement record must be in the Draft or Approval Rejected state.

To define maintenance requirement relationships:

1. Retrieve the maintenance requirement records that match your need. See Retrieving Existing Maintenance Requirement Records, page 2-8.
2. In the Search Results list, click the Title link of the pertinent record to launch the Update Maintenance Requirement page. The side navigation menu is accessible from this page.
3. On the side navigation menu, click Relationships to launch the Maintenance Requirement Relationships page.

Maintenance Requirement Relationships page

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Maintenance Requirement Relationships

Title 27-036-00 Revision Program Type Letter Check Status Draft Category AIRFRAME Program Subtype C

Maintenance Requirements List

Cancel Attach Revert Apply

27-036-00

Previous 1-1 of 1 Next

Remove	Title	Revision	Relationship Type	Description	Program Type	Status	Effective From	Effective To	Relationships
<input type="checkbox"/>	C-Check		Parent	Maintenance group to be performed every 2000 operation hours.	Letter Check	Complete	11-NOV-2002		

Add More Rows

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If other maintenance requirement relationships have already been defined for the requirement record, the Maintenance Requirements List shows the existing relationships. These relationship definitions can be updated by altering the values in the Maintenance Requirement List fields if the maintenance requirement record is in the Draft or Approval Rejected state.

Use the information in the following table to enter values in the Maintenance Requirement Relationships page.

Description of fields in the Maintenance Requirement Relationships page

Field Name	Description
Title	User defined maintenance requirement name. Enter the generic substitution metacharacter% and click the Search icon to retrieve the list of maintenance requirement records that exist in the database. Click the pertinent record in the list of values to return the value to the Title field.
Revision	The revision number of the maintenance requirement. This value if it exists, further identifies the maintenance requirement. This field is populated when the Title field value is returned.
Relationship Type	indicates whether the attached maintenance requirement relates as a parent or a child to the context maintenance requirement. The field values can be either Parent or Child. Relationship Type Parent implies that the attached maintenance requirement would include the context maintenance requirement, and Relationship Type Child implies that a context maintenance requirement would include the attached maintenance requirement.
Description	The maintenance requirement description. The description may be anything that identifies more information about the maintenance requirement. This field is populated when the Title field value is entered.
Program Type	The user defined maintenance requirement program type. Program Types are used to classify or group maintenance requirements, and can be used in conjunction with Program Subtypes. For example, Letter Check, Corrosion, Modification. This field is populated when the material requirement Title is entered.
Status	The seeded revision status of the maintenance requirement. This is either Draft, Complete, Approval Pending, Approval Rejected, or Terminated. Statuses are not user definable or editable, and only indicate whether the maintenance requirement details and associated information are editable. This field is populated when the maintenance requirement Title field value is returned.
Effective From	The effective start date of the maintenance requirement. Only one maintenance requirement revision can be effective at a time instance. This field is populated when the Title field value is entered.

Field Name	Description
Effective To	The effective maintenance requirement end date. Only one maintenance requirement revision can be effective at a time instance. This field is populated when the Title field value is entered.

4. To relate new maintenance requirements to the maintenance requirement record, click Attach. This launches the Search Maintenance Requirement page.

Retrieve Maintenance Requirements - Search Maintenance Requirements page

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Search Maintenance Requirements

Title Revision

Originating Document Status

Program Type Parent Title

Category Description

Associated Item Route Number

Maintenance Requirements Results

Select	Title	Revision	Description	Program Type	Status	Effective From	Effective To
No records were found matching the given criteria.							

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5. Retrieve the maintenance requirement records that match your needs. See Retrieving Existing Maintenance Requirement Records, page 2-8.
6. From the Search Results, select the record that you want to attach using the Select checkbox, and click Attach to return this record to the Maintenance Requirements List on the Maintenance Requirement Relationships page.

Attach Maintenance Requirements - Maintenance Requirement Relationships page

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Maintenance Requirement Relationships

Title 27-036-00

Revision

Program Type Letter Check

Maintenance Requirements List

Status Draft

Category AIRFRAME

Program Subtype C

Cancel

Attach

Revert

27-036-00

Previous

1-1 of 1

Next

Remove	Title	Revision	Relationship Type	Description	Program Type	Status	Effective From	Effective To	Rel
<input type="checkbox"/>	C-Check		Parent	Maintenance group to be performed every 2000 operation hours.	Letter Check	Complete	11-NOV-2002		
	061120031659		Parent		Corrosion	Complete	11-DEC-2003		

Add More Rows

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Next

- 7. Click Apply on the Maintenance Requirement Relationships page to save the relationship records.

View Associated Records - Maintenance Requirement Relationships page

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Maintenance Requirement Relationships

Title 27-836-00 Status Draft
Revision Program Type Letter Check Category AIRFRAME
Program Subtype C

[Maintenance Requirements List](#) [Cancel](#) [Attach](#) [Revert](#) [Apply](#)

27-836-00

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Remove	Title	Revision	Relationship Type	Description	Program Type	Status	Effective From	Effective To	Relationships
<input type="checkbox"/>	061120031650	061120031650	Parent	Letter Check	Letter Check	Complete	11-DEC-2003		
<input type="checkbox"/>	C-Check		Parent	Maintenance group to be performed every 2000 operation Check hours.	Letter Check	Complete	11-NOV-2002		

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Note: To include new maintenance requirement relationships, you can also click Add More Rows to open new rows, enter the field values as described above, and click Apply. This, however, limits the search criteria you can use to find the required maintenance requirement.

8. To remove a related requirement from the Material Requirements List, select the Remove checkbox beside the record you want to remove, and click Apply.
9. To view the child maintenance requirements associated with any Parent Relationship Type record in the Maintenance Requirements List, click the corresponding Relationships icon. This displays the list of material requirements to which the record is related, and their relationship types.

View Maintenance Requirements Hierarchy - Maintenance Requirement Relationships page

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Title 27-036-00 Status Draft
Revision Category AIRFRAME
Program Type Letter Check Program Subtype C

Maintenance Requirements List

061120031650 > 27-036-00

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Title	Revision	Relationship Type	Description	Program Type	Status	Effective From	Effective To	Relationships
27-036-00		CHILD	Perform detail inspection of rudder components.	Letter Check	Draft	05-AUG-2004		

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Updating Maintenance Requirement Records

Oracle Complex Maintenance, Repair, and Overhaul allows you to retrieve existing maintenance requirement records and edit the information associated with the requirement including maintenance routes, documents, effectivity, actions and relationships.

Note: You can update these attributes only for a maintenance requirement that is in the Draft or Approval Rejected state. If the selected maintenance requirement is in the Complete, Terminated, or Approval Pending states, the application generates the details and attribute pages in view-only mode.

To view the details of a Complete, Approval Pending, or Terminated maintenance requirement, see Viewing Maintenance Requirement Details, page 2-42.

This first step in the process allows you to edit the basic maintenance requirement information.

Prerequisites

- ☐ The maintenance requirement record you want to edit must exist in the database. The record must be in the Draft or Approval Rejected state.

To update maintenance requirement records:

1. Retrieve the maintenance requirements that match your need. See Retrieving Existing Maintenance Requirement Records, page 2-8.
2. In the Search Results list, click the Title Link of the record that you want to edit. This launches the Update Maintenance Requirement page if the maintenance requirement is in the Draft or Approval Rejected state.

Modify Maintenance Requirement Information - Update Maintenance Requirement page

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Update Maintenance Requirement

Cancel Approve Revert Ap

* Indicates required field

Maintenance Requirement Information

Title	27.036.00	Status	Draft	Version	3
Revision Number					
* Category	Airframe				
* Program Type	Letter Check				
Program Subtype	C				
* Service Type	On				
* Implement Status	Mandatory				
* Repetitive	Yes	Show	All		
* Whichever Comes	First				
* Effective From	05-AUG-2004				
Billing Item					
Quality Inspection Type					

If the maintenance requirement record you selected has the status Complete, Terminated, or Approval Pending, the application launches the View Maintenance Requirement page. In this case, a Super-User can change the following attributes in the maintenance requirement details:

- Program Type
- Program Sub Type
- Service Type
- Repetitive
- Show Repetitive
- Description
- Comments

- Revision Number
3. Make the necessary changes to the field values.
 4. Click Apply to record the changes.
 5. To advance the maintenance requirement to Approval Pending Status, click Approve. This is possible only after maintenance routes have been associated to the requirement. The status changes are dependent on the approval rules during Oracle Complex Maintenance, Repair, and Overhaul setup.

A maintenance requirement record in the Approval Pending Status cannot be edited. When you click Approve, the View Maintenance Requirement page is launched displaying the maintenance requirement details in a view only mode.

View Maintenance Requirement page

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View Maintenance Requirement

[Cancel](#)

Maintenance Requirement Information

Title	AHL%	Status	Approval Pending Version 1
Revision Number			
Category	Ground Service Equipment		
Program Type	Letter Check		
Program Subtype			
Service Type	On		
Implement Status	Mandatory		
Repetitive	Yes	Show	All
Whichever Comes	First		
Effective From	02-JAN-2004		
Follows After Accomplishment of			
Billing Item			
Quality Inspection Type			
Visit Category			
Description			
Comments			
Down Time		HOURS	

6. To view items to which the maintenance requirement applies, click Affected Items link on the side navigation menu. See Viewing Items Affected by a Maintenance Requirement, page 2-35.
7. To update attached documents, associated maintenance routes, attached actions, effectivities, and relationships, use the side navigation menu.

Related Topics

Attaching Documents to a Maintenance Requirement, page 2-9

Defining Maintenance Requirement Effectivities, page 2-15

Viewing Items Affected by a Maintenance Requirement

The View Affected Items page displays the items that are affected by a maintenance requirement. Maintenance requirement effectivity are defined using the Update Effectivity page.

To view items affected by a maintenance requirement:

1. You can access the View Affected Items page using any of the following methods.

From the Search Maintenance Requirement page:

- Retrieve the maintenance requirement record for which you want to view the affected items. See Retrieving Existing Maintenance Requirement Records, page 2-8.
- Select the pertinent record using the Select radio button, and click View Affected Items to launch the View Affected Items page.

View Affected Items page

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Affected Items

View Affected Items

Title 29B9999MR Status Draft
Revision Category AIRFRAME
Program Type Phase Program Subtype

Items List Cancel

Item	Serial Number	Location	Status	Owner	Condition	Unit
No records were found matching the given criteria.						

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Use the information in the following table to enter values in the View Affected Items page.

Description of fields in the View Affected Items page.

Field Name	Description
Item Number	Inventory item identification number referring to the Part Number that the maintenance requirement is applicable to in the context of the effectivity.
Serial Number	The part serial number to which the maintenance requirement applies. This is derived from the serial number ranges you set for maintenance requirement effectivity on the Update Effectivity Details page.
Location	is an attribute of the item instance that is affected by the maintenance requirement, and is one of the standard item identifiers. The field value refers to the part location.
Status	is an attribute of the item instance that is affected by the maintenance requirement, and is one of the standard item identifiers.
Owner	refers to the item owner. This is an attribute of the item instance that is affected by the maintenance requirement, and is a standard item identifier. This attribute is defined when a part information is added or updated.
Condition	is an attribute of the item instance that is affected by the maintenance requirement, and is one of the standard item identifiers.
Unit	The top node of the unit configuration that this particular item instance is part of. When you click the Unit link, the unit configuration page for the item opens.

2. From the Update Maintenance Requirement page (when the maintenance requirement is in the Draft or Approval Rejected state):
 - Retrieve the maintenance requirement records that match your needs.

- On the Search Results list, click the pertinent maintenance requirement Title link to launch the Update Maintenance Requirement page.
 - On the side navigation menu, click Affected Items to launch the View Affected Items page.
3. From the View Maintenance Requirement page (when the maintenance requirement is in the Approval Pending, Terminated, or Complete state):
- Retrieve the maintenance requirement records that match your needs.
 - On the Search Results list, click the pertinent maintenance requirement Title link to launch the View Maintenance Requirement page.
 - On the View Maintenance Requirement page side navigation menu, click Affected Items to launch the View Affected Items page.
4. From the Update Effectivity page (when the maintenance requirement is in the Draft or Approval Rejected state):
- Retrieve the maintenance requirement records that match your needs.
 - On the Search Results list, click the pertinent maintenance requirement Title link to launch the Update Maintenance Requirement page.
 - On the side navigation menu, click Effectivities to launch the Update Effectivity page.

Update Effectivity page

Update Effectivity

Title **29B999MR** Status **Draft**
Revision _____ Category **AIRFRAME**
Program Type **Phase** Program Subtype _____

Effectivities List

Previous 1-2 of 2 Next Cancel Revert Apply

Remove	Effectivity	Item	Master Configuration Position	Master Configuration Item	Product Classification Node	Effectivity Details	Interval Threshold	View Affected Items
<input type="checkbox"/>	PCEffectivity1	11475M95P05			Child			
<input type="checkbox"/>	PCEffectivity2	11475M95P05			MBT			

Add More Rows

Previous 1-2 of 2 Next

- To view the items affected by any effectivity definition, click the corresponding View Affected Items icon. This launches the View Affected Items page listing all the part Serial Numbers for which the effectivity is defined.

View items Affected by an Effectivity Definition - View Affected Items page

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View Affected Items

Title **29B9999MR** Status **Draft**
Revision
Category **AIRFRAME**
Program Type **Phase** Program Subtype
Effectivity **PCEffectivity1** Item **11475M95P05**
Master Configuration Position Master Configuration Item
Product Classification Node **Child**

Items List Cancel

Item	Serial Number	Location	Status	Owner	Condition	Unit
No records were found matching the given criteria.						

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5. From the View Effectivity page (when the maintenance requirement record is in the Approval Pending, Terminated, or Complete state):
 - Retrieve the maintenance requirement records that match your needs.
 - On the Search Results list, click the pertinent maintenance requirement Title link to launch the View Maintenance Requirement page.
 - On the side navigation menu, click Effectivities to launch the View Effectivity page.
 - To view the items affected by any effectivity definition, click the corresponding View Affected Items icon. This launches the View Affected Items page listing all the part Serial Numbers for which the effectivity is defined.

Associating Visit Types with a Maintenance Requirement

You can associate specific visit types to a maintenance requirement. This is especially useful for the transit visits, as it automates the visit creation process. When a transit visit is created and a visit type selected, the applicable maintenance requirements and associated routes are automatically added to the visit being defined. For information on transit visits, see *Creating Transit Visit from Unit Schedule*, page 8-35.

Prerequisites

- ☐ The visit types must have been defined. The maintenance requirement must be of Implement Status 'Unplanned'.

To associate a visit type with a maintenance requirement:

1. Navigate to the Update Maintenance Requirement page for the maintenance requirement with which you want to associate a visit type.

Update Visit Type Associations page

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Visit Types

Update Visit Type Associations

Title 21.040.00
Revision
Program Type Letter Check

Status Draft
Category AIRFRAME
Program Subtype C

Cancel Revert Apply

Remove	Visit Type	Description

2. Click Visit Types in the side navigation menu. The Update Visit Type Associations page appears. Click Add More Rows to associate visit type/types. Select the visit type/types to associate and click Apply. The visit type is associated with the maintenance requirement. This maintenance requirement will be automatically associated with any visit created with the selected visit type.

Associate Visit Type to MR - Update Visit Type Associations page

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Overview | Program Type Associations

Update Visit Type Associations

Title 21.040.00 Status Draft
Revision Category AIRFRAME
Program Type Letter Check Program Subtype C

Cancel Revert Apply

Previous 1-2 of 2 Next

Remove	Visit Type	Description
<input type="checkbox"/>	A Check	A Check
<input type="checkbox"/>	C Check	C Check

Add More Rows

Previous 1-2 of 2 Next

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Creating Maintenance Requirement Revisions

A maintenance requirement revision is created when an existing maintenance requirement record with the status Complete has to be updated for necessary reasons.

You can create a revision from an existing maintenance requirement record. The Create Maintenance Requirement Revision page is a variation of the Create Maintenance Requirement page with the status set to Draft. The maintenance requirement Version defaults to the next sequentially generated number, and all the original maintenance requirement attributes including intervals and thresholds are copied into the revision. The maintenance requirement Revision Number is user definable and optional.

Note: Revisions are allowed only from the latest Complete maintenance requirement record.

To create maintenance requirement revisions:

1. Retrieve the maintenance requirement record for which you want to create a revision.
2. In the Search Results list, select the pertinent record using the Select radio button, and click Create Revision. This launches the Update Maintenance Requirement page.

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Update Maintenance Requirement

Cancel Approve Revert

* Indicates required field

Maintenance Requirement Information

Title	00-MR-00	Status	Draft	Version
Revision Number	<input type="text"/>			
* Category	Ground Service Equipment			
* Program Type	Letter Check			
Program Subtype	<input type="text"/>			
* Service Type	On			
* Implement Status	Mandatory			
* Repetitive	Yes	Show	All	
* Whichever Comes	First			
* Effective From	08-AUG-2004			
Billing Item	<input type="text"/>			
Quality Inspection Type	<input type="text"/>			

The fields that appear on the Update Maintenance Requirement page are the same as that on the Create Maintenance Requirement page with the exception of the Copy Last Accomplishment field, and the Version field defaulting to the next sequentially generated number.

Copy Last Accomplishment is a flag to indicate whether the last accomplishment of the maintenance requirement should be copied in Unit Maintenance Plan when a new maintenance requirement revision is created. The field value can be either Yes or No, and is used when creating a maintenance requirement revision. This flag is used only in the case of repetitive maintenance requirements. The Unit Maintenance Plan module calculates the next occurrence of the maintenance requirement based on the previous accomplishment of the same maintenance requirement. Also, when a maintenance requirement revision is created, you may want to retain the previous accomplishment information, or start with new information.

3. Click Apply to save the maintenance requirement revision record.
4. To advance the maintenance requirement revision to Approval Pending Status, click Approve. This is possible only after maintenance routes have been associated to the requirement.

A maintenance requirement record in the Approval Pending Status cannot be edited. When you click Approve, the View Maintenance Requirement page is launched displaying the maintenance requirement details in a view only mode.

5. To update the maintenance requirement attributes, such as attached documents, associated maintenance routes, actions, effectivities, and relationships, see:
 - Attaching Documents to a Maintenance Requirement, page 2-9

- Defining Maintenance Requirement Effectivities, page 2-15
 - Defining Maintenance Requirement Relationships, page 2-26
6. To view items to which the maintenance requirement revision applies, click Affected Items link on the side navigation menu. See Viewing Items Affected by a Maintenance Requirement, page 2-35.

Viewing Maintenance Requirement Details

Maintenance requirement records with the status Complete, Terminated, or Approval Pending, cannot be edited. With any of these maintenance requirement statuses, the application opens the Maintenance Requirement Details page in a view-only mode.

To view maintenance requirement details:

1. Retrieve the maintenance requirement records that meet your needs. .
2. Click the pertinent Title link to launch the View Maintenance Requirement page. This page provides the maintenance requirement header details.

Maintenance Requirement Information	
Title	AHLPAMR05 Status Approval Pending Version 1
Revision Number	
Category	Ground Service Equipment
Program Type	Corrosion
Program Subtype	
Service Type	On
Implement Status	Mandatory
Repetitive	Yes Show All
Whichever Comes	First
Effective From	11-DEC-2003
Follows After Accomplishment of	
Billing Item	
Quality Inspection Type	
Visit Category	
Description	
Comments	
Down Time	HOURS

3. To view the attributes including attached documents, associated maintenance routes, attached actions, effectivities, and relationships of a Complete, Approval Pending, or Terminated maintenance requirement, click the corresponding link on the side navigation menu.

Associating Program Sub Types to Program Types

Use the following procedure to associate Program Sub Types to Program Types.

Prerequisites

- ☐ Program Type values must exist in the database.

To associate program sub types to program types:

1. Under the Fleet Maintenance Program tab, select Program Type Associations secondary tab to launch the Create Program Type/Sub Type page.

Create Program Type/Sub Type page


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Overview Program Type Associations

Create Program Type/ Sub Type

Program Type  Description

Program Sub Type List

Remove	Program Subtype	Description
No records were found matching the given criteria.		

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2. In the Program Type field enter the generic substitution metacharacter%, and click the Search icon to return a list of Program Type values on the Select Program Type page.

Select Program Type - Create Program Type/Sub Type page

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Document Index Route Management Fleet Maintenance Program

Overview | Program Type Associations

Select Program Type

Enter Partial Value %

Program Type	Description
Corrosion	Corrosion
Letter Check	Letter Check
Modification	Modification
Non-Routine	Non-Routine
Phase	Phase
Special	Special

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3. Click the relevant result to return this record to the Program Type field.
4. The Program Sub Types List displays all the Program Sub Types associated to the selected Program Type.
5. To associate a new sub type to the Program Type, click Add More Rows to reveal new rows.

Define Program Sub Types - Create Program Type/Sub Type page

6. Enter the required values in the fields. Fields in the Program Sub Types List include:
 - Program Subtype represents the user defined sub type of the Program Type. For example, for the Program Type Letter Check, Program Subtypes could be A Check, B Check, C Check, and D Check.
 - Description refers to the Program Subtype description. The description provides more description about the subtype to the user.
7. Click Apply to record the association.
8. To remove a Sub Type that is associated to the Program Type, select the Remove checkbox beside the Program Subtype you want to remove, and click Apply.

Note: You can remove a Program Sub Type association to a Program Type only if this combination is not associated to any existing maintenance requirement. For information on defining Program Types and Program Sub Types, refer to the *Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide*.

Service Requests

Service requests can be created to track requirements that are not defined in the Fleet

Maintenance Program. These maintenance requirements may arise in the following conditions:

- When a non-routine job requirement is discovered—these non-routine, or unplanned, jobs can be accomplished in the originating visit or deferred to subsequent visits. The service request is the instance of this requirement and is used for planning purposes to ensure the requirement is accomplished.
- During the utilization of the applicable unit or item. For example, when a problem is identified, the crew enters it into the system to be followed up with in the maintenance process.
- Through administrative or executive actions. For example, there is a decision to change the paint scheme of a particular plane, or the seating arrangement.

An integrated service request system enables these requests to be fed directly into the planning process. You can associate predefined maintenance solutions and resource requirements with a service request. You can schedule these service requests as you schedule the requirements generated.

You can create a service requests using the Service Request window in Oracle TeleService. You can also create non-routine service requests in the Unit Maintenance Plan region of the Planning module. These requests can be deferred to subsequent visits using MEL or CDL instructions. A corresponding Unit Effectivity is created for the service request. You can associate one or multiple maintenance requirements with the service request when a solution to the problem has been diagnosed. In these cases, a Corresponding Unit Effectivity is created for the service request and child unit effectivity are created for the associated maintenance requirements. Service requests of type Complex Maintenance appear as non-routine maintenance requirements. You can track not only planned maintenance in unit maintenance plan, but also the unplanned maintenance originating from production inspections or through the manual creation of a service request.

When a service request with maintenance requirements is planned, that is, associated with a visit, a summary task is created for the top level service request with root unit effectivity. For the child unit effectivity, summary tasks and planned tasks are created similar to the process for group maintenance requirements. All the summary tasks and planned tasks created will have Service Request ID associated.

When a service request with no child maintenance requirements is planned, a single summary and planned task is created for the service request. Both the summary task and planned task will have SR Unit Effectivity ID and Service Request ID associated.

Additionally, service requests for defects identified on the production floor can be defined in the production module when creating non-routine work orders.

Related Topics

Entering Service Requests, page 2-47

Entering Service Requests

To enter service requests:

1. Navigate to the Service Request window in Oracle TeleService.

Note: You can also enter non-routine service requests in the Unit Maintenance Plan region of the Planning module. See: Creating Non-routine Requests During Unit Maintenance, page 8-15

2. Create a Service Request of type Complex Maintenance.

For information on field descriptions see: About the Service Request Window, *Oracle TeleService Implementation and User Guide*

Service Request (41848 - testing cmro) - America/Los_Angeles

Log and Notes Profile...

Contact Type: [Dropdown] Customer Type: Organization

First: [Text] Last: [Text] Name: Business World

Email: [Text] Number: 2813

Relationship: [Text] Account: 1608

Phone: [Text] Email: operations@orac

Phone Type: Fax

Category: MRO-74101054

Item: Fan, Equipment

Revision: [Text] Instance: 70213

Serial: 5932

Tag: [Text]

Number: 41848

Reported: 07 JAN 2004 01:01

Type: Raj_CMRO_Type

Status: Open

Severity: Low

Group: Eastern Region

Owner: Daugherty, M

Subject Workbench Contacts / A... Tasks Interactions Related Obj... Service History Charges Work Order Maintenance Custom1 Custom2

Item: MRO-74101054-2

Component: [Text]

Subcomponent: [Text]

Item Instance: 70213

System: [Text]

Covered Site: 2391 L St; San Jose; CA; US; 95106

Type: MRO_AIRCRAFT

Order Num: [Text]

Item Rev: [Text]

Component Rev: [Text]

Subcomponent Rev: [Text]

Status: CREATED

Lot Num: [Text]

Sales PO Num: [Text]

Instance Configuration (M) Instance Detail (J) Register Instance (K)

Contracts

Contract	Service	Description	Status	Coverage	Warranty	Start Date	End Date
<input checked="" type="checkbox"/> 21093	WFR23763	Extended Notebook PC S	Entered	Gold Coverage	60	24-DEC-2003	23-FEB-2005
<input type="checkbox"/>							

Entitled Contracts (X) All Contracts (Y) Get Contracts (G)

Select the following values in the applicable fields:

- Type: Complex MRO Service Request Type
- Instance: Install Base Instance number
- Status: Open
- Summary: This will appear as the description of the Unit Maintenance Plan

3. Save your work.

A maintenance requirement with program type of non-routine is created.

To associate maintenance requirements:

1. In the Service Request window, select the Maintenance Requirement tab.

The Maintenance Requirement tab is enabled only for service requests of type Complex MRO.

2. Select the Maintenance Requirement to associate with the service request using the following search criteria:

You can associate a maintenance requirement with a service request only when it is in Open status.

- Program Type: CMRO Fleet Maintenance Program MR type
- Title: CMRO Fleet Maintenance Program MR Title

The screenshot shows the 'Service Request' window for '40048 - test cmro'. The 'Maintenance Requirement' tab is selected. The form contains the following data:

Contact Type	Customer Type	Category	Number
Customer	Organization	MRO-C1600	40048

Additional fields include: First Name (MS.), Last Name (Amy), Email (jack.wong@orac), Account (1608), Phone (213.861065510139), and Owner (Daugherty, M).

The 'Maintenance Requirement' table is as follows:

Program Type	Title	Description	Status
Corrosion	Raj_MR_06_Jan2	Raj_MR_06_Jan2	
Letter Check	21-150-00	Replace cabin temperature sensor.	

3. Save your work.

Updating Service Requests

You can close a service request using the Service Request window. The maintenance requirements associated with the service request must be in Accomplished or Cancelled status. The instance created in unit maintenance plan is removed when the service request is closed or cancelled. The following conditions apply to service requests:

- You cannot associate maintenance requirements/or remove maintenance requirements from the service request after it has been closed.
- You can change the type from CMRO to non-CMRO. Associated unit maintenance plan records are deleted.
- You can change the type from non-CMRO to CMRO only if the service request is in the Open status. A new unit maintenance plan record is created.
- If a service request has associated maintenance requirements, you cannot change instance number, type from CMRO to non-CMRO, or close the request.
- If a maintenance requirement associated with a service request, is terminated or revised in Fleet Maintenance Program, then the association is also nulled.
- You cannot associate duplicate maintenance requirements with a service request.

Managing Maintenance Routes

This chapter covers the following topics:

- Overview
- Route Management
- Creating Operation Records
- Creating Maintenance Route Records
- Creating an Item Composition List
- Editing Item Compositions
- Viewing Item Compositions
- Creating Disposition Lists
- Editing Disposition Lists
- Approving Disposition Lists
- Finding Operation Records
- Finding Maintenance Route Records
- Defining Reference Documents
- Defining Reference Documents for an Operation
- Defining Reference Documents for a Maintenance Route
- Defining Resource Requirements
- Defining Resource Requirements for an Operation
- Defining Resource Requirements for a Maintenance Route
- Defining Costing Parameters
- Defining Costing Parameter for an Operation Resource Requirement
- Defining Costing Parameter for a Route Resource Requirement
- Defining Material Requirements

- Defining Material Requirements for an Operation
- Defining Material Requirements for a Maintenance Route
- Associating Operations with a Maintenance Route
- Defining Access Panels
- Defining Access Panels for an Operation
- Defining Access Panels for a Maintenance Route
- Editing Operation Records
- Editing Maintenance Route Records
- Defining Component Locations in Fleet Units
- Associating Major Zones to Product Types
- Associating Sub Zones to Product Types
- Finding Oracle Complex Maintenance, Repair, and Overhaul Resources
- Creating Oracle Complex Maintenance, Repair, and Overhaul Resources
- Editing Oracle Complex Maintenance, Repair, and Overhaul Resources
- Associating BOM Resources

Overview

A maintenance route describes a series of maintenance, repair, or overhaul tasks on a fleet unit, subassembly, or subsystem. Maintenance routes are effectively work cards, modeling the printed work cards typically provided by the manufacturer of the fleet unit. Work cards are often associated with a zone in a fleet unit, such as the power plant of a commercial aircraft. Other attributes of maintenance routes include work location (for example, engine overhaul shop, machine shop, painting facility), supporting process types (for example, inspection, cleaning), skill types (for example, electronics technician, airframe technician, power plant technician), and supporting significant maintenance tasks (for example, ship in dry-dock with all cargo and engines removed). Oracle Complex Maintenance, Repair, and Overhaul includes the Route Management module that manages work cards and resource requirements.

This chapter discusses the key functions supported by the Oracle Complex Maintenance, Repair, and Overhaul Route Management module. The chapter provides process-oriented, task based procedures for using Oracle Complex Maintenance, Repair, and Overhaul to perform essential route management tasks in maintenance organizations.

See:

- Creating Operation Records, page 3-5
- Creating Maintenance Route Records, page 3-8

- Creating an Item Composition List, page 3-14
- Editing Item Compositions, page 3-18
- Viewing Item Compositions, page 3-20
- Creating Disposition Lists, page 3-21
- Editing Disposition Lists, page 3-31
- Approving Disposition Lists, page 3-31
- Finding Operation Records, page 3-31
- Finding Maintenance Route Records, page 3-33
- Defining Reference Documents, page 3-36
- Defining Resource Requirements, page 3-40
- Defining Material Requirements, page 3-47
- Associating Operations with a Maintenance Route, page 3-51
- Editing Operation Records, page 3-55
- Editing Maintenance Route Records, page 3-57
- Associating Major Zones to Product Types, page 3-58
- Associating Sub Zones to Product Types, page 3-60
- Finding Oracle Complex Maintenance, Repair, and Overhaul Resources, page 3-61
- Creating Oracle Complex Maintenance, Repair, and Overhaul Resources, page 3-62
- Editing Oracle Complex Maintenance, Repair, and Overhaul Resources, page 3-64
- Associating BOM Resources, page 3-65

Route Management

Route Management is a subsystem that manages the work definition of scheduled and unscheduled maintenance tasks. It allows maintenance organizations to create work cards specifying the zone, work location, supporting process types, skill types, and significant maintenance tasks associated with the work card.

The Route Management module also supports the management of resource

requirements for a maintenance route including labor estimate, materials estimate, tooling required, and reference documents. For some fleets, especially aircraft, regulatory compliance requires that maintenance operations be inspected before completion is formally recorded. Route Management supports the definition of inspection signature attributes for work card records. Route Management also supports check point definitions for labor cost collection, and progress reporting.

The Route Management module uses data managed by the other modules comprising Oracle Complex Maintenance, Repair, and Overhaul. For example, airlines may create work cards in response to an Airworthiness Directive by the Federal Aviation Administration, but only for a subset of the aircraft in the operational fleet. Through Fleet Maintenance Program, Route Management routes (work cards) can be associated with those fleet units.

Key Business Processes

Route Management supports the following business processes:

Work Card or Route Authoring

Work cards or routes are fundamental in accomplishing maintenance requirements. Work cards consist of step by step work instructions containing functional and operational data needed to perform specific job tasks. Oracle Complex Maintenance, Repair, and Overhaul supports the authoring of routes. Each work card is made up of one or several operations. The route authoring process allows maintenance personnel to select pre-defined operations, and associate them to a maintenance route.

Production Planning Information

Operational data is essential to grouping work cards and planning maintenance requirements. The more the information in the work card, the easier it is for the production planner to schedule and group work cards. Oracle Complex Maintenance, Repair, and Overhaul allows organizations to define production planning information for an operation, including work zone, work center, operation category, operation type, process, and significant tasks.

Resource Requirements Information

Functional data is essential to accomplish maintenance requirements, and to a lesser extent grouping of maintenance tasks. The more the information in the work card, the easier it is for the production planner to schedule and group work cards. This allows the material planner to schedule and forecast material needs. Oracle Complex Maintenance, Repair, and Overhaul allows organizations to define the resource requirements for an operation including estimated labor man hours, material required, tools required, and reference documents.

Sign-Off Requirements

A work card changes to a work order when issued to Production. In the maintenance, repair, and overhaul industry, all work orders require to be signed off when completed, and also at certain step levels. Oracle Complex Maintenance, Repair, and Overhaul

allows maintenance facilities to define sign-off requirements for each work card. You can set up all sign-off requirements at the time the work card or route is created. The actual sign-off, however, occurs on the work order and not on the work card.

Resource Collection Check Points

Maintenance organizations may require to collect actual labor expended, material usage, and other job cost data at the completion of different operations during a maintenance job. Oracle Complex Maintenance, Repair, and Overhaul allows you to collect this data by creating check points that group successive operations together.

Composition Lists Creation

Composition lists serve as the base definition for a component or assembly. They enable the creation of disposition lists and forecast models, based on the type of service to be performed, and also allow for a more accurate prediction of material requirements. It is a complete listing of the non-tracked items and/or item groups contained in an item/assembly.

Disposition List Creation

Disposition lists act as checklists for the Production user. Disposition listing is defined in Route Management, as the subset of a composition list, to compliment material requirements. Maintenance personnel may use the item composition or the composition of the master configuration, depending on their needs, to create the listing that is utilized when the item or master configuration is being planned in a maintenance requirement.

Creating Operation Records

The Route Management module leads you through the steps to create an operation record. The initial step creates a record of the operation in the database. Subsequent steps define operation attributes like document references, labor, machine and tooling requirements, and material requirements. The following process initiates the creation of an operation. The Create Operation page permits saving the record in the database before proceeding to define the attributes in the following pages.

To create operation records:

1. Navigate to the Create Operation page.
2. Use the information in the following table to create an operation record.

Description of fields associated with operation records

Field	Description
Operation	This field contains the operation code, which describes the order of the operation within the route.
Operation Type	Refers to the kind of operation being performed. It is used to help organize operations.
Process	Refers to the kind of maintenance process, such as cleaning or inspection. I
Status	Indicates whether the operation record is current, or in the draft stage.
Start Date	Refers to the date of the first day of effectivity of this operation.
Description	Refers to a text description of the maintenance operation.
Remarks	Is a field where you can enter any additional information that the maintenance personnel should know regarding the operation.
Revision	Document revision identifier.
Revision Note	Is a description of why the revision is made.
Quality Inspection Type	Is an association to a plan in Oracle Quality with quality elements for recording the necessary accomplishments and sign-off criteria of an operation.
Standard	Is a user selected yes or no value to catalog an operation record as a standard or non-standard job.
Model	This field is used to identify the type of aircraft (precisely document associated to a type of aircraft).

Note: The Model field is displayed on Create Operation page if you apply Enigma Integration. The Model field is used to identify the type of aircraft (precisely the document associated to a type of aircraft. For example, if the model is PW4000, then this corresponds to Engine Maintenance Manual in Enigma.

- Click Apply to record the operation in the database. The Edit Operation page appears where you can update information and/or define reference documents, resource requirements, and material requirements for the operation.

Edit Operation page

- After it is completely defined, the operation must be approved. To do this, click Approve on the Edit Operation page. This will launch the approval workflow and, depending on the outcome of the approval, change the status of the operation.

Note: During the approval workflow the status is "Approval pending" for the creation of a operation or "Termination pending" for the deletion of an operation. The outcome status of the approval workflow can either be "Complete" or "Approval Rejected." When

an operation record in the 'Approval Rejected' status is modified, the status reverts to 'Draft' and the record can be re-submitted for approval after editing.

Note: You can also approve a draft operation from the result list in the operation search screen. The approval workflow is defined by your organization at the time of setting up Oracle Complex Maintenance, Repair, and Overhaul. For more information about setting up approval workflow, see the *Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide*

Related Topics

Defining Reference Documents for an Operation, page 3-36

Defining Resource Requirements for an Operation, page 3-41

Defining Material Requirements for an Operation, page 3-47

Creating Maintenance Route Records

The Route Management module takes you through eight steps to create a maintenance route record. The first step creates a record of the route in the database, while the steps that follow help you define the attributes of the route including sign off requirement, document references, labor requirement, material requirement, machine requirement, and tool requirement. The final step involves associating existing operations with a route.

The following process initiates the creation of a route. The Create Route page lets you save the record in the database, before proceeding to define the attributes in the following pages.

Prerequisites

- ☐ You should know the Route Type, Product Type, the System, the Process, the Major/ Sub Zone, the Quality Collection Plan, and the Accounting class of the system to which the maintenance route applies. These fields are all optional. If you define the route as a work card for a different operator on whose equipment you perform maintenance, you can specify that operator on the route. If the route is a work card for an outside processing job, you can define the Service Item that is applicable when the outside processing work order and the purchase order gets created. If Route Management is used in the Preventive Maintenance Module you can also define the JTF Task Template Group which should be used when integrating with Oracle's Field Service module through Preventive Maintenance.

These values must exist in the database.

To create a route record:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab and then the Route secondary tab. The Search Route page in Route Management appears. Click Create to launch the Create Route page.
3. Use the information in the table below to create maintenance route records.

Description of fields associated with maintenance route records

Field	Description
Route Number	User-assigned identifier for a maintenance route.
Title	Refers to the text description of the maintenance route.
Operator	Refers to the organization operating the concerned fleet. If you do not know the value, enter the generic substitution metacharacter%, and click Go to launch the Select Operator page. This page displays all operator records in the database. Select the pertinent record to return the value to the field on the Create Route page.
Time Span	Defines the total duration of a route in hours. It will be used when calculating the visit structure in the Visit Work Package module.
Item Type	Refers to the classification by category, of the electromechanical system. If you do not know the value, enter the generic substitution metacharacter%, and click Go to launch the Select Item Type page. This page displays all item type records in the database. Select the pertinent record to return the value to the field.

Field	Description
Major Zone and Sub Zone	Refers to the user-defined zones used as a method for identifying locations in the electromechanical system being maintained. If you do not know the value, enter the generic substitution metacharacter%, and click Go to launch the Select Major Zone (or, if applicable, Sub Zone) page. This page displays all records in the database. Select the pertinent record to return the value to the field.
Route Type	Refers to the type of route, for example, whether the route applies to an entire aircraft or to a subsystem in the aircraft. The route types are defined while installing Oracle Complex Maintenance, Repair, and Overhaul.
Process	Refers to the type of the maintenance route such as cleaning or inspection.
System	Refers to the electromechanical system on which you perform the maintenance activity. This system field is a segmented flexfield. The segmentation is defined by your organization at set up time. When setting up the system field, your organization may define valid values for the segments.
Quality Inspection Type	Is an association to a plan in Oracle Quality with quality elements for recording the necessary accomplishments and sign-off criteria of an operation. Quality collection plans are used at the time of maintenance completion and are set up as part of Oracle Quality allowing for precise control of job completion requirements and subsequent processes. For more information, see the Oracle Quality set up procedures.
Service Item	Refers to the service item of this route for outside processing. This service item is used in production planning when creating the outside processing work order and the purchase order. Service Items are defined by your organization when setting up the item master in Oracle's inventory module.
Accounting Class	The accounting class is used when the route becomes a WIP job in Production. It supports the costing procedure in on the shop floor. Accounting Classes are defined by your organization when setting up Oracle's WIP module.

Field	Description
Task Template Group	Refers to a template group used by Oracle Service. Task Template Groups need only be defined when your Organization uses Oracle's Preventive Maintenance Module. Task Template Groups are defined by your organization when setting up Oracle's Service and/or Field Service module.
Allow Unit Receipt Update	This field takes a value of Yes or No (Default is No) and it cannot be modified once a Route is approved.
Start Date	Refers to the date of the first day of effectivity of this maintenance route. Enter a date directly, or click on the icon beside the date field to bring up the calendar. Click on a date to insert it in the field.
Revision	Is a field that holds a user-assigned document revision identifier.
Status	Indicates whether the route record is completed, or in the draft stage.
Model	The Model field is displayed on Create Route page if you integrate with Enigma. The Model field is used to identify the type of aircraft, precisely the document associated to a type of aircraft. For example, if the model is PW4000, then this corresponds to Engine Maintenance Manual in Enigma.

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Logged In As TSMITH

Create Route

* Indicates required field

Route Number: 110

Revision: 1

Title: Route_110

Route Type: Aircraft

Item Type: AC Aircraft C80

Major Zone: %

Service Item:

Accounting Class:

System: Air Conditioning GPS GPS 1

Start Date: 18-MAY-2010

Remarks:

Status: Draft

Revision Notes:

Time Span: 10 Hours

Process:

Operator:

Sub Zone:

Quality Inspection Type:

Task Template Group:

Allow Unit Receipt Update: No

Descriptive Flexfields

* Route FF:

Context Value:

Select Context Value and click 'Go' to show relevant fields.

Cancel Revert Apply

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- Click Apply to record the route in the database. The Update Route page appears where you can update information and/or define reference documents, resource requirements, and material requirements for the operation.

Update Route page

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Update Route

* Indicates required field

Route Number: 2356

Revision: 2

Title: NSARoutenew one

Route Type: Calibration

Item Type: AD Aircraft 55A1K

Major Zone:

Service Item:

Accounting Class:

System: Hydraulic VHF/UHF GPS 1

Start Date: 11-MAY-2010

Remarks: Testing

Status: Draft

Revision Notes:

Time Span: 23 Hours

Process:

Operator:

Sub Zone:

Quality Inspection Type:

Task Template Group:

Allow Unit Receipt Update: No

Descriptive Flexfields

* Route FF: NSA change

Context Value: Route Context Value

Select Context Value and click 'Go' to show relevant fields.

* Route Segment 1: 222

Cancel Delete Approve Revert Apply

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- After it is completely defined, the route must be approved. To do this, click Approve on the Update Route page. This will launch the approval workflow and, depending on the outcome of the approval, change the status of the operation.

View Route Approval Status - View Route page

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Details

View Route

Route Number 00-000-00-00 Status Complete

Revision 1 Revision Notes

Title Visual Inspection Time Span 0.25 Hours

Route Type Process

Item Type Operator

Major Zone Sub Zone

Service Item Quality Inspection Type

Accounting Class Task Template Group

System ..

Start Date 07-NOV-2002 Allow Unit Receipt Update No

Remarks Perform visual inspection following operational check

Descriptive Flexfields

Route FF

Context Value

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Note: The status to which the route gets updated to depends on the approval workflow setup. You may set up the workflow such that the route passes from Draft to the Approval Pending status. Optionally, the status may directly change to Complete when the route is approved. The outcome status of the approval workflow can either be "Complete" or "Approval Rejected." When a route in the 'Approval Rejected' status is modified, the status reverts to 'Draft' and the record can be re-submitted for approval after editing.

You can also approve a draft operation from the result list in the operation search screen. The approval workflow is defined by your organization at the time of setting up Oracle Complex Maintenance, Repair, and Overhaul. For more information about setting up approval workflow, see the *Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide*

For Routes created from Enigma, a file shortcut icon is displayed against route number. This icon either shows a PDF document if the revision is complete or shows a window which opens up enigma AMM section associated to the route depending on route id.

- To define the attributes of the route such as reference documents, labor requirement, resource (material, tool, machine etc.) requirement, and associated operations, see:

Related Topics

Defining Reference Documents for a Route, page 3-39

Defining Resource Requirements for a Route, page 3-42

Defining Material Requirements for a Route, page 3-49

Associating Operations to a Maintenance Route, page 3-51

Creating an Item Composition List

A Composition List is a flat listing of the non tracked parts, items or item groups, that are contained in, and can be used in maintaining an install base tracked item.

Composition lists are revision controlled, allowing for changes to be tracked and approved through an approval workflow, automatically replacing the older revision when approved. Composition lists serve as the base definition for a component or assembly enabling creation of disposition lists. Disposition Lists provide a listing of items, item groups, and positions which may be impacted during the performance of a route. Production planners refer to the composition list during the course of maintenance as a complete listing of the items contained in an item/assembly.

To create a composition list the user must select the item or the Master Configuration for which the composition is to be created. A hierarchy is then created using either position codes or items or a combination of both. After defining the composition list, you can create the details of the Disposition List by:

- Associating the tracked item with a route
- Associating a master configuration with a route. Compositions are inherited in Master Configuration through the tracked item's association with the item groups for each position and sub-configuration position.

Composition lists reduce the amount of time required to research, create, and maintain routes. When a composition is revised the changes automatically reflect in the routes disposition, thus keeping the route up-to-date.

See also:

Editing an Item Composition, page 3-18

Viewing Composition Lists, page 3-20

Prerequisites

- ☐ Tracked items, non-tracked items and item groups must have been defined. The Approval workflow must be set up.

To create a composition list for a tracked item:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Documents page appears.

2. Click the Route Management tab. The Search Operation page appears. Click the Item Compositions sub-tab. The Search Item Composition page appears.

Note: You can create Composition Lists from the Master Configuration module also. Navigate to the Master Configuration module, and select the Composition List sub-tab. The Search Item Composition page will appear.

3. Select Create. The Create Composition List page appears.
4. Select an Organization from the Organization LOV. Select an Item from the Item LOV.

The following table describes fields related to item compositions.

Description of fields associated with item composition

Field	Description
Organization	Refers to the Master Organization an Item belongs to. The organization will be automatically populated when a part number is defined. When creating a material requirement for an item group the Organization remains empty, since Alternate Item Groups are not Organization related in Master Configuration. Organizations are defined by your organization when setting up the item master.
Item	Install Base Tracked item for the header item and a non-Install Base Tracked item in the details.
Status	Indicates the status of the route.
Description	Refers to the description of the item group or the part number. The description is automatically populated when selecting an item group or part number.
Revision	Is a field that holds a user-assigned document revision identifier.

Field	Description
Item Group	Refers to the Alternate Item Group defined in Master Configuration. If your material requirement for this task is not a specific item type but a group of alternate items, you can define the complete alternate item group as a material requirement. This allows the system to plan for all the possible alternate items to perform the task. This definition specifically applies for a replacement material requirement. You can only define an item group or a part number for one and only one material requirement. If you do not know the value, enter a partial search string using the generic substitution metacharacter%, and click on the search icon to launch the alternate Item Group list of values. The alternate item groups are defined by your organization when implementing Master Configuration.
Quantity	It describes the quantity necessary for the item or item group and is not required for the item group association.
UOM	This describes the unit of measure for the item or item group and is not required for the item group association.

5. Click Add More Rows. You can add the following to the Composition List:
 - Non-Tracked Item Groups
 - Non-Tracked Items associated with at least one Inventory organization

Add Items/Item Groups - Create Composition List

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Create Composition List

Organization V1

Item 0001-3302-H

Status Draft

Name Vision Operations

Description LOCK BODY 0001 3502

Descriptive Flexfields

Item Composition FF

Context Value

Select Context Value and click 'Go' to show relevant fields.

Item List

Remove	Item Group	Item	Description	Quantity	UOH	Descriptive Flexfields
	CRF-B61-50 Antenna	Red 30	30 Red	10	Ea	00
						00
						00

Add More Rows

Cancel Apply

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Note: You can copy composition details from one item composition into another Composition List when you have records existing in the database. In the Update Composition List page, select Copy Compositions. In the Search Item Composition page that appears, select the item composition, that you want to copy the details from.

6. Specify the quantity and unit of measure for the non-tracked items. Click Apply. The Update Composition page appears, displaying the item composition details.
7. Select Submit for Approval, to submit the item composition for approval. An approval workflow is implemented to allow the user to obtain approval from engineering, planning, materials, or other supervisory authorities. This ensures that the materials are properly planned and approved for use.

View Composition List page

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View Composition List

Organization PM
Item 02-BR47124
Status Draft

Name Vision Project Mfg
Description BR-5000 Brake Assembly

Descriptive Flexfields
Item Composition FF
Context Value

Item List

Item Group	ItemDescription	Quantity	UOM	Descriptive Flexfields
BR-5000 Fittings	BR-5000 Fittings	1	Ea	00
BR-5000 Lines	BR-5000 Lines	1	Ea	00
BR-5000 Reservoir	BR-5000 Reservoir	1	Ea	00

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Editing Item Compositions

Prerequisites

- ☐ The Item Composition that you want to edit, must exist in the database, and must be in draft status.

To edit item compositions:

1. Navigate to the Search Item Compositions page. For information, see Creating an Item Composition List, page 3-14
2. Search for the Item Composition that you want to edit. The results appear in the Item Composition List table.

View Item Composition List - Search Item Composition page

3. Select the Item Composition, and click the corresponding Edit icon. The Update Composition List page appears.

Edit Information - Update Composition List page

Remove	Item Group	Item	Description	Quantity	UOM	Descriptive Flexfields
<input type="checkbox"/>	BR-5000 Fittings		BR-5000 Fittings	1	Ea	∞
<input type="checkbox"/>	BR-5000 Lines		BR-5000 Lines	1	Ea	∞
<input type="checkbox"/>	BR-5000 Reservoir		BR-5000 Reservoir	1	Ea	∞

4. To remove an item and/or item group from the composition list, select the Remove check box, and click Apply.
5. To add records, click Add More Rows. Enter information in the fields provided. Click Apply to save the changes.
6. To copy the item composition from an existing Composition List, select Copy Compositions. The Search Item Composition page appears. Search for, and select the Item Composition that you want to copy the composition list from. The View Composition list appears, displaying the item list for the selected composition.
7. Select the items that you want to include, and click Copy Compositions. The items

are added to the item list of the Composition that you were editing.

8. Select Submit for Approval to initiate the approval workflow. The item composition is submitted for approval, and the View Composition List page is displayed.
9. Select Create New Revision to make changes to the item composition that you have defined. The Update Composition List page appears. Make the necessary changes, and click Apply. A new revision, once approved, replaces the existing revision as the active revision.

Create Revision - Update Composition List page

Update Composition List

Organization: PM
Item: 02-BR47124
Status: Draft

Name: Vision Project Mfg
Description: BR-5000 Brake Assembly

Descriptive Flexfields
* Item Composition FF:
Context Value: Select Context Value and click 'Go' to show relevant fields.

Remove	Item Group	Item	Description	Quantity	UOM	Descriptive Flexfields
<input type="checkbox"/>	BR-5000 Fittings	<input type="text"/>	BR-5000 Fittings	1	Ea	<input type="text"/>
<input type="checkbox"/>	BR-5000 Lines	<input type="text"/>	BR-5000 Lines	1	Ea	<input type="text"/>
<input type="checkbox"/>	BR-5000 Reservoir	<input type="text"/>	BR-5000 Reservoir	1	Ea	<input type="text"/>

Add More Rows

Note: You can create revisions for all Item compositions in Complete status. The Create Revision button is also available in the results table in the Search Item composition list page. Disposition Lists, which have been created utilizing the Item Compositions, automatically inherit all revisions made to the item composition they are based on.

Viewing Item Compositions

To view item compositions:

1. Navigate to the Search Item Compositions page. For information, see Creating an Item Composition List, page 3-14.
2. Search for the Composition list that you want to view the details of. The results appear in the Item Composition List table.

3. Select an Item and click the link in the corresponding Item column. The View Composition List page appears, displaying the list of non-tracked items and item groups.

View Composition List Details - View Composition List page

View Composition List

Organization: PM
Item: 02-BR47124
Status: Draft

Name: Vision Project Mfg
Description: BR-5000 Brake Assembly

Descriptive Flexfields
Item Composition FF
Context Value

Item Group	ItemDescription	Quantity	UOM	Descriptive Flexfields
BR-5000 Fittings	BR-5000 Fittings	1	Ea	00
BR-5000 Lines	BR-5000 Lines	1	Ea	00
BR-5000 Reservoir	BR-5000 Reservoir	1	Ea	00

4. Optionally, you can view the item composition from the Master Configuration module. Under the Master Configuration tab, select the Item Composition tab. The Search Item Composition page appears. Enter your search criteria and click Go. The Item Composition List table populates with the desired lists. You can view the associated disposition lists, create a revision for the composition list, or submit it for approval.

Creating Disposition Lists

Disposition lists are defined as a subset of a composition list or master configuration to compliment material requirements. A Disposition List is a list of the items, item groups, and positions, that may be impacted when a route is performed. A Route can be set up to contain multiple Disposition Lists. A disposition list can also be a subset if additional materials are defined for the item or configuration.

Disposition Lists are created through the association of an item or master configuration to a route.

Route - Item association: For a route and item association, you can choose the disposition items from the composition list of the associated item. Additionally you can pick items from the item master not related to the composition list. The item must be set up as a Tracked Item. For every item defined in the disposition list, you can assign a percentage value that indicates the likelihood of a replacement or tracked percentage of rework when this maintenance route is executed. The percentage figure helps the material planner to make an accurate planning decision. You can also select non-tracked items or item groups from the composition list. The percentage of rework cannot be defined for a non-tracked item.

Route - Master Configuration association: For a route and master configuration association, you can select the positions to associate, from the configuration. This position path can be revision specific or revision independent. You can also select the alternate item and its composition items and item groups for a position. The association is at position level instead of the item level, indicating that every alternate item is dispositioned the same way. You can also pick items from the item master not related to the composition list. You can then assign to each position, a percentage of rework and/or replacement. The association with a Master Configuration can be revision specific or independent.

A Disposition List is approved when the Route is approved.

Materials are forecast, planned, and scheduled based on the percentile of expected replacement and/or rework from the disposition list combined with the mandatory replacement items on the material requirements list. Only the items, item groups, or positions that are set as 100% replacement are auto-planned. Disposition lists provide the ability to create material requirements that are item or master configuration specific. Disposition lists are also used by maintenance or inspection personnel to set up items/parts to be dispositioned and to create material transactions. Maintenance or inspection personnel use the listing to disposition parts for rework; scrap; use as is; identify parts not received; identify as BFS (bad from stock), not applicable, return to vendor, return to customer, hold, or not removed.

Disposition lists are created and utilized differently based on the maintenance needs. Following are some examples:

- Component overhaul - For component overhaul, the disposition list is defined based on a route-item association.
- Assembly breakdown - For assembly breakdowns, such as module disassembly in an engine shop, the items to disposition are typically the sub-assembly modules. Thus, when defining the disposition list for an assembly breakdown, the route is associated with a master configuration. The highest assembly is associated with the route, and the sub-assembly positions are selected into the disposition list.
- Assembly piece part breakdown - Disposition lists for assembly piece part breakdown are based on both the route-item as well as route-master configuration association. When a master configuration has been associated, you can also define a disposition list, which not only uses the master configuration hierarchy but also the item composition. You can select positions, and also compositions of the items assigned to the various positions. You can include the position's path if the disposition only applies to the specific position.

Prerequisites

- ☐ The following must have been defined:
 - Tracked and Non-tracked items and item groups

- Composition lists for all tracked items
- Master Configurations and their position associations

To create disposition lists:

1. Select the route, for which you want to create the Disposition list for. Navigate to the Update Route page for the selected route.

Route Details - Update Route page

2. Select Disposition Associations from the side navigation menu. The Define Disposition Associations page appears.
3. Use the information in the following table to define disposition associations.

Description of fields related to disposition association

Field	Description
Route Number	User-assigned identifier for a maintenance route.
Master Configuration	Name of the master configuration that you want to associate with the route. The items can be tracked or non-tracked.
Revision	Field contains a part revision identifier.

Field	Description
Organization Code	Refers to the code for the inventory organization.
Item	Non-tracked item.
Position Reference	Refers to the position to be dispositioned and can be at any level within the master configuration.
%Replace	Percent of replacement.
%Rework	Percent of rework.

Enter Details - Define Disposition Associations page

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Define Disposition Associations

Route Number 2356 Status Draft

Revision 2 Revision Notes

Title ISARoutenew one

Remove	Master Configuration	Revision	Organization code	Item Description	Disposition Details
<input type="checkbox"/>	C70-2			C70-2 Aircraft	
<input type="checkbox"/>	C70-1			C70-1 Aircraft	

Add More Rows

Cancel Apply

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To create a Route - Item association:

1. Select an organization from the organization list of values, using the search icon.
2. Select an item using the Item search icon. Click Apply.

Create Route - Item Association - Define Disposition Associations page

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Define Disposition Associations

Route Number 2356 Status Draft
Revision 2
Title NSARoutenew one

Remove	Master Configuration	Revision	Organization code	Item	Description	Disposition Details
<input type="checkbox"/>			PM	01-AR76354	Vehicle Armor Kit	

Add More Rows

Cancel Apply

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- To view the disposition details, click the Disposition details icon. The Disposition List Details page appears.

Disposition List Details page

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Disposition List Details

Route Number 2356 Status Draft
Revision 2
Title NSARoutenew one

Organization code PM Item 01-AR76354 Description Vehicle Armor Kit

Material List from Composition

Remove	Item Group	Organization code	Item Description	Quantity	UOH	Replace	Rework	Exclude	Repair	Item Material	Flexfields	Item Composition Flexfields
No records were found matching the given criteria..												

Add More Rows

Additional Materials

Remove	Item Group	Organization code	Item Description	Quantity	UOH	Replace	Rework	Exclude	Repair	Item Material	Flexfields	Item Composition Flexfields
No records were found matching the given criteria..												

Add More Rows

Cancel Apply Select from Composition

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- To add the non-tracked items and/or item groups in the item composition, click Select from Composition. The Composition Selection page appears, displaying the composition list.

Composition Selection page

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Logged In As TSMITH

Composition Selection

Route Number 2356 Status Draft

Revision 2 Revision Notes

Title ISARoutenew one

Organization code PH Description Vehicle Armor Kit

Item 01-AR76354

Item Composition List

Select	Item Group	Item Description	Quantity	UOM
No records were found matching the given criteria...				

Cancel Select

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5. Select the items to include. The items are added to the Disposition list. The disposition list definition should not include the 100% replacement parts defined in the material requirements. If such an item is included, the disposition list definition will supersede the material requirements list on the route. The disposition list will contain the same item as a material requirement if it varies by the configuration or composition.
6. Optionally, you can add one item or item group at a time. In the Disposition List Details page, choose the item/item-group using the corresponding list of values in the Material List from Composition table.
7. To remove an item or item group from the Disposition list, select the Remove check box, and click Apply. The item is not removed from the Item composition. You can include it again, by clicking Select from Composition, and then choosing the item from the Composition list.
8. Enter a Replace and/or Rework percentage. Items with 100% Replace or Rework percentage are automatically planned by the planning engine during material demand planning and scheduling. Items with lesser percentages can be manually planned and scheduled in the Scheduled Materials page in Long Term Planning. For details, see Material Demand Planning and Scheduling, *Oracle Complex Maintenance, Repair, and Overhaul User's Guide*.
9. Select the Exclude check box if you do not want these items to appear in the Production Disposition view when selecting items to disposition. For details on item disposition, see Item Disposition, *Oracle Complex Maintenance, Repair, and Overhaul User's Guide*.
10. Optionally, you can add additional items that may be required for, and will be impacted during the route execution. Click Add More Rows in the Additional Materials table. Choose the item group and/or item that you want to add.
11. Click Apply to save the record.

To create a Route - Master configuration association:

1. In the Disposition Association page, select the master configuration that you want to associate with the route. Optionally, you can choose a specific revision of this master configuration. Click Apply.

Route - Master Configuration Association - Define Disposition Associations page

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Define Disposition Associations

Route Number 2356 Status Draft
Revision 2
Title NSARoutenew one
Revision Notes

Cancel Apply

Remove	Master Configuration	Revision	Organization code	Item	Description	Disposition Details
<input type="checkbox"/>	C70-1				C70-1 Aircraft	
<input type="checkbox"/>	C70-2				C70-2 Aircraft	
<input type="checkbox"/>						
<input type="checkbox"/>						

Add More Rows

Cancel Apply

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2. To view the disposition details, click the Disposition details icon. You can now add position references to the Disposition list.

View Disposition List Details - Disposition List Details page

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Disposition List Details

Route Number 2356 Status Draft
Revision 2
Title NSARoutenew one
Revision Notes
Master Configuration C70-2
Description C70-2 Aircraft

Cancel Apply Select from

Remove	Position Reference	Item Group	Organization code	Item	Description	Source Composition	Quantity	UOH	%Replace	%Rework	Exclude	Repair Item	Item Flex
<input type="checkbox"/>													
<input type="checkbox"/>													
<input type="checkbox"/>													

Add More Rows

Additional Materials

Remove Item Group Organization code Item Description Quantity UOH %Replace %Rework Exclude Repair Item Item Flex

No records were found matching the given criteria.

Add More Rows

Cancel Apply Select from

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3. Click the Position Reference search icon to select the position references defined for the master configuration, which you associated with the route. The Search Master Configuration Revision page appears displaying all versions of the master configuration record. Optionally, you can enter a version number in the Revision field to select the position from a specific version of the master configuration.

4. To select a position reference, click the Tree icon corresponding to the master configuration version. The Select Position Page appears, displaying the configuration tree.
5. Select a position in the configuration tree. The position reference details are displayed. You can select the position reference by clicking the applicable node in the configuration tree.
6. To make the position path revision specific, select Yes from the Version Specific drop-down menu. The position reference that is taken into account is thus based on the selected master configuration version.

Select Position Reference - Select Position page

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Select Position

Previous 1-1 of 1 Next

Name	Revision	Position Key	Position Reference	Version Specific
737-800 1	1	12124	Position 1	Yes

Previous 1-1 of 1 Next

Cancel Apply

7. Click Apply. The Position reference is added to the Disposition list.
8. Enter a Replace and Rework percentage. Enter the Quantity and UOM. Click Apply.

Add Position Reference - Disposition List Details page

Disposition List Details

Route Number: 2356, Revision: 2, Title: NSARoutenew one, Master Configuration: C70-2, Description: C70-2 Aircraft

Status: Draft

Material List from Composition

Remove	Position Reference	Item Group	Organization code	Item Description	Source Composition	Quantity	UOH	%Replace	%Rework	Exclude	Repair Item	Material Flexfields	Item Composition Flexfields
<input type="checkbox"/>	21-22-01, Index					5	EA	20	30	<input type="checkbox"/>	<input type="checkbox"/>	∞	

[Add More Rows](#)

Additional Materials

RemoveItem GroupOrganization codeItem DescriptionQuantityUOH%Replace%ReworkExcludeRepair ItemMaterial Flexfields

No records were found matching the given criteria.

[Add More Rows](#)

Disposition lists, created for part piece assembly breakdown, are based on a route - master configuration association. These lists also require non-tracked parts listing, which is derived from the composition of the item assigned to a position reference.

Note: If a composition or master configuration is revised removing positions, items, or item groups, and a disposition list has been created which utilizes them, the disposition list will automatically reflect the changes.

To create disposition lists, with both configuration and composition selection:

1. Select a route, and associate a configuration with it.
2. Select the position references to add to the disposition list.
3. To choose items from item compositions, click Select from Compositions. The Composition Selection page appears.

Select item Composition Selection page

4. Select the Position and Item from the list of values. Click Go. The list of non-tracked items and item groups belonging to the selected item's composition are displayed.
5. Select the items to include in the Disposition list.
6. Optionally, select the Include Position Path in Disposition check box to add the position, in addition to the selected composition details, to the disposition list.
7. Click Apply. The Disposition List Details page appears, displaying the item and position details.

Note: If a item or item group is removed from a composition, it will be automatically removed from the disposition list.

Disposition Planning

The disposition listing and rework and replace percentages enable the maintenance planner to schedule materials when scheduling a maintenance visit. The item's from a route's material requirements and from the disposition list, which have a 100% replacement percentage, are planned by default through Advanced Supply Chain Planning. The non-100% items from a route's disposition lists are scheduled by the planner from the Schedule Materials user interface in Long Term Planning.

If the percentile is on the position code then the planning engine considers the requirement based on the first highest priority item for the position alternates.

Related Topics

Editing Disposition Lists, page 3-31

Approving Disposition Lists, page 3-31

Editing Disposition Lists

To edit disposition lists:

1. Navigate to the Update Route page, for the Route whose associated Disposition list you want to edit. For information, see *Editing Maintenance Route Records*, page 3-57
2. Select Disposition Associations from the side navigation menu. The Define Disposition Association page appears.
3. You can add or remove items from the Disposition List. For information, see *Creating Disposition Lists*, page 3-21. Make the required changes and click Apply.

Approving Disposition Lists

A Disposition list is approved when the route it is associated with, is approved. For information on route approval, see *Creating Maintenance Route Records*, page 3-8. When the route is approved, you can view the Disposition association. From the Update Route page, select Disposition Associations. The View Disposition Associations page appears displaying the disposition list details.

Note: Disposition lists, that apply to the master configuration and item being planned, are provided to planning, when the route for a maintenance requirement is being planned. Planners use the replace and rework percentiles to determine which materials to plan. The percentile of replacement combined with the actual item instance helps in planning the expected material use. The percentile of rework combined with the items average duration is used to forecast the need for a replacement part.

Finding Operation Records

Maintenance organizations refer to existing operation records while defining solutions for similar maintenance requirements. Oracle Complex Maintenance, Repair, and Overhaul also allows organizations to associate existing operations to a maintenance route. This necessitates the efficient retrieval of operation records.

Oracle Complex Maintenance, Repair, and Overhaul permits use of metacharacters when you type a word, or part of a word, to use as a search argument. Use % to represent any string of zero or more characters. Use _ to represent any single character. For example, if the database contains a record with the value "ENGINE" in a field, typing "E%" will return all records where the field value begins with "E".

Prerequisites

- ☐ The operation record you want to retrieve must exist in the database.

To find an operation record:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab. The Search Operation page appears.

Note: You can also activate the Search Operation page in a query-only mode by running a specific function. This function restricts you from creating a new operation using the Search Operation page.

3. Enter the information in the fields for which you know the value. For field descriptions, see Description of fields associated with operation records, page 3-6.
4. Click Go. The lower half of the screen displays the Operation List of all matching records in the database.

Operation Search Results - Search Operation Page

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Logged In As TSMITH

Search Operation

Operation

Operation Type

Standard

Description

Model A319/A320-UAL

Process

Status Active

Go Clear

Create

Select Operation: Approve Delete Create Revision Terminate

Select Operation	Standard	Description	Operation Type	Process	Revision	Status	Start Date	End Date
<input type="radio"/> TM_ACA_05-00-00_150.001	No	Operation_101	Inspection1	Complete	01-FEB-2009			

Select Operation: Approve Delete Create Revision Terminate

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5. To restart a search for records, click Clear. All the search fields on the page will clear. (If you have retrieved records being displayed in the lower half of the screen, these records will remain).

After entering the new search criteria, click Go to begin searching the database for records that match.

6. To edit a maintenance operation record, select an operation record, and click the

Operation link. The Edit Operation page appears. Make the necessary changes and click Apply.

7. To approve a draft operation, select the pertinent record and click Approve.
8. To delete a draft operation, select the pertinent record and click Delete.
9. To terminate an active operation, select the pertinent record and click Terminate.
10. To create a revision for an active operation, select the pertinent record and click Create Revision.

Note: The Approve, Delete, Terminate, and Create Revision functions can also be performed from the Edit Operations page.

Finding Maintenance Route Records

Use this process to retrieve maintenance route records from your database.

Oracle Complex Maintenance, Repair, and Overhaul permits use of metacharacters when you type a word, or part of a word, to use as a search argument. Use % to represent any string of zero or more characters. Use _ to represent any single character. For example, if the database contains a record with the value "ENGINE" in a field, typing "E%" will return all records where the field value begins with "E".

Prerequisites

- ☐ The maintenance route that you want to retrieve must exist in the database.

To find maintenance route records:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab, then select the Route secondary tab. The Search Route page appears in Route Management.

Note: You can also activate the Search Route page in a query-only mode by running a specific function. This function restricts you from creating a new route using the Search Route page.

3. Enter the information in the fields for which you know the value. For field descriptions, see Description of fields associated with maintenance route records,

page 3-9.

- 4. Click Go. The lower half of the screen displays the Route List of all matching records in the database.

Route Search Results - Search Route page

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Search Route

Route Number:

Title:

Route Type:

Item Type:

Major Zone:

Organization:

Status: Active

System: Flight Control.Flight Mana

Process:

Operator:

Sub Zone:

Item:

Go Clear

Create

Select Route: Approve Go

Select	Route Number	Title	Route Type	Item Type	Major Zone	Sub Zone	System	Operator	Revision	Status	Start Date	End Date
<input type="radio"/>	A300-600-101	Route_101	Aircraft	AC Aircraft	C70		Flight Control.Flight Management System.GPS 1	Centro	931	Complete	20-JAN-2009	

Select Route: Approve Go

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- 5. To restart a search for records, click Clear. All the search fields on the page will clear. (If you have retrieved records being displayed in the lower half of the screen, these records will remain).

After entering the new search criteria, click Search to begin searching the database for records that match.

- 6. To edit a maintenance route record, select a route, and click the Route link. The Update Route page appears. Make the necessary changes and click Apply.

Edit Route Record - Update Route page

7. To approve a draft route, select the pertinent record and choose Approve from the drop-down menu.
8. To delete a draft route, select the pertinent record and choose Delete from the drop-down menu.
9. To terminate an active route, select the pertinent record and choose Terminate from the drop-down menu. You can terminate only those routes, which are not associated with any maintenance requirements (MR), or if associated the MR's 'effective_to' date is a past date.
10. To create a revision for an active route, select the pertinent record and choose Create Revision from the drop-down menu.

Note: The Approve, Terminate, Delete, and Create Revision functions can also be performed from the Update Route page.

11. To associate operations with a maintenance route record, select the pertinent route, and choose Associate Operations from the drop-down menu.
12. Select View Maintenance Requirements from the drop-down menu to view maintenance requirements that have been associated with the route in Fleet Maintenance program. The Search Maintenance Requirements page is displayed. Query for records using the search criteria to view the maintenance requirements. You can view maintenance requirements only for routes with status 'Complete' or 'Termination Pending'.

Search Maintenance Requirements page

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Logged In As TSMITH

Search Maintenance Requirements

Title

Originating Document

Program Type

Program Subtype

Category

Associated Item

Revision

Status Active

Parent Title

Route Type

Description

Route Number VA-C70-53-340-00

Go Clear

Title	Description	Program Type	Status	Effective From	Effective To	Effectivity Relationships	View	Affected Items
VA-C70-53-340-00	Corrosion Prevention - Flight Compartment Floor Structure Routine Check	Complete	20-MAY-2005					

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Defining Reference Documents

Oracle Complex Maintenance, Repair, and Overhaul allows you to define the reference documents related to a maintenance activity while creating the work card. This provides a ready reference that will improve the operational efficiency of personnel involved in the maintenance job.

Related Topics

Defining Reference Documents for an Operation, page 3-36

Defining Reference Documents for a Maintenance Route, page 3-39

Defining Reference Documents for an Operation

Prerequisites

- ☐ The document references and the operation record to which you want to associate them must exist in the database.

To define reference documents for an operation:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab. The Search Operation page appears. Click the Create button to launch the Create Operation page, or search for an existing operation from the search operation page.

3. If you are creating a new operation, enter the information in the fields provided. Information in fields marked with asterisk is mandatory. (see Description of fields associated with operation records, page 3-6).
4. Click Apply, and the operation is added to the database. The Edit Operation page appears.
5. If you are associating documents to an existing operation, find that operation with the search, and click the corresponding link in the search result list to navigate to the edit operation page.
6. Click Reference Documents on the side navigation menu to launch the Attach Reference Document page.

Attach Reference Documents page

Use the information in the following table to define a reference document.

Description of fields associated with reference documents

Field	Description
Document Number	Contains a unique identifier, generated by the organization to identify a maintenance document. If you do not know the document number, enter the generic substitution metacharacter% in the field, and click Go to launch the Select Doc Number page that displays all the document references in the database.
Type	Represents the major topic such as powerplant, fleet unit, and ground support equipment that is described by the document in question. This field value is returned when you enter the Document Number.

Field	Description
Title	Refers to the title of the maintenance document. This field value returns when you enter the Document Number.
Revision	Is a field that holds a user-assigned document revision identifier.
Chapter	Refers to a specific chapter in the associated document. The value is defined by the user when the association is created.
Section	Refers to a specific section in the associated document. The value is defined by the user when the association is created.
Subject	Refers to a specific subject in the associated document. The value is defined by the user when the association is created.
Page	Refers to a specific page in the associated document. The value is defined by the user when the association is created.
Figure	Refers to a specific figure in the associated document. The value is defined by the user when the association is created.
Note	Refers to a specific note in the associated document. The value is defined by the user when the association is created.

- Click Apply to add the reference document information to the operation record.

Add Document Reference to Operation Record - Attach Reference Documents page

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Details Reference Documents Resource Requirements Material Requirements Access Panels

Attach Reference Documents

Operation VA.C70.Comp_Chg.900.603 Status Draft

Revision 1 Revision Notes Standard Yes

Title Component Change

Remove	Doc Number	Type	Title	Revision	View Revision	Chapter	Section	Subject	Page	Figure	Note	Use Latest	Media Type	Location
<input type="checkbox"/>	00-25-254-	Engine	EngineComprehensive Engine Management System Manual for D5D; D042	1	∞							No	Electronic File	CMRO.DFF Functional Design K&L V3.5.doc
<input type="checkbox"/>	NSA1	Engine	EngineNSA first doc	NSAREV1	∞							No	Electronic File	

Add More Rows

Cancel Revert Apply

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- To remove a reference document associated to the operation, click on the delete icon in the associate document list of document definition that you want to remove, then click Apply.

Defining Reference Documents for a Maintenance Route

Prerequisites

- ☐ The document references, and the maintenance route record to which you want to associate them, must exist in the database.

To define reference documents for a maintenance route:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab and then select the Route secondary tab. The Search Route page appears. Click the Create button to launch the Create Route page, or search for an existing route from the search route page.
3. If you are creating a new route, enter the information in the fields provided. Information in fields marked with asterisk is mandatory (see Description of fields associated with maintenance route records, page 3-9).
4. Click Apply, and the route is added to the database. The Update Route page appears.
5. If associating documents to an existing route, search for the route, and click the Route link to navigate to the Update Route page. Click Reference Document on the side navigation menu to launch the Attach Reference Document page.
6. Enter the information in the fields provided. For field descriptions, see Description of fields associated with reference documents, page 3-37.

Enter Document References - Attach Reference Documents page

Oracle Complex MRO - Attach Reference Documents page

Route Number: 2356, Revision: 2, Title: NSARoutenew one, Status: Draft

Remove	Doc Number	Type	Title	Revision	View Revision	Chapter	Section	Subject	Page	Figure	Note	Use Latest	Media Type	Location
<input type="checkbox"/>	00-25-264	Engine	Comprehensive Engine Management System Manual for D5D: D042	1	View Revision							No	Electronic File	CMRO OFF Functional Design KOL V5.5.doc

Buttons: Cancel, Revert, Apply

- Click Apply to add the reference document information to the maintenance route record.

View Attached Documents - Attach Reference Documents page

Oracle Complex MRO - Attach Reference Documents page (View Attached Documents)

Route Number: 2356, Revision: 2, Title: NSARoutenew one, Status: Draft

Remove	Doc Number	Type	Title	Revision	View Revision	Chapter	Section	Subject	Page	Figure	Note	Use Latest	Media Type	Location
<input type="checkbox"/>	00-25-264	Engine	Comprehensive Engine Management System Manual for D5D: D042	1	View Revision							No	Electronic File	CMRO OFF Functional Design KOL V5.5.doc

Buttons: Cancel, Revert, Apply

- To remove a reference document associated to the route, select the check box beside the document definition that you want to remove, and then click Apply.

Defining Resource Requirements

Oracle Complex Maintenance, Repair, and Overhaul allows you to compile labor requirements related to a maintenance task. This information is necessary for pre-planning activities. Resource requirements can be defined as Labor, Tooling or Machinery.

Resource requirements are defined at either the operation or the route level. If the requirements are defined at both levels, only the route definitions are used for planning and production processes.

Related Topics

Defining Resource Requirements for an Operation, page 3-41

Defining Resource Requirements for a Maintenance Route, page 3-42

Defining Resource Requirements for an Operation

To define resource requirements for an operation:

1. Select an operation and navigate to the Edit Operation page.
2. Select Resource Requirements to access the Define Resource Requirements page.
3. Use the information in the following table to enter resource requirements.

Description of fields in the Resource Requirement page

Field	Description
Resource Type	Refers to the type of resource requirement. .
Primary Resource	Refers to the resource required to perform the route or operation.
Quantity	Refers to the number of resources required to perform the route or operation.
Duration	Refers to number of hours required of each resource to perform the route or operation.
Costing Parameters	Costing parameters are used for calculating job costs during execution of the route or operation on the shop floor. The costing parameter values are defined when implementing Oracle's Work in Process (WIP) and Costing module.
Alternate Resources	Resources that the user can select as an alternative to the primary resource defined.
Total Duration	If more than one resource unit is required, the total duration represents the sum of all the required durations for each unit represented in the resource requirement's quantity field.

Field	Description
Schedule Sequence	Allows user to sequence resources on the Route or Operation. Sequencing resources are required for a long operation when the resource is not needed for the entire duration. It is required to find when you need a resource.

4. Select Apply to save your work.
5. Select Costing Parameter to specify costing parameters for this resource requirement. The Update Costing Parameters page appears. See Defining Costing Parameters, page 3-43.

Defining Resource Requirements for a Maintenance Route

Prerequisites

- ☐ The maintenance route record for which you want to define labor requirements must exist in the database. The Resources required to carry out the route must be set up in the database. Refer to the *Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide*.

To define resource requirements for a maintenance route:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab then click the Route secondary tab to bring up the Search Route page. Click the Create button to launch the Create Route page, or

search for an existing route from the search route page.

3. If you are creating a new route, enter the information in the fields provided. Information in fields marked with asterisk is mandatory (see Description of fields associated with maintenance route records, page 3-9). Click Apply to add the operation to the database. The Update Route page appears.
4. If you are defining resources for an existing route, search for the route, and click on the corresponding Route link in the search result list to navigate to the Update Route page.
5. Click the Resource Requirements link in the side navigation menu. The Define Resource Requirement page appears.
6. Click Add More Rows to enter resource requirements. Enter the information in the fields provided. For field descriptions, see Description of fields associated with resource requirements, page 3-41. Click Apply to add the resource requirement information to the operation record.

Define Resource Requirements for a Route - Define Resource Requirements page

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Define Resource Requirements

Route Number 2356 Status Draft

Revision 2 Revision Notes

Cancel Revert Apply

Remove	Schedule	Sequence	Resource Type	Resource	Description	Quantity	Duration	Total Duration	Costing Parameters	Define Alternate Resources
		10	Machine	AC-PGAUGE-01	Pressure Gauge 01	40	2			

Add More Rows

Cancel Revert Apply

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7. Click Apply to add the resource requirement information to the operation record.
8. Click on the Costing Parameter Icon to specify Costing Parameters for this resource requirement. See Defining Costing Parameters, page 3-43.
9. To remove a labor requirement associated to the operation, click the remove icon on the pertinent record in the resource list and then click Apply.

Defining Costing Parameters

Oracle Complex Maintenance, Repair, and Overhaul allows you to define the costing parameters for resource requirements. These parameters are used for calculating job costs during execution of the route or operation on the shop floor. The costing

parameter values are defined when implementing Oracle's Work in Process (WIP) and Costing module. Definition of the costing parameters at the route or operation level is optional. Should you choose not to define any parameter values at that level when you create a job in WIP for this Route/Operation, the system selects a default from the Bill of Materials resources connected to the Oracle Complex Maintenance, Repair, and Overhaul Resource.

Related Topics

Defining Costing Parameters for an Operation Resource Requirement, page 3-44

Defining Costing Parameters for a Route Resource Requirement, page 3-45

Defining Costing Parameter for an Operation Resource Requirement

Prerequisites

- ☐ The operation record and the material requirements for which you want to define costing parameters must exist in the database. The costing parameters must exist in the database.

To define the costing parameters for a requirement on an operation:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab to bring up the Search Operation page. Click the Create button to launch the Create Operation page, or search for an existing operation from the search operation page.
3. If you are creating a new operation, enter the information in the fields provided. Information in fields marked with asterisk is mandatory (see Fields Associated with Operation Records, page 3-6).
4. Click Apply to add the operation to the database. The Edit Operation page appears.
5. If you are defining parameters for an existing operation, search for the operation, and click the corresponding link in the search result list to navigate to the Edit Operation page.
6. Click on Resource Requirements in the side navigation menu to navigate to the Resource Requirements page.
7. Enter the information in the fields provided. For field descriptions, see Fields on the Resource Requirement Page, page 3-41.

8. Click Apply to add the resource requirement information to the operation record.
9. Click on the Costing Parameters icon in the resource requirements list to navigate to the Update Costing Parameters page.
10. Enter the information in the fields provided. For field descriptions, see Fields on the Costing Parameter Page, page 3-46.
11. Click Apply to save your costing parameter definition.

Enter Costing Parameters - Update Costing Parameters page

12. To remove Costing Parameters, select the null value from the pull down list of each field you want to remove and then click Apply.

Defining Costing Parameter for a Route Resource Requirement

Prerequisites

- ☐ The Route record and the material requirements for which you want to define costing parameters must exist in the database. The Costing Parameters must exist in the database.

To define costing parameters for a resource requirements on a route:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab then click the Route secondary tab to bring up the Search Route page. Click the Create button to launch the Create Route page, or search for an existing route from the search route page.
3. If you are creating a new route, enter the information in the fields provided.

Information in fields marked with asterisk is mandatory (see Description of fields associated with maintenance route records, page 3-9). Click Apply to add the route to the database. The Update Route page appears.

4. If you are defining parameters for an existing route, search for the route, and click on the Route Number link in the search result list to navigate to the Update Route page.
5. Click on Resource Requirements in the side navigation menu to navigate to the Resource Requirements page.
6. Enter the information in the fields provided. For information, see Description of fields associated with resource requirements, page 3-41.
7. Click Apply to add the resource requirement information to the Route record
8. Click on the Costing Parameters icon in the resource requirements list to navigate to the Update Costing parameters page.
9. Use the information in the following table to enter costing details.

Description of fields in the Costing Parameters page

Field	Description
Cost Basis	Refers to the Cost Basis ID. The value is picked from a pull down list. The valid cost basis id's are defined upon implementation of the Bill of Materials Resources.
Scheduled	Refers to the Schedule Type ID. The value is picked from a pull down list. The valid schedule types are defined upon implementation of the Bill of Materials.
Autocharge Type	Refers to the Autocharge Type. The value is picked from a pull down list. The valid autocharge types are defined upon implementation of the Bill of Materials Resources.
Standard Rate	Refers to the application of a Standard Rate. The value is picked from a pull down list and can be either Yes or No.

10. Click Apply to save your costing parameter definition.

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Update Costing Parameters [Cancel] [Revert] [Apply]

Route Number	2356	Status	Draft
Revision	2	Revision Notes	
Title	NSARoutenew one		
Resource Type	Machine	Quantity	40
Resource	AC-PGAUGE-01	Duration	2

Costing Parameters

Cost Basis	Item	Scheduled	Yes
Autocharge Type	Manual	Standard Rate	Yes

[Cancel] [Revert] [Apply]

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11. To remove Costing Parameters, select the null value from the pull down list of each field you want to remove and then click Apply.

Defining Material Requirements

Oracle Complex Maintenance, Repair, and Overhaul allows you to compile material requirements related to a maintenance task. This information is necessary for pre-planning activities.

The material requirements are defined at either the operation or the route level. If requirements are defined at both levels, only the route definitions are used for the planning and production processes.

Related Topics

Defining Material Requirements for an Operation, page 3-47

Defining Material Requirements for a Maintenance Route , page 3-49

Defining Material Requirements for an Operation

Prerequisites

- ☐ The operation record for which you want to define resource requirements should exist in the database. The Material required to carry out the operation must exist in the database.

To define material requirements for an operation:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab to bring up the Search Operation page. Click the

Create button to launch the Create Operation page, or search for an existing operation from the search operation page.

3. If you are creating a new operation, enter the information in the fields provided. Information in fields marked with asterisk is mandatory (see Description of fields associated with operation records, page 3-6). Click Apply to add the operation to the database. The Edit Operation page appears.
4. If defining material requirements for an existing operation, search for the operation and click on the hyper linked record in the search result list to navigate to the Edit Operation page.
5. Click the Material Requirements link in the side navigation menu. The Define Material Requirement page appears.
6. Click Add More Rows to enter material requirements. Use the information in the following table to enter material requirements.

Description of fields in the Material requirement page

Field	Description
Item Group	Refers to the Alternate Item Group defined in Master Configuration. If your material requirement for this task is not a specific item type but a group of alternate items, you can define the complete alternate item group as a material requirement. This allows the system to plan for all the possible alternate items to perform the task. This definition specifically applies for a replacement material requirement. You can only define an item group or a part number for one and only one material requirement. If you do not know the value, enter a partial search string using the generic substitution metacharacter%, and click on the search icon to launch the alternate Item Group list of values. The alternate item groups are defined by your organization when implementing Master Configuration.
Part Number	Refers to an item number that is required to perform the task. This definition supports the set up of consumable requirements to perform the task. You can only define an item group or a part number for one material requirement but not both. If you do not know the value, enter a partial search string using the generic substitution metacharacter%, and click on the search icon to launch the part number list of values. Parts are defined by your organization when setting up the item master. Only the eAM enabled inventory items are displayed in the list of values.

Field	Description
Description	Refers to the description of the item group or the part number. The description is automatically populated when selecting an item group or part number.
Quantity	Refers to the number of parts required to perform the task.
UOM	Refers to the Unit of Measure of the quantity required to perform the task.
Repair Item	Refers to a material requirement that is fulfilled by repairing an item in a visit and not planned for in Oracle's APS application.

Enter Material Requirements - Define Material Requirements page

The screenshot displays the 'Define Material Requirements' page in the Oracle Complex MRO application. The page header includes the Oracle logo and 'Complex MRO'. The navigation bar shows 'MEL/CDL', 'Document Index', 'Route Management', and 'Fleet Maintenance Program'. The left sidebar lists 'Operations', 'Routes', 'Major Zones', 'Sub Zones', 'Resource', and 'Item Compositions'. The main content area shows the 'Define Material Requirements' form. At the top, it indicates 'Operation: VA.C70.Comp.Chg.900.603' and 'Status: Draft'. Below this is the 'Materials List' table. The table has columns: 'Remove', 'Item Group', 'Item', 'Organization', 'Description', 'Quantity', 'UOM', and 'Include/Repair Item/Descriptive Flexfields'. The first row of data shows '00-AF10200' as the Item, 'Vision Project I' as the Organization, 'AC-5000 Air Cleaner' as the Description, and '10' as the Quantity. The 'UOM' column is empty. The 'Include/Repair Item' column has checkboxes for 'Include' and 'Repair', both of which are unchecked. The 'Descriptive Flexfields' column has a text input field. At the bottom of the table, there is an 'Add More Rows' button. The page also includes 'Cancel', 'Revert', and 'Apply' buttons at the bottom right.

7. Click Apply to add the material requirement information to the operation record.
8. To remove a material requirement associated to the operation, click the remove icon on the pertinent record in the resource list and then click Apply.

Defining Material Requirements for a Maintenance Route

Prerequisites

- ☐ The maintenance route record for which you want to define material requirements must exist in the database. The Item Type and Part Number values should exist in the database.

To define material requirements for a maintenance route:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab then click the Route secondary tab to bring up the Search Route page. Click the Create button to launch the Create Route page, or search for an existing route from the search route page.
3. If you are creating a new route, enter the information in the fields provided. Information in fields marked with asterisk is mandatory (see Description of fields associated with maintenance route records, page 3-9). Click Apply to add the operation to the database. The Update Route page appears.
4. If you are defining material requirements for an existing route, search for the route, and click the Route Number link in the search result list, to navigate to the Update Route page.
5. Click the Material Requirements link in the side navigation menu. The Define Material Requirement page appears. Click Add More Rows. Enter the information in the fields provided. For information, see Description of fields in the Material Requirement page, page 3-48.
6. Select the Include check box to indicate if the material requirement should be viewed in the disposition list by the Production Planner. A Disposition list is defined in Route Management as a subset of a composition list to compliment material requirements.

Items defined as material requirements are expected to be 100% replacement requirements. If you want to have the item as predominately 100% replacement but occasionally a different percentage, you must define the requirement in the disposition list and set the percentile for replacement and repair. Material requirements are superseded by the disposition requirements where applicable based on the master configuration and / or the item being planned.

The field Repair Item identifies a material requirement that is fulfilled by repairing an item in a visit and is not planned for in Oracle's APS applications.

Note: The item's from a route's material requirements and from the disposition list, which are set to 100% replacement, are planned by default through Advanced Supply Chain Planning.

7. Click Apply to add the material requirement information to the maintenance route record.

Add Material Requirements to a Maintenance Route - Define Material Requirements page

The screenshot displays the 'Define Material Requirements' page in the Oracle Complex MRO application. The page header includes the Oracle logo and navigation tabs like 'MEL/CDL', 'Document Index', 'Route Management', and 'Fleet Maintenance Program'. The left sidebar contains a navigation menu with options like 'Details', 'Reference Documents', 'Resource Requirements', 'Material Requirements', 'Associate Operations', 'Disposition Associations', and 'Access Panels'. The main content area shows the 'Define Material Requirements' form. At the top, it displays 'Route Number 2356', 'Revision 2', and 'Title NSARoutenew one'. The status is 'Draft'. Below this is the 'Materials List' table. The table has columns: 'Remove', 'Item Group', 'Item', 'Organization', 'Description', 'Quantity', 'UOM', 'Include', 'Repair Item', 'Descriptive', and 'Flexfields'. There are two rows of material requirements: one for '16T_Vent_Stab' with a quantity of 2 and UOM of 'CARTON', and another for 'BU55002' with a quantity of 10 and UOM of 'CARTON'. At the bottom of the table is an 'Add More Rows' button. The page footer contains the Oracle logo and copyright information.

Note: When material requirements change on a route that has been planned for, an approval workflow is started to notify the user to replan for the material requirements.

8. To remove a material requirement associated to the operation, click the remove icon on the pertinent record in the resource list and then click Apply.

Associating Operations with a Maintenance Route

The Associate Operation to a Route page allows you to associate operations to a selected maintenance route. The application simplifies the creation of maintenance routes by allowing you to use related operation records existing in the database. You can search for a required operation, and copy the operation record to associate it with the route.

Prerequisites

- ☐ Operation records that apply to the route must exist in the database.

To associate operations with maintenance routes:

1. Retrieve the route record for which you want to associate operations (see Finding Maintenance Route Records, page 3-33).
2. Select the pertinent route record from the Route List on the Search Route page.
3. Click Associate Operations on the side navigation menu to launch the Associate Operations page.

4. Enter the information in the fields provided.
 - Step refers to the serial order of the operation in the maintenance route. This field value is user assigned.

Note: A step number cannot be defined as a single digit because of Enterprise Asset Management restrictions. For example, steps should be defined with at least two digits, such as 10, 20, 30, and so on, instead of single digits 1, 2, and 3

- Operation field contains the pre-defined operation that you want to associate with the maintenance route.
5. Click the Operation search icon to launch the Select Operation page.

Select Operation page

The screenshot shows the 'Select Operation' page in the Oracle Complex MRO application. The page has a navigation bar at the top with links like 'Home', 'CMRO Home', 'Engineering', 'Configuration', 'Planning', 'Administration', 'Execution', 'Profile', 'Sign Out', and 'Help'. Below the navigation bar, there are tabs for 'Operations', 'Routes', 'Major Zones', 'Sub Zones', 'Resource', and 'Item Compositions'. The 'Operations' tab is selected. The page contains a search form with fields for 'Operation', 'Operation Type', 'Standard', and 'Description'. There are also dropdowns for 'Process' and 'Status'. Below the search form, there is a table of search results. The table has columns for 'Standard', 'Operation', 'Description', 'Operation Type', 'Process', 'Revision', 'Status', 'Start Date', and 'End Date'. The table contains 10 rows of data. The 'Associate' button is highlighted in the bottom left corner of the table.

Standard	Operation	Description	Operation Type	Process	Revision	Status	Start Date	End Date
<input type="checkbox"/> Yes	12.13.200.801.00	Check generator oil level	Inspection		2	Complete	10-MAY-2010	
<input type="checkbox"/> Yes	12.15.420.801.00	Hydraulic Brake Accumulator Servicing	Servicing		1	Complete	07-NOV-2002	
<input type="checkbox"/> Yes	12.15.610.801.00	Check Brake Accumulator Precharge	Operation Check		1	Complete	07-NOV-2002	
<input type="checkbox"/> Yes	21.27.000.801.00	Equipment Cooling Air Filter Removal	Disassembly		1	Complete	07-NOV-2002	
<input type="checkbox"/> Yes	21.27.400.801.00	Equipment Cooling Air Filter Installation	Assembly		1	Complete	07-NOV-2002	
<input type="checkbox"/> Yes	21.61.000.801.00	Cabin Temp Sensor Assembly Filter Removal	Disassembly		1	Complete	07-NOV-2002	
<input type="checkbox"/> Yes	21.61.100.801.00	Cabin Temp Sensor Assy Filter Cleaning	Cleaning		1	Complete	07-NOV-2002	
<input type="checkbox"/> Yes	21.61.400.801.00	Cabin Temp Assy Filter Installation	Assembly		1	Complete	07-NOV-2002	
<input type="checkbox"/> Yes	27.21.210.801.00	Rudder Aft Quadrant Detail Visual Inspection	Inspection		1	Complete	06-NOV-2002	
<input type="checkbox"/> Yes	27.31.210.801.00	Elevator Mechanical Control Path Inspection	Inspection		1	Complete	07-NOV-2002	

6. Query for operation records. Click the link to select the operation. The fields in the Associate Operations page will get populated with these values.
7. Click Apply to save the records.
8. Alternatively, click Attach to search and associate multiple operations. In the Search Operation page, enter information in the fields for which you know the value, and click Go. All operations matching your search criteria are displayed in the Operations Results table.

Search Operation Record - Search Operation page

Search Operation

Operation:

Operation Type:

Standard:

Description:

Go Clear

Select Operation: Associate

Select	Standard Operation	Description	Operation Type	Process	Revision	Status	Start Date	End Date
<input type="checkbox"/>	Yes	12.13.200.801.00Check generator oil level	Inspection		2	Complete	10-MAY-2010	
<input type="checkbox"/>	Yes	12.15.420.801.00Hydraulic Brake Accumulator Servicing	Servicing		1	Complete	07-NOV-2002	
<input type="checkbox"/>	Yes	12.15.610.801.00Check Brake Accumulator Precharge	Operation Check		1	Complete	07-NOV-2002	
<input type="checkbox"/>	Yes	21.27.000.801.00Equipment Cooling Air Filter Removal	Disassembly		1	Complete	07-NOV-2002	
<input type="checkbox"/>	Yes	21.27.400.801.00Equipment Cooling Air Filter Installation	Assembly		1	Complete	07-NOV-2002	
<input type="checkbox"/>	Yes	21.61.000.801.00Cabin Temp Sensor Assembly Filter Removal	Disassembly		1	Complete	07-NOV-2002	
<input type="checkbox"/>	Yes	21.61.100.801.00Cabin Temp Sensor Assy Filter Cleaning	Cleaning		1	Complete	07-NOV-2002	
<input type="checkbox"/>	Yes	21.61.400.801.00Cabin Temp Assy Filter Installation	Assembly		1	Complete	07-NOV-2002	
<input type="checkbox"/>	Yes	27.21.210.801.00Rudder Aft Quadrant Detail Visual Inspection	Inspection		1	Complete	06-NOV-2002	
<input type="checkbox"/>	Yes	27.31.210.801.00Elevator Mechanical Control Path Inspection	Inspection		1	Complete	07-NOV-2002	

Select Operation: Associate

9. Select multiple operation records and click Associate. You will see that the values in the Operation fields are not in the same line as that of the step for which you entered the operation, but on the next empty line. Enter the values in the Step fields later, along with the rest of the fields.
10. Click Apply to associate the operations to the maintenance route record.

Defining Access Panels

Oracle Complex Maintenance, Repair, and Overhaul enables you to associate access panels to a route or operation in engineering. When planning a maintenance visit, you can schedule tasks and work orders based on the applicable access panel.

Related Topics

Defining Access Panels for an Operation

Defining Access Panels for a Maintenance Route

Defining Access Panels for an Operation

Prerequisites

- ☐ The operation record for which you want to define access panels must exist in the database.

To define access panels for an operation:

1. Navigate to the Search Operation page in the Route Management tab.
2. Click Create to launch the Create Operation page.
3. Optionally, you can search for an existing operation to which you want to associate access panels.
4. Click the appropriate Operation number to navigate to the Edit Operation page.
5. Click Access Panels on the side navigation menu. The Edit Access Panels page opens.
6. Click Add More Rows to enter access panel types.

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Details
Reference Documents
Resource Requirements
Material Requirements
Access Panels

Edit Access Panels

Operation 12.13.200.801.00 Status Draft
Revision 2 Revision Notes
Title Check generator oil level Standard Yes

Cancel Revert Apply

Access Panels List

Remove	Access Panel Type	Description

Add More Rows

Cancel Revert Apply

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7. Add the appropriate Access Panel Type and description in the Access Panels List region.
8. Click Apply to add the access panels to the operation record.
9. To remove an access panel associated with the operation, click the Remove icon on the pertinent record in the Access Panels list, and click Apply.

Defining Access Panels for a Maintenance Route

Prerequisites

- ☐ The maintenance route record for which you want to define access panels must exist in the database.

To define access panels for a maintenance route:

1. Navigate to the Search Route page in the Route Management tab.
2. Click the Create button to launch the Create Route page.
3. Optionally, you can search for an existing route to which you want to associate access panels.
4. Click the appropriate Route Number to navigate to the Update Route page.
5. Select Access Panels from the Route Management navigation menu. The Edit Access Panels page opens.
6. Select Add More Rows to enter access panel types.

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Edit Access Panels

Route Number BBN Route 7
Revision 1
Title BBN Route 7

Status Draft
Revision Notes

Cancel Revert Apply

Remove	Access Panel Type	Description

Add More Rows

Cancel Revert Apply

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7. Add the appropriate Access Panel Type and its related description in the Access Panels List region.
8. Choose the Apply button to add the access panels to the route record.
9. To remove an access panel associated with a route, click the Remove icon on the pertinent record in the Access Panels list and then choose Apply.

Editing Operation Records

Oracle Complex Maintenance, Repair, and Overhaul allows you to retrieve existing operation records and edit the information associated with the operation including sign off, material, machine, and tool requirements. You can also edit document reference and phase code definitions associated with the operation.

This first step in the process allows you to edit the basic operation record information.

Prerequisites

- ☐ The operation must exist in the database and must have a status of Draft or Approval Rejected. To edit an approved operation, you must first create a revision of that operation.

To edit operation records:

1. Retrieve the operation records that match your requirement (see Finding Operation Records, page 3-31).
2. Select an Operation record, and click the Operation link to bring it up on the Edit Operation page.

Edit Operation Information - Edit Operation page

The screenshot displays the 'Edit Operation' page in the Oracle Complex MRO system. The page is titled 'Edit Operation' and features a sidebar with a 'Details' menu. The main form area contains several fields: 'Revision Operation' (1), 'Description' (VA.C70.Comp.Chg.900.603), 'Standard' (Yes), 'Operation Type' (Replacement), 'Start Date' (07-MAY-2005), 'Quality Inspection Type', 'Remarks', and 'Revision Note'. There are also buttons for 'Cancel', 'Delete', 'Approve', 'Revert', and 'Apply'. At the bottom, there are 'Descriptive Flexfields' and a 'Context Value' field.

3. Make the necessary changes to the information in the fields provided. For information, see Description of fields associated with operation records, page 3-6.
4. To save the edited operation, click Approve.
5. To edit reference document resources, material requirements, or associated operations, click the pertinent link in the side navigation menu.

Related Topics

Defining Reference Documents for an Operation, page 3-36

Defining Resource Requirements for an Operation, page 3-41

Editing Maintenance Route Records

Oracle Complex Maintenance, Repair, and Overhaul allows you to retrieve existing maintenance route records and edit the information associated with the route, including sign off, material, machine, and tool requirements. You can also edit document reference and phase code definitions associated with the operation.

This first step in the process allows you to edit the basic maintenance route record information.

Prerequisites

- ☐ The maintenance route record must exist in the database and must have a status of Draft or Approval Rejected. To edit an approved route, you must first create a revision of that route.

To edit maintenance route records:

1. Retrieve the maintenance route records that match your requirement (see Finding Maintenance Route Records, page 3-33).
2. Click the Route Number link to bring it up on the Update Route page.
3. Make the necessary changes to the information in the fields provided. For information, see Description of fields associated with maintenance route records, page 3-9.
4. To save the edited route, click Approve.
5. To edit reference document resources, material requirements, or associated operations, click the pertinent link in the side navigation menu.

Related Topics

Defining Reference Documents for a Route, page 3-39

Defining Resource Requirements for a Route, page 3-42

Defining Material Requirements for a Route, page 3-49

Associating Operations to a Maintenance Route, page 3-51

Defining Component Locations in Fleet Units

Maintenance organizations define zones to identify component locations in an

electromechanical system. Oracle Complex Maintenance, Repair, and Overhaul allows you to associate major zones and sub zones in electromechanical systems to product types. Product Type refers to the classification by category of electromechanical systems such as Ground Support and Engine for aircraft. This enables you to closely monitor maintenance activities and component location on any fleet unit belonging to a product type.

Related Topics

Associating Major Zones to Product Types, page 3-58

Associating Sub Zones to Product Types , page 3-60

Associating Major Zones to Product Types

Prerequisites

- ☐ Product Type, and Major Zone values must exist in the database. You should decide on the major zone that you want to associate with the selected Product Type.

To associate major zones to a product type:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab, and then select the Major Zone secondary tab. The Associate Major Zone to Item Type page appears.
3. Use the information in the following table to associate sub zones to item types.

Description of fields related to associating zones to item types

Field	Description
Product Type	Refers to the classification by category of the electromechanical system. Enter the value of the product type to which you want to associate zones. If you do not know the value, enter a partial search string with the generic substitution metacharacter%, and click Go. This launches the Select Product Type page with all the matching records in the database. Click the pertinent record to return this value to the field.

Field	Description
Major Zone	Refers to the user-defined zones used as a method for identifying locations in the electromechanical system being maintained. If you do not know the value, enter a partial search string with the generic substitution metacharacter%, and click Go. This launches the Select Major Zone page with all the matching records in the database. Click the pertinent record to return this value to the field.
Description (Major Zone)	Zone description automatically placed in this field when the Major Zone is selected from the database.
Sub Zone	Refers to the user-defined zones within a major zone used as a method for identifying locations in the electromechanical system being maintained. If you do not know the value, enter a partial search string with the generic substitution metacharacter%, and click Go. This launches the Select Sub Zone page with all the matching records in the database. Click the pertinent record to return this value to the field.
Description (Sub Zone)	Sub zone description automatically placed in this field when the Sub Zone is selected from the database.
Start Date	Refers to the date from which this definition for component location is valid. You cannot enter a date directly in this field. Click on the calendar selector icon beside the date field and select the correct date, which will be copied into the field.
End Date	Refers to the date up to which this component location definition for the product type would remain valid. Click on the calendar selector icon beside the date field and select the correct date, which will be copied into the field.

- Click Apply to record the major zones associated to the item type.

Save Association - Associate Major Zone To Item Type page

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Associate Sub Zone To Item Type

Item Type AC Aircraft C70

SubZones List

Remove	Major Zone	Major Zone Description	Sub Zone	Sub Zone Description
<input type="checkbox"/>	400 Engine & Nac	400 Engine & Nacelle	#1 Engine	#1 Engine
<input type="checkbox"/>	400 Engine & Nac	400 Engine & Nacelle	#1 Nacelle Strut	#1 Nacelle Strut
<input type="checkbox"/>	400 Engine & Nac	400 Engine & Nacelle	#2 Engine	#2 Engine
<input type="checkbox"/>	400 Engine & Nac	400 Engine & Nacelle	#2 Nacelle Strut	#2 Nacelle Strut
<input type="checkbox"/>	200 Upper Fusela	200 Upper Fuselage	Aft Cabin	Aft Cabin
<input type="checkbox"/>	100 Lower Fusela	100 Lower Fuselage	Aft Cargo Compart	Aft Cargo Compartment
<input type="checkbox"/>	800 Door	800 Door	Aft Cargo Door	Aft Cargo Door
<input type="checkbox"/>	800 Door	800 Door	Aft Entry Door	Aft Entry Door
<input type="checkbox"/>	100 Lower Fusela	100 Lower Fuselage	Electrical & Elect	Electrical & Electronics Compartment
<input type="checkbox"/>	200 Upper Fusela	200 Upper Fuselage	Flight Compartme	Flight Compartment

Add More Rows

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Revert Apply

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Associating Sub Zones to Product Types

Prerequisites

- ☐ Product Type, Major Zone, and Sub Zone values must exist in the database. You should decide on the major zone and sub zone that you want to associate with the selected Product Type.

To associate sub zones to product types:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab, and then select the Sub Zone secondary tab. The Associate Sub Zone to Item Type page appears.
3. Enter the information in the fields provided. For information, see Description of fields related to associating zones to item type, page 3-58.
4. Click Apply to record the sub zones associated to the product type.

Finding Oracle Complex Maintenance, Repair, and Overhaul Resources

Use this process to retrieve Oracle Complex Maintenance, Repair, and Overhaul resource records from your database.

Oracle Complex Maintenance, Repair, and Overhaul permits use of metacharacters when you type a word, or part of a word, to use as a search argument. Use % to represent any string of zero or more characters. Use _ to represent any single character. For example, if the database contains a record with the value "ENGINE" in a field, typing "E%" will return all records where the field value begins with "E".

Prerequisites

- ☐ The resource that you want to retrieve must exist in the database.

To find Oracle Complex Maintenance, Repair, and Overhaul resources:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
2. Select the Route Management tab, then select the Resource secondary tab. The Search Resources page appears in Route Management.
3. Enter the information in the fields for which you know the value. Click Go. The lower half of the screen displays the Oracle Complex Maintenance, Repair, and Overhaul Resources List of all matching records in the database.

Resources Search Results - Search Resources page

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Search Resources

Resource
Description
Resource Type

Go Clear

Create

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Resource	Description	Resource Type	Remove
AC-A&P	Airframe and Powerplant Mechanics	Person	
AC-AVI	Avionics Technician	Person	
AC-CALT	Calibration Technician	Person	
AC-COMPT	Component Technician	Person	
AC-ETECH	Engine Technician	Person	
AC-INSPE	Inspector	Person	
AC-PGAUGE-01	Pressure Gauge 01	Machine	
AC-STR	Structural Mechanics	Person	
AC-WRENCH-01	Torque Wrench 01	Machine	
AD-A&P	Airframe and Powerplant Mechanics	Person	

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- To restart a search for records, click Clear. All the search fields on the page will clear. (If you have retrieved records being displayed in the lower half of the screen, these records will remain).

After entering the new search criteria, click Search to begin searching the database for records that match.

Creating Oracle Complex Maintenance, Repair, and Overhaul Resources

The following process initiates the creation of a resource. The Create Oracle Complex Maintenance, Repair, and Overhaul Resource page lets you save the record in the database before defining the attributes.

Prerequisites

- ☐ You should know the resource type of the resource you want to create.

To create an Oracle Complex Maintenance, Repair, and Overhaul resource:

- From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Engineering Global button. The Search Maintenance Requirements page of Fleet Maintenance Program appears.
- Select the Route Management tab, then select the Resource secondary tab. The Search Resources page appears in Route Management.

3. Click the Create button. The Create Resources page appears.
4. Enter the information in the fields provided. Information in fields marked with asterisk is mandatory.

Enter Resource Information - Create Resources page

5. You must associate at least one BOM Resource with the Oracle Complex Maintenance, Repair, and Overhaul resource you are creating. Use the Associated BOM Resources List on the lower half of the page to associate BOM resources to the Oracle Complex Maintenance, Repair, and Overhaul resource. Click Add More Rows and enter the information in the fields provided.

Name	Select a name of the resource from the LOV
Description	Defaults from the name
Organization	Defaults from the name
Resource Type	Defaults from the resource type entered during creation process
Department	Select a department from the LOV

The Department field enables department level resource definitions for Operation and Route resource requirements. The department specified here will default as the CMRO work order operation (default operation) department.

If you the Department field is blank, the visit task department will default as the work order and operation department.

Associate BOM Resources - Create Resources page

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MEL/CDL Document Index Route Management Fleet Maintenance Program

Operations Routes Major Zones Sub Zones Resource Item Compositions

Logged In As TSMITH

Create Resources

* Indicates required field

* Name Resource

* Description Resource 1

* Resource Machine

Cancel Revert Apply

Associated BOM Resources List

Attach

Remove	Name	Description	Organization	Disable Date	Resource Type	Department
	AMOMACHINE		W1 - Kansas City Di		Machine	

Add More Rows

Cancel Revert Apply

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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6. Alternatively, click Attach to search for, and associate a specific BOM resource.
7. Click Apply to create the resource in the database. The Update Resources page will appear displaying the current resource in context.
8. Click Cancel to stop the process and return to the previous page.
9. Click Remove next to any BOM resource you want to remove.

Editing Oracle Complex Maintenance, Repair, and Overhaul Resources

Oracle Complex Maintenance, Repair, and Overhaul allows you to retrieve existing Resources and edit the information associated with it.

Prerequisites

- ☐ The Oracle Complex Maintenance, Repair, and Overhaul Resource must exist in the database.

To edit resource records:

1. Retrieve the Oracle Complex Maintenance, Repair, and Overhaul resource records that match your requirement (see Finding Oracle Complex Maintenance, Repair, and Overhaul Resources, page 3-31).
2. Select a resource, and click the corresponding Resource link to bring it up on the Update Resources page.
3. Make the necessary changes to the information in the fields provided. For more

information on attaching BOM Resources to an Oracle Complex Maintenance, Repair, and Overhaul Resource, see *Creating Oracle Complex Maintenance, Repair, and Overhaul Resources*, page 3-62.

4. Click Apply to save the changes to the database.

Associating BOM Resources

Use this process to retrieve BOM resource records from your database.

Oracle Complex Maintenance, Repair, and Overhaul permits use of metacharacters when you type a word, or part of a word, to use as a search argument. Use % to represent any string of zero or more characters. Use _ to represent any single character. For example, if the database contains a record with the value "ENGINE" in a field, typing "E%" will return all records where the field value begins with "E".

Prerequisites

- ☐ The resource that you want to retrieve must exist in the database.

To associate BOM resources:

1. Retrieve the Oracle Complex Maintenance, Repair, and Overhaul resource records that match your requirement (see *Finding Oracle Complex Maintenance, Repair, and Overhaul Resource*, page 3-31s).
2. Select a resource, and click the corresponding Resource link to bring it up on the Update Oracle Complex Maintenance, Repair, and Overhaul Resources page.
3. Click Attach under the Associated BOM Resources List results. The Search BOM Resource page appears.

Find BOM Resource - Search BOM Resource page

The screenshot shows the Oracle Complex MRO web interface. At the top, there's a navigation bar with links like Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. Below this is a breadcrumb trail: MEL/CDL | Document Index | Route Management | Fleet Maintenance Program | Resource | Item Compositions. The main section is titled 'Search BOM Resource'. It contains three input fields: Name, Description, and Organization. Below these fields are 'Go' and 'Clear' buttons. A search icon is also present. Below the search form, there's a section titled 'BOM Resources Results'. It shows a table header with columns: Select, Name, Description, Organization, Disable Date, Resource Type. Below the header, a message states: 'No records were found matching the given criteria...'. The footer of the page includes the Oracle logo and copyright information: Copyright 2006, Oracle Corporation. All rights reserved.

4. Enter the information in the fields provided and click Go. The lower half of the page displays the BOM Resources results for that Oracle Complex Maintenance, Repair,

and Overhaul resource.

BOM Resource Search Results - Search BOM Resource page

Oracle Complex MRO

MEL/CDL | Document Index | Route Management | Fleet Maintenance Program | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

Operations | Routes | Major Zones | Sub Zones | Resource | Item Compositions

Logged In As TSMITH

Search BOM Resource

Name
Description
Organization

Go Clear

BOM Resources Results

Select BOM Resource: Associate Previous 1-10 of 2817 Next

Select	Name	Description	Organization	Disable Date	Resource Type
<input type="checkbox"/>	KS-MCZ	Alternate resources	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCY	Alternate resources	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCX	Alternate resources	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCW	Alternate resources	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCV	Alternate resources	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCE	Resource with instance - TST1, TST2	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCD	Resource without instance	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCC	Resource with instance PCK1, PCK6	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCB	Resource with instance AMB5, AMB6	DistributionCenter		Machine
<input type="checkbox"/>	KS-MCA	Resource with instance - AMB1 and AMB2	DistributionCenter		Machine

Select BOM Resource: Associate Previous 1-10 of 2817 Next

MEL/CDL | Document Index | Route Management | Fleet Maintenance Program | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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- 5. Click the Select button next to the pertinent resource, then click Associate. The Update Resources page displays with the revised information.

Associate BOM Resource - Update Resources page

Oracle Complex MRO

MEL/CDL | Document Index | Route Management | Fleet Maintenance Program | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

Operations | Routes | Major Zones | Sub Zones | Resource | Item Compositions

Logged In As TSMITH

Update Resources

* Indicates required field

* Name Resource
* Description Resource 1
Resource Machine

Attach

Remove	Name	Description	Organization	Disable Date	Resource Type	Department
<input type="checkbox"/>	AMOMACHINE		W1 - Kansas Cty Distribution		Machine	
<input type="checkbox"/>	KS-MCZ	Alternate resources	DistributionCenter		Machine	

Add More Rows

Cancel Revert Apply

MEL/CDL | Document Index | Route Management | Fleet Maintenance Program | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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- 6. Click Apply to save the changes to the database.
- 7. Click Revert to restore the fields to the last saved position in the database.
- 8. Click Cancel to return to the Oracle Complex Maintenance, Repair, and Overhaul Resource page.

Managing Maintenance Documents

This chapter covers the following topics:

- Overview
- Creating Document References
- Associating Document Sub Types to Document Types
- Finding Document References
- Maintaining Document Subscription Information
- Maintaining Document Supplier Information
- Maintaining Document Distribution Information
- Creating Document Revision Records
- Uploading Electronic Documents

Overview

The maintenance, repair, and overhaul of high-valued electromechanical systems is supported by large volumes of documentation, supplied by original equipment manufacturers (OEMs), equipment operators, governmental agencies, and third-party maintenance specialists. These numerous documents evolve during the life of the asset, and must be monitored, often for regulatory compliance. From the perspective of the organization, the complete set of maintenance documents includes self-authored documents, as well as those produced by external organizations. Oracle Complex Maintenance, Repair, and Overhaul includes the Document Index module that permits a maintenance organization to create a repository of meta-documentation.

Key functions supported by the Document Index module provide process-oriented, task based procedures for performing essential document management tasks in maintenance organizations. See:

- Creating Document References, page 4-3

- Associating Document Sub Types to Document Types, page 4-5
- Finding Document References, page 4-7
- Editing Document References, page 4-8
- Maintaining Document Subscription Information , page 4-9
- Maintaining Document Supplier Information, page 4-10
- Maintaining Document Distribution Information, page 4-11
- Creating Document Revision Records, page 4-12
- Uploading Electronic Documents, page 4-14

Document Index

Document Index is a subsystem that provides an online catalog of documents used in maintenance, repair, and overhaul operations. Document Index is the Oracle Complex Maintenance, Repair, and Overhaul module that you will use to manage your maintenance, repair, and overhaul documents, regardless of their source, and regardless of their form, paper or electronic.

For each document that you would like to monitor with Document Index, you will add a reference to the document that includes the document identifier, its title, and whether or not the document can be subscribed to. Documents can be of certain types, and subtypes, and this information is also managed with Document Index. You can edit the document references that you create, as well as define and edit revisions. You cannot delete document descriptions using Document Index. When documents are no longer required, for example, after having disposed of a unit in your fleet, you can mark the document as obsolete.

Key Business Processes

The Document Index supports the following business processes:

Document Registration

Internal documents that evolve during the life of an equipment, and external documents provided by suppliers on a subscription basis, may consist of various formats that should be tracked. Oracle Complex Maintenance, Repair, and Overhaul allows you to consolidate all the document information by registering the document titles and reference information in a single area. The various business areas can refer to the documents for the latest information on a particular maintenance requirement. Maintaining accuracy in available documents begins with the process of registering the documents. Document registration defines only a document title; the document definition is created with the first revision.

Document Revision Control

Maintaining the latest documentation and related updates is a necessity for maintenance organizations. This includes tracking revisions of a document to ensure information is up to date and accurate. Inaccurate information may not be in adherence to required rules and regulations. Oracle Complex Maintenance, Repair, and Overhaul allows organizations to mark current information as reference, and obsolete information as not considered for use, while retaining the obsolete documents for document history.

Electronic Document Uploading

Any document that is available in electronic form can be uploaded to the database and associated with the relevant document revision. All file types are supported.

Document Subscription Control

Organizations maintain supplier information for documents to ensure that the right supplier provides the documentation requested or subscribed to. Oracle Complex Maintenance, Repair, and Overhaul allows organizations to maintain supplier information, and to track the status of a subscription for a document from an associated supplier.

Document Distribution

To maintain information on document distribution, it is necessary to map out who or what group is the recipient of a particular document. Missing or incorrectly identifying a recipient can cause substantial business impact. Approvals may be necessary by a specific individual before the release of a document. Oracle Complex Maintenance, Repair, and Overhaul allows organizations to maintain the distribution of documents by defining the recipient of a document. This enables organizations to map the documents and release them to the right individuals or groups.

Creating Document References

This is the primary process by which you can create references to all of the maintenance documents you would like to manage. You can record any revision information, if necessary, using this process.

Prerequisites

- ☐ To create a document reference, you should know the document type, the document source, the document number, whether the document is available through subscription, and whether the document is subscribed to by the organization. Document types should be set up by your organization while installing Oracle Complex Maintenance, Repair, and Overhaul.

To create a document reference:

1. Navigate to the Search Document page.

2. Select values in the applicable fields to filter your search, and select Create to display the Create Document page.

3. Use the information in the following table to enter document information.

Description of fields related to document records

Field	Description
Document Number	Contains a unique identifier, generated by the organization to identify a maintenance document.
Type	List of value field for the maintenance document type, and typically refers to the fleet unit, or major section division of the fleet unit.

Field	Description
Sub Type	Document category that describes the nature of the information contained in the document that you are defining.
Operator	The name of the company that owns or uses the document that you are recording.
Product Type	User-defined document product identifier.
Source	Internal or external supplier of the maintenance document. .
Title	Title of the maintenance document.
Subscription Available	Yes/No flag indicating if document is available by subscription.
Subscribed To	Yes/No flag indicating if your organization has subscribed to this maintenance document. The status of this field is derived from the status of the subscription available flag and whether or not a subscription is in place.
Status	Status indicates whether a document is obsolete or current.

4. Select Apply to save your work.

Note: You have the option of activating the Search Document page in a query-only mode by running a specific function. This will disable you from creating a new document using the Search Document page.

Associating Document Sub Types to Document Types

Manufacturers of transportation equipment produce many different types of documents including maintenance manuals, service bulletins, parts catalogs, and others. Organizations may wish to use sub types to identify maintenance documents that are sections of others, or related otherwise.

Prerequisites

- ☐ You should decide how to relate maintenance document types to sub types. Document types are defined.

To associate document sub types to a document type:

1. Navigate to the Associate Document Sub Type to Document Type page.
2. Select the document type for which you wish to create a document sub type using the Document Type drop-down menu. Document Type represents the major topic such as powerplant, fleet unit, and ground support equipment that is described by the document in question.
3. Click Add More Rows to add Sub Type records.

The screenshot shows the Oracle Complex MRO interface. The top navigation bar includes links for MEL/CDL, Document Index, Route Management, Fleet Maintenance Program, Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The main content area is titled 'Associate Document Sub Type To Document Type'. It features a 'Document Type' dropdown menu currently set to 'Aircraft'. Below this is a table with columns for 'Remove', 'Sub Type Name', and 'Sub Type Description'. The table lists various sub types such as 'Advisory Circular', 'Airworthiness Directives', 'Engineering Order', 'Illustrated Parts Catalog', 'Maintenance Manual', 'Maintenance Planning Data', 'OEM Task Card', 'Service Bulletin', 'Technical Order', and 'Time Compliance Technical Order'. Each row has a checkbox in the 'Remove' column. At the bottom of the table is an 'Add More Rows' button. The page also includes 'Cancel' and 'Apply' buttons at the top right and bottom right. The footer contains the text 'Copyright 2006, Oracle Corporation. All rights reserved.'

4. Select the new document Sub Type Name from the LOV. The Sub Type Description field is automatically populated.

Sub Type Name represents the content of the document type. For example, a document type might be "Powerplant", and the document sub type might be "Illustrated Parts Catalog". Sub Type Description contains the text description of the document Sub Type Name.

5. To remove a document sub type from a document, select the Remove check box for the sub type record that you want to delete.

Note: A document sub type can only be removed from its document type if the combination is not associated to an existing document.

6. Select Apply to save your work.

Finding Document References

Maintenance documents undergo frequent revisions. You can retrieve document references from the Document Index database and edit these references as necessary.

To find a document reference:

1. Navigate to the Search Document page where you can enter the search criteria.
2. Enter applicable information in the fields, see Description of fields related to document records, page 4-4.

The screenshot displays the Oracle Complex MRO Search Document page. The page has a blue header with the Oracle logo and 'Complex MRO' text. Below the header is a navigation bar with links: MEL/CDL, Document Index, Route Management, Fleet Maintenance Program, Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, Help. The 'Document Index' link is highlighted. Below the navigation bar is a search bar with the text 'Search' and 'Associate Type'. The search criteria section includes fields for Source, Title, Document Type, Operator, Media Type, Document Number, Status, Sub Type, and Item Type. There are 'Go' and 'Clear' buttons. Below the search criteria is a 'Create' button. The table below the search criteria has the following header: Select, Document Num, Title, Type, Sub Type, Revision Num, Revision Type, Status, Media Type, Location, View Document. The table body shows 'No records were found matching the given criteria...'.

3. Select Go to display the results.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

MEL/CDL Document Index Route Management Fleet Maintenance Program

Search Associate Type Logged In As: TSMITH

Search Document

Source: [] Title: [] Document Type: Aircraft Operator: [] Media Type: [] Document Number: [] Status: [] Sub Type: [] Item Type: []

Go Clear

Create

Select Object: Edit Revision Create New Revision Upload Delete Uploaded File

Select	Document Number	Title	Type	Sub Type	Revision Number	Revision Type	Status	Media Type	Location	View Document
<input type="radio"/>	00-25-4	Depot Maintenance of Aerospace Vehicles and Training Equipment	Aircraft	Technical Order	1	Full Revision	Current	Electronic File	TO 00-25-4 Depot Maintenance of Aerospace Vehicles and Trng Equip.pdf	oo
<input type="radio"/>	00-25-195	For Maintenance and Recoverability AF Weapons, Systems and Equip	Aircraft	Technical Order	1	Full Revision	Current	Electronic File	TO 00-25-195 Source, Maint and Recoverability Coding.pdf	oo
<input type="radio"/>	110-2012-31	Elevator feel actuator - removal/Installation	Aircraft	Technical Order	1	Full Revision	Current	Electronic File		oo
<input type="radio"/>	2002-19-51	Flight control modules C70 Series	Aircraft	Avworthiness Directives	1	Full Revision	Current	Electronic File	http://www.airweb.faa.gov/Regulatory_and_Guidance_Library/rgad.nsf/VibCurrentADFRAD/A65E607927F75622B6256C48005A25947	oo
<input type="radio"/>	21-27-02	Equipment Cooling Fan	Aircraft	Maintenance Manual	1	Temporary Revision	Current	Electronic File		oo
<input type="radio"/>	21-61-05	Cabin Temperature Sensor	Aircraft	Maintenance Manual	1	Temporary Revision	Current	Electronic File		oo
<input type="radio"/>	32-123	Howe landing gear shock strut inner cylinder installation	Aircraft	Maintenance Manual	1	Temporary Revision	Current	Electronic File		oo
<input type="radio"/>	C70-1/2/3	Maintenance Planning Data	Aircraft	Maintenance Planning Data	3	Full Revision	Current	Electronic File		oo
<input type="radio"/>	MBOnlineDoc		Aircraft		Rev-1	Temporary Revision	Current	Electronic File	Non empty file.txt	oo

Select Object: Edit Revision Create New Revision Upload Delete Uploaded File

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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After you create a document reference, you can edit it, or add more information about document subscriptions, document suppliers, and inhouse document distribution.

To edit document references:

1. Select the document number link to launch the Edit Document page for that document.

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MEL/CDL Document Index Route Management Fleet Maintenance Program

Search Associate Type Logged In As: TSMITH

Edit Document

* Indicates required field

Document Info

* Document Number: 21-27-02

* Type: Aircraft

* Sub Type: Maintenance Manual

* Operator: []

* Item Type: []

* Source: 1000

* Title: Equipment Cooling Fan

* Subscription Available: Yes

* Subscribed To: No

Descriptive Flexfields

* Doc FF: []

Context Value: []

Select Context Value and click 'Go' to show relevant fields.

Cancel Create New Revision Apply

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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2. Make necessary changes to the document information in the fields provided, see Description of fields related to document records, page 4-4 .

3. Save your work.

You can edit subscription information, supplier information, and distribution information from the Edit Document page using the links on the left hand menu. You can also create new revisions for the document from the Edit Document page

using the Create New Revision button.

Related Topics

Maintaining Subscription Information, page 4-9

Maintaining Supplier Information, page 4-10

Maintaining Document Distribution Information, page 4-11

Maintaining Document Subscription Information

When maintenance organizations purchase a new subscription, or want to update subscription information, tracking this information for reference is necessary. The supplier of a document may change over time, or the frequency of the subscription may change. Oracle Complex Maintenance, Repair, and Overhaul tracks such information ensuring that the document is subscribed from the right supplier, and that the information regarding the subscription is correct.

Prerequisites

- ☐ Define Subscription Type and Media Type valuesl.

To add or update subscription information:

1. Retrieve the document reference you want to add subscription information (See: Finding Document References, page 4-7)
2. Select the document to launch the Edit Document page, and select Subscription to display the Create New Subscription page.

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Search Associate Type

Details
Subscription
Supplier
Distribution

Logged In As: TSMITH

Cancel Apply

Edit Subscription Information

Title: Equipment Cooling Fan
Document Number: 21-27-02
Operator: Aircraft
Subscription Available: Yes
Source: World of Business
Sub Type: Maintenance Manual
Item Type:
Subscribed To: No

Document Descriptive Flexfield

Doc FF
Context Value

Remove	Subscription Type	Frequency	Requested By	Subscribe From	From Date	To Date	Status	Quantity	Purchase Order	Media Type
							Active			
							Active			
							Active			

Add More Rows

Cancel Apply

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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3. Click Add More Rows to add rows for subscription definition. Enter the subscription information in the fields provided.

- Subscription Type.
- Frequency specifies the reoccurrence of the subscription; such as monthly, semiannually, or annually.
- Requested By contains the name of the individual in your organization who has requested a subscription to this publication.
- Subscribe From specifies the name of the organization that supplies the maintenance document.
- From and To Date contains the date on which the document subscription started and ends.
- Status
- Quantity
- Purchase Order contains a purchase order identifier.
- Media Type indicates whether the subscription is a paper or an electronic document.

4. Select Apply to save your work. .

Maintaining Document Supplier Information

Maintaining supplier information for documents is necessary to ensure that the correct supplier provides the documentation requested or subscribed to. You may need to contact the supplier to verify information about a document, and for this reason maintenance of supplier contact information is crucial.

Prerequisites

- ☐ Define values for Preference Code.

To add or update supplier information:

1. Navigate to the Supplier Information page.
2. Click Add More Rows to add rows for Supplier definitions.

The screenshot shows the Oracle Complex MRO Fleet Maintenance Program interface. The top navigation bar includes links for MEL/CDL, Document Index, Route Management, and Fleet Maintenance Program. The left sidebar has a 'Supplier' link highlighted. The main content area is titled 'Supplier Information' and contains the following fields:

- Title: Equipment Cooling Fan
- Document Number: 21-27-02
- Type: Aircraft
- Operator: [Empty]
- Subscription Available: Yes
- Source: World of Business
- Sub Type: Maintenance Manual
- Item Type: [Empty]
- Subscribed To: No

Below these fields is a 'Document Descriptive Flexfield' section with a table for 'Doc FF Context Value'.

Remove	Supplier Number	Supplier Name	Preference Code
	10000	99 Supplier 1	Prime

At the bottom of the table is an 'Add More Rows' button. The interface also includes 'Cancel' and 'Apply' buttons at the top right and bottom right.

3. Enter supplier information in the applicable fields.
 - Supplier Name refers to the name of the organization that supplies this maintenance document.
 - Preference Code
4. Select Apply to save your work.

Maintaining Document Distribution Information

It is necessary for maintenance organizations to control the distribution of documents and software for various reasons including licensing, cost of distribution, regulatory authorities, and others. This creates the necessity to ensure that the requester has authorization to receive a document prior to distributing it. Oracle Complex Maintenance, Repair, and Overhaul allows you to manage information about recipients in the organization to whom documents will be distributed.

To record document distribution information:

1. Navigate to the Distribution Information page.
2. Click Add More Rows to add the Recipient Name.

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Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

MEL/CDL Document Index Route Management Fleet Maintenance Program

Search Associate Type Logged In As TSMITH

Distribution Information Cancel Apply

Title Equipment Cooling Fan
 Document Number 21-27-02
 Type Aircraft
 Operator
 Subscription Available Yes
 Document Descriptive Flexfield
 Doc FF
 Context Value

Source World of Business
 Sub Type Maintenance Manual
 Item Type
 Subscribed To No

Remove	Recipient Name	Number
	Michael Schumacher	56457

Add More Rows

Cancel Apply

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help
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3. Select Apply to save your work.

Creating Document Revision Records

Equipment manufacturers frequently revise maintenance documents. For tractability, it is necessary to record document revision information including issue dates, dates of obsolescence, dates of effectivity, and publication part number changes. Oracle Complex Maintenance, Repair, and Overhaul allows you to create new revisions once you retrieve the pertinent document reference from the database.

To create and edit revision records:

1. Retrieve the document reference for which you want to create new revisions, see: Finding Document References, page 4-7
2. In the Search Document page, select the document, and click Create New Revision. The Create New Revision page appears.
3. Enter revision information in the fields provided. Use the information in the following table.

Description of fields related to document revisions

Field	Description
Revision No	User-assigned document revision identifier.
Revision Date	This date should be greater than or equal to the system date.

Field	Description
Volume	The volume of this revision.
Issue Number	The issue of this revision. You cannot enter alphabetic characters here.
Date Received	Date document revision was received by the user organization.
Effective Date	Effective date should be greater than the revision date and the approved date.
Approved By	Contains the name of the individual who is authorized to approve this document revision. Names of approvers are maintained as type persons in the Oracle Trading Community Architecture module.
Remarks	Descriptive text field.
Revision Type	-
Status	Indicates whether a document revision is a draft, current, or obsolete.
Issue	Description of the document issue.
Issue Date	Refers to the date on which the maintenance document was made available, or the date of issue of the document, coming from the supplier.
Media Type	Indicates whether the document is in paper or electronic format.
Obsolete Date	Date on which the document is no longer valid.
Approved Date	Date document revision was approved by the individual named in the Approved By field.

4. Select Apply to save your work.

Uploading Electronic Documents

Documents available in an electronic format can be uploaded to the database and associated with relevant records in Document Index.

Prerequisites

- ☐ A document revision must exist with media type of E-File.

To upload electronic documents:

1. Navigate to the Search Document page, and select a document.
2. Choose Upload to display the Electronic File Upload page. .
3. In the File Upload region, select Browse to open your file browser.
4. Select your document. The file location path and the filename copy into the File field.

Note: There is a predefined folder set up in Oracle Content Manager for storing electronic documents. Refer to the Implementation Guide for more information on setting up Oracle Content Manager for Document Index.

5. Optionally, you can enter a description of the electronic document.

ORACLE Complex MRO

MEI/CDL Document Index Route Management Fleet Maintenance Program

Search Associate Type

Logged In As TSMITH

Electronic File Upload

Title	Comprehensive Engine Management System Manual for DSD: D042	Revision Num	1
Document Number	00-25-254-2	Source	Department of Defense
File	TO_00252542 Comprehensive Eng Mgmt	Sub Type	Technical Order
Type	Sys_Manual DSD_D042.pdf	Item Type	
Operator	Engine	Subscribed To	No
Subscription Available	Yes		

Document Descriptive Flexfield

Doc FF	
Context Value	

File To Upload

File	Description
iterals\CMRO DFF Functional C <input type="button" value="Browse..."/>	<input type="text" value="Image"/>

6. Select Upload. The document is now accessible through the document search result page or the edit document revision page.

ORACLE
Complex MRO

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<input type="radio"/>	00-25-254-2	Comprehensive Engine Management System Manual for D5B-0042	Engine	Technical Order	1	Full Revision	Current	ElectronicFile	CMRO DFF Functional Design KAL V5.5.doc
<input type="radio"/>	00-25-4	Depot Maintenance of Aerospace Vehicles and Training Equipment	Aircraft	Technical Order	1	Full Revision	Current	ElectronicFile	TO 00-25-4 Depot Maintenance of Aerospace Vehicles and Trng Equip.pdf
<input type="radio"/>	00-25-195	For Maintenance AF Weapons, Systems and Equip	Aircraft	Technical Order	1	Full Revision	Current	ElectronicFile	TO 00-25-195 Source, Maint and Recoverability Coding.pdf
<input type="radio"/>	00-25-254-1	Engine Management System Engine Configuration	Engine	Time Compliance Technical	1	Full Revision	Current	ElectronicFile	TO_00252541 Comprehensive Engine Mgmt Sys_Eng Config_Status_TCTO Reportng Procd.pdf

Working With Master Configurations

This chapter covers the following topics:

- Overview
- Master Configurations
- Creating Master Configuration Records
- Working with Positions
- Creating Positions in a Master Configuration
- Copying Existing Configurations to a Position
- Associating Item Groups with a Position
- Associating a Sub-Configuration/ Alternate Sub-Configuration with a Position
- Creating Rules for a Configuration or Sub-configuration
- Editing Position Ratios
- Attaching Documents to a Position
- Managing Alternate Items Information
- Adding Alternate Items Information
- Finding Alternate Items Information
- Editing Alternate Items Information
- Creating Item Group Revisions
- Editing Master Configuration Records
- Creating Master Configuration Revisions
- Approving Master Configurations
- Viewing Master Configuration Records
- Viewing Position Details
- Viewing Position Ratios Associated with a Position

- Viewing Documents Attached to a Position
- Viewing Alternate items Associated with a Position
- Viewing Positions Associated with an Alternate Item Group
- Viewing Rules
- Closing Master Configuration Records
- Reopening Closed Records

Overview

Modeling a complex assembly or system involves defining the hierarchy or structure, including the parts or sub-configurations allowed at each position or location, rules to control the configuration, documents which apply to the configuration, and ratios applicable between positions by which counter updates will flow down, if other than one to one. The assembly configuration for an aircraft type, locomotive, ship, or any other complex system or assembly, is described by the Oracle Complex Maintenance Repair and Overhaul module called Master Configuration.

This chapter discusses the key functions supported by the Oracle Complex Maintenance Repair and Overhaul Master Configuration module. The chapter provides process oriented, task based procedures for using the application to perform essential tasks for managing configuration models.

See:

- Creating Master Configuration Records , page 5-5
- Working with Positions, page 5-7
- Creating Positions in a Master Configuration , page 5-8
- Copying Existing Configurations to a Position, page 5-11
- Associating Item Groups with a Position, page 5-13
- Associating a Sub-Configuration/Alternate Sub-Configuration with a Position, page 5-14
- Creating Rules for a Configuration or Sub-Configuration, page 5-17
- Editing Position Ratios , page 5-22
- Attaching Documents to a Position , page 5-24
- Adding Alternate Items Information , page 5-28
- Finding Alternate Items Information , page 5-32

- Editing Alternate Items Information, page 5-33
- Creating Item Group Revisions, page 5-35
- Editing Master Configuration Records, page 5-36
- Creating Master Configuration Revisions , page 5-38
- Approving Master Configurations, page 5-39
- Viewing Master Configuration Records, page 5-40
- Viewing Position Details, page 5-41
- Viewing Position Ratios Associated with a Position, page 5-41
- Viewing Documents Attached to a Position, page 5-42
- Viewing Alternate items Associated with a Position, page 5-43
- Viewing Positions Associated with an Alternate item Group, page 5-43
- Viewing Rules, page 5-44
- Closing (Removing) Master Configuration Records, page 5-45
- Reopening Closed Records, page 5-46

Master Configurations

Master Configuration is the template or control structure for an assembly, system, sub-assembly, or subsystem that provides a model of the structure of an electrical, hydraulic, pneumatic, or mechanical system or assembly, with rules for component location and component selection, and applicable maintenance operations. For example, a Boeing 757-300 can be configured with either a pair of Pratt & Whitney PW2043 engines, or a pair of slightly more powerful Rolls-Royce RB211-535E4B engines. Master Configuration is used to create and maintain instances or units derived from the configuration hierarchy, parts, sub-assemblies, and rules defined. The presence of a master configuration simplifies route development (see the Route Management module for more information about maintenance routes), by serving as the basis for material requirements and their dispositioning in a disposition list. Master Configuration also simplifies maintenance requirement development (see the Fleet Maintenance Program module for more information about maintenance requirements), by serving as an association point for which maintenance requirements will apply.

Key Business Processes

The Master Configuration module supports the following business processes:

Definition of Allowable Configuration

A master configuration is a template that represents the hierarchy of component positions in an assembly. The relative component positions define the parent-child relationship among the items within a master configuration. Master Configuration identifies the tracked parts that make up a unit, and allows you to construct a logical tree structure to illustrate the component positions in an assembly. You can define multiple master configurations for a product to suit different operation modes. You can also define the allowable part alternates for each component position.

Provide Configuration Template for Unit Configuration

A fleet operator may have multiple units of the same configuration. The Master Configuration module provides a template to create a unit configuration, which reflects the current "as-installed" configuration of a product. A unit configuration replicates the position structure of a master configuration.

Attach Applicable Maintenance Requirement

When defining a unit's applicable maintenance requirement, organizations can use several grouping mechanisms to streamline the process. Oracle Complex Maintenance, Repair, and Overhaul allows you to apply a maintenance requirement, directly to a unit configuration, to a node in a product classification that a unit configuration inherits, or to a position in a master configuration that a unit configuration inherits. If you associate a maintenance requirement to a node in a master configuration for example, any unit configuration that you create based on the master will receive those maintenance requirements.

Provide Checklist for User

The physical breakdown of a complex assembly decides shop floor processes and information requirement. You can associate such information with a node or position in a master configuration. During the overhaul of an assembly, maintenance personnel, remove, reinstall, and replace serialized parts. The service provider has to provide an on-off log for such operations. The off log indicates the item number and serial number of a item installed at a certain position before the maintenance event. The on log indicates the item number and serial number of the item installed at a certain position during maintenance. Oracle Complex Maintenance, Repair, and Overhaul allows you to provide an on-off log template indicating all the positions and item alternates for the nodes (positions) where users can install or remove items.

Definition of Air Transport Association of America (ATA) codes

ATA codes are used in Minimum Equipment List (MEL) and Configuration Deviation List (CDL) functionality. This functionality identifies equipment that can be inoperative on aircraft—but still enable the aircraft to maintain airworthiness.

Creating Master Configuration Records

A master configuration represents the structure of a complete electromechanical assembly, consisting of as many nodes as necessary to fully represent the assembly. There is no limit to the number of nodes that an assembly representing a fleet unit can comprise.

To create a master configuration record:

1. Navigate to the Create Master Configuration page.

The screenshot displays the 'Create Master Configuration' page in the Oracle CMRO system. The page is divided into two main sections: 'Create Master Configuration' and 'Create Position'. The 'Create Master Configuration' section includes fields for Name (C80), Description (C80 Aircraft), Status (Draft), Revision (1), Version (1), and Model (BOEING747-422). The 'Create Position' section includes fields for Position (Airframe), ATA Code (00_30), Quantity (1), Start Date (01-FEB-2009), Item Group (C80), Display Order (1), Position Description (Airframe), Description (00_30), UOM (Ea), End Date, Description (C80 Airframe), and Necessity (Mandatory). The page features a navigation bar at the top with tabs for Master Configuration, Unit Configuration, and Product Classification. A 'Logged In As TSMITH' indicator is visible in the top right corner. The bottom of the page shows a copyright notice for Oracle Corporation, 2005.

2. Select information in the following fields:

Description of fields related to master configuration records

Field	Description
Name	Name for the configuration template hierarchy.
Description	Descriptive text field.
Status	Choices are: Complete, Draft, Approval Pending, Approval Rejected, Closed or Expired.
Position	Position in the assembly that is the topmost node of the master configuration hierarchy.
Position Description	Descriptive text field for this position in the configuration hierarchy.

Field	Description
ATA Code	Air Transport Association of America (ATA) codes, used for Minimum Equipment List (MEL) and Configuration Deviation List (CDL) functionality. See: Minimum Equipment List (MEL) and Configuration Deviation List (CDL) Setup, page 8-9
Quantity	Number of items in the item selection option set for this position.
UOM	Unit of measure
Start and End Dates	Effectivity of this position in the configuration hierarchy.
Item Group Name and Description	Name for the set of item option selections at this node.
Display Order	Order the configuration positions are displayed.
Revision	The revision number to indicate that the master configuration is under revision control. Revision control enables multiple configuration revisions to be active at one time. This is necessary because all of the units cannot be migrated to the new master configuration at the same time. During that transition phase the user will maintain units based on two different revisions of the same master configuration. This also aids in implementing configuration modifications throughout the master configuration life cycle.
Necessity	Indicates if position is mandatory or optional.
Model	The Model field is displayed on Create Master Configuration page if you associate Enigma Configuration information to Master Configuration. The Model field is used to identify the type of document. For example, if the model is PW4000, then this corresponds to Engine Maintenance Manual in Enigma.

3. Select Apply to save your work.

To create the top node of the hierarchy:

1. Search and select a position from the position list of values on the Master Configuration page.

2. Optionally, associate an item group with this node.
3. Click Apply to save this master configuration record. The Edit Master Configuration page appears displaying the configuration tree. The top nodes' details are displayed next to the configuration tree.
4. From the Edit Configuration page, you can do the following:
 - Add, delete, and copy positions
 - Edit Alternate items information
 - Attach documents to a position
 - Edit Position Ratios
 - Submit the configuration for approval
 - Create Rules
 - Add or remove sub-configurations

Related Topics

Editing Master Configuration Records, page 5-36

Working with Positions

After you define the general master configuration attributes, you can create each position in the hierarchy. For each position in the hierarchy, you can define a set of valid items, with maintenance requirements for each item. Oracle Complex Maintenance, Repair, and Overhaul stores this information in the database. Also, you can retrieve master configuration records to add other master configurations, item locations, and valid items to a position in the selected configuration.

Related Topics

Creating Positions in a Master Configuration, page 5-8

Copying Existing Configurations to a Position, page 5-11

Associating Item Groups with a Position, page 5-13

Associating a Sub-Configuration/ Alternate Sub-Configuration with a Position , page 5-14

Creating Rules for a Configuration or Sub-configuration, page 5-17

Editing Position Ratios, page 5-22

Attaching Documents to a Position, page 5-24

Managing Alternate items/Items Information, page 5-27

Creating Positions in a Master Configuration

Use the Edit Master configuration page to create a position in your master configuration. The top node in the hierarchy is created when defining the master configuration template, in the Create Master Configuration page. All additional nodes are defined later. The position you create in the Edit Configuration page will form an additional node in the selected master configuration hierarchy.

Prerequisites

- ☐ The master configuration for which you want to define a position must exist in the database. Position references must have been set up. For information, refer to the master configuration set up in *Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide*.

To create a position:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Configuration Management Global button. The Search Master Configuration page appears.
2. Click the Create button to launch the Create Master Configuration page.
3. Enter the master configuration information in the fields provided. For field descriptions, see Description of fields related to master configuration records, page 5-5.
4. Create the top node of the configuration hierarchy.
5. Click Apply to save the master configuration record in the database. The Edit Master Configuration page appears displaying the Master Configuration Tree structure in the left side of the page. The position details of the top node are also displayed.
6. Select the node where you want to add a position, and then choose Add from the drop-down menu. Click Go. The Create Position section is displayed under the master configuration details.

Select Node - Edit Master Configuration page

7. Use the information in the following table to enter information in the Create Position page.

Description of fields related to creating and editing position details

Field	Description
Position	Refers to positions in the assembly that can be the parent or child node in the master configuration hierarchy. Enter a partial search string with the generic substitution meta character% (example, Engine%), and click Go to launch the Select Position page that displays all matching records in the database.
Position Description	Is the field containing phrases or sentences that describe this configuration hierarchy.
Quantity	Refers to the number of items in the item selection option set for this position in the configuration hierarchy. Enter a number greater than zero.

Field	Description
UOM	This identifies the unit of measure of the items in the current hierarchy position. You cannot enter text directly in this field because the text value must exist in the database. Enter a text search argument with the generic substitution meta character%, and click Go to retrieve and display all records from the database that match the search argument. Click the correct value from the records displayed on the Select UOM page to have the text value returned to the field.
Start Date	Refers to the date of the first day of effectivity of this position in the configuration hierarchy. Enter a date directly, or click on the icon beside the date field to bring up the calendar. Click on a date to insert it in the field.
End Date	Refers to the date that represents the last day on which the position in the configuration is valid. Enter a date directly, or click on the icon beside the date field to bring up the calendar. Click on a date to insert it in the field.
Item Group Name	Is the name for the set of item option selections at this node. You cannot enter text directly in this field because the text value must exist in the database. Enter a text search argument (example, MACHINE%), and click Go to retrieve and display all records from the database that match the search argument. Click the correct value from the records displayed, to have the text value returned to the field.
Item Group Description	Refers to a description of the item options set, and is displayed automatically when you retrieve the item group Name.

Field	Description
Display Order	Refers to an ordinal that determines the order in which the configuration positions are displayed.
Necessity	Sets a node as mandatory or optional. This field defines whether the item represented by the node is a required installation, or is only an option.

- Click Apply to add the position to the master configuration record.

Add Position - Edit Master Configuration page

This will launch the Edit Master Configuration, Edit Position page where you can edit the position details if necessary. Click Apply to save the changes. You can attach position ratios, documents, or alternate items to the node position by using the appropriate buttons on this page. For more information, refer to the appropriate sections in this chapter.

Copying Existing Configurations to a Position

The Edit Master Configuration page allows you to access the Search Master Configuration page, where you can retrieve an existing master configuration record that you want to add to a selected master configuration position. This process allows you to build configuration template hierarchies using existing master configuration records.

Prerequisites:

Master configuration records that you want to add to the position must exist in the database.

To copy configurations to a position:

1. Navigate to the node to which you want to add a configuration. See *Creating Positions in a Master Configuration*, page 5-8.
2. To copy an existing configuration to a node, click the check box next to the node then select Copy from the drop-down menu. Click Go. The Search Master Configuration page appears.
3. Search for the master configuration that you want to add. The results appear in the lower half of the page.
4. Select the pertinent record from the Master Configuration List, generated when you execute the search.
5. This will launch the View Master Configuration page.

For more information, refer to the following sections:

- Viewing Position Details, page 5-41
 - Viewing Documents Attached to a Position, page 5-42
 - Viewing Alternate items Associated with a Position, page 5-43
 - Viewing Rules, page 5-44
 - Viewing Position Ratios Associated with a Position, page 5-41
6. To add this master configuration to the selected position, click Copy. The Edit Configuration page appears. The Master Configuration will now appear in the configuration tree.

View Configuration Tree - Edit Master Configuration page

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Actions Add Go

Edit Master Configuration

Indicates required field

Name C70-PR Aircraft Revision 1

Description C70-PR Aircraft (Do not approve, need PR eng) Version 1

Status Draft Model

Edit Position

Position Airframe Position Description Airframe

ATA Code Description

Position Key 10169 UOM Ea

Quantity 1

Start Date 29-APR-2005 Description C70-PR

Item Group C70-PR Necessity Mandatory

Display Order 1

Cancel Alternate Items Go Apply

Associating Item Groups with a Position

A Tracked Item Groups comprises items that can be assigned to a particular position in a master configuration. You can associate an Item Group with a position. You can then select the item instances to be added to the position. Non-tracked item groups are created for use in item compositions. Item groups can be revised independently from the master configuration. The master configuration gets updated with the changes upon the item group approval.

See Managing Alternate Items Information, page 5-27 for information on creating Item Groups.

Prerequisites

- ☐ The item group must exist in the database. The configurations and positions must have been defined.

To associate item groups with a position:

1. Create a position and click Apply. See Working with Positions, page 5-7.
2. Search for an Item Group, using the search icon. The Select Group Name page appears. Click Go to view a list of item groups.

Select Group Name page

Group Name	Description	Status
55E Adv Cent I/F	FSRS Antennas	Complete
%		Draft
165 Gun 20mm	Gun Assembly	Complete
16T Vert Stab	Vertical Stabilizer	Complete
16 Bearing Gun	Bearing Assy, Gun	Complete
16 Pad Recoil	Pad, Gun Recoil	Complete
209 Ammo Drum	Drum Assy, Ammo	Complete
209 Entrance Assy	Unit, entrance Assy	Complete
209 Exit Assy	Unit, Exit Assy	Complete
209 Loading Access	Access Unit, Loading	Complete

3. Select the item, which you want to associate with the position. The Edit Master configuration page appears displaying the association.

View Item Association - Edit Master Configuration page

Note: If any item in the Item Group has Quantity more than 1, it cannot be associated to a position which has child nodes.

4. Optionally, you can choose Alternate Items from the drop-down menu to add alternate item instances. See Managing Alternate Items Information., page 5-27

Associating a Sub-Configuration/ Alternate Sub-Configuration with a Position

A Master Configuration can be created as a hierarchy of positions and assembly of other master configurations. A master configuration can be defined for a sub component of a higher assembly. This sub-configuration can exist by itself, and also be added to the configuration hierarchy of another master configuration. For example, the master configuration of the engine can be included in the master configuration of the aircraft.

You can add Sub-Configurations to the Master Configuration positions, thus allowing the association of configurations within a configuration.

To attach a sub-configuration to a position:

1. Create a position, and click Apply. See Creating Positions in a Master Configuration, page 5-8.
2. The Edit Position page appears. To add sub-configurations to the position that you defined, select Add More Rows in the Alternate Subconfigurations table.
3. Select a sub-configuration using the Name search icon. Enter value in the Priority field.

Use the information in the following table to enter information related to sub-configuration association.

Description of fields related to sub-configuration association

Field	Description
Name	Name of the child Master Configuration or sub-configuration.
Revision	Field contains a item revision identifier. The revision number indicates that the master configuration is under revision control. Revision control enables multiple configuration revisions to be active at one time.
Focus	The user can click this icon to change the page context to the sub master configuration (sub MC).
Description	Description of the sub MC.
Status	Status of the sub MC. The sub MC should not be in Closed or Expired status.
Priority	The priority field is used to specify the highest priority assembly to be used by planning when planning for a replacement.
Start Date	Start date of the sub MC mapping.

Field	Description
End Date	End date of the sub MC mapping.
Remove	Is used to remove the sub MC mapping.

4. Select Apply. The sub-configuration is associated with the position.
5. In the Alternate Subconfigurations table, select the sub-configuration and click Apply. The sub-configuration is added to the configuration tree.

Note: After adding the sub-configuration to the assembly hierarchy, the tree can be expanded and positions within the sub-configuration selected and their positions changed. The position code for a sub-configuration position defaults to the value defined within the sub MC. You can override that by defining the position code from the context of a higher level MC. The new position will only affect the sub-configuration when the sub-assembly is installed in this higher assembly allowing for the position to be applicable based on the installation.

6. Click the sub-configuration Focus icon changes the focus of the entire configuration to the sub-configuration. You can view the master configuration header and position details of the sub - master configuration.

Change Focus to Sub-configuration - View Master Configuration page

Note: You can associate sub master configurations with a position only when a sub-assembly has been defined under that position.

Creating Rules for a Configuration or Sub-configuration

You can setup rules for configurations, sub-configurations, positions, and items that work together, to control the allowable items to be installed into the configuration. The definition of configuration rules enables the enforcement of regulations for equipment configurations issued by OEM's and regulatory institutions such as the FAA. You can create rules for:

- Restricting items for a position
- Restricting configurations for a position
- Restricting positions based on other positions

A reference for desired fleet percentages

To create rules for a configuration:

1. Choose Rules from the drop-down menu in the Edit Configuration page. Click go. The Edit Rules page appears.

Edit Rules page

The screenshot shows the Oracle Complex MRO interface. The top navigation bar includes 'ORACLE Complex MRO' and various menu items like 'Home', 'CMRO Home', 'Engineering', 'Configuration', 'Planning', 'Administration', 'Execution', 'Profile', 'Sign Out', and 'Help'. Below this, there are tabs for 'Master Configuration', 'Unit Configuration', and 'Product Classification'. The 'Unit Configuration' tab is active. On the left, there is a tree view under 'Airframe' with several sub-items like '21-22-01, Indicator, Rate of Climb', '21-23-01, Fan, Equipment Cooling', etc. The main area is titled 'Edit Rules' and contains a table with columns: Rule Name, Description, Rule Type, Start Date, End Date, and Remove. The table is currently empty, showing 'No records were found matching the given criteria...'. There are 'Add', 'Go', and 'Create Rule' buttons visible.

2. To create rules, select Create Rule. The Create Rule page appears. Define a Rule Name. Optionally, enter a description, start date, and end date. Use the information in the following table to define rules.

Field	Description
Rule Name	User-defined Rule name.
Description	Description of the rule.

Field	Description
Rule Type	Can be Mandatory or Fleet. A rule type of mandatory indicates that the rule will be evaluated during installations, and a rule type of fleet indicates that the rule is created only as a reference to the fleet percentages.
Start Date/End Date	Select from calendar. The end date must be greater than the start date.
Sequence	User defined value to determine the order of the rules defined.
Left and Right Parenthesis	Used to group two rule statements.
Subject	Use the search icon to launch the 'Select Positions' page where you can select the position path for which you are defining the rule.
Operator (Predicate)	Conditions in a rule. The possible values are: is installed, is not installed, has, does not have, must have, must not have, has same sub-configuration installed, does not have same sub-configuration installed.
Object Type	You can select from the following Object types: total quantity of children, item, configuration, configuration as position, item as position(1), or item as position.
Object	Use the search icon to select an object based on the object type chosen.
Operator	You can select from the following: And, Or, Implies, and Requires. The rule statements may be combined with these operators.

3. Choose a Rule Type.
4. Define the rule statement by entering data in the Rule Definition region.

Enter Rule Definition - Create Rule page

5. Click Apply. The Rule record is added to the database.
6. To Edit a rule, select the link under Rule Name in the Edit Rules page. The rule details are displayed.

You can set up rule control for configurations, sub-configurations, positions, and items that work together to produce the rule or rule set to control a configuration. Each control area may be combined with one or multiple of the rule control methods to effectively control the assembly. Note the following rule controls:

Configuration Rule Control

For the configuration rule control the following apply:

Subject: Configuration

Objects: Positions and Instances

Using a configuration as the subject, the direct object pointers are one or many positions or the percent of instances to plan. The rule will include a chain or sub-construct of the other rule controls. Referencing Positions it requires, excludes, or negates though the use of Necessity - mandatory, optional, and optional with a rule (containing Empty / Is Null, Installed / Is Not Null, Same As). Referencing Instances it implies the minimum and maximum percent or quantities by state / condition per configuration.

The outcome produces the following:

- Installation Allowed
- Installation Not Allowed
- Configuration Not Valid

- Configuration Valid

Position Rule Control

For the Position Rule Control the following apply:

Subject: Position

Objects: Sub-Configurations / Alternate Sub-Configurations, and Items

Using positions as the subject it will be in a sub-construct, if configuration control, or as a stand alone which contain sub-constructs, if node specific.

Referencing Sub-Configurations / Alternate Sub-Configurations it implies allowed by the association, excludes allowed by adding a rule, and requires by the use of mandatory or a rule.

Referencing Items though the item group association it implies allowed and excludes or requires through a rule.

The outcome produces the following:

- Installation Allowed
- Installation Not Allowed
- Configuration Not Valid
- Configuration Valid

Sub-Configuration / Alternate Sub-Configuration Rule Control

For the Sub-Configuration / Alternate Sub-Configuration Control the following apply:

Subject: Sub-Configuration / Alternate Sub-Configuration

Object: Position and Instances

Referencing Positions it requires, excludes, or negates though the use of Necessity - mandatory, optional, and optional with a rule (containing Empty / Is Null or Installed / Is Not Null)

Referencing Instances it implies the minimum and maximum percent or quantities by state / condition per configuration.

The outcome produces the following:

- Installation Allowed
- Installation Not Allowed

- Configuration Not Valid
- Configuration Valid

Item Rule Control

For the Item Control the following apply:

Subject: Item or Item #

Object: Item #, Is Installed, Previously Installed, Interchangeability Type, Interchangeability Code, and Instances

Referencing the item number it excludes, requires, or negates based on the hierarchy for which the rule is contained.

Referencing Item # and Is Installed or Previously Installed requires, excludes, or negates based on the current or historical reference.

Referencing Interchangeability Type and Interchangeability Code with the item # requires, excludes, negates, or implies based the type, code, or combination.

Referencing the priority with the item # provides defaults.

Referencing Instances it implies the minimum and maximum percent or quantities by state / condition per configuration. This rule is not evaluated.

The outcome produces the following:

- Installation Allowed
- Installation Not Allowed
- Configuration Not Valid
- Configuration Valid

Instance Rule Control

For the Instance Control the following apply:

Subject: Instance (Implied)

Object: Minimum, Maximum, Percent, Quantity, State / Condition

Referencing the object combination implies the instance quantity allowed per condition. This rule is not evaluated

The following table includes examples of some legal rule statements:

Subject	Predicate	Object	Outcome
Position	is installed / is not installed		T/F
Position	has / does not have	item	T/F/U if uninstalled
Position	has / does not have	sub-master configuration (rev specific)	T/F/U if uninstalled
Position	must have / must not have	item	T/F

The outcome of each rule evaluation is as follows:

- Success (T)
- Unable to determine true or false (U)
- Rule failed in evaluation (F)

When a rule is applied, the units affected by the configuration are validated. Once a list of applicable rules are defined for each position, then each rule is evaluated individually. The statements will require mapping position path to UC item instance and comparing instance properties against the rule requirements. The result of validation is either status "S" for success or a table of rule violations. If the validation fails the status of the configuration changes to incomplete. When you add a rule to a configuration or update a rule for a sub-configuration, the configuration and position path information are populated into the rule when the selection is made. When updating a rule for a sub-configuration from a higher assembly the modified rule will only apply to the higher assembly. You cannot alter the base rule.

Editing Position Ratios

The Edit Position Ratio page allows you to add information about service timer ratios in cases where the value derived from a service timer should be a multiple of the timer reading. For example, a power-plant operated in a high-temperature, high-altitude environment might run at much higher RPM to produce the same torque as compared to a less severe environment.

Prerequisites

- ☐ The master configuration record with the position that you want to define the position ratio for, must exist in the database. The values for the fields UOM and Rule Code should be set up by your organization.

To edit position ratios:

1. Retrieve the master configuration records that match your requirement.
2. Select the pertinent record from the Master Configuration List on the Search Master Configuration page.
3. The Edit Master Configuration page appears. Use the tree to find the position that needs to be changed. Click Position Ratio.
4. The Add Position Ratio page appears on the right.
5. Enter the information in the fields provided. If no position ratios are defined, the page will be empty. To define a position ratio, click Add More Rows. This will add three rows to the table. Enter information in the provided fields.
 - UOM indicates the unit of measurement that the operational service timer for this position represents. In most cases, this unit will be hours of time. You cannot enter text directly in this field because the text value must exist in the database. Enter a text search argument (e.g., MACHINE%), and click Go to retrieve and display all records from the database that match the search argument. Click the correct value from the records displayed on the Select UOM page to have the text value returned to the field.
 - Description refers to a text description of the unit of measure, and is automatically placed in this field when the UOM is selected from the database.
 - Ratio is a multiplying factor to be applied to an operational service timer to yield the service life value of the component. Typically, this ratio will be a number greater than or equal to 1.
 - Rule Code is a field containing a drop-down list box from which you can select a value. The set of values in this list is created when your configuration of Oracle Complex Maintenance, Repair, and Overhaul is installed.
6. Click Apply to retain the Position Ratio information in the database.
7. To remove a position ratio from the configuration hierarchy, select the record from the Position Ratio List, check the remove check box then click Apply.

Attaching Documents to a Position

The Edit Master Configuration page allows you to access the Attach Documents page, where you can search for, and enter documents that you want to attach as references for a component position in the hierarchy. This allows maintenance personnel to refer to the right documents while carrying out maintenance activities at a specific location in a system assembly. For more information on Document References, see the Document Index module.

Prerequisites

- ☐ The master configuration with the position to which you want to attach the documents must exist in the database.

To attach documents to a position:

1. Retrieve the master configuration records that match your requirement.
2. Select the pertinent record from the Master Configuration List on the Search Master Configuration page.
3. Click the Edit icon next to the record you want to edit. The Edit Master Configuration page appears.
4. Select a position. Choose Documents from the drop-down menu. Click Go. The Edit Document Associations page appears on the right.

Edit Document Associations page

Oracle Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Overview Alternate Parts Composition List

Actions Add Go

Edit Document Associations

Cancel Apply

Master Configuration Details

Name	C80	Revision	1
Description	C80 Aircraft	Version	1
Status	Draft		

Position Details

Position	21-22-01, Indicator, Rate of Climb, #1	Position Description	21-22-01, Indicator, Rate of Climb, #1
Necessity	MANDATORY	Description	Mandatory

Enigma Documents

Illustrated Parts Catalog Engine Manual Wiring Diagram Manual

Other Documents

Remove	Document Title	Revision	Type	Chapter	Section	Subject	Page	Figure	Note	Media	Type	Location	Use	Latest
No records were found matching the given criteria...														

Add More Rows

Cancel Apply

5. The Enigma Documents region enables you to look up configuration information in Enigma's 3C application and associate it to Oracle's Master Configuration.

Associating Enigma configuration information enables you to retrieve, view and associate Enigma 3C content on master configuration. You can associate three

different types of documents namely, Illustrated Parts Catalog (IPC), Engine Manual (EM), and Wiring Diagram Manual (WDM). You can select a document type and navigate to the relevant Enigma URL for the document selection.

The Edit Document Associations page shows buttons for viewing Engine Manual (EM), Wiring Diagram Manual (WDM) and Illustrated Parts Catalog (IPC) as applicable.

Click on the Illustrated Parts Catalog, Engine Manual, and Wiring Diagram Manual buttons to navigate to Enigma interface showing the relevant pages respectively.

Note: To enable these buttons set the following profile options to Yes:

- AHL: Enigma IPC Documents associated
- AHL: Enigma EM Documents associated
- AHL: Enigma WDM Documents associated

The Engine Manual button is visible when you enable the mentioned profile option and if the ATA code for the corresponding node starts from the number 72.

Alternatively, you can associate documents from document index as mentioned in the steps below.

6. To attach documents to the position, click Add More Rows. Enter the following information:
 - Document refers to the name of a maintenance document previously recorded using the Document Index module. You cannot enter text directly in this field. Enter a search string with the generic substitution meta character%, and click Go to launch the Select Document Number page. The lower half of the Select Document Number page displays the list of documents in the database. Click the pertinent document record to return this value to the Document List fields in the Attach Documents page.
 - Title is the document title that is automatically placed in this field when the Document Name is selected from the database.
 - Chapter refers to the chapter number where the required reference is available. If the component at this level in the hierarchy is described by a single chapter or less in the maintenance document, enter the chapter number here in this field.
 - Section refers to the section identifier of the maintenance document that describes maintenance procedures for the component described by the current configuration position.

- Page, Figure, and Note fields allow you to provide more specific information about the maintenance documentation for the items in the current configuration hierarchy position.
- Use Latest field contains a drop-down list box from which you can select a value from a set of values set up when your Oracle Complex Maintenance, Repair, and Overhaul configuration was installed.

If you have attached a document reference to the selected position, the page will display the attached document in the Document List field.

Attach Documents to Positions - Edit Document Associations page

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Overview Alternate Parts Composition List

Actions Add Go

Edit Document Associations Cancel Apply

Master Configuration Details

Name C80 Revision 1
Description C80 Aircraft Version 1
Status Draft

Position Details

Position Airframe
Necessity MANDATORY Position Description Airframe
Description Mandatory

Enigma Documents

Illustrated Parts Catalog Wiring Diagram Manual

Other Documents

Remove	Document	Title	Revision	Type	Chapter	Section	Subject	Page	Figure	Note	Med
	2002-19-51	Flight control mod R1	R1	AIRCRAFT							

Add More Rows

Cancel Apply

7. Click Apply to store your maintenance document definition for the selected configuration position in the database.

Save Document Association - Edit Document Associations page

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Overview Alternate Parts Composition List

Actions Add Go

Confirmation • 1 Document(s) Attached

Edit Document Associations

Cancel Apply

Master Configuration Details

Name: C80
Description: C80 Aircraft
Status: Draft

Position Details

Position: Airframe
Necessity: MANDATORY

Enigma Documents

Illustrated Parts Catalog Wiring Diagram Manual

Other Documents

Remove	Document	Title	RevisionType	Chapter	Section	Subject	Page	Figure	Note	Media Type
<input type="checkbox"/>	2002-19-51	Flight control modules C70 Series Airplanes	R1	AIRCRAFT						Electronic File

Add More Rows

Cancel Apply

8. To remove a document reference attachment, select the Remove check box, and click Apply.

Managing Alternate Items Information

Fleet vehicles with long service lives are designed and constructed with similar items from different suppliers. For example, aircraft can often be ordered from manufacturers with powerplant choice. A master configuration template definition that serves as a general model for a unit configuration definition, provides the fleet operator an opportunity to define an optional item group for any part position in the configuration.

The alternate items listed in the master configuration template allows you to derive a unit configuration that represents the "as-operated" configuration of a fleet unit. You can create Tracked item groups for association with master configurations, and Non-tracked item groups for use in item compositions. After creating the item group, you may submit it for approval. Once approved the new revision will replace the current revision. This allows the item group to be revised independently from the Master Configuration eliminating the need to revise the Master Configuration for each item group change. The new changes will be inherited into the Master Configuration upon the item group approval.

Related Topics

Adding Alternate Items Information, page 5-28

Finding Alternate Items Information, page 5-32

Editing Alternate Items Information, page 5-33

Adding Alternate Items Information

The Alternate Parts secondary tab allows you to access the Add Alternates page where you can add items, identified by item numbers existing in the database, to a particular group name. The group name specifies the set of item option selections at a node. You can also record any revision made to alternate item information in a group. You can create either a tracked item group or a non-tracked item group.

Prerequisites

- ☐ Values for Group Name, Item Number, Revision, Type, Interchangeability, and Reason fields should exist in the database.

To add alternate items:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Configuration Management Global button. The Master Configuration page appears.
2. Click on the Alternate Parts secondary tab to launch the Search Alternate Items page.

Search Alternate Items page

The screenshot displays the 'Search Alternate Items' page within the Oracle Complex MRO application. The page features a search interface with the following elements:

- Navigation Bar:** Includes 'ORACLE' logo, 'Complex MRO', and various navigation links like 'Home', 'CMRO Home', 'Engineering', 'Configuration', 'Planning', 'Administration', 'Execution', 'Profile', 'Sign Out', and 'Help'.
- Sub-navigation:** 'Master Configuration', 'Unit Configuration', and 'Product Classification' are visible, with 'Alternate Parts' selected under 'Product Classification'.
- Search Criteria:** Fields for 'Group Name', 'Organization', 'Type', 'Description', 'Item', and 'Status' are present. The 'Status' dropdown is set to 'All'.
- Buttons:** 'Go', 'Clear', and 'Create' buttons are located below the search fields.
- Table Header:** A table header is visible with columns: 'Select', 'Group Name', 'Description', 'Status', 'Type', 'Edit', and 'Remove'.
- Message:** A message at the bottom of the table area states: 'No records were found matching the given criteria...'.

3. Click Create to launch the Add Alternates page.
4. Use the information in the following table to add alternate items details.

Description of fields related to alternate items

Field	Description
Group Name	Is the name for the set of item option selections at this node. You cannot enter text directly in this field because the text value must exist in the database. Enter a text search argument (example, MACHINE%), and click Go to retrieve and display all records from the database that match the search argument. Click the correct value from the records displayed on the Select Group page, to have the text value returned to the field.
Description	Refers to the description of the item options set, and is displayed automatically when you retrieve the Group Name.
Type	Refers to the Tracked and Non-Tracked Item groups. Tracked Item Group is a group of install base tracked items, which can be associated with positions in a master configuration. Non-Tracked Item Groups is a group of non tracked items, that are contained in a tracked item and may be required for use in a route to maintain a component.
Item	This field contains the identifier of the item that you want to add to the group of items that can be installed in this position. You cannot enter text directly in this field because the text value must exist in the database. Use the LOV icon to launch the Select Item List page. Enter a text search argument (example, MACHINE%), and click Search to retrieve and display all records from the database that match the search argument. Click the correct value from the records displayed to have the text value returned to the field.

Field	Description
Status	Status of the item group. The options are: Complete, Draft, Approval Pending, Removed, and Approval Rejected.
Description (item)	Is the item description automatically placed in this field when the Item Number is selected from the database. You cannot enter a value in this field.
Organization Code	Refers to the code for the inventory organization assigned to the alternate item when the item information is created in inventory. This information exists in the database.
Revision	This field contains a item revision identifier. You cannot enter text directly in this field because the revision must exist in the inventory database. Enter a text search argument (example, MACHINE%), and click Go to retrieve and display all records from the database that match the search argument. Click the correct value from the records displayed to have the text value returned to the field.
UOM	This field contains a unit of measure in which the item is usually supplied. You cannot enter text directly in this field because the text value must exist in the database. However, you can enter a text search argument (example, MACHINE%), and click Go to retrieve and display all records from the database that match the search argument. Click the correct value from the records displayed on the Select UOM page to have the text value returned to the field.
Quantity	Specifies the number of optional items in this group that is to be installed.

Field	Description
Priority	Specifies the preferred selection order of items in the group. The most preferred item should be assigned a value of 1.
Interchangeability Type	Refers to the selection of a item for a configuration. One-Way-Interchangeable means that an item is a valid item to be installed under certain circumstances. When you install an item with One-Way-Interchangeability in CMRO, the system gives a warning that this item is One-Way-Interchangeable. Two-way interchangeability means that the item can be used in multiple configurations. Other values are Deleted, Obsoleted, Reference, and Superceded. You can choose one of the following from the drop-down menu.
Reason	Refers to the technical justification for one-way interchangeability. You can enter text directly in this field.
Composition	This will launch the Item Composition List Page for the selected item.

ORACLE® Complex MRO

Master Configuration | Unit Configuration | Product Classification | Overview | Alternate Parts | Composition List

Logged In As: TSMITH

Add Alternates

Group Name: Description: Cancel Apply

Type: Status:

Remove	Item	OrganizationDescription	Revision	UOM	Quantity	Priority	Interchangeability Type	Reason	Composition
	0001-012	V1 SHACKLE 0001 RG	Ea	2	1	1-Way Interchangeable			

Add More Rows

Cancel Apply

Master Configuration | Unit Configuration | Product Classification | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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- Click Apply to add the alternate items information to the database.

Edit Alternates page

ORACLE[®] Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Overview Alternate Parts Composition List

Logged In As TSMITH

Confirmation • Item Group (Alt_Group 1) is created. 1 Item(s) Added to Item Group

Edit Alternates

Group Name: **Alt_Group 1** Type: **Tracked**

Description: Status: **Draft**

Cancel Copy Submit for Approval Apply

Item List

Remove	Item	OrganizationDescription	Revision	UOH	Quantity	Priority	Interchangeability Type	Reason	Composition
<input type="checkbox"/>	0001-0120H V1	SHACKLE 0001 RG 2983	Ea	2	1	Reference			

Add More Rows

Cancel Copy Submit for Approval Apply

Master Configuration Unit Configuration Product Classification Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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Finding Alternate Items Information

Use the Search Alternate Items page to retrieve alternate item information that you want to edit. You can search for alternate items based on Group Name, Description, Item, Type, Status, and the Organization Code for the item.

Prerequisites

- ☐ The alternate item groups must be created.

To find alternate items:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Configuration Management Global button. The Master Configuration page appears.
2. Select Alternate Parts secondary tab to launch the Search Alternate Items page.
3. Enter the alternate item information in the fields provided. For field descriptions, see Description of fields related to alternate items, page 5-29.
4. Click Search to generate all alternate item groups that match the search criteria.

Find Alternate Items - Search Alternate Items page

ORACLE® Complex MRO

Master Configuration Unit Configuration Product Classification

Overview Alternate Parts Composition List

Logged In As TSMITH

Search Alternate Items

Group Name: Alt_Group 1

Organization: [Search]

Type: [Go] [Clear]

Create

Select Item Group: [Submit for Approval] [Go]

Select Group Name	Description	Status	Type	Edit	Remove
Alt_Group 1		Draft	Tracked	[Edit]	[Remove]

Select Item Group: [Submit for Approval] [Go]

Master Configuration Unit Configuration Product Classification Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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Editing Alternate Items Information

The Search Alternate Items page allows you to access the Edit Alternates page, where you can make necessary changes to alternate item information.

Prerequisites

- ☐ Values for Item Number/Item, Revision, Type, Interchangeability, and Reason fields should exist in the database.

To edit alternate item information:

1. Retrieve the pertinent alternate item group record from the database (see Finding Alternate Items Information, page 5-32).
2. To delete an alternate item group, click the remove icon in the search results list. Only Alternate Item Groups with no association to a master configuration position can be deleted.
3. To view the configurations with which an alternate item group is associated, select the group from the Item Group List on the Search Alternate Items page, and choose View Positions from the drop-down menu. This will launch the Edit Associated Positions page. See Viewing Alternate Item Associations, page 5-43.

Edit Associated Positions

ORACLE® Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Overview Alternate Parts Composition List

Logged In As TSMIT

Edit Associated Positions

Group Name 55E Adv Cent I/F Description FSRS Antennas
Type Tracked Status Complete

Configuration Positions List

Configuration Name	Configuration Description	Revision	Status	Position	Position Description	Necessity	Edit
C70-PR Aircraft	C70-PR Aircraft (Do not approve, need PR engine)	1	Draft	FCV-CIB-1010 Fuse Box	FCV-CIB-1010 Fuse Box	Mandatory	

Cancel

Master Configuration Unit Configuration Product Classification Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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- To submit an Alternate Item Group for approval, select the Item Group, and choose Submit for Approval from the drop-down menu. You can submit an Item Group for approval from the Edit Alternates page also. To initiate the approval workflow, at least one item should have the interchangeability 1-Way or 2-Way and the quantity should not exceed 1 if any position it is associated with has child position associations.

Note: The status of the item group changes from Draft to Approval Pending and finally to Complete on approval. An item group created for the first time and in Draft status can be associated with master configurations. When its status changes to Complete on approval, the information is recorded in history tables.

- To copy an Item Group, select the record from the Item Group List, and choose Copy from the drop-down menu. The Add Alternates page appears where you can add, delete, and/or modify items in the group. The Copy button is also available in the Edit Alternates page.
- To edit alternate item details, select the required alternate item group name from the Item Group List on the Search Alternate Items page, and click the Edit icon. This launches the Edit Alternates page showing the alternate items contained in the selected item Group.

Note: A temporary copy of the group is created to allow for editing a completed item group, while the completed group is in use. You can also access this page from the Edit Master Configuration page using the Alternates button (Search > Search Master Configuration page > Edit > Edit Master Configuration page > Edit Master Configuration tree page > Alternate Items).

7. Select the item record that you want to modify, and make the necessary changes in the fields provided. For field descriptions, see *Description of fields related to alternate items*, page 5-29.

You can also add alternate item records to the group, using the fields provided in the Items List section on the Edit Alternates page (see *Adding Alternate Items Information*, page 5-28).

8. To remove an alternate item from the item group, select the Remove check box for that item, and click Apply. If the alternate item group you edited is not attached to additional master configurations and positions, the changes are saved. If the alternate item group you selected is attached to a master configuration or position other than the one currently being edited, and you click Remove or Apply, the application will prompt you, "This item group is associated with more than one position. Do you want to force the changes to all positions?"
9. To apply the changes to all the configuration positions to which the item group is attached, click OK.
10. To cancel the changes and return to the Edit Alternates page, click Cancel.
11. To view the Composition List for an item in the Item List, click the corresponding icon under the Composition column. For information on Composition Lists, see *Creating an Item Composition.*, page 3-14
12. To edit position associations, click Select Applicable Positions in the Edit Alternates page. The Edit Associated Positions page appears.
13. To remove a position association for that item group, uncheck the Associate check box. Click Apply. This launches the Associate Item Group to Positions Page, where you can associate the item group to the position once again.

Any modifications to an item group and/or items in the group, impacts the Unit Configuration it is associated with, in the following ways:

- If the Interchangeability of an item is changed to Deleted or Referenced, it affects all the Units where this item is associated.
- If the Interchangeability is modified to Obsolete or Supersede, there is no impact on the existing unit configuration associations, but these items are no longer allowed for the position.

Creating Item Group Revisions

You can create multiple versions of an item group. If an item group in Draft status having an existing version in the status of Complete, is submitted for approval, it overwrites the existing item group, and the change is recorded in the history tables.

Prerequisites

- ☐ The item group that you want to revise must exist in the database.

To create item group revisions:

1. Navigate to the Search Alternates Items page. See Finding Alternate Items Information, page 5-32.
2. To create an item group revision, select the item group, and choose Create Revision from the drop-down menu. Revisions can only be created for Alternate Item Groups in Complete status. A draft version of the Item Group is created.

Create Revision - Edit Alternates page

ORACLE Complex MRO

Master Configuration Unit Configuration Product Classification
Overview Alternate Parts Composition List

Logged In As TSMITH

Confirmation • Item Group new revision was created successfully.

Edit Alternates

Group Name: 55E Adv Cent I/F
Type: Tracked

Description: FSRS Antennas
Status: Draft

Cancel Copy Submit for Approval Select Applicable Positions Apply

Remove	Item	Organization	Description	Revision	UOH	Quantity	Priority	Interchangeability Type	Reason	Composition
<input type="checkbox"/>	SSE3542-835	PM	Advanced Central Interface Unit		Ea	1	1	2-Way Interchangeable		
<input type="checkbox"/>	SSE3542-835B	PM	Advanced Central Interface Unit		Ea	1	3	2-Way Interchangeable		
<input type="checkbox"/>	SSE3542-837	PM	Advanced Central Interface Unit		Ea	1	2	2-Way Interchangeable		

Add More Rows

Cancel Copy Submit for Approval Select Applicable Positions Apply

Master Configuration Unit Configuration Product Classification Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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Editing Master Configuration Records

After you create a master configuration template, you can edit the record to add additional attributes. Because the configuration template must consist of all item locations, item installation options, and pertinent maintenance documents, the configuration hierarchy is completed by retrieving a previously created Master Configuration record.

After you view the topmost position in the configuration template, you can drill down into the hierarchy by clicking on the Position link.

To edit master configuration records:

1. Navigate to the Search Master Configuration page for your record.

Oracle Complex MRO

Master Configuration | Unit Configuration | Product Classification

Overview | Alternate Parts | Composition List

Logged In As: TSMITH

Search Master Configuration

Name:
 Description:
 Position:

Revision:
 Status:
 Item:

Create

Select Master Configuration: 1-10 of 44

Select	Name	Revision	Version	Edit	Description	Status	Close
<input type="radio"/>	AA-5000 Accelerator Assembly	1	1	<input type="button" value="Edit"/>	AA-5000 Accelerator Assembly	Complete	<input type="button" value="Close"/>
<input type="radio"/>	C70-1	1	1	<input type="button" value="Edit"/>	C70-1 Aircraft	Complete	<input type="button" value="Close"/>
<input type="radio"/>	C70-1	2	2	<input type="button" value="Edit"/>	C70-1 Aircraft	Complete	<input type="button" value="Close"/>
<input type="radio"/>	C70-2	1	1	<input type="button" value="Edit"/>	C70-2 Aircraft	Complete	<input type="button" value="Close"/>
<input type="radio"/>	C70-2	2	2	<input type="button" value="Edit"/>	C70-2 Aircraft	Complete	<input type="button" value="Close"/>
<input type="radio"/>	C70-3	1	1	<input type="button" value="Edit"/>	C70-3 Aircraft	Complete	<input type="button" value="Close"/>
<input type="radio"/>	C70-PH Aircraft	1	1	<input type="button" value="Edit"/>	C70-PH Aircraft	Complete	<input type="button" value="Close"/>
<input type="radio"/>	C70-PR Aircraft	1	1	<input type="button" value="Edit"/>	C70-PR Aircraft (Do not approve, need PR engine)	Draft	<input type="button" value="Close"/>
<input type="radio"/>	C80 Aircraft	1	1	<input type="button" value="Edit"/>	C80 Aircraft	Draft	<input type="button" value="Close"/>
<input type="radio"/>	C80-1 (RA)	2	2	<input type="button" value="Edit"/>	C80-1 Aircraft (RA)	Complete	<input type="button" value="Close"/>

Select Master Configuration: 1-10 of 44

Master Configuration | Unit Configuration | Product Classification | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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- To change the Description or Revision of the master configuration record, enter the relevant values in the fields.

Oracle Complex MRO

Master Configuration | Unit Configuration | Product Classification

Overview | Alternate Parts | Composition List

Actions:

Edit Master Configuration

* Indicates required field

* Name: C70-PR Aircraft
 Description: C70-PR Aircraft (Do not approve, need PR engi)
 Status: Draft

Revision:
 Version:
 Model:

Edit Position

* Position: Airframe
 ATA Code:
 Position Key: 10169
 Quantity: 1
 Start Date: 29-APR-2005
 Item Group: C70-PR
 Display Order: 1

Position Description: Airframe
 Description:
 UOM: Ea
 Description: C70-PR
 Necessity: Mandatory

- Navigate through the tree to the position for editing. It will display in the in the page panel.

Make necessary changes in the fields provided. For field descriptions, see Fields Associated with Master Configuration Records, page 5-5.

- You can change the item groups associated with a position by selecting Item Groups.
- You can alter the sub configurations associated to a position in a master configuration by adding or deleting version specific child master configurations.
- Select Apply to save your work.

7. You can choose the following options from the menu:
 - Choose Alternate Items to view the alternate items associated with the master configuration and/or with a specific position.
 - Choose Documents to view and edit the document references attached to the master configuration.
 - Choose Submit for Approval to submit the entire master configuration for approval. This option is only available for a Master Configuration in the status of Draft or Approval Rejected .
 - Select a position in the Master Configuration tree, and choose Position ratio to view the position ratio for that node.
 - Choose Rules to view the list of rules which pertains to this position.

Related Topics

Editing Position Ratios, page 5-22

Attaching Documents to a Position, page 5-24

Editing Alternate items Information, page 5-33

Creating Positions in a Master Configuration, page 5-8

Copying Existing Configurations to a Position, page 5-11

Associating Item Groups with a Position, page 5-13

Associating a Sub-Configuration/Alternate Sub-Configuration with a Position, page 5-14

Creating Rules for a Configuration or Sub-Configuration, page 5-17

Creating Master Configuration Revisions

Prerequisites

- ☐ The master configuration record must be the latest version of that record, and should be in the status of 'Complete'.

To create a master configuration revision:

1. Retrieve the master configuration records that match your requirement.
2. Select the record from the Master Configuration List on the Search Master Configuration page, and choose Create Revision from the drop-down menu. Click

Go. If the validations pass, then the master configuration header details, relationships, counter rules, document associations, rules, and rule statements will be copied to a new version. A confirmation message will be displayed and the new revision will appear in the Master configuration List in Draft status. You can edit the new MC version while it is in the Draft status.

Approving Master Configurations

You can set up an approval hierarchy to review and approve master configurations. Master configurations can be submitted for approval at the time of creation and/or modification. Changes made to the master configurations affect unit configurations and maintenance plans for all the units based off the updated master configuration. The Approval Workflow tracks and controls these changes. When a configuration is submitted for approval, a validation is performed to ensure that the configuration is complete, and that complete item groups and/or complete sub-configurations have been associated to each position. Errors are returned if the configuration is incomplete.

Prerequisites

- ☐ The Master configuration record, which you want to submit for approval, must exist in the database. All positions must have been set up. The item groups and/or sub-configurations associated with these positions must be in Complete status.

To approve master configurations:

1. Retrieve the master configuration records that match your requirement.
2. Select the pertinent master configuration from the Master Configuration List on the Search Master Configuration page, and choose Submit for Approval from the drop-down menu.

Completeness Check - A concurrent program checks for the completeness of the unit to determine if the unit is Complete or Incomplete. Each mandatory position must be mapped to an instance. If any Optional positions are mapped to item instances, then its child Mandatory positions must be mapped to instances as well. Any sub-units mapped within the main unit must be complete. If all sub-units are 'Complete' and all Mandatory positions (except those with "Optional" parent positions and no corresponding parent item instance) are mapped, the completeness check is successful, the configuration is approved, and the status changes from Approval Pending to Complete.

If rejected the configuration status changes to Approval Rejected and a list of position paths that are missing mandatory item instances, as well as extras and rule violations are displayed. The configuration is treated like a draft configuration, which the user can modify.

Viewing Master Configuration Records

View master configuration details using the following procedure.

Prerequisites

- ☐ The master configuration record must exist in the database.

To view master configuration details:

1. Retrieve the master configuration records that match your requirement.
2. Click the Master Configuration Name link. The View Master Configuration page appears showing the Name, Description, and Status of the configuration. The topmost node in the configuration is shown in the Position List.

View Configuration Details - View Master Configuration

The screenshot shows the Oracle Complex MRO interface. The top navigation bar includes links for Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The main content area is titled 'View Master Configuration' and displays details for the 'AA-5000 Accelerator Assembly'. The details are organized into sections: 'Master Configuration' (Name, Description, Status, Revision, Version, Model), 'View Position' (Position, ATA Code, Position Key, Quantity, Start Date, Item Group, Display Order), and 'Position Description' (Position Description, Description, UOM, Description, Necessity). The 'AA-5000 Accelerator Assembly' is shown with a status of 'Complete', revision 1, version 1, and a quantity of 1. The 'View Position' section shows the position 'FCV-AA-5000 Accelerator Assy' with a position key of 10184, a quantity of 1, and a start date of 21-MAY-2005. The 'Position Description' section shows the position description 'FCV-AA-5000 Accelerator Assy' with a description of 'AA-5000 Accelerator Assembly' and a necessity of 'Mandatory'. The page includes 'Cancel' and 'Go' buttons for navigation.

You can view the Position Ratio, Documents, and Alternate Items, and Rules associated with a node in the configuration, by choosing the corresponding option from the drop-down menu.

Related Topics

Viewing Position Details, page 5-41

Viewing Position Ratio, page 5-41

Viewing Documents Associated with a Position, page 5-42

Viewing Alternate items associated with a Position, page 5-43

Viewing Rules, page 5-44

Viewing Position Details

You can view the position details of master configuration nodes using the following procedure.

Prerequisites

- ☐ The master configuration record must exist in the database.

To view position details:

1. Retrieve the master configuration records that match your requirement.
2. Check the select radio button next to the pertinent master configuration from the Master Configuration List on the Search Master Configuration page. Click the Master Configuration Name link. The View Master Configuration page appears showing the Name, Description, and Status of the configuration. The topmost node in the configuration is shown in the Position List.
3. The node hierarchy is represented by the tree structure on the left. Navigate to the node that you want to view using the tree structure; click on the plus icon next to a node listing to display subordinate nodes.
4. Click on a node to display the position details corresponding to the node.

Viewing Position Ratios Associated with a Position

You can view position ratios associated with a position in a master configuration using the following procedure.

Prerequisites

- ☐ The position ratios of the master configuration position must be defined. See Editing Position Ratios, page 5-22.

To view position ratios associated with a position:

1. Retrieve the master configuration records that match your requirement.
2. Check the select radio button next to the pertinent master configuration from the Master Configuration List on the Search Master Configuration page. Click the Master Configuration Name link. The View Master Configuration page appears showing the Name, Description, and Status of the configuration. The topmost node in the configuration is shown in the Position List.

3. Navigate to the node that you want to view position ratios for, using the tree structure; click on the plus icon next to a node listing to display subordinate nodes. Click on a node to select it. The position details corresponding to the node appear.
4. Choose Position Ratio from the drop down menu. The View Position Ratio page appears.

View Position Ratio page

View Position Ratio

Master Configuration Details

Name	C70-1	Revision	1
Description	C70-1 Aircraft	Version	1
Status	Complete		

Position Details

Position	72-02, #2 Engine	Position Description	72-02, #2 Engine
Necessity	MANDATORY	Description	Mandatory

Position Ratio List

UOM	Description	Ratio	Rule
No records were found matching the given criteria...			

Viewing Documents Attached to a Position

Use the following procedure to view documents attached to a master configuration node.

Prerequisites

- ☐ Documents relating to the master configuration node must be defined. See *Attaching Documents to a Position*, page 5-24.

To view the documents attached to a position:

1. Retrieve the master configuration records that match your requirement.
2. Check the select radio button next to the pertinent master configuration from the Master Configuration List on the Search Master Configuration page. Click the Master Configuration Name link. The View Master Configuration page appears showing the Name, Description, and Status of the configuration. The topmost node in the configuration is shown in the Position List.
3. The node hierarchy is represented by the tree structure on the left. Navigate to the node for which you want to view the documents association for, using the tree structure; click on the plus icon next to a node listing to display subordinate nodes. Click on a node to select it. The position details corresponding to the node appear.
4. Choose Documents from the drop-down menu. The Documents List appears,

displaying all documents associated with the selected position.

View Document List - Edit Document Associations page

Master Configuration Details	
Name	C70-1
Revision	1
Description	C70-1 Aircraft
Status	Complete

Position Details	
Position	72-02, #2 Engine
Position Description	72-02, #2 Engine
Necessity	MANDATORY
Description	Mandatory

Document	Title	Revision	View	Revision Type	Chapter	Section	Subject	Page	Figure	Note	Media	Type	Location	Use	Latest
No records were found matching the given criteria..															

Viewing Alternate items Associated with a Position

Use the following procedure to view alternate items associated with different nodes in a master configuration.

Prerequisites

- ☐ Alternate items must be defined for the position prior to viewing the items associated with a position in a master configuration. See Adding Alternate items Information, page 5-28.

To view alternate items associated with a position:

1. Retrieve the master configuration records that match your requirement.
2. Check the select radio button next to the pertinent master configuration from the Master Configuration List on the Search Master Configuration page. Click the Master Configuration Name link. The View Master Configuration page appears showing the Name, Description, and Status of the configuration. The topmost node in the configuration is shown in the Position List.
3. Navigate to the node you want to view documents for using the tree structure; click on the plus icon next to a node listing to display subordinate nodes. Click on a node to select it. The position details corresponding to the node appear.
4. Choose Alternate Items from the drop-down menu. The Item Group details are displayed.

Viewing Positions Associated with an Alternate Item Group

Use the following procedure to view the configuration positions with which an

alternate item group is associated.

Prerequisites

- ☐ The alternate item group must be created.

To view positions associated with an alternate item group:

1. Retrieve the pertinent alternate item group record from the database (see Finding Alternate items Information, page 5-32).
2. To view the configurations with which an alternate item group is associated, select the pertinent group from the items Group List on the Search Alternate items page, and click View Positions.

This will launch the Edit Associated Positions page. The Configuration Positions List displays all the configurations and positions where the item group is attached.

Viewing Rules

Use the following procedure to view the rules defined for configurations, sub-configurations, positions, and items.

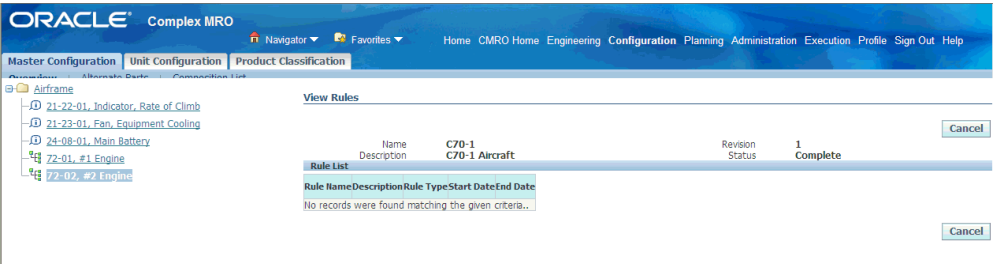
Prerequisites

- ☐ The rule that you want to view must exist in the database.

To view rules:

1. Navigate to the View Master Configuration page. See Viewing Master Configuration Records, page 5-40.
2. Choose Rules from the drop-down menu. The View Rules page appears, displaying the rules defined for the selected master configuration.

View Rules page



Closing Master Configuration Records

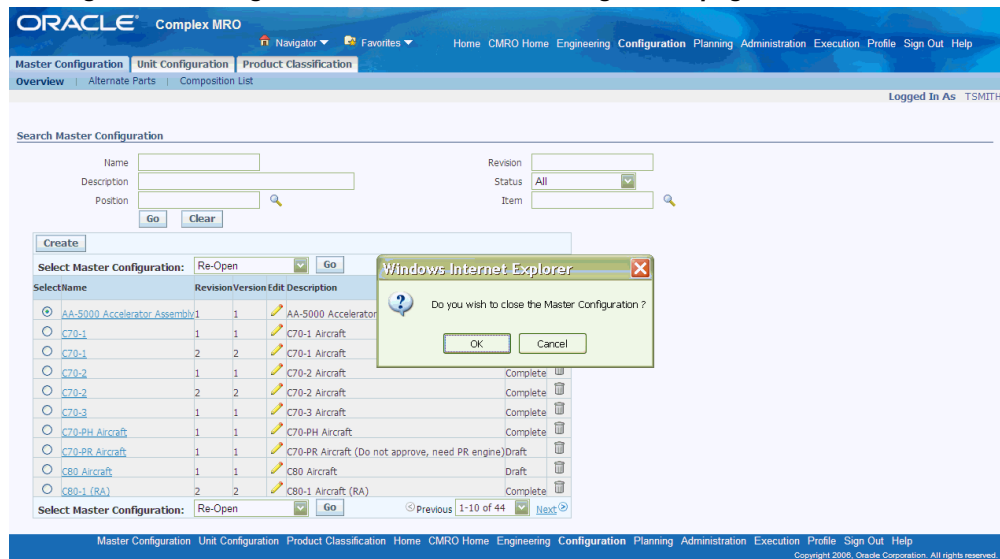
Prerequisites

- ☐ The master configuration record that you want to close must exist in the database. The master configuration must be in 'Complete' status and must not have any unit configurations associated with it.

To close master configuration records:

1. Retrieve the master configuration records that match your requirement.
2. Select a record, and click the corresponding Trash icon under the Close column. A message is displayed asking you to confirm whether you want to close the record.

Closing Master Configuration - Search Master Configuration page



3. Click Ok. A confirmation message is displayed, and the search results list is refreshed with the status of the selected master configuration record changed to Closed.

Reopening Closed Records

You can reopen a master configuration record that was previously deleted.

Prerequisites

- ☐ The master configuration record must have been previously defined, and then removed.

Note: You can only reopen master configuration records with status Closed or Expired.

To reopen closed master configuration records:

1. Retrieve the master configuration records that match your requirement.
2. Select the pertinent record from the Master Configuration List on the Search Master Configuration page.
3. Choose Reopen from the drop-down menu. The status reverts to complete or draft depending on the status from which it is closed.

Working With Unit Configurations

This chapter covers the following topics:

- Overview
- Unit Configurations
- Creating Unit Configuration
- Assigning Items to Unit Configuration Positions
- Migrating Unit Configurations
- Editing Unit Configuration Records
- Approving Unit Configurations
- Viewing Alternate Items Utilization
- Assigning Alternate Items to Unit Configuration Positions
- Creating and Updating Item Information
- Configuration Access Control Management

Overview

In the maintenance, repair, and overhaul industry, the "as-constructed" configuration of an assembly determines the specific maintenance program required to ensure the operational readiness of that asset. Even if two units have the same part number, or belong to the same product family, the as-constructed configurations may be different due to optional subsystems selected by fleet operators, and due to the asset's operational and service history. Ultimately, maintenance organizations must manage maintenance activities for each unit in the fleet. For maintenance purposes, an aircraft, for example, might consist of a thousand items that you must monitor. As you remove, overhaul, or replace items, you must associate the monitored items that have unique model and serial numbers with a fleet unit, and retain the maintenance history of those items. Many systems, such as aircraft flight management computers, contain software that is revised during their service lives. The Oracle Complex Maintenance, Repair, and

Overhaul Unit Configuration module describes the configuration for each unit, and enables maintenance organizations to define and monitor items in a fleet unit.

Key functions provide process-oriented, task based procedures for managing maintenance activities of fleet units. See:

- Creating Unit Configuration, page 6-3
- Assigning Items to Unit Configuration Positions, page 6-5
- Migrating Unit Configurations, page 6-10
- Editing Unit Configuration Records, page 6-13
- Approving Unit Configurations, page 6-15
- Viewing Alternate Items Utilization, page 6-16
- Assigning Alternate Items to Unit Configuration Positions, page 6-17
- Creating and Updating Item Information , page 6-18

Unit Configurations

Unit Configuration is a subsystem that describes the structure of an assembled electromechanical system. Unit Configuration is also concerned with monitored components modeling to support the management of a single part of interest, or a complex assembly that consists of a hierarchy of monitored items.

Unit Configuration manages information about the service readiness of any component, and implements Closed Loop Asset Tracking techniques, the result of which is instantaneous online intelligence about the location and state of components. Another important feature of Unit Configuration is the ability to precisely record the utilization of as many items or subassemblies in a fleet unit as required. Oracle Complex Maintenance, Repair, and Overhaul allows you to represent the part lifetime using industry-standard units of measure, such as operating hours, flight cycles, elapsed time, and calendar time. Unit Configuration also allows you to define and maintain the maintenance requirements for a subassembly or subsystem. Maintenance requirements for each fleet unit support detailed maintenance planning for the fleet as a whole.

Key Business Processes

Managing Equipment As-Installed Configurations

When a product is in service, some components may need replacement for maintenance and modification, or upgrade purposes. Knowing the current configuration is critical to plan the required maintenance actions. The Oracle Complex Maintenance, Repair, and Overhaul Unit Configuration module allows you to track the as-installed configuration

of a complex assembly, component installation and removal history, and the software installed in a unit.

Managing Configuration Changes

When a current equipment configuration does not meet the future needs, operators modify the existing equipment, instead of replacing it. Organizations also maintain multi-purpose equipment that require a configuration change between different modes of operation. Oracle Complex Maintenance, Repair, and Overhaul allows you to compare the unit (current) configuration with its master configuration to derive the effort required for the modification. Unit Configuration also allows you to validate allowable installation, and whether a configuration is complete.

Tracking Utilization of a Unit

Utilization is a major factor determining the maintenance required to preserve an equipment's operational utility. When an assembly is made up of different components that may require different parameters to measure utilization and aging, the resulting maintenance forecast process can be complicated. Unit Configuration will precisely track the utilization of each individual component within an assembly by tracking current utilization of units, such as age, odometer reading, and flight hours since overhaul. Unit Configuration applies the appropriate unit of measure to suit different types of utilization or aging.

Tracking Maintenance Requirements of a Unit

The key functions of maintenance planning include identifying the maintenance requirements of a unit, and calculating the service life before the next maintenance event. Fleet Maintenance Program provides this functionality. Unit Configuration enables you to model the maintenance requirement applicable to individual units, by providing a tracking mechanism for maintenance requirements.

Closed Loop Asset Management

Maintenance organizations track information about a unit using multiple systems throughout the service life of the unit. To build a continuous "cradle-to-grave" event history of a unit, may require great efforts. The Unit Configuration module provides an anchor to tie all the transactions required to build the full history of a unit. It tracks all transactions associated to unit location and status changes.

Tracking Unit Specific Business Information

Some critical business information resides at the individual unit level, and will require special attention and tracking. Unit Configuration provides a platform to track unit-specific information such as ownership.

Creating Unit Configuration

Master configuration provides a template for the structure of an electromechanical system with rules for component location and component selection, and applicable maintenance operations. An instance of a master configuration models the general

characteristics of a fleet unit. You can derive a unit configuration modeling the structure of an "as-operated" electromechanical system from a master configuration.

After retrieving a master configuration template from the database, you can create a unit configuration that represents an individual fleet unit, and shares attributes in common with other fleet units derived from the same master configuration template. To create a unit configuration, provide a name for the unit configuration, and select the item instance for the top position.

When searching for a master configuration record that will serve as the unit configuration template, you can search using the master configuration template name, or the hierarchical position reference where a master configuration is connected.

To find a master configuration record:

1. Navigate to the Search Master Configuration page.
2. Select search criteria in the following fields: Name Description, Revision, or Position. Select Go to display the results of your search.

The screenshot shows the Oracle Complex MRO application interface. At the top, there's a navigation bar with links like Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. Below this is a sub-navigation bar with links for Master Configuration, Unit Configuration, Product Classification, Search Unit, Create From Master, Search Product, and Create Product. The main content area is titled "Search Master Configuration". It contains search fields for Name, Description, Revision, and Position, along with "Go" and "Clear" buttons. Below the search fields is a table of results. The table has columns: Select Master Configuration, Revision, Description, and Position. The table lists various aircraft components like Accelerator Assembly, Aircraft, and Communication Assembly. At the bottom of the page, there's a footer with the text "Copyright 2005, Oracle Corporation. All rights reserved."

Select Master Configuration	Revision	Description	Position
<input type="radio"/> AA-5000 Accelerator Assembly	1	AA-5000 Accelerator Assembly	FCV-AA-5000 Accelerator Assy
<input type="radio"/> C70-1	1	C70-1 Aircraft	Airframe
<input type="radio"/> C70-1	2	C70-1 Aircraft	Airframe
<input type="radio"/> C70-2	1	C70-2 Aircraft	Airframe
<input type="radio"/> C70-2	2	C70-2 Aircraft	Airframe
<input type="radio"/> C70-3	1	C70-3 Aircraft	Airframe
<input type="radio"/> C70-PH Aircraft	1	C70-PH Aircraft	Airframe
<input type="radio"/> C80-1 (RA)	2	C80-1 Aircraft (RA)	Airframe
<input type="radio"/> CA-5000 Communication Assembly	1	CA-5000 Communication Assembly	FCV-CA-5000 Communication Assy
<input type="radio"/> CS-5000 Cooling System	1	CS-5000 Cooling System	FCV-CS-5000 Cooling Sys

Configuration records matching the search criteria display.

To create unit configuration:

1. Navigate to the Create Unit Configuration page.
The details for the master configuration populate this page including name, description, status, revision, and position.
2. Enter a value in the unit Config Name field.
3. Select an Instance Number, this is the Install Base Instance Number of the tracked item.

4. Select Apply to save your work.

The page is populated with information for Description, Serial Number, Owner, Owner Name, Location, and Location Address of the fleet unit.

ORACLE® Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Search Unit Create From Master Search Product Create Product

Logged In As TSMITH

Create Unit Configuration

* Unit Config Name Unit 600 Unit Config Status Draft

Master Config Name C70-1 Master Config Revision 2

Master Config Description C70-1 Aircraft Position Airframe

Select Item Instance For Top Position

* Instance Number	Item
2992044	C70-1
Serial Number 315	Lot Number
Owner 2813	Owner Name Business World
Location 2266	Location Address Avenue de la Grande Armée 145;75008 PARIS;PARIS;75008FR
Description Airframe, C70-1	Party Type Party

* Indicates required field

Cancel Apply

Master Configuration Unit Configuration Product Classification Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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The Edit Configuration page appears, displaying the position details and the item association for the top node of the unit configuration tree. You can now assign item instances to position references.

Related Topics

- Assigning Items to Unit Configuration Positions, page 6-5
- Migrating Unit Configuration Records, page 6-10
- Editing Unit Configuration Records, page 6-13
- Approving Unit Configurations, page 6-15

Assigning Items to Unit Configuration Positions

Creating a unit configuration logical record from a master configuration results in the connection of a unit configuration record with at least one item in the inventory catalog, and with an actual part or assembly in the inventory database. A unit configuration cannot exist without an item definition and a position definition. After you create a unit configuration header in the database, you can add item instances to all the positions that were defined in the template master configuration. All the item instances that you assign must exist in a group created using the Master Configuration module.

To assign items to a unit configuration position:

1. In the Edit Configuration page, select the position reference that you want to associate with the item.

The screenshot displays the 'Edit Unit Configuration' interface in Oracle Complex MRO. The top navigation bar includes 'Master Configuration', 'Unit Configuration', and 'Product Classification'. The left sidebar shows a tree view with 'FCV-AA-5000 Accelerator Assy' selected. The main content area is titled 'Edit Unit Configuration' and contains the following details:

- Unit Configuration:** FCV-AA-5000 Fuel Ctl Linkage
- Unit Config Status:** Draft
- Master Configuration:** AA-5000 Accelerator Assembly
- Master Config Revision:** 1
- Position Details:**
 - Position: FCV-AA-5000 Accelerator Assy
 - ATA Code: 03-AA96467
 - Item: [Field]
 - Lot Number: [Field]
 - Revision: [Field]
 - Quantity: 1
 - Owner: 8330
 - Install Date: [Field]
 - Status: In Relationship
- Descriptive Flexfields:**
 - Testing Shift: [Field]
 - Context Value: [Field]
- Additional Information:**
 - Necessity: Mandatory
 - Description: AA-5000 Accelerator Assembly
 - Mfg Date: [Field]
 - Instance Number: 706141
 - UOM: Ea
 - Owner Name: Department of Defence
 - Location: 1234 Independence Ave; Fairfax; 20198; VA US
 - Condition: [Field]

Buttons for 'Cancel' and 'Apply' are present at the top right and bottom right of the form.

The Create and Assign New Item Instances page appears. This page has two regions:

- Create and Assign New Item Instance enables you to create an item instance associate it with the position reference.
 - Assign Item enables you to assign applicable existing item instances.
2. To create a new record, select the item in the Create and Assign New Item Instance region.
 3. Optionally, you can enter the following additional information for the item instance:
 - Lot Number for lot controlled items
 - Serial Number for serial controlled items.
 - Revision
 - Mfg. Date.

A master configuration, on which the unit configuration is based, may have subconfigurations assigned to its position reference. In the unit configuration, you need to assign subunits based on that subconfiguration, to the position reference. The status of available subunits must be consistent with the status of the parent unit

4. Select the subassembly, and choose Assign.

5. You can also create subunits for the master configuration. Select Create from Master tab. See Creating Unit Configuration, page 6-3.

Note: The sub-units must be in draft status to be assigned to the unit configuration.

6. Save your work.
7. To associate an existing item instance, select the item and choose Assign.

ORACLE® Oracle Complex MRO

Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Search Unit | Create From Master | Search Product | Create Product

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Create and Assign New Item Instance

* Item Revision

Lot Number Mfg Date

Serial Number From Inventory

* Indicates required field

Assign Item

Select Item Instance and ... View Utilization Assign

Previous 1-1 of 1 Next

Select	Item	Instance Number	Serial Number	Lot Number	Owner	Location	Mfg Date	Instance Status
<input checked="" type="radio"/>	28B545-7	109308	400		AT&T Universal Card	5645 Main Street, Jacksonville, FL 32209		Out of the Enterprise

Previous 1-1 of 1 Next

Select Item Instance and ... View Utilization Assign

- To view utilization for an item instance, select View Utilization. The View item Instance Utilization page appears.

ORACLE® Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Search Unit | Create From Master | Search Product | Create Product

View Item Instance Utilization

Unit Configuration UC_201 Unit Config Status Draft
Master Config Name C70-2 Master Config Revision 1
Description C70-2 Aircraft Position 21-23-01, Fan, Equipment Cooling

Alternate Item Instance

Item	74101054-1	Serial Number	3759
Quantity	1	Status	Out of the Enterprise
Install Date		Mfg Date	
Owner	General Technologies	Condition	
Location	1900 Technology Parkway; EAST PORTLAND; 97214; ORUS		

Item Instance Utilization

Counter Name	Description	UOH Reading
TSN-197000	Time Since New (utabson hr, since new)	UHR
CSN-197001	Cycle Since New (utabson hr, since new)	UCY
TSO-197002	Time Since Overhaul (utabson hr, since overhaul)	UHR
CSO-197003	Cycle Since Overhaul (utabson cycle since overhaul)	UCY

Unit Configuration records the utilization of each component within an assembled hierarchy by monitoring current utilization of units and component hierarchies. Unit Configuration uses appropriate units of measurement including Time Since New, Time Since Overhaul, Time Since Repair, utilization cycles, Hobbs meter time, and many others. Unit Configuration also records utilization history of a revenue fleet unit, serialized part, or component hierarchy.

Note: You can assign alternate items to unit configuration positions after viewing the utilization gained by each allowable part listed for a position.

If the instance from an extra node can be installed into a missing node, then this

instance will be displayed in the item instance table list together with other applicable instances. You can then select and assign it to a missing node.

You can now add a node in a unit configuration without its parent. You can do this by adding the known part numbers and serial numbers as extra positions/part numbers/serial numbers in the unit configuration tree. Once you have the parent, the extras will be assigned to the correct position.

To find unit configuration records:

1. Navigate to the Search Unit Configuration page.
2. You can search for records by selecting the applicable search criteria including:
 - Unit Config Name
 - Item
 - Instance Number
 - Lot Number
 - Unit Config Status
 - Master Config Name
 - Master Config Revision
 - Master Config Status
3. Select Go to display the results of your search.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Search Unit Create From Master Search Product Create Product

Logged In As: TSMITH

Search Unit Configuration

Unit Config Name
Item
Instance Number
Serial Number
Lot Number

Unit Config Status
Master Config Name
Master Config Revision
Master Config Status
Search For

Go Clear

Create

Select Unit Configuration: Submit for Approval Validate Migrate Remove Previous 1-10 of 56 Next

Select Unit Configuration	Edit Instance Number/Item	Serial Number	Lot Number	Status	Installed Master Configuration	Revision
<input type="radio"/> AA5000 Accelerator Assy # 1020	706139	03-AA96467		Draft	AA-5000 Accelerator Assembly	1
<input type="radio"/> AA5000 Fuel Ctl Linkage # 1020	706141	03-AA96467		Draft	AA-5000 Accelerator Assembly	1
<input type="radio"/> C70-1, SN 311, Tail # VA521	644123	C70-1	311	Complete	C70-1	2
<input type="radio"/> C70-1, SN 312, Tail # VA522	644142	C70-1	312	Complete	C70-1	2
<input type="radio"/> C70-1, SN 313, Tail # VA523	644156	C70-1	313	Complete	C70-1	2
<input type="radio"/> C70-2, SN 411, Tail # VA681	644111	C70-2	411	Complete	C70-2	2
<input type="radio"/> C70-2, SN 412, Tail # VA682	644115	C70-2	412	Complete	C70-2	2
<input type="radio"/> C70-2, SN 413, Tail # VA683	644119	C70-2	413	Complete	C70-2	2
<input type="radio"/> C70-3, SN 511, Tail # VA761	643067	C70-3	511	Incomplete	C70-3	1
<input type="radio"/> C70-3, SN 512, Tail # VA762	644082	C70-3	512	Complete	C70-3	1

Select Unit Configuration: Submit for Approval Validate Migrate Remove Previous 1-10 of 56 Next

You can validate a unit against the master configuration structure, allowed items and sub-configurations, and the rule applicable to a configuration. You can independently validate the completeness of a unit. You can also validate a unit after migrating it to a new master configuration, or to a revision of an existing master configuration.

To validate a unit:

1. Navigate to the Search Unit Configuration page, and select your record.
2. Select Validate.

The Unit Configuration Validation Results page appears displaying the any errors for structure and rule violations.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Search Unit Create From Master Search Product Create Product

Logged In As: TSMITH

Unit Configuration Validation Results

Unit Configuration: C70-1, SN 311, Tail # VA521 Unit Config Status: Complete

Master Config Name: C70-1 Master Config Revision: 2

Description: C70-1 Aircraft

The Unit Configuration is valid. There are no validation errors.

Cancel

Cancel

Master Configuration Unit Configuration Product Classification Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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Migrating Unit Configurations

Master configurations may be revised over a period of time. Often these changes can be implemented immediately across the fleet. However at times, it is necessary to

transition the units throughout a given period or to a completely different master configuration. In Unit Configuration, the modification process is broken into steps allowing the user to choose when to migrate and what configuration to migrate to, allowing a staged lifecycle change. A Unit Configuration can migrate to a new master configuration or to another revision of the existing master configuration when desired throughout the unit's lifecycle.

When a master configuration is revised, certain part positions may be added or removed from the existing configuration. When a part or sub-assembly exists that is not defined in the master configuration, it will show up as an extra part in the unit configuration tree. You can unassociate these position references. Master configuration positions that do not have item association, are identified by the missing items icon in the configuration tree.

The alternate items/sub-assemblies appear in the Assign Items Table for sibling positions which are empty. You can assign these items to the empty position. You can then validate the completeness as needed. Optionally, you can create new Item Instances, and sub-units to assign to these position references.

To migrate a unit configuration:

1. Select the unit configuration and navigate to the Migrate Unit Configuration page.
2. In the Search Master Configuration region, search for your master configuration record by selecting criteria. Select Go to display the results of your search.
3. You can search using Name, Description, Revision, and Position. The records matching your search criteria are displayed in the Master Configuration list.

Oracle Complex MRO

Master Configuration | **Unit Configuration** | Product Classification

Search Unit | Create From Master | Search Product | Create Product

Logged In As TSMITH

Migrate Unit Configuration

Search and select a Master Configuration to which the Unit is to be migrated.

Unit Configuration: **C70-1, SN 311, Tail # VA521** | Unit Config Status: **Complete** | Master Config Revision: **2**

Select Master Configuration

Select	Name	Revision	Description	Position
<input type="radio"/>	AA-5000 Accelerator Assembly	1	AA-5000 Accelerator Assembly	FCV-AA-5000 Accelerator Assy
<input type="radio"/>	C70-1	1	C70-1 Aircraft	Airframe
<input type="radio"/>	C70-2	1	C70-2 Aircraft	Airframe
<input type="radio"/>	C70-2	2	C70-2 Aircraft	Airframe
<input type="radio"/>	C70-3	1	C70-3 Aircraft	Airframe
<input type="radio"/>	C70-PH Aircraft	1	C70-PH Aircraft	Airframe
<input type="radio"/>	C80-1 (RA)	2	C80-1 Aircraft (RA)	Airframe
<input type="radio"/>	CA-5000 Communication Assembly	1	CA-5000 Communication Assembly	FCV-CA-5000 Communication Assy
<input type="radio"/>	CS-5000 Cooling System	1	CS-5000 Cooling System	FCV-CS-5000 Cooling Sys
<input type="radio"/>	CS-5000 Radiator Assembly	1	CS-5000 Radiator Assembly	FCV-CS-5000 Radiator Assy

Select Master Configuration: **Migrate** | Previous | 1-10 of 32 | Next

4. Select the relevant master configuration, and choose Migrate.

The Edit Unit Configuration page appears, displaying the unit hierarchy and the position details for the top node.

Oracle Complex MRO

Master Configuration | **Unit Configuration** | Product Classification

Search Unit | Create From Master | Search Product | Create Product

Logged In As TSMITH

Edit Unit Configuration

Unit Configuration: **C70-1, SN 311, Tail # VA521** | Unit Config Status: **Incomplete Unapproved** | Master Config Revision: **1**

Position Details

Position	ATA Code	Item	Serial Number	Lot Number	Revision	Quantity	Owner	Install Date	Status
Airframe	C70-1	311	From Inventory			1	1007	05-MAY-2005	Out of the Enterprise

Descriptive Flexfields

Testing Shift:

Context Value:

Select Context Value and click 'Go' to show relevant fields.

Create New Item Instance (Unassigned)

* Item: | Revision: | Lot Number: | Mfg Date:

The following mapping is done when you migrate an unit configuration:

- If the node in the unit configuration is a subunit and it matches one of the subconfigurations defined in that node of the new master configuration, no further mapping is required.
- If the node in the unit is a subunit but it does not match any subconfigurations defined in that node of the new master, the subunit is treated as an extra node

and its tree structure is retained.

- If the node in the unit is not a subunit and it matches one of the nodes in the same level of the new master, further mapping is required.
- If the node in the unit is not a subunit and it does not match any node in the same level of the new master, then the node and all its decedents in the unit are treated as extra nodes.

Note: Migration is not possible if the top nodes of the templates do not match.

5. To remove the extra nodes, select the node and select Remove.
6. To assign item instances to the position references missing items, select the item instance from the Assign item table, and choose Assign. Optionally, you can assign a new item instance.

The extra items will be displayed in the unit hierarchy corresponding to the empty sibling position.

7. To associate this item, you can select it from the Assign Item table and select Assign.

Editing Unit Configuration Records

Maintenance organizations alter fleet unit configurations to suit different modes of operation, or to comply with changes in business rules. These alterations may also result from component replacements with allowable items at certain hierarchical positions.

To edit unit configuration records:

1. Navigate to the Edit Unit Configuration page.

Oracle Complex MRO

Master Configuration | Unit Configuration | Product Classification

Search Unit | Create From Master | Search Product | Create Product

Unit Configuration: AA5000 Accelerator Assy
 Master Configuration: AA-5000 Accelerator Assembly
 Description: AA-5000 Accelerator Assembly
 Model: AA-5000 Accelerator Assembly

Unit Config Status: Draft
 Master Config Revision: 1

Position Details

Position: FCV-AA-5000 Accelerator Assy
 ATA Code: 03-AA96467
 Item: 03-AA96467
 Lot Number:
 Revision:
 Quantity: 1
 Owner: 8330
 Install Date:
 Status: In Relationship

Necessity: Mandatory
 Description: AA-5000 Accelerator Assembly
 Mfg Date:
 Instance Number: 706139
 UOM: Ea
 Owner Name: Department of Defence
 Location: 1234 Independence Ave; Fairfax; 20198; VAUS
 Condition:

Descriptive Flexfields

Enigma Documents: Illustrated Parts Catalog, Wiring Diagram Manual

Testing Shift:
 Context Value:

Select Context Value and click 'Go' to show relevant fields.

Note: You cannot add or update position references in the unit configuration after changing the status to Complete.

To edit a position in the unit configuration hierarchy, use the tree structure to display the position references.

2. In the Position Details region, change applicable values.

Oracle Complex MRO

Master Configuration | Unit Configuration | Product Classification

Search Unit | Create From Master | Search Product | Create Product

Unit Configuration: AA5000 Fuel Ctrl Linkage
 Master Configuration: AA-5000 Accelerator Assembly
 Description: AA-5000 Accelerator Assembly
 Model: AA-5000 Accelerator Assembly

Unit Config Status: Draft
 Master Config Revision: 1

Position Details

Position: FCV-AA-5000 Accelerator Assy
 ATA Code: 03-AA96467
 Item: 03-AA96467
 Lot Number:
 Revision:
 Quantity: 1
 Owner: 8330
 Install Date:
 Status: In Relationship

Necessity: Mandatory
 Description: AA-5000 Accelerator Assembly
 Mfg Date:
 Instance Number: 706141
 UOM: Ea
 Owner Name: Department of Defence
 Location: 1234 Independence Ave; Fairfax; 20198; VAUS
 Condition:

Descriptive Flexfields

Enigma Documents: Illustrated Parts Catalog, Wiring Diagram Manual

Testing Shift:
 Context Value:

Select Context Value and click 'Go' to show relevant fields.

3. To remove a position reference from the unit configuration record, click on the position reference. Select Remove in the Position details region. You can reuse the item represented by the position reference that you remove from the unit configuration.

Note: You cannot remove a position reference that is defined as Mandatory in the master configuration. The Edit Unit

Configuration page presents this information in the Necessity field under Unit Configuration Structure.

4. To unassociate an items position, without removing the nodes from the unit configuration tree, select the position reference and click Unassociate. This allows you to map the positions manually, when the correct installation cannot be automatically determined.
5. To assign a part to a position in the unit configuration, select the pertinent position reference. If item instances for that position exist in the database, they will appear in the Assign Item table. Optionally, you can create and assign a new item instance. See Assigning Items to Unit Configuration Positions, page 6-5.
6. Enigma Integration allows you to look up configuration information in Enigma's 3C application and associate it to Oracle's Master Configuration. With that association you can view the associated document content in Unit Configuration.

The Enigma Documents region enables you to view the associated documents on the position and part based on the association in master configuration. The Enigma Documents region is displayed if the profile option, CMRO Enigma Integration URL, is set to Yes.

The region displays buttons for viewing Wiring Diagram Manual (WDM) and Illustrated Parts Catalog (IPC) as applicable.

Click the Illustrated Parts Catalog and Wiring Diagram Manual buttons to view the associated documents.

7. Select Apply to save your work.

Approving Unit Configurations

Creating or updating unit configurations is supported with an approval workflow.

You can setup an approval hierarchy to review and approve the unit creation. You can also submit a unit configuration for approval when you make a manual change to a complete unit configuration. Manual changes are necessary to record a discrepancy; all the other unit configuration changes should be performed through the proper production flow with work order sign off etc. Both the creation and the manual update of a unit configuration are critical tasks and need to be controlled.

After the Unit configurations have been created and/or edited, the unit is submitted for approval. When approved, if the unit is not complete it will be given the status of "Incomplete Approved" and if complete it will be assigned the "Complete Approved" status.

Prerequisites

- ☐ The Unit Configuration records that you want to submit for approval must exist in the database.

To approve unit configurations:

1. Retrieve the unit configuration record that you want to submit for approval (see Finding Unit Configuration Records, page 6-9). The search results appear in the lower half of the page.
2. To approve a unit configuration record, select the pertinent record from the Unit Configuration List, and click Submit for Approval. When a unit in draft is submitted for approval, the status changes to Approval Pending. If the changes are approved, the status changes to Complete else it changes to Approval Rejected.

Viewing Alternate Items Utilization

Unit Configuration records the utilization of each component within an assembled hierarchy by monitoring current utilization of units and component hierarchies. Unit Configuration uses appropriate units of measurement including Time Since New, Time Since Overhaul, Time Since Repair, utilization cycles, Hobbs meter time, and many others. Unit Configuration also records utilization history of a revenue fleet unit, serialized part, or component hierarchy.

You can assign alternate items to unit configuration positions after viewing the utilization gained by each allowable item listed for a position.

Prerequisites

- ☐ An assigned item must exist for the pertinent position in the unit configuration, and the Unit Configuration record must be in the Draft status..

To view alternate item utilization:

1. Retrieve the unit configuration record that you want to edit (see Finding Unit Configuration Records, page 6-9). Search results appear in the lower half of the page.
2. To view the use of alternate items, select the pertinent record from the Unit Configuration List, and click the Edit icon corresponding to it. The Edit Unit Configuration page appears. Using the tree structure on the left, navigate to the node you want to edit.
3. Select the position to which you want to assign alternate items. The alternate items

will be displayed in the Assign Item table. To view item utilization, select the item and click View Utilization.

Assigning Alternate Items to Unit Configuration Positions

When a fleet unit is in operation providing a transport service, eventually some components will require replacement to preserve the operational readiness of that unit. A unit configuration inherits the alternate items list for each component position in the hierarchy, from its master configuration template. Use this procedure to assign alternate items to a component position in an assembly. This will enable you to manage the "as-installed" configuration details of any fleet unit.

Prerequisites

- ☐ An assigned item must exist for the pertinent position in the unit configuration, and the Unit Configuration record Status must be flagged Complete.

To assign an alternate item to a unit configuration position:

1. Retrieve the unit configuration record that you want to edit (see Finding Unit Configuration Records, page 6-9). Search results appear in the lower half of the page.
2. To remove a unit configuration record, select the pertinent record from the Unit Configuration List, and click Remove.
3. To assign alternate items to a unit configuration position, select the pertinent record from the Unit Configuration List, and click Edit. This launches the Edit Unit Configuration (Unit Configuration Structure) page.
4. Click the topmost node in the unit configuration that appears in the Position field under Unit Configuration Structure. The position references beneath the selected node appear with corresponding part information.
5. Select the position to which you want to assign alternate items.
6. Click Alternates to launch the Alternate Items List page. This is the allowable items list defined for the selected position.
7. Select the alternate item that you want to assign to the position.
8. Click Assign. This assigns the selected alternate item to the position, and the item previously assigned to the selected position is marked Out-of-Service and returned to the Alternate Items List.

Creating and Updating Item Information

Oracle Complex Maintenance, Repair, and Overhaul uses Oracle Install Base, part of the Oracle e-Business Suite, to create and update item information.

- Click the Create Product secondary tab in the Unit Configuration module to launch the Create Product page.
- Click the Search Product secondary tab in the Unit Configuration module to launch the Search My Products page.

For instructions on using these pages to create, find, and update part information, refer to *Oracle Install Base Concepts and Procedures*. The chapter, "Using the Product Tabbed Page" in this guide provides all the information you need to use the Create Product and Search My Product pages.

Configuration Access Control Management

In certain circumstances access to a unit configuration needs to be restricted. This functionality is used in aircraft incident investigations where it is required that all data for the plane is preserved in its current state. Access to change anything on this configuration is stopped to avoid tampering with data. A quarantine can be requested for a unit configuration preventing performing any transaction.

Configuration management enables access locked or terminated to a specific unit configuration, preventing viewing or updating. A locked configuration prevents any transactions to be performed. This functionality includes two aspects:

- Activate Quarantine a Unit Configuration— including transactional consequences on unit maintenance plan, visit work packages, and production and execution
- Deactivate Quarantine a Unit Configuration

Access Control for a Unit Configuration

To quarantine a unit configuration:

1. Navigate to the Edit Unit Configuration region of the Unit Configuration page.
2. Select Quarantine.

ORACLE® Complex MRO

Home CMRO Home Engineering **Configuration** Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Search Unit Create From Master Search Product Create Product

Edit Unit Configuration

Unit Configuration: E86-1 Eng, SN 727 Unit Config Status: Complete
 Master Configuration: E86-1 Jet Engine Master Config Revision: 1
 Description: E86-1 Jet Engine

Position Details

Position	Engine Assy	Necessity	Mandatory
Item	E86-1	Description	Engine Assembly, E86-1
Serial Number	727	From Inventory	
Lot Number		Mfg Date	
Revision		Instance Number	644146
Quantity	1	UOM	Ea
Owner	1007	Owner Name	General Technologies
Install Date		Location	1900 Technology Parkway;EAST PORTLAND;97214;ORUS
Status	In Relationship	Condition	

Buttons: Cancel, Quarantine, Apply

When the unit configuration is quarantined, all transactions are stopped including:

- Initializing maintenance requirements
- Push to production
- Position update, installation, or removal
- Work order updates

Deactivation of a quarantined unit returns the unit configuration to the status prior to quarantine: Complete or Incomplete.

3. To deactivate a quarantined unit configuration, navigate to the Edit Unit Configuration region of the Unit Configuration page.

ORACLE Complex MRO

Home CMRO Home Engineering **Configuration** Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification

Search Unit Create From Master Search Product Create Product

☒ Airframe
☒ 21-22-01, Indicator, Rate of Climb
☒ 24-08-01, Main Battery

Edit Unit Configuration

Unit Configuration **C70-PH, SN 281, Tail # VA 131** Unit Config Status **Quarantine**
 Master Configuration **C70-PH Aircraft** Master Config Revision **1**
 Description **C70-PH Aircraft**

Position Details

Position	Airframe	Necessity	Mandatory
Item	C70-PH	Description	Airframe, C70-PH
Serial Number	281 (From Inventory)	Mfg Date	
Lot Number		Instance Number	677103
Revision		UCM Ea	
Quantity	1	Owner Name	Vision Engineering
Owner	42922	Location	2399 Market Street, San Francisco, 94101, CA US
Install Date	20-MAY-2005	Condition	
Status	Out of the Enterprise		

Cancel Deactivate Quarantine

Cancel Deactivate Quarantine

4. Choose Deactivate Quarantine.

Managing Product Classification

This chapter covers the following topics:

- Overview
- Product Classification
- Working With Product Classifications
- Creating a Product Classification
- Working With Nodes
- Associating Documents to a Node
- Attaching Units/Items in Product Classification
- Launching the Approval Process

Overview

In the transportation business, the term fleet commonly describes a group of related vehicles. A fleet may be divided into smaller groups, or subfleets, each consisting of products that are similar with regard to manufacturer, operating region, or other pertinent attribute. Because maintenance requirements are often based on such attributes, product classification is needed to provide a hierarchy within which the products can be grouped.

Throughout the maintenance industry, businesses need to define how maintenance and supporting documents apply to physical units. These documents typically represent other parts or technical information, and their purpose is to express what requirements apply to what units.

A product classification will group products logically across multiple levels. Examples are the family-model-version classification for engines and the fleet-series-model classification for aircraft. A product classification can be represented by a tree structure in which individual units can be attached to the nodes of the tree, with the implication that maintenance requirements and maintenance documents applicable to such a node

to the attached units or parts. See:

- Creating a Product Classification, page 7-4
- Working with Nodes:, page 7-7
- Associating Documents to a Node, page 7-8
- Attaching Units in Product Classification, page 7-10
- Launching the Approval Process, page 7-11

Product Classification

A product classification is a logical categorization of units or parts pertaining to maintenance, with a unit being the physical instance of an item and a part being the general item definition from which a unit is instantiated. Product Classification allows an organization to group its units or parts together from multiple viewpoints. Examples are the general product family classification, a classification per geographical location or a classification based on the type of usage of a unit or part. The affiliation of a unit or part to certain classifications is used to define the applicability of maintenance requirements and maintenance documents. In case of changing a product classification by adding, deleting or moving a unit or a part, the unit maintenance plan of the affected unit(s) is changed automatically to represent the maintenance requirements based on the edited product classification. This gives an organization a powerful set up of maintenance applicability with a minimum of maintenance of the engineering set up when implementing maintenance plan changes.

Key Business Processes

Product Classification

A maintenance engineer has the ability to create and maintain product classifications. Product Classification provides a hierarchy within which parts and units can be grouped. Organizations are able to create, copy and maintain product classification and for the use of maintenance definition of the parts or units within a product classification, they can associate documents and view association of the associated maintenance requirements. Maintenance Personnel can:

- Search the database to quickly refer to a product classification.
- Create new product classifications or product classifications revisions.
- Edit and copy product classifications.
- Associate documents to a nodes product classifications.

- Attach parts or units to product classifications.
- View maintenance requirements associated to a product classification node.
- View Utilization forecast of a product classification.
- Check for completeness of primary product classifications.
- Launch the approval process for a draft product classification.

Parts and Unit Classification

You can group parts or units in multiple product classifications. A product classification is represented in a tree model hierarchy. This supports organizations to group parts or units together from different viewpoints and enables them to define maintenance requirements and maintenance documents based on the parts or units product classification(s) association.

Primary and Supplementary Classification

Primary and supplementary classifications are supported. For a primary classification all parts or units of that classifications' product type need to be associated to this primary classification. An organization can have one primary classification per product type. This gives the organization a view of all the parts or units for a specific product type. An example of that would be the complete fleet of an airline. A supplementary classification can represent a subset of the parts and units for a particular product type. An organization can have multiple supplementary classifications for a particular product type. This allows an organization to group the parts and units together from different viewpoints. An example of that would be a categorization by geographical location of the parts and units.

Association of Maintenance Documents

You can associate maintenance documents to any node within the product classification hierarchy.

View Maintenance Requirement Association

You can display the maintenance requirements associated to a node in a product classification.

Unit Maintenance Plan Update

When a part or unit changes its product classification or is newly added or deleted from a product classification. The system automatically runs the recalculation of the affected units' maintenance plan.

Working With Product Classifications

Product Classification provides a multilevel hierarchy that permits the logical grouping of products. Product classifications are used mainly to define maintenance

requirements and documents applicability.

One of two types of product classifications, primary or supplementary. A primary classification is used to give an overview of all existing units that make up a complete list of components. For an operator in the transportation industry, this consist of all airplanes, trains, buses, ships, cars, and so forth. Multiple primary classifications can be defined but must associate an item type to a primary classification for validation purposes. For example, you can define multiple primary classifications for the complete fleet of airplanes and the complete list of engines. Only parts of product type airplane can be associated to the primary classification for the fleet of airplanes and only parts of product type engine could be associated to the engine classification. Since one part can only have one product type, there is no duplication when associating parts or units to a primary classification. Every unit defined as part of the fleet has to be part of the primary product classification. Supplemental classifications are applied to group certain units for specific classification needs based on geography, types not covered through the primary classification or any other attribution. A supplementary classification does not necessarily resemble the complete fleet it therefore does not have to have every unit assigned to a leaf node.

Related Topics

Creating Product Classifications, page 7-4

Creating a Product Classification

To create a product classification:

1. Navigate to the Create Product Classification page.
2. Enter a unique name for this product classification, and select a value in the Item Type field.
3. In the Primary Classification field, indicate if this record is classification record is the primary one. Your choices are True or False.

ORACLE® Complex MRO

Master Configuration | Unit Configuration | Product Classification

Overview

Logged In As TSMITH

Create Product Classification

* Indicates required field

Product Classification Details

* Name: PClass Type

Status: Draft

* Item Type: AC Aircraft C80

* Primary Classification: ☒ True ☐ False

* Association Type: ☒ Unit ☐ Item

Description:

Cancel Apply

Master Configuration | Unit Configuration | Product Classification | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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4. In the Association Type field, indicate if this classification is associated to a Unit or Item.
5. Optionally, you can enter descriptive text.
6. Select Apply to save your work, and display the Edit Product Classification page.

To find a product classification record:

1. Navigate to the Search Product Classification page.
2. Enter the information in the applicable:
 - Name
 - Product Type
 - Status
 - Primary Classification
 - Association Type
 - Document
 - Revision
 - Maintenance Requirements
 - Unit
 - Part
3. Select Go to display the results of your search.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification Overview

Logged In As TSMITH

Search Product Classification

Name: Description:

Item Type: Status:

Primary Classification: Association Type:

Document: Maintenance Requirements:

Revision: Item:

Unit:

Go Clear

Create

Select Classification: Check Complete Copy

Select	Name	Description	Item Type	Status	Primary Classification	Association Type	Tree	Remove
<input type="radio"/>	C70 Fleet - Maintenance Planning & Engineering	C70 Fleet - Maintenance Planning & Engineering	AC Aircraft C70	Complete	No	Unit		
<input type="radio"/>	C70 Fleet - Operating Environment	C70 - Desert & Ocean Environment	AC Aircraft C70	Complete	No	Unit		
<input type="radio"/>	C70 Fleet Utilization Forecast	C70 Fleet Utilization Forecast	AC Aircraft C70	Complete	Yes	Unit		
<input type="radio"/>	C70-PH Utilization Forecast	C70-PH Utilization Forecast	AC Aircraft C70-PH	Complete	Yes	Unit		
<input type="radio"/>	C80 Fleet (RA)	C80-1 (RA)	AC Aircraft C80	Complete	Yes	Unit		
<input type="radio"/>	Fleet One	All Tail numbers in Fleet One	MRO Aircraft	Complete	Yes	Unit		
<input type="radio"/>	KM_Prod_Classification		KM Component	Complete	Yes	Unit		
<input type="radio"/>	MBPC1	Primary Unit type asset activity PC	Asset Activity	Complete	Yes	Unit		
<input type="radio"/>	Vision A&D ACA Air Command	Vision A&D ACA Air Command	AD Aircraft ACA1K	Complete	Yes	Unit		
<input type="radio"/>	Vision A&D FCV Fleet	Vision A&D FCV Fleet	AD Vehicle FCV	Draft	Yes	Unit		

Select Classification: Check Complete Copy

To copy a product classification:

1. Navigate to the Copy Product Classification page
2. Enter a value in the New Name field—each product classification must have a unique name.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Master Configuration Unit Configuration Product Classification Overview

Logged In As TSMITH

Copy Product Classification

* Indicates required field

Product Classification Details

Name: C70 Fleet - Maintenance Planning & Engineering

* New Name:

Status: Draft

* Item Type: AC Aircraft C70

* Primary Classification: ☐ True ☒ False

* Association Type: ☒ Unit ☐ Item

Description: C70 Fleet - Maintenance Planning & Engineering

Other Components

Component

☐ Documents

☐ Units / Items

Cancel Apply

Master Configuration Unit Configuration Product Classification Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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3. Change any other information about regarding the new record in the fields provided.

Note: Only one primary product classification is permitted for any product type. If you also want to copy other components, such as any associated unit, parts or documents, click the check boxes next to the relevant component.

4. Select Apply to save your work, and display the Edit Product Classification page.

To edit product classification:

1. Select the Tree icon navigate to the Edit Product Classification page.

The screenshot shows the Oracle Complex MRO interface. The top navigation bar includes links for Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The main content area is titled 'Edit Product Classification'. On the left, a tree view shows the hierarchy: Vision A&D FCV Fleet, Vision Defense Europe, and Vision Defense US. The 'Vision A&D FCV Fleet' node is selected. The right pane displays the details for this node. The 'Name' field is 'Vision A&D FCV Fleet'. The 'Status' is 'Draft'. The 'Item Type' is 'Unit' (selected with a radio button). The 'Primary Classification' is 'AD Vehicle FCV'. The 'Association Type' is 'Unit' (selected with a radio button). The 'Description' field is empty. At the bottom right, there are 'Cancel', 'Submit', and 'Apply' buttons.

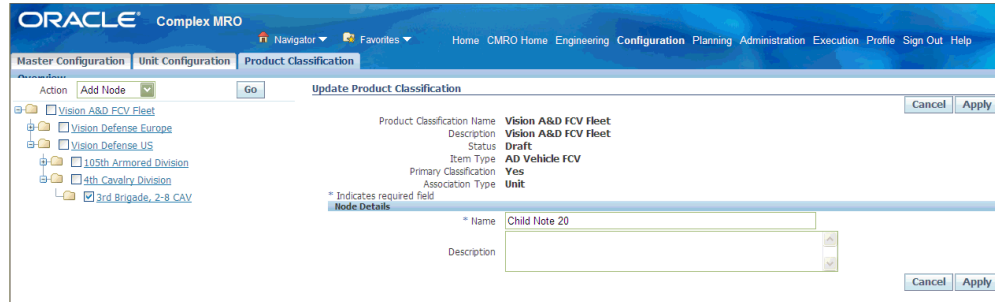
2. Make the necessary changes in the fields provided. Note that only one primary product classification is permitted for any product type.
3. Select Apply to save your work.

Working With Nodes

Assigning a part, instead of the unit to a node is an easier way to classify the products if a differentiation is not needed on the instance level. A hierarchy tree is used to graphically display the structure of product classifications and the elements related to them. You can add, edit, and remove nodes in addition to attaching documents, associate units/parts, and view the maintenance requirements for any selected product classification.

To add a node:

1. Select a product classification and navigate to the Edit Product Classification page.
2. Select a node, and choose Add Node from the Action menu.
3. Select Go to display information in the Node Details region.
4. Enter a name and descriptive text for this node.



5. Select Apply to save your work.

To edit a node:

1. Select the product classification and navigate to the Edit Product Classification page.
2. Use the tree to find the node you want to edit, and select Edit Node.
3. Make the necessary changes in the fields provided. Click More to associate documents or attach parts.
4. Select Apply to save your work.

To view utilization forecasts:

1. Retrieve the relevant product classification record, and navigate to the Edit Product Classification page..
2. Select the node, whose related utilization forecast you want to view.

Note: Utilization forecasts cannot be associated to the top node in the tree.

3. Select More Details.
4. The Update Attached Documents page appears. Select Utilization Forecast to display the View Utilization Forecast page, displaying any related utilization forecasts.

Associating Documents to a Node

Product Classification uses a tree structure to graphically display the structure of product classifications and the elements related to them. Documents can be associated with product classifications by attaching them to the appropriate node of this tree

structure.

To associate a document to a node:

1. Select the product classification record and navigate to the Edit Product Classification page.
2. Use the tree to find the node you want to associate a document, and select the node.
Click More Details button to navigate to the Update Attached Documents page. The page displays the currently attached documents.
3. To add a document, in the Document List region select the applicable document record.

ORACLE[®] Complex MRO

Master Configuration Unit Configuration Product Classification Overview

Confirmation • 1 Document(s) successfully associated with the Product Classification Node.

Update Attached Documents

Product Classification Name: Vision A&D FCV Fleet
Description: Vision A&D FCV fleet
Status: Draft
Item Type: AD Vehicle FCV
Primary Classification: Yes
Association Type: Unit

Node Details

Remove	Number	Title	Type	Revision	View	Chapter	Section	Subject	Page	Figure	Note	Media Type	Location	Use Latest
<input type="checkbox"/>	00-25-254-1	Engine Management System Engine Configuration, Status and TCTO Reporting	Engine	1	00							Electronic File	TO_00252541 Comprehensive Engine Maint Sys Eng Config Status TCTO Reporting-Procd.pdf	No

Add More Rows

Cancel Apply

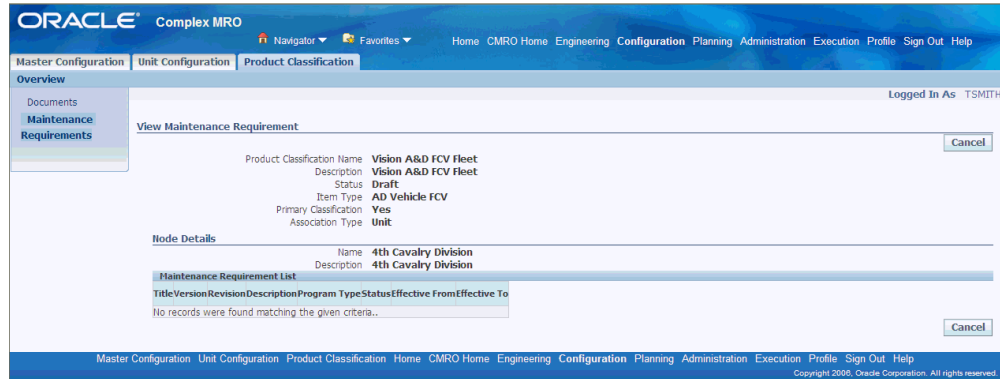
Master Configuration Unit Configuration Product Classification Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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4. Select Apply to save your work.

To view an associated maintenance requirement:

1. Select a product classification record, and navigate to the Edit Product Classification page.
2. Select the node and choose More Details. The Update Attached Documents page appears.
3. Select Maintenance Requirements The View Maintenance Requirement page appears, displaying any currently relevant maintenance requirements.



Attaching Units/Items in Product Classification

Product classification uses a tree structure to graphically display the structure of product classifications and the elements related to them. Units and items can be associated with product classifications by attaching them to the appropriate node of this tree structure.

To attach a part or unit:

1. Navigate to the Edit Product Classification page.
2. Use the tree to find the node want to attach the part or unit, and select the node.
3. Choose More Details to display the Update Attached Documents page. Select Units/Items.

The Update Attached Units page appears, displaying any currently attached units.

4. To add a unit/item, choose Add More Rows, and select a unit or item value.

Update Attached Units

Product Classification Name: C70 Fleet Utilization Forecast
 Description: C70 Fleet Utilization Forecast
 Status: Complete
 Item Type: AC Aircraft C70
 Primary Classification: Yes
 Association Type: Unit

Node Details

Name	Description
C70-3	C70-3

Attached Units

Name	Item	Serial Number	Status
C70-3, SN 511, Tail # VA761	C70-3511		Incomplete
C70-3, SN 512, Tail # VA762	C70-3512		Complete
C70-3, SN 513, Tail # VA763	C70-3513		Complete

5. Select Apply to save your work.

Launching the Approval Process

The completeness check enables you to check a draft product classification for completeness before launching an approval process. You cannot initiate the check complete process on a non-primary product classification.

The Oracle Complex Maintenance, Repair, and Overhaul Product Classification module allows you to start the approval process for a draft product classification.

To check the completeness of a product classification:

1. In the Search Product Classification page, select the product classification, and choose Check Complete.

Oracle Complex Maintenance, Repair, and Overhaul performs the check, then displays a confirmation message. If there are errors, the Unapplied Units page appears.

Unapplied Units

Please select a leaf node to attach unit(s) to.

Product Classification Name: C80 Fleet (RA)
 Description: C80-1 (RA)
 Status: Complete
 Item Type: AC Aircraft C80
 Primary Classification: Yes
 Association Type: Unit

Name	Item	Serial Number	Status
C80-1, SN888 Tail# VA888	C80-888		Complete

To launch the approval process:

1. Select the record, and navigate to the Edit Product Classification page.

2. Select Submit. The Product Classification status changes from Draft to Approval Pending.

Working With Unit Maintenance Plans

This chapter covers the following topics:

- Overview
- Unit Maintenance Plans
- Finding Unit Maintenance Plan Records
- Associating a Maintenance Requirement to a Visit
- Minimum Equipment List (MEL) and Configuration Deviation List (CDL) Setup
- Creating Non-routine Requests During Unit Maintenance
- Calculating Maintenance Requirement Due Dates
- Viewing Unit Maintenance Requirement Detail and History
- Viewing Group Maintenance Requirements
- Initializing Maintenance Requirements
- Viewing Unit Maintenance Requirement Details
- Viewing Maintenance Requirement Thresholds
- Finding Item Utilization Forecasts
- Updating Item Utilization Forecasts
- Finding and Updating a Product Classification Utilization Forecast
- Finding and Updating a Unit Configuration Utilization Forecast
- Transit/Line Maintenance and Scheduling
- Overview of Unit Schedules
- Viewing Unit Schedule
- Creating Transit Visit from Unit Schedule
- Viewing Unit Schedule Details
- Overview of Flight Schedules

- Maintaining Flight Schedule
- Updating Transit Visit Schedule

Overview

Work in maintenance environments is typically specified by a set of maintenance requirements. The unit maintenance plan is used to ensure that all maintenance requirements are accomplished on or prior to their due date, and provides the "demand" over a planning time window by forecasting the due date of maintenance requirements associated to a unit. It searches and displays maintenance requirements that are due for an equipment unit and provides maintenance personnel instant access to maintenance requirements, due date estimation, accomplishment history, and planning information for a unit configuration. See:

- Associating a Maintenance Requirement to a Visit, page 8-8
- Calculating Maintenance Requirement Due Dates, page 8-17
- Viewing Group Maintenance Requirements, page 8-19
- Initializing a Maintenance Requirement, page 8-21
- Viewing Unit Maintenance Requirement Details, page 8-22
- Viewing Maintenance Requirement Thresholds, page 8-23
- Updating Item Utilization Forecasts, page 8-27
- Finding and Updating a Product Classification Utilization Forecast, page 8-30
- Finding and Updating an Unit Configuration Utilization Forecast, page 8-31
- Entering Service Requests, page 2-45
- Transit/Line Maintenance and Scheduling, page 8-32
 - Creating Transit Visit from Unit Schedule, page 8-35
 - Maintaining Flight Schedule, page 8-41
 - Updating Transit Visit Schedule, page 8-43

Unit Maintenance Plans

Unit Maintenance Plan serves as a repository of the maintenance requirements related to units and any related subassemblies or components. It also enables forecasting of

usage to determine due dates for fleet maintenance activities.

Unit Maintenance Plan manages information about the service readiness of any component or subassembly, and offers instantaneous online intelligence about the maintenance requirement due date, the planning status and the history of all the maintenance works performed on the unit. Another important feature of Unit Maintenance Plan is the ability to precisely forecast the maintenance due dates.

Key Business Processes

Unit Maintenance Plan supports the following business processes:

Maintain utilization forecast

Unit Maintenance Plan allows maintenance personnel to forecast utilization for each unit in a fleet using appropriate units of measure such as operation hours, cycles, or mileage, for a period of time specified by the personnel.

View remaining serviceable time (UOM) of units

Determining the remaining service time of units, expressed in relevant units of measure (UOM), such as hours, cycles, or mileage is critical for maintenance planning. Unit Maintenance Plan has a full featured search for viewing and determining the remaining service time of units.

Model repetitive maintenance requirement over a time period

Replicate the maintenance requirement for any repetitive requirements over a user defined period, and provide the relevant unit of measure remaining for each occurrence of a maintenance requirement.

Calculate due dates of maintenance requirement

Calculate due dates based on utilization forecast and maintenance frequency if a fixed due date is not specified.

Associate a Maintenance Requirement to a Visit

Unit maintenance plan uses Oracle Complex Maintenance, Repair, and Overhaul Visit Work Package to associate a maintenance requirement to a visit. Unit Maintenance Plan allows you to schedule by associating a maintenance requirement group to visit appointments. View Service Requests

View Service Requests

Track unplanned maintenance by viewing service requests created to meet maintenance requirements originating from inspections, or other administrative and executive actions.

Finding Unit Maintenance Plan Records

The Unit Maintenance Plan module allows you to search for records using any or nearly any combination of the following criteria: unit name, part number, serial number, MR

Title, MR status, program type, or due date ranges. Maintenance requirements can come from a defined maintenance plan in Fleet Maintenance Program, or created as service requests.

Prerequisites

- ☐ The Unit configuration records from which you want to derive a unit maintenance plan for must exist in the database. It will help to know at least part of the unit name, part or serial number, or the MR Title of the sought after unit(s) in order to conduct a search.

To find Unit Maintenance Plan records:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Planning: Unit Maintenance, Overview link. The Search Unit Maintenance Plan page appears. This page enables you to search and display any maintenance requirements that are due on a unit.
2. Use the information in the following table to enter details in the Search Unit Maintenance Plan page.

Description of fields in the Search Unit Maintenance Plan page

Field	Description
Unit Name	User-defined name for a serialized part or assembly stored in the Oracle Complex Maintenance, Repair, and Overhaul database as a unit configuration. At this screen, the user provides all or part of name of an equipment record to be used to search Installed Base. For aviation users, this field might contain the FAA registration ID (called tail number) of the aircraft.
Part Number	Inventory identifying number. Note that the Oracle Inventory does not store what is actually in stock, only what is available to stock, so in that way it is more like a catalog. Actual warehouse contents are stored in Oracle Installed Base. This field might contain an aircraft type, like "B777-200".

Field	Description
Sort By	This field is not part of the database, but is used by the program to order the query results. The values displayed in the "pick-one" list are the names of other fields on this page. They are stored as seeded data and created by default. You can sort by due date, MR program, MR category, and implement status.
Title	Search argument field that contains a user-defined title of the maintenance requirement for which the user is searching. The maintenance requirement itself is created using Fleet Maintenance Program when the maintenance plans are loaded into the database.
Due From	Starting date range argument for imminent maintenance requirements.
Visit Organization	The organization for the maintenance visit.
Search For	Search criteria can be defined to select either manually planned, forecasted, or all types of requirements.
Serial Number	User-defined ID that uniquely identifies a part for which the user wants to view maintenance requirements.
Status	Maintenance requirements can be in different states. These states are provided by default in Oracle Complex Maintenance, Repair, and Overhaul, but can be expanded by the user as needed. This search argument field permits specifying a status in the retrieval query.

Field	Description
Program Type	The user may specify the name of a maintenance program that will be used as a search argument in retrieving imminent maintenance requirements. A maintenance program type might be "Corrosion Prevention." A maintenance requirement may be one of many that belong to the same program. Non routine requirements are discovered during maintenance or crew inspections.
Due To	Ending date range argument for imminent maintenance requirements.
Visit Department	This field enables the maintenance planner to search requirements scheduled for a particular department.
Visit Number	This field enables the maintenance planner to identify all of the maintenance requirements included for a particular visit.

3. Click Go. The lower half of the screen displays all matching records in the database.

ORACLE® Complex MRO

Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Overview Utilization Forecast Unit Schedule Flight Schedules Non-routines

Logged In As TSMITH

Search Unit Maintenance Plan

Unit Name

Item

Sort by Due Date

Title

Due from

Visit Organization San Francisco Maintenance

☐ Show Dependent Components

☐ Show Replicate

Search For All

Serial Number

Status Scheduled

Program Type

Due to

Visit Department Line Maintenance, SFM

Visit Number

☐ Include Tolerance Dates

☐ Show Child Maintenance Requirements

Select Unit Maintenance Plan: Associate to Visit

Select	Program Type	Title	Item	Serial Num	UDM Remain	Cnt Name	Earlier Due	Due Date	Latest Due	Tolerance	Status	Sched. Date	Visa	Originator Title	Dependent Title	Deferred From	Deferred To	Manually Planned	
<input type="checkbox"/>	Non-routine	Aircraft Defect-44570	75484-5	815								07-FEB-2007	20						✓
<input type="checkbox"/>	Non-routine	Aircraft Defect-39886	17C35-01	813								21-SEP-2006	19						✓
<input type="checkbox"/>	Non-routine	Aircraft Defect-39292	E86-2	802								21-SEP-2006	19						✓
<input type="checkbox"/>	Non-routine	Aircraft Defect-39290	75484-5	815								21-SEP-2006	19						✓
<input type="checkbox"/>	Non-routine	Aircraft Defect-39278	671250-17	812								21-SEP-2006	19						✓
<input type="checkbox"/>	Non-routine	Aircraft Defect-44574	E86-2	802								07-FEB-2007	20						✓
<input type="checkbox"/>	Corrosion	Test MR	KM001	KM001								11-APR-2008	61						✓
<input type="checkbox"/>	Non-routine	Aircraft Defect-44572	671250-17	812								07-FEB-2007	20						✓
<input type="checkbox"/>	Corrosion	MR002	KM001	KM001								11-APR-2008	96						✓
<input type="checkbox"/>	Routine Check	VA-C70-Transit-01	C70-3	511								24-MAY-2005	18						✓

Select Unit Maintenance Plan: Associate to Visit

Previous 1-10 of 37 Next

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

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Note: You can navigate directly to a maintenance visit requirement by selecting the link in the Visit column in the maintenance plan summary region.

- To restart a search for records, click Clear. All the search fields on the page will clear. (If you have retrieved records being displayed in the lower half of the screen, these records will remain).

After entering the new search criteria, click Go to begin searching the database for records that match.

Use the Due From and Due To fields to narrow your search to units due for maintenance between specified dates, or any units due before or after a specified date. If you are not sure of the dates you are looking for, pull up a calendar by clicking on the calendar icon next to the relevant field. 'Due to' represents the end of a period of time during which the Maintenance Requirement due date is valid within the Due From date.

Note: Select the 'Show Dependent Components' check box to return any maintenance requirements for any other components of the assembly or sub assembly to which the unit belongs. Select 'Show Replicate' to return the repeating maintenance requirements of the unit based on interval frequency and a rolling time window.

Associating a Maintenance Requirement to a Visit

You can associate maintenance requirements to visits defined in Visit Work Package.

Prerequisites

- Any relevant maintenance requirements must already be set up in Fleet Maintenance. Additionally, requirements may also arise from service requests. The Unit configuration records from which you want to derive unit maintenance plan must exist in the database. It will help to know at least part of the unit name, part or serial number, or MR Title of the sought after unit(s) in order to conduct a search.

To associate a maintenance requirement to a visit:

- From the search results page in Unit Maintenance Plan, retrieve the unit maintenance plan record that you want to associate with a visit (see Finding Unit Maintenance Plan Records, page 8-3).
- Select the record, and choose Associate to Visit from the pull-down menu in the results header.
- Click Go. The Search Visit page appears. For information, see Description of fields in the Search Visit page.

Search Visit page

ORACLE Complex MRO

Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visit Logged In As TSMITH

Search Visit

Item [] Unit []
Serial Number [] Service Request []
Organization [] Department []
Visit Number 16 Visit Name []
Start From Date [] Start To Date []
Visit Status [] Visit Type []
Service Category [] Priority []
Go Clear

Create

Select Visit: Cost and Price Information Go

Select	Visit Number	Visit Name	Item Unit	Serial Number	Visit Type	Priority	Organization	Department	Start Date	Planned End Date	Visit Status	Cost Structure	Remove	
C	16	VA761-C	C70-3VA761	511	C Check		San Francisco Maintenance Center	US	Base Maintenance, SPM	24-MAY-2005	29-JUL-2005	Implemented		

Select Visit: Cost and Price Information Go

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

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- Search for a visit, and associate it with the unit maintenance plan. The Create Planned Task page appears, displaying the association. You can click Apply to navigate to the Search Visit Tasks page, and define tasks for the visit.

Create Planned Task Page

Note: Deferred non-routine requirements that were discovered but not accomplished when the visit was in production can also be scheduled for other visits.

Minimum Equipment List (MEL) and Configuration Deviation List (CDL) Setup

Minimum Equipment List and Configuration Deviation List functionality identifies equipment and items that can be inoperative, but still enable the aircraft to maintain airworthiness. MEL addresses defective equipment, and CDL addresses missing parts in an aircraft. This functionality is defined using Air Transport Association of America (ATA) codes, based on the associated configuration position. You specify applicable ATA codes for each position when creating a master configuration. The ATA codes are defined with the corresponding repair times, installed quantities, and minimum required quantities. Deferrals for the unit are based on the ATA code definitions in corresponding master configurations. When a requirement is deferred against the MEL or CDL, applicable Maintenance and Operation (M) and (O) procedures are automatically added to the maintenance visit.

To setup MEL and CDL functionality:

- Specify ATA codes for each position on the Master Configuration page
- Create a maintenance requirement with a program type of Maintenance and Operation (M) and (O) procedures
- Define repair categories and associated repair time limits
- Associate MEL and CDL instructions and (M) and (O) Procedures with a product classification

Prerequisites

- ☐ Define a value of (M) and (O) Procedure for the Procedure Type for configurations.
- ☐ Define profile option values for AHL:Service Request Type. This profile is used to specify component, tool, and aircraft defects.
- ☐ Define required ATA codes for relevant configuration positions. These lookups in the Application Object Library are type AHL_ATA_CODE.

To specify ATA codes for each position:

1. Navigate to the Create Master Configuration or Edit Master Configuration pages.
2. Enter the appropriate details to create or edit your record.
See: Creating Master Configuration Records, page 5-5, or Editing Master Configuration Records, page 5-36
3. In the Edit Position or Create Position region of the Master Configuration page, select a value in the ATA Code field.
4. Select values in the other applicable fields for your record.
5. Select Apply to save your work.

To create a maintenance requirement with an (M) and (O) Procedure program type:

1. Navigate to the Create Maintenance Requirement or Update Maintenance Requirement page.

ORACLE® Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Program Type Associations

Logged In As TSMITH

Update Maintenance Requirement

Cancel Approve Approve And Calculate Due Date Revert Apply

* Indicates required field

Title **NSA MRTest**

Revision Number **1**

Category **Airframe**

Program Type **(M) and (O) Procedure**

Implement Status **Mandatory**

Repetitive **Yes**

Whichever Comes **First**

Billing Item **API Item_Single346**

Quality Inspection Type

Down Time **UOM Hours**

Description **This is test MR by NSA**

Comments **This is test MR by NSA**

Status **Draft**

Version **1**

Effective From **11-MAY-2010**

Program Subtype

Service Type **On**

Show **All**

Follows After Accomplishment of

Visit Category

Auto Sign Off **No**

Descriptive Flexfields

* FMP Create Flexfield **NSAFMPMR**

Context Value **Models MR effective**

Select Context Value and click 'Go' to show relevant fields.

* Model **767**

* Seg2 **555555**

Cancel Approve Approve And Calculate Due Date Revert Apply

2. Add the applicable information in the fields on this page. See: Creating Maintenance Requirement Records, page 2-5
3. In the Program Type field, select the value for the M and O Procedure type.
4. Select Apply to save your work.

To define repair categories and associated time limits:

1. Navigate to the Repair Categories page.
2. Select a value in the Category field for this type of repair, and enter a description.

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Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Repair Categories

Logged In As TSMITH

Repair Categories

Revert Apply

Category	Description	Repair Time Limit (in hours)	Remove
A	Repair Category A		
B	Repair Category B	24	
C	Repair Category C	72	
D	Repair Category D	240	
	Immediate Respond Immediately	54	

Add More Rows

Revert Apply

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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3. Enter a value for the repair time, in units of hours.
4. Select Apply to save your work.

To associate the ATA Code, Repair Category, and quantities with the applicable product:

1. Navigate to the MEL/CDL Search Product Classifications page.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Repair Categories

Logged In As TSMITH

Search Product Classification

Name Unit

Item Type

Go Clear

Name	Description	Item Type	Tree
C70 Fleet Utilization Forecast	C70 Fleet Utilization Forecast	AC Aircraft C70	
C70-PH Utilization Forecast	C70-PH Utilization Forecast	AC Aircraft C70-PH	
C80 Fleet (RA)	C80-1 (RA)	AC Aircraft C80	
Fleet One	All Tail numbers in Fleet One	MRO Aircraft	
KM_Prod_Classification		KM Component	
MBPCI	Primary Unit type asset activity	PCAsset Activity	
Vision A&D ACA Air Command	Vision A&D ACA Air Command	AD Aircraft ACA1K	

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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2. Choose a record, and select the Tree icon to display details you want to view on the View Product Classifications page.
3. Expand the tree nodes to view details, and select a record.
 - The Unit Details region displays when you select the unit configuration details in the tree.
 - The Node Details region displays when you select the product classification.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Repair Categories

View Product Classification

Product Classification Name C70 Fleet Utilization Forecast

Description C70 Fleet Utilization Forecast

Status Complete

Item Type AC Aircraft C70

Primary Classification Yes

Association Type Unit

Unit Details

Name C70-3, SN 511, Tail # VA761

Description Airframe, C70-3

Item C70-3

Serial Number 511

Cancel

4. Select the product classification node in the tree to display the Node Details region, and choose Create.
5. On the Create MEL/CDL page, enter a value in the Revision field.
6. Select the applicable value in the MEL/CDL Type field.

ORACLE® Complex MRO

Navigator Favorites Home CMRO Home **Engineering** Configuration Planning Administration Execution Profile Sign Out Help

MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Repair Categories

Logged In As: TSMITH

Create MEL/CDL

Product Classification Node: M-1900

* Indicates required field

* Revision: 1

* Revision Date: 21-May-2010 (example: 21-May-2010)

Status: Draft

Node Desc: M-1900 Aircraft

* MEL/CDL Type: CDL

Expiration Date: 30-May-2010

Cancel Apply

System Sequences

Details	System Sequence	Description	Repair Category	Repair Time (in hours)	Installed Number	Required Number
Hide	00_20	Air conditioning repair.	A		2	1
Remarks						
Show						
Show						
Add More Rows						

Cancel Apply

MEL/CDL Document Index Route Management Fleet Maintenance Program Home CMRO Home **Engineering** Configuration Planning Administration Execution Profile Sign Out Help

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7. Select a date in the Revision Date field, and optionally select a date in the Expiration Date field.
8. In the System Sequences region, select values in the following fields:
 - System Sequence—ATA code value for this product classification
 - Repair Code
 - Installed Number—quantity of this item normally installed on the aircraft
 - Required Number—minimum quantity of this item required for operation, provided conditions and limitations are met
9. Select Apply to save your work.

The Update CDL Node or Update MEL Node page displays with the information entered.

To associate applicable (M) and (O) Procedures with the product classification:

1. Navigate to the Update CDL Node or Update MEL Node page, and select your record in the System Sequence region.

Oracle Complex MRO

MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Repair Categories

Update CDL: Node M-1900

* Indicates required field

Node Desc: M-1900 Aircraft

* Revision: 1

* Revision Date: 21-May-2010

Status: Draft

* MEL/CDL Type: CDL

Expiration Date: 30-May-2010

System Sequences

Filter by System Sequence: [] Go

Select System Sequence: [] Delete

Select All Select None

Select	Details	System Sequence	Description	Repair Category	Repair Time (in hours)	Installed Number	Required Number	Update
<input type="checkbox"/>	Show	00_20		A	2	2	1	

Add More Rows

Cancel Submit for Approval Apply

2. Select Update to display the Update System Sequence page.
3. Select the (M) and (O) Procedures tab, and select a value in the Title field to associate a procedure with this item.

When you select a record, information displays in the Description, Revision, and Effective From and To date fields.

Oracle Complex MRO

MEL/CDL Document Index Route Management Fleet Maintenance Program

Overview Repair Categories

Update System Sequence: 00_20

System Sequence Desc: 00_20

Product Classification: Fleet One

Node Name: M-1900

Type: CDL

Status: Draft

Node Desc: M-1900 Aircraft

(M) and (O) Procedures Interrelationship Rules Associated Positions

Details	Title	Description	Revision	Effective From	Effective To	Remove
Show	M-21-22-01	M-21-22-01		20-Sep-2006		
Show						
Show						

Add Another Row

Cancel Apply

4. Select the Interrelationship Rules tab, and select a value in the System Sequence field to associate other ATA codes considered in this MEL or CDL deferral.

When you select a record, information displays in the Description, Repair Category, Number Installed, and Number Required fields for this code.

5. Select the Associated Positions tab, to view configuration positions applicable to this MEL or CDL.

When you select a record, information displays in the Revision, Position, Position Key, ATA code, Necessity, Quantity, and Unit of Measure fields.

6. Select Apply to save your work.

Related Topics

Creating Non-routine Requests During Unit Maintenance, page 8-15

Creating Non-routine Requests During Unit Maintenance

When non-routine maintenance requirements are discovered during inspections, you can create service requests in the Create Non-routine page. In this process you:

- Create a non-routine service request requirement
- Add the requirement to a maintenance visit and push to production
- Optionally defer the non-routine requirement using MEL or CDL instructions

To create non-routine requests during unit maintenance:

1. Navigate to the Create Non-routine page.
2. Select applicable values for this request in the Non-Routine Details region. This includes:
 - Type
 - Customer Type
 - Contact Type
 - Customer Name
 - Contact Name
 - Urgency
 - Problem Code
 - Problem Summary
 - Incident Date
 - Status
 - Severity

ORACLE® Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Overview | Utilization Forecast | Unit Schedule | Flight Schedules | **Non-routines**

Logged In As: TSMITH

Create Non-routine

* Indicates required field

Unit / Component Details

Unit: C-1600, Tail # 101

Log Series: A

* Item: MRO-C1600

* Instance: 70211

Flight Number:

Log Number:

* Serial: 101

Non-Routine Details

Request Date: 21-May-2010

* Type: stype11202463402

Customer Type: Organization

Contact Type:

Urgency:

Problem Code:

* Problem Summary:

Incident Date: 21-May-2010

Status: Open

* Customer Name: American Avionics Corp

Contact Name:

Severity: High

Cancel Apply

3. In the Unit/Component Details region, select applicable values in the following fields to create unit details for this request:
 - Unit
 - Log Series
 - Item
 - Instance
 - Flight Number
 - Log Number
 - Serial Number
4. In the Resolutions region, you can select a value in the Resolve By Date field.
 When the maintenance task is completed, you can later update the record and select a value in the Resolution field. There are three tabs in this region used to view or associate data to this non-routine service request.

5. Use the Position Details tab to select the ATA code and position. Choose Go to navigate to the Select Position page to associate this ATA code with the master configuration.

This tabbed region also displays fields for deferring this non-routine service request to MEL or CDL instructions.

6. Use the Notes tab to view or add detail notes. You have the option to add a note type, descriptive text, and set the visibility (private, public, or publish).
7. Use the Maintenance Requirement tab to view or create maintenance requirements for this non-routine request.
8. The MEL/CDL Instructions region is used to associate one of these types of deferrals to the non-routine service request. Select the appropriate value in the MEL/CDL Type field.

9. Select Associate MEL/CDL Instructions

The non-routine request is created and deferred per the applicable MEL or CDL instructions. Associated (M) and (O) procedures are added to the visit

10. Select Apply to save your work.

Related Topics

Minimum Equipment List (MEL) and Configuration Deviation List (CDL) Setup, page 8-9

Calculating Maintenance Requirement Due Dates

You can use Unit Maintenance Plan to estimate due dates and any repetitive maintenance requirement for the selected unit.

Prerequisites

- ☐ Maintenance requirement records must exist in the database. The relevant maintenance requirements must be initialized, and the information for Last Accomplishment must be set up. A product classification forecast and/or an unit utilization forecast must be defined to calculate due dates.

To calculate maintenance requirement due dates:

1. Retrieve the unit maintenance plan record for which you want to view maintenance requirement details (see Finding Unit Maintenance Plan Records, page 8-3).
2. Select the record, and choose Calculate Due Dates from the drop-down menu in the results header. Click the Go button.
3. Unit Maintenance Plan will calculate the due dates for the selected record, then confirm that it has done so.

Viewing Unit Maintenance Requirement Detail and History

The Unit Maintenance Plan module allows you to view maintenance requirement details.

Prerequisites

- ☐ Maintenance requirement records must exist in the database. The Unit configuration records from which you want to derive unit maintenance plan must exist in the database. It will help to know at least part of the unit name, part or serial number, or MR Title of the sought after unit(s) in order to conduct a search.

To view Unit Maintenance requirement history:

1. Retrieve the unit maintenance plan record for which you want to view details (see Finding Unit Maintenance Plan Records, page 8-3).
2. Select the record, and choose View Details & History from the drop-down menu. Click Go.
3. The View MR Detail and History page appears displaying the history and details relevant for the selected record.

View Maintenance Requirement Detail & History page

View Maintenance Requirement Detail & History

Unit Name	C70-3, SN 512, Tail # VA762	Item	C70-3	Serial Number	512
Status		Program Type	Routine Check	Title	VA-C70-53-340-00
Tolerance Flag		Implement Status	Mandatory	Description	Corrosion Prevention - Right Compartment Floor Structure
Date Run	21-MAY-2010	Due Date		Category	Airframe
Remarks		Revision	16	Due Counter	
Counter Name		Visit Number	16	Visit Start Date	24-MAY-2005
Visit End Date	28-JUL-2005	Visit Status	Partially Implemented		

Due Date	Set Due Date	Accomplished Date	Remarks	Status
No records were found matching the given criteria...				

The following table provides information about the fields in the View Maintenance Requirement Detail and History page.

Description of fields in the View Maintenance Requirement Detail and History page

Field	Description
Due Date	Is the date on which an imminent task is due to be completed. Click the calendar icon to display a calendar from which you can select a due date.
Set Due Date	Determines the calendar due date for the maintenance requirement.
Accomplished Date	Indicates the date on which the maintenance was performed.
Status	Maintenance requirements can be in different statuses. These are provided by default in Oracle Complex Maintenance, Repair, and Overhaul, but can be expanded by the user as needed. This search argument field permits specifying a status in the retrieval query

- Select 'Cancel' to return to previous page.

Viewing Group Maintenance Requirements

Unit Maintenance Plan allows you to view group Maintenance requirements.

Prerequisites

- ☐ Maintenance requirement records must exist in the database.

To group Maintenance requirements:

1. Retrieve the unit maintenance plan record for which you want to view group maintenance requirement details (see Finding Unit Maintenance Plan Records, page 8-3).
2. Select the record, and choose View Group MR from the drop-down menu. Click Go.
3. The Unit Maintenance Plan - Group MR page appears displaying the group maintenance requirements relevant for the selected record.

Group Maintenance Requirement page

Oracle Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Overview | Utilization Forecast | Unit Schedule | Flight Schedules | Non-routines

Logged In As TSMITH

Group Maintenance Requirement

Title VA-C70-53-340-00 Due Date
Item C70-3 Serial Number 512
Visit Number 16
Visit End Date 28-JUL-2005

VA-C70-53-340-00

SelectFocusTitleDescriptionItemSerial NumberStatus

No records were found matching the given criteria...

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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The following table provides information about fields in the Group Maintenance Requirement page.

Description of fields in the Group Maintenance Requirement page

Field	Description
MR Status	Maintenance requirements can be in different states. These states are provided by default in Oracle Complex Maintenance, Repair, and Overhaul, but can be expanded by the user as needed. This search argument field permits specifying a status in the retrieval query.

Field	Description
Visit Number	Refers to the Visit Number attribute of the visit template record retrieved.
Visit Date	Refers to the date on which the relevant maintenance visit is scheduled.

4. Select 'Cancel' to return to previous page.

Initializing Maintenance Requirements

To initialize a maintenance requirement:

1. Retrieve the unit maintenance plan record, see: Finding Unit Maintenance Plan Records, page 8-3).
2. Select Initialize MR, and choose Go. The Initialize Maintenance Requirement page appears.

3. In the Init Action field, select an initializing action. Choices are First Due, or Initial Accomplishment.
4. Select a date you want to set the initialization on, in the Set Date field.
5. To define first due or last accomplished counter values for the requirement, click Add More Rows. Enter information in the provided fields.
6. Select Apply to save your work.

Viewing Unit Maintenance Requirement Details

The Unit Maintenance Plan module can display all maintenance requirements applicable to a selected unit. You can sort the results by due date, category, program type, implement status, or group type. Maintenance Requirements with unspecified due dates appear at the top of the list by default. You can calculate the remaining time of a maintenance requirement based on many factors, including the usage counter, the UOM time remaining, and utilization forecast and maintenance requirement thresholds.

The system will allow the user to filter by maintenance requirement type or by status: Accomplish, Terminate, Initialized or Open.

Prerequisites

- ☐ The maintenance requirement records must exist in the database.

To view maintenance requirement details:

1. Retrieve the unit maintenance plan record for which you want to view maintenance requirement details (see Finding Unit Maintenance Plan Records, page 8-3).
2. Select the record, and choose View MR Details from the drop-down menu. Click Go.
3. The View Maintenance Requirement page appears displaying the information for that record.

View Maintenance Requirement page

Oracle Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Overview | Utilization Forecast | Unit Schedule | Flight Schedules | Non-routines

Logged In As TSMITH

Details

- Documents
- Routes
- Effectivities
- Relationships
- Affected Items**
- Visit Types

View Maintenance Requirement

Title: VA-C70-53-340-00 Status: Complete

Revision Number: 1 Version: 20-MAY-2005

Category: Airframe Program Type: Routine Check

Program Subtype: Mandatory Implement Status: Yes

Repetitive: First Service Type: On

Whichever Comes: No Follows After Accomplishment of: All

Billing Item: No

Quality Inspection Type: 20 HOURS

Down Time: Corrosion Prevention - Flight Compartment Floor Structure

Description:

Comments:

Descriptive Flexfields

* FMP Create Flexfield Context Value

Cancel

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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4. From the View Maintenance Requirement page, you can use the side navigation menu to navigate to the following pages:
 - Documents
 - Routes
 - Action
 - Effectivities
 - Relationships
 - Effected Items
5. Select 'Cancel' to return to the previous page.

Viewing Maintenance Requirement Thresholds

The Unit Maintenance Plan module allows you to view maintenance requirement thresholds.

Prerequisites

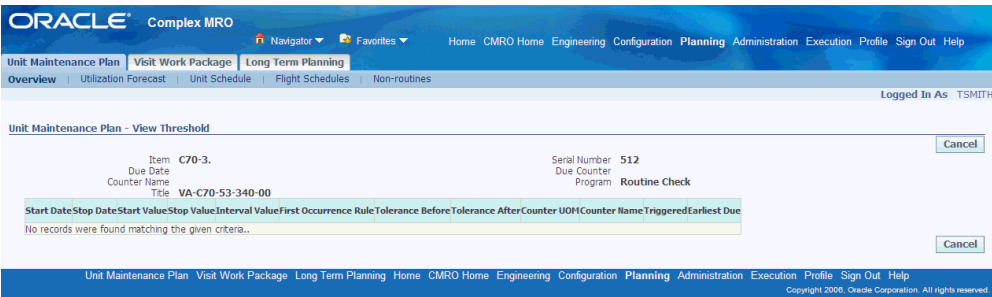
- ☐ Any relevant maintenance requirements must already be set up in Fleet Maintenance. The Unit configuration records from which you want to derive unit maintenance plan must exist in the database. It will help to know at least part of the unit name, part or serial number, or MR Title of the sought after unit(s) in order to

conduct a search.

To view maintenance requirement thresholds:

- 1. Retrieve the unit maintenance plan record for which you want to view maintenance requirement thresholds (see Finding Unit Maintenance Plan Records, page 8-3).
- 2. Select the record, and choose View Threshold from the drop-down menu. Click Go.
- 3. The Unit Maintenance Plan - View Threshold page appears, displaying the thresholds relevant for the selected record.

Unit Maintenance Plan - View Threshold page



The following table describes the fields in the View Threshold page.

Field	Description
Start Value	The start counter value of the range from which the interval specified is valid. Start value is mutually exclusive with the Stop value, and begins the range for the interval in relation to the associated counter. This field does not apply for one time maintenance requirements.
Stop Value	The stop counter value of the range before which the interval specified is valid. This value is mutually exclusive with the Start value, and ends the range for the interval in relation to the associated counter. This field does not apply for one time maintenance requirements.

Field	Description
Interval Value	The interval value for repetitive maintenance requirements, and drop-dead counter values for one time maintenance requirements. When used with one time maintenance requirements, interval will be a count down of the associated counter. When used with repetitive maintenance requirements, interval will represent the frequency of occurrence according to the associated counter.
Tolerance Before	The number of counter units of measure that is acceptable for maintenance requirement accomplishment before the specified interval. This aids in planning maintenance jobs.
Tolerance After	The number of counter units of measure that is permissible for maintenance requirement accomplishment after the specified interval. This value aids in planning maintenance jobs.
Start Date	The start date of the range before which the interval specified is valid. This field value is mutually exclusive with the Stop Date, and begins the range for the interval in relation to the associated counter. This field does not apply for one time maintenance requirements.
Stop Date	The stop date of the range before which the interval specified is valid. This date is mutually exclusive with Start Date, and ends the range for the interval in relation to the associated counter. This field is not applicable for one time maintenance requirements.
Counter UOM	The Unit of Measure as per the associated counter. This field value is returned when the counter is selected. This value is not editable.

4. Select 'Cancel' to return to previous page.

Finding Item Utilization Forecasts

Oracle Complex Maintenance, Repair, and Overhaul permits use of meta characters when you type a word, or part of a word, to use as a search argument. Use % to represent any string of zero or more characters. Use _ to represent any single character. For example, if the database contains a record with the value "ENGINE" in a field, typing "E%" will return all records where the field value begins with "E".

Prerequisites

- ☐ Any relevant maintenance requirements must already be set up in Fleet Maintenance. The Unit configuration records from which you want to derive unit maintenance plan must exist in the database. It will help to know at least part of the unit name, part or serial number, or MR Title of the sought after unit(s) in order to conduct a search.

To find an item utilization forecast:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Planning link. The Search Unit Maintenance Plan page of Unit Maintenance Plan appears.
2. Select the Utilization Forecast secondary tab. The Search Item page appears.

The following table provides information about the fields in the Search Item page.

Description of fields in the Search Item page

Field	Description
Item	Inventory identifying number. Note that Oracle Inventory does not store what is actually in stock, only what is available to stock, so in that way it is more like a catalog. Actual warehouse contents are stored in Oracle Installed Base. This field might contain an aircraft type, like "B777-200".
Search With	A pull-down menu that allows you to specify items with an associated forecast, or with no forecast, or with both.

Field	Description
Forecast Available	Indicates if a forecast is available for this item.
Product Classification	Displays the product classification number for the item.
Item Type	Refers to the group the product belongs to according to its use or category.

- Click Go. The lower half of the screen displays all matching records in the database.

View Item Search Results - Search Item page

The screenshot shows the Oracle Complex MRO Search Item page. The page has a navigation bar with links: Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, Help. Below the navigation bar, there are tabs: Overview, Utilization Forecast, Unit Maintenance Plan, Visit Work Package, Long Term Planning. The main content area is titled 'Search Item' and contains a search form with fields for 'Item' and 'Description', a 'Search With' dropdown menu, and 'Go' and 'Clear' buttons. Below the search form, there is a 'Search Results' section with a table of results. The table has columns: Select, Item, Description, Forecast Available, Product Classification, and Item. The results show four items: Capital Item KM001, Radhika Item1 aps take2 Radhika Item1 aps take2, Radhika Item2 aps p, and VG0205 New Item. The table also includes pagination controls: Previous, 1-4 of 4, Next.

Select	Item	Description	Forecast Available	Product Classification	Item
<input type="radio"/>	Capital Item KM001	This is a test item for item type Capital Item for AHL No	No	KM-PC31122003	Capital It
<input type="radio"/>	Radhika Item1 aps take2 Radhika Item1 aps take2		Yes	apspc	APSTYPE
<input type="radio"/>	Radhika Item2 aps p	Radhika Item2 aps p	Yes	apspc	APSTYPE
<input type="radio"/>	VG0205	New Item	Yes	PC0304	PTO Optic

Updating Item Utilization Forecasts

The Unit Maintenance Plan module allows you to create and update item configuration utilization forecasts.

Prerequisites

- ☐ Any relevant maintenance requirements must already be set up in Fleet Maintenance. The Unit configuration records from which you want to derive unit maintenance plan must exist in the database. It will help to know at least part of the

unit name, part or serial number, or MR Title of the sought after unit(s) in order to conduct a search.

To update an item utilization forecast:

- 1. Retrieve the part record with the forecast you want to update (see Finding Item Utilization Forecasts, page 8-26).
- 2. Select the record, and click Utilization Forecast. The Update Item Utilization Forecast page appears.

Update Item Utilization Forecast page

ORACLEOracle Complex MRO

[Home](#) [Engineering](#) [Configuration](#) [Planning](#) [Administration](#) [Execution Profile](#) [Sign Out](#) [Help](#)

[Unit Maintenance Plan](#) [Visit Work Package](#) [Long Term Planning](#)

Overview | **Utilization Forecast**

Confirmation • 1 records updated

Update Item Utilization Forecast

Product Classification **KM-OC31122003-1**

Item Type **Capital Item**

Item **Capital Item KM001**

Description **This is a test item for item type Capital Item for AHL**

Utilization Forecast

Previous1-1 of 1Next

Remove	Start Date	End Date	Usage Per Day	UOM
<input type="checkbox"/>	17-JUN-2004	24-JUN-2004	20	10P

Add More Rows

Previous1-1 of 1Next

CancelCopyApplyView

CancelCopyApplyView

Use the information in the following table to enter item utilization forecast details.

Description of fields in the Update Item Utilization Forecast page

Field	Description
Start Date	Marks the start of a utilization forecast period.
End Date	End of utilization forecast period. If left empty, Unit Maintenance assumes there is no end date and the forecast is unlimited.

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Field	Description
Usage Per Day	Estimates usage per day (as 100 miles per day).

- Enter the information in the fields provided. If no utilization forecast is defined, the page will be empty. To define a forecast, click Add More Rows. Enter information in the fields provided.

Enter Forecast Information - Update item Utilization Forecast page

ORACLE Oracle Complex MRO

Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning






Overview | Utilization Forecast

Update Item Utilization Forecast

Product Classification **KM-OC31122003-1** Item Type **Capital Item**

Item **Capital Item KM001** Description **This is a test item for item type Capital Item for AHL**

Utilization Forecast

Remove	Start Date	End Date	Usage Per Day	UOM
	17-JUN-2004	24-JUN-2004	10	10P
				
				
				
				

Add More Rows

Cancel Copy Apply View

- Click Apply to retain the utilization forecast information in the database.

Save Forecast Record - Update Item Utilization Forecast page

ORACLE Oracle Complex MRO

Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Overview Utilization Forecast

Confirmation • 1 records created

Update Item Utilization Forecast

Product Classification **KM-OC31122003-1** Item Type **Capital Item**

Item **Capital Item KM001** Description **This is a test item for item type Capital Item for AHL**

Utilization Forecast

Previous 1-1 of 1 Next

Remove	Start Date	End Date	Usage Per Day	UOM
<input type="checkbox"/>	17-JUN-2004	24-JUN-2004	10	10P

Add More Rows

Previous 1-1 of 1 Next

Cancel Copy Apply View

5. To remove a forecast from the list, select the Remove check box next to the forecast then click Apply.
6. Select 'Cancel' to return to the previous page.

Finding and Updating a Product Classification Utilization Forecast

In order to estimate due dates for the Maintenance Requirement applied to the Unit Maintenance Plan, you need to be able to convert the remaining time of a maintenance requirement UOM that is in a form other than a calendar date into a calendar date. The Utilization Forecast page helps to facilitate this calculation. For example, an estimate of driving 50 miles a day will translate the requirement of changing engine oil every 3000 miles to 60 days.

Prerequisites

- ☐ The Unit configuration records on which you want to base an utilization forecast and the Primary Product Classification must exist in the database.

To update a product classification utilization forecast:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, select the Planning link. The Search Unit Maintenance Plan page of Unit Maintenance Plan appears.

2. Select the Utilization Forecast secondary tab. The Search Part page appears.
3. Enter the information in the fields for which you know the value. Click Go. The lower half of the screen displays all matching records in the database.
4. Select the part that you want to create or update the product classification for, and click Utilization Forecast.
5. The Update Item Utilization Forecast page appears. Make any necessary changes. Click Add More Rows to enter new forecast data.
6. Click Apply to add the changes to the database.

Edit Records - Update Item Utilization Forecast page

Note: All Product Classification records are read-only.

To reset the form and start a new search, click on the Clear button.

Finding and Updating a Unit Configuration Utilization Forecast

The Unit Maintenance Plan module allows you to create and update unit configuration utilization forecasts.

Prerequisites

- ☐ Any relevant maintenance requirements must already be set up in Fleet Maintenance.

To create an Unit Configuration Utilization Forecast:

1. Using the Result Product Classification Tree Structure located on the left hand side of the page, double click on the Product Classification or Unit for which the utilization forecast is to be added or updated.

2. The Update Product Classification Utilization Forecast section appears directly to the right of the Product Classification Tree.
3. Click on the Add More Rows Icon to add a new utilization forecast.

Create Utilization Forecast - Update Unit Utilization Forecast page

The screenshot displays the 'Update Unit Utilization Forecast' page in the Oracle Complex MRO application. The page header includes the Oracle logo and navigation tabs: Unit Maintenance Plan, Visit Work Package, Long Term Planning, Overview, Utilization Forecast, Unit Schedule, Flight Schedules, and Non-routines. The main content area shows the 'Update Unit Utilization Forecast' section with a table for adding forecasts. The table has columns for Remove, Start Date, End Date, Usage Per Day, and UOM. Two rows are visible: one for '14-MAY-2005' with a usage of 4 and UOM 'UCY', and another for '14-MAY-2005' with a usage of 16 and UOM 'UHR'. An 'Add More Rows' button is at the bottom of the table. To the right of the table, there are fields for Product Classification (C70 Fleet Utilization Forecast), Item (C70-1), Unit (C70-1, SN 311, Tail # VA521), Item Type (AC Aircraft C70), and Serial Number (311). There is also a checkbox for 'Use Unit Utilization Forecast'. At the bottom right, there are buttons for Cancel, View, Copy, and Apply. The footer contains the text 'Copyright 2006, Oracle Corporation. All rights reserved.'

4. Enter a start date in the Start Date field or click on the calendar selector icon next to the date field to bring up a calendar from which you can select the desired date.
5. Enter the end date in the Start Date field or click on the calendar selector icon next to the date field to bring up a calendar from which you can select the desired date. Note that the end date must be later or on the same date as the start date.
6. Enter the usage per day in the Usage Per Day field.
7. Enter the UOM directly to the UOM field or partial of UOM followed by the generic substitution meta character% in UOM field, and click the search icon. Select the UOM from the search result.
8. Click 'Apply' to Save the record. Before saving the record, the system will check for duplicate records and for any overlap of the utilization forecast.

Transit/Line Maintenance and Scheduling

Transit maintenance and scheduling functionality allows users to import, view, update, edit or create a unit's utilization schedule, and then schedule maintenance at the defined opportunities. In addition to the normal transit visit inspections and requirements, various nonroutine requirements may arise due to defects discovered on the production floor or during operation of the unit. These may delay the next scheduled utilization. Flight schedule is imported into the application through integration with a flight operation system. Optionally, users may manually define a flight schedule using the Create Flight Schedule UI. The Unit Schedules UI displays the flight schedule for a particular unit over the time period specified by the planner. This page provides complete visibility over the unit's schedule and allows transit visit planners to plan

visits for the various maintenance opportunities, and deal with potential conflicts.

Related Topics

Viewing Unit Schedule, page 8-33

Creating Transit Visit from Unit Schedule, page 8-35

Viewing Unit Schedule Details, page 8-37

Maintaining Flight Schedule, page 8-41

Updating Transit Visit Schedule, page 8-43

Overview of Unit Schedules

The unit schedule page displays the different flight segments for a tail number and the scheduled visits or maintenance opportunities between flights. Flight schedules are imported into the application through an application program interface (API). You can also create a flight schedule manually using the Create Flight Schedule page. Transit visit planners can view flight details and identify where visits can be created. Select the appropriate related topic link to either view unit schedules from Unit Schedules page or from the Transit Technician Workbench.

Related Topics

Unit Schedules page, page 8-33

Transit Technician Workbench, page 14-10

Viewing Unit Schedule

The unit schedules are displayed in context of a unit in increments of minutes, hours or days. Planners may drill into the applicable unit/period intersection to create a visit for a maintenance opportunity, view an existing flight or visit, view potential conflicts or view a combination of these.

To view unit schedules:

1. Navigate to the Unit Schedules page.

Query for a unit schedule by unit name, item number, or serial number. Specify the start date and time. Enter a Display Increment and select a UOM to define the time period. Schedules are divided in specified time increments, for example, 2 hours or 2 days.

2. Click Go. The unit schedule appears in a table in the lower half of the page. The flight information spreads across the time frame defined by the display increment

and corresponding unit of measure.

The icons represent a conflict, maintenance opportunity, visit scheduled, flight scheduled, multiple events, or multiple events with maintenance opportunity. The following table defines each of the above mentioned entity.

Maintenance Opportunity	A Maintenance Opportunity is defined as any time period when a unit is available for maintenance.
Conflict	A Conflict is shown any time there is an overlap of successive events (visit or flights) or when the arriving/departing/visit organizations do not match.
Flight Scheduled	The Flight Scheduled icon indicates that a flight is scheduled during the corresponding time slot.
Visit Scheduled	The Visit Scheduled icon indicates that a visit has been scheduled in the corresponding time slot.
Multiple Events	The Multiple Events icon indicates that too many events to display are found for a time period. This may happen if the user has selected a big display increment.
Multiple Events with Maintenance Opportunity	This icon represents the following two conditions: Multiple Events and Maintenance Opportunity. The user can differentiate between a multiple events condition with or without an embedded maintenance opportunity.

You can do the following:

- Create a Transit visit.
- View conflict details.
- View the flight information for a time slot as well as view the preceding and the following event.
- View visit details like visit number, department, organization, start and end times, status, and so on.
- View multiple events found within a specified time period.
- Create visits if opportunities exist between multiple events.

Related Topics

Viewing Unit Schedule Details, page 8-37

Creating Transit Visit from Unit Schedule, page 8-35

Creating Transit Visit from Unit Schedule

Transit visit is a visit created from the Unit Schedule page in the context of a maintenance opportunity. The visit is created to fill the ground time slot for a unit. Maintenance Planners can create visits in 'Planning' status or along with the workorders in 'released' or 'unreleased' status.

Prerequisites

- ☐ A maintenance opportunity must exist for a unit. The unit configuration must exist in complete status. Default MR must be created with association to a visit type. MR must be of 'Unplanned' implementation type. Flight schedule must be created for the Unit, with behavior of following transit visit selected from one of the three attributes (Always Reschedule, Delete Visit, Never Reschedule). For flight schedule details, see Maintaining Flight Schedule, page 8-41.

To create a transit visit :

1. Click the Maintenance Opportunity icon corresponding to the time period during which you want to schedule the visit. The Create Transit Visit page appears. The values for the Unit Name, Organization and Department fields default based on the unit flight schedule information. The Item and Instance are derived based on the Unit Name. The Preceding and Succeeding Event information is displayed in the lower half of the page. You must take this into account to fill the visit duration

information (Start and End time).

Note: Preceding event can be an arrival flight or a visit. Succeeding event can be either a visit or a flight.

2. Select a visit type. The maintenance requirements (MR) with Implement Status of Unplanned and associated by default with the selected visit type (MRs associated when defining the visit type at the MR effectivity level), are automatically associated with the transit visit being defined. For more information, see *Associating Visit Types with a Maintenance Requirement., Oracle Complex Maintenance, Repair, and Overhaul User's Guide*

Enter Visit Details - Create Transit Visit page

The screenshot displays the 'Create Visit' page in the Oracle Complex MRO system. The page is titled 'Create Visit' and includes a 'Cancel', 'Revert', and 'Apply' button set at the top right. The form is divided into several sections: 'Indicates required field' (marked with an asterisk), 'Descriptive Flexfields', and 'Context Value'. The 'Indicates required field' section contains fields for Visit Name (Engine Check), Visit Type (Transit Check), Item (MRO-M1900), Organization (Vision Project Manufacturer), Sub Inventory, Service Request, Start Date (27-MAY-2010), Project Template, Unit (M-1900, Tail # 301), Serial Number (301), Department, Physical Locator, Service Category, and Priority. The 'Descriptive Flexfields' section includes Visit FF (Visit), Context Value (Visit Flex Field), Segment 1 (111), and Segment 2 (123). The 'Context Value' section has a note: 'Select Context Value and click Go to show relevant fields.' The page also features a navigation bar at the top with links for Unit Maintenance Plan, Visit Work Package, Long Term Planning, Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The user is logged in as TSMITH.

Enter other visit details. For information on visit definition, see *Creating Maintenance Visit Records, Oracle Complex Maintenance, Repair, and Overhaul User's Guide*.

3. Select the status in which to create the visit. You can create a visit either in status planning (no work orders are created yet), status production for scheduling (work order created in status unreleased for shop floor scheduling) or status production released (work order created in status released for immediate start of execution). The project parameters and project information are automatically created prior to pushing the visit to production in Released or Unreleased status.
4. Click Apply to save the record. The Update Visit page appears.

Update Visit page

If MRs are associated and the visit is created in Planning status, tasks corresponding to the MR are automatically created for the visit. Alternatively, if MRs are associated and the visit is created in Push to Production status, workorders corresponding to the MR are automatically created for the visit. A visit will not be created for a period that will not accommodate the total default MRs for the visit type. You can add Planned Tasks or Unplanned tasks to the visit in addition to the default tasks created if any. For information, see *Associating Tasks with Maintenance Visits, Oracle Complex Maintenance, Repair, and Overhaul User's Guide*.

Note: A warning is displayed if the visit duration is not sufficient to complete the associated tasks to the visit as well as a 'Calculated End Date' being displayed.

The system will automatically adjust the visit schedule should flight information data change between visit creation and visit execution.

Viewing Unit Schedule Details

The Unit Schedule page identifies where flights and maintenance visits have been created, as well as where visits can be created or 'maintenance opportunities' exist. The unit schedules are displayed in context of a unit in increments of minutes, hours or days. Maintenance opportunities are identified whenever there are available times between flights or flights and other scheduled visits. You can also view schedule conflicts. Conflicts occur whenever two flights or a flight and a maintenance visit overlap either in the scheduled arrivals and departures (start and end dates for visits) or

in the defined organizations. Maintenance Planners can quickly identify where visits might need to be canceled or rescheduled, drill into the applicable unit/period intersection to create a visit for a maintenance opportunity, view an existing flight or visit, view potential conflicts or view a combination of these.

To view unit schedule details:

1. Navigate to the Unit Schedules page and query for a unit record. The schedule, based on the time increment specified in the search criteria, is displayed in the lower half of the page.
2. Click the Visit Scheduled icon to navigate to the Update Visit page and view the visit details. You can update the information of the visit. If the visit is in planning status, you can push the visit to production in either released or unreleased status.
3. Click the Flight Scheduled icon to navigate to the View Unit Schedule page. The Unit flight schedule is displayed with information on the unit, flight number, segment, departure and arrival organization and departments, departure and arrival estimated and actual times, and so on. You can also view the Preceding and Succeeding events, which can be either visits or flights.

A link to view the preceding and succeeding flight or visit is displayed. If multiple visits start at the same time (for a preceding or following event) a warning display message is shown at top of screen and either the preceding or following event information is blank.

View Unit Schedule page

ORACLE Complex MRO [Home](#) [Home](#) [Engineering](#) [Configuration](#) [Planning](#) [Administration](#) [Execution](#) [Profile](#) [Sign Out](#)

[Unit Maintenance Plan](#) [Visit Work Package](#) [Long Term Planning](#)

[Overview](#) | [Utilization Forecast](#) | [Unit Schedule](#) | [Flight Schedule](#)

View Unit Schedule

Unit	M-1900, Tail # 301	Item	MRO-M1900	Serial Number	301	Cancel
Flight Number	0610	Segment	MRO-EM3			
Departure Organization	JFK	Arrival Organization	EM3			
Departure Department	Base Maint	Arrival Department	W-Maint			
Estimated Departure Date/Time	10-Jun-2005 05:47:14	Estimated Arrival Date/Time	10-Jun-2005 09:47:34			
Actual Departure Date/Time		Actual Arrival Date/Time				
Preceding Event Information		Succeeding Event Information				
		Flight Number	0610			
		Departure Organization	MRO			
		Departure Department	MRO Dept 1			
		Estimated Departure Time	10-Jun-2005 09:25:16			
		Actual Departure Time				
						Cancel

[Unit Maintenance Plan](#) | [Visit Work Package](#) | [Long Term Planning](#) | [Home](#) | [Home](#) | [Engineering](#) | [Configuration](#) | [Planning](#) | [Administration](#) | [Execution](#) | [Profile](#) | [Sign Out](#)

4. Click the Conflicts icon to view the conflict in unit flight schedules and previously created visits for the same unit. A conflict can exist when ever the ending date and time, or arrival times for flights, overlaps with the subsequent events date and time, or departure times for flights. A conflict is also displayed when the preceding and

subsequent locations differ. These locations can be based on organization or organization and department, depending on the defined profile value.

The Multiple Events Found with Conflicts page includes the list of visits and flights that are in conflict with the preceding or the following event or with one another. The list of visits shows the visit number, visit name, department, organization, start and end date and time, visit status. The list of flights shows the flight number, segment, department, organization, and estimated and actual times.

View Conflicts - Multiple Events Found with Conflicts page

Multiple Events Found with Conflicts

Conflict

Unit: [C70-1, SN 311, Tail # VAS21](#)

Item: [C70-1](#)

Serial Number: [311](#)

Start Date and Time: 21-May-2010 04:35:42

End Date and Time: 22-May-2010 04:35:42

[Show Conflict Messages](#)

List of Flights

Event No.	Conflict	Flight Number	Segment	Departure Organization	Departure Department	Arrival Organization	Arrival Department	Departure Time	Arrival Time
No results found.									

List of Visits

Event No.	Conflict	Visit Number	Visit Type	Visit Name	Status	Organization	Department	Start Time	End Time	Cancel
1		26	Component Repair	MD Visit 3	Implemented	SFM	ESHOP-SFM	12-May-2010 00:00:00	26-May-2010 02:00:00	Cancel
2		29	Engine Overhaul	MD Visit 2	Implemented	SFM	BMAINT-SFO	20-May-2010 00:00:00	25-May-2010 06:00:00	Cancel
3		30	Component Repair	MD Visit 2	Planning	SFM	LMABNT-SFO	21-May-2010 00:00:00	07-Jun-2010 00:10:00	Cancel

5. You can modify the planned start and end times for a visit. Optionally, click the Visit Number link to navigate to the Visit Details page and modify the details of the visit.
6. Click the Multiple Events icon to navigate to the Multiple Events Found page. This UI is similar to the Unit Schedule Conflict Details UI and displays all the events found within the specified time period. You can also drill into a particular event to view the event's details.

Multiple Events Found page

ORACLE Complex MRO Home Home Engineering Configuration Planning Administration Execution Profile Sign Out

Unit Maintenance Plan Visit Work Package Long Term Planning

Overview | Utilization Forecast | **Unit Schedule** | Flight Schedule

Multiple Events Found

Cancel

Unit M-1900_Tail # 301 Start Date and Time **10-Jun-2005 11:56:12**
 Item **MRO-M1900** End Date and Time **10-Jun-2005 14:56:12**
 Serial Number **301**

List of Flights

Event No.	Flight Number	Segment	Departure Organization	Departure Department	Arrival Organization	Arrival Department	Departure Time	Arrival Time
No data exists.								

List of Visits

Event No.	Visit Number	Visit Type	Visit Name	Status	Organization	Department	Start Time	End Time	Cancel
1	<u>156</u>	A Check	0610	Planning	JFK	Line Maint	10-Jun-2005 11:57:00	10-Jun-2005 12:27:00	
2	<u>157</u>	Transit Check	0610	Planning	JFK	Line Maint	10-Jun-2005 12:28:00	10-Jun-2005 12:58:00	
3	<u>158</u>	Overnight Check	0610	Planning	JFK	Line Maint	10-Jun-2005 12:59:00	10-Jun-2005 14:56:00	

Cancel

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Planning | Home | Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out

- Click the Multiple Events with Maintenance Opportunity icon to navigate to the Multiple Events Found with Maintenance Opportunities page.

Multiple Events Found with Maintenance Opportunities page

ORACLE Complex MRO Home Home Engineering Configuration Planning Administration Execution Profile Sign Out

Unit Maintenance Plan Visit Work Package Long Term Planning

Overview | Utilization Forecast | **Unit Schedule** | Flight Schedule

Multiple Events Found with Maintenance Opportunities

Cancel

Unit M-1900_Tail # 301 Start Date and Time **10-Jun-2005 17:56:12**
 Item **MRO-M1900** End Date and Time **10-Jun-2005 20:56:12**
 Serial Number **301**

[Show Maintenance Opportunity Details](#)

List of Flights

Event No.	Maintenance Opportunity	Flight Number	Segment	Departure Organization	Departure Department	Arrival Organization	Arrival Department	Departure Time	Arrival Time
No data exists.									

List of Visits

Event No.	Maintenance Opportunity	Visit Number	Visit Type	Visit Name	Status	Organization	Department	Start Time	End Time	Cancel
1		<u>159</u>	A Check	0610	Planning	JFK	Line Maint	10-Jun-2005 14:57:00	10-Jun-2005 18:00:00	
2		<u>160</u>	Transit Check	0610	Planning	JFK	Line Maint	10-Jun-2005 18:01:00	10-Jun-2005 19:20:00	
3										

Maintenance Opportunity

Cancel

An icon representing a maintenance opportunity enables you to differentiate between a Multiple Events condition with or without an embedded maintenance opportunity. Click this icon to navigate to a UI displaying all events found within the specified time period, and also providing a link to the Create Transit Visit UI. You can create a maintenance visit during the unit's down time, and based on the

facility's capabilities and the applicable unit's defined maintenance plan.

Overview of Flight Schedules

Flight schedules are imported into the application through integration with Flight Operation Systems. You can also view flight schedules for a particular unit over a specified time using the Unit Schedules page. You can set up flight schedules in two ways: through the Create Flight Schedule page or through the Transit Technician workbench. Select the appropriate related topic link to set up flight schedules.

Related Topics

Create Flight Schedule page, page 8-41

Transit Technician Workbench, page 14-10

Maintaining Flight Schedule

You can define flight schedules manually through the Flight Schedule page. You can search for, view, edit, create or remove the applicable flights.

To create a flight schedule:

1. Click the Flight Schedule secondary tab. The Search Flight Schedules page appears. Enter your search criteria to view the list of flights scheduled and the flight details.
2. The page refreshes with details about the Unit, Flight Number, Segment, Departure Organization, Arrival Organization, Estimated Departure and Arrival Time, Actual Departure and Arrival Time. Click the View/Edit icon to navigate to the Update Flight Schedule page, and view or edit the flight details.

ORACLE® Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out

Unit Maintenance Plan Visit Work Package Long Term Planning

Overview Utilization Forecast Unit Schedule **Flight Schedules** Non-routines

Logged In As TSMITH

Search Flight Schedules

Unit: Flight Number:
 Item Number: Serial Number:
 Departure Organization: Arrival Organization:
 Start Date: End Date:
 (example: 21-May-2010 19:45:00)

Go Clear

Create

Unit	Flight Number	Departure Segment Organization	Arrival Organization	Estimated Departure Time	Estimated Arrival Time	Actual Departure Time	Actual Arrival Time	View/Edit Remove
C70-2, SN 412, Tail # VA682	310	DFW-JFK DFW	JFK	01-Oct-2006 14:00:00	01-Oct-2006 17:00:00			
C70-2, SN 412, Tail # VA682	315	JFK-DFW JFK	DFW	01-Oct-2006 18:30:00	01-Oct-2006 21:30:00			
C70-2, SN 412, Tail # VA682	320	DFW-SFM DFW	SFM	01-Oct-2006 23:00:00	02-Oct-2006 03:00:00			
C70-2, SN 412, Tail # VA682	325	SFM-DFW SFM	DFW	02-Oct-2006 15:00:00	02-Oct-2006 19:00:00			
C70-2, SN 412, Tail # VA682	330	DFW-JFK DFW	JFK	02-Oct-2006 20:30:00	02-Oct-2006 23:30:00			
C70-2, SN 412, Tail # VA682	335	JFK-DFW JFK	DFW	03-Oct-2006 01:00:00	03-Oct-2006 04:00:00			
C70-2, SN 412, Tail # VA682	340	DFW-SFM DFW	SFM	03-Oct-2006 14:00:00	03-Oct-2006 18:00:00			
C70-2, SN 412, Tail # VA682	345	SFM-DFW SFM	DFW	03-Oct-2006 19:30:00	03-Oct-2006 23:30:00			
C70-2, SN 412, Tail # VA682	350	DFW-JFK DFW	JFK	04-Oct-2006 01:00:00	04-Oct-2006 04:00:00			
C70-2, SN 412, Tail # VA682	355	JFK-DFW JFK	DFW	04-Oct-2006 14:00:00	04-Oct-2006 17:00:00			

- To create a new flight schedule, click Create on the Search Flight Schedules page. The Create Flight Schedule page appears. Define a flight for a unit with the relevant arrival and departure information. Select a Synchronization Rule for the visit that will be created for the maintenance opportunity after this flight.

The synchronization rule determines if the system will automatically reschedule a subsequent visit (Always Reschedule), delete it (Delete) or allow the planner to manually make the required changes (Never Reschedule). This behavior is always in relation to a Transit Visit (created for a maintenance opportunity) that follows the flight in context.

ORACLE® Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out

Unit Maintenance Plan Visit Work Package Long Term Planning

Overview Utilization Forecast Unit Schedule **Flight Schedules** Non-routines

Logged In As TSMITH

Create Flight Schedule

* Indicates required field

* Unit: M-1900, Tail # 301

* Flight Number: 340

* Departure Organization: JFK

* Departure Department: LMAINT-JFK

* Estimated Departure Time: 29-May-2010 00:00:37
 (example: 25-May-2010 19:45:00)

Actual Departure Time:
 (example: 25-May-2010 19:45:00)

Synchronization rule for following Visit:

☒ Always Reschedule
☐ Delete
☐ Never Reschedule

* Segment: DFW-JFK

* Arrival Organization: BMS

* Arrival Department: Operations

* Estimated Arrival Time: 30-May-2010 00:00:00
 (example: 25-May-2010 19:45:00)

Actual Arrival Time:
 (example: 25-May-2010 19:45:00)

Cancel Apply

Cancel Apply

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out

- Select Apply to save your work.

- The Actual date and time for a flight arrival and departure can be recorded only if the prior event's actual date and time have been recorded.
- You cannot update the department, organization or estimated date and time if the actual date and time has been entered for the following event of the same unit.
- You can delete a flight schedule for a unit if the actual date and/or time for this event has not been recorded.

Updating Transit Visit Schedule

Maintenance planners can modify a visit as requirements arise or when the visit is out of sync with the utilization of the applicable unit. The important attributes to keep in synchronization are the preceding utilization's end date, time, organization, department and space (optional) and the subsequent utilization's start date. A conflict is created when visits are out of sync, that is, overlap with each other or with scheduled flights.

To update a transit visit:

1. Navigate to the Update Visit page by clicking the Visit Scheduled icon or through the Unit Schedule Conflict Details page. You can modify the Organization and Department (until the visit has been released), Planned End Time, Visit Name, and Start Time. For associated tasks, you can update the Department (until the visit has been released), Service Request, Cost, Start from Hours, and Task Name.

Note: If the visit has been pushed to production, the organization cannot be updated hence the visit must be cancelled and re-created.

2. You can delete a visit from the Unit Schedule Conflict Details page as well as from the Multiple Events pages. When a unit schedule is deleted, the transit visit created

for the unit schedule and the workorders in production are deleted. If the visit is in planning status, all the visit tasks are deleted and the associated workorders (if created in draft status for costing purpose) and scheduled materials are cancelled. If the visit is in released status, all the visit tasks, associated workorders, and scheduled materials are cancelled.

Working with Maintenance Visits

This chapter covers the following topics:

- Overview
- Creating Maintenance Visit Records
- Push to Production
- Associating Tasks with Maintenance Visits
- Associating Maintenance Requirements to a Visit
- Creating Visit Tasks Unassociated with Routes
- Setting up Stages for Tasks
- Updating Visit Task Headers
- Visit Costing and Pricing
- Visit Pricing
- Closing a Visit

Overview

Transportation services, including aviation, railway and marine require complex and high-valued unit maintenance. Maintenance of such systems is complex and expensive, and organizations seek to minimize operational costs while maximizing operational revenues.

In addition to the conflicting requirements of service availability versus service reliability, a maintenance planner seeks to optimize a maintenance plan, taking into consideration the following:

- Service efficiency: Do not replace a unit component or the unit itself any sooner than economically necessary.
- Constrain offline maintenance duration: Organizations earn revenue when their

units are in operation, not when under maintenance.

- Constrain maintenance cost: Provide an infrastructure that permits maximum skilled worker productivity. Sequence maintenance tasks based on efficiency dependencies, and historical service records that help predict maintenance requirements.
- Meet safety and regulatory mandates.

The Visit Work Package module permits a maintenance planner to organize a maintenance visit for an equipment unit, whether the unit be at a maintenance base, or in the field. The module provides process-oriented, task-based procedures to perform essential maintenance visit management tasks. See:

- Creating Maintenance Visit Records, page 9-4
- Associating Tasks with Maintenance Visits, page 9-11
- Associating Item Serial Numbers and Service Requests to Tasks, page 9-21
- Creating Visit Tasks Unassociated with Routes, page 9-22
- Defining Visit Task Hierarchy, page 9-26
- Defining Visit Cost Structure, page 9-28

Visit Work Package

Planning capabilities to an organization are provided. Visit Work Package permits a maintenance planner, skilled in the maintenance of the firm's units, and aware of cost and complexity, to organize maintenance tasks for a unit based on unit availability and forecasted maintenance requirement due dates.

A unit is treated as a hierarchy of other units and/or positions. The advantage of supporting such a unit structure is the capability to associate maintenance requirements with increasing component granularity. Maintenance requirements can be tracked at the unit level or at any of the unit's subcomponents. This allows forecasted requirements to move with subcomponent from one unit to another. This is especially important in an industry like aviation.

Visit Work Package enables the planner to group maintenance requirements applicable to a unit and its subcomponents into a single maintenance event. In defining the maintenance visit, the planner can add planned and unplanned maintenance requirements and individual maintenance tasks. The individual tasks within a visit can be structured to optimize work performed on the production floor. Planners can also manage maintenance visits to the individual task level, based on the estimate costs at the task, route, task group, task package, and visit levels.

Key Business Processes

Visit Work Package supports the following business processes:

Equipment-Based Maintenance Visit Definition

Visit Work Package provides a maintenance planner with the ability to create and manage a maintenance visit. A visit definition connects a unit with a block of tasks, a location where the maintenance work takes place, and a period of time in which the work is accomplished.

Adding Forecasted Maintenance Requirements to Visits

When creating tasks for a maintenance visit, the planner will usually select forecasted requirements from Unit Maintenance Plan. By adding these requirements, the associated routes, and all the routes for any child maintenance requirements are added to the visit as tasks. Through the associated routes, the material and resource requirements are planned for at the task level. Additionally, any technical dependencies between associated routes, defining the sequence in which the work must be accomplished, are automatically created between the visit's tasks.

Adding Unplanned Maintenance Requirements to Visits

In an industry like aviation, unplanned or non-routine requirements make up the majority of the work performed during production. These requirements are added to a visit based on discoveries made during the inspection process. These requirements may be added to a visit any time during the planning and production phases of a visit. When adding them during the production phase, the Push to Production function must be manually initiated from Visit work Package in order to create work orders for the new visit tasks.

In addition to non-routine maintenance added to a visit, unplanned requirements may be used for maintenance performed on third-party units. In this case, the forecasted maintenance is being tracked by outside parties and contracted to the CMRO user. After adding these requirements to a visit, maintenance will be tracked through the production process in the same way, regardless of whether the requirement is planned or unplanned.

Adding Unassociated Repair Tasks to Visits

If a job needs to be done on an equipment unit, for a requirement not tracked by Unit Maintenance Plan or defined in Fleet Maintenance Program, the planner will create an unassociated repair task. These tasks are not associated with a route, but the scope of the work to be accomplished is manually described at the task header. Unassociated tasks are intended to address minor, non-routine repairs.

Resource Schedule Definition

Efficient maintenance planning seeks to smooth the workload curve. Before a shop visit duration can be accurately determined, an organization's skilled workers' schedules and availability must be considered. Using Long Term Planning's Resource Leveling, the planner can view the resource capacities for visit requirements defined in Visit Work

Package.

Visit Task Cost Structure Definition

To calculate the costs incurred during a maintenance visit, a cost structure must be defined, so that labor, parts, and materials cost transactions associated with tasks can be configured, recorded, and accumulated using other Oracle eBusiness Suite modules, and used to account for overall visit costs. The cost structure is implied by the parent-child relationship between tasks. After costs have been defined by item and unit of measure, summary tasks, representing the maintenance requirements, can be defined as control breaks for subtotal cost calculations at any point in the visit hierarchy.

Visit Task Hierarchy Definition

Visit Work Package permits the maintenance planner to precisely define the order of completion of all tasks that comprise a maintenance facility visit. The precedence order is established by parent-child relationships such that a child task has as many parents as it is technically dependent on. This feature ensures that complex routes are correctly planned and accomplished. Technical dependencies defined between routes for a maintenance requirement in Fleet Maintenance Program are automatically used to create a hierarchical relationship between a visit's tasks. This sequence of tasks within a visit is used to calculate the derived completion date of a visit, allowing the planner to make sure that it does not exceed the visit's defined end date.

Visit Costing and Pricing

Costing and estimating the price for a service is very important for any service organization. Visit Work Package enables the maintenance planner to estimate the cost of an in-house maintenance visit, and calculate the visit price as a third-party service provider. The visit cost and price estimation enables the maintenance organization to calculate the profit, on providing such a service, before sending the quotation to the customer. By comparing the historical data including estimated costs and actual costs for visits, maintenance requirements, and tasks, the maintenance planner can plan the cost of future visits effectively.

Creating a Project for a Maintenance Visit

Oracle Complex uses Projects as part of its maintenance planning and production flows. A project is created for each visit work package and project tasks assigned to it. A visit's corresponding project is used in the maintenance execution flow to collect costs associated with resource and material transactions performed in CMRO's Production module. Project Manufacturing's standard billing functionality can be used to generate the required reports for the corresponding visit work packages.

Creating Maintenance Visit Records

A maintenance visit represents the intersection of several entities:

- Equipment to be maintained

- Location where the maintenance jobs will take place
- Period of time, called a visit slot, during which the maintenance will be accomplished
- Maintenance requirements to be completed during the visit

The number of tasks that can be in a visit and the duration a visit have no limits.

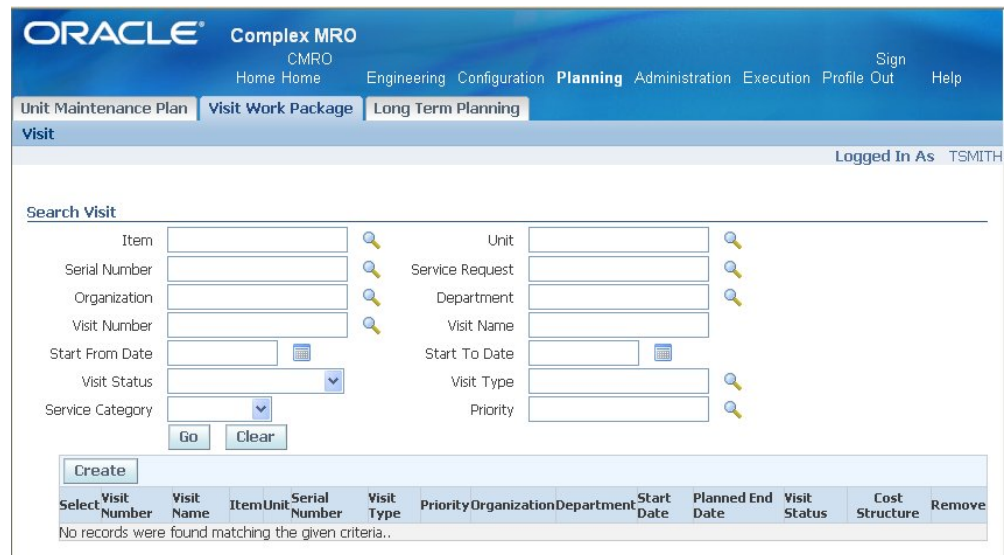
The goal of the maintenance planner is to schedule requirements within the forecasted due by dates at capable facilities, while minimizing a unit's down time. The first process in creating a visit is to define the visit header. Its attributes include a name, number, organization, description, department, visit type, inventory item, serial number, etc. After the header has been created, maintenance requirements are added to the visit, which create tasks to complete the visit definition. Tasks can be attached to the visit from the maintenance plan associated through Unit Maintenance Plan, or through unplanned requirements from Fleet Maintenance Program, or as ad hoc tasks.

To create a maintenance visit record:

1. Navigate to the Create Visit page.

The Search Visit page appears.

Search Visit



ORACLE® Complex MRO
CMRO



Home Home Engineering Configuration **Planning** Administration Execution Profile Out Sign Help



Unit Maintenance Plan **Visit Work Package** Long Term Planning



Visit


Logged In As TSMITH



Search Visit



Item  Unit 



Serial Number  Service Request 

Organization  Department 

Visit Number  Visit Name

Start From Date  Start To Date 

Visit Status  Visit Type 

Service Category  Priority 

Select	Visit Number	Visit Name	Item Unit	Serial Number	Visit Type	Priority	Organization	Department	Start Date	Planned End Date	Visit Status	Cost Structure	Remove
No records were found matching the given criteria..													

2. Select your search criteria and choose Create to launch the Create Visit page.
3. Select information in the following fields:
 - Visit Name

- Visit Type
- Item
- Unit: The unit configuration
- Service Request
- Category
- Serial Number
- Organization
- Department
- Start Date
- Description
- Priority: A value that defines the priority assigned to a visit. For example, High, Medium, and Low, or 1,2, and 3, respectively. Visit priority values should be the same as currently used by WIP and defined by the lookup WIP_EAM_ACTIVITY_PRIORITY.
- Project Template

The screenshot shows the 'Create Visit' form in the Oracle Complex MRO application. The form is titled 'Create Visit' and has a 'Visit' tab selected. It contains various input fields for creating a visit record. The 'Visit Name' is 'Engine Check', 'Visit Type' is 'Transit Check', 'Item' is 'MRO-H1900', 'Organization' is 'Vision Project Manufacturer', 'Sub Inventory' is blank, 'Service Request' is blank, 'Start Date' is '27-MAY-2010', 'Project Template' is blank, 'Unit' is 'M-1900, Tail # 301', 'Serial Number' is '301', 'Department' is blank, 'Physical Locator' is blank, 'Service Category' is blank, and 'Priority' is blank. There is a 'Description' field with a small icon. Below the main fields is a 'Descriptive Flexfields' section with 'Visit FF' set to 'Visit', 'Context Value' set to 'Visit Flex Field', and 'Segment 1' set to '111' and 'Segment 2' set to '123'. Buttons for 'Cancel', 'Revert', and 'Apply' are located at the top right and bottom right of the form.

To create a single visit record for multiple units and/or tracked items, leave the Unit field blank. When a unit is selected, the visit record is created only for that unit.

4. Select Apply to save your work and display the Update Visit page. See Associating Tasks with Maintenance Visits, page 9-11.

Defining Stages for a Visit

You can define the stages for a visit, Stages can also be specified when associating a route to a maintenance requirement. When this maintenance requirement is assigned to a visit, the visit tasks automatically inherit the stages specified during the MR-Route association. The stage numbers are predefined for all visits.

To set up stages for a visit:

1. Navigate to the Update Visit page.

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visit

Logged In As: TSMITH

Update Visit

* Indicates required field

Cancel Revert Validate Go Apply

Visit Number: 44

Visit Type: Transit Check

Unit: M-1900, Tail # 301

Organization: Vision Project Manufactur

Sub Inventory:

Priority:

Service Request:

Project Template: AHLT1202463224

Start Date: 27-MAY-2010

Planned End Date:

End Date:

Due By Date:

Description:

Descriptive Flexfields

* Visit FF: Visit

Context Value: Visit Flex Field

* Segment 1: 111

* Segment 2: 123

Cancel Revert Validate Go Apply

Visit Name: Engine Check

Item: MRO-M1900.

Serial Number: 301

Department:

Physical Locator:

Visit Status: Planning

Service Category:

Simulation Plan: Primary Plan

2. Select Stages to display the Visit Stages pages.
3. In the Stage List table, enter a name and duration for the stage. The Stage Start/End Time is derived from based on the Visit Start Time, Visit Department, Department Shift, and Stage Duration. The Duration must be an integer greater than or equal to 0 and the stage name must be unique within one visit.

Note: If you do not want all of the stages defined in setup for a particular visit, you can leave the name blank and the duration left at 0.

Oracle Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visit

Details
Visit Tasks
Maintenance Requirements
Cost Details
Visit Stages

Visit Stages

Visit Number 44
Unit M-1900, Tail # 301
Serial Number 301

Visit Type Transit Check
Start Date 27-MAY-2010
End Date

Item MR0-M1900.
Organization Vision Project Manufacturing USD
Department

Stage List

Stage Number	Name	Duration	Planned Start Date	Planned End Date	Actual Date	Descriptive Flexfields
1	Clean	3				00
2	Oil Check	2				00
3	Servicing	5				00
4	Install Parts	2				00
5		0				00
6		0				00
7		0				00
8		0				00
9		0				00
10		0				00

Cancel Revert Apply

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | **Planning** | Administration | Execution | Profile | Sign Out | Help

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4. Select Apply to save your work. The Planned Start and End time changes based on the duration specified.

Preparing the Maintenance Visit for Production Planning

Once you have finished developing and refining the structure of a maintenance visit, you can transfer the visit, including the visit header and all of the associated tasks to Oracle Complex Maintenance, Repair, and Overhaul Production Planning for final adjustments before the maintenance project is started.

To validate a visit:

1. Navigate to the Visit page.
2. Select the visit record and choose Validate.

Retrieving Existing Maintenance Visit Records

Maintenance planners need to retrieve existing maintenance visit records for reference or new visits based on an existing visit. The Search Visit page provides the ability to search and display all maintenance visits regardless of their status.

To retrieve existing maintenance visit records:

1. Navigate to the Search Visit page and search for records.
2. To validate a visit before releasing to production, select the pertinent record, and choose Validate.

Note: You can only validate visits that are in the Planning Status.

3. To view the cost and/or price information for the visit, choose Cost and Price to display the Visit Cost and Price page
4. To view the Maintenance Requirements for the visit, choose Maintenance Requirements
5. To search tasks associated with the visit, select Search Tasks to display the Search Visit Task page.
6. To view the task cost structure for a visit, choose Cost Structure.

Push to Production

If the visit structure is logically correct, push the visit to production on the Visit Overview page. Optionally, this function is also available in the Visit Details page. The visit structure logic is checked, and the process creates an associated project and task. A master work order is created for the visit and the visit's requirements, and associated work orders are created for the visit's tasks. Visit tasks are exported to Oracle Projects as a complete set.

To push a job to production:

1. Navigate to the Search Visit page, and search for your visit record.
2. A complete visit, or selected maintenance requirements in a visit are pushed to production. To push a complete visit to production, with a visit in context from the Visit Details page, or select the visit from the results table and choose either Push to Production (Jobs Released) or Push to Production (Jobs Unreleased).

When you create work orders for tasks with Item based resource requirements, the requirement quantities are multiplied by the work order's instance quantity.

Both create work orders for the visit and tasks. If you choose to push the visit to production with jobs in unreleased status, all the date validations, accounting period validations and scheduling hierarchy is skipped.

Note: Only complete sets of tasks are transferred to Projects and to the Oracle Complex Maintenance, Repair, and Overhaul production modules. If an error occurs during the export of tasks to production jobs, the Projects object is not rolled back. Instead, the relationships between visit tasks and tasks in Projects are maintained, and another attempt is made to export production jobs

when pushing the visit structure to production.

The following visit attributes are checked when a visit and its tasks are exported to maintenance production:

- The visit is associated with a valid department, and a valid organization.
- The visit has a starting date and time. The visit end date and time is automatically calculated.
- The visit is associated with a valid Item, and a correct Unit from Install Base.
- The visit is in the Planning stage.
- A correct visit type is selected for the visit.
- The visit definition is a member of a primary simulation plan. See the Long Term Planning module for more details.
- All visit tasks not based on a repair or service route defined by Fleet Maintenance Program as pertinent to the equipment being serviced may not have a duration of zero.
- Visit tasks based on an expired maintenance requirement or route cannot be scheduled for maintenance production.
- Each department in which a maintenance task is planned must belong to the related organization.

Associating Tasks with Maintenance Visits

After a maintenance planner has completed the visit header creation, the planner can add new tasks to the visit structure. A maintenance plan consists of three task types:

- Tasks based on routes that comprise a maintenance requirement, and can have required completion dates based on the forecast in Unit Maintenance Plan. See: Associating Unplanned and Planned Maintenance Requirements to a Visit, page 9-14.
- Tasks based on routes from unplanned requirements that is not forecasted in unit maintenance plan, but might apply, in the judgment of the planner, to the equipment being maintained. These tasks are created from routes associated with maintenance requirements that pertain to the equipment type.
- Tasks can be added on an ad hoc basis, even if no corresponding route exists. The description of the work to be accomplished is stored as a task remark. See: Creating

Visit Tasks Unassociated With Routes, page 9-22.

To associate tasks with maintenance visits:

1. Navigate to the Update Visits page for your record.

If the visit record is in the Planning state. If the visit record is in the Released or Closed status, the application generates the View Visit Details page.

2. Select Visit Tasks. This launches the Search Visit Task page with the visit context information, and the list of tasks, if any, already associated with the visit.

The screenshot displays the 'Search Visit Task' page in the Oracle Complex MRO application. The page is titled 'ORACLE Complex MRO' and includes a top navigation bar with links for Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. A sidebar on the left contains links for Unit Maintenance Plan, Visit Work Package, Long Term Planning, and Visit. The main content area shows search criteria for Visit Number 44, Unit M-1900, Tail # 301, Visit Type Transit Check, Start Date 27-MAY-2010, Item MRO-M1900, and Organization Vision Project Manufacturing USD. The search results table is empty, displaying the message 'No records were found matching the given criteria..'. The page includes a sidebar with navigation links and a top navigation bar with various application links.

3. To update a task associated with the visit, select the pertinent task. This launches the Update Visit Task page, see Updating Visit Task Headers, page 9-25.
4. To create a summary task, select Create Summary Task and choose Go. The Create Summary Task page appears.

ORACLE Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visit

Logged In As TSMITH

Create Summary Task

Visit Number 44 Visit Type Transit Check Item MRO-M1900.

Unit M-1900, Tail # Start Date 27-MAY-2010 Organization Vision Project Manufacturing USD

Serial Number 301 End Date Department

Cancel Revert Apply

Indicates required field

Task Header Information

* Task Name

Department

Originating Task

Cost Parent Task

Task Description

Descriptive Flexfields

* Visit Task FF

Context Value

Select Context Value and click 'Go' to show relevant fields.

Cancel Revert Apply

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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5. Enter task details and select Apply to save your work.
Summary tasks are created automatically for each maintenance requirement in the process of creating Planned and Unplanned tasks. You can create summary tasks until the visit is closed. If new summary tasks are created in a released visit, then the status of the visit will not become Partially Released.
6. To create a new task, unassociated to any maintenance route, select Create Unassociated Task. This launches the Create Unassociated Task page, see: Creating Visit Tasks Unassociated with Routes, page 9-22.
7. Select the applicable fields in the Task Header Information region. Select Apply to save your work.

8. To remove a task associated to the visit, click the corresponding Remove icon.

When you remove a task associated to a maintenance visit, note the following:

- If all tasks associated to a maintenance requirement summary task are deleted, the summary task is deleted as well.
- You can delete a task that is the originating task for another only if the association is first removed.
- You must first remove the association to delete a task with associated child tasks.
- You cannot delete a task that has other tasks dependent on it.

You can add tasks (Planned, Unplanned, Unassociated and Summary) to a visit after the visit is exported to production and until the visit is closed. The tasks are automatically added to the cost structure. You can adjust the cost structure for the newly added tasks. You can also create technical dependency for the newly added tasks provided any of the subsequent jobs for the task for which technical dependency is created is not released.

You can push one or multiple unreleased tasks to production. The jobs are created in Unreleased status. After tasks are added to a visit that is in released status, the visit status changes to Partially Released until all the remaining tasks are released to production.

Associating Maintenance Requirements to a Visit

When a planned maintenance requirement is associated to a visit, all the routes associated with the maintenance requirements are assigned to the visit automatically. If a group maintenance requirement is associated to a visit, the routes of group requirement and the routes of all the individual requirements in the group are assigned

to the visit. You can also associate a service request that is planned to a visit. The routes of all the maintenance requirements associated with the service request are assigned to the visit automatically.

Note: You can now schedule a maintenance requirement multiple times to the same instance in a single maintenance visit.

Unplanned or non-routine maintenance requirements are those requirements that are not factored into the planning process in Unit Maintenance Plan and may occur due to ad hoc service needs or during work on third party units, aircraft, or engines. Adding unplanned requirements to visits that are in production is especially useful for third party customers whose aircraft and engines are not tracked in the unit maintenance plan. When an unplanned maintenance requirement from fleet maintenance program is added to a visit, all the routes associated with the requirement are assigned to the visit.

Note: If these unplanned requirements cannot be accomplished during the visit, it will show in Unit Maintenance Plan as Non-Routine requirements. These deferred maintenance requirements can then be scheduled to other visits in Unit Maintenance Plan.

Note: Maintenance Requirements are added to a visit for any available instance, regardless of the unit associated to the visit's header.

To associate planned maintenance requirements to a visit:

1. Navigate to the Update Visit page for this visit.
2. Select Maintenance Requirements. In the Search Maintenance Requirements page, select Add Planned Requirements from the drop-down menu.
3. The Search Unit Maintenance plan page appears. Query for the unit maintenance requirements. The results appear in the Unit Maintenance Requirements table.

ORACLE Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visit

Logged In As: TSMITH

Search Maintenance Requirements

Unit Number 44 Unit M-1900, Tail # 301 Serial Number 301

Visit Type Transit Check Start Date 27-MAY-2010 End Date

Item MRO-M1900. Organization Vision Project Manufacturing USD Department

Maintenance Requirement Description

Go Clear

Search Results

Add Unplanned Requirement Go

TitleDescriptionService RequestService Request SummaryItemSerial NumberInstance NumberQuantityUOHTasksCost/PriceRemove

No records were found matching the given criteria..

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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4. Select one or more maintenance requirements and select Associate to Visit. The Create Planned Task page appears. Click Apply to add the task to the visit.

A summary task is automatically created for each maintenance requirement and service request in the process of creating Planned tasks. Summary tasks will be used as the originating task and cost parent of planned tasks. If you select Associate to Visit (Default Department), the task is automatically added to the visit without requiring association through the Create Planned Task page.

ORACLE Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visit

Logged In As: TSMITH

Search Unit Maintenance Plan

Unit Name C-1600, Tail # 101 Item MRO-C1600

Sort by Due Date

Title

Non Routine Type

Due from

Show Dependent Components

Show Replicate

Go Clear

Search For All

Serial Number 101

Status Unscheduled

Program Type

Non Routine Num

Due to

Include Tolerance Dates

Select Unit Maintenance Plan: Associate to Visit Associate to Visit (Default Department)

Select	Program Type	Title	Item	Serial Num	UOH	Remain	Cnt	Name	Earlier	Due	Due	Date	Latest	Due	Tolerance	Status	Sched.	Date	Visit	Originator	Title	Dependent	Title	Deferred	From	Deferred	To	Manually	Planned
<input type="checkbox"/>	Letter Check	32-300-00	MRO-C1600	101																									
<input type="checkbox"/>	Letter Check	B-Check	MRO-C1600	101	1000	TSN																							
<input type="checkbox"/>	Letter Check	29-030-02	MRO-C1600	101																									
<input type="checkbox"/>	Letter Check	A-Check	MRO-C1600	101	12824	TSN																							
<input type="checkbox"/>	Letter Check	27-073-00	MRO-C1600	101																									
<input type="checkbox"/>	Letter Check	28-020-01	MRO-C1600	101																									
<input type="checkbox"/>	Letter Check	C-Check	MRO-C1600	101	0	TSN						11-NOV-2002			Yes														

Select Unit Maintenance Plan: Associate to Visit Associate to Visit (Default Department)

Cancel

If a unit is specified in the visit header, then tasks can only be created for units on the configuration tree of the visit header unit.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As TSMITH

Create Planned Task

Visit Number 26 Visit Type Transit Check Item MRO-C1600

Unit C-1600, Tail # 101 Start Date 20-JAN-2009 Organization San Francisco Maintenance Center US

Serial Number 101 End Date Department Base Maintenance, SFM

Cancel Revert Apply

Unit Maintenance Plan Requirements

Select	Maintenance Requirement/Service Request Due By Date	Item	Serial Number	Service Request Number	Department
	32-300-00	MRO-C1600	101		

Cancel Revert Apply

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

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You can associate a department to the tasks. Alternatively, the department associated to the visit header is associated to all the tasks created. You can create unplanned tasks until the visit is closed. If new unplanned tasks are created in a released visit, then the status of the visit becomes Partially Released. You can delete a maintenance requirement from the visit when the visit is in planning stage. When a task is deleted all the tasks of that requirement are deleted.

To associate unplanned maintenance requirements to a visit:

1. When you add a Maintenance Requirement for non serialized instances, you can select the instance quantity that the applicable maintenance needs to be accomplished on. This quantity is associated to the applicable tasks and the corresponding work orders.

Select your maintenance requirement record on the Search Maintenance Requirements page, and choose Associate to Visit.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As TSMITH

Search Maintenance Requirements

Title

Originating Document

Program Type

Program Subtype

Category

Unit: C-1600, Tail # 101

Associated Item: MRO-C1600

Instance Number: 70211

Revision

Status: Complete

Parent Title

Route Type

Description

Route Number

Serial Number: 101

Go Clear

Associate To Visit Associate To Visit(Default Department) Cancel

Select	Title	Revision	Description	Program Type	Effective From	Effective To	Associated Item	Serial Number	Instance Number	Qty	UOH	Actual Qty
<input type="checkbox"/>	A-Check		*Maintenance group to be performed every 500 operation hours.	Letter Check	11-NOV-2002		MRO-C1600	101	70211	1	Ea	1
<input type="checkbox"/>	C-Check		Maintenance group to be performed every 2000 operation hours.	Letter Check	11-NOV-2002		MRO-C1600	101	70211	1	Ea	1
<input type="checkbox"/>	28-020-01		Operationally check left surge tank relief valves.	Letter Check	13-NOV-2002		MRO-C1600	101	70211	1	Ea	1
<input type="checkbox"/>	27-073-00		Perform a general visual inspection of the elevator mechanical control path.	Letter Check	13-NOV-2002		MRO-C1600	101	70211	1	Ea	1
<input type="checkbox"/>	29-030-02		Replace hydraulic pump filter.	Letter Check	13-NOV-2002		MRO-C1600	101	70211	1	Ea	1
<input type="checkbox"/>	32-300-00		Check brake accumulator precharge pressure, service as required.	Letter Check	13-NOV-2002		MRO-C1600	101	70211	1	Ea	1
<input type="checkbox"/>	B-Check		*Maintenance group to be performed every 1000 operation hours.	Letter Check	11-NOV-2002		MRO-C1600	101	70211	1	Ea	1

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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The Create Unplanned Visit Task page appears.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As TSMITH

Create Unplanned Visit Task

Visit Number 26 Visit Type Transit Check Item MRO-C1600

Unit C-1600, Tail # 101 Start Date 20-JAN-2009 Organization San Francisco Maintenance Center US

Serial Number 101 End Date Department Base Maintenance, SFH

Cancel Revert Apply

Task Header Information

Select	Maintenance Requirement	Item	Serial Number	Instance Number	Quantity	UOH	Department
<input type="checkbox"/>	A-Check	MRO-C1600	101	70211	1	Ea	Component Shop

Cancel Revert Apply

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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2. Select Apply to add the task to the visit.

The maintenance requirement is added to the visit record. The tasks inherits the same stage as the corresponding route. A summary task is created automatically for each requirement in the process of creating unplanned tasks. Summary tasks are used as originating task and cost parent of unplanned tasks.

After a maintenance planner creates a visit structure, the Search Visit Tasks page permits the planner to retrieve tasks associated with a particular visit, or to add new tasks to the visit structure.

After retrieving visit tasks based on desired search criteria, the planner can select a task for subsequent editing. The Search Visit Tasks page also allows maintenance personnel to link to pages that permit creation of tasks associated with serialized inventory items, for both imminent and undated maintenance requirements, and tasks associated only with non-serialized assemblies.

To retrieve existing visit tasks:

1. Navigate to the Search Visit page. .
2. You can use the following search criteria to find your visit. Select Go to display the results of your search.
 - Task Number
 - Task Name
 - Maintenance Requirement
 - Route
 - Task Type
 - Task Due By.
 - Work Order
 - Work Order Status
 - Service Request
 - Department
 - Item
 - Serial Number
 - Route Type
 - Stage
 - Status

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As TSMITH

Details
Visit Tasks
Maintenance Requirements
Cost Details
Visit Stages

Search Visit Task

Cancel

Visit Number 26 Unit C-1600, Tail # 101 Visit Type Transit Check Start Date 20-JAN-2009 End Date 20-JAN-2009 Item MRO-C1600 Organization San Francisco Maintenance Center US Department Base Maintenance, SFM

Task Number

Maintenance Requirement

Task Type

Work Order

Service Request

Item

Route Type

Status

Go Clear

Task Name

Route

Tasks Due By

Work Order Status

Department

Serial Number

Stage

Push to Production (Jobs Released) Go

Select tasks and ... Push tasks to Production (Jobs Released) Push tasks to Production (Jobs UnReleased)

Select	Task Number	Task Name	Item	Serial Number	Instance Number	Quantity	UOM	Maintenance Requirement	Department	Stage	Task Type	Status	Hierarchy	Cost/Price	Remove
<input type="checkbox"/>	1	A-Check	MRO-C1600	101	70211	1	Ea	A-Check	Component Shop, SFM		Summary	In Planning			
<input type="checkbox"/>	2	Visual Inspection	MRO-C1600	101	70211	1	Ea	A-Check	Component Shop, SFM		Unplanned	In Planning			
<input type="checkbox"/>	3	29-030-02	MRO-C1600	101	70211	1	Ea	29-030-02	Component Shop, SFM		Summary	In Planning			
<input type="checkbox"/>	4	EMDP case drain filter	MRO-C1600	101	70211	1	Ea	29-030-02	Component Shop, SFM		Unplanned	In Planning			
<input type="checkbox"/>	5	Visual Inspection	MRO-C1600	101	70211	1	Ea	29-030-02	Component Shop, SFM		Unplanned	In Planning			
<input type="checkbox"/>	6	A-Check	MRO-C1600	101	70211	1	Ea	A-Check	Component Shop, SFM		Summary	In Planning			

- On the Search Visit Task page, select information in any of the search fields to query for tasks related specifically to your search criteria.
- To update visit task details, select the Task Number to display the Summary Task Details page.

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Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As TSMITH

Details
Cost Details

Summary Task Details

Visit Number 26 Unit C-1600, Tail # 101 Visit Type Transit Check Start Date 20-JAN-2009 End Date 20-JAN-2009 Item MRO-C1600 Organization San Francisco Maintenance Center US Department Base Maintenance, SFM

Cancel Revert Apply

* Indicates required field

Task Header Information

Task Number 1

Task Name A-Check

Task Status In Planning

Item MRO-C1600

Instance Number 70211

Maintenance Requirement A-Check

Cost Parent Task

Task Description

Task Type Summary

Department Component Shop, SFM

Serial Number 101

Quantity 1 Ea

Service Request

Originating Task

Cancel Revert Apply

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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You can update the visit task details and associated information only if the visit record is in the Planning state. If the visit record is in the Released or Closed status, the system generates the visit task details page in view only mode.

- To remove a task associated to the visit, select Remove.

You can only remove a task that is in the Planning state. To delete a task from a Primary visit, any task associated to it in a simulation visit must have the association removed. If you delete all tasks associated to a maintenance

requirement summary task, the summary task is deleted as well. To remove a task that is the originating task for another task, the associations must be first removed. To remove a task with associated children tasks, the association must first be removed. Also, a task with other technically dependent tasks cannot be removed. Any material requests defined in Long Term Planning for a task must be cancelled before it can be deleted.

To update visit details:

1. Navigate to the Update Visit page.

You can update these attributes only for a visit record that is in the Planning state. If the selected visit is in the Released or Closed states, the application generates the details and visit tasks pages in view only mode.

2. Make the necessary changes to the field values. Select Apply to save your work.

Associating Item Serial Numbers with Tasks

A repair job required to fix a defect reported by built-in test equipment, monitoring and control systems, operating personnel, or maintenance personnel during inspections, might not have a corresponding route in the unit maintenance plan. In such cases, it may be necessary to select a maintenance requirement and routes to add to a visit for the equipment type.

After a technician has inspected a part, the equipment type task must be associated with an actual part in the unit configuration. If the part to be serviced or repaired is not serialized, or not of sufficient importance to describe in the Unit Configuration, the task can be associated with the visit header's equipment type and serial number.

To associate serial numbers and service requests with a task:

1. Navigate to the Create Unplanned Visit Task page. The page displays the Visit Number, Visit Type, Item, Unit, Start Date and End Date as context information. The Item subcomponent in the visit package to which the service request or serial number is to be associated is also displayed.
2. In the Task Header Information region, select values in the item, Serial Number, Department, and Service Request fields.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As TSMITH

Create Unplanned Visit Task

Visit Number 26 Visit Type Transit Check Item MRO-C1600

Unit C-1600, Tail # 101 Start Date 20-JAN-2009 Organization San Francisco Maintenance Center US

Serial Number 101 End Date Department Base Maintenance, SFM

Cancel Revert Apply

Task Header Information

Select Maintenance Requirement	Item	Serial Number	Instance Number	Quantity	UOH	Department
A-Check	MRO-C1600	101	70211	1	Ea	Component Shop

Cancel Revert Apply

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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3. Select Apply to associate the Item Serial Number to the selected task.

Creating Visit Tasks Unassociated with Routes

You can create ad hoc tasks, usually to repair or replace a component, to be included in a shop or field maintenance visit. Tasks can be added to a visit on an ad hoc basis, even if no corresponding route exists. The description of the work to be accomplished, and the required tools and materials is stored as a task remark. The Create Unassociated Task page is used to create a task that is not associated with any maintenance route.

Note: Unassociated tasks are added to a visit for any available instance, irrespective of the unit associated to the visit's header.

To create visit tasks unassociated with routes:

1. Select a visit number record and navigate to the Create Unassociated Task page.
2. Enter a value for Task name, and select a Department and Stage for this visit.

Note: If unit is specified in the visit header, you can create unassociated tasks only for one of the components of the unit.

3. When you create tasks for non serialized instances, you can select the instance

quantity that the applicable maintenance needs to be accomplished on. This quantity is associated to the task and the corresponding work order.

Select values in the Item and Serial Number fields.

4. Enter a Start From Hours value pertaining to this unassociated task.

This is the time offset in decimal hours, of this task, from the beginning of the visit being planned. Use this field to specify precisely when this task should start relative to the beginning of the visit.

5. Enter a value in the Duration/Hour field, this is the duration in hours of this task.
6. Select a value for Cost Parent Task.

This is the identifier of the summary task in the task hierarchy at which a subtotal of cost transactions, including the costs attached to the task being created, will be calculated. A top task must be a summary task.

7. Select a value for Originating Task.

This is another task that requires the inclusion of the current task in the visit task package. A task may not originate itself. The originating task usually is part of a scheduled maintenance requirement.

8. In the Task Description box, enter any descriptive text.
9. Select Apply to save your work.

You can create unassociated tasks until the visit is closed. If new unassociated tasks are created in a released visit, the status of the visit changes to Partially Release.

Setting up Stages for Tasks

You can associate tasks with the stages defined for a visit. Stages can be determined when associating routes to a maintenance requirement. When this requirement is assigned to a visit, the task automatically inherits the stage definition specified during route association. Stages cannot be assigned to summary tasks.

You can add and modify stage information until the task is pushed to production. A task with no stage defined for it is planned at the end of the visit and is not considered for long term planning. A stage with no duration and tasks in a visit implies that the stage is not applicable for that visit.

Task hierarchy honors stage sequence. If there are two tasks and one is dependent on the other, the second task will be in the later stage or in the same stage as the first task.

To associate stages with tasks:

1. Navigate to the Create Unassociated Task page.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As: TSMITH

Create Unassociated Task

Visit Number 26 Visit Type Transit Check Item MRO-C1600

Unit C-1600, Tail # 101 Start Date 20-JAN-2009 Organization San Francisco Maintenance Center US

Serial Number 101 End Date 20-JAN-2009 Department Base Maintenance, SFH

* Indicates required field

Task Header Information

* Task Name Unit C-1600, Tail # 101

Department Stage

* Item Serial Number

Start From Hours * Duration / Hour

* Instance Number * Quantity

Cost Parent Task Originating Task

Task Description

Cancel Revert Apply

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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2. In the Stage field, query the stages defined.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As TSMITH

Select Stage

Enter Partial Value % Search Cancel

Stage	Stage Number	Duration
1	1	0
2	2	0
3	3	0
4	4	0
5	5	0
6	6	0
7	7	0
8	8	0
9	9	0
10	10	0

First | Previous 1 - 10 of 10 Next | Last

Cancel

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out

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3. Select the stage that you want to associate the task with. Select Apply to save your work.

Updating Visit Task Headers

You can retrieve existing maintenance visit task records, and edit the header and task hierarchy information.

The planner can modify the task attributes that are unique to the current visit association. Attributes inherited from the route definition cannot be updated.

Use the Update Task Header page to update visit task header details, and to navigate to pages that allow you to update task dependency and task hierarchy.

From the Search Task page:

1. Select a record and navigate to the Update Task Header page.

2. Use the information in the following table to enter or update values in the Update Task Header page.

You cannot update a task if a maintenance requirement or maintenance requirement route is associated with the task.

3. You can update the following fields: Task Number, Task Name, Maintenance Requirement, Service Request, Cost Parent Task, Description, Duration/Hour, Route, Start From Hours, Originating Task, and Stage.
4. Select Apply to save your work.

After visit tasks are attached to the visit header, further refinement of the visit structure involves three processes: removing redundant tasks, defining the task hierarchy for costing purposes, and arranging the tasks sequence. It may be possible to remove redundant tasks if more than one job will be done in the same area of the equipment. To support cost transaction summarization during and after production, a task hierarchy specifies the summary tasks for subtotal calculations using the Oracle Projects features. The tasks sequence specifies the temporal order of tasks to be carried out during the visit, respecting the technical considerations of task dependencies.

After defining task dependencies, the planner can create a final task structure by deriving the task network connecting tasks to each other in a parent-child relationship. The task network complies with the technical dependencies between tasks while becoming the optimal structure for more efficient maintenance resources utilization.

The Visit Work Package module allows maintenance planners to retrieve visit tasks, select a task record, and define the parent-child relationship between the selected task and other tasks in the visit structure using the Task Hierarchy page.

To define visit task hierarchy

1. Retrieve the desired visit task records and navigate to the Update Task Header page.
2. Select Hierarchy to launch the Task Hierarchy page. The task header context information is displayed on the page. Optionally, you can use the Hierarchy icon in the Search Visit Task page, to navigate to the Task Hierarchy page for a particular task.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Details

Hierarchy

Cost Details

Task Hierarchy

Task Number 2
Service Request 671
Maintenance Requirement MR0205
Zone

Task Name Route0205
Department Outside Processing
Route Route0205
Sub Zone

Cancel Revert Apply

Hierarchy

Select	Task Number	Task Name	Department	Zone	Sub Zone	Start From Hours	Relationship
No records were found matching the given criteria.							
Add More Rows							

Cancel Revert Apply

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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3. To edit the workflow hierarchy information of an associated task, select the task and choose Edit Hierarchy.
4. Enter a Task Name and select a Relationship value. Your choices are Parent or Child.
5. Select Apply to save your work.

Visit Costing and Pricing

You can calculate the cost and/or price for a maintenance visit. Costs can be estimated at any stage of the visit planning, based on resource and material requirements. Actual costs are calculated based on the material and resource transactions for a job.

Prices are calculated for third-party maintenance visits. When performing third-party maintenance, a predefined price list is associated with the visit. Prices are estimated based on the required materials and resources. The actual price of the visit is generated out of the used materials and resources. Additionally, you can calculate the cost for such a visit, and determine the profit arising out of a service provided, by comparing it

with the visit price. The difference between the visit price and the cost is your profit.

Defining Visit Cost Structure

A maintenance planner may not wish to export all planned visit definitions to Oracle Projects. You may define a set of visit options, called simulations. Each member of a simulation set is a complete visit definition. The simulation set is used to determine the task package that is optimal with respect to the scheduling of repair facilities, and the materials necessary to complete each job.

To define visit cost structure:

1. Select a visit and navigate to the Visit Cost Structure page.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Cost Structure

Visit Number 436
Unit
Serial Number 300

Visit Type A Check
Start Date 12-OCT-2004
End Date 14-OCT-2004

Item 737-800
Organization San Diego Manufacturing
Department Inspection Department

qantas.mat req visit
737-800 Maintenance Check
RTS Route
R and R APU Generator

Cancel Revert Apply

* Indicates required field

Cost Information

Estimated Cost Actual Cost

Summary Task Header Info

Task Number 1

* Task Name 737-800 Maintenance Che Department

Item 737-800 Serial Number 300

Maintenance Requirement 737-800 Maintenance Check Service Request

Cost Parent Task Originating Task

Task Description

2. Enter a unique value in the Task Name field.
3. Select appropriate values in the Serial Number, Maintenance Requirement, and Service Request fields.
4. Select a value in the Cost Parent Task field.

The Cost Parent Task field determines which other task is the current task's immediate predecessor in the cost accounting structure. The tree-structured task graphic shows the relationships between the tasks. This is the mid-level task connected to the current task as a low-level task. Only low-level tasks can have associated cost transactions.

5. Select a value in the Originating Task field.

This is a task that requires the inclusion of the current task in the visit task package. A task may not originate itself. The originating task usually is part of a scheduled

maintenance requirement.

6. In the Description field enter any appropriate descriptive text.
7. Select Apply to

Visit Costing

Visit Costing is the collection of all costs incurred in executing a maintenance project. Costs arise out of the materials and resources allocated for the visit. You can estimate the cost of a visit based on these material and resource requirements. When the visit is pushed to production, the actual cost of the execution is calculated from the shop floor transactions. Costs are rolled up at every level of the visit's costing structure. You can view the cost at the task, maintenance requirement, and visit level.

To setup visit costing, set billing items in Oracle Inventory as non-stockable and non-transactable items.

To estimate the cost of a visit:

1. Navigate to the Visit Cost and Price page.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Details
Visit Tasks
Maintenance Requirements
Cost Details
Visit Stages

Visit Cost and Price

Visit Number 44 Visit Type Transit Check Item MRO-M1900.
Unit M-1900, Tail # Start Date 27-MAY-2010 Organization Vision Project Manufacturing USD
Serial Number 301 End Date Department

Cost/Price Details

☐ Visit for Outside Party

Price List
Estimated Cost

Currency USD
Actual Cost

Estimate Cost

Estimate Cost

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2. Select information in the following fields
 - Price List: A list containing the base selling price per unit for a group of items, item categories, or service offered.
 - Estimated Cost: This value is calculated based on the material and resource requirements for a job.
 - Actual Cost
 - Estimated Price: It is the price quoted by a maintenance organization for performing a third- party service, and is based on the price of the required material and resources for the service.
 - Actual Price: It is the price for performing a service at a third party location,

calculated based on the actual price of the used material and resources.

Estimated Profit: It is calculated by subtracting the estimated cost from the estimated price.

Actual Profit: It is calculated by subtracting the actual cost from the actual price.

3. Select Estimate Cost to initiate the cost estimation process. The cost will be displayed in the Cost/Price Details region.

The following occurs in the cost estimation process:

- You will be prompted to estimate costs when tasks are added or deleted from the visit
- If you modify a material or resource requirement, or perform a material or resource transaction—the system automatically displays the updated estimated and actual costs.
- For records without an associated work order, a corresponding work order in Draft status is created in work in process, when you click the Estimate Cost.
- The actual task cost is the sum of the cost of the service item for the route, and actual cost calculated. When a task has an associated OSP work order, the actual cost will be sum of the cost of the OSP line and actual cost calculated. The estimated task cost is the same as the actual cost.
- The estimated cost of the maintenance requirement is the sum of the estimated costs of the tasks in that requirement. The actual cost is the sum of the actual costs of the tasks.
- The estimated cost of the visit is the sum of the estimated costs of the maintenance requirements and other tasks that are associated with the visit. The actual cost of the visit is the sum of the actual costs and other tasks that are associated with the visit.

To view cost information:

1. To view the cost rollup, select a visit record and navigate to the View Visit Details page. Select Cost Structure and choose Go.

The cost structure page appears. Select a node in the tree structure to view the cost details. If the node does not have a corresponding work order, the Estimated Cost and Actual Cost fields are null.

2. To view cost information at the visit level, select the visit in the Search Visits page, and select Cost and Price Information. Choose Go to display the Visit Cost and Price page with the estimated and actual cost information.

3. Navigate to the Task Cost and Price page showing the estimated and actual task costs.
4. To view cost of a maintenance requirement, navigate to the Maintenance Requirement Cost and Price page.

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Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Maintenance Requirement Cost and Price

Cancel

Visit Number 424	Visit Type A Check	Item 737-800
Unit	Start Date 20-MAY-2004	Organization San Diego Manufacturing
Serial Number 300	End Date 21-MAY-2004	Department Outside Processing

Maintenance Requirement Details

Title	737-800 Maintenance Check	Description	737-800 Maintenance Check
Billing Item			

Cost/Price Details

Currency	ANY	
Estimated Cost	2200	Actual Cost 200

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You can store the cost estimate that you are viewing, by selecting Cost Snapshot. This snapshot can be used for comparison with other snapshots of the same visit with different tasks or in a different location.

Note: If the visit cost has not been estimated, then the system will automatically calculate the actual and estimated costs, when a visit is closed.

Visit Pricing

A maintenance organization may perform a service for an outside party or customer. Pricing is the calculation of costs arising out of third-party maintenance. You can define a price list at visit level or at task level. The price list at task level is optional and supersedes the price list defined at visit level. For price information at task level, you have to define the material and resource requirements as price items in the price list. You can also calculate prices for maintenance requirements. Billing items must be created, and linked to the maintenance requirement. The Visit Work Package process then takes the price of the maintenance requirement from the price list associated at visit work package level.

To calculate the price for a visit:

1. Create a visit, and associate a service request with it. Save the record.
2. In the Update Visit page, select Cost Details from the side navigation menu. The Visit Cost and Price page appears. Select the Visit for Outside Party check box.

Mark a Visit for Outside Party - Visit Cost and Price page

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Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Details
Visit Tasks
Maintenance Requirements
Cost Details

Visit Cost and Price

Cancel

Visit Number **471** Visit Type **A Check** Item **1319M11P04**
Unit Start Date **21-JUN-2004** Organization
Serial Number **SN001** End Date Department

Cost/Price Details

Estimate Cost Apply Revert

☒ Visit for Outside Party

Price List Currency
Estimated Cost Actual Cost

Estimate Cost Apply Revert

Unit Maintenance Plan | **Visit Work Package** | Long Term
Planning | Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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3. Select a Price List using the LOV icon. You can only associate a price list that has been created for the customer specified in the service request, and is valid for the period between the visit start and end date. Click Apply. The Estimate Price button appears in the Cost/Price Details region.

Estimate Price - Visit Cost and Price page

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Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Details
Visit Tasks
Maintenance Requirements
Cost Details

Visit Cost and Price

Cancel

Visit Number 471 Visit Type A Check Item 1319M11P04
Unit Start Date 21-JUN-2004 Organization
Serial Number SN001 End Date Department

Cost/Price Details

Estimate Price Estimate Cost Items Without Price Apply Revert

☒ Visit for Outside Party

Price List Price List 0204 Currency
Estimated Cost Actual Cost
Estimated Price Actual Price
Estimated Profit Actual Profit

Estimate Price Estimate Cost Items Without Price Apply Revert

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4. Create tasks for the visit. For information, see Associating Tasks with Maintenance Visits, page 9-11.

Note: Each BOM resource used in the task resource requirements or work order transactions must be associated with an Item. For the system to be able to calculate price for a task, all the materials and resources' billing items should be orderable and defined in the price list associated with the task/visit.

5. Click Estimate Price in the Visit Cost and Price page, to initiate the price calculation process.

The following can be applied to the price calculation process:

- The price of a task, associated with a route, is estimated by adding the price of the materials and resources required to perform that task. The estimated price for a task without a route association is always zero. The actual price is calculated by adding the prices of the materials and resources transacted. If the task price is recalculated, and the amount differs from the former estimate, then the MR and visit prices are adjusted accordingly.
- For an MR with a billing item associated, the estimated price is the price of the billing item. For an MR with no Billing Item associated, the estimated price is the sum of the estimated prices of the tasks in that MR. The actual price of the MR is calculated by adding the actual prices of the tasks in that MR. If the MR

price is recalculated, and the new price differs from the old one, then visit price will be adjusted accordingly.

- The estimated price of the visit is the sum of the estimated prices of the MRs and other tasks that are not through an MR. The actual price of the visit is the sum of the actual prices of the MRs and other tasks that are not through an MR. When an MR or a task is deleted from the visit, the MR/task price is subtracted from the visit price.

To view price information:

1. Retrieve the visit task record, for which you want to view the price information. For information, see Retrieving Existing Visit Task Records., page 9-18
2. To view the cost rollout, select the visit, and click the corresponding Cost Structure icon.
3. To view price information at the visit level, select the visit in the Search Visits page, and choose Cost and Price Information from the drop-down menu. Click Go. The Visit Cost and Price page appears displaying the estimated and actual prices.

ORACLE Oracle Complex MRO

Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Details
Visit Tasks
Maintenance Requirements
Cost Details

Visit Cost and Price

Cancel

Visit Number **457** Visit Type **A Check** Item **VG0205**
 Unit **Ucd206** Start Date **26 MAY 2004** Organization **San Diego Manufacturing**
 Serial Number **SN0206** End Date **26 MAY 2004** Department **Outside Processing**

Cost/Price Details

Estimate Price Price Snapshot Cost Snapshot Items Without Price Apply Revert

☒ Visit for Outside Party

Price List Price List 0204 Currency **ANY**

Estimated Cost	171.9	Actual Cost	28.65
Estimated Price	299.46	Actual Price	49.91
Estimated Profit	127.56	Actual Profit	21.26

Estimate Price Price Snapshot Cost Snapshot Items Without Price Apply Revert

Unit Maintenance Plan | **Visit Work Package** | Long Term Planning | Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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4. To view price at the task level, click Visit Tasks in the side navigation menu. The Search Visit Task page appears, displaying a list all the tasks associated with the visit.

Search Visit Task Cancel

Visit Number **457** Visit Type **A Check** Item **VG0205**
 Unit **Uc0206** Start Date **26-MAY-2004** Organization **San Diego Manufacturing**
 Serial Number **SN0206** End Date **26-MAY-2004** Department **Outside Processing**

Task Number Task Name
 Maintenance Requirement Route
 Task Type Tasks Due By
 Work Order Work Order Status
 Service Request Department
 Item Serial Number
Go Clear

Search Results

Previous 1-2 of 2 Next

Task Number	Task Name	Item	Serial Number	Maintenance Requirement	Route	Department	Start Time	End Time	Task Type	Hierarchy	Cost/Price
1	MR0421	VG0205	SN0206	MR0421					Summary		
2	Route0421	VG0205	SN0206	MR0421	Route0421		26-MAY-2004 7:00	26-MAY-2004 13:00	Unplanned		

Previous 1-2 of 2 Next

- To view the task price, select the corresponding Cost/Price icon, the Task Cost and Price page appears displaying the estimated and actual task prices.

ORACLE Oracle Complex MRO

Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Task Cost and Price Cancel

Task Number **1** Task Name **MR0421**
 Service Request Department
 Maintenance Requirement **MR0421** Route
 Zone Sub Zone

Cost/Price Details

Price List		Currency	ANY
Estimated Cost	171.9	Actual Cost	28.65
Estimated Price	299.46	Actual Price	49.91
Estimated Profit	127.56	Actual Profit	21.26

Estimate Price Items Without Price

Estimate Price Items Without Price

Unit Maintenance Plan | **Visit Work Package** | Long Term Planning

Planning | Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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- To view price at the MR level, in the Visit Cost and Price page, click Maintenance Requirements in the side navigation menu. The Search Maintenance Requirement page appears, displaying the list of MRs associated with the visit.
- To view the MR price, click the corresponding Cost/Price icon. The Maintenance

Requirement Cost and Price page appears, displaying the price.

View Maintenance Requirement Price - Maintenance Requirement Cost and Price page

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[Unit Maintenance Plan](#) [Visit Work Package](#) [Long Term Planning](#)

Visit

Maintenance Requirement Cost and Price

Cancel

Visit Number 457
Unit Ucd206
Serial Number SN0206

Visit Type A Check
Start Date 26-MAY-2004
End Date 26-MAY-2004

Item VG0205
Organization San Diego Manufacturing
Department Outside Processing

Maintenace Requirement Details

Estimate Price Items Without Price

Title MR0421
Billing Item

Description

Cost/Price Details

Estimate Price Items Without Price

Currency ANY
Estimated Cost 171.9
Estimated Price 299.46
Estimated Profit 127.56

Actual Cost 28.65
Actual Price 49.91
Actual Profit 21.26

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8. To view a list of the items not defined in the price list, for a task, MR and/or visit, click Items Without Price. The Items without Price page appears, displaying the items, if any.

Items without Price page

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[Unit Maintenance Plan](#) [Visit Work Package](#) [Long Term Planning](#)

Visit

Items without Price

Visit Number **457**
Unit **Ud0206**
Serial Number **SN0206**

Visit Type **A Check**
Start Date **26-MAY-2004**
End Date **26-MAY-2004**

Item **VG0205**
Organization **San Diego Manufacturing**
Department **Outside Processing**

[Cancel](#)

[Previous](#) 1-1 of 1 [Next](#)

Organization	Item	Item Description	Maintenance Requirement	Task Number	Task Name
San Diego Manufacturing	VG0415	New Item	MR0421	2	Route0421

[Previous](#) 1-1 of 1 [Next](#)

[Cancel](#)

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You can take a snapshot of the task, MR, or visit price by clicking Price Snapshot in the Visit Cost and Price page.

Note: The profit and loss information is displayed only when both the cost and price have been calculated for a visit. Profit is calculated by subtracting the cost from the price.

Closing a Visit

Once you have finished working on the maintenance visit and implementing the same, you can close the maintenance visit record.

To close a visit:

1. Navigate to the Search Visit page and choose the visit that you want to close.

Note: You can only close visits in Implemented status.

2. Click the Visit Number link to navigate to the Update Visit page.
3. Choose the Close option from the drop down list and click Go.

The Close Visit page opens.

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Unit Maintenance Plan Visit Work Package Long Term Planning

Visit

Logged In As TSMITH

Close Visit

Cancel Revert Apply

Visit Number 20
Visit Name RA Part Changes 1
Visit Type
Start Date 07-FEB-2007
Visit Status Implemented

Organization San Francisco Maintenance Center US
Department Line Maintenance, SFM
Item C80
Serial Number 811
Unit C80-1, SN811 Tail# VA636

Signoff Information

☒ Signoff all pending Maintenance Requirements
☒ Complete all pending Jobs and Operations
☒ Default Actual Dates from Resource Transaction Dates
☐ Use these Actual Dates

Actual Start Date 07-FEB-2007 Hour 02 Minutes 00
Actual End Date 28-FEB-2007 Hour 02 Minutes 00

☒ Transact Resource by Requirements

Technician 546 Smith, Mr. Tom
Equipment

Cancel Revert Apply

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

4. In the Signoff Information region, verify if the check boxes for signoff are ticked.
5. Click Apply to close the visit permanently.

Material Marshalling

Overview

The aerospace, defense, and transportation industries need to maintain complex configurative and regulated equipment systems at optimum service levels. The Marshalling functionality of Oracle Complex Maintenance, Repair, and Overhaul (CMRO) enables maintenance, repair, and overhaul organizations to define, plan, and execute the reassembly of various parts specific to engine shops.

This chapter discusses the key functions supported by the CMRO's Material Marshalling module, including the following:

- Setting up Material Marshalling, page 10-2
- Searching for a Visit using the Marshalling Workbench, page 10-3
- Viewing Visit Configuration using the Marshalling Workbench, page 10-4
- Viewing required item details per position, page 10-6
- Viewing available item details per position, page 10-6
- Viewing unavailable item details per position, page 10-8
- Viewing work order progress per position, page 10-11

Marshalling the Engine Shop

Material Marshalling consists of planning and grouping of worn-out, reconditioned, and new materials for constructing complex assemblies, such as aircraft engines. In an engine overhaul shop, once you initiate the tear down, a large number of parts are released from assemblies and sub assemblies that make up a single working engine. Some parts are replaced with new parts, some parts are inspected and reused, while

others are repaired and reused. Marshalling is the process of organizing these parts and then planning for their use in reassembly.

Key Business Processes

Material Marshalling supports the following business processes:

Creating and Managing a Marshalling Area

A Marshalling area is created to enable the users to easily transfer the materials for an upcoming visit. This Marshalling area acts as the staging area for a visit. The user can then stage all expected materials in this area, with specific work orders and material requirements in mind.

Monitoring the Marshalling Area

A Marshalling area is selected to monitor. The Marshalling area is displayed along with the following information:

- Units using the Marshalling area and their assembly status.
- The material requirements and their associated jobs.
- The materials staged for installation.
- Open positions on the unit and the needed part.

Requesting Required Materials

The requisition for materials begins when the user identifies a missing part required to fill a unit's position. If the user is unable to locate the part for transfer from other inventory organizations, he makes a request, which alerts the material planner. The material planner takes the necessary steps to acquire the part, and after it is received, it is automatically transferred into the correct Marshalling area.

Viewing Visit Status

Users can view a unit, its related visits, and the status of each visit. To view a visit's status, users search for the specific unit. The unit is displayed along with the installed, missing, and staged parts that qualify for installation. Related visits and jobs are also displayed with progress meters.

Setting Up Material Marshalling

The Marshalling area for staging parts is created using the existing CMRO setup. You create marshalling areas using subinventory and locator associations, which can be accessed by navigating to the CMRO Administration responsibility, Department Location tab. When you create each visit, you then link the associated subinventory and locator, which creates the marshalling area.

The screenshot shows the Oracle Complex MRO Administration interface. The top navigation bar includes links for Home, CMRO Home, Engineering, Configuration, Planning, Administration (selected), Execution, Profile, Sign Out, and Help. Below this is a secondary navigation bar with links for Approvals, Workflow, Department Location (selected), Spaces, Space Unavailability, Reliability, and Vendor Sourcing. The user is logged in as TSMITH.

The main content area is titled "Search Department Locations". It contains two input fields: "Organization" and "Department", each with a search icon. Below these fields are "Go" and "Clear" buttons. A "Create" button is also present. Below the buttons is a table header with columns: Organization, Department, Sub Inventory, Physical Locator, Shift Number, Days On, Days Off, Start Time, End Time, and Remove. The table body shows the message "No records were found matching the given criteria..".

The bottom navigation bar includes links for Approvals, Workflow, Department Location, Spaces, Space Unavailability, Reliability, Vendor Sourcing, Home, CMRO Home, Engineering, Configuration, Planning, Administration (selected), Execution, Profile, and Sign Out. The copyright notice "Copyright 2006, Oracle Corporation. All rights reserved." is at the bottom right.

Searching for a Visit using the Marshalling Workbench

A Visit is the process of organizing maintenance tasks for a unit based on unit availability and forecasted maintenance requirement due dates. The Marshalling Workbench enables you to search a Visit using the following criteria: Visit Number, Unit, Visit Start Date, and Visit End Date.

To search for a visit using the marshalling workbench:

1. Navigate to the Marshalling Workbench page.
2. Enter any of the following search criteria:
 - Visit Number: Select a visit from the list in Implemented or Partially Implemented status.
 - Unit: Lists all the active units.
 - Visit Status: Closed, Implemented, and Partially Implemented visits are displayed.
 - Organization: Select the Organization of the visit.
 - Department: Select the Department of the visit.
 - Sub Inventory: This is the marshalling area for visit.
 - Locator: This is the marshalling area for visit.
 - Start Date: Select the date of the first day of the visit.
 - End Date: Select the date of the last day of the visit

ORACLE® Complex MRO

Home Sign Out Help

Marshalling Workbench

Logged In As TSMITH

Marshalling Workbench

Visit Number Organization Sub Inventory
Unit Department Locator
Visit Status Start Date End Date
(example: 16-Feb-2008 19:45:00)

Go Clear

Results

Visit Number	Visit Name	Unit	Status	Start Date	End Date	% Complete	Organization	Department	Subinventory	Locator	Details
No results found.											

Marshalling Workbench Home Sign Out Help

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- Choose Go. The Results region displays all visits within the selected criteria

Viewing Visit Configuration using the Marshalling Workbench

The Material Marshalling page enables you to view the details of a visit. The Marshalling Workbench displays marshalling details related to each position in the configuration. The visit configuration is displayed in an H-grid format that is expandable down to each position level. After searching a visit, you can view its progress visually, a percentage of completed work orders, and the status of the visit.

To view visit configuration using the Marshalling Workbench:

- Navigate to the Marshalling Workbench page.
- Query the visit using search criteria to view the details. The Results region of the Marshalling Workbench page displays the visit details

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Home Sign Out Help

Marshalling Workbench

Logged In As TSMITH

Marshalling Workbench

Visit Number Organization Sub Inventory
Unit Department Locator
Visit Status Start Date End Date
(example: 20-Feb-2008 19:45:00)

Go Clear

Results

Visit Number	Visit Name	Unit	Status	Start Date	End Date	% Complete	Organization	Department	Subinventory	Locator	Details
32	KMTest VT001	KMTest UC001	Implemented	06-Mar-2008	10-Mar-2008	0	San Francisco Maintenance Center US	Base Maintenance, SFM	STORES	1.1.1	

- Click the Details icon to navigate to the Visit Details page. The Visit Details page displays the Visit configuration.

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Marshalling Workbench Logged In As TSMITH

Visit Details Cancel

Visit Number 32 Unit KMTTest UC001 Sub Inventory STORES Locator 1.1.1	Organization San Francisco Maintenance Center US Department Base Maintenance, SFM Visit Start Date 05-Mar-2008 22:00:00 Visit End Date 09-Mar-2008 22:02:00
--	---

Related Information

Required Items	10
Issued Items	0
Available Items	5
Not Available Items	5
Completed Work Orders	0
Total Work Orders	1

List Of Units

Select Unit	Unit Status	Item	Serial Number	Item Instance Number
<input checked="" type="radio"/>	KMTTest UC001 Complete	KM001	KM001	#SR001,2932943

Unit Configuration Details

[Expand All](#) | [Collapse All](#)

Focus Position	Allowed Quantity	Installed Quantity	Required Items	Issued Items	Available Items	Not Available Items	Work Orders Complete/Total
<input checked="" type="checkbox"/> Position 1 (KM001\KM001 #SR001)	1	1	10	0	5	5	0/1
<input type="checkbox"/> Position 2 (KM001\KM001 #SR002)	1	1	10	0	5	5	0/1

Cancel

4. You can monitor the status of the configuration in the visit by navigating to the H-grid and viewing the column results. The Unit Configuration Details region displays the following:
 - Focus: If the H-grid is too large to view a particular row, enables you to move the row to the top of the page.
 - Position: Displays the position name for the Unit's master configuration.
 - Allowed Quantity: Displays the Unit position's required quantity.
 - Installed Quantity: Displays the Unit position's current installed quantity on the position.
 - Required Items: Displays the total number of required items, as work order material requirements.
 - Issued Items: Displays the total number of items issued to the work orders that are associated to item instances that are installed in the Unit position.
 - Available Items: Displays the total number of items in a Visit's subinventory and locator that meet the requirements displayed in the Required Items column.
 - Not Available Items: Displays the total number of items still needed to meet the requirements in the Required Items column.
 - Work Orders Complete/Total: Displays the number of work orders that have

been completed and the total number of work orders that are in the visit in context.

Viewing Required Item Details Per Position

The Visit Details page in Marshalling Workbench enables you to view the total required materials for a position and all of its child positions.

To view required item details:

1. Navigate to the Marshalling Workbench page.
2. Query the Visit, using the search criteria.
3. Click the Details icon in the Results region to navigate to the Visit Details page.

The Required Items column displays the total number of required materials as work order material requirements. This includes the position in context and all of the child positions. These required items are indirectly associated to positions in the Unit, through work order item instances.

Viewing Available Item Details Per Position

You can drill down to the Available Items details from the Visit Details page. It represents the total number of items in a visit's subinventory and locator that meet the requirements mentioned in the Required Items. The Available Items quantity includes the position in context and all of its child positions.

To view available item details:

1. Navigate to the Visit Details page.
2. Select the Available Items Quantity link to navigate to the Available Items page.

Available Items

Visit Number 25 Unit C70-1, SN 312, Tail # VAS22
 Sub Inventory STORES Position Airframe (C70-1\312)
 Locator 1.1.1.. Total Work Orders 4
 Available Items 1 Completed Work Orders 0

Related Information
 Required Items 5
 Issued Items 0
 Not Available Items 4

Search Items
 Work Order Item Description Go Clear

Items Available in Visit Marshalling Area

Select Items: Issue

Select All Select None Show All Details Hide All Details

Select	Details	Item	Required Item	Source Work Order	Operation Sequence	Quantity	UOM	Date	Required Quantity	Issued Quantity	On Hand Quantity	Issue Allowed
<input type="checkbox"/>	Show	75484-S	SFM181	1	1	Each	20-Mar-2008	1	0	6	✓	

The Available Items page displays the required items in a subinventory and the items that will meet requirements. These items are located in other work orders within the same visit. This page also enables you to issue items to the work order from the subinventory. It also enables you to issue items from another work order to the work order with the requirement.

Issuing Materials from the Visit Subinventory

You can view the materials available in the visit subinventory and other work orders in the visit. From the Available Items page you can transact these materials to the context work order.

To issue materials from the visit subinventory:

1. In the Available Items page, select the required item check box from the Items Available in Visit Marshalling Area region.
2. Enter the following in the Issue Details region:
 - Sub Inventory: Defaults to the visit subinventory.
 - Locator: Lists the locator of the default visit subinventory.
 - Transaction Date: Material issue date.
 - Serial/Quantity: Applicable for serial number specific materials.
 - Lot Revision: Defaults from the serial number details.

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Marshalling Workbench

Logged In As: TSMITH

Available Items

Visit Number: 25 Unit: C70-1, SN 312, Tail # VA522
 Sub Inventory: STORES Position: Airframe (C70-1\312)
 Locator: 1.1.1.. Total Work Orders: 4
 Available Items: 1 Completed Work Orders: 0

Related Information

Required Items: 5
 Issued Items: 0
 Not Available Items: 4

Search Items

Work Order: Item: Description: Go Clear

Items Available in Visit Marshalling Area

Select Items: Issue

Select All Select None Show All Details Hide All Details

Select Details	Required	Item Source	Work Order	Operation Sequence	Quantity	UOM	Required Date	Required Quantity	Issued Quantity	On Hand Quantity	Issue Allowed
<input checked="" type="checkbox"/>	Hide	75484-5	SFM181	1	1	Each	20-Mar-2008	1	0	6	✓
Work Order Status: Released(1) Item Description: Assy, Turbine, HP Reserved Quantity: 0 Quantity Per Assembly: 1											

Issue Details

Sub Inventory: STORES Serial/Quantity: 754AND06 Lot Revision:
 Locator: 1.1.1.. Receipt: Aaron, Mrs. Tamara
 Transaction Date: 14-Apr-2008 Disposition:

Cancel

3. Click Issue.

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Home Sign Out Help

Marshalling Workbench

Logged In As: TSMITH

Confirmation

Changes have been saved.

Available Items

Visit Number: 25 Unit: C70-1, SN 312, Tail # VA522
 Sub Inventory: STORES Position: Airframe (C70-1\312)
 Locator: 1.1.1.. Total Work Orders: 4
 Available Items: 0 Completed Work Orders: 0

Related Information

Required Items: 5
 Issued Items: 1
 Not Available Items: 4

Search Items

Work Order: Item: Description: Go Clear

Items Available in Visit Marshalling Area

Select Details	Required	Item Source	Work Order	Operation Sequence	Quantity	UOM	Required Date	Required Quantity	Issued Quantity	On Hand Quantity	Issue Allowed
No Items Found											

Cancel

The confirmation page shows that the material has been issued to the work order. The Issued Items field matches the number of items issued to the work order. This confirms that the materials have been issued successfully.

Viewing Unavailable Item Details Per Position

Unavailable materials are those materials that are required by a work order requirement, but are not available in the visit subinventory. The unavailable materials in a visit are displayed as a single total. This total represents the required materials for a position including all of its child positions.

To view unavailable item details:

1. Navigate to the Visit Details page.
2. Select the Not Available Items quantity link to navigate to the Unavailable Items page.

Oracle Complex MRO

Marshall Workbench

Home Sign Out Help

Logged In As TSMITH

Unavailable Items

Cancel

Visit Number 36 Unit UC001

Sub Inventory STORES Position Position 1 (KM001\KM001 #SN001)

Locator 1.1.1.. Total Work Orders 1

Not Available Items 6 Completed Work Orders 0

Related Information

Required Items 10

Issued Items 4

Available Items 0

Search Items

Work Order Item Description Go Clear

List Of Items Not Available in Marshalling Area

Select Items: Issue

Select All Select None Show All Details Hide All Details

Select	Details	Item	Required	Source Work	Operation	Quantity	UOM	Required	Required	Issued	On Hand	Issue	
				Order	Sequence			Quantity	Date	Quantity	Quantity	Allowed	
<input type="checkbox"/>	Show	KN001		SFM417	10			6 Each	14-Apr-2008	10	4	16	4

List Of Items Not Available in Inventory

Details	Required	Item	Source	Work	Order	Operation	Sequence	Quantity	UOM	Required	Date	Required	Quantity	Issued	Quantity	Exception	Date
No Items Found																	

Cancel

The Unavailable Items page displays the items not available for the selected configuration position. This page enables you to locate, view, and issue materials from alternate subinventories. These materials must be transacted before the required date.

Issuing Materials from Alternate Subinventory

The Unavailable Items page enables you to locate subinventories that have required materials. You can issue those materials to the current work order. Additionally, you can identify the materials not available in any subinventory and make alternative arrangements to secure them .

To issue materials from alternate subinventory:

1. In the Unavailable Items page, in the List of Items Not Available in Marshalling Area region, select the item and click the Show button.
2. In the Issue Details region, enter the following information:
 - Sub Inventory: Lists the inventories other than the visit subinventory.
 - Locator: Lists the locator values based on the selected subinventory.
 - Transaction Date: The material issue date.
 - Serial/Quantity: This is applicable for serial number specific materials. You can

select a serial number for the item selected.

Note: When the selected item is a non serial item, the serial number LOV is disabled. You can manually enter the quantity in place of the LOV.

- Lot Revision: Defaults from the serial number details.

ORACLE[®]Complex MRO

HomeSign OutHelp

Logged In As: TSMITH

Marshall Workbench

Unavailble Items

Visit Number36

UnitUC001

Sub InventorySTORES

PositionPosition 1 (KM001\KM001 #5M001)

Locator1.1.1..

Total Work Orders1

Not Available Items6

Completed Work Orders0

Cancel

Related Information

Required Items10

Issued Items4

Available Items0

Search Items

Work Order

Item

Description

Go

Clear

List Of Items Not Available in Marshalling Area

Select Items:Issue

Select AllSelect NoneShow All DetailsHide All Details

Select	Details	Required Item	Source	Work Order	Operation	Sequence	Quantity	UOM	Required Date	Required Quantity	Issued Quantity	On Hand Quantity	Issue Allowed
<input type="checkbox"/>	<input type="checkbox"/>	Hide	KM001	SFM417			10	6 Each	14-Apr-2008	10	4	16	✓

Work Order StatusReleased(1)

Item DescriptionKM001 -- Serial Tracked Revision

Ctrl

Reserved Quantity0

Quantity Per Assembly10

Issue Details

Sub InventoryHolding

Locator3.3.3..

Transaction Date04-Apr-2008

Serial/Quantity3016

RecipientSmith, Mr. Tom

Disposition

Lot Revision0

List Of Items Not Available in Inventory

Details

Required Item	Source	Work Order	Operation	Sequence	Quantity	UOM	Required Date	Required Quantity	Issued Quantity	Exception Date
No Items Found										

Cancel

3. Click Issue.

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Marshalling Workbench Logged In As: TSMITH

Confirmation
Changes have been saved.

Unavailable Items

Visit Number: 36	Unit: UC001	Related Information Required Items: 10 Issued Items: 5 Available Items: 0
Sub Inventory: STORES	Position: Position 1 (KM001\KM001 #5N001)	
Locator: 1.1.1.1.	Total Work Orders: 1	
Not Available Items: 5	Completed Work Orders: 0	

Search Items

Work Order: Item: Description: Go Clear

List Of Items Not Available in Marshalling Area

Select Items:

[Select All](#) | [Select None](#) | [Show All Details](#) | [Hide All Details](#)

Select	Details	Item	Required Quantity	Source Work Order	Operation Sequence	Quantity	UOM	Required Date	Required Quantity	Issued Quantity	On Hand Quantity	Issue Allowed
<input type="checkbox"/>	Show	KM001		SFM417	10			5 Each, 14-Apr-2009	10	5	15	

List Of Items Not Available in Inventory

Details	Required Item	Source Work Order	Operation Sequence	Quantity	UOM	Required Date	Required Quantity	Issued Quantity	Exception Date
No Items Found									

The confirmation page displays the material that has been issued to the work order. Note that quantity in the Issued Items field has increased confirming that the materials have been successfully issued.

Viewing Work Order Progress Per Position

The work orders in a visit are displayed as totals. These totals are shown as number completed versus total number of work orders. It represents the total required materials for a position and all of its child positions.

To view work order progress per position:

1. Navigate to the Visit Details page.

The column Work Orders Complete/Total represents the total number of work orders associated to the item in a position and all of its child positions.

For more details, please see: Viewing Visit Configuration Using the Marshalling Workbench, page 10-4.

Managing Long Term Planning

This chapter covers the following topics:

- Overview
- Finding Scheduled and Unscheduled Visits
- Scheduling a Visit
- Assigning Spaces to a Visit
- Material Demand Planning and Scheduling
- Reliability Planning
- Supply Chain Planning
- Checking the Material Schedule
- Checking Material Availability
- Serial Number Reservation
- Managing Simulation Plans
- Creating a New Simulation Plan
- Adding Visits to a Simulation Plan
- Setting a Simulation Plan as Primary
- Copying a Visit to a New Simulation Plan
- Running Resource Leveling Plans

Overview

The Oracle Complex Maintenance, Repair, and Overhaul Long Term Plan module maximizes maintenance scheduling by balancing maintenance requirements with available maintenance capacity. It allows you to simulate a visit or sequence of visit combinations in order to find the optimal maintenance visit schedule.

Key functions supported by the Long Term Planning module provide essential tasks for planning the long term maintenance needs of fleet units. See:

- Finding Scheduled and Unscheduled Visits, page 11-4
- Assessing a Work Schedule, page 11-5
- Scheduling a Visit, page 11-6
- Assigning Spaces to a Visit, page 11-10
- Material Demand Planning and Scheduling, page 11-10
- Checking Material Availability, page 11-24
- Checking the Material Schedule, page 11-22
- Managing Simulation Plans, page 11-29
- Creating a New Simulation Plan, page 11-30
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- Copying a Visit to a New Simulation Plan, page 11-33
- Running Resource Leveling Plans, page 11-34

Long Term Plans

The Long Term Planning (LTP) module is used by a maintenance planner to schedule maintenance visits based on the optimal use of capable maintenance facilities, available resources and material constraints. The maintenance planner using Long Term Plan is able to make a complete assessment of the maintenance resources available at all maintenance locations. The maintenance planner is able to do this by balancing visits created for forecasted maintenance requirement information from Unit Maintenance Plan against projected maintenance capacity. The planner will schedule maintenance visits, assess capacity and reserve required materials.

Key Business Processes

Create a Visit

A visit is created in Visit Work Package and is a group of events created by the maintenance planner made up of selected maintenance requirements —defined in Unit Maintenance Plan or directly from Fleet Maintenance Program— and associated routes, with projected compliance times based the unit's forecasted operational times. This visit

is used to group events together for long and short term capacity planning, and to facilitate scheduling to a maintenance base. Visits are used for production through Visit Work Package and Production Planning. Creation of a maintenance visit consists of selecting and creating tasks for maintenance requirements and associated routes, and projecting compliance times based the unit's forecasted operational times.

Define a Visit's Resource Requirements

Maintenance visit resource requirements must be defined to allow accurate scheduling and capacity planning. Visit resource requirements are based on the maintenance requirement's associated routes—which are created in Route Management—and the man hour requirements by skill, skill level and certification, required tooling, required materials, duration and required completion times as defined by Unit Maintenance Plan.

Schedule a Visit

After a visit has been created it must be scheduled at a maintenance facility. Availability for this is based on currently scheduled visits, material constraints, and the forecast resources of the maintenance facility. The visit start time is set by considering due dates calculated for maintenance requirements by Unit Maintenance Plan. Required materials are reserved and the maintenance planner can determine if capacity is exceeded or does not fulfill requirements.

Schedule Required Materials

After a visit has been created and scheduled to a capable maintenance facility, the associated material requirements are factored into the supply chain plan through Oracle's Advanced Supply Chain Planning application. The visit's required materials, defined through the routes associated to each task, are scheduled based on the start date and time of each task for the applicable organization. LTP provides the planner, functionality to identify any schedule conflicts, when the required materials will not be available by the start date of the applicable visit task. Alternate items for these requirements may be selected and scheduled, or the planner may make scheduling changes to ensure that the materials will be available by the start of the associated work order.

Capacity Versus Work Load Requirements

You can compare resource capacity versus resources required for the projected workload, which is an essential tool for accurate scheduling and planning and ensures that available resources are used as efficiently as possible. This is accomplished through the Resource Leveling feature of Long Term Plan. To derive the optimal schedule, you must have the ability to adjust visit schedules, change maintenance locations, and remove and add visit requirements.

Simulations

The simulation function works in conjunction with both the scheduling and resource leveling functions of Long Term Plan. This allows the user to test different scheduling scenarios without changing the original visits. Visits can be copied into a simulation plan and their schedule or structure changed. After evaluating these visits, and taking

into account schedule and resource consumption, the changes can be implemented for the entire simulation plan, or for individual visits within the plan.

Finding Scheduled and Unscheduled Visits

The Search Visit page provides the ability to search and display all maintenance visits regardless of their status.

To find a visit:

1. Navigate to the Long Term Planning page from Oracle Complex Maintenance, Repair, and Overhaul's home page. Click the Visits link to display the Search Visits page.

You can view all primary visits, scheduled and unscheduled. All visits that need to be associated to an item (model) or serial number, all visits of a certain visit type, all visits due during a defined period, or all visits associated to an organization and department.

2. Select values in the applicable fields and select Go to display the results of your search.
 - Organization
 - Department
 - Item
 - Due From, Due To: These two attributes allow the user to filter the displayed visits based on when a visit is due.
 - Start From, Start To: Lists the date of the first day of effectivity of an operation.
 - Display Only: Used to filter displayed visits by Scheduled, Unscheduled, or Visits with conflicting end dates. This field is empty by default. A visit is considered scheduled if its start date is defined and it is associated with a department and organization. Visits not assigned to any organization and/or department and with no Start Date are Unscheduled Visits. Conflicting visits are visits whose Derived End Date is greater than it's Planned End Date.
 - Visit Type: Defines what kind of maintenance visit is required, such as C-Check, D-Check, Preflight. The types are user defined. This allows maintenance to be classified into categories. Larger visits can include many different maintenance requirements, but can still be grouped together under one visit type.
 - Visit Number

Search Visit

ORACLE[®] Complex MRO

Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visits Simulations Resource Leveling Material Requirements

Logged In As TSMITH

Search Visits

Organization

Department

Item

Unit

Due From Date

Start Date From

Display Only

Serial Number

Visit Type

Visit Number

Visit Status

Due To Date

Start Date To

Service Category

Select	Visit Number	Item	Visit Type	Serial Number	Organization	Department	Start Date	Planned End Date	End Date
No records were found matching the given criteria..									

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

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3. To search for a visit, in production or in planning stage, whose derived end date has exceeded the manually defined planned end date, select Visits with Confliction End Dates from the Display Only drop-down menu. Click Go. You can manually adjust the planned end date in the Schedule Visit page. See Scheduling a Visit, page 11-6.

Assessing a Work Schedule:

Long Term Planning allows quick identification of a maintenance base's workload. This assessment identifies the current scheduled visits at an organization's capable department and spaces for a given maintenance visit.

To assess a work schedule:

1. Retrieve the visit schedule you want to view in the search results region.
2. Select Plan Visit to navigate to the Scheduled Visit page.

3. Enter the schedule information in the applicable fields.
4. Select Go. All Visits within the selected criteria are displayed, showing the Organization, Department, Space, and Category. The schedule is indicated by icons, which are defined at the top of the page.

Scheduling a Visit

Long Term Plan permits maintenance organizations to schedule visits, which can be created specifically for a maintenance requirement. An empty visit can be created and later be associated to requirements.

Note: You can now schedule a maintenance requirement more than once to the same instance in a single maintenance visit.

Prerequisites

- ☐ The visit to be scheduled must exist in the database.

To schedule a visit:

1. Click Schedule Visit to navigate to the Schedule Visit page.
2. Select the visit you want to schedule, then select Plan Visit button.

ORACLE Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

Visits | Simulations | Resource Leveling | Material Requirements

Logged In As: TSMITH

Schedule Visit

* Indicates required field

Revert Apply

Visit Number: 43
 Item: C70-1
 Unit: MD UC 1
 Organization: San Francisco Maintenance
 Start Date: 27-MAY-2010
 Start Time Hours: 12
 Visit Type: Engine Overhaul

Due By: 314
 Serial Number: Primary Plan
 Simulation Plan: Base Maintenance, SFM
 Department: Base Maintenance, SFM
 Planned End Date: 27-MAY-2010
 Planned End Time Hours: 14
 Service Category: [Dropdown]

Assigned Spaces

Select	Space
No records were found matching the given criteria...	

Add More Rows

Revert Apply

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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3. Select information in the following fields.

This page enables you to assign a visit to an organization and department. You also must define its start date. All three of these attributes must be assigned and define a visit as scheduled. After a visit has been scheduled, spaces can be assigned and Long Term Planning's resource leveling functionality can be used. You can also reschedule a visit from this page if it is in planning status.

- **Visit Number:** All maintenance visits are assigned a unique visit number. All visit numbers for all visits that have been created are available for selection.
- **Duration:** the total length of the visit in days. It is the sum total of the durations of the associated visit tasks. Maintenance visits can be any length, from an hour to an unlimited number of days.
- **Visit Type:** this enables maintenance to be classified into categories. Some of the larger visits, like a D-Check, will often include many different maintenance requirements, but can still be grouped together under once visit type.
- **Due By:** The due date of a visit is defined by the associated maintenance requirements from Unit Maintenance Plan. The maintenance requirements are associated to the visit's tasks.
- **Item:** All visits must be associated with an item.
- **Unit:** serial number of a specific item.
- **Simulation Plan:** Identifies the visit by simulation plan the visit or if it is a visit in the primary plan. When coming from the Search Visits screen, the visit will always be part of the Primary Plan. When coming from the View Simulation Plan screen, the value is defined by the plan in context.

- Organization
- Department
- Start Date
- Planned End Date
- Planned End Time
- Service Category

You can also adjust the planned end date for a visit with conflicting planned and derived end dates.

You can schedule and reschedule a visit while viewing current visit details in the Scheduled Visits page. You can search for availability periods using the following search criteria:

4. Select Apply to save your work.

To schedule and reschedule visits:

1. Navigate to the Scheduled Visits page to view details for a currently scheduled visit number.
2. In the Search Scheduled Visits region, enter information in the applicable fields and select Go. The schedule details appear in the Scheduled Visits results table.
3. Select the intersecting icon, between the start date and corresponding department or space, to schedule the visit to the applicable organization, department and space. The Schedule Visit page appears.

ORACLE Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visits | Simulations | Resource Leveling | Material Requirements

Logged In As: TSMITH

Schedule Visit

* Indicates required field

Revert Apply

Visit Number: 43
 Item: C70-1
 Unit: MD UC 1
 Organization: San Francisco Maintenance
 Start Date: 02-FEB-2004
 Start Time Hours: 12
 Visit Type: Engine Overhaul

Due By: 314
 Serial Number:
 Simulation Plan: Primary Plan
 Department: Base Maintenance, SFM
 Planned End Date: 27-MAY-2010
 Planned End Time Hours: 14
 Service Category:

Assigned Spaces

Select	Space

Add More Rows

Revert Apply

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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4. Enter the schedule details, and select Apply to save your work.
5. To reschedule a visit, select the icon for the visit in the results table. Make the necessary changes, and click Apply.
6. Optionally, assign Spaces. See: Assigning Spaces to a Visit, page 11-10. The Space information is carried over to the Schedule Visit page for assignment.
7. To view the visit details assigned to a department or space, select the View icon for the applicable row in the results table. The View Details page displays the department and all scheduled visits starting during the previously defined period.

ORACLE Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visits | Simulations | Resource Leveling | Material Requirements

Logged In As: TSMITH

Visit Details

Previous

Organization: San Francisco Maintenance Center
 Department: US
 Space: Outside Processing SFM
 Simulation Plan: Primary Plan

Select	Visit Number	Visit Name	Visit Type	Unit	Item	Serial Number	Start Date	Due By	End Date	Additional Spaces Assigned
No records were found matching the given criteria...										

Previous

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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The Additional Spaces Assigned column indicates whether or not additional spaces are assigned to the visits.

8. To return to the Scheduled Visits page, select the visit and Schedule.

To unschedule a maintenance visit:

- 1.

Retrieve the visit you want to schedule.

2. Select Unschedule.

The visit is removed from the schedule and no longer appears in the Visits results. The Organization, Department, Start Date and any associated Spaces are removed from the visit.

To view scheduled visit details:

1. Retrieve the visit you want to view.
2. Select Plan Visit. The Schedule Visit page appears, displaying the currently scheduled visits for the relevant visit number.

Assigning Spaces to a Visit

Long Term Plan uses spaces to assign locations to the maintenance work required during a visit. One or more spaces may be assigned to a visit.

Prerequisites

- ☐ A visit must exist in the database, and it must be scheduled. A space must exist in the database.

To assign spaces to a visit:

1. Retrieve the visit you want to assign a space in the Schedule Visit page, and select Plan Visit.

The Schedule Visit page appears. The Assigned Spaces information is displayed in the lower half of the page.

2. Select Add More Rows, and add information in the provided fields. Select a value in the Space field.
3. Select Apply to save your work.

Material Demand Planning and Scheduling

Oracle CMRO's integration with Oracle Advanced Planning and Scheduling (APS) provides comprehensive material planning, scheduling and rescheduling capabilities. Planners have complete visibility into forecasted, planned, and unplanned material requirements. You can plan materials well in advance to accommodate fluctuations in demand and supply for both planned and unplanned material requirements. You can also maintain optimum stock to meet specific service levels under the defined inventory

budget constraints. The APS integration includes the following:

- **Material Demand Planning** - Material demand arises out of the planned maintenance requirements forecasted by Unit Maintenance Plan (UMP), defining when they must be accomplished. This forecast is based on the utilization of the applicable units. The material demand for all planned maintenance requirements in UMP is automatically stored every time the utilization forecast is updated or the "build unit effectivities" process is run. The replace and rework percentages defined in the disposition lists and the material requirements defined for the routes are factors influencing material demand. Material demand associated to unplanned, non-routine maintenance requirements is discovered during the production phase. Additionally, unplanned demand can be predicted based on the historical demand for each organization. This unplanned demand can be refined based on the historical relationship between the planned maintenance requirements, associated units and the unplanned material requirements.

Demand Planning collects these material requirements, factors them into the global demand, and feeds the global demand to Inventory planning and supply chain planning. The forecast/demand variability along with the supply variability (like supplier capacity and lead-times) is then used to specify time phased safety stock recommendations for the supply chain.

- **Supply Chain Planning** - After the planned maintenance requirements have been associated with a visit work package and scheduled to capable maintenance facilities, the required materials are scheduled through Oracle Advanced Supply Chain Planning. The Planning engine will first net existing supplies, and then generate planned orders to procure the required materials.

Material Demand Planning

The three primary material streams into the APS engine are global material demand from forecasted maintenance requirements, scheduled maintenance requirements and historical non-routine material requirements. Demand Planning factors the required materials into global material demand; and pushes it into Inventory Planning where the supply and demand variability is considered to compute safety stocks at all locations. Demand plans created in the process, provide visibility into the upcoming material requirements long before the applicable maintenance is scheduled to a facility.

Demand Planning includes the following procedures:

Create demand plans:

1. Navigate to the Demand Plans window in Oracle Demand Planning
2. Create a Demand Plan. See: Procedure to Define a Demand Plan, *Oracle Demand Planning User's and Implementation Guide*

You must define the following Input Parameters:

- Material Requirements - Scheduled
- Material Usage History - Unplanned
- Material Usage History - Planned
- Material Requirements - Planned

These streams account for global demand from Unit Maintenance Plan, scheduled requirements in Long Term Planning and historical requirements from non-routine maintenance defined during the production process.

Run data collections:

1. Navigate to the Custom Stream Collection window in Oracle Demand Planning.
2. Select the CMRO streams, and run collections.

See: Procedure for Collecting Data, *Oracle Demand Planning User's and Implementation Guide* This process collects the material requirements from CMRO and populates demand plans with it.

Build demand plans:

Once a demand plan has been defined in the Demand Planning Server, you build the demand plan in the Demand Planning Engine. This process builds the Demand Planning databases, and download data from the Demand Planning server to these databases.

1. Navigate to Demand Plan Administration in Oracle Demand Planning. A list of Demand Plans appears.
2. Select the demand plan that you want to work with, and build it. See: Building a New Demand Plan, *Oracle Demand Planning User's and Implementation Guide*

Reliability Planning

Reliability Planning enables you to reduce inventory levels at maintenance facilities and transient stations. This functionality provides forecast capabilities for non-routine items, based on identified failure probabilities, using the Supply Chain Planning engine. You can avoid costly interruptions to flight schedules if the correct parts are available, and also avoid situations of overstocking inventory by providing a query to analyze the reliability of rotatable parts.

Reliability Planning functionality uses historic part change reports and identifies failure probabilities. Earlier inspections and possible item replacements at more opportune times can reduce unplanned maintenance and associated costs. Historic calculations use standards such as part and age. For example, if a standard engine requires an overhaul

every 8000 hours under certain operational conditions, but historical data shows it is actually closer to every 7500 hours—the future performance is compared to the standard. You can then determine if the proposed action should be used for the overall maintenance. Reliability Planning includes the following features:

- Calculation of historical information used for predicted failure rate of installed components. Anticipated failure rates of installed components are identified in configuration positions within a unit.
- Manual calculation of predicted failure rate of components when historical data is not available. You can manually identify the Mean Time Between Failure (MTBF) for applicable items.
- Creation of material demand for anticipated part changes based on a utilization schedule. Based on identified failure rates and the projected flight schedule of units, material demand is identified at locations. This demand is factored into planning with the associated probability failure rates.

Reliability Planning is setup in Oracle Inventory, Oracle Planning, and in Complex Maintenance Repair and Overhaul's Administration mode. The Reliability tabbed region in the Administration mode is used to:

- Define conditions for data included, and codes for removing the data for analysis and reporting.
- Define counters for tracking the usage of installed parts.
- Associate the applicable forecast sets and define associated planning probabilities.
- Define manual reliability definitions.
- Generate the Submit Request function for the Reliability Analyzer Process.
- View the history of transactions for items and configurations, and export the data for reporting.

Prerequisites

- ☐ Create planning forecasts for each organization for the applicable probability range.

To view and define conditions and removal codes for reliability planning:

1. Navigate to the Reliability Setup page.

The Setup Summary region displays Conditions and Removal Codes, and the number of records associated with each attribute.

The Setup Details region is used to add or delete Condition and Removal Code

records.

2. In the Setup Details region, select the Conditions tab to view the conditions set for reliability analysis.

Oracle Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Part Changes Setup Counter Associations Forecast Associations Reliability Definitions Vendor Sourcing

Reliability Setup

Revert Save

Setup Summary

Attribute	Number of Associations
Conditions	2
Removal Codes	1

Setup Details

TIP Define the conditions and removal codes that should be considered by the reliability process.

Conditions Removal Codes

Associated Conditions	Remove
MRB Review	
Unserviceable	

Add Another Row

Revert Save

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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3. To add a record, select Add Another Row and choose the List of Value icon to display the Search and Select page.
4. Select a value and choose Select to refresh the Reliability Setup page with the new record.
5. Select the Removal Codes tab to view the codes enabling removal of the condition in the reliability analysis.
6. To add a record, select Add Another Row and choose the List of Value icon to display the Search and Select page.
7. Select a value and choose Select to refresh the Reliability Setup page with the new record.
8. Save your work.

To view and define base and override counter associations:

1. Navigate to the Counter Associations page to display base and override counters.
2. To add records, select Add Another Row. Choose the List of Value icon in the Base Counter field, and select a value from the Search and Select page.

Counters track usage, for example, each time an engine is started counts as one cycle. Base counters represent the total hours or cycles on a part, usually

represented by Time Since New (TSN) or Cycles Since New (CSN).

The screenshot displays the Oracle CMRO Complex MRO interface. The top navigation bar includes links for Approvals, Workflow, Department Location, Spaces, Space Unavailability, Reliability, and Vendor Sourcing. The main content area is titled 'Counter Associations' and contains a table with the following data:

Base Counter	Override Counter	Description	Remove
CSN	CSO	Cycles Engine	
CSN	CSO	Cycles Component	
TSN	TSO	Hours Engine	
TSN	TSO	Hours Component	

Below the table is an 'Add Another Row' button. The interface also includes a 'Revert' and 'Save' button on the right side of the table.

3. Choose the List of Value icon in the Override Counter field, and select a value from the Search and Select page.

Override counters are used to factor in a more accurate time component in the reliability analysis. For example, when a part is overhauled, time is more accurately represented by the Time Since Overhaul (TSO), but for accountability purposes, the TSN counter is tracked.

4. Enter a counter description for the override counter—for example: hours, cycles or formula.
5. Save your work.

To view planning forecasts associated with probability rates:

1. Navigate to the Forecast Associations page.
2. In the Search Region, you can search for forecasts associated with predicted failure rates using filter criteria in the following fields:
 - Organization
 - MRP Forecast
 - Type:
 - Historical—uses historical data for calculation
 - MTBF—Mean Time Between Failure, uses a manual figure for calculation

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing

Part Changes Setup Counter Associations Forecast Associations Reliability Definitions

Logged In As TSMITH

Forecast Associations

Save Search

Simple Search

Organization SFM

MRP Forecast

Type

Go Clear

Create

Organization	MRP Forecast	Probability Range %		Type	Update	Remove
		From	To			
SFM	SFM-1-15	0.01	15	Historical		
SFM	SFM-16-50	16	50	Historical		
SFM	SFM-51-100	51	100	Historical		
SFM	SFM-MTBF-0			MTBF		

Save Search

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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3. Select Go to display the results of your search.

To associate forecasts with reliability data:

1. Navigate to the Forecast Associations page, and choose Create to display the Create Forecast Associations page.
2. Select values in the Organization and Forecast Designator fields.

The forecast designator is the planning forecast name.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing

Part Changes Setup Counter Associations Forecast Associations Reliability Definitions

Logged In As TSMITH

Create Forecast Association

* Indicates required field

* Organization SFM

* Forecast Designator SFM-1-10

Type Historical

Probability Failure Rate - From

Probability Failure Rate - To

☒ TIP Please note that a 100% upper Probability Failure Rate limit is always taken into consideration inclusively.

Cancel Apply

Cancel Apply

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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3. Select a reliability planning type to be used for the calculation. Choices are:
 - Historical—calculation of anticipated failure of components using historical information.
 - MTBF—Mean Time Between Failure, this is a manual calculation of predicted failure of components.

4. Enter a percentage value in the Probability Failure Rate From and To fields.

These fields are used to determine which forecast is used to populate a material requirement. Reliability planning calculates the average life of an item, and predicts the probability of failure as the larger unit arrives at each service station. The requirements are added to the applicable forecast, identified by these two fields.

5. Select Apply to save your work.

Some failure rates are manually defined when an item is new and has no historical data attached it. Once you have historical data, you can delete this information. For the MTBF flow, you define known average failure rates for items in a specific position within a configuration.

To view or define manual reliability definitions:

1. Navigate to the Reliability Definitions page.
2. You can search for Master Configuration details in the Search region by selecting search criteria, and selecting Go.

You can searching using the following values:

- Master Configuration
- Position
- Revision
- Item Number

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing

Part Changes Setup Counter Associations Forecast Associations Reliability Definitions

Logged In As TSMITH

Reliability Definitions

Save Search

Search

Master Configuration Revision

Position Item Number

Go Clear

Create

Name	Revision	Position	Item	Organization	Item Details	Revision	Update	Remove
No results found.								

Save Search

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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The results of your search display in the Master Configuration Details region.

3. For records that have accumulated historical data, and no longer need to be manually defined, select Remove to delete this record.

4. Choose Create to display the Create Reliability Definition page for specifying new definitions.
5. Select a value in the Master Configuration field.
6. In the Position field, select Go to display the Select Position page. This page lists available positions. See: Select Position Page, page 3-27

Oracle Complex MRO

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Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing

Part Changes Setup Counter Associations Forecast Associations Reliability Definitions

Logged In As TSMITH

Select Position

Select Object: Associate

Expand All Collapse All

Select Focus Position	Description	Necessity	Quantity	UOM	Active Start Date	Active End Date	Item Group
<input type="radio"/>	Airframe/Airframe	Mandatory	1	Ea	29-Apr-2005		C70-1

Cancel

Cancel

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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7. Select a Position and choose Associate to add this record to the reliability definition. The Edit Reliability Definition page appears.

Oracle Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing

Part Changes Setup Counter Associations Forecast Associations Reliability Definitions

Logged In As TSMITH

Create Reliability Definition

* Indicates required field

* Master Configuration C70-1

* Position Airframe Go

* Item

Revision 1

Position Description Airframe

Item Revision

Cancel Apply

Cancel Apply

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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8. In the MTBF Details region, choose Add Another Row to enter counter and MTBF definitions.
9. Select the List of Values icon to display the Search and Select Counter page, and select a counter value.

ORACLE® Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

Part Changes Setup Department Location Spaces Space Unavailability Reliability Vendor Sourcing

Logged In As TSMETH

Edit Reliability Definition

* Indicates required field

Master Configuration: C70-1
Position: Airframe
Item: C70-1

Revision: 1
Position Description: Airframe
Item Revision:

MTBF Details

Counter	MTBF Value	Remove
CSN		

Add Another Row

Cancel Apply

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

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10. Enter a value in the MTBF field.

This is the average failure rate for the item in this specific position, within a configuration.

11. Select Apply to save your work.

The last step in Reliability Planning analysis is running the Reliability Analyzer Process. The reliability process identifies the probability of component failures. This information is used for material requirements in applicable planning forecasts.

To run the Reliability Analyzer Process for defined period:

1. Navigate to the Submit Requests window.
2. In the program Name field, select Reliability Analyzer Process.
3. In the Parameter field, select a date range.
4. Select the other information needed to generate this program.
See: Submitting a Request, *Oracle E-Business Suite User's Guide*
5. Choose Submit to generate this concurrent request.

Viewing Historic Part Changes

Part change transactions can be viewed and used in planning calculations. A summary of the part change transactions is displayed in the summary region of the Part Changes page. This information can be exported to other reporting programs.

To view historic part changes:

1. Navigate to the Part Changes page.

2. To find your appropriate records, select search criteria In the Search region. You can select information in the following fields:
 - Serial Number
 - Unit Configuration
 - Item
 - Lot Number
 - Visit Number
 - Organization Code
 - Transaction Type
3. Select Go to display the results of your search.

The screenshot shows the Oracle Complex MRO interface. The top navigation bar includes the Oracle logo and 'Complex MRO' text. Below it is a menu with various options: Approvals, Workflow, Department Location, Spaces, Space Unavailability, Reliability, Vendor Sourcing, Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The 'Part Changes' section is active, displaying a 'Simple Search' form. The form has a note: 'Note that the search is case insensitive'. It includes input fields for Serial Number, Unit Configuration, Item, Lot Number, Visit Number, Organization Code, Transaction Type, Condition, Removal Code, Part Change Date From, and Part Change Date To. There are 'Go' and 'Clear' buttons. Below the search form, there's an 'Export' button and a table with columns for Item Details, Configuration Details, and Visit Details. The table shows 'No results found.' and has buttons for 'Printable Page' and 'Save Search'.

The page displays information for each item in several regions: Item Details, Configuration Details, and Visit Details.

You can review the information for the following values: serial number, lot number, master configuration, subconfiguration, position, unit configuration, transaction type, date, visit number and name, workorder, organization, condition, and removal code.

4. Select Export to move these results to another document program.

Supply Chain Planning

When maintenance requirements, forecast, routine, and non-routine, are scheduled to

an organization through a visit, the associated material requirements are automatically picked up through Oracle Advanced Supply Chain Planning's (ASCP) collection process. The required materials are pegged against the applicable visit and task. Material requirements associated with the scheduled visits then appear in the Scheduled Materials page as scheduled. Scheduled materials are then removed from the global demand defined for planned MRs to ensure that the requirements are not counted twice by the planning engine.

The scheduled dates and quantities are displayed in the Scheduled Materials page. The collection process also returns exception dates, i.e. the dates on which the material is required but will not be available. If for a particular material requirement, either the scheduled date or the scheduled quantity is unsatisfactory, the maintenance planner can select alternate items, and schedule it using the same process.

The planner then creates an ASCP Plan to process the net existing supplies and generate Planned Orders. Material Demand is reflected as Sales Order in ASCP. The Sales Order number is displayed as concatenated visit number, task number and Complex MRO. (such as 100.2.Complex MRO). When the sales order is released, the Scheduled date and Scheduled quantity is automatically updated.

Supply Chain Planning involves the following processes:

Create an supply chain plan:

1. Navigate to the Supply Chain Plans window in Oracle Advanced Supply Chain Planning.
2. Create a supply chain plan and set it to ATP enabled. See: *Creating a Supply Chain Plan, Oracle Advanced Supply Chain Planning Implementation and User's Guide*

Run data collections:

1. Navigate to the Planning Data Collection concurrent program in Oracle Advanced Supply Chain Planning.
2. In the Parameters field for Planning Data Pull, the following two parameters must be set up to collect data from Oracle CMRO:
 - Select the applicable CMRO instance from the Instance list of values.
 - Select Yes for Sales Orders.

This ensures that material requirements from CMRO are collected as sales orders for the correct organization and instance. See: *Running Standard Collections, Oracle Advanced Supply Chain Planning Implementation and User's Guide*

3. Launch the plan.

Checking the Material Schedule

Oracle Complex Maintenance, Repair, and Overhaul Long Term Plan provides the ability to check the material schedule in order to assess available material resources. When a visit is planned, materials are automatically scheduled. The scheduled materials show up in the Scheduled Materials page. ASCP collections run on a regular basis to collect the requirements and provides exception dates if the material will not be available by the required date. When a conflict exists between a maintenance visit and the associated material schedule, the planner can select alternate items or reschedule the applicable visit, tasks within a visit, or maintenance requirement.

Prerequisites

- ☐ Disposition lists must be defined in Route Management and tasks must be associated with the routes.

To check the material schedule:

1. Navigate to the Schedule Visit page, and select Scheduled Materials.

The Scheduled Materials page appears displaying information about the materials scheduled for the visit. The scheduled date and quantity is displayed for each scheduled material requirement. The Item Description column enables the planner to identify the correct material requirement when item number is not enough. ASCP collection, that is set up to run on a regular basis, collects the requirements and provides any exception dates when the material will not be available by the required date.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visits Simulations Resource Leveling Material Requirements

Logged In As TSMITH

Schedule Visit
Scheduled Visits
Scheduled Materials
Material Availability

Scheduled Materials

Visit Number: 98
Visit Status: Implemented
Unit: MBUC1
Organization: San Francisco Maintenance Center US
Department: Outside Processing SFM
Start Date: 12-APR-2008
End Date: 14-APR-2008

Visit Type: Service Category
Serial Number: MBBSN001
Item: MBSrChTrk
Simulation Plan: Primary Plan
Planned End Date: 14-APR-2009
Due By: 22-APR-2008

Search Materials

Task:
Item:
Replace % >=
Go Clear

Display Only:
Rework % >=

Materials

Revert Apply

Position Path	Sub Configuration	Item	Item Description	For Task	Task Status	Required Date	Scheduled Quantity	Required Quantity	UOM	Repair Item	Exception Date	Replace %	Rework %
		501RC21Indicator, Rate Of Climb	VA-C70-21-22-In Shop Floor	D1	In Shop Floor	14-APR-2008	1	1	Each	No		100	
		501RC21Indicator, Rate Of Climb	VA-C70-21-22-In Shop Floor	D1	In Shop Floor	14-APR-2008	1	1	Each	No		100	
		501RC21Indicator, Rate Of Climb	VA-C70-21-22-In Shop Floor	D1	In Shop Floor	14-APR-2008	1	1	Each	No		100	

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

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Items defined with a 100% replacement percentage in the associated disposition list are automatically planned and scheduled by ASCP. Items defined as material requirements in Route Management are assumed to be 100 % replacement items. Planners must manually specify the quantity to be scheduled for non 100 % replacement items. Only items that are scheduled will flow into work orders as material requirements.

- To manually check for exception dates when collections have not run, select Schedule Conflicts from the Display Only drop-down menu. Select Go.

The exception dates are displayed in the Materials table.

- Optionally, you can search for and plan materials using the following search criteria:

- To search for material requirements for a specific task or item, select Task and Item.
- To search for materials by disposition percentage, enter a value in the Replace % or Rework % fields.

These percentages indicate the likelihood of the materials being required when executing the task.

- Select Go to display results matching the search criteria.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning

Visits Simulations Resource Leveling Material Requirements

Logged In As TSMITH



Schedule Visit
Scheduled Visits
Materials
Material Availability

Scheduled Materials

Visit Number: 46
Visit Status: Planning
Unit: DUMINY
Organization: San Francisco Maintenance Center US
Department: Outside Processing SFM
Start Date: 01-APR-2008
End Date: 01-APR-2008

Visit Type:
Service Category:
Serial Number: Demo-9
Item: MBSrCtrlrk
Simulation Plan: Primary Plan
Planned End Date: 02-APR-2008
Due By:

Search Materials

Task:  Display Only:
Item: 
Replace % >= Rework % >=

Materials

Position Path	Sub Configuration	Item	Item Description	For Task	Task Status	Required Date	Scheduled Quantity	Required Quantity	UOM	Repair Item	Exception Date	Replace %	Rework %
		KM001	KM001 - Serial Tracked Revision Cntrl	BEN	In Planning	01-APR-2008	5	5	Each	Yes		100	
		KM001	KM001 - Serial Tracked Revision Cntrl	BEN	In Planning	01-APR-2008	10	10	Each	Yes		100	

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration **Planning** Administration Execution Profile Sign Out Help

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5. Select the Item icon to select an alternative item to replace the item that appears by default in the Materials list.

For a sub-configuration or position, the item that is installed is automatically selected to be planned. When no item is installed, the planning engine picks up the alternates defined based on priority.

6. Set the quantity to be scheduled.
7. Select Apply to save your work. Select Cancel to return to the previous page.

Checking Material Availability

Oracle Complex Maintenance, Repair, and Overhaul's Long Term Planning module provides the ability to check the availability of materials for task starting time and location through Oracle's Available to Promise application. The ASCP collection runs periodically to automatically schedule materials, when visits are assigned to organizations. Alternatively, maintenance planners can also manually schedule materials through the Material Availability page.

Prerequisites

- ☐ The material requirements must be defined in Route Management and tasks must be associated to the routes.

To check material availability:

1. Navigate to the Schedule Visit page, and select Material Availability.

The Material Availability page appears.

ORACLE Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visits | Simulations | Resource Leveling | Material Requirements

Schedule Visit
Scheduled Visits
Scheduled Materials
Material Availability

Material Availability

Visit Number: 38
Visit Status: Planning
Unit: C70-1, SN 311, Tail # VA521
Organization: San Francisco Maintenance Center US
Department: Line Maintenance, SFM
Start Date: 25-MAY-2010
End Date: 28-MAY-2010

Visit Type: Engine Overhaul
Service Category: 311
Item: C70-1
Simulation Plan: Primary Plan
Planned End Date:
Due By:

Materials Availability for Selected Visit/Task

Check Availability For All | Schedule Materials For All

SelectItemFor Task	Task Status	Required Arrival Date	Available Quantity	Exception Date	Scheduled Quantity	UOM
No records were found matching the given criteria..						

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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If needed, you can use the filter to search material requirements by the department that is associated to the route/operation's associated task.

2. To schedule materials, based on current material supply against given organization, select the relevant material requirement, and click Schedule Materials.

The applicable requirements are passed through ATP and scheduled into the correct ASCP plan. Optionally, you can select Schedule Materials for All to schedule all the materials in the visit.

Note: This feature enables the maintenance planner to manually initiate the scheduling process, and determine conflicts if any, between the available quantities and the required quantities. This may be required for visits that have been recently scheduled or rescheduled, or when additional maintenance requirements have been associated with a visit.

3. To check availability for all the materials, click Check Availability For All.

Optionally, to check material availability for one material at a time, select an item, and click Check Availability. If the material will not be available by the required date, a warning is displayed.

4. Select Cancel to return to the previous page.

Serial Number Reservation

Oracle Complex Maintenance, Repair, and Overhaul is integrated with Oracle Inventory serial number reservation functionality, enabling you to select a serialized item and reserve it for a specific task in a visit. Only serial controlled items can be reserved. You can select items to reserve using associated conditions and counter values. This is used in reducing aircraft down times and increasing the life expectancy

of subcomponents by providing a method to track the usage of installed parts.

A global view of material requirements across maintenance visits is provided. You have the ability to identify material availability at the required location and for a specific date. You can search for requirements by exception dates to identify material shortages. This enables you to identify when materials are not available at the required location and date.

After you have reserved serialized items, the last step in the process is issuing items to the production work orders.

Prerequisites

- ☐ Serial number reservation functionality is set up in Oracle Inventory.

To search for material requirement information:

1. Navigate to the Material Requirements page.
2. You can search for records using the following fields:
 - Organization
 - Visit Number
 - Required Item
 - Required From and To Dates
 - Maximum Rework %
 - Maximum Replace %
 - Visit Status
 - Visit Type
 - Task Number
 - Work Order Number
3. You can also specify if you want filter your search for reservations and exception dates by flagging the following check boxes:
 - View only requirements with reservations
 - View only requirements with exception dates

ORACLE® Complex MRO Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Unit Maintenance Plan Visit Work Package Long Term Planning
Visits Simulations Resource Leveling Material Requirements

Logged In As TSMIT

Material Requirements

Search

Note that the search is case insensitive.

Organization Visit Number Required Item Required From Date (example: 26-May-2010) Maximum Rework % Maximum Replace % Visit Status

Visit Type Task Number Work Order Number Required To Date

☐ View only requirements with reserved items
☐ View only requirements with exception dates

4. Select Go to display the results of your search in the Select Material Requirement region.

The Material Requirement region provides a global view of all requirements. The Exception Date field enables you to easily identify material requirement shortages.

Select Material Requirement: View Reserved Items Reserve Items												Previous 1-10 Next 10	
Select Item	Organization	Required Date	Exception Date	Required Quantity	Scheduled Quantity	Reserved Quantity	Visit UOM	Visit Number	Visit Status	Task Number	Work Order Number	Op Seq	Update
<input type="radio"/> 17C35-01.	San Francisco Maintenance Center US	18-Jun-2009			1		Each	21	Implemented	2	SFM135	1	
<input type="radio"/> 17C35-01.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	94	SFM347	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	24-May-2005		1	1		Each	16	Partially Implemented	14	SFM60	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	18-Jun-2009		1	1		Each	21	Implemented	2	SFM135	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	10-May-2010		1	1		Each	25	Implemented	6	SFM199	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	4	SFM257	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	60	SFM313	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	22	SFM275	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	32	SFM285	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	80	SFM333	1	

Select Material Requirement: View Reserved Items Reserve Items												Previous 1-10 Next 10	
Select Item	Organization	Required Date	Exception Date	Required Quantity	Scheduled Quantity	Reserved Quantity	Visit UOM	Visit Number	Visit Status	Task Number	Work Order Number	Op Seq	Update
<input type="radio"/> 17C35-01.	San Francisco Maintenance Center US	18-Jun-2009			1		Each	21	Implemented	2	SFM135	1	
<input type="radio"/> 17C35-01.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	94	SFM347	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	24-May-2005		1	1		Each	16	Partially Implemented	14	SFM60	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	18-Jun-2009		1	1		Each	21	Implemented	2	SFM135	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	10-May-2010		1	1		Each	25	Implemented	6	SFM199	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	4	SFM257	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	60	SFM313	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	22	SFM275	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	32	SFM285	1	
<input type="radio"/> 32871-16.	San Francisco Maintenance Center US	17-May-2010		1	1		Each	28	Implemented	80	SFM333	1	

To view reserved items:

1. Navigate to the Material Requirements page and select a record.
2. Select View Reserved Items to display the Reserved Items page.

The list of reserved items is displayed for each visit number. The visit number quantities are shown for required, scheduled, reserved, and completed. Reserved items are displayed in table rows by item, serial number, organization, and subinventory.

Oracle Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Material Requirements

Logged In As: TSMITH

Reserved Items

Cancel | Reserve Items

Visit Number: 21
 Visit Status: Implemented
 Visit Type:
 Service Category:
 Maintenance Requirement: VA-C70-29-030-01
 Work Order Number: SFM135
 Task Number: 2
 Required Item: 17C35-01.
 UOM: Each

Unit: C70-3, SII 511, Tail # VA761
 Organization: San Francisco Maintenance Center US
 Department: Outside Processing SFM

Required Quantity: 0
 Scheduled Quantity: 1
 Reserved Quantity: 0
 Completed Quantity: 1
 Exception Date:

Details Item	Serial Number	Organization	Subinventory	Remove
No results found.				

Cancel | Reserve Items

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

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To reserve items:

1. Select Reserve Items—either in the Material Requirements or Reserve Items page—to display the Reserve Items page.
2. In the Search region, you can query items to reserve by counter values and condition. Results of your query display in the details table rows.

Oracle Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning | Material Requirements

Logged In As: TSMITH

Reserve Items

Cancel | View Reserved Items | Apply

Visit Number: 21
 Visit Status: Implemented
 Visit Type:
 Service Category:
 Maintenance Requirement: VA-C70-29-030-01
 Work Order Number: SFM135
 Task Number: 2
 Required Item: 17C35-01.
 UOM: Each

Unit: C70-3, SII 511, Tail # VA761
 Organization: San Francisco Maintenance Center US
 Department: Outside Processing SFM

Required Quantity: 0
 Scheduled Quantity: 1
 Reserved Quantity: 0
 Completed Quantity: 1

Search

Counter 1:

Counter 2:

Counter 3:

Counter 4:

Condition:

Maximum Value Counter 1:

Maximum Value Counter 2:

Maximum Value Counter 3:

Maximum Value Counter 4:

3. Select the items you want to reserve, and choose Apply to save your work.

To issue reserved serialized items to applicable work orders:

1. Navigate to the Material Issue page, and search for the work order to issue serialized items.
2. In the Select Material region select your work order record, and the details for the issue transaction including Issue Quantity, Recipient, Serial Number, and Disposition.

ORACLE Complex MRO

Navigator Favorites Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

Issues Returns View Material Transactions

Logged In As TSMITH

Material Issue

Work order: Priority:

Organization: Item:

Required Date From: Required Date To:

Service Request: Visit Number:

Department:

Go Clear

Select Material(s): Issue

Select	Work Order	Operation Seq	Item	Description	Required Quantity	Issued Quantity	Net Quantity	Uom	Issue Quantity	Issue UOH	Repair Item	Recipient	Serial Number	Details	Disposition
<input type="checkbox"/>	SPM48	2	93242-S	Sensor, Temperature	1	0	0	Each	1	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM462	10	MBSrLotCtrTrk	Serial and Lot Controlled Tracked Item	8	0	0	Each	8	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM462	10	MBSrRevCtrTrk	Serial and Revision Controlled Tracked Item	8	0	0	Each	8	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM462	10	MBSrCtrTrk	Serial Controlled Tracked Item	8	0	0	Each	8	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM459	10	MBSrLotCtrTrk	Serial and Lot Controlled Tracked Item	10	0	0	Each	10	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM459	10	MBSrRevCtrTrk	Serial and Revision Controlled Tracked Item	10	0	0	Each	10	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM459	10	MBSrCtrTrk	Serial Controlled Tracked Item	10	0	0	Each	10	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM456	10	MBSrLocCtrTrk	Serial and Locator Controlled Tracked Item	10	0	0	Each	10	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM456	10	MBSrLotCtrTrk	Serial and Lot Controlled Tracked Item	10	0	0	Each	10	Ea	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="checkbox"/>	SPM456	10	MBSrCtrTrk	Serial Controlled Tracked Item	10	0	0	Each	10	Ea	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Select Material(s): Issue

Previous 1-10 of 34 Next

3. Select Issue to save your work.

Related Topics

Item Reservations, *Oracle Inventory User's Guide*

Setting Up Serial Number Control, *Oracle Inventory User's Guide*

Generating Serial Numbers, *Oracle Inventory User's Guide*

Assigning Serial Numbers, *Oracle Inventory User's Guide*

Managing Simulation Plans

An important function of Long Term Planning is to balance the resources of work load requirements versus maintenance base resource capacity. This is important for scheduling purposes, to assure that the available resources are used as efficiently as possible. Simulation plans allow you to compare various plans before implementing them to enable selection of the most efficient maintenance plan.

See:

Related Topics

Viewing Simulation Plans, page 11-32

Creating a New Simulation Plan, page 11-30

Adding Visits to a Simulation Plan, page 11-31

Setting a Simulation Plan as Primary, page 11-33

Creating a New Simulation Plan

Prerequisites

- ☐ There must be a primary plan in the database. At least one visit associated to the primary plan must exist in the database.

To create a new simulation plan:

1. Navigate to the Simulations Plan page.
2. Use the information in the following table to define a simulation plan.

Field	Description
Plan Name	All visits are associated with a simulation plan.
Primary Plan	Indicates whether or not the plan is set as the primary plan. When visits are created in Visit Work Package, they are automatically included in the primary plan. Copies of these visits can then be added to other simulation plans. See: Setting a Simulation Plan as Primary, page 11-33
Number of Visits in Plan	Visits included in the specified plan.

3. Select Add More Rows to enter information in the provided fields.

The screenshot shows the Oracle Complex MRO Planning interface. The top navigation bar includes links for Unit Maintenance Plan, Visit Work Package, Long Term Planning, Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The main content area is titled "Simulation Plans" and contains a table with the following data:

Select * Plan Name	Primary Plan	Number of Visits in Plan	Delete
<input type="radio"/> Primary Plan	Y	10	
<input type="radio"/> Sim Plan 1	N	0	
<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	

Below the table are buttons for "Add More Rows", "Set Plan as Primary", and "View Plan".

4. Select Delete to delete a simulation plan.
If the Simulation Plan is not the Primary Plan, it is deleted.
5. Select Apply to save your work.

Adding Visits to a Simulation Plan

Prerequisites

- ☐ A primary plan, a non-primary plan with a visit, and at least one visit associated to the primary plan must exist in the database.

To add a visit to a simulation plan:

1. Navigate to the Simulations Plan page.
2. Select the simulation plan you want to add a visit. Select View Plan to display the View Simulation Plan page . .
3. Select Add More Rows to add several rows to the table

ORACLE Complex MRO

Unit Maintenance Plan Visit Work Package Long Term Planning

Visits Simulations Resource Leveling Material Requirements

Logged In As TSMITH

View Simulation Plan

Simulation Plan Primary Plan

Visit List

Schedule Unschedule Copy to a New Plan Edit

Select	Visit Number/Item	Visit Type	Serial Number	Organization	Department	Start Date	Delete	
<input type="radio"/>	17	C70-2.	Transt Check	412	JFK Maintenance Center US	Line Maintenance, JFK	01-OCT-2006	
<input type="radio"/>	36	C70-1.	Engine Overhaul	311	San Francisco Maintenance Center US	Base Maintenance, SFM	25-MAY-2010	
<input type="radio"/>	39	C70-1.	Transt Check	311	San Francisco Maintenance Center US	Base Maintenance, SFM	25-MAY-2010	
<input type="radio"/>	31	MRO-C1600.	Transt Check	101	JFK Maintenance Center US	Line Maintenance, JFK	21-MAY-2010	
<input type="radio"/>	44	MRO-M1900.	Transt Check	301	Vision Project Manufacturing USD		27-MAY-2010	
<input type="radio"/>	35	C70-1.	Engine Overhaul	311	San Francisco Maintenance Center US	Base Maintenance, SFM	25-MAY-2010	
<input type="radio"/>	42	C70-1.	Engine Overhaul	314	San Francisco Maintenance Center US	Base Maintenance, SFM	10-MAY-2010	
<input type="radio"/>	24		Engine Overhaul		San Francisco Maintenance Center US	Base Maintenance, SFM	10-MAY-2010	
<input type="radio"/>	38	C70-1.	Engine Overhaul	311	San Francisco Maintenance Center US	Line Maintenance, SFM	25-MAY-2010	
<input type="radio"/>	43	C70-1.	Engine Overhaul	314	San Francisco Maintenance Center US	Base Maintenance, SFM	27-MAY-2010	

Schedule Unschedule Copy to a New Plan Edit

Unit Maintenance Plan Visit Work Package Long Term Planning Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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4. Select values in the Visit Number and Item fields.
The item refers to a model name—such as Boeing 747-200B— that the visit is associated to. All visits must be associated to an item.
5. Select the type of maintenance visit is required. This enables maintenance to be classified into categories.
6. Select an applicable unit, this refers to the serial number of a specific item.
7. Select the applicable organization and department.
8. Select the Start Date, the date of the first day of effectivity of this operation.
9. Select Apply to save your work.
10. To delete a record, select the record and choose the Delete icon.

To view simulation plans:

1. Navigate to the Simulations Plan page.

The screenshot shows the Oracle CMRO Planning interface. The top navigation bar includes links for Unit Maintenance Plan, Visit Work Package, Long Term Planning, Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The main content area is titled 'Simulation Plans' and contains a table with the following data:

Select*	Plan Name	Primary Plan	Number of Visits in Plan	Delete
<input type="radio"/>	Primary Plan	Y	10	
<input type="radio"/>	Sim Plan 1	N	0	

Buttons for 'Revert', 'Apply', 'Set Plan as Primary', and 'View Plan' are visible above and below the table. The footer of the page indicates 'Copyright 2006, Oracle Corporation. All rights reserved.'

All simulation plans are displayed, showing for each the number of visits in the plan, and if the plan is set to primary. Plan names may be changed, but must remain unique.

2. Select the plan and select View Plan. The View Simulation Plan page appears, displaying the visit list.

Setting a Simulation Plan as Primary

To calculate maintenance requirement due dates:

1. Navigate to the Simulations Plan page.
2. Select the simulation plan you want to set as the primary plan.
3. Select Set Plan as Primary.

Copying a Visit to a New Simulation Plan

Prerequisites

- ☐ A primary plan with at least one visit and a simulated plan must exist in the database. Visits may only be added to non-primary plans.

To copy a visit to a new simulation plan:

1. Navigate to the Simulations Plan page
2. Select a simulation plan to display the View Simulation Plan page.
3. Select button next to the visit you want to copy, and choose Copy to a New Plan button. The Copy to a New Plan page appears.

ORACLE® Complex MRO

Unit Maintenance Plan | Visit Work Package | Long Term Planning

Visits | Simulations | Resource Leveling | Material Requirements

Logged In As: TSMITH

Copy to a New Plan

* Indicates required field

Visit Details

Assoc. Primary Visit Number	17	Visit Type	Transit Check
Item	C70-2	Serial Number	412
Start Date	01-OCT-2006	End Date	02-OCT-2006
		* Simulation Plan	Sim Plan 1

Assigned Space List

Organization	Department	Space
No records were found matching the given criteria...		

Apply

When a primary visit is copied to a simulation plan, the new visit inherits all the unit effectivity associated with the parent visit. You can view the applicable visit's due by date, derived from the associated unit effectivity.

4. Select Apply to save your work.

Running Resource Leveling Plans

Long Term Plan allows you to assess resources associated with the maintenance requirements of scheduled visits against the capacity of maintenance locations. Ideally, a certain percentage of maintenance capacity is kept free to allow for non routine maintenance needs. The resource leveling feature of Long Term Plan identifies shortcomings in your plan so that you can reschedule a visit or adjust it in Visit Work Package in order to better utilize available resources. Running resource leveling on different simulation plans allows you to identify the best plan with regards to resource capacity.

Resource leveling takes task level department assignments into consideration. Resource leveling procedure allows you to filter and display only those required resources that exceed a defined level of capacity.

Note: Resource leveling can display only those required resources that exceed a defined level of capacity. This means that the full set of procedures must now be run at the beginning of the process, as opposed to the previous function that drilled into each resource requirement before making these calculations. Enter a value in the Required Capacity field to set the reserve level.

The resource leveling procedure allows you to easily identify where a potential problem exists with regards to conflicts or shortages in available resources. When planning visits, a scheduler needs to be able to leave a certain percentage or resources available in anticipation of non-routine maintenance. If the planned requirements consume too

much of these resources, the over plan must be changed by either rescheduling entire visits, tasks within a visit or maintenance requirements associated with a visit. Setting a reserve with the Required Capacity field resolves this need in Long Term Plan. A resource's unused capacity is defined by summing the required units, subtracting these from the total number of applicable people or machines defined for the applicable department, and dividing that by the number of available units. Available units are the total number of persons or machines minus those that are not available due to existing work order assignments.

Results in Resource Leveling can be filtered to display only those required resources that exceed a defined level of capacity.

Note: Resource leveling can only be done for one organization and simulation plan at a time and if all of the applicable resources and resource requirements have been setup correctly.

To run resource leveling:

1. Navigate to the Resource Leveling page.

The screenshot displays the Oracle Complex MRO interface for Resource Leveling. The top navigation bar includes links for Unit Maintenance Plan, Visit Work Package, Long Term Planning, Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The main content area is titled 'Resource Leveling' and contains a search form. The form includes fields for Organization (with a dropdown arrow), Department (with a dropdown arrow), Simulation Plan (with a dropdown arrow), Start Date, End Date, Period UOM (with a dropdown arrow), and Available Capacity (with a dropdown arrow). The Available Capacity field is currently set to 0%. Below the search form is a table with the following columns: Select Date, Resource Type, Resource Name, Available Capacity, and Department. The table is currently empty, and a message below it states 'No records were found matching the given criteria.' The bottom of the page shows the same navigation bar as the top.

2. To search for resources, you can select values in the following fields:

- Organization
- Department
- Start and End Dates
- Simulation Plan
- Required Capacity %

This field sets the percentage of capacity that you want to hold in reserve. All

resources required for each period for all visits in the selected simulation plan are balanced against the total available resources.

3. Select Go to display the results of your search.
4. Select your record and choose View Resources to display the Resource Availability page.
5. Select View Details to display the Resource Consumption Details page. Select the Visit or task column to edit the respective visit or task in Visit Work Package.

Administration

This chapter covers the following topics:

- Overview
- Creating Department Location
- Creating a Maintenance Space
- Finding a Space's Unavailable Period
- Using Reliability Planning
- Managing Vendor Sourcing

Overview

Efficient maintenance planning seeks to smooth the workload curve. Before a shop visit duration can be accurately determined, an organization's skilled workers' schedules must be considered. Using Visit Work Package, the planner can select shift schedules for the workers who will accomplish the inspections and repairs. As the task-to-shift matching is completed, the time required for the visit tasks to be completed can be calculated. Administrative functions related to the Visit Work Package and Long Term Planning modules are described in the following topics:

- Creating Department Location, page 12-1
- Creating a Maintenance Space, page 12-3
- Using Reliability Planning, page 12-6
- Managing Vendor Sourcing, page 12-6

Creating Department Location

You use the Department Location tab to set up marshalling area for staging parts. It is

done through the subinventory and locator association in the Administration menu. The subinventory and locator are then associated to each visit upon creation, thereby creating a marshalling area for each visit.

To create department location:

1. Navigate to the Create Department Location page.

2. Select an Organization and Department.
3. Select a work calendar value in the Calendar field.
4. Select a Shift Number and Start and End Time values.
5. In the Work Days field, select a value that identifies workday patterns associated with the shift, calendar, and department.
6. Select Apply to save your work.

Retrieving Department Location Records

Once departmental location records are created, you can retrieve them from the database, viewed, and if necessary, deleted. Location records cannot be updated; they must be deleted and recreated.

To retrieve departmental location records:

1. Navigate to the Search Department Locations page.
2. Select values for the Organization and Department, and choose Go to display your records.

ORACLE® Complex MRO

Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing

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Search Department Locations

Organization

Department

Go Clear

Create

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Organization	Department	Sub Inventory	Physical Locator	Shift	Number	Days	On Days	Off Days	Start Time	End Time	Remove
JFK Maintenance Center US	Line Maintenance, JFK			5	7	0	0:00	12:00			
DFW Maintenance Center US	Outside Processing DFW			1	5	2	7:00	15:00			
JFK Maintenance Center US	Outside Processing JFK			1	5	2	7:00	15:00			
San Francisco Maintenance Center US	Outside Processing SFM			1	5	2	7:00	15:00			
AM1 - Vision A&D Maintenance Base1 US	Outside Processing			1	5	2	7:00	15:00			
AM2 - Vision A&D Maintenance Base2 US	Outside Processing			1	5	2	7:00	15:00			
Amsterdam Maintenance Center Europe	Line Maintenance, AMS			5	7	0	0:00	12:00			
San Francisco Maintenance Center US	Base Maintenance, SFM			5	7	0	0:00	12:00			
San Francisco Maintenance Center US	Calibration Lab, SFM			5	7	0	0:00	12:00			
San Francisco Maintenance Center US	Component Shop, SFM			5	7	0	0:00	12:00			

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Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

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Creating a Maintenance Space

A maintenance space is used in Long Term Planning as a subgroup of Departments. They define specific locations where maintenance tasks take place, the type of work that can be performed there and the item the work can be done on.

To create a maintenance space:

1. Navigate to the Add Space page.

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Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing

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Add Space

* Indicates required field

Space Details

* Organization

* Department

* Service Category

* Space Name

Cancel Apply

Cancel Apply

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

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2. Select Organization and Department values.
3. Select a Service Category. This represents the level of maintenance that can be performed in a space. A common method of categorization would be based on the equipment type.
4. Select a Space Name.
5. Select Apply to save your work, and display the Edit Space page.

6. Define the space capabilities by selecting values for item and visit type.
7. Select Apply to save your work.

To search maintenance spaces:

1. Navigate to the Search Spaces page.
2. You can select search criteria using the following fields:
 - Organization
 - Department
 - Space
 - Status
 - Item Capability
 - Visit Type Capability
 - Service Category
3. Select Go to display the results of your search.

ORACLE® Complex MRO

Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

Approvals Workflow Department Location **Spaces** Space Unavailability Reliability Vendor Sourcing

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Search Spaces

Organization Item Capability

Department Visit Type Capability

Space Service Category

Status Go Clear

Create

Previous 1-10 of 18 Next

Space	Organization	Department	Service Category	Status	Delete
SFO_Ramp 1	San Francisco Maintenance Center US	Line Maintenance, SFM	Category 6	Active	
SFO_Eng Shop 1	San Francisco Maintenance Center US	Engine Shop, SFM	Category 6	Active	
SFO_Hangar 1 Bay 1	San Francisco Maintenance Center US	Base Maintenance, SFM	Category 6	Active	
DFW_Ramp 1	DFW Maintenance Center US	Line Maintenance, DFW	Category 6	Active	
DFW_Eng Shop 1	DFW Maintenance Center US	Engine Shop, DFW	Category 6	Active	
SFO_Eng Shop 2	San Francisco Maintenance Center US	Engine Shop, SFM	Category 6	Active	
AMS_Ramp 1	Amsterdam Maintenance Center Europe	Line Maintenance, AMS	Category 6	Active	
Dock 1	San Francisco Aviation Maintenance Center MRO Headquarters		Category 1	Inactive	
DFW_Hangar 1 Bay 1	DFW Maintenance Center US	Base Maintenance, DFW	Category 6	Active	
SFO_Ramp 2	San Francisco Maintenance Center US	Line Maintenance, SFM	Category 6	Active	

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Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

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Finding a Space's Unavailable Period

To find the unavailability of a space:

1. Navigate to the Search Availability Restrictions page.
2. You can select search criteria in the following values: Organization, Department, Space, Unavailable From and To.
3. Use the information in the following table to enter values in the Search Availability Restrictions page.
4. Select Go to display the results of your search.

The screenshot shows the Oracle Complex MRO interface. The top navigation bar includes links for Home, CMRO Home, Engineering, Configuration, Planning, Administration (highlighted), Execution, Profile, Sign Out, and Help. Below this is a sub-navigation bar with links for Approvals, Workflow, Department Location, Spaces, Space Unavailability (highlighted), Reliability, and Vendor Sourcing. The main content area is titled "Search Availability Restrictions" and contains search criteria fields for Organization, Department, Space, Unavailable From Date, and Unavailable To Date. There are "Go" and "Clear" buttons. Below the search fields is a "Create" button. A table header is visible with columns: Select, Space, Organization, Department, Unavailable From Date, Unavailable To Date, and Description. The table body shows a message: "No records were found matching the given criteria..". The bottom of the page has a footer with copyright information: "Copyright 2006, Oracle Corporation. All rights reserved."

To set a space as unavailable:

1. Choose Create to open the Add Availability Restriction page.
2. Select values in the following fields: Organization, Department, Space, Unavailable From and To.
Enter any descriptive text in the Description box.

ORACLE® Complex MRO

Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing

Logged In As: TSMETH

Add Availability Restriction

* Indicates required field

Availability Restriction Details

* Organization

* Department

* Space

* Unavailable From Date

* Unavailable To Date

Description

Cancel Apply

Approvals Workflow Department Location Spaces Space Unavailability Reliability Vendor Sourcing Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out Help

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3. Select Apply to save your work.

Using Reliability Planning

Reliability Planning enables you to reduce inventory levels at maintenance facilities and transient stations. This functionality provides forecast capabilities for non-routine items, based on identified failure probabilities, using the Supply Chain Planning engine. You can avoid costly interruptions to flight schedules if the correct parts are available, and also avoid situations of overstocking inventory by providing a query to analyze the reliability of rotatable parts.

See, Reliability Planning., page 11-12

Managing Vendor Sourcing

Vendor Sourcing operates in conjunction with Outside Processing setup. The feature consists of defining vendors, creating associations of parts at specific locations, and creating vendor and customer connections. For more details, see Inventory Service Order Outside Processing.

See, Inventory Service Order Outside Processing., page 15-5

Production Planning and Production

This chapter covers the following topics:

- Overview
- Managing Workorders
- Releasing Workorders
- Deferring Workorders
- Canceling Workorders
- Deferring Maintenance Requirements
- Scheduling Workorders Using the Scheduler Workbench
- Viewing the Scheduling Hierarchy
- Viewing Serial Number Change History
- Working with Maintenance Requirements
- Updating Material Requirement Details
- Editing Resource Requirements
- Updating Resource Requirement Details
- Viewing Resource Assignments
- Editing Resource Assignments
- Charging Resources
- Working with Material Transactions
- Viewing and Issuing Materials Across WorkOrders
- Returning Materials Across Workorders
- Identifying the Employee that Items are Issued To or Returned By
- Viewing the Material Transaction History
- Item Disposition

- Disposition Association during Material Transaction
- Updating Dispositions
- Viewing Item/Part Service History
- My Workorders Interface

Overview

In the maintenance, repair, and overhaul industry, it is necessary to identify, perform, and track maintenance execution to form a complete history of an unit while maintaining the units condition to ensure service availability and capturing the costs associated with the maintenance execution. While maintaining the unit it is necessary to identify defects, the corrective action steps, material, and resource requirements as well as charging resources, performing material transactions, and maintaining the quality for a job.

The objective of production planning is to evaluate a work package and develop a feasible project plan, including resource allocation by mechanics' skill, material, breakdown man hour by zone/process, and estimate turn time for each major process. When a Visit Work Package is updated with non-routine or repair jobs, the production plan will include these.

The Production Planning module is used by production planners to manage shop floor activities, assign personnel and equipment to jobs, fine tune work schedules, manage procurement, create material requirements for unplanned maintenance, and track components sent out for repair against the maintenance visit.

This interface is also used by maintenance personnel to execute the organizations' maintenance program. Technicians and supervisors can view job assignments, view component and material availability, record maintenance activities; material and component consumption; and job completion, update maintenance compliance details, issue quality inspection results to satisfy regulatory requirements, and initiate new service requests for unplanned maintenance discovered during planned maintenance visits. See:

- Managing Workorders, page 13-5
- Working with Maintenance Requirements, page 13-14
- Updating Material Requirements, page 14-31
- Viewing Employee Assignments, page 14-34
- Viewing Documents, page 14-36
- Viewing Resource Requirements, page 14-34
- Viewing Resource Assignments, page 13-21

- Charging Resources, page 13-23
- Working with Material Transactions, page 13-25
- Item Disposition, page 13-30

Production

The Production module supports the execution of the tasks against an Install Base Tracked Item. Production is the actual execution of the work required for a maintenance visit. The execution of the visit accumulates the entire history of work performed, the inspection findings, and component changes. The production activity thus provides the information necessary for the records that is required for commercial and regulatory purposes. Production manages key processes such as receiving a unit for service, disassembling, cleaning and inspecting it as well as dispositioning the parts.

The Production Planning module automates production tasks like job creation, maintenance and job completions. Once a job is released to the floor, it can be executed and vouchered to. The execution of a job can be routine, disassembly, inspection, assembly, disposition that can lead to scrap, and part request and repair job creation to correct a deviance. All costs associated with the jobs are collected throughout the repair cycle.

Routine Tasks

A routine task is a job that has been generated from a predefined route setup in Route management. If defined through a maintenance requirement, it may have a schedule and due date as defined by Unit Maintenance Plan. The task has been associated with a maintenance visit in Visit Work Package and released to Production, optionally scheduled by Long Term Plan, and optionally has resources scheduled by Production Planning.

Non-Routine Tasks

When a non-routine requirement is discovered—these non-routine, or unplanned, jobs can be accomplished in the originating visit or deferred to subsequent visits. Non-routine tasks consist of a service request tracking the problem, and a job consisting of the steps required to resolve the problem. A non-routine task may have additional routes associated with it in visit work package to support the resolution. You can create service requests using the Service Request window in Oracle TeleService. You can also create non-routine service requests in the Unit Maintenance Plan region of the Planning module. These requests can be deferred to subsequent visits using MEL or CDL instructions. See: Creating Non-routine Requests During Unit Maintenance, page 8-15

Key Business Processes

The Production module of Oracle Complex Maintenance, Repair, and Overhaul supports the following business processes:

Search for Routine and Non-Routine Workorders

After a Routine workorder or Non-Routine workorder is created, the workorder can be selected from the results of a search using the desired filtering elements.

Create workorders from visit tasks for Scheduled, Unscheduled, and Convenience maintenance

Workorders are created in Production when the tasks are pushed to Production from Visit Work Package or when a Service Request, from Oracle Complex Maintenance, Repair, and Overhaul Production, is created in a Visit where the tasks have been pushed to Production.

Create Service Requests to track reported problems

Service Requests are created when an item has a service difficulty, requiring an action to address the issue. During the Service Request creation a Visit Task is created and a job is created if the Visit's Tasks have been pushed to Production. The Service Request creation will also be generated when an Install Base tracked item is returned or removed in the Unserviceable or MRB condition.

Create Operations to Non-Routine workorders for work definition and tracking

For Non-Route based workorders the user is allowed to create operations to describe the steps required to correct the service difficulty. For Route based workorders the operation steps are created from the definition in Route Management including the associated material and resource requirements that are valid for the execution organization.

Maintain Workorders

The user maintains the workorder by adjusting the schedule, the status, completing, deferring, and selecting the actual start and end for a workorder. In addition, the user can select if the workorder is confirming the jobs necessity by selecting the confirmed failure flag. When a workorder is completed it triggers a check to determine if the workorder is the last as part of a maintenance requirement. If the workorder was the last workorder to be completed for a maintenance requirement, the counters are reset as defined by Fleet Maintenance Program and Unit Maintenance Plan is updated to reflect the maintenance requirement is complete.

Maintain Operations

The user maintains the operations by updating the operations, adding, removing, or updating the material and resource requirements, captures costs by Charging Resources, Issuing, and Returning Materials, viewing the resource assignments, recording part changes, and completing the operations.

Maintain Quality

Quality is maintained using the Route setup from Route Management for the workorder and operation compliance and from the profile options for Non-Routine Workorder and Operation compliance, Job Deferral, MRB part disposition support, and by capturing counter readings at the job completion. The quality results are captured

based on the setup storing them in Oracle Quality.

View Service History

During the planning phase of a service or the execution of a work order, planners access the history of service performed against a Unit/part. Planners will then compare the current/future requirements and schedule the tasks to be performed. Planners can also review the past, current and future maintenance requirements against a part/item.

Managing Workorders

The Production module is the interface to perform various activities related to work orders. You can update, release, cancel, defer, and complete work orders; and create non-routine work orders arising out of maintenance needs discovered on the production floor. You can also view documents, scheduling hierarchy, material, and resource requirements associated with work orders. See:

- Finding Workorders, page 14-17
- Updating Operations, page 14-20
- Completing Operations, page 14-27
- Creating Non-Routine Workorder, page 14-24
- Releasing Workorders, page 13-5
- Completing Workorders, page 14-27
- Deferring Workorders, page 13-6
- Signing Off Maintenance Requirements, page 14-28
- Changing the Serial Number of Items Associated with Workorders, page 14-30

Releasing Workorders

To release a workorder:

1. Navigate to the Execution region, and select the Production Planning tab. The Workorder Overview page appears.
2. Enter information in the applicable fields and select Go. All jobs matching your search criteria appear in the Workorder List Results table.
3. Select the workorder that you want to release and choose Release Workorder from the drop-down menu. Optionally, you can navigate to the Workorder Operations

page and update the workorder status to Released.

4. To release all the workorders within a particular visit, select Release Visit Workorder from the drop-down menu. Optionally, you can also navigate to the Search Visit page under the Production Planning subtab. Search for a visit and release all workorders associated with that visit.
5. To release workorders for a particular maintenance requirement, choose Release Maintenance Workorder from the drop-down menu in the Workorder List table. This option is also available in the Search Maintenance Requirements page under the Production Planning subtab.

Deferring Workorders

To defer a workorder:

1. Navigate to the Execution region, and select the Production Planning tab. The Workorder Overview page appears.
2. Enter information in the applicable fields and select Go. All workorders matching your search criteria appear in the Workorder List Results table.
3. Select a workorder, and choose Defer from the drop-down menu. Optionally, you can defer the workorder from the Workorder Operations page.

Production Planning | Outside Processing | Service History | Material Transactions

Work Orders | Operations | Resources | Materials | Maintenance Requirements | My Work Orders | Visits

Logged In As TSMITH

Work Order Overview

Organization
Department
Department Class
Serial Number
Item
Visit Number
Visit Name
Unit Name
Maintenance Requirement
Start Date
BOM Resource
☐ All Operations Completed
Go Clear

Work Order Num
Work Order Description
Operation Code
Operation Description
Priority
Confirmed Failure
Work Order Status
Non-Routine Work Order
Resolution Code
End Date
Work Order Type

Select	Work Order Num	Work Order Description	Unit Name	Item	Serial Number	Non-Routine Work Order	OSP Order Num	Scheduled Start Date	Scheduled End Date	Status	All Operations Completed
<input type="radio"/>	SFM48	VA-C70-21-150-00	C70-3, SN 511, Tail # VA761	C70-3.	511			24-MAY-2005	24-MAY-2005	Released (1)	
<input type="radio"/>	SFM50	VA-C70-21-40-00	C70-3, SN 511, Tail # VA761	C70-3.	511			24-MAY-2005	24-MAY-2005	Released (1)	
<input type="radio"/>	SFM52	VA-C70-24-020-01	C70-3, SN 511, Tail # VA761	C70-3.	511			24-MAY-2005	24-MAY-2005	Released (1)	
<input type="radio"/>	SFM54	VA-C70-27-36-00	C70-3, SN 511, Tail # VA761	C70-3.	511			24-MAY-2005	24-MAY-2005	Released (1)	
<input type="radio"/>	SFM56	VA-C70-27-73-00	C70-3, SN 511, Tail # VA761	C70-3.	511			24-MAY-2005	24-MAY-2005	Released	

Canceling Workorders

A method is introduced to restrict access for canceling work orders to specific users. Users can cancel work orders based on status 'Released', 'Unreleased', or both.

Two new security functions have to be set for all users:

- AHL_PRD_CANCEL_REL_JOBS
- AHL_PRD_DISALLOW_CANCEL_JOBS

The function, AHL_PRD_CANCEL_REL_JOBS, enables the users to have the Cancelled option for any work order provided work status change rules allow the canceling of the work order.

A user having the function, AHL_PRD _DISALLOW_CANCEL_JOBS, will no longer have the Cancel Workorder option. An error indicating, User does not have the permission to cancel workorders, is shown to the users having this security function.

If both the above-mentioned functions are not enabled, the users can cancel only Unreleased workorders.

Deferring Maintenance Requirements

You can defer routine and non-routine maintenance requirements not completed during a visit, either due to shortage of material and resource, or because the unit was put back into service for an emergency assignment. You can also defer maintenance requirements belonging to a group MR. The group MR is signed off at the end of the visit, and the deferred MR is carried out on a later date, and accomplished with the

group MR on the next group Maintenance Requirement event. Maintenance requirements can be deferred to a future date (hard date when this MR will be performed), and/or they can be based on counter threshold values. A deferred maintenance requirement with a new due date is created in Unit Maintenance Plan.

You can skip a planned maintenance requirement to the next repetitive one, and also push the next due date based on the deferred date

To defer a maintenance requirement:

1. Navigate to the Search Maintenance Requirements page.

The screenshot displays the 'Search Maintenance Requirements' interface. At the top, there are navigation tabs: Production Planning, Outside Processing, Service History, Material Transactions, Maintenance Requirements (selected), My Work Orders, and Visits. Below these are search filters for Visit, Organization, Department, Visit Start Date, Maintenance Requirement, Non-Routine Workorder, Unit, and Status. A table lists maintenance requirements with columns: Select, Title, Description, Visit, Visit Start Date, Unit, Organization, Department, Status, Scheduled Start Date, Scheduled End Date, and Actual End Date. The table contains several entries, including 'AHL MR' and 'Aircraft Defect'. At the bottom, there are navigation controls for 'Select Maintenance Requirement', 'Defer/Cancel', and 'Go' buttons, along with pagination information (1-10 of 105).

2. From the search results, select the maintenance requirement that you want to defer, and click Defer. The Maintenance Requirement Deferral Details page appears.

Production Planning | Outside Processing | Service History | Material Transactions | **Maintenance Requirements** | My Work Orders | Visits

Logged In As: TSMITH

Maintenance Requirement Deferral Details

Cancel | Apply | Submit for Approval | View Work order Details

Title: **AHL MR**
 Description: **Effective on c-70,MbSrCttrrk and with AHL Route 1 and AHL Route 2**
 Visit Number: **41**
 Deferral Type: **Deferral**

Due Date: **Released**
 Status: **Released**
 Maintenance Requirement Type: **Manually Planned**

Reason

☒ Facility ☐ Labor
☒ Material ☐ Other
☐ Technical Assistance Required ☐ Time Constraint
☐ Tool ☐ Warranty Claim

Remarks:

Approver Notes:

Descriptive Flexfields

* MR Deferral FF:

Context Value:

Select Context Value and click 'Go' to show relevant fields.

Schedule

☐ Optional Fields are ignored if cancelled
☐ Cancel Maintenance Requirement

Defer To Date:

* Deferral Effective On: **27-MAY-2010** Hrs: **03** Mins: **28**

☐ Affect Due Date Calculation

Remove Counter Name Deferral Type Counter Value Unit of Measure

No records were found matching the given criteria..

Add More Rows

Use the information in the following table to enter deferral details.

Description of fields in the Maintenance Requirement Deferral Details page

Field Name	Description
Title	The title of the maintenance requirement, that you want deferred.
Description	Maintenance requirement description.
Visit Number	Is an alphanumeric value that uniquely identifies the visit definition that you wish to retrieve.
Due date	Due date of the maintenance requirement.
Status	Seeded workorder status of the maintenance requirement.
Reasons	User-defined reasons, displayed for the user to select.
Remarks	Multiple lines field to allow the user to enter additional information related to his/her deferral request.
Approver Notes	Multiple lines field to allow the approver to enter approval or rejection information.

Field Name	Description
Defer To Date	The date to which the maintenance requirement is going to be deferred.
Deferral effective on	Defaults to the system date, when the deferral is being created.
Counter Name	Fleet Maintenance Requirement threshold counter name.
Deferral Type	Deferred By counter UOM or Deferred To counter UOM value.

3. Choose the deferral reasons by checking the corresponding check boxes in the Reasons region. You can select more than one deferral reason. Enter Remarks.
4. To defer the maintenance requirement to a later date, enter a date in the Defer To Date field. Alternatively, select from the Oracle Calendar.
5. Enter a date in the Deferral Effective On field. Alternatively, select from the Oracle Calendar.
6. To defer the maintenance requirement based on counter readings, select Add More Rows, and enter the counter threshold values.
7. Select Counter Name from the LOV. The Unit of Measure is returned based on the selected Counter Name.
8. Choose Defer By or Defer To from the Deferral Type drop-down menu. Enter a counter value.

Note: The system will return an error message if the deferred date or deferred counter is equal or greater than the next due date/due counter for the repetitive maintenance requirement.

9. If you select the Affect Due Date Calculation check box, Unit Maintenance Plan uses the new deferred date or counter value, to calculate when repetitive requirements will be due again.
10. To remove this instance of the requirement from Unit Maintenance Plan without affecting subsequent forecasted requirements, select the Skip Maintenance check box.

11. Click Apply to save the record. Click Cancel to cancel the transaction.
12. Select View Workorder Details to navigate to Workorder Overview UI, and to view all workorders related to the requested MR for deferral.

13. To submit the deferral for approval, select Submit For Approval. The status changes to Approval Pending.
 - When the Deferral is submitted for approval, all the workorders associated with the MR are put on-hold.
 - On approval, all workorders in Released status and associated with the MR are completed, and all Unreleased workorders are cancelled. A new UMP is created to track the deferred requirement in Unit Maintenance Plan, in case the Deferral is not to skip the MR.
 - If the Deferral is rejected, all associated jobs statuses are reverted to their previous statuses. You can rectify the errors and resubmit for approval.

Note: You cannot submit a Deferral for approval, if a child MR is pending deferral approval.

Scheduling Workorders Using the Scheduler Workbench

Before a workorder is executed, the planner needs to balance the requirements (resource & materials) with the available supply/capacity, also known as resource leveling. The planner assigns the workorders in such a way that the resources are consumed in a steady rate, thus avoiding the peak-valley situations. The Scheduler Workbench

provides a graphical user interface of the Visit's work hierarchy, and enables the planner to schedule workorders and operations, manage dependencies, and assign resources. The scheduling decisions are validated against the applicable maintenance visit's start and end dates, as well as the defined technical dependencies between production workorders.

A large maintenance operation can have multiple visits and thousands of workorders at a single facility. The Scheduler Workbench allows the planner to quickly schedule and reschedule workorders, while viewing the required and available resources, and the workorder dependencies.

The scheduling hierarchy and the completion dependencies of a visit are pushed to Oracle Work-In-Process (WIP). Completion Dependencies are the technical dependencies between visit tasks in Visit Work Package. For example, Task 3 is executed after Task 1.

Prerequisites

- ☐ To use Enterprise Asset Management's Scheduler Workbench, workorders must have already been created. After creating a visit in Visit Work Package, associating the applicable maintenance requirements and scheduling the visit to an available organization and department, workorders are created by pushing the visit to production. Non-routine workorders are created manually in Production Planning.

Related Topics

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

Viewing the Scheduling Hierarchy

You can view the completion dependencies for a workorder in the View Workorder Scheduling Hierarchy user interface. The selected workorder information is displayed as read-only Context.

To view the scheduling hierarchy:

1. Navigate to the Workorder Overview page.
2. Enter information in the applicable fields and select Go. All workorders matching your search criteria appear in the Workorder List Results table.
3. Select the workorder, and choose View Scheduling Hierarchy from the drop-down menu. Click Go. The Work Order Scheduling Hierarchy page appears, displaying the workorder details, and the related workorders.

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Production Planning Outside Processing Service History Material Transactions

Work Orders Operations Resources Materials Maintenance Requirements My Work Orders Visits

Logged In As TSMITH

Work Order Scheduling Hierarchy

Work Order Number: SFH48
 Work Order Status: Released(1)
 Department: Base Maintenance, SFH
 Work Order Description: VA-C70-21-150-00
 Maintenance Requirement: VA-C70-21-150-00
 Route: C70-3
 Item: C70-3, SN 511, Tail # VA761
 Unit Name: C70-3, SN 511, Tail # VA761
 Quantity: 16
 Visit Number: 16
 Accounting Class: Maintenance
 Completion Sub Inventory: 24-MAY-2005 00:00
 Scheduled Start Date: 24-MAY-2005 00:00
 Actual Start Date: 24-MAY-2005 00:00

Organization: San Francisco Maintenance Center US
 All Operations Completed

Project: 16
 Project Task: VA-C70-21-150-0
 Serial Number: 511
 Instance Number: 643067
 UOM: 2
 Visit Task: 2
 Priority: 2
 Locator: 24-MAY-2005 03:00
 Scheduled End Date: 24-MAY-2005 03:00
 Actual End Date: 24-MAY-2005 03:00

Cancel Revert

Related Work Orders

Focus Work order Number	Relationship	Scheduled Work order Start Date	Scheduled Work order Start Time	Scheduled Work order End Date	Scheduled Work order End Time	Work order Status	Non-Routine Workorder	OSP Order Number
SFH48		24-MAY-2005	00:00:00	24-MAY-2005	03:00:00	Released(1)		

Cancel Revert

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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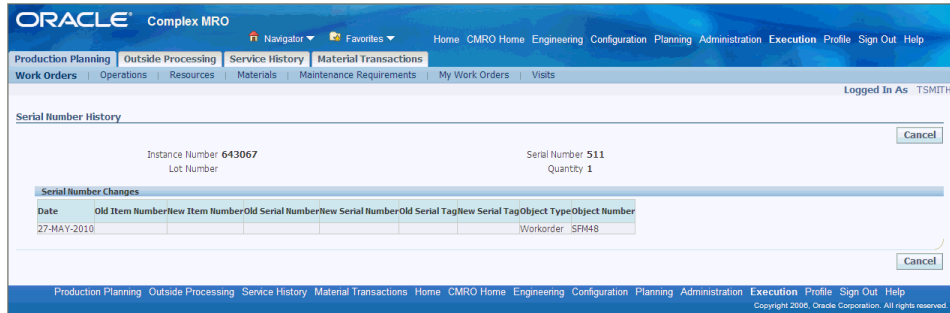
- To focus on a workorder to view it's relationships, clicking the Focus Icon in the Related Work Orders result set.
- To navigate to the Workorder Operations user interface, click the Workorder Number link in the Related Work Orders result set.

Viewing Serial Number Change History

You can view all serial number changes performed for the work order item instance, in the Serial Number History page.

To view the serial number change history:

- Navigate to the Item Number/Serial Number Change page. See Changing Item and Serial Numbers Associated with Work Orders, page 14-30.
- Select View History. The Serial Number History page appears, displaying the following information about the serial number changes:
 - Date
 - Old Serial Number
 - Old Serial Tag
 - New Serial Number
 - New Serial Tag



Working with Maintenance Requirements

You can search for maintenance requirements associated with workorders and perform all actions including deferring, signing off, submitting quality results, and viewing relationships using the Maintenance Requirements secondary tab.

To work with maintenance requirements:

1. Under the Production Planning tab click the Maintenance Requirements secondary tab. The Search Maintenance Requirements page appears. Enter your search criteria and click Go. A list of maintenance requirements will appear in the results table.
2. You can select a maintenance requirement and do the following:
 - Defer
 - Submit Quality Results
 - Sign off
 - View associated workorders
 - View relationships
3. Select Maintenance Requirement to navigate to the View Maintenance requirement page to view details, associated documents, routes, effectivities, relationships, and effected items.

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Production Planning Outside Processing Service History Material Transactions Maintenance Requirements My Work Orders Visits

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Details

- Documents
- Routes
- Effectivities
- Relationships
- Affected Items
- Visit Types

View Maintenance Requirement Cancel

Title	AHL MR	Status	Complete
Revision Number		Version	1
Category	Ground Service Equipment	Effective From	18-JUN-2009
Program Type	Corrosion	Effective To	
Program Subtype		Service Type	On
Implement Status	Mandatory	Show	All
Repetitive	Yes	Follows After Accomplishment of	
Whichever Comes	First	Visit Category	No
Billing Item		Auto Sign Off	
Quality Inspection Type			
Down Time	HOURS		
Description	Effective on c-70,MbScCttrk and with AHL Route 1 and AHL Route 2		
Comments			

Descriptive Flexfields

* FMP Create Flexfield Context Value Cancel

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4. Optionally, select a maintenance requirement and click View Workorders. The Maintenance Requirement Workorders page appears displaying information about the workorders associated with a maintenance requirement. You can do the following :
- Submit quality results and complete work order
 - Navigate to the Update Workorder Operations UI by clicking the Update Icon in the work order result set
 - Navigate to the View Service Request page by selecting Service Request.
 - Submit quality results, sign off and defer the maintenance requirement

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Production Planning Outside Processing Service History Material Transactions Maintenance Requirements My Work Orders Visits

Logged In As: TSMITH

Maintenance Requirement Work Orders

Maintenance Requirement: AHL MR
Visit: 41
Visit Start Date: 25-MAY-2010 00:00
Status: Released

Organization: San Francisco Maintenance Center US
Department: Base Maintenance, SFM
Unit: HBUC1
Actual End Date:

Cancel Defer/Cancel Go

Work Orders List

Select a Work Order: Submit Work Order QA Results Complete Cancel

Select Work Order	Work Order Number	Description	Non-Routine	Workorder	Actual Start Date	Actual End Date	Status	Update
<input type="radio"/>	SRM459	AHL Route 2,AHL Route 2	58388				Released(1)	
<input type="radio"/>	SRM462	AHL Route 1,AHL Route 1	58388				Released(1)	

Select a Work Order: Submit Work Order QA Results Complete Cancel

Cancel Defer/Cancel Go

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Updating Material Requirement Details

Prerequisites

- ☐ A workorder with a status of Draft, Unreleased, Parts Hold, Hold, or Pending QA status must exist in the database. The WIP Mass Load Concurrent Program must be running. The operation must have a Uncomplete or Pending QA status.

To update material requirement details:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, click **Execution**. Select the Production Planning tab. The Workorder Overview page appears.
2. Enter information in the fields for which you know the value then click **Go**. All workorders matching your search criteria appear in the Workorder List Results table.
3. Click the Workorder number. The Workorder Operations page appears.
4. Select Materials from the left-hand navigation bar. The Update Material Requirement page appears.
5. Select the material requirement that you want to update, and click **Details**. The Material Requirement (Detail) page appears.

Production Planning | Outside Processing | Service History | Material Transactions | Work Orders | Operations | Resources | Materials | Maintenance Requirements | My Work Orders | Visits

Logged In As: TSMITH

Material Requirement (Detail)

* Indicates required field

Cancel Revert Apply

Work Order Number	SFM48	Organization	San Francisco Maintenance Center US
Work Order Status	Released(1)	All Operations Completed	
Department	Base Maintenance, SFH		
Work Order Description	VA-C70-21-150-00	Project	16
Maintenance Requirement	VA-C70-21-150-00	Project Task	VA-C70-21-150-0
Route	VA-C70-21-150-00	Serial Number	511
Item	C70-3, SN 511, Tail # VA761	Instance Number	643067
Unit Name		UOM	
Quantity		Visit Task	2
Visit Number	16	Priority	
Accounting Class	Maintenanc	Locator	
Completion Sub Inventory		Scheduled End Date	24-MAY-2005 03:00
Scheduled Start Date	24-MAY-2005 00:00	Actual End Date	
Actual Start Date			

Material Details

Operation Seq	2	Operation Code	VA-C70-21-61-06-420.801
Item	93242-5.	Description	Sensor, Temperature
Scheduled Quantity	1	Required Date	24-MAY-2005
Issued Quantity	0	Net Quantity	0
UOM	Ea	Exception Date	
Qty Per Assembly	1		

Descriptive Flex Fields

* Material Req FF

Context Value

Select Context Value and click 'Go' to show relevant fields.

Cancel Revert Apply

Production Planning | Outside Processing | Service History | Material Transactions | Home | CMRO Home | Engineering | Configuration | Planning | Administration | Execution | Profile | Sign Out | Help

Use the information in the following table to modify material requirement details.

Field Name	Description
Operation Sequence	The jobs operation sequence number.
Operation Code	The standardized operation code, if selected.
Item	The Item Number for the requirement.
Description	The description of the item defined.
Scheduled Quantity	The quantity scheduled by the Long Term Plan.
Required Date	The date on which the requirement is expected.
Issued quantity	Part quantity issued.
Net Quantity	The difference between total quantity issued and total quantity
UOM	The unit of measure for the item's quantity.
Quantity per Assembly	Part usage quantity.

- Make the required changes, and click **Apply**. Click **Cancel** to cancel any changes

and return to the previous page.

Note: When changing an existing requirement defined in Route Management, the selection is limited to the alternates for the Item.

Editing Resource Requirements

Prerequisites

- ☐ A visit or workorder with associated requirements must exist in the database.

To edit resource requirements and view summaries and details:

- Find the workorder or operation you want to edit. See Finding Workorders., page 14-17
- Navigate to the Resource Requirements page.
- Make any necessary changes to the items displayed in the Resource Requirement list. To add requirements, click **Add More Rows**. Add a resource requirement.

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Production Planning Outside Processing Service History Material Transactions

Work Orders Operations Resources Materials Maintenance Requirements My Work Orders Visits

Logged In As TSMITH

Resource Requirements

Work Order Number: SF48
Work Order Status: Released(1)
Department: Base Maintenance, SFM
Work Order Description: VA-C70-21-150-00
Maintenance Requirement: VA-C70-21-150-00
Route: C70-3
Item: C70-3, SN 511, Tail # VA761
Unit Name: 16
Quantity: 16
Visit Number: Maintenance
Accounting Class: Maintenance
Completion Sub Inventory: 24-MAY-2005 00:00
Scheduled Start Date: 24-MAY-2005 00:00
Actual Start Date: 24-MAY-2005 03:00

Organization: San Francisco Maintenance Center US
All Operations Completed
Project: 16
Project Task: VA-C70-21-150-0
Serial Number: 511
Instance Number: 643067
UOH: 2
Priority: 2
Locator: 24-MAY-2005 03:00
Actual End Date: 24-MAY-2005 03:00

Resource Requirement List

Select Resource Requirement: Details Remove

Select	Operation Seq	Resource Seq	Schedule Seq	Resource Type	Resource Duration	UOH Quantity	Start Date	End Date
<input type="radio"/>	1	10		Person	A&P-SFM 1	Hour 1	24-MAY-2005	24-MAY-2005
<input type="radio"/>	2	20		Person	A&P-SFM 1	Hour 1	24-MAY-2005	24-MAY-2005
<input type="radio"/>	3	30		Person	A&P-SFM 1	Hour 1	24-MAY-2005	24-MAY-2005

Add More Rows

Select Resource Requirement: Details Remove

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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Use the information in the following table to modify resource requirements.

Field Name	Description
Operation Sequence	The workorders operation sequence number.
Resource Sequence	The sequence number for the resource within an operation.
Resource Type	The type of resource requirement.
Resource	The resource name within the operations department.
Duration	The length of time required.
UOM	The unit of measure for the time required.
Quantity	The quantity of resources required.
Start Date	The start date for the resource.
End Date	The end date for the resource.

4. Click **Apply** to save your changes; click **Cancel** to cancel changes and return to the Workorder Overview page.

Updating Resource Requirement Details

Prerequisites

- ☐ A workorder with a status of Draft, Unreleased, Parts Hold, Hold, or Pending QA status must exist in the database. The WIP Mass Load Concurrent Program must be running. The operation must have a Uncomplete or Pending QA status.

To update the resource requirement details:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, click **Execution**. Select the Production Planning tab. The Workorder Overview page appears.
2. Enter information in the fields for which you know the value then click **Go**. All workorders matching your search criteria appear in the Workorder List Results table.

3. Click the workorder number. The Workorder Operations page appears.
4. Select Resources from the left-hand navigation bar. The Update Resource Requirement page appears.
5. Select the requirement you want to update and click **Details**. The Resource Requirement Detail page appears.

The screenshot displays the 'Resource Requirement Detail' page. At the top, there are tabs for 'Production Planning', 'Outside Processing', 'Service History', and 'Material Transactions'. Below these are sub-tabs for 'Work Orders', 'Operations', 'Resources', 'Materials', 'Maintenance Requirements', 'My Work Orders', and 'Visits'. The user is logged in as 'TSMITH'.

The main section is titled 'Resource Requirement Detail'. It contains a form with the following fields:

- Work Order Number:** SFH48
- Work Order Status:** Released(1)
- Department:** Base Maintenance, SFH
- Work Order Description:** VA-C70-21-150-00
- Maintenance Requirement:** VA-C70-21-150-00
- Route:** C70-3
- Item:** C70-3, SN 511, Tail # VA761
- Unit Name:** C70-3, SN 511, Tail # VA761
- Quantity:** 16
- Visit Number:** 16
- Accounting Class:** Maintenance
- Completion Sub Inventory:** 24-MAY-2005 00:00
- Scheduled Start Date:** 24-MAY-2005 00:00
- Actual Start Date:** 24-MAY-2005 00:00
- Organization:** San Francisco Maintenance Center US
- All Operations Completed:** Yes
- Project:** 16
- Project Task:** VA-C70-21-150-0
- Serial Number:** 511
- Instance Number:** 643067
- UOM:** 2
- Visit Task:** 2
- Priority:** 2
- Locator:** 2
- Scheduled End Date:** 24-MAY-2005 03:00
- Actual End Date:** 24-MAY-2005 03:00

Below the main form, there is a section for 'Requirement Detail Information' and 'Resource Seq'. The 'Requirement Detail Information' section includes fields for 'Operation Seq', 'Schedule Seq', 'Resource Type', 'Duration', 'Quantity', 'Applied', 'Charge Type', 'Basis', 'Operation Start Time', and 'Start Date'. The 'Resource Seq' section includes fields for 'Resource', 'UOM', 'Total Required', 'Open', 'Standard Rate', 'Scheduled', 'Operation End Time', and 'End Date'. There are 'Cancel', 'Revert', and 'Apply' buttons at the bottom right.

The following table provides information about the fields in the Resource Requirement Detail page.

Field Name	Description
Operation Sequence	The workorder operation sequence number.
Resource Sequence	The sequence number for the resource within an operation.
Resource Type	The type of resource requirement.
Resource	The resource name within the operations department.
Duration	The length of time required.
UOM	The unit of measure for the time required.
Quantity	The quantity of resources required.

Field Name	Description
Total Required	The total amount of time required derived by multiplying the duration with the quantity.
Applied	The duration of the resource charged to date.
Open	The duration of the resource difference between the Total Required and the Applied amount.
Charge Type	The expected method of charging the resource.
Standard Rate	Determines if the resource is to be charged at the standardized rate.
Basis	Provides the basis for determining the resource requirement.
Operation Start Time	The date on which the operation is scheduled to start.
Operation End Time	The date on which the operation is scheduled to end.
Start Date	The start date for the resource.
End Date	The end date for the resource.

6. Make the required changes, and click **Apply**. Click **Cancel** to cancel any changes and return to the previous page.

Note: When changing an existing requirement defined in Route Management, the selection is limited to the alternates for the Item.

Viewing Resource Assignments

To view a resource assignment:

1. Find the workorder you want to view assignments for. See Finding Workorders., page 14-17
2. Navigate to the Workorder Operations page. Select Assignments from the left-hand navigation panel. The Resource Assignments page appears.

The following table provides information about the fields in the Resource Assignments page.

Field Name	Description
Operation Sequence	The workorder's operation sequence number.
Resource Sequence	The sequence number for the resource within an operation.
Operation Status	The status of the operation.
Operation Start Time	The date on which the operation is scheduled to start.
Operation End Time	The date on which the operation is scheduled to end.
Resource Type	The type of resource requirement.
Employee Number	The number assigned to identity the employee.
Employee Name	The full name of the employee.
Serial Number	The Serial Number used for non-person type resources.
Start Date	The start date for the assignment.
End Date	The end date for the assignment.

3. Make any necessary changes to the items displayed in the Resource Assignment list. To add assignments, click **Add More Rows**.
4. Click **Apply** to save your changes; click **Cancel** to cancel changes and return to the Workorder Overview page.

Editing Resource Assignments

To edit resource assignments:

1. Find the workorder with the assignments that you want to edit. See Finding Workorders., page 14-17
2. Navigate to the Resource Assignments page. Make any necessary changes to the items displayed in the Resource Assignment list. To add assignments, click **Add**

More Rows.

Resource Assignments

Work Order Number: SFH48
 Work Order Status: Released(1)
 Department: Base Maintenance, SFM
 Work Order Description: VA-C70-21-150-00
 Maintenance Requirement: VA-C70-21-150-00
 Route: C70-3
 Item: C70-3, SN 511, Tail # VA761
 Unit Name: C70-3, SN 511, Tail # VA761
 Quantity: 16
 Visit Number: 16
 Accounting Class: Maintenance
 Completion Sub Inventory: 24-MAY-2005 00:00
 Scheduled Start Date: 24-MAY-2005 00:00
 Actual Start Date: 24-MAY-2005 00:00

Organization: San Francisco Maintenance Center US
 All Operations Completed

Project: 16
 Project Task: VA-C70-21-150-0
 Serial Number: 511
 Instance Number: 643067
 UOM: 2
 Visit Task: 2
 Priority: 2
 Locator: 24-MAY-2005 03:00
 Scheduled End Date: 24-MAY-2005 03:00
 Actual End Date: 24-MAY-2005 03:00

Resource Assignment List

Select	Operation Seq	Resource Seq	Operation Start Time	Operation End Time	Resource Type	Employee Name	Employee Number	Serial Number	Start Date	Start Hours	Start Minutes	End Date	End Hours	End Minutes	Self
<input type="checkbox"/>	1	10			Person	Cogen, Mr.	1633		24-MAY-2005	00	00	24-MAY-2005	00	00	
Add More Rows															

Buttons: Cancel, Revert, Apply

3. Click **Apply** to save your changes; click **Cancel** to cancel changes and return to the Workorder Overview page.

Charging Resources

To charge resources:

1. From the Oracle Complex Maintenance, Repair, and Overhaul Home page, click **Execution**. Select the Production Planning tab. The Workorder Overview page appears.
2. Enter information in the fields for which you know the value then click **Go**. All workorders matching your search criteria appear in the Workorder List Results table.
3. Click the workorder number. The Workorder Operations page appears.
4. Select Resources Transactions from the left-hand navigation bar. The Perform Resource Transactions page appears.

Production Planning | Outside Processing | Service History | Material Transactions | Work Orders | Operations | Resources | Materials | Maintenance Requirements | My Work Orders | Visits | Logged In As TSMITH

Perform Resource Transactions

Organization: San Francisco Maintenance Center US
All Operations Completed

Work Order Number: SFM48
Work Order Status: Released(1)
Department: Base Maintenance, SFM
Work Order Description: VA-C70-21-150-00
Maintenance Requirement: VA-C70-21-150-00
Route: VA-C70-21-150-00
Item: C70-3
Unit Name: C70-3, SN 511, Tail # VA761
Quantity: 16
Visit Number: 16
Accounting Class: Maintenance
Completion Sub Inventory: 24-MAY-2005 00:00
Scheduled Start Date: 24-MAY-2005 00:00
Actual Start Date:

Project: 16
Project Task: VA-C70-21-150-0
Serial Number: 511
Instance Number: 643067
UOM:
Visit Task: 2
Priority:
Locator:
Scheduled End Date: 24-MAY-2005 03:00
Actual End Date:

View Transactions | Cancel | Revert | Apply

Select*	Operation Seq	Resource Seq	Resource	Charge Department	Employee	Serial Number	Quantity	UOM	Activity	Reason	Reference
<input type="checkbox"/>	2	20	A&P-SFM	BMAINT-SF			1	Hour			
<input type="checkbox"/>											
<input type="checkbox"/>											

Add More Rows

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The following table provides information about fields in the Perform Resource Transactions page.

Field Name	Description
Operation Sequence	The workorder's operation sequence number.
Resource Sequence	The sequence number for the resource within an operation.
Resource	The resource name within the operations department.
Department	The department within the organization to be charged.
Employee	The employee number to be charged.
Serial Number	The serial number, if serial controlled, of the tracked item for which the service request will be created.
Quantity	The quantity of resources to be charged.
UOM	The unit of measure for the quantity to be charged.
Reason	The reason for charging the resource.
Reference	User defined reference information.

5. You can then perform the following:

- Make any necessary changes and click **Apply** to save your changes.

- Click **Add More Rows** to add charged resources.
 - Click **Revert** to clear any changes.
6. Click **Cancel** to cancel any changes.

Note: You have the option to disable the Resource Transactions side menu bar in the Resource Requirements page by running a specific function. This minimizes the chances of incorrect labor and usage costing.

Working with Material Transactions

Using the Production Planning module, users can issue and return materials to Inventory with a single work order in context, identify the employee that items are issued to or returned by, and view the material transaction history. This allows a user to perform material transactions across workorders rather than having to drill into each and every work order.

See:

- Viewing and Issuing Materials Across WorkOrders, page 13-25
- Returning Materials Across Workorders, page 13-27
- Identifying the Employee that Items are Issued To or Returned By, page 13-29
- Viewing the Material Transaction History, page 13-29

Viewing and Issuing Materials Across WorkOrders

Users can view material requirements, identify the materials previously issued against these requirements and determine which items need to be issued for each job, based on the defined requirements.

To view material requirements and issue materials across workorders:

1. Under the Execution link, click the Material Transactions tab. The Material Issue page appears under the Issues secondary tab. Enter search criteria and click Go. Material requirements across workorders matching your search criteria are displayed in the Workorder Requirements table.

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Production Planning Outside Processing Service History **Material Transactions**

Issues Returns View Material Transactions

Logged In As TSMITH

Material Issue

Work order: Priority:

Organization: Item:

Required Date From: Required Date To:

Service Request: Visit Number:

Department:

Go Clear

Select Material(s): Issue

Select	Work Order	Operation Seq	Item	Description	Required Quantity	Issued Quantity	Net Quantity	Uom	Issue Quantity	Issue UOH	Repair Item	Recipient	Serial Number	Details	Disposition
<input type="checkbox"/>	SFM48	2	93242-5	Sensor, Temperature	1	0	0	Each	1	Ea					
<input type="checkbox"/>	SFM60	1	32871-16	Filter, Hydraulic Pump	1	0	0	Each	1	Ea					
<input type="checkbox"/>	SFM60	1	394872-1	Gasket, Hydraulic	1	0	0	Each	1	Ea					
<input type="checkbox"/>	SFM195	10	KMIT001	Serial Controlled tracked item	1	0	0	Each	1	Ea					
<input type="checkbox"/>	SFM255	10	MBSiLotCnTrk	Serial and Lot Controlled Tracked Item	10	2	0	Each	10	Ea					
<input type="checkbox"/>	SFM255	10	MBSiCnTrk	Serial Controlled Tracked Item	10	2	0	Each	10	Ea					
<input type="checkbox"/>	SFM255	10	MBNonTrkItem	Non Tracked Item	5	3	1	Each	4	Ea					
<input type="checkbox"/>	SFM255	10	MBSiRevCnTrk	Serial and Revision Controlled Tracked Item	10	4	3	Each	7	Ea					
<input type="checkbox"/>	SFM277	10	KMIT001	Serial Controlled tracked item	1	0	0	Each	1	Ea					
<input type="checkbox"/>	SFM239	10	KMIT001	Serial Controlled tracked item	1	0	0	Each	1	Ea					

Select Material(s): Issue

Previous 1-10 of 12 Next

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- The Item and the Required Quantity are displayed against each workorder. The Issued Quantity defaults from the material requirements and the Net Quantity is calculated as the difference between total quantity issued and total quantity returned. You can change the quantity as required. Select the UOM and the Recipient (the employee who will receive the item) from the corresponding list of values. If the issued quantity is 1, select the serial number of the item from the Serial Number list of values. Optionally, you can associate disposition to the material issued by selecting it from the Disposition list of values.
- Optionally, click the Details icon to navigate to the Material Issue Details page and enter lot, revision, locator, and subinventory information if the item is controlled in inventory. Click Done to apply this information and return to the Material Issue page.

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Production Planning Outside Processing Service History **Material Transactions**

Issues Returns View Material Transactions

Logged In As TSMITH

Material Issue Details

To record details, click on Issue on Material Issue page.

Work Order: **SFM48** Operation Seq: **2**

Item: **93242-5** Serial Number:

Additional Details

Lot: Revision:

SubInventory: **STORES** Locator: **1.1.1.**

Transaction Date: **21-JAN-2009**

Clear Done

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- Select the workorder or workorders for which you have entered issue details and click Issue. The required items are issued to the workorder.

Returning Materials Across Workorders

Users can query for items that have already been returned or that need to be returned and also search for items that were issued, but not completely used to complete the applicable job. Multiple items can be returned at the same time without the user having to navigate to a single job or associated visit in context. Users can also manually identify the issued items that will replace the non-tracked parts which will be returned.

To return materials across workorders:

1. Under the Material Transactions tab, click the Returns secondary tab. The Material Returns page appears.

The screenshot displays the Oracle CMRO Material Returns page. The top navigation bar includes links for Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The main navigation tabs are Production Planning, Outside Processing, Service History, and Material Transactions. The Material Transactions tab is active, and the Returns sub-tab is selected. The page title is 'Material Returns'. Below the title is a search area with fields for Work order, Organization, Service Request, Department, Priority, Item, Visit Number, and Disposition. There are 'Go' and 'Clear' buttons. Below the search area is a table titled 'Material Returns' with columns: Select, Work Order, Operation Seq, Item, Description, Disposition, Condition, Serial Number, Net Quantity, Return, UOH, Move To Project, Received From, and QualityDetails. The table contains several rows of material data, including items like 'MBSRevCtrTrk' and 'MBSNonTrkItem'. At the bottom of the table is an 'Add More Rows' button.

2. Enter your search criteria and click Go. The workorders matching your search criteria are listed in the Workorder Return Results table. The following two types of material are available for return:
 - Material that was issued to the job. If the material has associated Dispositions, then each Disposition is shown as a separate return line. For non-serialized items, net quantity available to return will be defaulted to (Total of all Issues – Total of all Returns) for the given Material. The returned material should not be more than disposition quantity if disposition is associated.
 - Material that was not issued to the job but has a Disposition associated to it. (For tracked items removed from the Unit Configuration, a Disposition will be created automatically, if it does not already exist).
3. The Item and the Net Quantity are displayed against each workorder. Enter the quantity to be returned. The quantity to be returned must be 1 if the item number is

serial number controlled and should not be more or greater than the Net quantity. When a disposition is associated to the return, the quantity to be returned should not be more than the net disposition quantity.

Select the UOM and the employee from which it is received from the UOM and Received From list of values respectively. Optionally, choose the condition in which item is returned. The condition defaults when a disposition is associated.

Select	Work Order	Operation Seq	Item	Description	Disposition	Condition	Serial Number	Net Quantity	Return	UOM	Move To Project	Received From	Quality Details
<input type="checkbox"/>	SFM255	2	MBSRevCtrTrk	Serial and Revision Controlled Tracked Item		Obsolete	MBSRevCtrTrk001	3	1	Ea	<input type="checkbox"/>	A Bakke	
<input type="checkbox"/>	SFM255		MBSRevCtrTrk	Serial and Revision Controlled Tracked Item			MBSRevCtrTrk003	3	1	Ea	<input type="checkbox"/>		
<input type="checkbox"/>	SFM255		MBNonTrkItem	Non Tracked Item				1	1	Ea	<input type="checkbox"/>		

- To enter additional information, click the Details icon. The Material Return Details page appears. Serial, lot, and locator information must be provided if the item is controlled in inventory.

The Locator and SubInventory fields are populated with values defaulting from WIP_PARAMETERS. The Transaction Date should not be more than the system date. The Reason and Problem Code will not be displayed if a disposition is associated with the item. Click Done to apply changes and return to the Material Returns page.

Material Return Details

To record details, click on Return on Material Return page.

Work order: SFM255
 Project Num/Name: 28 / MBMHXonVisit
 Part Number: MBSRevCtrTrk
 Status: Released(1)

Serial Number: MBSRevCtrTrk001
 Task Num/Name: 2 / MBRoute1
 Operation Number: 2

Additional Details

Lot:
 Subinventory: STORES
 Reason: Obsolete
 Problem Code: OTHER
 Create Work Order Option: Do not create Workorder

Revision: 0
 Locator: 1.1.1.
 Transaction Date: 21-JAN-2009
 Summary:

Buttons: Clear, Done

- You must enter quality results if the condition is MRB and when no disposition is associated with the material return. To enter quality results, click the Quality icon.
- After entering the required details, select the workorder and Click Return to return materials. A service request is created for all unserviceable tracked parts being returned.

Identifying the Employee that Items are Issued To or Returned By

A high level of accountability is maintained whenever a material transaction is performed. Material transaction details like item, or multiple items, serial numbers (if applicable), quantity, employee, operations and the date of the transaction are stored. Organizations track each issue and return made against workorders. Users can identify the employees to whom the material is issued and also the employees who return the items. The profile: AHL_MTL_ISSUE_RETURN_EMPLOYEE must be set to Yes. Users can query for employee names using the Recipient and Received From list of values in the Material Issue and Material Return pages respectively.

Viewing the Material Transaction History

The View Material Transactions page displays a summary of the all material requirements and their associated transactions.

Prerequisites

- ☐ Valid workorders must exist, and materials associated with and transacted against them.

To view the material transaction history:

1. Under the Material Transaction tab, click the View Material Transactions secondary tab. The View Material Transactions page appears. Enter your search criteria and click Go. The results display both issue and return transactions history.

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Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Production Planning Outside Processing Service History **Material Transactions**

Issues Returns **View Material Transactions**

Logged In As TSMITH

View Material Transactions

Work order: Priority:

Organization: Item:

Transaction Date From: Transaction Date To:

Service Request: Visit Number:

Department: Job Status:

Transaction Type:

Go Clear

Select Material: Associate Dispositions Service Request Details Previous 1-10 of 18 Next

Select	Details	Transaction Date	Work Order	Operation Seq	Item	Description	Quantity	Transaction Type	Service Request	Condition	Quality
<input type="radio"/>		20-JAN-2009	SPM255	10		MBSRevCvTrkSerial and Revision Controlled Tracked Item1	1	WIP Issue			
<input type="radio"/>		20-JAN-2009	SPM255	10		MBNonTrkItemNon Tracked Item	2	WIP Issue			
<input type="radio"/>		20-JAN-2009	SPM255	10		MBSLotCvTrk Serial and Lot Controlled Tracked Item	1	WIP Issue			
<input type="radio"/>		21-JAN-2009	SPM255	10		MBSrCvTrk Serial Controlled Tracked Item	1	WIP Issue			
<input type="radio"/>		21-JAN-2009	SPM255	10		MBSrCvTrk Serial Controlled Tracked Item	1	WIP Return		Active	
<input type="radio"/>		21-JAN-2009	SPM255	10		MBSrRevCvTrkSerial and Revision Controlled Tracked Item1	1	WIP Issue			
<input type="radio"/>		21-JAN-2009	SPM255	10		MBNonTrkItemNon Tracked Item	1	WIP Issue			
<input type="radio"/>		21-JAN-2009	SPM255	10		MBSLotCvTrk Serial and Lot Controlled Tracked Item	1	WIP Issue			
<input type="radio"/>		21-JAN-2009	SPM255	10		MBSrRevCvTrkSerial and Revision Controlled Tracked Item1	1	WIP Return		Active	
<input type="radio"/>		21-JAN-2009	SPM255	10		MBSrRevCvTrkSerial and Revision Controlled Tracked Item1	1	WIP Return		Obsolete	

Select Material: Associate Dispositions Service Request Details Previous 1-10 of 18 Next

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2. You can perform the following actions:

- View the details of the transaction by clicking the Details icon
- Associate the transaction to existing dispositions
- View the Service Request details
- Click the Workorder number link to navigate to the Workorder Operations page and view details associated with the workorder

Item Disposition

Disposition lists are defined in Route Management as a subset of a composition list or master configuration to compliment material requirements and to setup planning percentages. Disposition Lists can also act as a superset if additional materials are defined for the item or configuration. When a workorder is created based on a route, the disposition list associated with the route is carried over into production where the maintenance user can specify the disposition details as well as add items from the composition list, which have not been previously defined in engineering. Maintenance or inspection personnel use the disposition details to transact the material (serviceable/non-serviceable) and initiate overhaul, repair or scrap requirements accordingly. Maintenance or inspection personnel can create and view the discrepancies/non-conformances recorded, create a material requirement based on the disposition item, initiate the removal and installation of tracked parts, and initiate the capturing of the MRB quality disposition information.

Note: For an unserviceable part, if you first create a non-routine and subsequently remove the part, the process of part removal results in the part getting transferred to the non-routine work order.

Prerequisites

- ❑ Items must have been set up in inventory. A composition list must exist for the item. A disposition list must have been created for the item- route or the master configuration- route combination. There must be a workorder for which to disposition the item or position against.

To disposition items in production:

1. From the Workorder Overview page, select a workorder and navigate to the Workorder Operations page. Click Dispositions in the side navigation menu. The Workorder Dispositions page appears displaying the disposition list associated with the workorder. The Disposition List includes all the default dispositions which are automatically generated when the workorder is created (based on the route_id associated with this workorder), dispositions created by the user and the dispositions created or updated by the corresponding part changes.

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Service History

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Work Orders

Operations

Resources

Materials

Maintenance Requirements

My Work Orders

Visits

Logged In As TSMITH

Operations

Materials

Workorder Materials

Resources

Assignments

Resource

Transactions

Dispositions

Work order Dispositions

Work Order Number SFM48

Work Order Status Released(1)

Department Base Maintenance, SFM

Work Order Description VA-C70-21-150-00

Maintenance Requirement VA-C70-21-150-00

Route VA-C70-21-150-00

Item C70-3

Unit Name C70-3, SN 511, Tail # VA761

Quantity 16

Visit Number 16

Accounting Class Maintenance

Completion Sub Inventory

Scheduled Start Date 24-MAY-2005 00:00

Actual Start Date

Organization San Francisco Maintenance Center US

All Operations Completed

Project 16

Project Task VA-C70-21-150-0

Serial Number 511

Instance Number 643067

UOM

Visit Task 2

Priority

Locator

Scheduled End Date 24-MAY-2005 03:00

Actual End Date

Filter Dispositions By

Position

Item

Immediate Disposition

Status

Item Group

Item Type

Secondary Disposition

Condition

Go

Clear

Create

Position	Off Item	Off Serial Number	Off Lot Number	Off Quantity	Off UOM	Immediate Disposition	Secondary Disposition	Status	Condition	On Item	On Serial Number	On Lot Number	On Quantity	On UOM	Details
No records were found matching the given criteria.															

24-08-01, Main Battery

Position	Off Item	Off Serial Number	Off Lot Number	Off Quantity	Off UOM	Immediate Disposition	Secondary Disposition	Status	Condition	On Item	On Serial Number	On Lot Number	On Quantity	On UOM	Details
24-08-01, Main Battery						Use As Is		Installation Required	Active : Available for ATP and Reservations						

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You can do the following:

- Create a new entry by clicking the Create button
- Edit or view an existing record by clicking the Details icon
- View position information by clicking the Position link

The on /off log displays the removal and installation information as they are accomplished, and the disposition status reflects the progression of the disposition. You can query for specific dispositions by entering your search criteria in the Filter Dispositions By region.

2. Click the Details icon corresponding to the item that you want to disposition. The Disposition Details page appears. You can disposition both tracked as well as non-tracked items.

You can select the item and instance information if the process of combining the disposition list definition with the instance information did not result in an instance being found for some of the defined positions or alternate part groups. If you select an item group, the item list of values will comprise only items allowed for the configuration position and item group.

3. Select the immediate disposition. The immediate disposition and secondary disposition types drive the transaction requirements. The disposition options and actions are different for a tracked and non-tracked item.

Tracked Item Disposition

The following table describes the immediate disposition types and the action that the user needs to perform consequently for a tracked item.

Disposition Type	User Action
BFS (Bad From Stock)	Enter Non-Conformance and Secondary Disposition
Not Applicable	No Action Required
Non-Conformance	Enter Non-Conformance and Secondary Disposition
Not Received	No Action Required
Not Removed	No Action Required
RTC (Return to Customer)	Remove Instance
RTV (Return to Vendor)	Remove Instance

Disposition Type	User Action
Scrap	Enter Non-Conformance, Removal Details, and MRB QA results
Use As Is	Remove Instance from Install Base keeping the item in serviceable condition

When the immediate disposition and condition is selected, the secondary disposition is enabled if applicable. The following table describes the secondary disposition types and user actions for a tracked item.

Disposition Type	User Action
Hold	Further Secondary Action Required
Rework – Removal Not Required	No Further Action Required
Rework – Removal Required	Remove Item Instance
RTC (Return to Customer)	Remove Item Instance
RTV (Return to Vendor)	Remove Item Instance
Scrap	Remove Item Instance and Enter MRB QA

- If the disposition is for a position, click the position link to navigate to the View Position Path page to view the position path across all sub configurations.
- A service request is created when you enter the primary non-conformance information. Click Create to create additional non-conformances. The Non Conformance Log lists all the service requests associated to this disposition either directly or indirectly (through Parts Change or Material transaction). The Primary column indicates if the Non Conformance is a primary (Auto generated) one or not. You can enter the Problem code, summary and severity fields (Primary Non Conformance section) only when the Immediate type is Non Conformance or BFS and the condition is Unserviceable or MRB.

Click the Incident number link in the Non Conformance Log section to navigate to the View/Edit SR page to view or edit the service request details.
- Click Material Requirement to create a material requirement for the disposition

item and quantity.

- Click Submit QA Results to navigate to the quality collection user interface to enter the MRB quality results. You can enter quality results only when the item condition is set to MRB when defining the item in Inventory.
- Click Terminate to close the disposition.
- Click Apply to save the changes made or click Cancel to discard the changes.

Non-Tracked Item Disposition

The following table describes the immediate disposition types and the user action for a non-tracked item.

Disposition Type	User Action
Non-Conformance	Secondary Disposition Required
Not Received	No Action Required
Not Removed	No Action Required
RTC (Return to Customer)	Material Transaction Required
RTV (Return to Vendor)	Material Transaction Required
Scrap	Material Transaction Required
Use As Is	No Action Required

When the immediate disposition and condition is selected the secondary disposition is enabled if applicable. The secondary disposition types and actions are as follows:

Disposition Type	User Action
Hold	Further Secondary Action Required
RTC (Return to Customer)	Material Transaction Required
RTV (Return to Vendor)	Material Transaction Required

Disposition Type

User Action

Scrap

Material Transaction Required

The screenshot displays the Oracle Production Planning and Production interface. The top navigation bar includes tabs for Production Planning, Outside Processing, Service History, and Material Transactions. Below this, a sub-navigation bar lists Work Orders, Operations, Resources, Materials, Maintenance Requirements, My Work Orders, and Visits. The user is logged in as TSMITH.

The main content area is divided into two sections: Disposition Details and Installation Details.

Disposition Details:

- Unit Configuration: C70-3, SN 511, Tail # VA761
- Master Configuration: C70-3
- Position: 24-08-01, Main Battery
- Item: [Searchable]
- Operation Sequence: [Searchable]
- Serial Number: [Searchable]
- Quantity: [Searchable]
- Immediate Disposition: Use As Is
- Secondary Disposition: [Searchable]
- Comment: [Searchable]
- Work Order: SFH48
- Revision: 1
- Item Group: [Searchable]
- Item Revision: [Searchable]
- Instance Number: [Searchable]
- Lot Number: [Searchable]
- UOM: [Searchable]
- Status: Installation Required
- Condition: Active : Available for ATP

Installation Details:

- Item: [Searchable]
- Serial Number: [Searchable]
- Quantity: [Searchable]
- Installation Date: [Searchable]
- Instance Number: [Searchable]
- Lot Number: [Searchable]
- UOM: [Searchable]

Buttons at the top right of the Disposition Details section include Cancel, Terminate, Material Requirement, and Apply. Buttons at the bottom right of the Installation Details section include Cancel, Terminate, Material Requirement, and Apply.

- Click the Terminate button to close the disposition.
 - Click the Material Requirement button to create a material requirement for the disposition item and quantity.
 - Click Apply to save the changes made and click Cancel to discard the values entered.
4. To create a new disposition record, click Create in the Workorder Dispositions page. The Create Disposition page appears. Select an item to disposition using the Position, Item Group or Instance search criteria. Enter the disposition details as required. Select the condition in which to disposition.

Create Disposition

* Indicates required field

Unit Configuration: C70-3, SN 511, Tail # VA761

Master Configuration: C70-3

Position: 24-08-01, Main Battery

Item:

Operation Sequence:

Serial Number:

Quantity:

Immediate Disposition: Use As Is

Secondary Disposition:

Comment:

Work Order: SFH48

Revision: 1

Item Group:

Item Revision:

Instance Number:

Lot Number:

UOM:

Status:

* Condition: Active : Available for ATP

Primary Nonconformance

Problem Code:

Severity:

Resolution Code:

Summary:

Create Work Order Option: Create and Release Workorder

Maintenance Requirements for Non Routine

Add Maintenance Requirements

Remove Title Revision Description Program Type

No records were found matching the given criteria...

Cancel Submit QA Results Apply

5. Click Apply. The page will refresh with the applicable disposition details listed in the lower half of the page. If the item being dispositioned is a tracked item, you need to perform the parts change as required. If the item being dispositioned is non-tracked, you can associate the appropriate material transactions with it.

Additionally, you can create material requirements to support the disposition, submit quality results if submitting for MRB review, or create additional service requests if needed.

Disposition Items from the Parts change user interface:

6. You can enter disposition details when performing an item or a unit configuration parts change. Navigate to the Workorder Operations page and select Perform Part Removal/Install. The Unit Configuration Part Changes page appears displaying the configuration tree. Select the position against which you want to perform the disposition. The page refreshes displaying the position details. The input parameters for disposition appear in the lower half of the page.

7. Enter the required information.

Disposition Association during Material Transaction

When issuing materials to a workorder from the Material Issue page, you can associate the existing dispositions for that workorder and issue parts directly to disposition. Click the Disposition search icon in the Workorder Requirements table to navigate to the Select Disposition page and select the appropriate disposition.

When returning materials issued to a workorder, the dispositions associated with the workorder if any appear in the Workorder Return Results table. This allows for the disposition to be directly associated with a material transaction.

You can associate a disposition to a material transaction for a non-tracked item after the transaction has occurred. Query for the material transaction in the View material Transaction page. Select the transaction and clicking Associate Dispositions to navigate to the Update Associated Dispositions page to select the disposition(s) to associate. Select from the available dispositions to associate with the material transaction.

Updating Dispositions

To update dispositions:

1. Navigate to the Workorder Dispositions page.
2. Select the disposition to update. Optionally, query for specific dispositions using the search criteria in the Filter Dispositions By region.
3. Click the Position link to view the position details. Click the Details icon to navigate

to the Disposition details page. Modify information as required.

Viewing Item/Part Service History

Maintenance planners can access the history of service performed against a unit/part during the planning phase of a service or the execution of a work order. The history of the performed service, enables the planner to plan and execute decisions about the currently planned service, as well as provides support for the maintenance engineer during workorder execution. The planner or maintenance engineer is able to view a detailed service history on a workorder part such as maintenance requirements, jobs and operations that have been performed on the part and all the visits it has been part of. The service history includes both in-house service as well as supplier-performed service.

To view the service history of an item/serial number, you must enter the item and serial number or the instance number. You can either search for workorders for the entered part/serial number or search for maintenance requirements associated to the part/serial number. You can restrict the search by providing additional filters like workorder scheduled Start/End date range, workorder Actual Start/End dates, mechanic, organization, department, machine, visit, program type, and so on.

To view work order history:

1. Under the Execution link, click the Service History tab. The Search Workorders page appears. Enter your search criteria and click Go.

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Production Planning Outside Processing Service History Material Transactions

Work Orders | Maintenance Requirements

Search Workorders

Item Number and one of either Serial Number or Instance Number are required fields to perform a search.

Item Number: Serial Number: Instance Number:

Organization: Department: Mechanic:

Actual Start Date: Actual End Date: Machine:

Visit: Summary: Problem Code:

Resolution Code: Workorder Status:

Workorder List

Select Workorder and ...

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Select	Workorder Number	Description	Actual Start Date	Actual End Date	Non-Routine Workorder	Status	OSP Order	Visit Task	Maintenance Requirement
<input type="radio"/>	766	00-000-00-00				Released		00-000-00-00 28-020-01	
<input type="radio"/>	765	28-020-01-00				Released		28-020-01-00 28-020-01	
<input type="radio"/>	308	28-020-01-00 2004-DEC-20	2004-DEC-20			Complete		28-020-01-00 Test Mr 1.2	
<input type="radio"/>	307	Route Test 1 2004-DEC-20	2004-DEC-20			Complete		Route Test 1 Test Mr 1.2	
<input type="radio"/>	305	Prithwi test 1 2004-DEC-20	2004-DEC-20			Complete		Prithwi test 1 Test Mr 1.1	
<input type="radio"/>	303	test route 1				Released		test route 1 Test Mr 1.0	

- Click the Workorder Number link to navigate to the Workorder Operations page and view the work order details, the materials, resources, assignments, resource transactions, and dispositions associated to the work order.

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Production Planning Outside Processing Service History Material Transactions

Work Orders | Maintenance Requirements

Workorder Operations

Operations Materials Resources Assignments Resource Transactions Dispositions

Indicates required field

Workorder Details

Workorder Number: 766 Organization: San Diego Manufacturing

Workorder Description: 00.000.00.00 Department: Assembly Department

Maintenance Requirement: 28.020.01 Project: 172

Route: 00.000.00.00 Project Task: 00.000.00.00

Priority: Item: MRO-C1600 Serial Number: 101

Visit Number: 172 Unit Name: C-1600, Tail # 101

Workorder Status: Released Visit Task: 3

Completion Sub Inventory: Accounting Class: CMRO-Maint

Lot Number: Locator: Confirmed Failure: No

Scheduled Workorder Start Date: 2005-APR-11 Scheduled Workorder End Date: 2005-APR-11

Scheduled Workorder Start Time: Hrs 18 Mins 00 Scheduled Workorder End Time: Hrs 18 Mins 15

Actual Workorder Start Date: Actual Workorder End Date:

Actual Workorder Start Time: Hrs Mins Actual Workorder End Time: Hrs Mins

Operations

Details Operation QA Results Complete Operation

Previous 1-1 of 1 Next

Select	Operation Sequence	Operation Code	Operation Description	Actual Start Date	Actual End Date	Scheduled Start Date	Scheduled End Date	Department	Operation Status
<input type="radio"/>	10		Default Operation			2005-APR-11	2005-APR-11	Assembly D	Uncomplete

Previous 1-1 of 1 Next

- You can do the following:
 - Select a work order with an associated OSP order number and click View OSP Details to view the order details.

- View the visit task details
- View maintenance requirements associated with the visit
- View service requests associated with the visit

To view maintenance requirements history:

1. Click the Maintenance Requirements subtab under Service History. The Search by Maintenance Requirements page appears. Enter your search criteria and click Go. The date range filter must be applied against the MR's effective from and effective to date. Maintenance requirements meeting your search criteria are listed in the maintenance requirements results table.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Production Planning Outside Processing **Service History** Material Transactions

Work Orders | Maintenance Requirements

Search by Maintenance Requirements

Item Number and one of either Serial Number or Instance Number are required fields to perform a search.

Item Number: MRO-C1600 Serial Number: 101 Instance Number:
 Category: Program Type: Sub Type:
 Job Actual Start Date: Mechanic: Machine:
 End Date: Title: Version:
 Description: Unit Effectivity Status:
 Go Clear

Maintenance Requirements Results

Previous 1-10 of 16 Next

Workorder Details	Maintenance Requirement	Version	Accomplished Date	Program Type	Unit Effectivity Status	Visit Number	Relationships
	testmr1	1		Letter Check	Released	19	
	21-040-00	2	2004-DEC-09	Letter Check	Signed off	34	
	21-040-00	2	2005-JAN-09	Letter Check	Signed off	34	
	21-150-00	2	2005-JAN-09	Letter Check	Signed off	34	
	TestResrc	1		Corrosion	Released	54	

2. Click the Maintenance Requirement link to view the details of the selected maintenance requirement.
3. To view work orders associated with the maintenance requirement, click the Workorder Details icon. The Maintenance Requirements Workorders Listing page appears displaying the details of the associated work orders. Click the Workorder Number link to navigate to the Workorder Operations page and view all the materials, resources, assignments, resource transactions, and dispositions associated with the work order.

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Complex MRO

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Production Planning Outside Processing **Service History** Material Transactions

Work Orders | Maintenance Requirements

Maintenance Requirements Workorders Listing

Item Number **MRO-C1600** Serial Number **101** Instance Number **70211** [Cancel](#)
 Title **21-040-00** Description **Replace the electrical and electronic compartment supply fan filter.** Program Type **Letter Check**
 Version **2**

Details of Workorders [Visit Task Details](#)

Previous 1-2 of 2 Next

Select	Workorder Number	Workorder Description	Workorder Status	Visit Type	Visit Task
<input type="radio"/>	223	21-040-00-00	Complete	B Check	21-040-00-00
<input type="radio"/>	224	00-000-00-00	Complete	B Check	00-000-00-00

Previous 1-2 of 2 Next

Details of Workorders [Visit Task Details](#)

[Cancel](#)

- Click the Visit Task Details button to view the visit details, hierarchy, and cost information pertaining to the visit associated with the work order.

ORACLE®
Complex MRO

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Production Planning Outside Processing **Service History** Material Transactions

Work Orders | Maintenance Requirements

View Visit Task Details

Visit Number **34** Visit Type **B Check** Item **MRO-C1600** [Cancel](#)
 Unit **C-1600, Tail #** Start Date **2004-DEC-09** Organization **San Diego Manufacturing**
 Serial Number **101** End Date **2004-DEC-09** Department **Outside Processing**

Task Header Information

Task Number	2	Task Name	21-040-00-00
Department	Outside Processing	Task Type	Unplanned
Task Status	Closed	Serial Number	101
Item	MRO-C1600	Route	21-040-00-00
Maintenance Requirement	21-040-00	Sub Zone	E&E
Zone	FUSE_LWR	Service Request	
Route Type		Originating Task	1
Cost Parent Task	1	Duration /Hour	2
Start From Hours		End Time	2004-DEC-09 12:00
Start Time	2004-DEC-09 10:00		
Stage			
Workorder Number	223	Workorder Status	Complete
Project Task Number			
Task Description			

[Cancel](#)

[Production Planning](#) | [Outside Processing](#) | [Service History](#) | [Material Transactions](#) | [Home](#) | [CMRO](#)
[Home](#) | [Engineering](#) | [Configuration](#) | [Planning](#) | [Administration](#) | [Execution](#) | [Profile](#) | [Sign Out](#) | [Help](#)

- To view relationships for a Group MR, click the Relationships icon in the Maintenance Requirements Results table. The Maintenance Requirement Relationships Listing page appears displaying all the child MRs.

My Workorders Interface

The My Work orders user interface displays all the work orders for the user logged in

the system. Employees can record labor time and sign off for the work orders and operations assigned to them, from one central location. Thus users can sign off and transact simple work orders especially those associated with standard line maintenance visit. Additionally, users can also perform other work order execution functionality like parts change, non-routine creation, quality recording, and so on if required.

Note: You can now create a non-routine from an existing non-routine work order by selecting the appropriate non-routine work order from the My Work Orders page. You can perform this by adding the function, Allow creation of a Non-Routine originating from a Non-Routine. The corresponding function is AHL_ALLOW_CREATE_NR_FROM_NR to the menu associated to a responsibility.

ORACLE® Complex MRO

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Production Planning Outside Processing Service History Material Transactions

Work Orders Operations Resources Materials Maintenance Requirements My Work Orders Visits

Logged In As TSMITH

My Work Orders

* Indicates required field

* Employee Name Smith, Mr. Tom Employee Number 546 Resource

Work Order Number Work Order Status Released(1) Work Order Start Date Hrs Mins

Operation Sequence Operation Status Flight Number Work Order End Date Hrs Mins

Visit Number Flight Date 04-FEB-2009 Hrs 03 Mins 02

Go Clear Apply

Complete	Operation	Work order	Operation Sequence	Resource Number	Resource	Work order Status	Operation Status	Hours Transacted	Hours
No records were found matching the given criteria.									

Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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Maintenance Technician Roles

Role based workbenches and pages supporting different types of maintenance tasks are described in this chapter.

This chapter covers the following topics:

- Overview
- Using the Technician Workbench
- Updating Work Orders
- Using the Transit Technician Workbench
- Using the Data Clerk Workbench
- Viewing Enigma Documents
- Viewing Operation Resources and Visit Details
- Maintenance Requirement Recording
- Finding Workorders
- Operations
- Creating Non-Routine Workorders
- Completing Work Orders and Operations
- Performing Part Removal/Install
- Changing Item and Serial Numbers Associated with Work Orders
- Viewing and Updating Material Requirements
- Viewing Assignments, Documents, and Resources

Overview

Maintenance technician role based functionality consists of workbenches and pages supporting different types of maintenance tasks for production technicians, transit

technicians, and data entry clerks. This includes the following roles and user interfaces:

- Heavy Maintenance and Engine Shop Technician

These pages focus on a technician working on medium to large sized maintenance visits, lasting for days and weeks, where technicians are assigned to specific work orders based on their skill set. You can identify the work order assigned, log in and log out, update quality plans, create transactions for part charges and dispositions, and automatically transact time performed on a job. See: Using the Technician Workbench, page 14-2

- Line and Transit Maintenance Technician

These pages focus on a technician working on a small visit, either on the flight line, or between flights. These visits are simpler than a heavy maintenance visit, and last for a few hours rather than days. The visit tasks are usually for smaller inspections, quicker maintenance issues, and non routine handling. A technician is not necessarily assigned to specific work orders. See: Transit Technician Workbench, page 14-10

- Data Entry Clerk

Data clerks do not perform the work on the equipment; the clerk is entering data after the work is performed work. These pages focus on records the clerk is entering for tasks performed by a technician during a shift. See: Using the Data Clerk Workbench, page 14-12

Using the Technician Workbench

The Technician Workbench is used by heavy maintenance and engine shop technicians to display work orders, and perform maintenance tasks for large jobs. Work orders are selected from assigned and unassigned lists. Assigned work orders are assigned to a specific technician; unassigned work orders are displayed based on resource associations. This workbench also enables you to:

- View resource assignments and transactions
- View and update visit details
- View non routine orders
- Update work orders by deferring maintenance requirements, changing parts, and collecting quality information
- Print maintenance work cards
- Recording maintenance requirements

- Access task cards

Maintenance Work Card Printing

A template is provided for a maintenance work card enabling you to print, or create a file, of the details displayed in the Technician Workbench. This is designed as a hard copy of the work order for data entry. You can print a range of work orders—and use sorting options such as scheduled date, work order number, visit, or visit stage.

To view work orders in the Technician Workbench:

1. Navigate to the Technician Workbench.
2. You can search for work order records by selecting search criteria in the applicable fields including Work Order Number, Work Order Status, Visit Number, and Start and End Dates. Select Go to display the results of your search.

The screenshot shows the Oracle Complex MRO Technician Workbench interface. At the top, there's a navigation bar with 'Home', 'Profile', and 'Sign Out'. Below this, a 'My Work Orders' tab is active. The main section is titled 'Technician Workbench' and includes a 'Complete Op/Work Order' button and an 'Op/Work Order Login or Logout' button. A 'Simple Search' section contains input fields for 'Work Order Number' (with a search icon), 'Work Order Status' (a dropdown menu showing 'Released'), 'Visit Number' (with a search icon), 'Start Date' (with a calendar icon), and 'End Date' (with a calendar icon). There are 'Go' and 'Clear' buttons at the bottom of the search section. An 'Advanced Search' button is also present. Below the search section is the 'Assigned Work Orders' section, which includes a 'Select Work Order' button, 'Print', and 'Update' buttons. A table lists assigned work orders with columns for 'Select', 'Details', 'Work Order Number', 'Work Order Description', 'Non-Routine', 'Visit Number', 'Task Number', 'Start Date', 'Status', 'Complete', 'Log In', 'Log Out', and 'Task Card'. The table contains four rows of data, each with a checkbox and a 'Show' button in the 'Select' column.

Select	Details	Work Order Number	Work Order Description	Non-Routine	Visit Number	Task Number	Start Date	Status	Complete	Log In	Log Out	Task Card
<input type="checkbox"/>	Show	SFM179	A319/A320-UAL:05-22-20-200-006		64	3	09-Feb-2007 07:00:00	Released				
<input type="checkbox"/>	Show	SFM182	A319/A320-UAL:05-28-30-200-003		64	6	09-Feb-2007 07:00:00	Released				
<input type="checkbox"/>	Show	SFM184	A319/A320-UAL:05-21-50-200-002		65	2	16-Feb-2007 07:00:00	Released				
<input type="checkbox"/>	Show	SFM222	A319/A320-UAL:05-22-20-200-006		69	9	12-Feb-2007 07:00:00	Released				

Information displays in the Assigned Work Orders and Unassigned Work Orders regions. You can view data in the following fields: Work Order Number and Description, Non-Routine request number, Visit number, Task Number, Start Date, Status, Complete flag, and Log In and Log Out indicator.

Integration with Enigma enables a technician to view and print associated Enigma documents related to a specific work order in Oracle CMRO. To identify and troubleshoot a defect, the technician can view the Fault Identification Manual (FIM) that is linked to Enigma's interface.

Click on the Task Card icon for any work order to display the corresponding Aircraft Maintenance Manual (AMM). The AMM task cards are associated with a route in Oracle CMRO. These task cards include content from AMM, IPC, and WDM manuals. Oracle CMRO maintains the revision of the tasks and stores a PDF file as an attachment to the route.

Unassigned Work Orders (User Qualified)

Select Work Order

Print

Update

Previous

1-10 of 79

Next 10

Select All

Select None

Select	Details	Work Order Number	Work Order Description	Non-Routine	Visit	Task Number	Start Date	Status	Complete	Log In	Log Out	Task Card
<input type="checkbox"/>	Show	SFM100	00-000-00-00		28	3	27-Nov-2006 07:00:00	Released				
<input type="checkbox"/>	Show	SFM110	Aircraft Defect - Winrunner Created Non-routine for MEL	37526	33	2	08-Dec-2006 07:00:00	Released				
<input type="checkbox"/>	Show	SFM112	Aircraft Defect - Winrunner Created Non-routine for MEL	37524	37	2	11-Dec-2006 07:00:00	Released				

- To display or print a maintenance work card, select a work order and choose Print. Maintenance work card printing provides printed or file information of the details displayed in the Technician Workbench. This provides a hard copy of the work order to give technicians before each shift.
- You can complete an operation from the Search page of the Technician Workbench. Expand the Show Details link for a work order and click the Complete icon for each operation to complete the operation.

ORACLE
Complex MRO

Home Profile Sign Out Help

My Work Orders

Logged In As TSMITH

Technician Workbench

Hide Icon Legend

Complete Op/Work Order
Op/Work Order Login or Logout

Simple Search

Work Order Number
SFM1000

Work Order Status
Released(1)

Visit Number

Start Date

End Date
28-Apr-2008 20:59:59

Go Clear

Advanced Search

Assigned Work Orders

Select Work Order
Print
Update

Select All | Select None

Operation Resources

- You can perform the following actions:
 - Choose Update to display the Update Work Orders page, see: Updating Work Orders, page 14-5

- View resource assignments and transactions, see: Viewing Operation Resources, page 14-14
- View and update visit details, see: Viewing Operation Resources and Visit Details, page 14-14
- View non routine orders, see: Creating Non-routine Workorders, page 14-24
- Print maintenance work cards
- Access task cards

Updating Work Orders

The Update Work Orders page displays the work order, and its associated operations and maintenance requirements. You can update the work order by performing a number of transactions, and view detail information in five tabbed regions. This page also displays a notes area for technicians to communicate between shift turnovers.

During the creation of work orders if operation resources are planned at a department level, the operation department defaults from the operation resource if the associated BOM resource is available in the Visit's Organization. See: Creating Oracle Complex Maintenance, Repair, and Overhaul Resources., page 3-62

To update work orders:

1. Select a work order and navigate to the Update Work Orders page.

This page enables you to access other pages to perform work order tasks. Select a task in the Select Work Order box, and choose Go to navigate to the appropriate page:

- Create Non-routine, see: Creating Non-routine Workorders, page 14-24 and Creating a Non-Routine from an Existing Non-Routine Workorders, page 14-26.
- Defer Maintenance Requirement, see: Deferring Maintenance Requirements, page 13-7
- Print Work Card provides a file or printed maintenance work card of details of the Technician Workbench.
- View/Create Dispositions, see: Item Disposition, page 13-30

2. In the Select Work Orders row, you can perform the following actions:
 - Change Parts enables you to navigate to the Unit Configuration Part Changes page, see: Performing Part Removal/Install, page 14-28
 - Update Non-Routine.
 - Task Card enables you to access Enigma associated documents. Click the Task Card icon to display Aircraft Maintenance Manual if the corresponding route of the workorder has an external document association.
 - Record Quality collection information, see Entering Quality Results, *Oracle Quality User's Guide*
 - Sign Off enables you to end maintenance requirement transactions, see: Maintenance Requirement Recording, page 14-16

In the Details region, there are tabbed areas to view work order information including: Details, Operations, Quality, Materials, Documents, and Dependencies.

3. Select Details to view a summary of work order details and turnover notes. Select Other Details to display more information on the selected work order.

Details: SFM121

Revert Apply

Details Operations Quality Materials Documents Dependencies

Number: SFM121
Description: Aircraft Defect - Antenna Removed/Installed

* Scheduled Start Time: 03-Oct-2006 02:36:34
* Scheduled End Time: 03-Oct-2006 03:36:34
All Operations Complete

Unit: C80-1, SN811 Tail# VA636
Unit Quarantined: No
Organization: San Francisco Maintenance Center
Department: Line Maintenance, SFM
Visit Number: 19
Visit Task: 10
Visit Start Date: 21-Sep-2006 00:00:00
Visit End Date: 31-Oct-2006 00:00:00
Project: 19
Project Task: 13145-39278

Status: Released(1)
Hold Reason:
Actual Start Time:
Actual End Time:

Maintenance Requirement
Route Item: 671250-17
Serial Number: 812
Quantity:
UOM:
Lot Number:
Originating Work Order:
Associated Non-Routine: 39278

Hide Other Details

Turnover Notes

TIP Notes is a mandatory column and describes the work performed

Date/Time	Employee	Notes
Turnover notes have not been entered.		
Add Row		

This region enables you to:

- Update the status of the work order
 - Enter a reason when the status of the work order is On Hold or Parts Hold
 - Update Scheduled Start and End Time
 - Navigate to the View Unit Configuration page, see: Creating Unit Configuration , page 6-3
 - Navigate to the View Visit Details page, see: Viewing Operation Resources and Visit Details, page 14-14
 - Navigate to the View Maintenance Requirement pages, see: Viewing Maintenance Requirement Details, page 2-42
 - Navigate to the View Route page, see: Creating Maintenance Route Records, page 3-8
4. The Turnover Notes region displays date and time, employee, and a short description of the work performed. You can add additional notes for a specific date and time period.
 5. Select Operations to view work order operation details.

This region displays the operation status, hours worked, scheduled, and actual time worked.

- Total Hours—for assigned work orders, this column represents the total required hours according to the assignment. For the unassigned work orders,

this represents the sum of all the required hours for the work order.

- **Hours Worked**— represents the amount of time technician is logged into the work order, plus the other time transacted for this work order.

In the Perform Resource Transactions region, you can record resource information for machine type resources.

6. Select **Quality** to view and enter Quality collection plan information for this maintenance requirement.

This includes data for APU Hours, Total Engine Hours, Action Description, and Comments.

See: *Entering Quality Results, Oracle Quality User's Guide*

7. Select **Material** to view item information. This region displays operation sequence, scheduled and issued quantities, and required date. You can update the scheduled

quantity and add new items to the work order.

*Operation Sequence Item	Item Description	Scheduled Quantity	Required Date	Issued Quantity	UOM
10 MRO-17C35-01	Main Battery	1	16-Feb-2007 <small>(example: 19-Feb-2007)</small>	0	Each
10 MRO-101054-3	Fan, Equipment Cooling	1	16-Feb-2007 <small>(example: 19-Feb-2007)</small>	0	Each

8. Select Documents to view any work order documents associated to the maintenance requirements, operations, product classification, or configuration items. You can access the Illustrated Parts Catalog and Wiring Diagram Manual from this region.

To enable these buttons you must set the following profile options to Yes:

- AHL: Enigma IPC Documents associated
- AHL: Enigma WDM Documents associated

Click the Illustrated Parts Catalog and Wiring Diagram Manual buttons to view the associated documents.

This page lists applicable document revision, chapter, section, subject, page, figure, and note. See: Attaching Documents to a Maintenance Requirement, page 2-9

Document Number	Title	Revision	Chapter	Section	Subject	Page	Figure	Note	Association
2002-19-51	Flight control modules C70 Series Airplanes R1								Route
C70-1/2/3 MPD	C70-1/2/3 Maintenance Planning Data	3							Route

9. The Dependencies region displays any scheduling dependencies for this work order including work order status, scheduling time and dates, non-routine, and outside processing orders.

Details: SFM179

Revert

Apply

Details

Operations

Quality

Materials

Documents

Dependencies

Expand All

Collapse All

Work Focus Order	Description	Status	Scheduled Start Time	Scheduled End Time	Non Routine	OSP Order
SFM179	A319/A320-UAL:05-22-20-200-006	Released	09-Feb-2007 07:00:00	16-Feb-2007 15:00:00		

- Select Apply to save your work.

Using the Transit Technician Workbench

Transit maintenance technicians are working on smaller maintenance visits that last for a few hours rather than days.

ORACLE® Complex MRO

Home Profile Sign Out

Unit Schedule

Flight Schedule

Visits

Logged In As TSMITH

Unit Schedules

Conflict

Flight Scheduled

Maintenance Opportunity

Multiple Events

Multiple Events with Maintenance Opportunity

Visit Scheduled

Unit Name

Item Number

Display Increment

Start Date and Time

Serial Number

UOM

Go

Clear

Previous

1-10 of 44

Next 10

Unit	2007/03/19 15:22:40	2007/03/20 15:22:40	2007/03/21 15:22:40	2007/03/22 15:22:40	2007/03/23 15:22:40	2007/03/24 15:22:40	2007/03/25 15:22:40	2007/03/26 15:22:40	2007/03/27 15:22:40
BBN UC1									
C-1600 Tail # 101									
C-1600 Tail # 102									

The workbench provides three tabbed regions:

- Unit Schedule

This page displays the different flight segments for a tail number, and the scheduled visits or maintenance opportunities between flights. The unit schedules are displayed in context of a unit in increments of minutes, hours or days. You can also access conflict messages which show an overlap of events. See: Viewing Unit Schedule, page 8-33

- Flight Schedule.

Flight schedules are imported into the application using an API, or can be created manually. See: Maintaining Flight Schedule, page 8-41

- Visits

You can view flight details and identify where visits can be created. The Visit tabbed region enables you to search for visits, create new records, and update visit information. See: Creating Maintenance Visit Records, page 9-4

Enigma Integration enables a transit technician to view associated Enigma documents related to a maintenance work order.

To view associated Enigma documents:

1. Click the Visits tab and search for the relevant work order.

Visit : 16

Organization: San Francisco Maintenance Center US
 Visit Name: VA761-C
 Visit Type: C Check
 Start Date: 23-May-2005 22:00:00
 Visit Status: Implemented

Department: Base Maintenance, SFM
 Item: C70-3
 Serial Number: 511
 Unit: C70-3, SN 511, Tail # VA761

Simple Search

Work Order Number:
 Work Order Status: Released(1)
 Start Date:
 End Date:

Results

Select	Details	Number	Work Order Description	Unit	Serial	Item Number	Non-Routine	Start Date	Status	Complete	Log In	Log Out	Task Card
<input type="checkbox"/>	Show	SFM48	VA-C70-21-150-00	C70-3, SN 511, Tail # VA761	C70-3	511		23-May-2005 22:00:00	Released(1)				
<input type="checkbox"/>	Show	SFM50	VA-C70-21-40-00	C70-3, SN 511, Tail # VA761	C70-3	511		23-May-2005 22:00:00	Released(1)				
<input type="checkbox"/>	Show	SFM52	VA-C70-24-020-01	C70-3, SN 511, Tail # VA761	C70-3	511		23-May-2005 22:00:00	Released(1)				
<input type="checkbox"/>	Show	SFM54	VA-C70-27-36-00	C70-3, SN 511, Tail # VA761	C70-3	511		23-May-2005 22:00:00	Released(1)				

2. The Results region displays the search result.

The Task Card column on the Results table is visible if the corresponding route of the work order has an external document association.

3. Click the Task Card icon for a work order to view the corresponding Aircraft Maintenance Manual (AMM).

Enigma Integration enables you to view any other work order documents associated to the maintenance requirements, operations, product classifications, or configuration items. You can access the Illustrated Parts Catalog and Wiring Diagram Manual from the Documents region in the Update Work Orders page.

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Unit Schedule Flight Schedule Visits

Home Profile Sign Out Help

Logged In As TSMITH

Update Work Orders

Cancel

Show Icon Legend

Select Work Order Create Non-routine Go

Select Number	Description	Start Date	Status	Complete	Change Parts	Non-Routine	Task Card	Visit Title	Maintenance Requirement	Record Quality	Sign Off
SFM48	VA-C70-21-150-00	23-May-2005 22:00:00	Released(1)					16	VA-C70-21-150-00		

Details: SFM48

Revert Apply

Details Operations Quality Materials Documents Dependencies

Illustrated Parts Catalog Wiring Diagram Manual

Document Number	Media Type	Electronic File Title	Revision	Chapter	Section	Subject	Page	Figure	Note	Association
21-61-06	Electronic File	Cabin Temperature Sensor	1	2	3	Removal				Operation
21-61-06	Electronic File	Cabin Temperature Sensor	1	2	6	Installation	4	2A		Operation
21-61-06	Electronic File	Cabin Temperature Sensor	1	4	7B	Functional Test 2				Operation
C70-1/2/3 MPD	Electronic File	C70-1/2/3 Maintenance Planning Data	3	4	1					Maintenance Requirement

Cancel

Unit Schedule Flight Schedule Visits Home Profile Sign Out Help

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Using the Data Clerk Workbench

The Data Clerk Workbench is used in environments where the shift work records are updated by data entry clerks. The work orders are not filtered per user, and the pages do not contain default information. Data clerks can search and record data for work orders that have been assigned to any technician; and can record job tasks, start and stop times, and completions.

To view work orders on the Data Clerk Workbench:

1. Navigate to the Data Clerk Workbench.
2. You can search for records by using the applicable values in the Search region including: Work Order Number, Work Order Status, Visit Number, and Start and End Date. Select Go to display the results of your search.

Work Orders Logged In As TSMITH

Data Clerk Workbench

✓ Complete Op/Work Order

Simple Search **Advanced Search**

Work Order Number Start Date (example: 15-Feb-2007 19:45:00)

Work Order Status End Date 02-Mar-2007 23:59:59

Visit Number

Results

Select Work Order Previous 1-10 of 85 Next 10

Select All | Select None

Select	Details	Work Order Number	Work Order Description	Non-Routine	Visit Number	Task	Start Date	Status	Complete	Task Card
<input type="checkbox"/>	Show	SFM100	00-000-00-00		28	3	27-Nov-2006 07:00:00	Released		
<input type="checkbox"/>	Show	SFM110	Aircraft Defect - Winrunner Created Non-routine for MEL	37526	33	2	08-Dec-2006 07:00:00	Released		
<input type="checkbox"/>	Show	SFM112	Aircraft Defect - Winrunner Created Non-routine for MEL	37524	37	2	11-Dec-2006 07:00:00	Released		
<input type="checkbox"/>	Show	SFM114	Aircraft Defect - Winrunner Created Non-routine for MEL	37534	42	2	11-Dec-2006 07:00:00	Released		

3. Select a work order to perform the following transactions:

- Print Maintenance Work Cards
- Update Work Orders, see: Updating Work Orders, page 14-5
- View Operation Resources, see: Viewing Operation Resources and Visit Details, page 14-14
- View Non-routine Work Orders, see: Creating Non-routine Workorders, page 14-24
- View Visit Details, see: Viewing Operation Resources and Visit Details, page 14-14
- View Enigma Documents, see: Viewing Enigma Documents, page 14-13

Viewing Enigma Documents

Enigma Integration enables a data clerk to view associated Enigma documents related to a maintenance work order. The Task Card column on the Results table of the Data Clerk Workbench is visible if the corresponding route of the work order has an external document association.

Click the Task Card icon for a work order to view the corresponding Aircraft Maintenance Manual (AMM).

Enigma Integration also enables you to view any other work order documents associated to the maintenance requirements, operations, product classifications, or configuration items. You can access the Illustrated Parts Catalog and Wiring Diagram Manual from the Documents region in the Update Work Orders page.

Oracle® Complex MRO

Work Orders

Home Profile Sign Out Help

Logged In As TSMITH

Update Work Orders

Cancel

Show Icon Legend

Select Work Order Create Non-routine Go

Select Number	Description	Start Date	Status	Complete	Change	Parts	Non-Routine	Task Card	Visit	Title	Record	Quality	Sign Off
SFM121	Aircraft Defect - Antenna Removed/Installed 03-Oct-2006 02:36:34 Released(1)								19				

Details: SFM121

Revert Apply

Details Operations Quality Materials Documents Dependencies

Illustrated Parts Catalog Wiring Diagram Manual

Document Number	Media Type	Electronic File	Title	Revision	Chapter	Section	Subject	Page	Figure	Note	Association
No Documents Found											

Cancel

Work Orders Home Profile Sign Out Help

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Viewing Operation Resources and Visit Details

Viewing and Updating Operation Resources

Operation resources are accessed from both the Technician and Data Clerk Workbenches by selecting the details for specific work orders. This page displays labor resources, and includes operation sequence, operation code, description, status, resource name, assigned start date and time, total hours and hours worked, and log in and log out data.

You can complete the operation in this page, and navigate to the View Resource Details page.

Assigned Work Orders

Select Work Order

Print

Update

Select All

Select None

Select	Details	Work Order Number	Work Order Description	Non-Routine	Visit	Task Number	Start Date	Status	Complete	Log In	Log Out	Task Card
<input type="checkbox"/>	+ Show	SFM179	A319/A320-UAL:05-22-20-200-006		64	3	09-Feb-2007 07:00:00	Released				
<input type="checkbox"/>	- Hide	SFM182	A319/A320-UAL:05-28-30-200-003		64	6	09-Feb-2007 07:00:00	Released				

Operation Resources

Operation Sequence	Operation Code	Description	Status	Complete	Resource Name	Assigned Start	Total Hours	Hours Worked	Log In	Log Out
10	UAL_A319.78-32-80-941-050...	Safety Precautions	Uncomplete	<input checked="" type="checkbox"/>	INSP-SFM		0	0		
10	UAL_A319.78-32-80-941-050...	Safety Precautions	Uncomplete	<input checked="" type="checkbox"/>	STR-SFM	09-Feb-2007 07:00:00	3	0		

Select the Resource Name to navigate to the View Resource Detail page. This page displays the details on the particular resource, and includes regions for Resource Assignments and Resource Transactions.

ORACLE Complex MRO
 Home Profile Sign Out

My Work Orders

Logged In As TSMITH

View Resource Details:Etech-SFM

Cancel

Operation Sequence	10	Resource Sequence	10
Resource Type	Person	Resource Name	Etech-SFM
Duration	8	UOM	Hour
Quantity	1	Total Required	8
Applied		Open	
Charge Type	Manual	Standard Rate	
Cost Basis	Item	Scheduled Type	Yes
Operation Start Time	09-Feb-2007 07:00:00	Operation End Time	16-Feb-2007 15:00:00
Start Date	09-Feb-2007 07:00:00	End Date	16-Feb-2007 15:00:00

Resource Assignments

Employee Name	Employee Number	Serial Number	Assignment Start Date	Assignment End Date
Smith, Mr. Tom	546		13-Feb-2007 08:00:00	13-Feb-2007 17:00:00

Resource Transactions

Employee Name	Employee Number	Serial Number	Quantity	UOM	Activity	Reason	Reference	Transaction Date	Transaction Status
No Transactions Found									

See: Defining Resource Requirements for an Operation, page 3-41

Viewing Visit Details

The View Visit Details page enable you to view maintenance visit information, and navigate to pages to create visit transactions. See: Creating Maintenance Visit Records, page 9-4

You can cancel or close this visit record, and navigate to the Cost Structure page. See: Visit Costing and Pricing, page 9-27

View Visit Details	
Visit Number	64
Visit Type	
Unit	C70-1, SN 311, Tail # VA521
Organization	San Francisco Maintenance Center US
Priority	
Service Request	
Project Template	AHLT1167733495
Start Date	09-FEB-2007 2:00
Planned End Date	19-FEB-2007 2:00
Workorder Number	MRO-64 - A319_Visit_1
Visit Name	A319_Visit_1
Item	C70-1
Serial Number	311
Department	Base Maintenance, SFM
Visit Status	Implemented
Service Category	Primary Plan
Simulation Plan	
End Date	16-FEB-2007 15:00
Due By Date	
Description	

Maintenance Requirement Recording

You can initiate and stop the recording of maintenance requirement transactions in the maintenance technician workbenches. When all the work orders for a particular maintenance requirement are completed, and quality collection plan information is updated—you can sign off the maintenance requirement. All associated work orders for the maintenance requirement must be complete.

To stop maintenance requirement transactions:

1. Select a work order and navigate to the Signoff Maintenance Requirement page.
Maintenance requirement and visit details display for this record.
2. In the Signoff Information region, enable the check boxes for the appropriate information including:
 - Signoff all pending child Maintenance Requirements
 - Complete all pending Workorders and Operations

ORACLE® Complex MRO Home Profile Sign Out Help

My Work Orders Logged In As TSMITH

Signoff Maintenance Requirement

Maintenance Requirement: **A319/A320-UAL:05** Organization: **San Francisco Maintenance Center US**
 Visit: **64** Department: **Base Maintenance, SFM**
 Visit Start Date: **09-FEB-2007 02:00** Unit: **C70-1, SN 311, Tail # VA521**
 Status: **Released** Actual End Date:

Signoff Information

☒ Signoff all pending child Maintenance Requirements
☒ Complete all pending Workorders and Operations
☒ Default Operation Actual Dates from Scheduled Dates
☐ Use these Actual Dates

Actual Start Date: Hour: Minutes:
 Actual End Date: Hour: Minutes:

☒ Transact Resource by Requirements

Technician: **Smith, Mr. Tom**
 Equipment:

Cancel Revert Apply

3. Choose one of the date range values for signing off your requirements.
 - Default Operation Actual Dates from Scheduled Dates
 - Enter date and time information in the Use these Actual Dates region.
4. You have the option to select the Transact Resource by Requirements check box. You can then select another technician or select equipment for this record.
5. Select Apply to save your work.

Finding Workorders

To search for workorders:

1. Navigate to the Workorder Overview page.
2. Select applicable search criteria, and choose Go to display the results of your search.
 You can use the following fields:
 - Organization
 - Department
 - Department Class

- Serial Number
- Item
- Visit Number
- Visit Name
- Unit Name
- Maintenance Requirement
- Start Date
- BOM Resource
- Work Order Number
- Work Order Description
- Operation Code
- Operation Description
- Priority
- Confirmed Failure
- Work Order Status
- Non-Routine Work Order
- Resolution Code
- End Date
- Work Order Type
- All Operations Completed

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

Work Orders Operations Resources Materials Maintenance Requirements My Work Orders Visits

Logged In As TSMITH

Work Order Overview

Organization
Department
Department Class
Serial Number
Item
Visit Number
Visit Name
Unit Name
Maintenance Requirement
Start Date
BOM Resource

Work Order Num
Work Order Description
Operation Code
Operation Description
Priority
Confirmed Failure
Work Order Status
Non-Routine Work Order
Resolution Code
End Date
Work Order Type

☐ All Operations Completed

Go Clear

Select Work Order: Update Work Order Go

Select	Work Order Num	Work Order Description	Unit Name	Item	Serial Number	Non-Routine Work Order	OSP Order Num	Scheduled Start Date	Scheduled End Date	Status	All Operations Completed
<input type="radio"/>	SFM48	VA-C70-21-150-00	C70-3, SH 511, Tail # VA761	C70-3	511			24-MAY-2005	24-MAY-2005	Released (1)	
<input type="radio"/>	SFM50	VA-C70-21-40-00	C70-3, SH 511, Tail # VA761	C70-3	511			24-MAY-2005	24-MAY-2005	Released (1)	
<input type="radio"/>	SFM52	VA-C70-24-020-01	C70-3, SH 511, Tail # VA761	C70-3	511			24-MAY-2005	24-MAY-2005	Released (1)	
<input type="radio"/>	SFM54	VA-C70-27-36-00	C70-3, SH 511, Tail # VA761	C70-3	511			24-MAY-2005	24-MAY-2005	Released (1)	
<input type="radio"/>	SFM56	VA-C70-27-73-00	C70-3, SH 511, Tail # VA761	C70-3	511			24-MAY-2005	24-MAY-2005	Released	

The All Operations Completed option enables you to limit the search results to work orders that are ready for sign off. This identifies only the work orders that have all of its operations in complete status. The completed work orders are displayed in the All Operations Complete column in the results region with a tick mark icon.

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Work Order Overview

Organization
Department
Department Class
Serial Number
Item
Visit Number
Visit Name
Unit Name
Maintenance Requirement
Start Date
BOM Resource

Work Order Num
Work Order Description
Operation Code
Operation Description
Priority
Confirmed Failure
Work Order Status
Non-Routine Work Order
Resolution Code
End Date
Work Order Type

☒ All Operations Completed

Go Clear

Select Work Order: Update Work Order Go

Select	Work Order Num	Work Order Description	Unit Name	Item	Serial Number	Non-Routine Work Order	OSP Order Num	Scheduled Start Date	Scheduled End Date	Status	All Operations Completed
<input type="radio"/>	SFM129	RA PC1	C80-1, SN811 Tail # VA636	C80	811			07-FEB-2007	09-FEB-2007	Released (1)	
<input type="radio"/>	SFM215	21-150-00-00.Cabin Temp Sensor Filters	AHLUT001	KMIT001	KMIT001-SN003			19-JAN-2009	19-JAN-2009	Complete	✓
<input type="radio"/>	SFM216	21-040-00-00.E/E cooling supply fan filter	AHLUT001	KMIT001	KMIT001-SN003			19-JAN-2009	19-JAN-2009	Complete	✓
<input type="radio"/>	SFM218	00-000-00-00.Visual Inspection	AHLUT001	KMIT001	KMIT001-SN003			19-JAN-2009	19-JAN-2009	Complete	✓

3. You can choose the following actions from the drop-down menu:

- Update Workorder
- Complete Workorder

- Release Workorder
- Defer/Cancel
- Create Non-Routine Work Order
- Update/View Non-Routine Work Order
- Record Workorder QA Results
- Record Maintenance Requirement QA Results
- View Documents
- View OSP
- View Scheduling Hierarchy
- Update Material Requirements
- Update Resource Requirements
- Perform Resource Assignments
- Perform Resource Transactions
- Release Visit Work Order
- Release Maintenance Work Order
- Cancel Work Order
- Close Visit
- Sign Off Maintenance Requirement

Operations

You can navigate to the Work Order Operation page by selecting a work order and choosing Update Work Order. This page enables you to perform the following options:

- Defer/Cancel
- Complete Work Order
- Create Non-Routine Work Order

- Update/View Non-Routine Work Order
- Perform Part Removal/Install
- Item/Serial Number Change
- Record Work Order QA Results
- Record Maintenance Requirement QA Results
- Sign Off Maintenance Requirement
- Release Visit Work Order
- Release Maintenance Work Order
- Cancel Work Order
- Close Visit

A technician can now access the Unit Configuration page from the Work Order Operations page to update the Unit Configuration directly from the shop floor. These configuration updates are allowed for routes that have the Allow Unit Receipt Update option enabled at the time of creation.

When a Visit task is created for a Route that has Allow Unit Receipt Update option as Yes and a Work order is created for this task, you can choose the new option Update Unit Configuration from Actions drop down list.

You can use the Update Unit Configuration page to identify the condition of the items. This facilitates in the creation of reports used to evaluate the condition in the Edit Unit Configuration page.

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Work Order Operations

* Indicates required field

Work Order Num SFM48

Work Order Description VA-C70-21-150-00

All Operations Completed

Maintenance Requirement

Route VA-C70-21-150-00

Item C70-3

Unit Name C70-3, SN 511, Tail # VA761

Quantity 16

Visit Number 16

Work Order Status Released(1)

Hold Reason

Completion Sub Inventory

Lot Number

* Scheduled Work Order Start Date 24-MAY-2005

Scheduled Work Order Start Time Hrs 00 Mins 00

Actual Job Start Date

Actual Job Start Time Hrs Mins

Originating Work Order

Organization San Francisco Maintenance Center US

Department Base Maintenance, SFM

Project 16

Project Task VA-C70-21-150-0

Serial Number S11

Instance Number 643067

UOM

Visit Task 2

Accounting Class Maintenance

Priority

Locator

Confirmed Failure

* Scheduled Work Order End Date 24-MAY-2005

Scheduled Work Order End Time Hrs 03 Mins 00

Actual Job End Date

Actual Job End Time Hrs Mins

Associated Non-Routine

Operations

Select Operation: Complete Operation Details Operation QA Results

SelectSeq	Code	Description	Actual Start Date	Actual End Date	Status
1	VA.C70.21-61-06.020.801	Remove temperature sensor			Uncomplete
2	VA.C70.21-61-06.420.801	Install temperature sensor			Uncomplete
3	VA.C70.21-61-06.720.801	Functional test temperature sensor			Uncomplete

Select Operation: Complete Operation Details Operation QA Results

Cancel Revert Apply Defer/Cancel Go

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To update Operations:

1. Navigate to the Work Order Overview page.
2. Select a work order and choose Update Work Order. In the Work Order Operations page you can update the following fields:
 - Work Order Status
 - Hold Reason

Note: Hold Reason applies only when the work order is put on hold.

- Scheduled Start and End Dates
- Scheduled Start and End Time
- Actual Start and End Dates
- Actual Start and End Time
- Department
- Accounting Class

Note: This field allows you to change the WIP Accounting

Class when updating a Work Order. You can select the appropriate Accounting Class from the list of values. This field becomes read-only if the work order is in status closed, complete, complete-no-charge, and canceled.

Note: This page shows an icon alongside the work order number that opens up a page showing current AMM manual section if Enigma Integration is applied.

3. Select Apply to save your work.

To update operation details:

1. Navigate to the Operation (Detail) page .

The screenshot displays the Oracle Complex MRO 'Operation (Detail)' page. The top navigation bar includes links for Production Planning, Outside Processing, Service History, Material Transactions, Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The main content area is divided into two sections: 'Operation (Detail)' and 'Operation Details'. The 'Operation (Detail)' section contains fields for Work Order Number (SFM48), Work Order Status (Released(1)), Department (Base Maintenance, SFM), Work Order Description (VA-C70-21-150-00), Maintenance Requirement (VA-C70-21-150-00), Route (VA-C70-21-150-00), Item (C70-3), Unit Name (C70-3, SN 511, Tail # VA761), Quantity (16), Visit Number (16), Accounting Class (Maintenance), Completion Sub Inventory, Scheduled Start Date (24-MAY-2005 00:00), and Actual Start Date. The 'Operation Details' section contains fields for Operation Seq (1), Description (Remove temperature sensor), Auto Charge (Manual), Scheduled Start Date (24-MAY-2005), Scheduled Start Time (Hrs 00, Mins 00), Actual Start Date, Actual Start Time (Hrs, Mins), Department (Base Maintenance, SFM), Operation Code (VA-C70-21-61-06.020.001), Operation Type (Replacement), Operation Status (Uncomplete), Scheduled End Date (24-MAY-2005), Scheduled End Time (Hrs 03, Mins 00), Actual End Date, and Actual End Time (Hrs, Mins). The page also includes buttons for Cancel, Revert, Apply, Complete Operation, and Operation QA Results.

2. You can update the following fields:

- Department
- Scheduled Start and End Dates
- Schedule Start and End Times
- Actual start and End Dates
- Actual Start and End Times

3. Select Apply to save your work.

To enter Quality results for an operation:

1. In the Work Order Operations page, choose Operation QA Results.
The Submit Quality Results page appears.
2. Enter your quality collection information. See: Entering Quality Results, *Oracle Quality User's Guide*

Creating Non-Routine Workorders

You can create non-routine work orders originating from other inspection/repair tasks or for problems discovered in the production floor when a work order is being executed. During this process a service request, an unassociated task and a work order are created.

To create a non-routine work order against an existing work order:

1. Navigate to the Create Non-Routine Workorder page.

The screenshot shows the 'Create Non-Routine Workorder' form in the Oracle Complex MRO application. The form is titled 'Create Non-Routine Workorder' and includes a 'Cancel', 'Revert', and 'Apply' button set at the top right. A note indicates that an asterisk (*) denotes a required field. The form is organized into several sections: 'Report By Type' (set to 'Pilot Log'), 'Report Type' (dropdown menu), 'Contact Type' (dropdown menu), 'Date' (text field), 'Severity' (text field), 'Origination Visit' (text field), 'Origination Task' (text field), 'Item' (text field), 'Serial Number' (text field), 'Summary' (text area), 'Estimated Duration' (text field), and 'Problem Code' (text field). On the right side, there is a 'Release Work Order' checkbox, 'Name' (text field), 'Contact' (text field), 'Status' (dropdown menu), 'Urgency' (text field), 'Target Visit' (text field), 'Instance Number' (text field), 'Lot' (text field), 'UOM' (text field), and 'Resolution Code' (text field). The 'Status' is set to 'Open' and the 'Instance Number' is '70255'. The 'UOM' is set to 'Hours'.

2. Select information in the following fields to create the work order.
 - Report Type
 - Report By Type

- Name
- Contact Type and Contact
- Date
- Status
- Severity
- Urgency
- Originating visit and Task
- Target Visit
- Part Number
- Instance Number
- Serial Number
- Lot
- Summary
- Estimated Duration
- Problem Code
- Resolution Code

Note: You have the option of making the Resolution Code field mandatory. You can do this by setting the profile option, AHL: Enable Resolution Code to be Mandatory, to Yes. If the field is not made mandatory the users will not enter the value. Using Resolution Code as one of the parameters will enhance the results while searching for work orders.

3. Select Apply to save your work.

To view and update an existing non-routine work order:

1. Select a workorder and navigate to the Update or View Non-Routine Workorder page.

2. You can update the applicable fields including: Contact Type, Contact, Status, Urgency, Problem Code, and Resolution Code.

Note: The Maintenance Requirements tab at the bottom of the page enables an engineer to add MRs to resolve the Non-Routine.

3. Select Apply to save your work.

To create a non-routine from an existing non-routine work order:

Oracle CMRO enables you to create a Non-Routine from an existing Non-Routine. Administrators can now enable this functionality for a User or for a Responsibility by assigning the seeded user function, Allow creation of a Non-Routine originating from a Non-Routine. The corresponding function is AHL_ALLOW_CREATE_NR_FROM_NR to the menu associated to a responsibility.

This functionality is restricted in the seeded CMRO menus and responsibilities by default. You are not allowed to create a non-routine from another Non-Routine work order. If the mentioned function is added to the responsibility, you can create Non-Routine from the context of another Non-Routine work order, otherwise it gives the existing error message.

1. Navigate to the Work Order Overview page.
2. Query for a non-routine work order.

3. Select the work order and choose Create Non-Routine Work Order from the drop down menu.

This creates a new non-routine if the mentioned functionality is associated to the responsibility.

Completing Work Orders and Operations

Work orders can be completed with statuses of Draft, Unreleased, Parts Hold, Hold, or Pending QA.

If the work order is the final work order completed as part of a planned maintenance requirement, the completion also completes the maintenance requirement and updates the unit maintenance requirement.

To complete an operation:

1. Select a work order and navigate to the Workorder Operations page.
2. Select the operation that you want to complete, and choose Complete Operation.

To complete a workorder:

1. Navigate to the Workorder Overview page and choose Complete Workorder

Oracle Complex MRO provides integration with Oracle Quality pages to enter collection plan data. You can set up collection plans and enter quality data results for mandatory or optional collection plans. The Quality Collection plan must be set up and the inspection type associated with the Job Deferral Inspection Type profile option, or with the route header in Route Management, or to the Non-Routine Job Inspection profile option. See:

- Overview of Collection Plans, *Oracle Quality User's Guide*
- Creating Collection Plans, *Oracle Quality User's Guide*
- Defining Collection Plan Elements, *Oracle Quality User's Guide*
- Defining Collection Plan Element Actions, *Oracle Quality User's Guide*
- Associating Transactions with Collection Plans, *Oracle Quality User's Guide*

Once you complete a work order in CMRO, the concurrent program, WIP Close Jobs (SRS), closes the work order in WIP. CMRO provides a concurrent program, Close Work Orders that identifies all such work orders closed in WIP but are not in closed status in CMRO.

You can run these two concurrent programs simultaneously so that after WIP concurrent manager closes work orders in WIP, system will start CMRO concurrent

manager and will close those work orders in CMRO.

Signing Off Maintenance Requirements

When all the work orders for a particular maintenance requirement have been completed, you can sign off the maintenance requirement. You can associate a quality plan with a maintenance requirement.

All the work orders associated with the maintenance requirement must be complete, and all associated child maintenance requirements must also be signed off.

To sign off maintenance requirements:

1. Navigate to the Workorder Overview page and select a record.
2. Choose Sign Off

You can also sign off maintenance requirements using the Workorder Operations or the Maintenance Requirement Workorders pages.

Performing Part Removal/Install

During installations, assemblies are mapped based on the position key, the position reference, sub-configuration, and item. If the position association is undeterminable, the part / subassembly is displayed as an extra. You can manually map the hierarchy to the correct positions. If a position reference has been modified in the higher assemblies master configuration, the position reference is automatically updated to reflect the correct installation position. In addition to the structure of the hierarchy being validated during the installation, the configuration rules are validated, ensuring that the assembly complies with the rules established in master configuration. Maintenance personnel have increased visibility into missing and extra items, and subassemblies.

You can assign the extra items and subassemblies to the appropriate sibling positions for which installation is allowed. Identifying parts that need to be installed or removed is easily accomplished through the use of the missing and extra icons. In addition to parts issued to a work order, any installed sibling identified as an extra item, which meets the installation criteria, will appear in the search results for an empty position.

During a part removal, if an instance is identified as unserviceable and a non-routine is created in released status, the removed part's location is set to the non-routine work order instead of the work order where it is removed.

To perform part removal and/or install:

1. Select a record on the Workorder Operations page, and choose Perform Part Removal/Install . The Item Part Changes or Unit Configuration Part Changes page appears.

2.
 - For the Unit Configuration Part Changes page, select the subconfiguration.
 - For the The Item Part Changes page, select the item.

3. Make any necessary changes in the following fields:

Field name	Description
Operation Seq	Operation sequence number for the work order.
Condition	The condition of the part being removed.
Subinventory	The subinventory, if desired, to return the part.
Locator	The locator within the sub inventory, if locator controlled.
Reason	The reason for the part being removed.
Removal Code	The code associated with the part being removed.

Field name	Description
Removal Date	The date the removal was performed.
Problem Code	The code associated with the problem being reported.
Estimated Duration	The time in hours that it is estimated to correct the service task.
Severity	The severity of the service difficulty, if the part is being removed in the unserviceable or MRB condition.
Summary	The summary of the service difficulty, if the part is being removed in the unserviceable or MRB condition.
Part Number	The part number of the Item being installed.
Instance Number	The Install Base Instance Number of the part being installed.
Installation Date	The date the part was installed.

4. Select Remove to remove a part.
5. Select Install to add a position.

Note: A new option is introduced in the part removal process. You can remove a part as unserviceable without creating a non-routine. The Create Work Order Option, in the Non-Conformance Details region allows this functionality.

Changing Item and Serial Numbers Associated with Work Orders

You can change both item numbers and serial numbers of a tracked configuration component, in the Item Number/Serial Number Change page. This process updates the applicable unit configuration, and the item instance.

To change item and serial numbers:

1. Navigate to the Item Number/Serial Number Change page.

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CMRO

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Item Number / Serial Number Change

* Indicates required field

Work Order Number	SFM103	Organization	San Francisco Maintenance Center US
Work Order Status	Released(1)	Department	Base Maintenance, SFM
Work Order Description	stype11185453274 - Summary		
Maintenance Requirement		Project	25
Route		Project Task	stype1118545327
Priority		Serial Number	105
Item	MRO-C1600	Unit Name	C-1600, Tail # 105
Visit Number	25	Visit Task	4
Accounting Class	class1		
Completion Sub Inventory		Locator	
Scheduled Start Date	01-AUG-2007 03:05	Scheduled End Date	01-AUG-2007 04:05
Actual Start Date		Actual End Date	

Item / Serial Number Details

* New Item Number	<input type="text" value="MRO-C1600"/>	New Revision	<input type="text"/>
* New Serial Number	<input type="text" value="105"/>	Serial Tag	<input type="text"/>
New Lot Number	<input type="text"/>		

Cancel View History Apply

2. For changing items, select the applicable value in the New Item Number field. You can also select an applicable revision for the item.
3. For changing serial numbers, select the applicable value in the New Serial Number field. Optionally, you can also select a Serial Tag value.
4. For lot controlled items, you have the option to select a value in the New Lot Number field.
5. Select Apply to save your work.

Viewing and Updating Material Requirements

The Required Materials page provides an overview of all material requirements, across workorders. You can query for a workorder number and view material requirements for that particular workorder. Optionally, you can query for an item and view requirements against that item across all workorders. You can also update the quantity of item required and the date on which it is required.

Prerequisites

- ☐ A workorder with a status of Draft, Unreleased, Parts Hold, Hold, or Pending QA status must exist in the database. The WIP Mass Load Concurrent Program must be

running. The operation must have a Uncomplete or Pending QA status.

To view material requirements:

1. Navigate to the Workorder Overview page.
2. Select the Material tab. The Required Materials page appears.

3. To view material requirements across all workorders, click Go. Material requirements for all workorders and against all items appear in the Materials result table.

Select	Work Order Num	Operation Seq	Item	Scheduled Quantity	UOM	* Required Date	Exception Date	Repair Item	Work Order Status	Issued Quantity	Net Quantity	Reserved Quantity
<input type="checkbox"/>	SPH48	2	93242-5	1	Each	24-MAY-2005			Released(1)	1	1	0
<input type="checkbox"/>	SPH195	10	KMIT001	1	Each	19-JAN-2009			Released(1)	0	0	0
<input type="checkbox"/>	SPH219	10	KMIT001	1	Each	19-JAN-2009			Complete	0	0	0
<input type="checkbox"/>	SPH222	10	KMIT001	1	Each	19-JAN-2009			Complete	0	0	0
<input type="checkbox"/>	SPH228	10	KMIT001	1	Each	19-JAN-2009			Complete	0	0	0
<input type="checkbox"/>	SPH239	10	KMIT001	1	Each	19-JAN-2009			Released(1)	0	0	0
<input type="checkbox"/>	SPH255	10	MBSrLotCvTrk	10	Each	22-JAN-2009			Released(1)	2	0	0
<input type="checkbox"/>	SPH255	10	MBSrCvTrk	10	Each	22-JAN-2009			Released(1)	2	0	0
<input type="checkbox"/>	SPH255	10	MBSrRevCvTrk	10	Each	22-JAN-2009			Released(1)	4	2	0
<input type="checkbox"/>	SPH255	10	MBSrNonTrkItem	5	Each	22-JAN-2009			Released(1)	3	1	0

4. To view material requirements for a particular workorder number, enter information in the Workorder Number field and click Go. All requirements matching your search criterion appear in the Materials result table.
5. To view material requirements against a particular item, enter information in the Item field and click Go. All requirements matching your search criterion appear in the Materials result table.
6. To update the required quantity and/or the required date for a workorder, select the job number and enter information in the corresponding fields. Click Apply to save

the changes.

7. To navigate to the Workorder Operations page, click the workorder number. The Workorder Operations page appears.

To update material requirements:

1. Navigate to the Workorder Overview page.
2. Enter information in the fields for which you know the value then click **Go**. All workorders matching your search criteria appear in the Workorder List Results table.
3. Select the workorder number and choose Update Workorder from the drop-down menu. The Workorder Operations page appears.
4. Select Materials from the left-hand navigation bar. The Update Material Requirement page appears.

The screenshot shows the Oracle Complex MRO interface. The top navigation bar includes links like Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. The left sidebar has a 'Materials' section expanded, showing options like Workorder Materials, Resources, Assignments, Resource, Transactions, and Dispositions. The main area is titled 'Update Material Requirements' and contains several input fields for work order details. Below these fields is a table for 'Material Requirements' with columns for 'Select* Operation Seq', 'Item', 'Description', 'Scheduled Quantity', 'UOH', 'Repair Item', 'Required Date', 'Exception Date', 'Net Quantity', and 'Reserved Quantity'. One row is populated with '2', '93242-S Sensor, Temperature', '1', 'Each', an empty box, '24-MAY-200', an empty box, '1', and '0'. Buttons for 'Cancel', 'Revert', 'Apply', 'Remove', and 'Add More Rows' are visible.

Use the information in the following table to update material requirements.

Field Name	Description
Operation Sequence	The workorders operation sequence number.
Item	The Item Number for the requirement.
Description	The Description of the item defined.

Field Name	Description
Required Quantity	The quantity desired for the requirement.
Scheduled Quantity	The quantity scheduled by the Long Term Plan.
UOM	The unit of measure for the Item's quantity.
Required Date	The date on which the requirement is expected.
Scheduled Date	The date on which the quantity is scheduled by Long Term Plan.
Issued Quantity	The quantity issued to an operation (only for a work order in Released Status)

5. You can then perform the following:
 - Select the Item, Required Quantity, and a Required Date and click **Apply** to save your changes.
 - Select the requirement and click **Remove** to remove the requirement.
 - Click **Add More Rows** to add additional requirements.
6. Click **Cancel** to cancel any changes.

Note: When changing an existing requirement defined in Route Management, the selection is limited to the alternates for the Item.

Viewing Assignments, Documents, and Resources

Viewing Employee Assignments

For a workorder or an associated operation, you can assign employee and machinery to the resource requirement. You can view these employee assignments, and perform all of the production functions applicable to the assignment and associated workorder, in the Search Employee Assignments page. You can search for employee assignments by the employee's name, number, the associated workorder job number, department, and other related criteria.

To view employee assignments:

1. Navigate to the Workorder Overview page.
2. Select the Resources tab. The Employee Assignments page appears.

Employee Assignments

Organization Department
Employee Number Employee Name
Shift Number Visit Number
Priority Workorder Status
Start Date End Date
Work order Number

Search Results

Select	Work order Number	Operation Sequence	Employee Number	Employee Name	Assignment Start Time	Assignment End Time	Workorder Status	Operation Status	Remove
No records were found matching the given criteria.									

3. Enter information in the appropriate fields and select Go. All assignments matching your search criteria appear in the Results table.

Employee Assignments

Organization Department
Employee Number Employee Name
Shift Number Visit Number
Priority Workorder Status
Start Date End Date
Work order Number

Search Results

Select a Workorder and ... Update Workorder

Select	Work order Number	Operation Sequence	Employee Number	Employee Name	Assignment Start Time	Assignment End Time	Workorder Status	Operation Status	Remove
<input type="radio"/>	285	10	404	Aaron, Mrs. Tamara	2004-DEC-28	2005-JAN-12	Cancelled	Uncomplete	<input type="button" value="Remove"/>

Select a Workorder and ... Update Workorder

4. You can select a workorder and perform the following actions, which are available as selections in a drop down menu:
 - Update Workorder

- Resource Transactions
- Perform Parts Change
- View Documents
- Complete Workorder
- Complete Operation
- Record Workorder QA Results
- Record Operation QA Results
- Sign Off Maintenance Requirements
- Record Maintenance Requirement QA Results
- View Resource Transactions
- Create Service Requests

Viewing Documents

Documents may be associated with maintenance requirements, routes, and operations. You can view all the documents pertaining to work orders, workorder operations, and material requirements in the View Documents page.

To view documents associated with workorders:

1. Navigate to the Workorder Overview page..
2. Enter information in the appropriate fields and select Go. All workorders matching your search criteria appear in the Workorder List Results table.
3. To view documents associated with a workorder's route, select the workorder and choose View Documents from the drop-down menu. The View Documents page appears, displaying the workorder details and the documents defined for the routes associated with the workorder.

Enigma Integration displays buttons for viewing Wiring Diagram Manual (WDM) and Illustrated Parts Catalog (IPC) as applicable.

The following table provides information about fields in the View Documents page.

Description of fields in the View Documents page

Field Name	Description
Route Number	It is the user-assigned identifier for a maintenance route.
Route Title	It refers to the text description of the maintenance route.
Document Number	It contains a unique identifier, generated by the organization to identify a maintenance document. If you do not know the document number, enter the generic substitution meta character% in the field, and click on the LOV icon to launch the Select Doc Number page that displays all the document references in the database.
Type	Represents the major topic such as powerplant, fleet unit, and ground support equipment that is described by the document in question.
Title	Refers to the title of the maintenance document.
Revision	Is a field that holds a user-assigned document revision identifier.
Chapter	Refers to a specific chapter in the associated document. The value is defined by the user when the association is created.

Field Name	Description
Section	Refers to a specific section in the associated document. The value is defined by the user when the association is created.
Note	Refers to a specific note in the associated document. The value is defined by the user when the association is created.
Figure	Refers to a specific figure in the associated document. The value is defined by the user when the association is created.
Subject	Refers to a specific subject in the associated document. The value is defined by the user when the association is created.
Page	Refers to a specific page in the associated document. The value is defined by the user when the association is created.

Select the document and click View Documents. You can view the details of the document in the View Revision page.

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View Revision Cancel

Title	Equipment Cooling Fan	Revision Num	1
Document Number	21-27-02	Source	World of Business
File		Sub Type	Maintenance Manual
Type	Aircraft	Item Type	
Operator		Subscribed To	No
Subscription Available	Yes		

Revision No	1	Revision Type	Temporary Revision
Revision Date	2004-OCT-27	Status	Current
Volume		Issue	
Issue Number		Issue Date	
Date Received		Media Type	Electronic File
Effective Date		Obsolete Date	
Approved By		Approved Date	
Remarks			

- To view documents associated with the workorder's operations, click Operation.
- To view documents associated with maintenance requirements, select the Maintenance Requirement sub-tab under the Production Planning tab. The Search Maintenance Requirements page appears.
- Enter your search criteria and click Go. The Maintenance Requirements matching

your search criteria are displayed in the Maintenance Requirements Results table.

7. Click the Maintenance Requirement link to navigate to the View Maintenance Requirement page.

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Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Workorders | Resources | Materials | **Maintenance Requirements** | My Workorders | Visits

Production Planning Outside Processing Service History Material Transactions

View Maintenance Requirement

Maintenance Requirement Information

Title	21-040-00	Status	Complete Version 2
Revision Number			
Category	Airframe		
Program Type	Letter Check		
Program Subtype	C		
Service Type	On		
Implement Status	Mandatory	Auto Sign Off	No
Repetitive	Yes	Show	All
Whichever Comes	First		
Effective From	2002-NOV-13		
Follows After Accomplishment of	Billing Item		
Quality Inspection Type	Visit Category		
Description	Replace the electrical and electronic compartment supply fan filter.		
Comments			
Copy Accomplishments	No		
Down Time			

8. Click the Documents link in the side navigation menu. The View Attached Documents page appears, displaying the documents associated with the maintenance requirement.

Viewing Resource Requirements

A visit or workorder with associated resources must exist in the database in order to view resources.

To view resource requirements for a workorder:

1. Find the workorder or operation you want to view dependencies for. See Finding Workorders, page 14-17.
2. Select the workorder, and choose Update Workorder from the drop-down menu. The Workorder Operations page appears displaying the relevant information for that workorder.
3. Select Resources from the left-hand navigation panel. The Resource Requirements page appears.

Resource Requirements page

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Production PlanningOutside ProcessingService HistoryMaterial Transactions

WorkordersResourcesMaterialsMaintenance RequirementsMy WorkordersVisits

OperationsMaterialsResourcesAssignmentsResource TransactionsDispositions

Workorder NumberCMR0323

Workorder StatusReleased(1)

Workorder Description29.030.02.00

Maintenance Requirement29.030.02

Route29.030.02.00

Priority

ItemMRO-C1600

Visit Number71

Accounting ClassMaintenance

Completion Sub Inventory

Scheduled Workorder Start Date2005-JAN-05 09:00

Actual Workorder Start Date

OrganizationSan Francisco Aviation Maintenance Center

DepartmentMRO Headquarters

Project71

Project Task29.030.02.00

Serial Number102

Unit NameC-1600, Tail # 102

Visit Task4

Locator

Scheduled Workorder End Date2005-JAN-05 10:45

Actual Workorder End Date

Resource Requirements List

CancelRevertApply

Select a Resource Requirement and ...DetailsRemove

Previous1-2 of 2Next

Select	Operation Sequence	Resource Sequence	Resource Type	Resource	Duration	UOM	Quantity	Start Date	End Date
<input type="radio"/>	10	10	Person	MROAF	1	Hour	1	2005-JAN-05	2005-JAN-05
<input type="radio"/>	10	20	Machine	MROM2	1	Each	1	2005-JAN-05	2005-JAN-05

Add More Rows

Previous1-2 of 2Next

Select a Resource Requirement and ...DetailsRemove

Managing Outside Processing

This chapter covers the following topics:

- Overview
- Working With Outside Processing Work Orders
- Inventory Service Order Outside Processing
- Creating an OSP Order
- Reviewing Purchase Orders
- Synchronizing Outside Processing Work Orders with Purchase Orders
- Updating and Approving Purchase Orders
- Shipping and Receiving
- Working with Exchange Orders
- Creating an Exchange Order
- Editing Exchange Orders
- Converting Service/Exchange OSP to Exchange/Service OSP

Overview

In the maintenance, repair, and overhaul industry, there will be occasions when a part needs to be serviced outside of the organization. This may be due to lack of resources, skilled/certified personnel or cost considerations. The planner needs to have the flexibility of determining when, where and how the service will be performed at the most cost effective manner. In addition a planner needs to have the ability to Borrow parts from third parties when the same is not available in inventory, as well as Loan a parts to a third parties when it is requested.

This chapter discusses the key functions supported by the Oracle Complex Maintenance, Repair, and Overhaul Outside Processing module and covers the key Outside Processing (OSP) functions supported by the Oracle Complex Maintenance,

Repair, and Overhaul Production Planning module. The processes for creating and maintaining OSP work orders are explained. See:

- Working With Outside Processing Work Orders, page 15-4
- Shipping and Receiving, page 15-23
- Working with Exchange Orders, page 15-31

Key Business Processes

The Outside Processing module of Oracle Complex Maintenance, Repair, and Overhaul supports the following business processes:

Assign production jobs for third party service

After it is determined that the job will be performed by a third party organization, you can assign the production job to any department with a class of 'Vendor'. This assignment to a outside department can be done either in Long Term Planning or in Production Planning. To be included in an Outside Processing Work Order the job must be assigned to a department with a department class of 'Vendor'.

Assign production jobs to an OSP Work Order

After assigning a job to an outside department, create an OSP Work Order and add to it the jobs that the third party organization will perform. You can include jobs with multiple parts or for a single instance. An OSP Work Order can be issued for one supplier and can have multiple jobs associated with it.

Determine the supplier for outside processing

Determine which supplier should perform the service based on the service history of the part, warranties that may be applicable and then pick a supplier from a specified approved vendor list.

Add or remove production jobs to an existing OSP Work Order

You can add production jobs to an existing OSP Work Order if the order has not yet been submitted for Purchase Order creation. Or, if a job is not needed you can remove it, provided the order has not been submitted. Once an OSP Work Order is submitted to create a Purchase Order in Oracle Purchasing, any additions or deletions must be performed in the Oracle Purchasing Module.

Determine shipping and receiving logistics

Determine how and when the parts will be shipped to the supplier by creating a shipping order against the OSP Work Order. You define the shipment date, receipt date, freight terms and carrier. The shipment of the parts do not occur until the OSP Work Order has been submitted to create a Purchase Order in Oracle Purchasing and the buyer has approved the Purchase Order.

Create and Approve Purchase Orders

After required services from a supplier are finalized, 'submit' them to create a Purchase Order. The Purchase Order is created in Oracle Purchasing. The buyer completes the Purchase Order by providing shipping and accounting distribution details. When the Purchase Order is ready to be shared with the Supplier, the buyer approves it in Oracle Purchasing. Upon approval, the Shipment Order is marked as ready for the shipping clerk to pick, pack, and ship the parts. Any deletion or cancellation of Purchase Order line items are reflected in the corresponding OSP Work Order—meaning the production job is no longer associated with the OSP Work Order. It is up to the planner to decide on the disposition of the production job. If the buyer adds new line items to a Purchase Order, the planner must decide if those items have to be included in the OSP Work Order. The Planner also must use a manual process to associate the new Purchase Order line items to existing eligible production jobs.

Shipping & receiving of parts

Once the Purchase Order is approved, the shipping clerk can pick, pack and ship the parts. The shipping clerk receives a notification of the Shipment Order number that indicates the parts are ready to be shipped. The Shipping Order provides shipping details such as ship to organization and location, part number, quantity, serial numbers, the location to pick the part from, and any shipping or packing instructions. Every time the part is shipped and received, the current location of the part and ownership is automatically reflected in the Oracle Install Base module. Shipping is taken care of with Oracle Shipping. Receipt of parts after servicing is done with Oracle Purchasing.

Inspect parts after service

After receipt of the part that has been serviced by a supplier and received into inventory, the production planner will reassign to the same production job that initiated the outside processing to an internal department.

The designated technician assigned to this job uses the Production module to complete and document the quality process. This ensures that the service has been performed correctly per maintenance requirement and the part is in good condition.

Acknowledge supplier service

In order to pay the supplier for the service provided, the purchase order line may specify that the service has to be accepted (Received) without any quality assurance or the service has to be accepted and approved by quality assurance team (Inspected). If the purchase order line has Receipt required specified then the technician has to Receive the service in Oracle Purchasing module (three-way matching). If the purchase order line has 'Inspection required' specified then the technician has to Receive the service and enter the quality assurance code (four-way matching). It is possible that the buyer may indicate that in the Purchase Order line that the services need not be received, in which case the supplier is paid upon the approval of the purchase order.

Close OSP Work Order

You can close the OSP Work Order provided that all shipped parts have been received back, the serviced parts are in good condition, all of the production jobs associated with the OSP Work Order are closed, and the Purchase Order is closed. If any one of the

conditions fails, the OSP Work Order cannot be closed.

Perform Item Exchange

Replace an item/part with another part from a supplier. Item exchange is an integral part of the production process in most service industries. Most service stations send out specialized components to be repaired at outside repair facilities. The item exchange process speeds up the production process by allowing like parts to be sent and received without waiting for the repair of the originals.

OSP Work Orders

An OSP Work Order is an order that contains the information required to service parts by a third party organization. It contains information about the supplier, the parts that need to be serviced, what services will be performed, and when and where the part will be shipped and received. If parts have to be shipped out to a third party there is a shipment order associated with the OSP Work Order.

Exchange Orders

An Exchange Order is used to replace an item/part with another similar or dissimilar part from a supplier. The exchange can be of two types; Simple Exchange or Advanced Exchange. In Simple Exchange the servicing organization sends out the item in repair to a supplier and gets an item of similar kind. In Advanced Exchange the supplier sends the replacement item ahead of time. An Exchange Order is created for an existing job scheduled to a vendor class department. Outside Processing work orders that require an item exchange are identified at the work order header. These Exchange Orders contain information about the parts that will be shipped out and received back from the supplier, including: the inbound and outbound part number and serial numbers, the shipment and return dates, and the costs of item exchange through an interface to the procurement system.

Working With Outside Processing Work Orders

An Outside Processing Work Order allows you to group together production jobs that have been earmarked for outside servicing. You can base the creation of purchase orders, which describe the services ordered from the supplier and ship orders, which describe the shipping and receiving logistics of the serviceable parts on Outside Processing Work Orders.

Related Topics

Creating an OSP Work Order, page 15-12

Finding an OSP Work Order, page 15-12

Editing an OSP Work Order, page 15-12

Closing an OSP Work Order, page 15-12

Submitting an OSP Work Order, page 15-12

Inventory Service Order Outside Processing

Defective parts are often removed and put in an inventory location before the work order is created. Inventory service orders enable you to create orders for items directly from an inventory location, without creating a visit and work order. This process is automated using default data.

The service item is an inventory master item with specific attributes such as non transactable and non stockable. It is derived from the setup of the item and vendor association. Service items are set up primarily to track costs, outside processing orders can then be created for shipment purposes. The features of inventory service orders for outside processing include:

- Automatic service order creation
- Vendor sourcing and shipping rules are defined based on the item and location
- Attachments can be defined and maintained
- Ability to convert the service order into an exchange order

Inventory service order creation comprises defining vendors, creating associations of parts at specific locations, creating vendor and customer connections, and submitting the information for purchase order creation.

Prerequisites

- ☐ Define profile options to default information to automate the creation of service orders. This includes:
 - AHL:Service Order Default Shipment Priority
 - AHL:OM Tax Exempt Reason
 - AHL:Vendor Service Duration
 - AHL:OM Shipment Priority
 - AHL:OM Line Return Reason
 - AHL:OM Mixed Order Type ID
 - AHL:OM Ship Only Line Type ID

- AHL:OM Return Line Type ID
- AHL:Service Order Ship IB Transaction SubType
- AHL:Service Order Return IB Transaction SubType
- AHL:Exchange Order Ship IB Transaction SubType
- AHL:Exchange Order Return IB Transaction SubType
- AHL:Overwrite PO line description with Item/Serial Number
- AHL: PO line description Item number prefix
- AHL: PO line description Serial number prefix
- AHL:PO Line Type ID
- AHL:OSP Default PO Distribution Creation

See: Setting Up Inventory Service Order Outside Processing, *Oracle Complex Maintenance, Repair, and Overhaul Implementation Guide*

To search and add vendors for inventory service orders:

1. Navigate to the Vendors page.
2. In the Search Vendor region, you can select search criteria using Vendor Name, Vendor Location, and Primary Contact. Select Go to display the results of your search.

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Approvals Workflow Department Shift Spaces Space Unavailability Reliability Vendor Sourcing

Vendors Item Service Relationships Customer Relationships

Logged In As TSMITH

Vendors

* Indicates required field

Save Revert

Search Vendor

Note that the search is case insensitive

Vendor Name

Vendor Location

Primary Contact

Go Clear

*Vendor Name	*Vendor Location	*Primary Contact	*Start Date	End Date
Advanced Network Devices	SANTA CLARA	Mr Martin Rapp	19-Jul-2006	
TT Services	TT SAN FRAN-PM	Bill Morano	29-Jan-2007	

Add Another Row

Save Revert

3. To add vendors for outside processing and inventory service orders—select values in the Vendor table region for Vendor Name, Vendor Location, Primary Contact, and Start and End date fields.
4. Save your work.

To query and edit existing vendor and item associations:

1. Navigate to the Item Service Relationships page.
2. To search for existing associations, you can select values in the following fields: Inventory Organization, Inventory Item, and Service Item. Select Go to display the results of your search in the Service Item Sourcing region.

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Vendors Item Service Relationships Customer Relationships

Logged In As TSMITH

Item Service Relationships

* Indicates required field

Save Revert

Search

Please note that the search is case insensitive.

Inventory Organization San Francisco Maintenan

Inventory Item

Service Item

Go Clear

Service Item Sourcing

Create Relationship

Select Item Number	Description	Inventory Organization	Service Item	Start Date	End Date	Rank	Edit	Delete
75484-5	Assy, Turbine, HP	San Francisco Maintenance Center US	75484-OVHL	21-Jul-2006		1		

75484-5/San Francisco Maintenance Center US/75484-OVHL: Vendors

*Vendor Name	*Vendor Location	Primary Contact	*Start Date	End Date	*Rank	Service Duration	Delete
Advanced Network Devices	SANTA CLARA	Mr Martin Rapp	21-Jul-2006 (example: 29-Jan-2007)		1	10	

Add Another Row

- You have the option to change information in the End Date or Rank fields by selecting Edit. The Edit Relationship page appears.

ORACLE Complex MRO

CMRO

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Approvals Workflow Department Shift Spaces Space Unavailability Reliability Vendor Sourcing

Vendors Item Service Relationships Customer Relationships

Logged In As TSMITH

Edit Relationship

* Indicates required field

Inventory Organization San Francisco Maintenance Center US

Inventory Item 353905-3

Service Item 43722-REPR

Start Date 12-Mar-2007

End Date

* Rank 2

Cancel Apply

Cancel Apply

- Save your work.

To create a new vendor and item association:

- Navigate to the item Service Relationships page, and select Create Relationship to display the Create Relationship page.
- Select values in the Inventory Organization, Inventory Item, and Service Item fields.

The screenshot shows the Oracle Complex MRO Administration interface. The top navigation bar includes links for Home, Engineering, Configuration, Planning, Administration (selected), Execution, and Profile Out. Below this is a sub-navigation bar with tabs for Approvals, Workflow, Department Shift, Spaces, Space Unavailability, Reliability, and Vendor Sourcing. The 'Vendor Sourcing' tab is active, and the 'Item Service Relationships' sub-tab is selected. The user is logged in as TSMITH.

The 'Create Relationship' form is displayed. It includes the following fields and controls:

- * Inventory Organization:** A dropdown menu with 'San Francisco Maintenan' selected and a search icon. Below it is a checkbox for 'All Inventory Organizations'.
- * Inventory Item:** A text field with '3786658' and a search icon.
- * Service Item:** A text field with '75484-OVHL' and a search icon.
- * Start Date:** A date picker with '29-Jan-2007' selected.
- End Date:** A date picker.
- * Rank:** A text field with '3' entered.

At the bottom of the form, there are two sets of buttons: 'Cancel', 'Apply and Create Another', and 'Apply'.

3. Select Start and End dates, and a value for Rank.

Vendors are ranked using item, inventory organization, and service item relationships. The priority is calculated with the lowest number being the highest in rank.

4. Select Apply to save your work, and refresh the Item Service Relationships page.
5. To associate the vendor and location with the service item, select your record in the Service Item Sourcing region.
6. In the Vendor region, select values in the following fields:
 - Vendor Name
 - Vendor Location
 - Start and End Date
 - Rank
 - Service Duration
7. Save your work.

To view and define vendor and customer associations:

1. Navigate to the Customer Relationships page.
2. You can search for existing relationships by selecting criteria in the Search region, and choosing Go.

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Home CMRO Home Engineering Configuration Planning **Administration** Execution Profile Sign Out

Approvals Workflow Department Shift Spaces Space Unavailability Reliability Vendor Sourcing

Vendors Item Service Relationships **Customer Relationships**

Logged In As TSMITH

Customer Relationships

* Indicates required field

Search

Please note that the search is case insensitive.

Vendor Name Vendor Location

Customer Name Customer Location

Customer Number

Go Clear

*Vendor Name	*Vendor Location	*Customer Number	Customer Name	*Customer Location	Delete
Advanced Network Devices	SANTA CLARA	5350	Advanced Network Devices	Santa Clara	<input type="checkbox"/>
Allied Manufacturing	SAN JOSE-PM	1007	General Technologies		<input type="checkbox"/>

Add Another Row

- To add a new vendor and customer association, select information in the following fields in the Vendor region, and save your work.

These fields include Vendor Name, Vendor Location, Customer Number, Customer Name, and Customer Location.

- Save your work.

To create an inventory service order:

- Navigate to the Inventory Items page.
- You can search for records using the following criteria: Inventory Organization, Sub Inventory, Item Number, or Serial Number. Select Go to display the results of your query.
- In the results region, select items for this service order. Choose a different Service Item using the LOV if necessary.

Ensure that the Ship check box is enabled to use default shipping information to create this order. This includes shipping method, freight terms, FOB, and payment terms.

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Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out

Production Planning Outside Processing **Service History** Material Transactions

OSP Orders | **Inventory Items** Logged In As TSMITH

Inventory Items

* Indicates required field

Simple Search

You must fill out the following field before starting your search: Inventory Organization.

* Inventory Organization Item Number

Sub Inventory Serial Number

Results

Select Items: Previous 1-10 Next 10

Select All | Select None

Select	Details	Inventory Organization	Sub Inventory	Item Number	Serial Number	On Lot Hand	Non Routine	*Service Quantity	Service Item	Ship
<input type="checkbox"/>	Show	San Francisco Maintenance Center US	STORES	75484-5	754AND01	1Ea		1	75484-OVHL	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Show	San Francisco Maintenance Center US	STORES	75484-5	754AND02	1Ea		1	75484-OVHL	<input checked="" type="checkbox"/>

4. Choose Create Service Order to create your inventory service order record.

To create a purchase order for the associated inventory service order record:

1. Navigate to the Edit OSP Order page for your inventory service order record.
2. Choose Submit OSP.

See: Editing an OSP Work Order, page 15-12

To convert an inventory service order into an exchange order:

1. Navigate to the Edit OSP Order page for your inventory service order record.
2. Delete the return shipment lines for this order.

See: Editing an OSP Work Order, page 15-12

3. Convert the inventory service order to an exchange order.

See: Converting Service/Exchange OSP to Exchange/Service OSP, page 15-36

4. Create new return shipment lines.

Creating an OSP Order

To create an outside processing work order:

1. Navigate to the Search Jobs page, and select each job to include in the outside processing work order.
2. Select Create to display the Edit OSP Order pages.

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OSP Orders Inventory Items

General

Warning
Low-level Diagnostic Logging is turned on. This may temporarily reduce performance.

Edit OSP Order S8001: General

* Indicates required field

Order Number S8001
Order Status Entered
Order Type Service
Order Date 28-Apr-2008
* Buyer Name Smith, Mr. Tom
* Vendor Name
Vendor Contact
Vendor Location
Shipment Number

OSP Attachments None Add

Order Lines

Create Item Order Line Create Work Order Line

Details	Line Number	Status	Job Number	Item Number	Service Item	Quantity	UOM	Need By Date	Delete	Change Item
Show	1	Entered	SPM1008	C70-1		1		29-Apr-2008		

Cancel Submit OSP Go Apply

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3. Select values in the Vendor, Vendor Name, and Buyer Name fields.
4. For each line item displayed in OSP Order Lines region, select information in the applicable fields for Job Number, Item, Line Status, Instance Number, Service Item Quantity.
5. Select Apply to save your work.

To find an OSP Work Order:

1. Navigate to the Outside Processing Orders page.
2. Select search criteria in the applicable fields, and select Go to display the results.
You can select information in the following fields:
 - Order Number
 - Order type
 - Order Status
 - Description

- Requisition Number
- PO Number
- Shipment Number
- Vendor Name
- Has New PO Lines
- Work Order Number
- Project Name
- Task Name
- Item
- Serial Number
- Department
- Ready for Receipt

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Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Logged In As TSMITH

Outside Processing Orders

Synchronize POs

Advanced Search

Simple Search

Order Number
Order Type
Order Status Requisition Created
Description
Requisition Number
PO Number
Shipment Number
Vendor Name

Has New PO Lines
Work Order Number
Project Name
Task Name
Item
Serial Number
Department

Ready for Receipt

Go Clear

Results

Select Object: Close Submit DSP Order Delete Shipment Create

Previous 1-10 Next 10

Select	Order Number	Description	Date	Order Type	Status	Requisition Number	PO Number	Shipment Order Number	Update	Delete
<input type="radio"/>	50004		12-Apr-2008	Service	Requisition Created	42		80116		
<input type="radio"/>	50003		12-Apr-2008	Service	Requisition Created	48		80115		
<input type="radio"/>	50002		12-Apr-2008	Service	Requisition Created	47		80114		
<input type="radio"/>	50001		12-Apr-2008	Service	Requisition Created	46		80113		
<input type="radio"/>	35001		04-Apr-2008	Service	Requisition Created	38				
<input type="radio"/>	31001		04-Apr-2008	Service	Requisition Created	34		80092		
<input type="radio"/>	28001		01-Apr-2008	Service	Requisition Created	33		80085		
<input type="radio"/>	21001	MB Order without return line	25-Mar-2008	Service	Requisition Created	32		80065		
<input type="radio"/>	19001		24-Mar-2008	Service	Requisition Created	31		80063		
<input type="radio"/>	18000	Demo-21	24-Mar-2008	Service	Requisition Created	30		80061		

Select Object: Close Submit DSP Order Delete Shipment Create

Previous 1-10 Next 10

3. You can perform the following transactions:

- Close: To close the outside processing work order
- Submit: To create a purchase requisition or a purchase order using the outside processing order.
- Delete Shipment: To delete the associated Ship Order.

To edit an OSP work order:

1. Select the OSP Order on the OSP Search page, and choose the Update icon.

2. Make the required changes, and select Apply to save your work.
3. In the drop-down box you have the option to navigate to pages to:
 - Convert to Service
 - Create Shipment
 - Close OSP
4. To create a new order line, select Create Item Order Line or Create Work Order Line. The Create OSP Line page appears.
5. Perform a search, select the required Items or Jobs from the search results and click the Create Order Lines button.

Note: If you want to physically ship the part associated with the newly created line then you must create a new ship order line.

To create a purchase requisition using OSP order:

You can create a Purchase Requisition from an OSP order, in addition to the ability to create a Purchase Order. Upon submission of an OSP order, the system initiates the creation of a Purchase Requisition.

Set the profile option, AHL: Initialize Purchase Requisition to Yes, to create Purchase Requisitions instead of Purchase Orders.

1. Create an OSP order with appropriate values and submit. Alternatively, navigate to the OSP Search page to retrieve the OSP Order you want to submit.

2. Select the OSP Order, and click Submit OSP Order. This will trigger the creation of a Purchase Requisition in Oracle Purchasing if the profile value, AHL: Initialize Purchase Requisition is set to Yes.
3. Click the Synchronize POs button. This updates the OSP Order's status and its association with the newly created Requisition (if any).
4. If a Requisition was created successfully, the status of OSP Order changes to Requisition Created.

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Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Logged In As TSMITH

Outside Processing Orders

Synchronize POs

Simple Search

Order Number 50004

Work Order Number

Go Clear

Results

Select Object: Close Submit OSP Order Delete Shipment Create

Order Select	Order Number	Description Date	Order Type	Status	Requisition Number	PO Number	Shipment Order Number	Update	Delete
C	50004	12-Apr-2008	Service	Requisition Created	49		50116		

Synchronize POs

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5. Click the Update icon to navigate to the Edit OSP Order page.
6. Click the Requisition Details on the left navigator panel. The Requisition Details page opens.

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OSP Orders Inventory Items

Logged In As TSMITH

General Shipment Requisition Details

Requisition Details

Order Number 50004
Order Status Requisition Created
Order Type Service
Order Date 12-Apr-2008
Buyer Name Smith, Mr. Tom

Requisition Header

Requisition Number 49
Preparer Smith, Mr. Tom
Status Approved
Creation Date 12-Apr-2008
Amount 920
Currency USD
Justification

Details Line Number	Physical Item	Instance Number	Service Item	Service Item Description	Qty Ordered	UOM	Unit Price	Visit Task	Job Number	Deliver To Location	PO Number
1	MIS-CRTR	2056111	43722-OVHL	MIS-CRTR	1	Each	920			SFO - San Francisco	501

Urgent Requisition Note To Buyer No

Need By Date 14-Apr-2008
Vendor Name Advanced Network Devices
Vendor Location SANTA CLARA
Vendor Contact Rapp, Martin

Cancel

Production Planning Outside Processing Service History Material Transactions Home OMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out

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7. The Requisition Details page displays the details of the Purchase Requisition and its status.
8. You create a Purchase Order from existing Requisition using the Oracle Purchasing

module.

9. If a PO was created for the OSP requisition, you can drill down to navigate to the PO Details page by clicking on the link in the PO Number column.

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Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Logged In As TSMITH

Purchase Order Details

Order Number 50004
Order Status Requisition Created
Order Type Service
Order Date 12-Apr-2008
Buyer Name Smith, Mr. Tom

Purchase Order Header

PO Number 203
Buyer Smith, Mr. Tom
Vendor Name Advanced Network Devices
Amount 1840
Approval Status Never Approved
Closure Status Open

Revision 0
Date 12-Apr-2008
Vendor Location SANTA CLARA
Currency USD
Cancelled No

Purchase Order Lines

Select Object: View PO Shipments View PO Receipts

Select Line	Physical Item Instance Number	Service Item	Service Item Description	Qty Ordered	Qty Received	UOM	Unit Price	Visit	Task	Job Number
C 1		MBEItemMBSrCtrTrk	MBESerDemo-34.1	0		Each	920			
C 2		MBEItemMBSrCtrTrk	MBESerDemo-35.1	0		Each	920			

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The Purchase Order Details page displays in a table format, the PO Header information and Purchase Order Lines. You can select any PO line to view PO Shipments and PO Receipts.

10. You can close the OSP order after its completion.

Note: When you update the purchase requisitions in Oracle Purchasing, it results in the following:

- If you delete the requisition lines using Oracle Purchasing, and trigger the PO Sync process in CMRO, the associated OSP order lines shows a status of Requisition Deleted.
- If you delete the requisition lines and requisition header from Oracle Purchasing, and trigger the PO Sync process in CMRO, the associated OSP order lines delete.

To submit an OSP Work Order:

1. Retrieve the OSP Work Order you want to submit.
2. Select the OSP Work Order, and click Submit. This will create a Purchase Order or a Requisition in Oracle Purchasing.

To close an OSP Work Order:

If no further activity will be done to an OSP Work Order, you can close it. You cannot work on the order again once it is closed. All shipped parts must be received from the supplier. All parts must be in good condition and the inspector has approved the performed service. The associated Purchase Order and all associated jobs must be closed.

1. Retrieve the OSP Work Order that you want to close. .
2. Select Close. If all prerequisites are met, the OSP Work Order will be closed.

Reviewing Purchase Orders

To review a purchase order:

1. Retrieve the OSP Work Order that you want to review. .
2. Navigate to the Edit OSP Work Order page for the selected work order.
3. Select PO Details to display the Purchase Order Details page. It shows summary information about the related OSP work order and the line item details.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Logged In As: TSMITH

Purchase Order Details

Order Number 50004
Order Status Requisition Created
Order Type Service
Order Date 12-Apr-2008
Buyer Name Smith, Mr. Tom

Purchase Order Header

PO Number 203
Buyer Smith, Mr. Tom
Vendor Name Advanced Network Devices
Amount 1040
Approval Status Never Approved
Closure Status Open

Revision 0
Date 12-Apr-2008
Vendor Location SANTA CLARA
Currency USD
Cancelled No

Purchase Order Lines

Select Object: View PO Shipments View PO Receipts

Select Line	Physical Item Instance Number	Service Item Description	Qty Ordered	Qty Received	UOM	Unit Price	Visit	Task	Job Number
1		MEBzeriMESrChrTrk.MESerDemo-34.1	0		Each	920			
2		MEBzeriMESrChrTrk.MESerDemo-35.1	0		Each	920			

4. Select a line item to view associated shipping or receiving details for that item.

Note: A list of errors will appear if the Purchase Order was not successfully created. Edit the relevant OSP Work Order to fix any errors, then submit the Purchase Order again.

- Click the View PO Shipments button to view the purchase order shipments.

ORACLE® Complex MRO
Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions
OSP Orders Inventory Items

Logged In As TSMITH

Purchase Order Shipments

PO Number 181 Item Description MBItemMBSrCtrTrk Status Open
Vendor Name Advanced Network Devices Item MBSerMBIBSN002
Amount 2300 USD UOM Each Quantity 1
Line Number 1 Date 04-Aug-2008
Vendor Site SANTA CLARA

Shipments Lines

Select Object: View Accounting Distributions

Shipment Select Number	Need By Date	Promised Date	Quantity Ordered	Quantity Received	Quantity Accepted	Quantity Billed	UOM	Ship To Organization	Ship To Location
1	05-Aug-2008		1	1	0	1	Each	San Francisco Maintenance Center US	SFO - San Francisco

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- Select a shipment number and click Accounting Distributions to view accounting distributions associated with the shipment.

ORACLE® Complex MRO
Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions
OSP Orders Inventory Items

Logged In As TSMITH

Purchase Accounting Distributions

PO Number 181 PO Line Number 1
Shipment Number 1 Ship To Organization San Francisco Maintenance Center
Ship To Location SFO - San Francisco US
Quantity Ordered 1 Need By Date 05-Aug-2008
Quantity Accepted 0 Quantity Received 1
Promised Date UOM Each

Accounting Distributions

Line Number	Charge Account	Ordered Quantity	Amount Billed	Quantity Billed	Project Task	WIP Number
1	101.1310.740.711000.0000.0000.0001	2300	1	29	MBRoute1SFM341	

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- Click Receipts in the Purchase Order Details page to view receipts associated with the purchase order line item. To view quality results for the receipt, select a receipt and click QA Result.

The screenshot displays the Oracle Complex MRO web application. The top navigation bar includes links for Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, Sign Out, and Help. Below this, a secondary navigation bar shows tabs for Production Planning, Outside Processing, Service History, and Material Transactions. The 'Outside Processing' tab is active, and the 'OSP Orders' sub-tab is selected. The main content area is titled 'PO Receipts' and shows details for a specific receipt. The receipt information includes: PO Number 181, Vendor Name Advanced Network Devices, Amount 2300 USD, Line Number 1, Item Description MBItemMBSrCtrTrk, UOM Each, Date 04-Aug-2008, Vendor Site SANTA CLARA, Status Open, and Item Quantity 1. Below this, a 'Receipt Details' section contains a 'Select Object:' dropdown menu with 'View QA Results' selected. A table below the dropdown lists receipt details with columns: Select, Receipt Number, Receipt Date, Shipment Number, Quantity, UOM, Sub Inventory, Receipt Exception, and QC Grade. The table contains one row with the following data: ☐, 3725297, 04-Aug-2008, 1, 1, Each, , , . The bottom of the page features a footer with the same navigation links as the top bar and a copyright notice: Copyright 2008, Oracle Corporation. All rights reserved.

Note: There may be a delay between the submission and actual creation of a Purchase Order in Oracle Purchasing. If you notice that the submission request has a Pending status for a long time, notify your system administrator. Review submission status on the Concurrent Requests page.

Synchronizing Outside Processing Work Orders with Purchase Orders

A buyer may add additional Purchase Order Lines manually after a Purchase Order has been created in Oracle Purchasing through a Submit action in OSP Work Order. If you decide that the newly added Purchase Order Lines should be reflected in the source OSP Work Order then you must assign the new Purchase Order Lines to existing production jobs.

To synchronize an OSP Work Order with a Purchase Order:

1. Retrieve the OSP Work Order you want to synchronize and navigate to the Edit OSP Work order page.

2. Select PO Details.

The Purchase Order Details page appears, displaying summary information about the related OSP Work Order and the line item details. If there are line items without job numbers, the items need to be added to the current OSP work order. .

3. Select a job number and choose Apply.

A list of jobs appear with the following conditions:

If the Purchase Order line has a service item number:

- List of jobs that have same service item number associated with job's route.
- List of jobs that have no service item number associated with job's route.

If the Purchase Order line does not have a service item number then you will see a list of jobs that have no service item number associated with job's route.

4. Select Apply to save your work.

Note: The Synchronize POs process synchronizes the purchase orders with OSP orders that both exist in the user's OU.

Updating and Approving Purchase Orders

To update or approve a purchase order:

1. Switch to the Oracle Purchasing responsibility.
2. Query the purchase order number. The window displays purchase order details.

Purchase Orders (Vision Project Mfg) - 30110

PO, Rev	30110	0	Type	Standard Purchase Order	Created	20-JAN-2004 09:38:03
Supplier	Allied Manufacturing		Site	SAN JOSE-PM	Contact	
Ship-To	P2- Los Angeles		Bill-To	PM- HQ Location (LA)	Currency	ANY
Buyer	Smith, Mr. Tom		Status	Incomplete	Total	10.00
Description	AHL OSP Order 10140 - test exch					
P-Card						

[Lines](#)
[Price Reference](#)
[Reference Documents](#)
[More](#)
[Agreement](#)
[Temporary Labor](#)

Num	Type	Item	Rev	Job	Category	Description	UOM	Quantity	Price
1	Services	CMRO Service Item			MISC.MISC...	CMRO Service Item	Each	1	10

Item: CMRO Service Item CMRO Service Item

[Catalog...](#)
[Currency...](#)
[Terms](#)
[Shipments](#)
[Approve...](#)

3. Select Approve to initiate the order approval process. The Approve Document page appears.

Approve Document (Vision Project Mfg) - 30110

Approval Details Additional Options

Encumbrance

☐ Reserve ☐ Unreserve Unreserve Date

☐ Use GL Override ☐ Use Document GL Date to Unreserve Accounting Date

Approval

☒ Submit for Approval Forward From

☐ Forward Approval Path

Forward To

Note

Change Summary

Transmission Methods

☐ Print ☐ XML

☐ Fax FAX Number ☐ EDI

☐ E-Mail E-Mail Address

OK Cancel

4. Choose OK to submit the purchase order for approval.

Shipping and Receiving

Outside processing work orders and purchase orders are shipped to your locations, and received into your plant. These tasks consists of Shipping Parts, page 15-23, and Receiving Parts, page 15-23

Shipping Parts

You can create a ship order for OSP work orders involving parts that need to be shipped for outside service. An OSP Work Order can have only one associated ship order.

To create a ship order:

1. Retrieve the OSP work order and navigate to the Edit OSP Order page
2. Select Shipments from the side navigation menu to navigate to the Edit OSP Order: Shipment page.
3. Enter the required information and select Apply to save your work.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Logged In As: TSMITH

General
Shipment
Requisition Details

Edit OSP Order 15000: Shipment

* Indicates required field

Order Number 15000
Order Status Requisition Created
Description Some lines error in requisition creation
Vendor Name Advanced Network Devices
Vendor Contact Mr Martin Rapp

Order Type Service
Order Date 13-May-2008
Buyer Name Smith, Mr. Tom
Vendor Location SANTA CLARA

Cancel Apply

Shipment Details

Shipment Number 80055
Open Yes
* Warehouse San Francisco Maintenan
Ship Method DHL
FOB DEST
Packing Instructions

Booked No
Cancelled No
Shipment Priority Standard Priority
Freight Terms Prepay & Add
Shipping Instructions

Shipment Lines

Create Shipment Line

Details	Line Number	Line Type	Item	Ordered Quantity	UOM	Shipped Quantity	Ship Date	Receive Item	Receive PO	Booked	Update	Delete
Show	1	Standard Line - PJM	MBSrCtTrk	1	Ea		13-May-2008			No		
Show	2	Return w/ Receipt - PJM	MBSrCtTrk	1	Ea		15-May-2008			No		
Show	3	Standard Line - PJM	MBSrCtTrk	1	Ea		13-May-2008			No		
Show	4	Return w/ Receipt - PJM	MBSrCtTrk	1	Ea		17-May-2008			No		

Cancel Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

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4. Select Delete link in the Shipment Lines region to delete a ship order.

This action cannot be undone. All associated ship line items will be deleted with the ship order. You cannot delete a ship order if parts related to the order have already shipped.

To create a ship order line:

1. Select a shipment and navigate to the Edit OSP Order: Shipment page.
2. Choose Create Shipment Line. The Shipment Line page appears.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Logged In As: TSMITH

Shipment Line

* Indicates required field

* Line Type Standard Line - PJM
OSP Line Based

* Warehouse San Francisco Maintenan
Sub-Inventory AX_INTRANS
Item Number 17C35-01
Item Description Battery
Lot
Serial Number

Shipment Quantity 1000
Shipment UOM CTN
* Scheduled Ship Date 22-May-2008
Shipment Priority Standard Priority
Shipment Method ADS Truck
FOB Cost, Insurance and Freight
Freight Terms Collect
Packing Instructions

Cancel Apply

Cancel Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

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3. In the Line Type field, select the appropriate line type.
4. Select the warehouse from where the part will be shipped.

5. Select the Sub-Inventory the part will be shipped or received.
6. Select the Item Number that you want to ship.
7. Select the Lot and Serial number of the item.
8. Enter the quantity to be shipped.
9. Specify the UOM.
10. Enter the Schedule Shipment Date, this is a required field.
11. Select values in the Shipment Priority, Shipment Method, Freight On Board terms, and Freight Terms fields.
12. You have the option to enter information for the shipping clerk in the Packing and Shipping Instructions field.
13. Choose Apply to save your work.

To edit or delete a ship order line:

1. Retrieve the OSP Order associated to the ship order you want to edit or delete.
2. Navigate to the Edit OSP Order page. Select Shipments.
3. In the Shipment Lines region, select a shipment and click Update. The Shipment Line page opens.

4. Make changes to the shipment line as required, and choose Apply.
5. To delete a shipment line, choose Delete corresponding to the line number, in the Shipment Lines region.

Note: The delete action cannot be reversed.

6. Select Apply to save your work.

Receiving Parts

Receiving redesign for Outside Processing feature handles return of items or equipment that have been shipped out of an operation for service. The OSP receiving clerk will record physical receipt, the receipt of the purchase order items, and update the necessary attributes on the item record in the system.

OSP Receiving allows you to receive items into the organization mentioned in the RMA. You must change the RMA line information if you want to receive items into a different organization.

To find an OSP order related to received items:

1. Navigate to the Advance Search page.
2. Enter any of the following search criteria:
 - Order Number
 - Order Type
 - Order Status
 - Description
 - Requisition Number
 - PO Number
 - Shipment Number
 - Vendor Number
 - Work Order Number
 - Project Name
 - Task Name
 - Item
 - Serial Number
 - Department

ORACLE® Complex MRO Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

DSP Orders Inventory Items

Logged In As TSMITH

Outside Processing Orders

Synchronize POs

Advanced Search

Simple Search

Order Number

Order Type

Order Status

Description

Requisition Number

PO Number

Shipment Number

Vendor Name

Has New PO Lines

Work Order Number

Project Name

Task Name

Item

Serial Number

Department

☐ Ready for Receipt

Go Clear

Results

Create

Select	Order Number	Description	Date	Order Type	Status	Requisition Number	PO Number	Shipment	Order Number	Update	Delete
No search conducted.											

3. Select the Ready for Receipt checkbox to filter the OSP orders that have shipped out and have not yet been received.
4. Click Go. The result page displays OSP orders related to the search criteria.

ORACLE® Complex MRO Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

DSP Orders Inventory Items

Logged In As TSMITH

Outside Processing Orders

Synchronize POs

Advanced Search

Simple Search

Order Number

Order Type

Order Status

Description

Requisition Number

PO Number

Shipment Number

Vendor Name

Has New PO Lines

Work Order Number

Project Name

Task Name

Item

Serial Number

Department

☒ Ready for Receipt

Go Clear

Results

Select Object: Close Submit DSP Order Delete Shipment Create

Order	Select	Number	Description	Date	Order Type	Status	Requisition Number	PO Number	Shipment	Order Number	Update	Delete
C		10002	Demo 09	19-Mar-2008	Service	PO Created		122	80048			

Synchronize POs

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration Execution Profile Sign Out Help

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To receive an OSP item:

1. Navigate to the Outside Processing Orders page.
2. Select the appropriate order from the Results region.
3. After clicking the Update icon in the search page, you have to click on the Shipment

side navigation menu option.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

DSP Orders Inventory Items

General
Shipment
PO Details

Logged In As TSMITH

Edit OSP Order 10009: Shipment

* Indicates required field

Order Number 10009 Order Status PO Created Order Type Service
Description Demo 09 Order Date 19-Mar-2008
Vendor Name Advanced Network Devices Buyer Name Smith, Mr. Tom
Vendor Contact Mr Martin Rapp Vendor Location SANTA CLARA

Shipment Details

Shipment Number 80048 Booked Yes
Open Yes Cancelled No
* Warehouse San Francisco Maintenan Shipment Priority Standard Priority
Ship Method DHL Freight Terms Prepay & Add
FOB DEST Shipping Instructions
Packing Instructions

Shipment Lines

Create Shipment Line

Details	Line Number	Line Type	Item	Ordered Quantity	UOM	Shipped Quantity	Ship Date	Receive Item	Receive PO	Booked	Update	Delete
Show	1	Standard Line - PJM	MBSrCtrTrk	1	Ea		19-Mar-2008			Yes		
Show	2	Return w/ Receipt - PJM	MBSrCtrTrk	1	Ea		21-Mar-2008			Yes		

Cancel Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

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4. Identify the RMA line to receive against and click the Receive Item icon and navigate to the Receive Shipment page.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out

Production Planning Outside Processing Service History Material Transactions

DSP Orders Inventory Items

Logged In As TSMITH

Receive Shipment

* Indicates required field

Order Number 10005 Order Status PO Created Order Type Service
Description Demo 06 Order Date 19-Mar-2008
Buyer Name Smith, Mr. Tom

Instance Details

Instance Number 2856082 Item Number MBSrCtrTrk
Revision Number Serial Number Demo-06
Lot Number

Item Receipt

Receiving Organization San Francisco Maintenance Center US Item Number MBSrCtrTrk
Location SFO - San Francisco * Receiving Quantity 1
Condition Active * UOM Ea
* Subinventory STCRES * Receiving Date 08-Apr-2008
Locator (example: 24-Mar-2008)

☐ Perform Item Change/Exchange

New Item Number 17C35-01 Exchange Item Number
New Serial Number Demo-9 Exchange Serial Number
New Lot Number Exchange Lot Number
New Revision
New Serial Tag Actual

Cancel Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out

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5. To receive an item enter the following information:
- Receiving Organization name defaults
 - Location

- Condition
 - Subinventory
 - Locator
 - Receiving Quantity
 - UOM
 - Receiving Date
6. To receive an unexpected item, enter the following information in the Perform Item Change/Exchange region:
- Exchange Item Number
 - Exchange Serial Number
 - Exchange Lot Number

The screenshot displays the Oracle Complex MRO web interface. The top navigation bar includes links for Home, CMRO Home, Engineering, Configuration, Planning, Administration, Execution, Profile, and Sign Out. The main menu on the left shows 'Production Planning' and 'Outside Processing' as active sections, with sub-items 'OSP Orders' and 'Inventory Items'. The user is logged in as TSMITH.

The 'Receive Shipment' section is active, showing order details for Order Number 10011, Order Status PO Created, and Description Demo 11. The Order Type is Service, Order Date is 19-Mar-2008, and Buyer Name is Smith, Mr. Tom.

The 'Instance Details' section shows Instance Number 2856087, Revision Number, and Lot Number. The Item Number is MBSrCtrTrk and the Serial Number is Demo-11.

The 'Item Receipt' section shows Receiving Organization San Francisco Maintenance Center US, Location SFO - San Francisco, Condition Active, Subinventory STORES, and Locator. The Item Number is MBSrCtrTrk, Receiving Quantity is 1, UOM is Ea, and Receiving Date is 08-Apr-2008.

The 'Perform Item Change/Exchange' section is expanded, showing fields for New Item Number, New Serial Number, New Lot Number, New Revision, and New Serial Tag. The Exchange Item Number is 378655, Exchange Serial Number is Demo-10, and Exchange Lot Number is.

Buttons for 'Cancel' and 'Apply' are present at the bottom of the section.

7. To receive an item with new Item/serial number, enter the following information in the Perform Item Change/Exchange region:
- New Item Number
 - New Serial Number
 - New Lot Number

- New Revision
- New Serial Tag

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out

Production Planning Outside Processing **Service History** Material Transactions

OSP Orders Inventory Items

Logged In As TSMITH

Receive Shipment

* Indicates required field

Order Number **10005** Order Status **PO Created** Order Type **Service**
Description **Demo 06** Order Date **19-Mar-2008** Buyer Name **Smith, Mr. Tom**

Instance Details

Instance Number **2856082** Item Number **MBSrCtrTrk**
Revision Number **Demo-06** Serial Number **Demo-06**
Lot Number

Item Receipt

Receiving Organization **San Francisco Maintenance Center US** Item Number **MBSrCtrTrk**
Location **SFO - San Francisco** * Receiving Quantity **1**
Condition **Active** * UOM **Ea**
* Subinventory **STORES** * Receiving Date **08-Apr-2008**
Locator (example: 24-Mar-2008)

☐ **Perform Item Change/Exchange**

New Item Number **17C35-01** Exchange Item Number
New Serial Number **Demo-9** Exchange Serial Number
New Lot Number
New Revision
New Serial Tag **Actual** Exchange Lot Number

Cancel Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out

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8. Click Apply. You will receive an item to the appropriate subinventory, locator with new item details.

ORACLE® Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

General
Shipment
PO Details

Logged In As TSMTH

Confirmation
The selected RMA Line has been successfully submitted for receipt.

Edit OSP Order 10009: Shipment

* Indicates required field

Order Number 10009
Order Status PO Created
Description Demo 09
Vendor Name Advanced Network Devices
Vendor Contact Mr Martin Rapp

Order Type Service
Order Date 19-Mar-2008
Buyer Name Smith, Mr. Tom
Vendor Location SANTA CLARA

Shipment Details

Shipment Number 80048
Open Yes
* Warehouse San Francisco Maintenan
Ship Method DHL
FOB DEST
Packing Instructions

Booked Yes
Cancelled No
Shipment Priority Standard Priority
Freight Terms Prepay & Add
Shipping Instructions

Shipment Lines

Create Shipment Line

Details	Line Number	Line Type	Item	Ordered Quantity UOM	Shipped Quantity	Ship Date	Receive Item	Receive PO	Booked	Update	Delete
Show 1	1	Standard Line - P/M	MBSrCtTrk	1 Ea		19-Mar-2008			Yes		
Show 2	2	Return w/ Receipt - P/M	MBSrCtTrk	1 Ea		21-Mar-2008			Yes		

Cancel Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

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Working with Exchange Orders

During the production planning or execution process, the planner may decide to replace an item/part with another similar or dissimilar part from a supplier. The servicing organization may ship out the item first (simple exchange) and then receive the exchange item or may receive the exchange item from the supplier first (advanced exchange) and then ship the item out. Exchange Orders are created for each item being shipped, and contains information about the parts that will be shipped out and received back from the supplier, the shipment and return dates, and the costs of item exchange through an interface to the procurement system.

An exchange instance must be created in Install Base, and associated to an order line before an item can be received in exchange.

An exchange order can be converted into a service order and vice versa so long as the return shipment has not occurred.

- Creating an Exchange Order
- Editing Exchange Orders
- Converting an Exchange OSP to a Service OSP

Creating an Exchange Order

To create an exchange order:

1. On the Oracle Complex Maintenance, Repair, and Overhaul Home page, select **Execution**. The Job Overview page of the Production Planning module appears.
2. Select the Outside Processing tab. The Search OSP Order page appears.
3. Click Create under the OSP Order Search Results header. The Search Work Order page appears.
4. Enter your search criteria in the fields and click Go. The production jobs matching your search criteria are displayed. Click Clear if you want to clear all fields and start the search over.
5. Under Work Order Search Results, select the work order you want to include in the Exchange Order. Click Exchange. The Edit OSP Order page opens.

Use the information in the following table to enter details in the Edit OSP Order page.

Description of fields in the Edit OSP Order page

Field	Description
Order Number	Displays the order number.
Order Type	Displays the order type of exchange for the Exchange work orders.
Vendor Name	Select a vendor name from the list of vendors that will perform the service.
Vendor Location	Select the location from the list. This will be the ship to location of the supplier.
Buyer Name	Name of the buyer.

Field	Description
Order Status	<p>This is display only information about the order status. Possible values are:</p> <p>'Entered' - the OSP Work Order is still in processing mode; edits to OSP Work Order is allowed.</p> <p>'Submitted' -the OSP Work Order has created a Purchase Order in Oracle Purchasing; no edits allowed. Further edits should be done in Oracle Purchasing.</p> <p>'Submit Failed'-the OSP Work Order has failed to successfully create a Purchase Order in Oracle Purchasing. Edits to OSP Work Order are allowed. Re-submit the OSP Work Order when all edits are completed.</p> <p>'Closed' -the OSP Work Order has been closed and no further activity will be allowed.</p>
Order Date	Enter the date of Ship Order. Defaults to the current date.
Job Number	The number generated for a job.
Item	The tracked item for which the job has been created against.
Line Status	The current status for each delivery line.
Instance Number	The Install Base Instance Number of the tracked item.
Exchange Instance	Instance of the item that will be received as part of the exchange.
Service Item Quantity	Quantity of the Service Item required.

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Logged In As: TSMITH

General

Edit OSP Order 20000: General

* Indicates required field

Order Number: 20000
Order Status: Entered
Description:
* Vendor Name: Advanced Network Device
Vendor Contact: Mr Martin Rapp
OSP Attachments: None Add

Order Type: Exchange
Order Date: 19-May-2008
* Buyer Name: Smith, Mr. Tom
* Vendor Location: SANTA CLARA
Shipment Number:

Cancel Submit OSP Go Apply

Order Lines

Create Item Order Line Create Work Order Line

Details	Line Number	Status	Job Number	Item Number	Service Item	Quantity	UOM	Exchange Instance	Need By Date	Delete
Show	1	Entered	SFM1118	C70-3	43722-REPR	1	Ea		20-May-2008	

Cancel Submit OSP Go Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

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- To create a new order line, select Create Item Order Line or Create Work Order Line. The Create OSP Line page appears.

Create Order Line - Create OSP Line page

ORACLE Oracle Complex MRO

Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning **Outside Processing**

Overview Create Instance

Create OSP Line

Cancel Apply

OSP Details

Order Number: 10482
Status: Entered
Order Date: 30-JUN-2004
Line Number: 1
Need By Date:

Description:
Order Type: Exchange
Vendor Name: Advanced Network Devices
Line Status: Entered

Job Details

* Job Number:
Instance Number:
Project Name:

Item:
Serial Number:
Task Name:

Service Details

Service Item:
Service Item Quantity:
Line Type:

Service Item Description:
UOM:

- Perform a search, select the required Items or Jobs from the search results.
- Enter the following information:
 - Need by date
 - Service Item Details- You can select the service item to be exchanged and its corresponding quantity and unit of measure.

- Exchange Instance - Select an exchange instance that the supplier sends in place of the job's existing instance. For an Exchange order, the you will select an exchange instance before the can supplier creates a return shipment line.

Note: Multiple items may be exchanged with a supplier using a single Exchange Order (multiple lines).

9. Click Apply to save the record.

Editing Exchange Orders

To edit an exchange order:

1. Navigate to the Outside Processing Orders page to query the OSP order you want to edit.
2. Enter information in the fields for which you know the value. The Order type should be Exchange. Click Go. The exchange orders matching your search criteria appear in the OSP Order Search Results table.
3. Identify the order you want to edit and click the Update icon. The Edit OSP Order page appears.

Modify Exchange Order - Edit OSP Order page

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Logged In As TSMITH

Edit OSP Order 13000: General

* Indicates required field

Order Number 13000 Order Type Exchange
 Order Status Requisition Created Order Date 12-May-2008
 Description Navigation Function Emp Buyer Name Smith, Mr. Tom
 Vendor Name Advanced Network Devices Vendor Location SANTA CLARA
 Vendor Contact Mr Martin Rapp Shipment Number 80053
 OSP Attachments None Add

Cancel Convert To Service Go Apply

Order Lines

Details	Line Number	Status	Job Number	Item Number	Service Item	Quantity	UOM	Exchange Instance	Need By Date
Hide	1	Requisition Created		MBSrCtrTrk	501RC2X-OVHL	1	Ea		14-May-2008
Item Description Serial Controlled Tracked Item Sub-Inventory STORES Lot Number Quantity 1 Inventory Organization San Francisco Maintenance Center US Serial Number MBSrCtrTrk010 Service Item Description MBSrCtrTrk Visit Name Task Name Exchange Item Number Exchange Serial Number									

Cancel Convert To Service Go Apply

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

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4. Make the necessary changes and click Apply to save the record. Click Cancel to discard any changes and return to the Search OSP order page.
5. Select the work order and click Submit to create a related Purchase Order in Oracle

purchasing. You can view the PO details by clicking the link on the side navigation menu option.

6. Click **Delete Shipment** to remove the shipping order associated with the current OSP Work order.
7. Click **Close** to permanently close the current OSP Work Order. This will be successful if:
 - The item requested in exchange has been received.
 - All listed production jobs are closed.
 - The associated Purchase Order is closed.

Converting Service/Exchange OSP to Exchange/Service OSP

You can change an Exchange order to a Service Order and vice versa if the return shipment has not occurred.

Prerequisites

- ☐ • If the Exchange Order is in the Closed state, conversion will not be possible
- If there is a return shipment line with the received quantity greater than zero, conversion cannot be done

To convert an OSP order:

1. On the Oracle Complex Maintenance, Repair, and Overhaul Home page, select **Execution**. The Job Overview page of the Production Planning module appears.
2. Select the Outside Processing tab. The Search OSP Order page appears.
3. Enter information in the fields for which you know the value. The OSP orders matching your search criteria are displayed.
4. Identify the order you want to convert and click the Update icon.

Edit Order - Edit OSP Order page

ORACLE Complex MRO

Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

Production Planning Outside Processing Service History Material Transactions

OSP Orders Inventory Items

Logged In As TSMITH

Edit OSP Order 21000: General

* Indicates required field

Order Number: 21000
 Order Status: Entered
 Description:
 * Vendor Name:
 * Advanced Network Device:
 Vendor Contact: Mr Martin Rapp
 OSP Attachments: None

Order Type: Service
 Order Date: 19-May-2008
 * Buyer Name: Smith, Mr. Tom
 * Vendor Location: SANTA CLARA
 Shipment Number: 80058

Order Lines

Create Item Order Line Create Work Order Line

Details	Line Number	Status	Job Number	Item Number	Service Item	Quantity	UOM	Need By Date	Delete	Change Item
<input type="button" value="Hide"/>	1	Entered		MBSrCbrTrk	501RC2X-OVHL	1	Ea	21-May-2008	<input type="button" value="Delete"/>	<input type="button" value="Change Item"/>
Item Description: Serial Controlled Tracked Item Inventory Organization: San Francisco Maintenance Center US Serial Number: MBSrCbrTrk015 Sub-Inventory Lot Number: STORES Quantity: 1 UOM: Ea Visit Name: Task Name Service Item Description: MBSrCbrTrk MBSrCbrTrk										
<input type="button" value="Show"/>	2	Entered		MBSrCbrTrk	501RC2X-OVHL	1	Ea	21-May-2008	<input type="button" value="Delete"/>	<input type="button" value="Change Item"/>

Production Planning Outside Processing Service History Material Transactions Home CMRO Home Engineering Configuration Planning Administration **Execution** Profile Sign Out Help

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5. Select the Convert to Exchange option from the list of values. Choose the Go button. You will get a notification that the order had been converted.

Windows and Navigation Paths

This appendix covers the following topics:

- Windows and Navigation Paths

Windows and Navigation Paths

This appendix provides the navigation paths for Oracle Complex Maintenance, Repair, and Overhaul:

- Brackets surrounding an entity in a path indicates a button selection.
- Braces surrounding an entity indicates a drop-down menu option.
- Tabs, Secondary tabs, Links, and Icons are noted for the related entity.

Navigation Paths

Window or Page Name	Navigation Path
Add Alternates	Configuration > Master Configuration (tab) > Alternate Parts (secondary tab) > [Create]
Add Availability Restriction	Administration > Space Unavailability (tab) > [Create]
Add Space	Administration > Spaces (tab) > [Create]
Associate Document Sub Type To Document Type	Engineering > Document Index (tab) > Associate type (secondary tab)

Window or Page Name	Navigation Path
Associate Major Zone To Item Type	Engineering > Route Management (tab) > Major Zones (secondary tab)
Associate Operations	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number > Associate Operations
Associate Sub Zone To Item Type	Engineering > Route Management (tab) > Sub Zones (secondary tab)
Attach Reference Documents (for an Operation)	Engineering > Route Management (tab) > Operations (secondary tab) > select record > Operation > Reference Documents
Attach Reference Documents (for a route)	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number > Reference Documents
Available Items	Marshalling Workbench > Visit Details > Available Items (link)
Composition Selection	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number > Disposition Associations > Disposition Details > [Select from Composition]
Copy Product Classification	Configuration > Product Classification (tab) > [Copy]
Copy to a New Plan	Planning > Long Term Planning (tab) > Simulations (secondary tab) > select record > [View Plan] > select record > [Copy To a New Plan]
Cost Structure	Planning > Visit Work Package (tab) > select record > Cost structure
Counter Associations	Administration > Reliability (tab) > Counter Associations
Create Composition List	Engineering > Route Management (tab) > Item Compositions (secondary tab) > Create

Window or Page Name	Navigation Path
Create Department Shift	Administration > Department Shift (tab) > [Create]
Create Document	Engineering > Document Index (tab) > [Create]
Create Exchange Order	Execution > Outside Processing (tab) > {Create OSP} > select job record > [Create Exchange]
Create Forecast Association	Administration > Reliability (tab) > Forecast Associations > [Create]
Create Loan Order	Execution > Outside Processing (tab) > {Create OSP} > select job record > [Create Loan]
Create Maintenance Requirement	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > [Create]
Create Master Configuration	Configuration > Master Configuration (tab) > Overview (secondary tab) > Create
Create MEL/CDL	Engineering > MEL/CDL (tab) > Overview > Search Product Classification > [Go] > [Tree] > [select Node] > Node Details > [Create]
Create New Revision	Engineering > Document Index (tab) > Search (secondary tab) > select record > [Create New Revision]
Create Non-routine	Planning > Unit Maintenance Plan > Non-routines > Search Non-routine > [Create]
Create Operation	Engineering > Route Management (tab) > Operations (secondary tab) > [Create]
Create OSP Line	Execution > Outside Processing (tab) > select record > Order Number > [Create Order Line]
Create OSP Order	Execution > Outside Processing (tab) > {Create OSP} > select job record > [Create OSP]

Window or Page Name	Navigation Path
Create Planned Task	Planning > Visit Work Package (tab) > select record > Visit number > Visit Tasks > [Create Planned Task] > select unit maintenance plan > {Associate to Visit} > [Go]
Create Product Classification	Configuration > Product Classification (tab) > [Create]
Create Relationship	Administration > Vendor Sourcing > Item Service Relationships > Create Relationship
Create Reliability Definition	Administration > Reliability (tab) > Reliability Definitions > [Create]
Create Resources	Engineering > Route Management (tab) > Resources (secondary tab) > [Create]
Create Route	Engineering > Route Management (tab) > Routes (secondary tab) > [Create]
Create Rule	Configuration > Master Configuration (tab) > Overview (secondary tab) > select record > Name > {Rules} > [Create Rule]
Create Service Request	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Create Service Request} > [Go]
Create Shipment Line	Execution > Outside Processing (tab) > select record > Order Number > Shipments > [Create Shipment Line]
Create Unassociated Task	Planning > Visit Work Package (tab) > select record > Visit number > Visit Tasks > [Create Unassociated Task]
Create Unit Configuration	Configuration > Unit Configuration (tab) > Create From Master (secondary tab) > [Create Unit configuration]

Window or Page Name	Navigation Path
Create Unplanned Task	Planning > Visit Work Package (tab) > select record > {Search Task} > Create Unplanned Task > select maintenance requirement > [Associate to Visit]
Create Visit	Planning > Visit Work Package (tab) > [Create]
Customer Relationships	Administration > Vendor Sourcing > Customer Relationships
Define Disposition Associations	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number > Disposition Associations
Define Material Requirements (for an operation)	Engineering > Route Management (tab) > Operations (secondary tab) > select record > Operation > Material Requirements
Define Material Requirements (for a route)	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number > Material Requirements
Define Resource Requirements (for an operation)	Engineering > Route Management (tab) > Operations (secondary tab) > select record > Operation > Resource Requirements
Define Resource Requirements (for a route)	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number > Resource Requirements
Disposition List Details	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number > Disposition Associations > Disposition Details
Distribution Information	Engineering > Document Index (tab) > Search (secondary tab) > select record > Document Num > Distribution

Window or Page Name	Navigation Path
Edit Access Panels	Engineering > Route Management (tab) > Operations (secondary tab) > Access Panels Engineering > Route Management (tab) > Routes (secondary tab) > Access Panels
Edit Alternates	Configuration > Master Configuration (tab) > Alternate Parts (secondary tab) > select record > Group Name
Edit Associated Positions	Configuration > Master Configuration (tab) > Alternate Parts (secondary tab) > select record > {View Positions} > [Go]
Edit Availability Restriction	Administration > Space Unavailability (tab) > select record > Space
Edit Document	Engineering > Document Index (tab) > Search (secondary tab) > select record > Document Num
Edit Document Associations	Configuration > Master Configuration (tab) > Overview (secondary tab) > select record > Name > {Documents}
Edit Exchange Order	Execution > Outside Processing (tab) > select record > order number
Edit Master Configuration	Configuration > Master Configuration (tab) > Overview (secondary tab) > select record > [Edit]
Edit Operation	Engineering > Route Management (tab) > Operations (secondary tab) > select record > Operation
Edit OSP Order	Execution > Outside Processing (tab) > select record > Order Number
Edit OSP Line	Execution > Outside Processing (tab) > select record > Order Number > Line Number

Window or Page Name	Navigation Path
Edit Product Classification	Configuration > Product Classification (tab) > select record > Tree
Edit Reliability Definition	Administration > Reliability (tab) > Reliability Definitions > Select Position > [Associate]
Edit Revision	Engineering > Document Index (tab) > Search (secondary tab) > select record > [Edit Revision]
Edit Rules	Configuration > Master Configuration (tab) > Overview (secondary tab) > select record > Name > {Rules}
Edit Shipment Header	Execution > Outside Processing (tab) > select record > Order Number > Shipments
Edit Shipment Line	Execution > Outside Processing (tab) > select record > Order Number > Shipments > select record > Line Number
Edit Space	Administration > Spaces (tab) > Space
Edit Subscription Information	Engineering > Document Index (tab) > Search (secondary tab) > select record > Document Num > Subscription
Edit Unit Configuration	Configuration > Unit Configuration (tab) > Search Unit (secondary tab) > select record > Edit
Electronic File Upload	Engineering > Document Index (tab) > Search (secondary tab) > select record > [Upload]
Forecast Associations	Administration > Reliability (tab) > Forecast Associations
Group Maintenance Requirement	Planning > Unit Maintenance Plan (tab) > Overview (secondary tab) > select record > {View Group MR} > [Go]

Window or Page Name	Navigation Path
Initialize Maintenance Requirement	Planning > Unit Maintenance Plan (tab) > Overview (secondary tab) > select record > {Initialize MR} > [Go]
Item Number/Serial Number Change	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > {Item/Serial Number Change} > [Go]
Item Service Relationships	Administration > Vendor Sourcing > Item Service Relationships
Items without Price	Planning > Visit Work Package (tab) > select record > {Cost and Price Information} > [Go] > Maintenance Requirements > select requirement > Cost/Price > [Items Without Price]
Maintenance Requirement Cost and Price	Planning > Visit Work Package (tab) > select record > {Cost and Price Information} > [Go] > Maintenance Requirements > select requirement > Cost/Price
Maintenance Requirement Deferral Details	Execution > Production Planning (tab) > Maintenance Requirements (secondary tab) > select record > [Defer]
Maintenance Requirement Relationships	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Title > Relationships
Marshalling Workbench	Complex MRO > Marshalling Workbench
Material Availability	Planning > Long Term Planning (tab) > Visits (secondary tab) > select record > [Plan Visit] > Material Availability
Material Requirements	Planning > long term Planning (tab) > Material Requirements
MEL/CDL Associations	Engineering > MEL/CDL (tab) > Overview > [Go] > Tree

Window or Page Name	Navigation Path
Migrate Unit Configuration	Configuration > Unit Configuration (tab) > Search Unit (secondary tab) > select record > [Migrate]
Job Operations	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go]
Job Overview	Execution > Production Planning (tab) > Work Orders (secondary tab)
Operation (Detail)	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > select operation record > [Details]
Part Changes	Administration > Reliability (tab) > Part Change History
Perform Material Transactions	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > Material Transactions
Perform Resource Transactions	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > Resource Transactions
Purchase Order Details	Execution > Outside Processing (tab) > select record > Order Number > PO Details
Receive Shipment	Execution > Outside Processing (tab) > OSP Orders (secondary tab) > Receive Shipment
Reliability Definitions	Administration > Reliability (tab) > Reliability Definitions
Reliability Setup	Administration > Reliability (tab) > Setup
Repair Categories	Engineering > MEL/CDL (tab) > Repair Categories

Window or Page Name	Navigation Path
Resource Assignments	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > Assignments
Resource Leveling	Planning > Long Term Planning (tab) > Resource Leveling
Resource Requirements	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > Resources
Resource Requirement Detail	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > Resources > select requirement > [Details]
Required Materials	Execution > Production Planning (tab) > Materials (secondary tab)
Route Dependencies	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Title > Routes > Dependency
Scheduled Materials	Planning > Long Term Planning (tab) > Visits (secondary tab) > select record > [Plan Visit] > Scheduled Materials
Schedule Visit	Planning > Long Term Planning (tab) > Visits (secondary tab) > [Plan Visit]
Schedule Visits	Planning > Long Term Planning (tab) > Visits (secondary tab) > [Plan Visit] > Schedule Visits
Search Alternate Items	Configuration > Master Configuration (tab) > Alternate Parts (secondary tab)
Search Availability Restrictions	Administration > Space Unavailability (tab)
Search BOM Resource	Engineering > Route Management (tab) > Resources (secondary tab) > [Create] > [Attach]

Window or Page Name	Navigation Path
Search Department Location	Administration > Department Location (tab)
Search Department Shift	Administration > Department Shift (tab)
Search Document	Engineering > Document Index (tab)
Search Item	Planning > Unit Maintenance Plan (tab) > Utilization Forecast (secondary tab)
Search Item Compositions	Engineering > Route Management (tab) > Item Compositions (secondary tab)
Search Maintenance Requirements	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab)
Search Maintenance Requirements (for a visit)	Planning > Visit Work Package (tab) > select record > {Maintenance Requirements} > [Go]
Search Maintenance Requirements (in the Execution module)	Execution > Production Planning (tab) > Maintenance Requirements (secondary tab)
Search Master Configuration	Configuration > Master Configuration (tab) > Overview (secondary tab)
Search Non-routine	Planning > Unit Maintenance Plan > Non-routines
Search Operation	Engineering > Route Management (tab) > Operations (secondary tab)
Search OSP Order	Execution > Outside Processing (tab)
Search Product Classification	Configuration > Product Classification (tab)
Search Resources	Engineering > Route Management (tab) > Resources (secondary tab)
Search Route	Engineering > Route Management (tab) > Routes (secondary tab)
Search Spaces	Administration > Spaces (tab)

Window or Page Name	Navigation Path
Search Unit Configuration	Configuration > Unit Configuration (tab) > Search Unit (secondary tab)
Search Unit Maintenance Plan	Planning > Unit Maintenance Plan (tab) > Overview (secondary tab)
Search Visit	Planning > Visit Work Package (tab)
Search Visits	Planning > Long Term Planning (tab) > Visits (secondary tab)
Search Visit Task	Planning > Visit Work Package (tab) > select record > {Search Tasks} > [Go]
Serial Number History	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > {Item/Serial Number Change} > [Go] > [View History]
Scheduled Materials	Planning > Long Term Planning (tab) > Visits (secondary tab) > Scheduled Materials
Simulation Plans	Planning > Long Term Planning (tab) > Simulations (secondary tab)
Submit Quality Results (for a job)	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Record Job QA Results} > [Go]
Supplier Information	Engineering > Document Index (tab) > Search (secondary tab) > select record > Document Num > Supplier
Task Cost and Price	Planning > Visit Work Package (tab) > select record > {Search Tasks} > [Go] > select task > Cost/Price
Task Hierarchy	Planning > Visit Work Package (tab) > select record > {Search Tasks} > [Go] > select task > Task Number > Hierarchy

Window or Page Name	Navigation Path
Unavailable Items	Marshalling Workbench > Visit Details > Unavailable Items (link)
Update Attached Actions	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Actions
Update Attached Documents	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Documents
Update Attached Documents (for a product classification)	Configuration > Product Classification (tab) > select record > Tree > Documents
Update Attached Routes	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Routes
Update Attached Units	Configuration > Product Classification (tab) > select record > Tree > Units/Items
Update Composition List	Engineering > Route Management (tab) > Item Compositions (secondary tab) > select record > Item
Update Costing Parameters (for an operation)	Engineering > Route Management (tab) > Operations (secondary tab) > select record > Operation > Resource Requirements > Costing Parameters
Update Costing Parameters (for a route)	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number > Resource Requirements > Costing Parameters
Update Effectivity	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Effectivities
Update Effectivity Details	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Title > Effectivities > Effectivity Details

Window or Page Name	Navigation Path
Update Item Utilization Forecast	Planning > Unit Maintenance Plan (tab) > Utilization Forecast (secondary tab) > select record > [Utilization Forecast]
Update Interval Threshold	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Title > Effectivities > Interval Threshold
Update Maintenance Requirement	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Title
Update Material Requirements	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > Materials
Update MEL/CDL	Engineering > MEL/CDL (tab) > Overview > [Go] > Tree
Update Resources	Engineering > Route Management (tab) > Resources (secondary tab) > select record > Resource
Update Route	Engineering > Route Management (tab) > Routes (secondary tab) > select record > Route Number
Update Service Request (in the Execution module)	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update/View Service Request} > [Go]
Update Task Header	Planning > Visit Work Package (tab) > select record > {Search Tasks} > [Go] > select task > Task Number
Update Visit	Planning > Visit Work Package (tab) > select record > Visit number
Unit Configuration Parts Change/Item Instance Parts Change	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {Update Work Order} > [Go] > {Perform Part Removal/Install} > [Go]

Window or Page Name	Navigation Path
Unit Configuration Validation Results	Configuration > Unit Configuration (tab) > Search Unit (secondary tab) > select record > [Validate]
Unit Maintenance Plan - View Threshold	Planning > Unit Maintenance Plan (tab) > Overview (secondary tab) > select record > {View Threshold} > [Go]
Vendors	Administration > Vendor Sourcing > Vendors
View Affected Items	Engineering > Fleet Maintenance Program (tab) > Overview (secondary tab) > select record > Title > Affected Items
View Item Instance Utilization	Configuration > Unit Configuration (tab) > Search Unit (secondary tab) > select record > Edit > [View Utilization]
View Maintenance Requirement (for a product classification)	Configuration > Product Classification (tab) > select record > Tree > Maintenance Requirements
View Maintenance Requirement Detail & History	Planning > Unit Maintenance Plan (tab) > Overview (secondary tab) > select record > {View Details & History}
View Maintenance Requirement (for an Unit Maintenance Plan)	Planning > Unit Maintenance Plan (tab) > Overview (secondary tab) > select record > {View MR Details} > [Go]
View Composition Lists	Configuration > Master Configuration (tab) > Composition List (secondary tab)
View Documents	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {View Documents} > [Go]
View Maintenance Requirement	Execution > Production Planning (tab) > Maintenance Requirements (secondary tab) > select record > Maintenance Requirement
View Product Classifications	Engineering > MEL/CDL (tab) > Overview > [Go] > Tree > select unit configuration

Window or Page Name	Navigation Path
View Purchase Accounting Distributions	Execution > Outside Processing (tab) > select record > Order Number > PO Details > select line item > [PO Shipments] > select Shipment Number > [Accounting Distributions]
View Purchase Order Shipments	Execution > Outside Processing (tab) > select record > Order Number > PO Details > select line item > [PO Shipments]
View Receipts	Execution > Outside Processing (tab) > select record > Order Number > PO Details > select line item > [Receipts]
View Simulation Plan	Planning > Long Term Planning (tab) > Simulations (secondary tab) > select record > [View Plan]
Visit Cost and Price	Planning > Visit Work Package (tab) > select record > {Cost and Price Information} > [Go]
Visit Details	Planning > Long Term Planning (tab) > Visits (secondary tab) > select record > [Plan Visit] > Scheduled Visits > View
Visit Details: Marshalling	Complex MRO > Marshalling Workbench > Visit Details
Visit Errors	Planning > Visit Work Package (tab) > select record > {Validate} > [Go]
Work Order Overview	Execution > Production Planning (tab) > Work Orders (secondary tab)
Work Order Scheduling Hierarchy	Execution > Production Planning (tab) > Work Orders (secondary tab) > select record > {View Scheduling Hierarchy} > [Go]

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