

**Oracle® Utilities Work and Asset
Management**

Maintenance User Guide

Release 1.9.0.3

July 2011

Oracle® Utilities Work and Asset Management Maintenance User Guide for Release 1.9.0.3

Doc v1 rev.0 7/12/11

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Chapter 1

Overview

Your organization's maintenance work is requested, planned, recorded and processed in the Maintenance subsystem. As maintenance efforts create demand for parts, the system uses this information to help with inventory control. Information from this subsystem can be used to track downtime and asset reliability, optimize work schedules and more.

The Maintenance subsystem is the primary user of information established in the Resource subsystem, including information about assets, stock items, employees and accounts. It also channels information to the Inventory and Purchasing subsystems by placing demand for parts.

The Maintenance subsystem allows work to be tracked through all stages of a project; from the initial observation of a problem and the resulting Work Request, through the initiation and approval of the Work Order and the completion of each Work Order Task. It also allows you to plan Preventative Maintenance that occurs in cycles, and helps you plan ahead for parts and labor requirements to so that you can streamline your maintenance operations.

Work Management

Work management is the process by which work orders are entered, approved and activated, work is performed and then work is finished and closed. While the work is being performed, materials and labor costs are charged against the work order. All work order information gathered by the system can then be reviewed to help improve your business's work practices.

As time progresses and the number of work orders generated grows, you can begin to streamline and improve work management practices. Using the work order information captured by the application, your business can migrate gradually from reactive maintenance to preventive maintenance and ultimately to predictive maintenance; from unplanned work to pre-planned and reusable work.

The following sections discuss the stages involved in completing work:

Identifying Work

Create a work request specifying the asset to be worked on and including a complete and accurate description of the work to be performed.

Requesting Work

Typically, work requests can be created by anyone with access to the application. They are simply a vehicle to request that work be performed. Only authorized users can migrate a work request to a work order.

Any user granted proper authority can skip the work request process and create work orders directly in the Work Order module.

Approving Work

Before generating a work order, research the issue fully. Access asset information to determine work history and review asset failure information if applicable. Look for an open work order already written for the requested work or for related work that can be added to. Finally, check to see if a PM master (preventive maintenance work order) is due to cycle and accelerate the cycle date if appropriate.

Planning Work

Planning work requires a good amount of thought and time. A planner should consider the number and sequence of tasks necessary, the material and labor requirements, and other related details and attachments for each task. Unplanned work requires entry and execution of a work order. Foregoing planning is effective when the task to be completed is straightforward and does not involve many details.

Steps in Planning a Work Order

The details of a work plan can be entered in the Work Order module and/or the Work Order Task module. However, before planning in the system, you must give some thought to the following:

- How many separate tasks should be defined to complete the job?
- What are the materials and service requirements for each task?
- What labor requirements exist for each task?
- Does this task involve compatible units?
- Are there any permits required for any of the tasks?
- What attachments and/or notes should be linked for each task?
- Should service history information be captured for each task?

Please refer to the user guide chapter on the Work Order Task module for more information on how to complete these areas of the work order. If you also need to work with Compatible Units, please reference the Compatible Units user guide.

Advantages of Planned Work

There is always an appropriate time for unplanned work as well as planned work. Consider time constraints and the information that needs to be gathered, then use your own discretion.

Accuracy: Thorough work plans facilitate work accuracy by providing the work performers with specific instructions and all underlying information required to perform the job at hand. Breaking down the work into logical tasks, identifying the material and labor requirements for each task, and providing all related detail information simplifies the performer's job and decreases the likelihood of error.

Cost Monitoring: Accurately planned material, service and labor requirements for work establishes total work cost estimates. These estimates may then be monitored as the work is performed and compared with the actual costs as they are incurred.

Please refer to Benchmarking chapter for more information.

Reuse and Refinement: Accurately planned work orders can be used as a template to generate new work orders. Create a benchmark work order from a well-planned work order to use again and again when generating new work orders for the same type of work. Any closed work order that has been moved to the History Work Order module can be used as a template as well, copying all information (with the exception of actual costs incurred) into a new work order.

Cost Savings: Work planning contributes to cost savings in a number of ways. By providing detailed information regarding the work, planned work facilitates work accuracy and decreases the likelihood of follow-up work. Detailed material cost and labor projections provide awareness

of expected costs and facilitate preparation for absorbing the costs. Finally, reusing work plans via benchmark work orders or history work orders reduces the overall costs associated with planning work.

Disadvantages of Planning Work

Time and Effort: The only disadvantage associated with planning work involves the time and effort required to build accurate work plans. Significant time and effort may be involved in researching the type of work and coordinating with coworkers to identify the necessary tasks and corresponding material, service, and labor requirements. Furthermore, if the work has been benchmarked, additional time is required to maintain the benchmark work plans for improved and accurate future use.

Advantages of Unplanned Work

- Entering an unplanned work order into the system involves very little effort.
- Unplanned work simplifies small, uncomplicated, and/or one-time jobs.

Disadvantages of Unplanned Work

- Little or no instruction is available to the person(s) performing the work.
- Unplanned work does not lend itself to reuse.
- Only actual costs are available for analysis.
- Often detailed work history information is not required and therefore, not gathered and entered into the system.

Performing Work

After work has been identified, a work request has been submitted and approved, and you have planned the work (or decided not to plan) it is time to initiate a work order.

Generating Work Orders

Work orders can be generated in a variety of ways from a variety of sources:

- Migrating a work request to a work order
- Entering a work order directly into the Work Order module
- Using a benchmark work order as a template
- Cycling a PM master (using a benchmark work order to define the work)
- Using a history work order as a template
- Selecting Create Emergency Work Order from the home page

Part of performing work may include pre-planning work requirements (the identification of one or many work order tasks the work element of the work order (dividing the job into logical work pieces), material requirements (from inventory and direct purchases), labor requirements, and attachments (such as documents, procedures, specifications, and permits). While the work is being performed, you can also gather service history information. You can also choose to schedule work on a daily schedule, weekly forecast, or both. Finally, when the work is finished, assure proper maintenance with inspection and reporting of the work performed.

Closing Work

Once the work is completed (all tasks are finished), enter closeout information including failure, downtime, and repair information into the system at the task and work order levels. Review the work order details and if necessary, update related records such as Bills of Materials, Specifications, and Procedures.

Managing Costs

As work is performed employees need to log the time that they work against the work order. This is completed in the Timekeeping module under Employee Timekeeping. When the work is finished the system posts all of the accumulated costs including parts, labor, and other expenditures to the appropriate charge accounts throughout the system.

Setting Up Work for Reuse

Once a work order has been entered into the system, it may be reused later as a template for new work. Generate a benchmark work order from an existing work order or enter a new one directly into the Benchmark Work Order module for use as a template. You may also use a history work order to generate a new work order and change specific information as required. (See the section on Benchmarking for more information.)

Setting Up Maintenance Practices

Once regular work is identified, it is beneficial to generate a PM master based on a benchmark work order to cycle the work for regular completion. This preventative measure can help to prevent future equipment failure.

Reactive, Preventive, and Predictive Maintenance

These three types of maintenance practices each have an appropriate time and place to be used. You can begin with reactive maintenance practices and gradually work your way into preventive practices. As you continue to use the system and capture work information, the data can be used to facilitate predictive maintenance practices.

Reactive Maintenance - Reactive maintenance is work performed in response to an immediate breakdown. With reactive maintenance, no time is spent preparing work orders before the work is required; however, there is also no indication of future workload. More importantly, the cost of the work may be significantly higher than it would have been if preventive actions were taken before the equipment failed.

Preventive Maintenance - Preventive maintenance is work that is routinely performed to prevent asset failure. While unforeseeable failures cannot be eliminated; overall failures, downtime, and maintenance costs can be significantly reduced by enacting preventative maintenance measures. Small-scale cyclical work is defined and controlled using PM routes. Large-scale cyclical work is defined and controlled using PM masters. Preventive maintenance is performed on a routine basis (dependent on dates, run-time information such as readings taken from assets), or events (shutdowns, turnarounds, etc.) and requires the use of a benchmark work order that stores detailed, pre-planned work requirements. The system determines when the work is due based on the cycling information entered, and generates a new preventive maintenance work order using the referenced benchmark as a template. This way, when the PM work cycles and the system generates a work order, the work has already been planned and is ready to go.

Predictive Maintenance - Predictive maintenance is the art of estimating when a specific asset will fail and then performing the work just in time to prevent failure. Not appropriate for all work, predictive maintenance requires regular asset work history analysis to reduce the possibility of error when estimating time of failure.

The overhaul or replacement of a failed engine that could have been prevented with regular servicing exemplifies the poor use of reactive maintenance. Alternatively, replacing a burned out light bulb in a room is more appropriately handled by reactive maintenance, not preventive maintenance.

The system allows you to gather information required for predicting asset failure. This information can be imported into other tools for advanced analysis and prediction.

Cyclical Work

Cyclical Work is work performed on a regular, repeating, or periodic basis. The nature and duration of the work may vary but the underlying requirement is that the work is performed on a routine basis. The scope of cyclical work may be as large as overhauling a turbine or as small as lubricating a valve.

Note: Once you understand the concept of cyclical work you can move on to create PM routes and PM masters, as well as learn how to associate the two for further work management functionality.

There are two classifications of cyclical work:

- Small-scale cyclical work does not necessarily require the use of a work order.
- Large-scale cyclical work requires the use of a work order for documenting authorization and approvals, pre-planning the job, tracking progress and costs, and closing out the work.

A PM (Preventive Maintenance) route is a work path that defines simple work to be performed on assets and components. Assets are described as stops along the work path.

The system has 3 modules associated with PM routes. Use the Plan PM Routes module to identify each asset along the route, describe the work, and define the work frequency. The Schedule PM Routes module is used to schedule the work. Work can then be displayed, updated, and printed in the Display Scheduled PM Route module.

An example where you would use a PM route would be to lubricate pieces of equipment. Such a task does not necessarily merit the use of a work order with a separate task for each asset requiring lubrication. Instead, you can establish a route to cover all of the lubricating, defining a separate stop for each asset. When the work described on the route report is complete, just update the individual stops as Finished or Missed and the system maintains a complete work history for each asset.

PM masters contain cycling information used by the system to periodically generate preventive maintenance work orders. When the PM cycles based on a predefined calendar basis, event, or asset reading, the system uses a benchmark work order to define the work. The benchmark contains the pre-planned labor requirements, material and service requirements, and related details to simplify the preventive maintenance work.

For example, large-scale cyclical work often requires more time and effort for a specific asset. It therefore must be defined and planned. Take advantage of the system's PM master processing by first generating a benchmark work order to define all of the requirements for overhauling the turbine. Then, define a PM so that the system knows when to generate a PM work order using the benchmark as a template.

Understanding the Critical Number

Over time, you may build many PM routes and PM masters. Since different assets and different jobs have varying cycling criteria (every 3 weeks, on the 6th of June each year, and so on), how do we know which job is more critical (with respect to time) and should be completed first?

The system automatically maintains a critical number indicating the relative lateness of work for each stop on a route and for each PM master. A critical number of 100 indicates that the work is due today. If the work is not performed when due, the critical number continues to grow at the cycling rate defined on the PM route or PM master.

In the system, assets are described as stops along the work path.

For more detailed information about how to build and use PM routes and PM masters, please refer to the PM Master and PM Routes chapters.

The critical number tells you how far overdue the job is.

For example, assume that a PM route for a simple asset inspection has been defined and is due to cycle every three weeks; however six weeks have passed and the inspection has not been finished. Since the work is overdue by two cycling periods, the critical number for the route stop reaches 200. When a job scheduled to cycle annually is three weeks overdue, the critical number will be only slightly over 100, indicating that the work is overdue by a little more than one cycling period.

Both PM route and PM master processing automatically maintain critical number information based upon when the work was last performed and when it is/was due. This information is very helpful when determining work backlog priorities.

The system maintains a complete work history for each asset identified in the Asset module. Whenever an asset ID is listed on a route, or referenced on a PM master, or work order, the system maintains the work history for future analysis.

Asset Work History

From the Asset record, select Work History from the Views list to see a listing of all Active, Finished or Closed Work Order records written against the displayed asset.

Open the Asset record in the Asset module of the Resource subsystem. From the Views list, select Work History, PM Schedule, and PM Routes to see all of the Active, Finished, or Closed work orders, active PMs, and scheduled route stops referencing the asset.

Asset Work History

PM Schedule

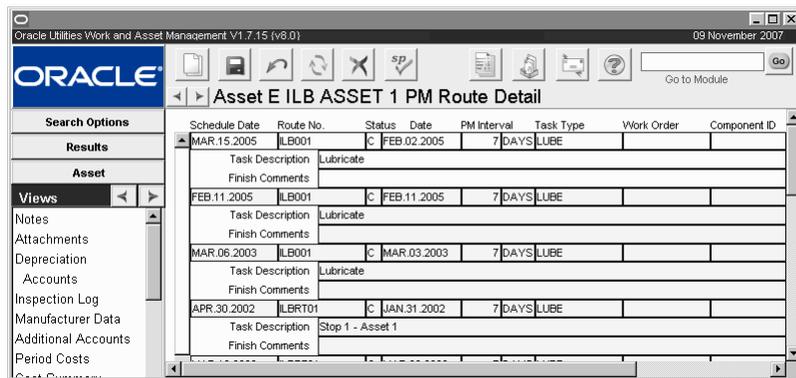
From the Asset record, select Maintenance PM Schedule from the Views list to see all active PM Master records that reference the asset. If a PM work order has been generated, but not completed, the Work Order ID displays. Otherwise, only the Next Scheduled Date is listed.

PM Schedule

PM Route

A similar PM Route Detail view in the Component ID module lists all scheduled PM Route stops referencing a particular component.

From the Asset record, select PM Routes from the Views list to see all scheduled route stops referencing the asset.



PM Route Detail

Approving Work Records

Please refer to the System Basics guide for more information on approval processing.

After a work request or work order has been created and supplemental information has been entered, the user entering the record (the requestor) must submit the record for review and approval. When the requestor sets the record status to Pending Approval and enters an approval route, the system sends alerts to the approval titles in the sequence that they appear on the approval route.

The system continues to process the route and enter decisions in the approval log until:

- An approver authorized to approve the dollar amount approves the record and all mandatory approvers have agreed or approved, or
- No approval titles remain on the route. In this case, the system sends an alert to the requestor who can review the approval log to see why the record was not approved. The requestor may then modify the record or select another route to approve the record.

After the record is approved, the work record can be completed as necessary and work can begin.

Reviewing Records for Approval

Record any changes that you make to the record in the Comments section of the approval log.

Before approving a work record, you should research the work described and verify the validity of the record. Work requirements for work requests and work orders should be looked at closely.

For example, if you are approving a work order you should ask yourself the following questions:

- Is this work already part of an active work order?
- Is the asset referenced due for preventive maintenance that covers the work requested?
- Can this work be added to an existing work order for the same asset?

PM Schedules

Select PM Schedule from the Views list to open the Asset PM Schedule window.

From the Asset module, you can make sure that the work requested is not the same as work due to cycle soon on a PM (preventive maintenance) work order. Select PM Schedule from the Views list to open the Asset PM Schedule window.

PM Schedule View in Asset Module.

The Asset PM Schedule view will only display information from PM Master records in Active status.

The Asset PM Schedule window lists all of the PM Master records that are in Active status and that reference the current asset. If a PM work order has been generated, but not finished, the Work Order ID displays. Otherwise, only the forecasting information for the next PM cycle displays.

This information is helpful when determining if a new work order should be created for work on the asset or an open or future PM work order could be used instead. The reverse situation may also apply. A regular work order can be used to satisfy a PM master that is scheduled to cycle soon. You can use a similar PM Schedule view in the Work Order module to credit the work order for work described on a PM master.

If you find an appropriate work order to add the work request to, make sure you take note of the Work Order ID so that you can reference it later.

Work Orders in Planning Status

Once you have researched the work history of the asset, look for existing work orders in Planning status for the asset. There may already be a work order for the requested work or a work order for similar work that the requisition could be added to as a separate task.

Select Work Order from the Maintenance subsystem. On the Work Order Search Options window, enter the Asset ID of the asset that you are researching and specify Planning as the status. Select Search from the Actions list to find the record.

If more than one record matches the selection criteria, the system opens the Search Results window. View the first record to review and, from there, use the Next Record icon to move to the next work order.

Once you have reviewed the records with the appropriate level of detail, you can approve, reject, or pass them on for further review.

Summary

Work management involves much more than simply writing and performing work orders. It includes making decisions regarding when to plan work, scheduling work, initiating unplanned work orders, creating and maintaining templated work, setting up and using PM masters for preventive maintenance, performing cost and asset performance analysis, and potentially much more.

You can complete any of the above mentioned tasks then use the information gathered later on to progress into preventive and ultimately predictive maintenance. As you begin using preventive maintenance practices, maintenance time and costs decrease, and the overall efforts spent building and maintaining PM masters and benchmarks are streamlined.

Please refer to the topics referenced to learn more about how to complete the steps in the work management cycle:preventative, and predictive maintenance respectively?

Identifying Work
Work Request

Closing Work
Work Order Task
Cost and Closeout

Planning Work
Work Order Task
Project/Subproject
Daily Schedule
Workweek Schedule
Schedule Plan

Managing Costs
Understanding Cost Types

Approving Work
Approvals

Reproducing Work
Benchmarking

Performing Work

Work Orders
Managing Crews
Working with Permits
Logging Time

Setting up Maintenance Practices

PM Masters
PM Routes
Associating PM Routes & PM Masters

Chapter 2

Work Request

The first step in beginning the process of completing work tasks that need to be performed within your organization is to initiate a Work Request in the Work Request module. Work Requests are used to request work or services to be performed and, when approved, become Maintenance Work Orders against which work is performed. If the work to be performed is of a critical nature, it is possible to enter a Work Order directly if you have the proper authorization.

Work Request Records

When you create a Work Order from a Work Request, the system transfers the Work Request information to the Work Order.

The screenshot displays the Oracle Utilities Work and Asset Management V1.7.15 (v6.16) interface. The window title is "Work Request 0600018". The main content area shows the details for a Work Request with ID 0600018. The request is of Type "Regular Work" and Status "Work Order", dated 13 MAR 2006. The Initiator is IMANI BROWN, and the Phone is (925)935-7670. The Description is "A work request was needed for this asset after all." The Asset is "ILB ASSET 1" with the description "PUMPS IN THE ILB FACILITY.". The Component is "EROSION", Department is "LB1", and Area is "LBA1". The Account No is "ILB1-Y-PROCESS-COMP-NONE-009". The Init W/O Type is "Regular", Status is "Planning", and Crew/Backlog is "ILBC2". The Class/Catg. is "GST", and the Priority is "7". The Process is "ILB PROCESS 5", Renewal Work is "N", and Safety is checked. The Maintenance Manager is "ILB5", Change Request Required? is "N", and ISO Related is checked. The Maintenance Approver is "ILB3", Change Request No. is "ILB3", and Health is checked. The Asset Activity Log ID is "0600000000000001", Production Approver is "ILB3", and Environmental is checked. The Report Codes field is empty.

Work Request record

The following fields are included on Work Request records.

Request - The Work Request field is completed by the system and identifies the Work Request.

Type - The type field represents a way to classify Work Requests. Work Types include: Regular, Temporary Repair, Design Change.

If you create a Work Request in support of a Change Request, you must check the Change Request Required? indicator at the bottom of the window. You can also use the Design Change Type selection to indicate that the work supports a Change Request, in effect, directing other users to the Change Request section of the window. However, choosing this Type does not have any direct relationship to Change Request processing in the application.

Status - The Status field describes the current state of the Work Request. This field is also used to route the Work Request for approval as well as to approve or cancel the Work Order.

Available statuses are:

Created

Pending Approval - An Approval Routing List must be selected before the system allows you to change the record status to Pending Approval.

Approved - When a Work Request is approved, the approver is only approving the work, not the dollar value of the request. The work costs are managed in the Work Order phase.

Work Order - Change the status to Work Order to create a work order from the work request. Users must have authority in the Work Request Authority business rule to make this status change. [Click here](#) for more information on creating a work order.

Rejected - If an approver rejects the Work Request, the system displays a box where the approver can enter a reason. The system then sends an alert to the initiator on the request to notify them that the request was rejected. The rejection reason is shown in the Approvals View of the Work Request record. This field is only shown if the Work Request record is in Rejected status.

The initiator can then make any necessary changes and try for approval again or leave the record in Rejected status.

The field next to the Status field is maintained by the system and represents the last date information was changed on the record.

Work Order - When you create a Work Order record from the Work Request record, the system enters the Work Order number in these fields.

Initiator - The Initiator field represents the person responsible for requesting the work.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Phone - The Phone field indicates the contact phone number for the Requestor and is provided by the system using the Employee module of the Resource subsystem when you select the requestor. You can change the information in this field before the record is saved.

Required By - The Required By field displays the date by which the work is to be completed.

Description - The Description field contains a general description of the requested work.

Asset - The first two Asset ID fields display the identification number for the asset on which the work is requested.

When these fields are completed, the system provides the Asset Description (the third field), Account Number, Priority, Crew Code and Backlog from the Asset record. If the asset has an associated Department and Area, the system also provides this information.

Component - If the work involves an installed component you can enter the Component ID from the associated list of values, which is controlled by the Component ID module of the Resource subsystem.

The list of values for this field behaves slightly differently from other lists of values depending on how much information you give the system. If you have provided an asset in the Asset ID field, the list only shows the components installed in the asset. If you have not provided an asset, the list shows all components.

If the Get Asset From Component ID option is set to YES in the Component Processing Business Rule and you select an installed component, the system fills in the fields for the asset. Also, if the Work Installed Without Asset option is set to YES, you can create a Work Order against an installed component without having to list the asset. However, the Get Asset From Component ID option overrides this second option because the Get Asset From Component ID option retrieves the asset information and removes the component information if you remove the Asset ID.

Failure Code - The Failure Code field indicates a suspected cause for the problem you are reporting.

Depending on how your organization has configured the system the list of values may only show Failure Codes that have been Associated with the chosen asset.

If you enter a failure code and select Find Duplicate Request or Work Order from the Actions list, the system searches for other Work Request and Work Order records that associate the given Asset ID and the given failure code. Then the system opens the Possible Duplicate Work Requests window so that you can check to make sure you are not creating duplicate work.

Department and Area - The Department and Area fields represent layers of the asset hierarchy and indicate where the work costs will roll up. If you supply an Asset ID, the system provides the associated Account Number, Department and Area from the Asset record in the Asset module of the Resource subsystem.

Account Number - The Account field represents where the charges for the work will roll up, unless the account is changed when the Work Order is produced. If you supply an Asset ID, the system provides the associated account number, department and area from the Asset record in the Asset module of the Resource subsystem. When only one account is associated with the asset the system automatically enters that account number in the Account field. When there are additional accounts for the asset, the system provides a list of values displaying all the accounts associated with the asset, so that you can select the appropriate one.

Build/Loc. and Position - These fields indicate exactly where the asset to be worked on can be found. When you select the Asset ID number, the system updates these fields from the Asset record.

Deficiency - The Deficiency field allows you to enter a number for a physical tag identifying the breakdown cause. This field is used only for informational purposes and does not affect the system elsewhere.

Initial WO Type - The Initial Work Order Type field determines the type of Work Order that will be created from the Work Request. Possible Work Orders types include Regular, Urgent, and Emergency.

Status - This Status field indicates the status of the Work Order will be created in.

Crew/Backlog - You can plan to assign a crew to do the work by entering a crew from the list of values, which is controlled by the Crew module in the Maintenance subsystem. This crew assignment can be changed on the Work order and individual Work Order Tasks.

Class/Catg. - The Class field contains a code to describe the type of work to be done. The Category field contains a second code to describe the type of work to be done. Both fields are on the Search Option panel and can be used for helping narrow a search when you are looking for Work Request records.

Planner - The planner field indicates the probable Planner responsible for planning the work if a Work Order is initiated. Planners are defined in the Planner Business Rule.

The relationship between Backlog Group and Crew is defined in the Default Backlog Groups Business Rule.

Settings in the Criticality Override Business Rule determine whether or not user's can modify the criticality on work records that reference the asset. The Default Work Request Required Date Rule determines how the system calculates the Required date based on Priority.

Priority - The Priority field is used to indicate the overall importance or criticality of the asset on which the work is to be done. The system supplies this information from the Asset record when you enter an Asset ID. The number in the Priority field is used at the Work Order Task level of the work Order to calculate the criticality of the task.

Downtime? - The Downtime check box indicates whether or not the work will require downtime for the asset.

Type - The Type field indicates the type of Downtime that will be involved. The Type field has an associated list of values that is controlled by Code Table 139.

Process, Maintenance Manager, Maintenance Approver, and Production Approver - These fields can be used to indicate the various approvers and managers for the Work Request.

Asset Activity Log ID - If the work request was created from an Asset Activity Log record, the system displays that record ID in this field.

Renewal Work - Place a Y in this field if the work requested will restore or replace the asset towards its original size, condition, or capacity. The default is N. The indicator cannot be changed if the work Request is in Work Order or Rejected status.

Note: The default for the Renewal Work field is No, however, if your organization generally performs Renewal Work on assets, and you would prefer that the default be Y, you can re-configure the default in the Modules Administration - Forms module.

Change Request Required and Change Request No. - If the Work Request is in support of a Change Request, you can enter Y and select a Change Request number and the system will carry this information over to the Work Order when it is produced. The system also records the information in the Where Used view of the Change Request module in the Resource subsystem. The list is controlled by the Change Request module and is limited to requests in Created, Pending Approval and Approved statuses.

The system lists all Work Requests associated with a Change Request on the appropriate record in the Where Used view of the Change Request module in the Resource subsystem.

Safety, ISO Related, Health, Environmental - These check boxes are checked by the system according to the settings on the record for the asset that is indicated in the Asset ID field. These check boxes allow users to easily recognize if any equipment on a Work Request has been identified as requiring special considerations for ISO, Safety, Environmental or Health reasons so that proper procedures, if necessary, are used in planning and working the job. These check boxes cannot be modified.

Run to Failure - Place a check next to Run to Failure to indicate that the Asset should be used until it dies. A good example of this concept is the use of a light bulb. This check box is for information only and does not include any business processing. It is, however, copied to work order tasks when the asset is populated on the task. Having the information available at the task level is useful for metrics, especially for comparing the number of failures when the Asset was on a preventive maintenance program and was not.

Report Codes - Report Codes allow you to place a variety of grouping codes on Work Requests so that later you can run reports against the Work Order Tasks, grouping or identifying them by the entered Report Code. A list of values (controlled by Code Tables 281 through 285 in the Administration subsystem) is associated with each Report Code field.

How to Create a Work Request

1. **Open the Work Request module.**
2. **Click New.**
The system creates a blank record in Created status.
3. **Enter information as it is relevant to your organization.**

The Type field (work type) and the initiator are defaulted in when the new record is created. These can be changed if needed. Other key fields to fill in would be the description and asset information if applicable.

Remember: Only the first few words of the Description field can be seen in other parts of the system (such as Search Options panels) so you should be concise and put key information at the beginning of the description.

4. Select the Initial Work Order Type from the drop-down menu.

Approved work requests create work orders; this selection determines what kind of Work Order record will be created by this work request.

5. Enter the appropriate approval title in the Approval Route field.

If your organization uses automated approval processing and you save the record with the Approval Route field left empty, the system uses the approver from either the Asset or the Account record referenced on the work request when you save the request. For more on this feature, see the sections on the Work Request Processing business rule, or the Asset and Account modules.

6. Click Save.

Once the record is saved, route it for approval by changing the status to Pending Approval.

How to Add a Work Request to an Existing Work Order

1. Open the appropriate Work Request record.

The Work Request module is in the Maintenance subsystem.

2. Change the status to Work Order.

The system opens the WO in Initial Work Order Status window.

3. If you wish, choose a sort preference for the Work Order list of values.

Choosing a sort preference can make it easier to find the work order you want to use. Selections in the upper part of the window determine if the list of values is sorted by Work Order Number or by Asset ID, or if the list is restricted to work orders for the Asset ID identified on the work request.

4. Select a Work Order Number from the list of values.

The list is controlled by the Work Order module and shows only those work orders in active status or lower.

5. Click the Save icon.

The system creates a new work order task based on the work request and records the work order number in Work Order field on the work request. The new task is added with the same status as the Work Order record.

How to Create a New Work Order from a Work Request

1. Open the appropriate Work Request record.

The Work Request module is in the Maintenance subsystem.

2. Select Create Work Order from Request from the Actions list.

You can also change the status to Work Order.

The system opens the WO in Initial Work Order Status window.

3. Leave the Work Order Number field empty.

The empty field tells the system to create a new work order.

4. Check the Set New Work Order to Auto Close? Box if desired.

Check this box to allow the system to automatically close the work order if it remains in FINISHED status for the number of days defined in the WO Aging business rule.

5. **Click the Save icon.**

The system creates a work order in planning status based on the work request, assigns a work order number and records the number in Work Order field on work request (as type R).

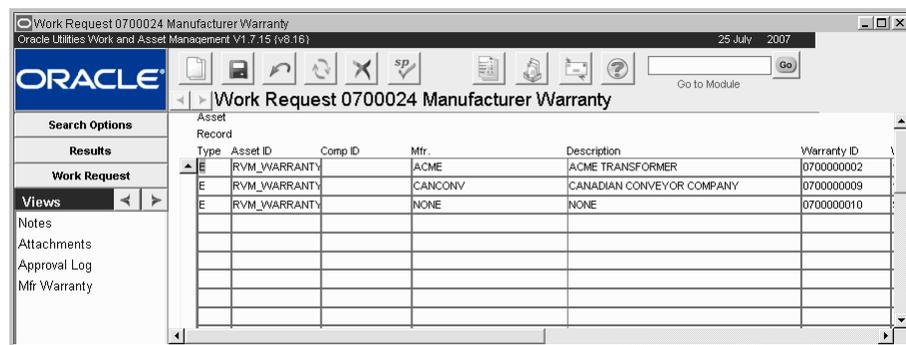
Work Request Views

In addition to standard notes, attachments, and approval views, the Work Request module includes the following:

Manufacturer Warranty

The Manufacturer Warranty displays warranty information for assets and components referenced by the work request. Each line identifies an asset or component, along with the associated warranty, including manufacturer, warranty ID and description, expiration date and status. You can use this information to identify work that may be under warranty.

Warranty information is entered and maintained in the Warranty module. When an asset that references a Warranty ID is entered on the work request, warranty information is automatically entered in this view.



Type	Asset ID	Comp ID	Mfr.	Description	Warranty ID
E	RVM_WARRANTY		ACME	ACME TRANSFORMER	070000002
E	RVM_WARRANTY		CANCONV	CANADIAN CONVEYOR COMPANY	070000009
E	RVM_WARRANTY		NONE	NONE	070000010

Manufacturer Warranty view

Work Request Actions

In addition to standard bookmarking, saving, and printing actions the following actions can be completed from within the Work Request module.

Initiating a Work Order from a Work Request

In order to create a Work Order from a Work Request you can either change the record status to Work Order or you can select Create Work Order from Request from the Actions list. If you leave the work Order field blank the system creates a new Work Order. To add to an existing Work Order, select the appropriate Work Order from the list of values.

For new Work Orders, the system assigns a Work Order number and records the number in Work Order field on Work Request as type R.

Settings in the Work Request Authority business rule determine which users can create a work order from a work request.

Find Duplicate Work Requests or Work Orders

Creating multiple requests for the same work is inefficient and wastes resources. The system can help avoid duplication by checking for similar work based on asset ID and failure codes. If you enter a Failure Code on the Work Request header record and select Find Duplicate Request or Work Order from the Actions list, the system searches for other Work Request and Work Order records that associate the given Asset ID and the given failure Code. The system will then open the Possible Duplicate Work Requests window where you can check to make sure you are not creating duplicate work. The system does not, however, keep you from creating a duplicate request.

Go to Work Order

The Go To Work Order action displays on the Work Request Actions list when the Work Request is in Work Order status. Select this action to drill-down to the Fleet Work Order if the asset Type is 'V', or to the Work Order for all other asset types.

Chapter 3

Work Design

Regulated utilities often perform construction work which requires a design or estimation based on requirements indicated by the person or company for whom they are completing the work. The Work Design module allows for the creation of job estimates which can be reviewed and approved (outside of the application) without the creation of a work order. If multiple estimates are needed for a single job, the module can be used to create these estimates and compare them.

Work Design Records

The Work Design module supports a workflow to ensure that all necessary contributions, permits, and other preliminary requirements are accounted for before work begins. It also provides the option to use compatible units as the means to identify material, labor and equipment costs. Other costs, such as permit to excavate, right of way, and contractor bids can also be factored in and compared in one view.

If you prefer to enter all costs on one screen for a quick and simplified design, use the Design Estimate view to enter all costs then manipulate the values until an optimal estimate is achieved.

The screenshot displays the Oracle Work Design application window. The title bar reads "Work Design Oracle Utilities Work and Asset Management V1.7.15 (v17152-4) 23 January 2008". The interface includes a navigation pane on the left with sections for "Search Options", "Results", "Work Design", "Views", and "Actions". The "Views" section is expanded, showing options like "Notes", "Attachments", "Design Estimate", "CU Summary", "CU Discount Worksheet", "Items Worksheet", "Location (List)", "Location (Detail)", "Location Worksheet", and "ROW Requirements". The "Actions" section contains "Duplicate Last Record". The main form area is titled "Work Design" and contains the following fields and sections:

- Design No.:** [Text Field]
- Status:** Created (Dropdown)
- Description:** [Text Field]
- Designed By:** IMANI BROWN (Text Field)
- Approval Route:** [Text Field]
- Design Date:** JAN 23, 2008 (Text Field)
- Required Date:** [Text Field]
- Contribution Type:** [Text Field]
- Expiration Date:** [Text Field]
- Contribution Amount:** [Text Field]
- Map Reference No.:** [Text Field]
- Phase:** PHASE 1 (Text Field)
- Project:** [Text Field]
- Design Estimate:** .00 (Text Field)
- Work Site:**
 - Address:** [Text Field]
 - City/State:** [Text Field]
 - Work Region:** [Text Field]
 - Time:** [Text Field]
 - Trips:** [Text Field]
- Contact Information:**
 - Customer ID:** [Text Field]
 - Company Name:** [Text Field]
 - Contact Name:** [Text Field]
 - Work Phone:** [Text Field]
 - Ext:** [Text Field]
 - Home Phone:** [Text Field]
 - Mobile Phone:** [Text Field]
- Taxes:**
 - State:** [Text Field]
 - Federal:** [Text Field]
 - Duty:** [Text Field]

Work Design record

The following fields are included on Work Design records.

Design No. - The unique identifier for the record can be created manually, or depending on your configuration settings, is auto-generated by the system when the record is saved.

Description - The Description field provides an area where you can freely enter free text to describe the work design.

Status - Valid statuses include Created, Pending Approval, Approved, Work Order, and Canceled.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Designed By & Design Date - These fields are automatically entered with the name of the user logged on to the system and the current system date. They can be changed if necessary.

Contribution Type, Contribution Amount and Paid Indicator - The contribution type code is defined by your organization to indicate the type of contribution made to aid in construction. Enter the dollar amount in the Contribution Amount field. Place a check in the Paid box when the contribution has been made.

Phase - Use phases to indicate the stage of the work design. Your organization defines phases in the Work Design Phase business rule.

Required & Expired Dates - Fill in these date fields to indicate when the work design needs to be completed, and when the design expires.

Map Reference No. - Use this field to input the map reference for the location of the construction project.

Project/ Subproject - Enter a project and subproject to associate with the design.

Design Estimate - The Design Estimate field shows the final estimated amount of the entire work design. You can modify this value by updating the Override fields in the Design Estimate view.

Work Site Information - Use the fields in the Work Site section to indicate the location of the construction site, and the work region if applicable. The Work Order Travel time business rule determines the default travel time associated to the region. This information can be used for timekeeping purposes or to simply track the time and number of trips estimated. These values become part of the estimate for labor costs displayed in the Design Estimates view.

Taxes - Use the tax fields to enter codes to indicate the taxes that apply to your project. The system uses these values to calculate the taxes in the Design Estimates view. Note that the label for the third tax field is defined in the PO Report Constants business rule by the Label_Duty_Tax rule key.

Contact Information - Enter the name, address, phone and other applicable information for the appropriate contact on the project. If there is a Customer record associated to the contact person, you can select a Customer ID from the list of values, and the remaining information is carried over from the Customer record. All of these fields can be modified if needed.

Work Design Views

In addition to standard notes, attachments, and approval views, the Work Design module includes the following:

Estimates Section

The estimate section consists of three columns: Designed, Override, and Final. The system compiles values taken from the other views and calculates the total costs for each category. The Override column can be used to enter a different value from what was calculated by the system and the updated totals are displayed in the Final column.

	Designed	Override	Final
Material	.00	<input type="text"/>	.00
Labor	20.00	<input type="text"/>	20.00
Equipment	1,480.00	<input type="text"/>	1,480.00
Other Cost	261.00	<input type="text"/>	261.00
Discount	.00	<input type="text"/>	.00
Standard Price Adjustment	.00		.00
Subtotal	1,761.00		1,761.00
Contractor Amount	106,700.00		106,700.00
Subtotal with Contractor	108,461.00		108,461.00
State	.00	<input type="text"/>	.00
Federal	1,084.61	<input type="text"/>	1,084.61
Duty	54,230.50	<input type="text"/>	54,230.50
Estimated Total	163,776.11		163,776.11

Design Estimate view Estimates section

Material - The material total is derived from the total of all material type items entered in the Items Worksheet view. This value is also updated when any material type item is added, updated, or deleted from the Location Worksheet.

Labor - The labor total is derived from the total of all labor type items entered in the Items Worksheet view. This value is also updated when any labor type item is added, updated, or deleted from the Location Worksheet. Since this value also includes travel costs, it is updated if the Work Region, Travel Time, or Trips fields are modified on the header.

Equipment - The equipment total is derived from the total of all equipment type items entered in the Items Worksheet view. This value is also updated when any equipment type item is added, updated, or deleted from the Location Worksheet.

Other Costs - This is the sum of the values entered in the Other Costs section of the Design Estimate view.

Discount - The discount total is taken from the CU Discount Worksheet view. This value is updated if any related compatible units are updated on the Location Worksheet.

Standard Price Adjustment - This value is the sum of costs for all compatible units with the Standard check box marked. It does not include values from the contractor supplied section at the bottom of the screen. The value is recalculated if a compatible unit is added or modified on the location worksheet.

Contractor Amount - This contractor amount value is the total from the Contractor Supplied section at the lower portion of the screen. The value is only recalculated when that section is modified.

State, Federal, and Duty - These tax values are taken from the values entered on the header. They are updated or recalculated if the Subtotal with Contractor value is recalculated. If you enter override values for the tax fields then recalculate other values, the tax fields are cleared.

Estimated Total - Add the state, federal and duty to the subtotal with contractor amount.

Do not enter “0” in an override field unless you want the system to calculate an actual zero value. If you don’t want to override a value, simply leave the override field blank.

Override

Use the override column to manipulate the values in the calculated field. If the tax fields are not overridden then the system calculates the tax based on the final subtotal (in the Final column) using tax rates from the header. Otherwise if the override fields are populated, the final tax amount is displayed and the totals are calculated accordingly. If you enter “0” in an override field, the system calculates a zero value. If you do not want to override a value, simply leave the override field blank.

The screenshot shows the Oracle Work Design software interface. The main window title is "Work Design 0700001 Estimate". The table displays various cost categories and their calculated values. A red box highlights the "Override" column, which contains empty input fields for each row.

	Designed	Override	Final
Material	.00		.00
Labor	20.00		20.00
Equipment	1,480.00		1,480.00
Other Cost	261.00		261.00
Discount	.00		.00
Standard Price Adjustment	.00		.00
Subtotal	1,761.00		1,761.00
Contractor Amount	106,700.00		106,700.00
Subtotal with Contractor	108,461.00		108,461.00
State	.00		.00
Federal	1,084.61		1,084.61
Duty	54,230.50		54,230.50
Estimated Total	163,776.11		163,776.11

Override column

Other Costs

Enter costs that fall outside of the other predefined categories in this section. You can also use the Other Costs section to enter costs from predefined categories when you want to create a quick estimate without filling in all of the views in the module. The final total is reflected in the Estimates section next to Other Cost, and can be overwritten as needed.

Contractor Supplied Section

You can use the Contractor Supplied section to enter costs when you want to create a quick estimate without filling in all of the views in the module. The final total is reflected in the Estimates section next to Contractor Amount, and can be overwritten as needed.

The screenshot shows the "Contractor Supplied" section of the software. It is a table with columns for CU No., Function, Difficulty, Contractor, Description, Bid Amount, Material, and Labor. The first row is populated with data: CU No. RLV_POLE6, Function INSTALL, Difficulty DIFFICULT, Contractor RLV_GRAINGER, Description P-town Branch, Bid Amount 12,500.00, and both Material and Labor checkboxes are checked.

CU No.	Function	Difficulty	Contractor	Description	Bid Amount	Material	Labor
RLV_POLE6	INSTALL	DIFFICULT	RLV_GRAINGER	P-town Branch	12,500.00	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>
					Contractor Total:	12,500.00	

Contractor Supplied section of Design Estimates view

If a compatible unit is filled in and the Material or Labor check boxes are checked, the same compatible unit will not be factored into the total where it appears on a location or items worksheet (i.e. the system does not count the compatible unit twice). If a compatible unit is not entered, these check boxes are for information only.

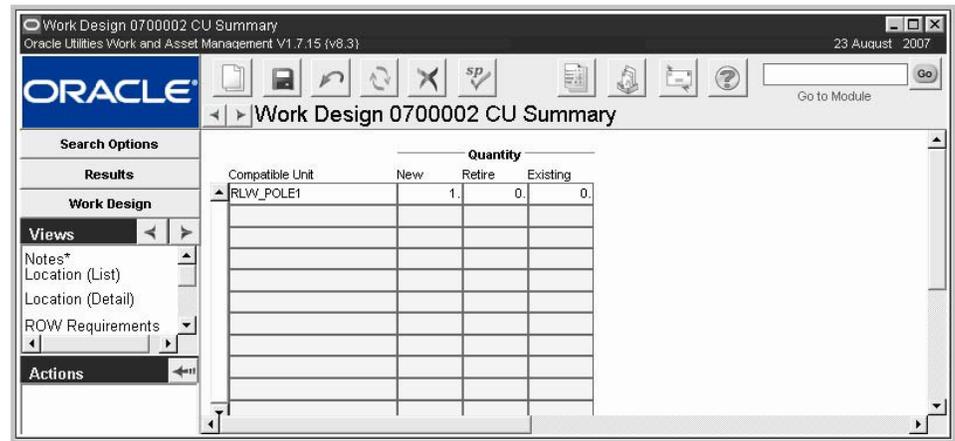
Contractor ID and bid amounts are required. The list of values for the Contractor ID shows all vendors in Active status with “Contractor” as a Characteristic type in the Characteristics view of

the Vendor module. If there is an existing bid indicated on the compatible unit record, the value is brought over. This can be changed if needed. The list of values for the Compatible Unit field shows all unique compatible units in all location worksheets.

CU Summary

Select CU Summary from the Views list to display a list of all unique compatible units in the work design. The quantity associated to each compatible unit is categorized as either new, retire or existing based on how the compatible unit is defined in the Compatible Unit Function business rule.

A compatible unit can only appear once in the list, but it can have values in more than one of the quantity columns.

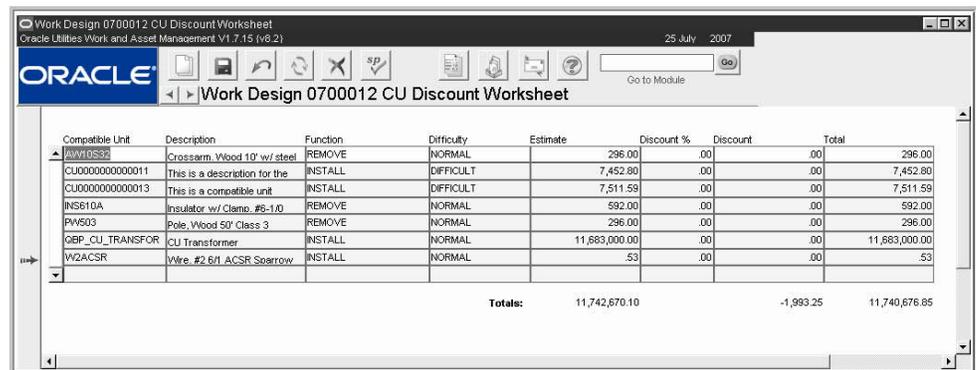


CU Summary view

CU Discount Worksheet

This screen displays all compatible units from the location worksheets in the work design. The compatible unit function and difficulty are also included. You can use the Discount % column to enter discount values as they apply. When you enter a discount percentage or a discount amount, the system calculates the other value and the total discounted price. When the worksheet is saved, the system copies the discount total on the CU Worksheet and displays an asterisk next to Discount Worksheet in the Views list.

The estimate amount is derived from the average unit price of the stock code across all storerooms where the stock code is active. Since the estimates shown in the Design Estimate view and the Items Worksheet view are based on the average unit price for the stock code in one storeroom, the amounts will most likely differ between the views.



CU Discount Worksheet view

Items Worksheet

The Items Worksheet view shows all of the items from all location worksheets in the work design. You can use this worksheet as a single point of entry for the material, labor, and other resources required to complete the design.

Type	Item ID	Store	Description	Quantity	Duration	UOM	Unit Price	Total	
	ELEC		Electrician	3	44,686.28	HOUR	11.0300	1,478,568.01	
M	442030	ANA	Wlre. #2 6/1 ACSR Automatic	1		LF	.1500	.15	
M	CU_BOLTS	CUS	Compatible Units - Cross Arm bolts	160		EA	.2500	40.00	
M	CU_BOLTS2	CUS	Compatible Units - Cross Arm bolts 2	50		EA	1.1500	57.50	
M	CU_CONCRETE	CUS	Compatible Units - Pole Concrete	70		BG	15.0000	1,050.00	
M	RLV_INVENTORY1		Inventory Stock Code Non-Lot /	46		EA		.00	
O	COMPRESSOR		This is a really big compressor that blows lots of	1	64.00	HOUR	35.0000	2,240.00	
O	CRANE HR		An hourly charge for a crane to get a lift from.	1	240.00	HOUR	50.1200	12,028.80	
O	OPEN		For whatever you want it to be...	2	21.00	NONE		.00	
O	TOW HR		This will tow a long way baby!	1	96.00	HOUR	10.0000	960.00	
O	TRUCK		This is a truck with 4 wheels	1	133,892.01	HOUR	12.5000	1,674,900.13	
								Items Total	9,920,793.08
								Travel	132.36
								Total	9,920,925.44

Items Worksheet view

The system automatically populates the Items Worksheet view when you add Compatible Unit records to the CU Worksheet, but you can add new items and change any of the default items as necessary.

If compatible units are added to the CU Worksheet that result in a duplication of material, labor or other items on the Items Worksheet, the system increases the quantity or duration. For example, if two compatible units each require the use of a crane for 4 hours, the Items Worksheet will show that one crane is required for 8 hours. If you want to resolve the duplication in some other way, you can edit the Items Worksheet accordingly.

Location

Use the Location (List) view to review all of the locations defined for the work design.

Location	Description	Source
LOCATION1	this is a description	
LOCATION2		
LOCATION3		

Work Order	Task	Description	Status	Phase
00400146	01	WORK ORDER FOR WORK DESIGN 0700010	PLANNING	WORK STARTED

Location List view

After a work order has been created from the work design, this view also shows a summary of the work orders that were created for each location along with the current work order status and phase.

Highlight a location then select Location (Detail) from the views list for more in depth information about each location.

Location: LOCATION 2 Structure Type: Back Span

Description: It's a back span...really far, far away

Source: LOCATION1 Latitude: NW

Distance: 75 FT Longitude: NE

Overhead

Underground

Location Detail view

Location and Structure Type - A one word description or name identifies the location. The structure type provides additional identifying information.

Description - Enter a description of the location in this field.

Source - The source field provides a list of all locations already identified in work design. You can select one of these, or enter a new value to identify the location source.

Distance and Distance Units - Enter the number describing a dimension for the location and units, if applicable.

Latitude and Longitude - Use these fields to indicate the latitude and longitude position of the location.

Overhead and Underground - Check the box that applies to the location. Only one can be checked.

Note: Slack is not factored into the calculation if the Underground check box is checked.

Location Worksheet

You must have the Show CU Locations functional responsibility, in addition to Show CU on WO, in your user profile to access the CU Location views

The Location Worksheet view allows designers to use compatible units to plan material, labor and other requirements for work at a particular location. If you are not planning CU requirements by location, you can enter the compatible units directly on the CU Worksheet.

Compatible Unit	Description	Est. Qty	UOM	Function	Difficulty	Usage	Account Treatment	Estimate	Standard Price
									00
Total									00

Location Worksheet view

All of the compatible units listed in this view are planned for the single location identified in the Location field. They are cascaded to the CU Discount Worksheet and the Items Worksheet as appropriate. If the same compatible unit exists on multiple Location Worksheets, all material, labor and other charges are accumulated on a single row on the CU Worksheet. If a compatible unit is deleted from the Location Worksheet all values are in turn removed or quantities reduced from the CU Worksheet. If a discount is applied to a compatible unit, the discount amount is spread evenly to each Location Worksheet where the compatible unit exists.

The estimate amount shown is derived from the average unit price of the stock code across all storerooms where the stock code is active. Since the estimates shown in the Design Estimate view and the Items Worksheet view are based on the average unit price for the stock code in one storeroom, the amounts will most likely differ between the views.

The No. of Runs field only applies to CUs which include conductors. Please refer to [Planning Compatible Units for Conductors](#) for more information.

If a record already exists, the system recalculates the estimate by first summing all estimates where that compatible unit with the function and difficulty exist in all location worksheets. Then it recalculates the discount amount by multiplying the total estimate by the discount percent.

Since a large number of Compatible Unit records may be available for selection, a special CU Selection Criteria section is provided at the bottom of the screen. You can use these fields to filter the list of available compatible units by Business Unit, Class, Equipment Type, or Size. All of the selection fields are optional and the only the ones that you populate are used to filter the list of values.

Please refer to the User Guide section about [Compatible Units on Work Order Tasks](#) for more information on working with the Compatible Units views.

Work Design ROW Requirements

ROW stands for “Right of Way” and is an industry standard to indicate how construction should conform to codes and parameters. The ROW Requirements view allows you to create classifications of type, category, and location, then list specific requirements for that classification. The location column only shows the locations that are already included on the work design.

Enter requirements with unique type/category combinations as appropriate. You cannot enter multiple records with the same type and category even if the locations are different. If you need additional classifications, use the Specification module to define additional type/category combinations.

Type	Category	Location
SERV_HIST	STBYGEN	

Seq	Specification Attribute	Specification Value
1	the attribute	
2	the second attribute	
3	the third attribute	
4	the forth attribute	
5	the fifth attribute	

ROW Requirements view

Permits

Select Permits from the Views list to include permit requirements for the work design.

Type	Permit Number	Acquired Date	Template ID
SAFE	234153	MAY.17.2010	ILBPT2

Permits view

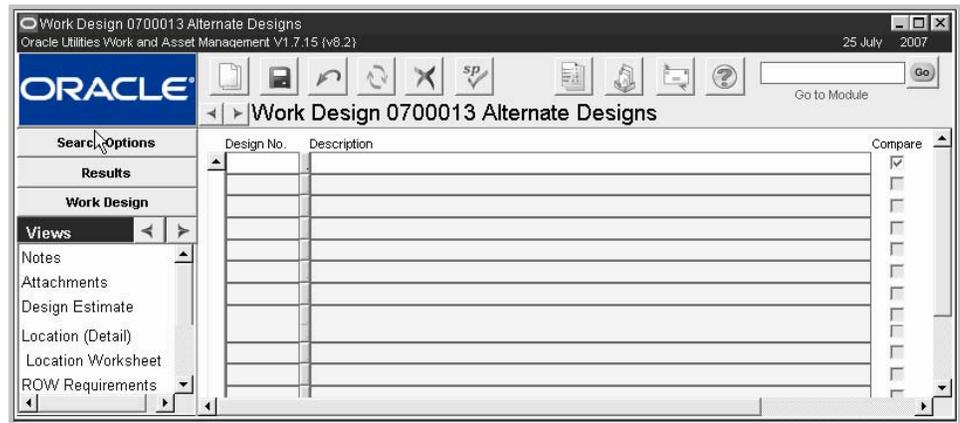
Enter the permit type, permit number, acquired date and Template ID to record the permit requirement. The Type and Template ID are validated fields with values created and managed in the Permit Templates module.

The system adds an asterisk(*) next to the view name when permit requirements have been entered. Permits cannot be added after the record is in Approved status or above.

Alternate Designs

The Alternate Designs view provides a means to list and cross reference other designs that are related to the same project. An asterisk is displayed next to the view name in the Views list if alternate designs are present. The Design No. field shows work designs in all statuses except Canceled.

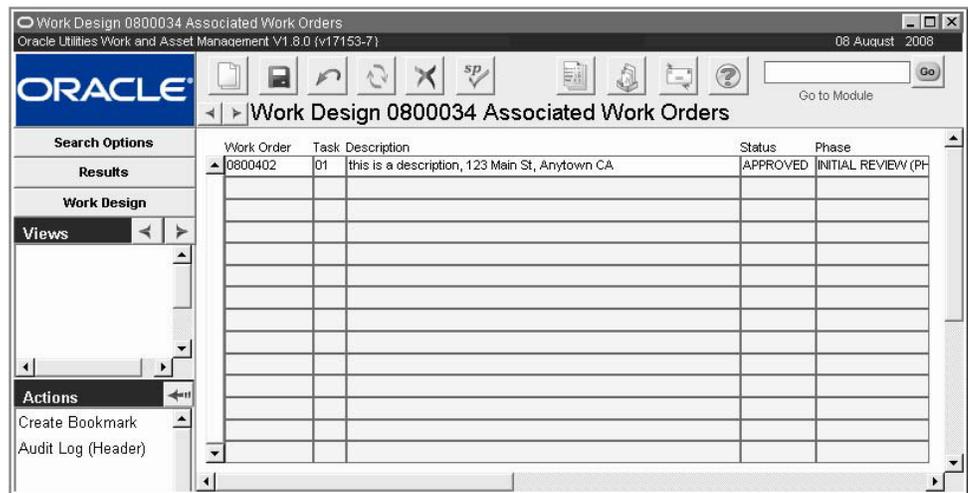
Place a check in the compare box to print the design along with the package when the work design is printed.



Alternate Designs view

Associated Work Orders

Select Associated Work Orders from the Views list to review the work orders that have been created from the work design. The current status and phase of the task and included and the system updates these values here when they are changed on the task.



Associated Work Orders view

Work Design Actions

In addition to standard actions, the following can be completed from within the Work Design module.

Update Pricing

Select Update Pricing from the actions list to update the pricing of all material, labor, and equipment items based on updated unit price values that have been modified elsewhere in the system. The travel cost is also updated if factors based on the updates are included in the travel cost. Total costs in the Items Worksheet view and in the Design Estimate view are affected.

Create Work Order from Work Design

A common business practice is to create multiple work designs for the same job for cost estimate comparison purposes. Once it is determined which design to proceed with, a work order can be created from the work design to manage the process of completing the work. Users with the appropriate responsibility added to their user profile have access to actions allowing them to create a new work order or add to an existing work order based on the work design.

Restrictions

Settings in the Work Design Processing business rule determine whether site information is added to the description on the work order and task when the new record is created. Settings in the Work Order Processing business rule determine which status the work order can be in to have a work design added to it.

Processing

When a new Work Order record is created from a Work Design record, all notes and selected attachments, locations, compatible units, construction assets for each capital compatible unit, discount records, permit requirements and worksheet items are copied to a new work order on task 01. If any worksheet items already existed on the work order task, the system adds the quantity and duration to the existing record. The system also calculates and inserts records for regulatory accounting splits.

The originating work design number is indicated on the task location record.

Once the wizard is complete and a work order has been created the system changes the Work Design record to Work Order status.

Task Material Records

A task material record is created for each record in the Other Costs section of the Design Estimate view, and any contractors listed are added to the Task Contractor Supplied view on the work order task. If the contractor is not associated to a compatible unit, the system creates a task material record for the contractor.

ROW Requirements

ROW requirements are copied to the Task Service History view. If the location associated to a ROW requirement was not selected, the ROW requirement is also not copied to the work order.

How to Create a Work Order from a Work Design

1. **Open a work design in Active status.**
2. **Select Create WO from Work Design from the Actions list.**
The system opens a wizard to walk you through the process of creating the work order.
3. **Enter a Description for the work order, and other information as appropriate.**
The fields are the same as the fields that you will find on the work order screen.
4. **Click Next.**

A listing of locations and compatible units included on the Work Design is displayed for review.

- 5. Place a check next to each location and compatible unit that should be included on the work order.**

If the location associated to a ROW requirement is not selected, the ROW requirement is also not copied to the work order.

- 6. Click Next.**
- 7. Select additional items to include from the Items Worksheet.**
- 8. Click Finish.**

The system confirms the work order number created. Here you have the option of navigating to the new work order, return to the originating Work Design record by clicking Close, or to restart the wizard by clicking Start Again.

Chapter 4

Work Order

You can enter, review and maintain Work Order information in the Work Order module. Work Orders can be generated by Work Requests, PM Masters, Benchmarks, Historical Work Orders, or are entered directly. General information about the work is maintained at the Work Order header (such as work description, the asset to be worked on, and cost information).

Work Order Records

The system automatically creates a Work Order Task record based on the Work Order header record. You can add additional Tasks for more complex Work Orders. For example, a Work Order to repair the engine of a large vehicle could be broken down into several tasks, including: pulling the engine, replacing plugs, checking valves, etc. One task can apply to [multiple assets](#).

Time and materials are planned and charged against the Work Order Tasks. You can choose to plan the work before activating a Work Order or you can activate the Work Order and have the system maintain labor, stores and direct purchase information as charges are applied to the Work Order.

Work Order record

Note: Work on some assets may require specific permits. These permits are created and maintained in the Permit Templates and Permits modules of the Maintenance subsystem. Once a Permit Template is created and associated with an Asset record, any work order tasks for that Asset will be flagged with Permit near the top of the window. This flags the planners for the

work order task that they need to create a Permit record to ensure that the permit requirements are met for the work.

The following fields are included:

Work Order - The system automatically assigns a Work Order number when the record is saved. The first field classifies the Work Order with a letter such as “R” for repair or “E” for emergency. The second field is a unique identifying number.

For work Orders other than “P” and “S” types, you can update the Work Order type if you have the appropriate responsibility function in your user profile and the Work Order is not in Finished or Closed status.

Status - The Status field describes the current state of the Work Order. This field is also used to route the Work Order for approval as well as to approve or cancel the Work Order. Available statuses are: Planning, Pending Approval, Approved, Waiting Activation, Active, Finished, Closed, Rejected, and Canceled.

The Updated field is maintained by the system and represents the last date information was changed on the record.

Please refer to the section titled [Work Order Status Change Conditions](#) for more detailed information.

Description - The Description field contains a general description of the ordered work. You can enter as much text as you need. If you need a larger description area, or need a wider area to get columns of text to align, you can double-click the Description field to open the Editor window, which can be sized to meet your needs. The Editor window also includes a Search button that can be useful for finding specific text in a long note.

Class - The Class field contains a code to describe the type of work to be done. The field is controlled by a code table. Since it is available on the Search Options screen, it can be useful when searching for particular Work Order records.

Category - The Category field contains a second code to describe the type of work to be done. The field is controlled by a code table. The Class and Category fields can be used together to give a more complete way of labeling work. Since both fields are available on the Search Options screen, they can be useful when searching for Work Order records.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Requestor - The Requestor field represents the person responsible for requesting the work. If the Work Order was generated by the system from another record - such as a Work Request - the system will complete the field using the requestor information from that record, otherwise, the system enters your name. You can change this information to indicate the person who actually requested the work.

The system can be set to send an alert to the requestor when backordered items are received. In order to enable this feature, the person responsible for configuring Business Rules in your organization must enter REQUESTOR for the BACKORDERED ITEMS HAVE ARRIVED rule key in the Alerts Business Rule.

Required - The Required field displays the date by which the work is to be completed. If the Work Order was generated from a Work Request the field is completed by the system using the information supplied on the request.

Asset ID - The first two Asset ID fields display the identification number for the asset on which the work is being done. If the Work Order was generated from a Work Request, these fields are completed by the system using the information supplied on the request.

When these fields are completed, the system provides the Asset Description (the third field), Account Number, Priority, and Crew Code from the Asset record. If the asset has an associated Department and Area, the system also provides this information.

If the Get Asset From Component ID option is set to YES in the Component Processing Business Rule and you select an installed component, the system fills in the fields for the asset. If the Work Installed Without Asset option is set to YES, you can create a Work Order against an installed component without having to list the asset. However, the Get Asset From Component ID option effectively over-rides this option because the Get Asset From Component ID option retrieves the asset information and removes the component information if you remove the Asset ID.

Component ID - When the work involves an installed component you can enter the Component ID from the associated list of values, which is controlled by the Component ID module of the Resource subsystem.

If the Work Order is generated from a Work Request, the Component ID is completed by the system using the information supplied on the request.

If the Enhanced Material Disposition key in the Repairables Processing rule and the Auto-Populate Instld Component in the Work Order Processing rule are set to ON, the system supplies the Component ID of the installed component. If more than one component is installed, you can select from a list of installed components.

Process, Department and Area - The Process, Department and Area fields represent layers of the asset hierarchy and indicate where the Work Order costs will roll up. If you supply an Asset ID, the system provides the associated Account number(s), Department(s) and Area(s) from the Asset record in the Asset module of the Resource subsystem. If the Work Order was generated from a Work Request these fields are completed by the system using the information supplied on the request.

Account - The Account field represents where the charges for the Work Order will roll up unless the Work Order Task account is different. If you supply an Asset ID, the system provides the associated account number, department and area from the Asset record in the Asset module of the Resource subsystem. When only one account is associated with the asset the system automatically enters that account number in the Account field. When there are additional accounts for the asset, the system provides a list of values displaying all the accounts associated with the asset, so that you can select the appropriate one. If the Work Order record was generated from a Work Request record the field is completed by the system using the information supplied on the request.

Priority - The number in the Work Order Priority field copies to the Work Order Task, where it is used as a factor in calculating the overall Work Order Task Priority. The Priority field indicates the work priority, and is controlled by a code table.

Default Work priorities based on Work Request are defined in the Work Priority Defaults Business Rule.

Planner - Enter the code for the person responsible for planning the Work Order. If an asset is entered, the system automatically carries over the Planner from the Asset record, however the field can be modified if necessary. The Planner entered is also copied to all Work Order Tasks. Planner codes are created in the Planners Business Rule.

If the Work Order is created by batch processing from a PM Master, the system supplies the planner code from either the asset or the benchmark depending on settings in the PM Master module.

Once a planner code is assigned to the work record, Planners can use the Work Planning Tool on the home page to review and manage work.

If the Alerts business rule is set to do so and the planner indicated on a task differs from the planner enter here, the system sends an alert to the planner on the work order task when parts have arrived.

Crew - You can plan to assign a crew to do the work by entering a crew from the list of values (which is controlled by the Crew module in the Maintenance subsystem). This crew assignment can be changed on individual Work order Tasks.

The Work Order Forecast report lists scheduled Work Orders and Craft hours needed by Crew. The values shown in the Craft fields (Tech, Carp, Mech) are determined by the S_RPT071 Crew Crafts Columns Business Rule.

Deficiency Tag - The Deficiency Tag field allows you to enter a number for a physical tag identifying the breakdown cause. This field is for information only, and does not affect the system elsewhere.

Change Request Required - The Change Request Required check box is maintained by the system and only indicates that one or more Work Order Tasks for the Work Order have been identified as being for a Change Request. This is done by providing the appropriate information on the Asset Data view to the Work Order Task record.

The system lists all of the Work Order Tasks associated with a Change Request on the appropriate record in the Where Used view of the Change Request module in the Resource subsystem.

Safety, ISO Related, Health, Environmental - These check boxes are checked by the system according to the settings on the record for the asset that is indicated in the Asset ID field. These check boxes allow users to easily recognize if any equipment on a Work Order has been identified as requiring special considerations for ISO, Safety, Environmental or Health reasons so that proper procedures, if necessary, are used in planning and working the job. These check boxes cannot be modified.

Run to Failure - Place a check next to Run to Failure to indicate that the Asset should be used until it dies. A good example of this concept is the use of a light bulb. This check box is for information only and does not include any business processing. It is, however, copied to work order tasks when the asset is populated on the task. Having the information available at the task level is useful for metrics, especially for comparing the number of failures when the Asset was on a preventive maintenance program and was not.

Rough Estimate - Enter an estimate in this field Work Order Tasks will not be used to pre-plan the work.

Project - You can associate the Work Order with a Project / Subproject by entering an active Project / Subproject number into the Project / Subproject fields. Costs incurred against the Work Order are summed by batch processing to the selected Project / Subproject.

If you assign the Work Order to a Project/Subproject, the system provides the appropriate account number in the Account field. The system also copies this number to each Work Order Task, even if different tasks involve different Asset IDs. You can overwrite the Project/Subproject account number on the task if necessary.

When the Work Order is in Active status, you cannot update the Project / Subproject fields unless you have the appropriate responsibility function in your User Profile.

Approved - The Approved field is completed by the system when the record is approved, using the Approval Amount from the Approvals view – which is calculated by the system using the total estimated costs from the Work Order Tasks. If the Approved Amount is not available in the Approval view, the system uses the total of the Task cost estimates, and if pre-planned estimates are not available, the system uses the Rough Estimate.

Inspection Required - Check the Inspection Required box if inspection will be required when the work is finished.

Auto Close? - Check this box to allow the system to automatically close the Work Order if it remains in FINISHED status for the number of days defined in the WO Aging Business Rule. Work Orders created from a Benchmark have a check in this box if it is checked on the Benchmark. You can remove the check mark if necessary.

The default for this value can be set in the Modules Administration - Forms module in the Enter Data view. Set Y or N for the HEADER block for the field name CLOSE_WO_IND.

Work Order Status Change Conditions

The following section outlines some conditions which affect work order status changes.

Adding Tasks

Once a Work Order is Active, settings in the Work Order Processing business rule determine if new tasks are added in Active or Planning status. If the new tasks are added in Planning status, the status of the Work Order record is also set to Planning status.

Approved, Waiting Activation

If a Work Order record is left in Approved, Waiting Activation status while the tasks are being completed and all of the tasks are set to Finished or Canceled status, the system automatically sets the status of the work order to Finished when the Finish WO batch job runs.

Change Requests

Work orders that include tasks planned in support of a Change Request, cannot be set to Approved status until the Change Request is set to Approved status.

Committed Costs

Active work orders cannot be set to Canceled once costs have been committed or actualized against the work order.

Deleting Work Orders

Work orders can be deleted only when they are in Planning, Rejected, or Canceled status.

PM Group Association

In order to maintain accurate group maintenance forecasts, work orders generated from PM Masters that are part of a PM Group cannot be reset from Rejected back to Planning status.

Project/Subproject Approval

Your organization has the option of setting the system to allow user's who wouldn't normally have the authority to approve Work Orders to do so if the Work Order is written against an approved Subproject. Set the Check Approval Document rule key in the Project Budget Options Business Rule to OFF. When Check Approval Document is set to OFF, the system checks the Subproject to see if it has been approved. If it has, the user is allowed to approve the Work Order without the standard approval authority. If Check Approval Document is set to ON, the system does not consider the status of the Subproject, and forces users to follow standard approval processing.

How to Create a Work Order Record

Creating a work order is a two step process. First you must create the header record with information about the whole work order. Then you address the tasks to be done under the work order.

Work Orders can also be planned and charged against Subprojects in Active status.

1. Open the Work Order module.

You can also open the Work Order module from the Subproject Work Orders view by double-clicking the Work Order field.

Some business processes require that work orders come from work requests. If you are authorized to create work orders without first issuing a work request, this section details how to complete that task.

If the Project Type is set to provide the account number in the Project Work Order Account Business Rule, when you have selected both the project and the Subproject, the system supplies the Department, Area and primary Account Number from the Subproject record. You can change the information in these fields, but remember that the Department and Area will limit your options for the Account Number. If the Project Type is also set to cascade in the Business Rule, the system also provides the account number on each related Work Order Task.

2. **Click New.**
The system opens a new Work Order record in Planning status.
3. **Enter a Description of the Work Order.**
Remember that only the first few words will be visible on the Search Results screen.
4. **Select the Project and Subprojects from the lists of values (if applicable).**
These only show the Project and Subprojects that are in Active or Finished status.
5. **Assign an Account number to the Work Order.**
You can do this by selecting an Account Number, an Asset or a Project/Subproject.
6. **Enter any additional information that your organization requires.**
7. **Click Save.**
The system saves the record in Planning status, supplies a Work Order number and creates the first task record using the work order description for the task description and a sequence number of one.

From this point you can select Task (Detail) from the Views list to add tasks.

If you referenced a Subproject you can plan and use parts and labor on the Work Order Tasks, and the charges will roll up to the Subproject and Project.

How to Create a Work Order Record for a Project/Subproject

Work orders can be planned and charged against subprojects in Active status.

1. **Open the Work Order module.**
You can also open the Work Order module from the Subproject Work Orders view by double-clicking the Work Order field.
2. **Click the New icon.**
The system opens a new Work Order record.
3. **Enter a Description.**
4. **Update the Requestor if necessary.**
5. **Select the project and subprojects from the Lists of Values.**
These lists are controlled by the Project/Subproject module in the Maintenance subsystem and show only those projects and subprojects that are in Active or Finished status.

If the Project Type is set to provide the account number in the Project Work Order Account business rule, when you have selected both the project and the subproject, the system supplies the Department, Area and primary Account Number from the Subproject record. You can change the information in these fields, but remember that the Department and Area will limit your options for the Account Number. If the Project Type is also set to cascade in the business rule, the system also provides the account number on each related work order task.
6. **Add any additional information required by your organization.**
7. **Click the Save icon.**
The system will assign a work order number and save the record. Once you begin adding work order tasks, you can plan and use parts and labor with this work order and the charges will roll up to the subproject and Project.

Work Order Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Additional Data

Select Additional Data from the Views list to enter the following information: Maintenance Manager, Maintenance Approver, Production Approver, Building, Location, and Position. Information retrieved from the entered asset number on the header may be overwritten. Information entered and maintained here is a continuation of the Work Order header window, stored as part of the Work Order record.

Additional Work Order Data view

The Benchmark and PM Master fields are populated by the system when a work order is created from a Benchmark or from a PM Master.

If the Work Order was created because operational data exceeded tolerances, the system enters the date of the data reading in the Asset Operational Reading Date field. You can double click this field to open the Asset Operational Data record.

If the work order was created from an Asset Activity Log record, the system displays that record ID in the Asset Activity Log ID field.

Cost Summary

The Cost Summary view presents summary cost information for all tasks on the Work Order. In addition to the fields discussed below, the Cost Summary view may also display overhead costs and information reported by your organization's external financial system, depending on responsibilities in your User Profile.

Category	Original Estimate	Revised Estimate	Committed	Accrued	Actual
Inventory Stock	130.00	130.00	130.00	.00	130.00
Leave Expense	92.00	92.00	.00	.00	.00
Voucher Expense	1,040.00	1,040.00	.00	.00	.00
Total	1,262.00	1,262.00	130.00	.00	130.00

Overhead Class	Indirect Overhead		Capital		Grand Total
	Original Estimate	Actual	Allocation	Direct Allocation	
					Original Estimate 1,262.00
					Actual 130.00
					Actual + Allocation 130.00
Total					

Cost Summary view

Category - Costs are listed by the categories defined in the Expense Code Business Rule.

Original Estimate - The total dollars planned before the Work Order is activated

Revised Estimate - The current dollar estimates

Committed - Commitments occur at different points depending on the nature of the cost category. Labor costs are committed when work time is posted and batch has run. Direct purchase costs are committed when the Purchase Order is issued. Material costs are committed when the item is issued on a Checkout Request.

Accrued - Accruals include all unpaid receipts (at the Purchase Order price).

Actual - Actuals include all stock issues, posted labor charges, paid invoices.

External Actual Amount and Actual Quantity - If you have the appropriate function responsibility in your user profile, you can use these columns to compare actual amounts and quantities from an external financial system with estimates maintained by Oracle Utilities Work and Asset Management.

Overhead Class - Overhead Class types are defined for your organization in the Regulatory Account Overhead Class Type business rule. The Overhead Class provides the ability to allocate overhead costs to the appropriate capital, maintenance and operations regulatory accounts.

Original Estimate - The system calculates the Overhead Estimate value by multiplying the Original Estimates from the upper portion of the screen that have the same Expense Category as the Overhead Class record's Applied Expense Category by the Estimated Overhead Percentage defined in the Regulatory Account Overhead Class business rule.

Actual - The system calculates the Actual value by multiplying the appropriate Actual amounts from the upper portion of the screen by the Estimated Overhead Percentage defined in the Regulatory Account Overhead Class business rule.

Allocation - The overhead cost allocation is calculated as the sum of the allocation amounts from the Regulatory Account Overhead Cost records with the same Overhead Class and work order task.

Direct Allocation - The overhead cost totals resulting from actual work performed for the work order and not from year end processing calculations.

Original Estimate - The Original Estimate is the sum of the total original estimate from the upper and lower portions of the view.

Actual - The sum of the total Actual amounts from the upper and lower portions of the screen.

Actual + Allocation - Sum of the Actual from the upper portion of the screen and the total allocations from the lower portion of the screen.

Closeout Summary

The Work Order Closeout Summary view gives you easy access to all the task and asset information associated with a Work Order. A Work Order may cover several assets and each asset may have several associated tasks. The Closeout view allows you to select a task and review data on the related asset, then return easily to the data on the task.

Closeout Summary view

When you select Closeout Summary from the Views list, the Closeout Summary window appears and additional options for Task Closeout Summary, Asset Closeout Summary, and Task Failure Summary appear on the Views list.

Start and Finish - The Start field represents when the work on the Work Order was initiated. The system uses the earliest date and time associated with the tasks for the Work Order. The Finish field represents when the Work Order status was changed to 'Finished' (when the last finished task was set to 'Finished'). You can change the date and time manually, or you can use the calendar feature. When you make a change and move the cursor out of the field, the system automatically updates the duration.

Downtime information is not shown on the Task Summary screen because Downtime is associated with the asset (it's reliability record, etc.) rather than the Task. However, you can review the Downtime information by highlighting the task in the task list, and then selecting 'Asset Summary' from the pull-down menu in the upper part of the screen.

Duration - The system uses the Start and Finish fields to determine the duration for the Work Order as a whole (in hours). The system does not prevent you from entering a finish time that is after the start time. However, if it is, the duration shows up as a negative number. If the duration is negative, you need to check the 'Start' and 'Finish' fields.

Sign-off by and Date - The Sign-off by field indicates the person responsible for authorizing the Work Order for closeout. This person might be different from the person actually closing out the Work Order. For example the Sign-off by name might be that of the shop supervisor or an inspector.

Use the (sign-off) Date field to indicate when the closeout was authorized. The Sign-off by field does not have to be completed before you can fill in the Date field.

While the system currently allows you to make changes in the Duration field, if you need to change the Duration, you should do so using the Start and Finish fields to allow the system to recalculate.

Closed by and Date - The Closed by field represents the person who actually changes the status of the Work Order from Finished to Closed. You cannot make changes to this field because the system automatically enters the user name of the person who closes out the Work Order.

The Date field indicates when the status of the Work Order was changed from Finished to Closed. You cannot make changes to this field because the system automatically enters the date and time when the Work Order status is changed to Closed.

Retain - These radio buttons describe how the system will maintain the history of the Work Order. Typically, the system uses settings in the Work Order Aging Business Rule to determine how to retain Work Order history for your organization. However, the business rule can be overridden by selections here. After the Work Order status is set to closed, the system will wait a set number of days (determined either in the business rule or the After __days field) before moving the record into history. Up to the point the Work Order is moved into history, it can be reopened to allow changes, by changing the status back to 'Finished'.

Full History - Maintains a record of all the details associated with the work order, the asset(s) and the task(s) at the time the work order was finished. The system will move the record into the Work Order History module, where the information is maintained indefinitely.

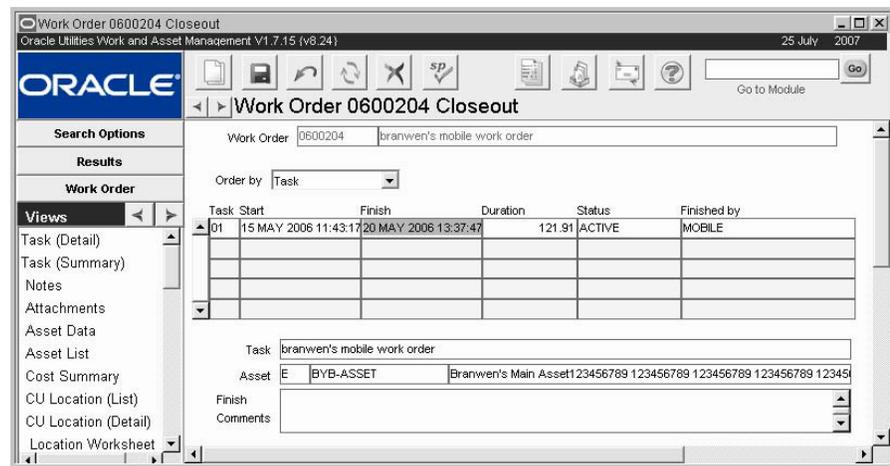
Asset History - Maintains a record only of the information shown on the Asset Summary of the Work Order Closeout screen. The system will move the asset information into the Asset Summary view in the Resource subsystem, where the information is maintained indefinitely.

Delete - Maintains a record of all the details associated with the work order, the asset(s) and the task(s) at the time the work order was finished until it is time set to delete the record. The information is maintained for the number of days indicated in the business rule or the 'After__days' field.

After__days - You can indicate the number of days that must pass before the Retain action is processed. A closed work order will be moved to history or deleted after the number of days specified here. If you leave the 'After__days' field blank, the system uses settings in the Work Order Aging Business Rule to determine when to create or delete the Work Order history.

Task Closeout Summary

The Task Closeout Summary view provides information for all the tasks associated with the Work Order. It also shows you more detailed information for a single, selected task below the task list. Select a task from the list to highlight it and show more detailed information below the list.



Task Closeout Summary view

Work Order and Description - The Work Order number and description fields identify the Work Order. You cannot change the information in these fields.

Order By - You can use the Order By field to determine how you want Task to appear in the Task List. Select from the pull down list to choose how to sort the tasks.

Task - The Task field shows the task number the system assigned to the task within the Work Order. If you need to review information on the task that is not presented on the Task Summary screen, you can double-click the task number. The system opens the Task module and the appropriate Task record. To return to the Task Summary screen close the Task module, or use the Window menu.

Start, Finish, and Duration - These fields are the same as on the Closeout Summary window showing the amount of time worked on each task.

Status - The Status field shows whether the task is finished or in some other status. You cannot change this information from this screen. To do so, you must go back to the Work Order screen and follow the steps to Finish the Work Order Task.

Finished by - The 'Finished by' field indicates who actually finished the work in the task. You can update this field manually.

Task - The 'Task' field contains the description of the task. The field is gray because you cannot update this information, you can only view it. If the description is longer than the field allows you to see, you can double-click in the field to bring up the editor feature. However, because the field cannot be updated, most of the editor's features do not function.

Asset - If you need to check detailed information about the asset associated with the task, you can double-click the asset id number. The system opens the Asset module and the appropriate Asset record. You can then close the Asset module or use the Window menu to return to the Work Order Closeout screen.

Finish Comments - The Comments field shows any comments that have been made about the task. This information comes from the Finish Task screen as part of the Finish Task process. If you need to update the comments, place the cursor in the appropriate part of the field and make your changes.

Asset Closeout Summary

The asset closeout summary provides information for all the assets associated with the Work Order. It also shows you more detailed information for a single, selected asset in the area below the assets list. Select an asset from the asset list to highlight it and show more detailed

information below the list. This information changes as you select different assets to reflect the chosen asset.

Asset	Start	Finish	Duration	Scheduled
ILB ASSET 1	17 APR 2006 16:28:38	17 APR 2006 16:28:40	0	<input type="checkbox"/>

Task Failure	Repair	Component	Mode	Root Cause	Primary
01	CORROSION				<input checked="" type="checkbox"/>

Asset Closeout Summary view

If you need to add additional assets, click the New icon or anywhere the next available line in the Asset list. You can select Asset Type and Asset ID from the list of values.

Start / Finish - To log downtime against the Asset, enter the date and time when work was started and finished.

Duration - The system calculates the duration based on the Start and Finish times you enter. However, you can change the Duration value if necessary.

Scheduled? - Indicate if the asset was scheduled downtime by checking the “Scheduled?” indicator.

Task - The Task field contains the description of the task.

Failure - The Failure field shows the type of problem that required the work on the asset.

Repair - The ‘Repair’ field shows the type of work done on the asset.

Component - The ‘Component’ field indicates which component of the asset was worked on. This is not the same information as that used for tracking components in the Component ID module of the Resource subsystem.

Mode and Root Cause - Use of these fields varies from organization to organization.

Primary? - The Primary check box indicates whether or not the problem was the primary reason the asset required work.

Task Description - The Task Description field contains the description of the task.

Task Failure Summary

The Task Failure Summary view displays Failure information for each task individually.

The screenshot displays the 'Task Failure Summary' view for Work Order 0600139. The interface includes a search bar with 'Work Order 0600139' and 'Renewal work' entered. Below the search bar is a table with the following columns: Task, Asset, Failure, Repair, Component, and Further Action. The table contains one row with the following data: Task: 01, Asset: E ILB ASSET 1, Failure: CORROSION, Repair: (blank), Component: (blank), Further Action: (blank). Below the table are several input fields: Asset Description (Pumps in the ILB facility.), Required (blank), Description (blank), Request (blank), Root Cause (blank), Failure Mode (blank), and Primary? (checked).

Task Failure Summary view

Task - The Task field contains the description of the task.

Asset - If you need to check detailed information about the asset associated with the task, you can double-click the asset id number. The system opens the Asset module and the appropriate Asset record. You can then close the Asset module or use the Window menu to return to the Work Order Closeout screen.

Failure - The Failure field shows the type of problem that required the work on the asset. You can update the field by selecting a code from the list of values.

Repair - The Repair field shows the type of work done on the asset. You can update the field by selecting a code from the list of values.

Component - The Component field indicates which component of the asset was worked on. This is not the same information as that used for tracking components in the Component ID module of the Resource subsystem. You can update the field by selecting a code from the list of values, which is controlled by the Component ID module in the Resource subsystem.

Further Action - The Further Action field is used to indicate whether there is further action needed and, if so, what kind of action is required. An example would be an inspection after a period of operation. You can update the field by selecting a code from the list of values. When you select from the list of values, the system enters the associated description in the Description field immediately below the Required and Further Action fields.

Required - If there is a deadline for further action, the date should be indicated in the Required field.

Description - If necessary, enter a description of the additional action that must be taken. If you use a code in the Further Action field, the system places the description associated with the code into the Description field. You can use this basic description as it is, or you can adjust it.

Request - If the Finish Task process identified the need for Further Action including a new subsequent Work Request, the system shows the new Work Request number here.

You can review the new Work Request by double-clicking the Work Request number in the field. The system opens the Work Request module and the appropriate Work Request record. To return to the Asset Summary screen, close the Work Request module. You can also use the list of values associated with the field to select a different Work Request.

If the field is blank, no new Work Request has been initiated. If you need to initiate a new Work Request, you can double-click the empty 'Follow-up Request' field. The system opens the Work

Request module and a blank Work Request record. For detailed information on how to create a new Work Request see the User Guide section on the Work Request module.

Root Cause - Use of this field varies from organization to organization. It is controlled by a code table defined by your business processes.

Failure Mode - Use of this field varies from organization to organization. The field has an associated list of values that is controlled by a code table.

Primary? - The Primary check box indicates whether or not the problem was the primary reason the Asset required work.

How to Close a Work Order

After you enter the closeout information the record status is ready to be set to Closed.

1. **Open the appropriate Work Order.**
2. **Set the status to Closed.**
The system asks if you want to save your changes.
3. **Click the Save button.**
The system saves the status change and records your user name and the date in the appropriate fields on the Work Order Closeout screen.
4. **Click Save.**

How to Review Work Order Closeout Information

Depending on the procedures within your organization, the person responsible for this step can be a reviewer who authorizes that the work order is ready to be closed, or it can be the person who actually sets the status to Closed.

1. **Open the appropriate work order.**
2. **Select Closeout Summary from the Views list.**
You may want to review Task Summary, Asset Summary and Task Failure information before continuing. You can select these options from the Views list after the Closeout Summary view opens. If you open these other views, select from the Views list again to return to the Closeout Summary view before continuing.
3. **Enter your name in the 'Signoff By' field and enter the appropriate date.**
4. **Review the 'Retain' selection and change it if necessary.**
The work order status is now ready to be set to 'Closed'. The work order can be closed by someone other than the person who reviewed the closeout information (the person indicated in the 'Signoff By' field).

PM Schedule

This view shows the Preventive Maintenance schedule for the asset on the Work Order.

The screenshot displays the Oracle Utilities Work and Asset Management V1.7.15 (v8.24) interface. The main window title is "Work Order 0700182 PM Schedule". The interface is divided into several sections:

- Search Options:** A panel on the left with a "Results" section.
- Work Order:** A section below "Search Options" with a "Views" dropdown.
- Additional Data:** A section below "Views" with a "Notes" dropdown.
- Approval Log:** A section below "Notes" with a "Cost Summary" dropdown.
- Closeout Summary:** A section below "Cost Summary" with a "Activity Log" dropdown.
- Budget Overage:** A section below "Activity Log" with a "PM Schedule" dropdown.
- Warranty:** A section below "PM Schedule" with a "Associated Service Re" dropdown.
- Actions:** A section below "Associated Service Re" with a "Create Bookmark" dropdown.
- Audit Log (Header):** A section below "Create Bookmark" with a "Credit PM" dropdown.

The main content area shows a table of PM Masters:

PM	Description	Asset	Next Scheduled	Last Completed
000129	pm master for daily schedule	E RLV_ASSET2	17 OCT 2005	10 OCT 2005
000130	pm master for daily schedule	E RLV_ASSET2	05 APR 2006	29 MAR 2006
000131	pm master for daily schedule	E RLV_ASSET2	07 SEP 2001	02 SEP 2005
000132	pm master for daily schedule	E RLV_ASSET2	14 OCT 2005	21 SEP 2001
000133	pm master for daily schedule	E RLV_ASSET2	14 OCT 2005	
000134	this is a description	E RLV_ASSET2	10 JUN 2002	13 SEP 2005
000899	this is a pm master to cycle	E RLV_ASSET2	13 JUN 2006	13 DEC 2005
000913	this is a pm master to cycle	E RLV_ASSET2	21 DEC 2006	13 DEC 2006

Below the table, there are two detailed panels:

- Work Order Assigned to Forecast:**
 - WO: P 0500774
 - Status: Active
 - Status Date: 15 OCT 2005 PM Master Override Not Allowed
 - Benchmark: B000072
 - Description: This is a benchmark for the new PM Master
- PM Cycling Info:**
 - PM Cycle No: 14
 - Schedule Basis: CALENDAR_A
 - Interval: 1
 - Units: WEEK
 - Last PM: 0
 - PM Meter Interval: []
 - Meter Units: []
 - Next PM Due: 0
 - Current Meter: []
 - Current Meter Date: []

At the bottom, there is a "Tasks" table:

Task	Status	Asset	Task Description
01	ACTIVE	E RLV_ASSET2	This is a benchmark for the new PM Master
02	ACTIVE	E RLV_ASSET2	This is a benchmark for the new PM Master

PM Schedule

Use this information to help determine if the work completed has satisfied a PM Master scheduled to cycle soon. If so, and if you have the proper responsibility in your User Profile, you can select Credit PM from the Actions list to reschedule the PM Master and credit a regular Work Order for having satisfied the requirements for the current maintenance cycle.

The information in the upper portion of the screen describes the PM Masters associated with the asset. When you select a PM Master by clicking anywhere on the line, the fields in the lower section of change to display information about Work Orders assigned to the PM Master and additional cycling information. If a Work Order has been generated and has not been completed, the Work Order number is displayed. Otherwise, the Next Schedule Date is listed without a Work Order number, indicating that a Work Order will be generated for that date.

A check in the PM Master Override Not Allowed box indicates that you cannot use a regular type Work Order to satisfy the PM Master.

Credit PM

If you have the proper responsibility in your User Profile, you can use the Credit PM action to credit a regular work order as having satisfied the requirements for a PM Master. The Cycle PM action is available on the PM Schedule view of the Work Order and Work Order Task modules.

To ensure that batch processing properly records readings for the asset and updates the PM schedule, you must credit the PM before finishing the Work Order. Therefore, to use the Credit PM action, at least one Work Order Task referencing the asset on the Work Order must be in Planning, Approved or Active status.

You cannot use the Credit PM action if the PM already has an active PM (P-type) Work Order associated with it. In this case, you will need to cancel the existing PM Work Order and wait for the PM finish batch processing to run. You can then use the Credit PM action to assign another Work Order to the PM.

To credit a Work Order to a PM, highlight the PM in the PM Schedule view for the Work Order you wish to credit and select Credit PM from the Actions list. The system inserts the current Work Order number and type into the PM Forecast and updates the scheduling information.

Caution: The scheduling information for Calendar Anniversary and Runtime Interval type PM Masters will not be reset. You can credit regular Work Orders as having satisfied these types of PM Masters, but you should be aware that the resulting interval until the next PM may exceed your requirements.

Work Order Activity Log

The Work Order Activity Log view is populated by the system when the Work Order or Task status changes. You can also enter and maintain Activity information related to a Crew, Backlog Group, and Event. Entries referencing a Crew are also accessible through the Crew Activity Log module in the Maintenance subsystem.

Budget Overage

This view displays account/expense code combinations that have been caused to go over budget by the approval or processing of the current record.

Budget amounts are entered in the Period Costs view of the Account module.

Account Number	Expense Code	Document Amt	Budget Amt	Budget Balance
RLW1-N-PROCESS-NONE-WORK ORDER-001	00006	1,157.36	.00	-642.12
RLW1-N-PROCESS-NONE-WORK ORDER-001	00003	2,095.00	.00	-2,100.00

Account Number	Document Amt	Budget Amt	Budget Balance
RLW1-N-PROCESS-NONE-WORK ORDER-001	3,252.36	.00	-5,400.89

Budget Overage view

Note: For more information on Budget Checking, please refer to the User Guide titled Accounts. The Budget Checking by Document and Budget Checking Business Rules control this functionality.

Please refer to the topic on [Budget Checking](#) for more information on budget functionality.

Task (Summary) and Task (Detail)

Select Task (Summary) or Task (Detail) from the Views list to enter or review information regarding the specific tasks associated with the Work Order. The information contained in these views can also be found in the [Work Order Task](#) module. For an in depth discussion of the Task windows please see the User Guide section on Work Order Tasks.

Warranty

The Warranty view displays warranty information for assets and components referenced on the work order. Each line identifies an asset or component, along with the associated warranty, including manufacturer, warranty ID and description, expiration date and status. You can use this information to identify work that may be under warranty.

Asset ID	Component ID	Mfr.	Description	Warranty ID	Warranty
RVM_VWARRANTY_01		ACME	ACME TRANSFORMER	070000002	1 st Warranty in QA1 7.15
RVM_VWARRANTY_01		NONE	NONE	070000010	Sam's Electronics Warrant

Warranty view

The system gathers data for this view from the Asset and Component modules and the fields cannot be modified. Before warranties can be associated with assets or components, the appropriate Warranty record must first be created in the [Warranty](#) module.

Associated Service Requests

This view provides a cross-referenced listing of Service Requests that are related to the Work Order.

Number	Status	Problem Description	Requested Date	Finished Date
0100002	Closed	Check to see what might have caused the outage		09 FEB 2001
0100010	Closed	This is a description		
0300002	Work Order	Branwen's Service Request 2		

Problem Address

Contact: MacDonald, Richard Call Back

Address: 2121 North California Blvd. Suite 800

Cross Street:

City/State/Zip: Walnut Creek, CA, 94596

Work Phone: (925)935-7670 106 Home Phone:

Problem Code: OUTAGE Problem caused by an outage

Associated Service Request view

The system automatically inserts the Service Request number in the Associated Service Requests view of the Work Order record when the Create Follow-Up Work Order Action is used from the Service Request record. You can also associate Service Requests manually by selecting the Service Request number from the list of values in the Number field. The system populates the remaining fields automatically.

Once you create an association on the Work Order record, the system automatically creates the association in the view of the Service record. The address information in the lower section of the screen is copied from the Service Request record and cannot be updated in this view. Double-click the Work Order Number field to open the Work Order listed.

How to Manually Associate a Service Request to a Work Order on the Work Order Record

This process allows you to link Service Requests that are related in some way and that you want to cross-reference.

1. **Open the appropriate Work Order record.**
2. **Select Associated Service Requests from the Views list.**
3. **Place the cursor in the first empty line.**
4. **Enter the Service Request number for the Service Request you want to associate.**
5. **Click the Save icon.**

The system adds the association to this record as well as to the record for the Service Request that you just added to the list.

Work Order Actions

The main actions executable from the Work Order module provide the ability to create a Benchmark Work order, Update a Work Order from an existing Benchmark, and update an existing Benchmark from a Work Order. In order for Update from Benchmark and Add Tasks from Benchmark to appear on the Actions list, you must have the UPDATE WO FROM BENCHMARK responsibility function. You can also print the work order alone, the work order with attachments, or print a PM Route report for route stops related to the work order.

How to Create a Benchmark from a Work Order

If you produce a Benchmark Work Order from a Work Order (using the Create Benchmark from a Work Order Action), the Change Request data is not copied over from the Work Order and Tasks

If you have created a Work Order for work that you know will have to be performed again in the future and will therefore require another Work Order, you can create a sort of template, or Benchmark Work Order, from which you can create numerous additional Work Orders.

1. **Open the Work Order you want to copy**
2. **Select Create Benchmark from Work Order from the Actions list.**

In order for Create Benchmark from Work Order to appear on the Actions list, you must have the UPDATE BENCHMARK WO responsibility function.

3. **Click the OK button.**

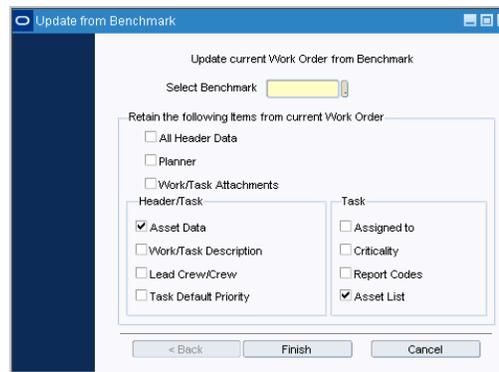
The system notifies you that it has created a Benchmark and gives you the number for the new Benchmark.

Once a Benchmark is created from a Work Order each record is independent and changes to either the Work Order or the Benchmark will not affect the other record. However, these two actions allow you to update the Work Order with changes made on the Benchmark and vice-versa.

How to Update a Work Order from a Benchmark

1. **Select Update from Benchmark from the Actions list.**

The Update from Benchmark action is not available if the work order has a task in active status or if you do not have the UPDATE WO FROM BENCHMARK responsibility function.



2. **Enter the benchmark work order number to use as a template or select the number from the list of values.**
3. **Select the information that you want to retain from the current work order.**
You can retain data such as the asset information, work or task attachments, work or task descriptions, crew information, criticality, and report codes. All of the other information will be copied from the benchmark to your work order.
4. **Click Finish.**
The system returns you to the work order with the changes applied.

How to Update a Benchmark from a Work Order

If you have the UPDATE BENCHMARK WO responsibility function in your User Profile, and the work order you are working on was created from a benchmark, you can select Update Benchmark WO from the Actions list to update the originating Benchmark record with newly entered information on the existing Work Order record. You can find the Benchmark record ID in the Additional Data view.

1. **Open the appropriate PM Master record.**
2. **Select PM History from the Views list.**
The PM History view opens showing a summary of Work Orders related to the PM Master.
3. **Double click the Work Order you want to use as a model for the Benchmark.**
The Work Order module opens and displays the record you selected.
4. **Select Update Benchmark WO from the Actions list.**
The system replaces the Benchmark Work Order header, Tasks, and associated details with the corresponding data from the Work Order, and displays a confirmation message.
5. **Click the OK button to return to the Work Order.**

How to Print a PM Route Report from a Work Order

Select Print PM Route Report from the Actions list to print the PM Route report for route stops related to the work order. The report is printed directly to your default printer. You can also run the PM Route report (S_RPT058) from the Reports module.

1. **Open the appropriate Work Order record.**
2. **Select Print PM Route Report from the Actions list.**
Stops on the route that reference this work order are printed on the report.

You could give the printed report to the person(s) performing the work. When they have finished the work, use the information they entered on the report to log back into the system.

Emergency Work Orders

You can initiate an Emergency Work Order by setting the Init Work Order Type field on a Work Request to Emergency, by executing an action in the Asset module, or by selecting the action from the home page. In order to use the actions you must have the proper responsibilities set in your User Profile.

Emergency Work Orders begin with an “E” and are created in Active status so that Approval processing is not necessary to activate the work. When an emergency work order is created, the work order is automatically added to the specified crew's backlog or schedule. The rest of the information on this type of record is the same as on a standard Work Order.

Chapter 5

Work Order Task

Work orders consist of one or many tasks that must be completed in order to complete the work. You can plan individual tasks including parts, labor, and direct purchase requirements in the Work Order Task module. If you choose not to plan the work, the system automatically creates these records when parts are issued or returned, labor is charged, and requisitions or purchase orders are written against the work order tasks.

Work Order Task Records

Work Order Task tasks can be accessed directly from the Maintenance menu or from the Views list in the Work Order module.

The screenshot displays the Oracle Utilities Work and Asset Management V1.9.0 (v19-58) interface for 'Work Order Task 1100012 Task 02'. The window title is 'Work Order Task 1100012 Task 02' and the date is '12 April 2011'. The interface is divided into several sections:

- Search Options:** Includes fields for Work Order (1100012), Task (02), Seq (1), Status (Planning), and a date field (JAN 11 2011 01:46:07).
- Results:** Shows the description 'KATY'S WORK ORDER #1'.
- Work Order Task:** Contains fields for Class (SERVICE), Category (R&D), Asset ID (ILB ASSET10), Component ID, Process, Planner (ILB), Department (ILB1), Area (LBA1), Account No. (ILB1-Y-PROJECT-COMP-DIRECT PO-998), and Vehicle Codes.
- Phase:** Set to 'INITIAL REVIEW (PHASE 1)' with a 'Held for Parts' checkbox.
- Required By:** 'JAN 13 2011' with a '% Comp' field.
- Downtime:** 'N' with 'Type' set to 'TURNAROUND' and 'Hours' set to '50.00'.
- Priority:** '8' with a formula '(4 * 2) + 0'.
- Crew/Backlog:** '4094' with a 'Shop' field.
- Assigned To:** A text field.
- Work Region:** A text field.
- Time:** A text field.
- Trips:** A text field.
- Report Codes:** A text field.
- Request:** A text field.
- Service Request:** A text field.
- Deficiency Tag:** 'DEF-TAG-001'.
- WBS:** A text field.

The left sidebar contains a 'Views' section with a list of options: Notes, Attachments, Asset Data, Asset List, Cost Summary, CU Location (List), CU Location (Detail), Location Worksheet, CU Worksheet, Discount Worksheet, and Contractor Supplied. Below this is an 'Actions' section with options: Create Bookmark, Audit Log (Header), Create Permit, and Search for Duplicate P.

The screenshot displays the Oracle Utilities Work and Asset Management V1.8.0 (v181-19) interface. The main window title is "Work Order Task 0700416 Task 01". The interface includes a search bar, a navigation pane on the left with sections for "Search Options", "Results", "Work Order Task", "Views", "Actions", and "Timesheet". The main content area shows the following details for the selected task:

- Work Order:** 0700416, **Task:** 01, **Seq:** 1, **Status:** Active, **Date:** JUL.31.2008 16:14:10
- Description:** This asset is under warranty.
- Asset ID:** ILB ASSET 1, **Description:** Pumps in the ILB facility.
- Component ID:** ILBCMP2, **Description:** Replacement component for ILBCMP1
- Process:** ILB PROCESS 5, **Department:** ILB1, **Area:** ILBA1
- Planner:** GST, **Account No.:** ILB1-Y-BUDGET-NONE-NONE-009
- Checkboxes:** Safety, ISO Related, Health, Environmental, Run to Failure
- Phase:** WORK STARTED, Held for Parts, **Job Code:** [blank]
- Required By:** [blank], **% Comp:** [blank], **Reason:** [blank]
- Downtime?** N, **Type:** [blank], **Hours:** [blank], **Action:** [blank]
- Priority:** 0, **GE:** [blank], **Shop:** [blank], **Reading Date:** [blank]
- Crew/Backlog:** [blank], **Assigned To:** [blank], **Current Reading:** [blank]
- Work Region:** [blank], **Time:** [blank], **Trips:** [blank], **Meter:** MILES, **Life to Date:** 12345678
- Report Codes:** [blank], **Request:** [blank], **Service Request:** [blank], **Deficiency Tag:** [blank]

Work Order Task record

Work Order Task Statuses

Individual work order tasks can have various statuses, including Planning, Approved, Rejected, Active, Finished and Closed. Other than Finished and Closed, these statuses are maintained by the system and cannot be updated.

When you set the work order status to Active, the system sets the status of all the Tasks to match. If you have the appropriate function in your responsibilities, you can also change the status of an individual work order task from Approved status to Active status without changing the status of the work order itself. You may want to do this to allow some investigative work to begin before the work order is active.

When you add tasks to a work order that is already in Active status, settings in the Work Order Processing business rule determine if the tasks are added in Active or Planning status. If the new tasks are added in Planning Status, the status of the main Work Order record is also set to Planning and must be routed for approval.

When you have set all the Task statuses to Finished, the system sets the work order status to Finished. Finished work orders can be reviewed and manually set to Closed. Setting a task status to Finished triggers the Finish Task process. For more on this process, see the section titled Finishing Work Order Tasks.

If the Auto Close? Indicator is set on the work order, batch processing sets the status of the work order to Closed after the number of days defined in the WO Aging business rule.

You can also assign phases to your work order tasks to add an additional level of planning. The Phase field is located at the beginning of the second section on the Work Order Task record.

When a Work Order Task status is set to Finished you have the option of indicating follow-on work needs to be completed. This option is only presented if the Task record includes an Asset ID. Therefore, when possible, if a Task is for work on an asset, that Asset ID should be recorded on the asset record.

The following fields are included:

Work Order - The system supplies the work order number for the task.

Task - Tasks are ordered numerically as they are entered and assigned a task number.

Seq - Sequence number is used to indicate the order in which the tasks should be completed. The Task Summary view of the Work Order window shows the tasks in order by their sequence numbers.

Description - The Description field contains a general description of the task.

Class and Category - The Class and Category fields contain codes to describe the type of work to be done. Used together, these fields provide a more complete labeling convention for the work, if needed. The system automatically enters the Class and Category associated with the work order, but you can overwrite this information as necessary. Since both fields are available on the Search Options screen, they can be useful when searching for Work Order Task records.

Asset ID and Component ID (and Descriptions) - The system automatically enters the Asset ID and Component ID associated with the work order, but you can overwrite this information if a different asset is to be worked on. The system also supplies descriptions for the asset and component. If you enter an Asset ID, you can only select components associated with that asset. If you do not enter an Asset ID, or select a Function instead of an Asset ID, you can select a Component ID from a list of all components not associated with assets. The system generates this list only if the Enhanced Material Disposition key in the Repairables Processing rule and the Auto-Populate Instld Component in the Work Order Processing rule are set to ON.

More than one Asset can be associated to the task by selecting Asset List from the views list, and entering other Assets there. Please see the Asset List section for more information.

If there are permit requirements with the Assoc box checked for any asset entered, the system automatically adds that requirement to the Permits view.

Process, Department, and Area - The Process, Department and Area fields represent layers of the Asset hierarchy and indicate where the work order costs will roll up. If you supply an Asset ID, the system provides the associated Account number(s), Department(s) and Area(s) from the Asset record in the Asset module of the Resource subsystem. If the work order was generated from a work request these fields are completed by the system using the information supplied on the request. These fields can be modified when the record is in planning status, if needed.

Planner - The planner is defaulted from the Work Order record or from the Asset record if an asset is entered. It can be changed if necessary. This field represents the code for the person responsible for managing the Work Order Task. Planner codes are defined in the Planner business rule.

If the Work Order is created by batch processing from a PM Master, the system supplies the planner code from either the asset or the benchmark depending on settings in the PM Master module.

Once a planner code is assigned to the work record, Planners can use the Work Planning Tool on the home page to review and manage work.

If the Alerts business rule is set to do so, the planner indicated here is notified when parts are received for the work order task.

Account Number - The Account field represents where the charges for the Work Order will roll up if the account is different from the account on the Work Order. The system offers the account number associated with the work order or the asset. If asset information is available, you cannot change the account number without changing the asset. If you supply a different Asset ID in the Asset field, the system provides the associated account number, department and area from the Asset record in the Asset module of the Resource subsystem. When only one account is associated with the asset the system automatically enters that account number in the Account

field. When there are additional accounts for the asset, the system provides a list of values displaying all the accounts associated with the asset, so that you can select the appropriate one.

Safety, ISO Related, Health, Environmental - These check boxes are checked by the system according to the settings on the record for the asset that is indicated in the Asset ID field. These check boxes allow users to easily recognize if any equipment on a Work Order Task has been identified as requiring special considerations for ISO, Safety, Environmental or Health reasons so that proper procedures, if necessary, are used in planning and working the job.

Run to Failure - Place a check next to Run to Failure to indicate that the Asset should be used until it dies. A good example of this concept is the use of a light bulb. This check box is for information only and does not include any business processing. It is, however, copied to work order tasks when the asset is populated on the task. Having the information available at the task level is useful for metrics, especially for comparing the number of failures when the Asset was on a preventive maintenance program and was not.

Vehicle Codes - These three fields are controlled by linked code tables that can be set up by your organization to reflect VMRS (Vehicle Maintenance Reporting Standard) codes. The first field represents “system”, the second represents “assembly”, and the third represents “component”. The code tables for the Job Code, Reason, and Action fields below can also be set up and used as a part of this reporting standard.

Phase - When the Work Order Task record is created the system assigns the phase according to the settings in the Work Order Task Planning business rule. As work progresses, the Planner can change the Phase according to what stage the task is in the work process. When the Phase is changed the system makes an entry in the Work Order Activity Log.

Held for Parts - The system maintains the Held for Parts indicator. If there are not enough parts on hand in the storeroom for any of the parts estimated in the Parts view, the system checks the Held for Parts box until the part is restocked.

Required By - The Required By date indicates when the specific Task needs to be completed.

% Comp - The % Complete field is informational only. For tasks that take some time to finish, this field can be used to indicate how much of the task is complete.

Downtime?, Type and Hours - If the work to be done for the Task requires asset downtime, check the Downtime box, enter a Downtime Code, and the estimated number of Hours of downtime required.

Priority - Priority indicates the overall importance of the task. It is calculated based on the three fields located to the right of the Priority field: Asset Criticality, Work Order Task Priority, and Adjustment to the Priority.

Note: Settings in the Criticality Override business rule determine whether or not users can modify the criticality on work records that reference the asset.

Asset Criticality - The criticality of the work. This value is copied from the Asset record and cannot be modified.

Work Order Task Priority – The Work Order Task Priority indicates the importance of the task and is copied from the Work Order header record. You can update this field on the Task level by selecting a number from the list of values, which is controlled by Code Table 41. The Work Order Task Priority number ranges from “1” through 9 where “1” is not critical and “9” is very critical. This value is then multiplied by the asset criticality to produce the overall priority.

Adjustment to the Priority - To increase the Priority even further, you can enter in an adjustment number, which is added to the overall Priority number.

Crew/Backlog - You can also enter a Crew that returns a default Backlog Group. The Backlog Group can be overwritten. The scheduling modules make use of this information to enable you to search work backlogs by crew and/or backlog group.

Note: The associated lists of values for the Crew and Backlog fields are controlled by the Crew module and Code Table 110 respectively.

If you want to assign ONE crew to the task, enter that crew in the Crew/Backlog field on the Work Order Task record. If you want to assign multiple crews to the task, select Scheduling from the Views list, and enter Crews in the fields provided. When you enter a crew here, the system automatically creates a scheduling record in the appropriate scheduling module assigning the date that you enter in the Date field. If you use MS Project, and you want the information that you enter to be exported to MS Project, or if you want to assign crafts as well as crews enter your crew assignments in the Assignments view.

Shop - Use this field to indicate the shop location where the asset will be worked on. Shop codes are defined by your organization in code table 12.

Assigned To - If your organization generally assigns work order tasks to one person, enter the name of that person in this field. Maintenance employees can then enter their name in the Assigned To field of the Work Order Task Search Options screen to find all of the Tasks that they are assigned to complete.

If you need to assign the Work Order Task to more than one person, and make assignments available to the Project Management interface, select Assignments from the Views list.

Work Region - Work Region and the two associated fields provide a way to account for travel time when planning and scheduling the task. Regions are defined for your organization in the Work Order Travel Time business rule, along with approximate travel times for one-way travel to or from the site.

Time - When you select a Work Region, the system will supply the one way travel time defined in the Work Order Travel Time business rule. If no value is supplied, you can enter an appropriate time per trip. If you update the time, the system updates the original and revised estimates for each labor record in the Labor Requirements view.

Trips - The number of one-way trips planned to and from the work region. If you are planning that the crew will travel to the site once and return once, the number of trips is two. If you update the number of trips, the system updates the original and revised estimates for each labor record in the Labor Requirements view.

Job Code, Reason, Action - These fields are controlled by linked code tables that can be set up to provide additional detail into the work specifications for the asset.

Reading Date, Current Reading, Meter Units - These fields can be used to record the date, the reading taken from the asset, and the units for the reading. The reading can be any numeric entry. If you enter the Current Reading field first, the system automatically fills in the Reading Date field with the current date.

The current reading entered here is NOT transferred to the Runtime Entry module. To record the meter reading properly, be sure to enter it in the Runtime Entry module as well.

Life to Date - This value is maintained by the system as the vehicle's total meter value to date. This value is taken from the Runtime module.

Report Codes - Report Codes allow you to place a variety of grouping codes on Tasks so that you can run reports against the Tasks, grouping or identifying them by the entered Report Code. The system uses the Validate Task Report Codes business rule to verify the codes entered. A list of values controlled by Code Tables 281 through 285 is associated with each Report Code field.

See the discussion of the Labor Requirements view for more information on Planning Travel Time.

Request and Service Request - If a Work Request or a Service Request generated the task the system enters the record number in the appropriate fields. You can double-click either field to open the corresponding record.

Deficiency Tag - Deficiency Tag allows you to enter a tag number identifying the breakdown cause. This field is used only for informational purposes and does not affect the system elsewhere.

WBS - The work breakdown structure (WBS) field can be used to refer to the WBS tool used to define and group a project's discrete work elements (or tasks) in a way that helps organize and define the total work scope of the project. Use of this field will depend on your individual business practices.

Creating Work Order Task Records

Every work order has at least one task because the system creates a task when the Work Order record is first saved. After you have created the Work Order, you want to at least enter a description, assign an account number, and enter an Asset ID as appropriate for the Task that was automatically created. You also have the option of adding additional tasks for the Work Order either through the Work Order module or directly in the Work Order Task module.

Once your Tasks are entered there are several Work Order Task views that can also be used in creating task records and planning Work Order Tasks.

For example, the Scheduling and Labor Requirements views can be used to plan labor commitments, and the Materials view can be used for planning Storeroom commitments. These View windows are described in more detail below.

How to Create a New Work Order Task Record

Every work order has at least one task because the system creates a task when the Work Order record is first saved.

- 1. Open the Work Order Task screen.**

You can do this by going to the specific work order and selecting Task (Summary) or Task (Detail) the Views list, or you can Open the Work Order Task module directly.

- 2. Click the New icon.**

The system creates a blank record in Planning or Active status, depending on the status of the work order.

- 3. Enter a description of the task.**

- 4. Select the Account Number from the list of values, or**

- 5. Enter the Asset ID from the Lists of Values.**

The system offers the account number associated with the work order, but you can overwrite this number if a different account is more appropriate.

If you choose to enter an asset, the system provides the account number associated with that asset.

The charges accrued for the individual task will roll up through the assigned task account number.

If the work order is being charged to a Project/subproject, the system offers account number for the subproject. You can overwrite this account number by picking one from the list of values, which is controlled by the Account module of the Resource subsystem.

The charges accrued for the individual task will roll up through the assigned task account number.

- 6. Enter any appropriate additional information.**

Note that there are several work order task views that can also be used in creating task records and planning work order tasks.

For example, the Scheduling and Labor Requirements views can be used to plan labor commitments, and the Materials view can be used for planning Storeroom commitments.

7. Click the Save icon.

Work Order Task Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Asset Data

Additional Asset and Component ID information can be accessed by selecting Asset Data from the Views list. You can enter Building, Location, and Position. The information in the address section is copied from the Asset record if the asset uses an address location. You can update the address shown, but the updated information will not copy back to the Asset record. The remaining asset and component information is returned from the associated record and cannot be overwritten.

The screenshot displays the Oracle Utilities Work and Asset Management V1.7.15 (v8.37) interface. The main window title is "Work Order Task 0400334 Task 01 Asset and Component Data". The interface is divided into a left-hand navigation pane and a main data entry area. The navigation pane includes sections for "Views" (Notes, Attachments, Asset Data, Asset List, Cost Summary, Items Worksheet, Delivery, Scheduling, Work Order Permit, Material (List), Material (Detail)) and "Actions" (Create Bookmark, Audit Log (Header), Timesheet, Direct Charges, Activity Tracking, Update Distributions). The main data entry area is titled "Work Order Task 0400334 Task 01 Asset and Component Data" and contains the following fields:

- Search Options:** Building, Location, Position, Change Request Required? (N), Change Req No, PM Route/Date.
- Asset:** Specification No, Type, Category, BOM ID (ILBBOM1), Point ID.
- Component:** Specification No, Type, Category, BOM ID.
- Address:** Address, Suite, Cross Street, City/State/Zip, Offset, Direction, From Asset ID, To Asset ID.
- Vehicle Information:** Class, Engine Size, Year, Engine Desc, Make, Tire Size, Model, Transmission Size, License No, Serial No, Warranty Date.
- GASB Reporting:** Renewal Work? (N).

Asset Data view

The Change Request Required? Fields - If the Work Order Task is in support of a Change Request, you can enter Y and select a Change Request number manually. Otherwise, the system automatically enters an N in this field. Or, if the Task was produced automatically from a work request that included Change Request information, the system provides the information from the Work Request record.

The system lists all Work Order Tasks (and Work Requests) associated with a Change Request on the appropriate record in the Where Used view of the Change Request module in the Resource subsystem.

Renewal Work - Place a Y in this field if the work requested will restore or replace the asset towards its original size, condition, or capacity. The default is N.

Note: The default for the Renewal Work field is No, however, if your organization generally performs Renewal Work on assets, and you would prefer that the default be Y, you can re-configure the default in the Modules Administration - Forms module.

If the Work Order was created from a Work Request, this field is carried over from the Work Request record. It can be modified if necessary. The indicator cannot be changed if the work Request is in Rejected or Canceled status.

Asset List

Use the Asset List view to list the assets that are related to the work and the percentage split of the associated costs. The Asset List cannot be modified once the record status has been set to Closed. Select Balance Asset Distribution to have the system automatically readjust the percentages to evenly allocate costs across all listed assets.

Asset ID	Description	Component ID	%	Cost
			100.00	

Asset List view

Assets Have Been Posted & Posted Date - Once the work order task is closed, the system processes the assets listed and applies costs throughout the system appropriately. When the assets are posted the system checks this box.

The system also automatically enters the date and time that the Asset(s) were posted by the system.

Asset ID - The Asset ID can be selected from the list of values associated to this field. If a warranty or permit is associated to the asset, the system displays an alert in the same way as it does for assets entered on the header. If an asset with permit requirements is entered here the system automatically populates the Permits view with those permit requirements if they do not already exist in that view.

If there are construction assets or if there is a PM Route indicated on the task, additional assets cannot be entered in the Asset List view.

Description - The system automatically enters the description of the Asset as it appears on the Asset record. This information cannot be modified.

Component ID - Installed components for the asset can be entered in this field. Components cannot be entered without first entering an Asset.

The Work History and Cost Rollup values are reflected back to the component as applicable.

% - The system enforces a percent split total of 100% when new assets are entered. Select Balance Asset Distribution from the Actions list to evenly distribute the percentage split across all assets listed on the service request.

Cost - This display-only value reflects costs as they are posted to the Asset and Component according to the percent split indicated.

Cost Summary

The Task Cost Summary view presents summary cost information for the Work Order Task. Costs are listed by Category (Expense). In addition to the fields discussed below, the Cost Summary view may also display overhead costs and information reported by your organization's external financial system, depending on responsibilities in your User Profile.

Cost Category	Original Estimate	Revised Estimate	Committed	Accrued	Actual	Ext. Actual Amount	Ext. Actual Qty.
Direct Stock	.00	30.50	.00	.00	.00	.00	0.
Total	.00	30.50	.00	.00	.00	.00	0.

Cost Summary view

The system uses the sum of the values from the Work Order Tasks to calculate the following:

Original Estimates - Total dollars planned before the Work Order is activated

Revised Estimates - Current dollar estimates

Committed - Direct purchase costs are committed when the Purchase order is issued. Labor costs are committed when work time is posted and batch has run. Stock Item costs are committed when the item is issued on a Checkout Request.

Accrued - Unpaid receipts (at P.O. price)

Actual - Stock issues, posted labor charges, paid invoices.

External Actual Amount and Actual Quantity - If you have the appropriate function responsibility in your user profile, you can use these columns to compare actual amounts and quantities from an external financial system with estimates maintained by Oracle Utilities Work and Asset Management.

If a Work Order Task is associated to a PM Route, the system will use the PM Route Options business rule to determine how costs should be allocated to assets.

Settings in the Variable Expense Codes business rule determine if the Regular and Premium columns display and if they can be updated while the Work Order record is in Planning status.

Duration - Duration is required for L type items. You can enter fractional amounts using up to four decimal places. Duration is the amount of time each person or item is required. If two carpenters are required for eight hours each, the duration is eight.

Total - The system calculates the total cost for the item by multiplying quantity by unit price and by duration. If the unit price rate for carpenters is \$50/hr., the total for two carpenters required for eight hours each is \$800.

Regular - This column holds the expense codes for regular labor, material and other type charges.

Premium - This column holds the expense code for premium labor charges. Premium expense codes do not apply to material or other type charges.

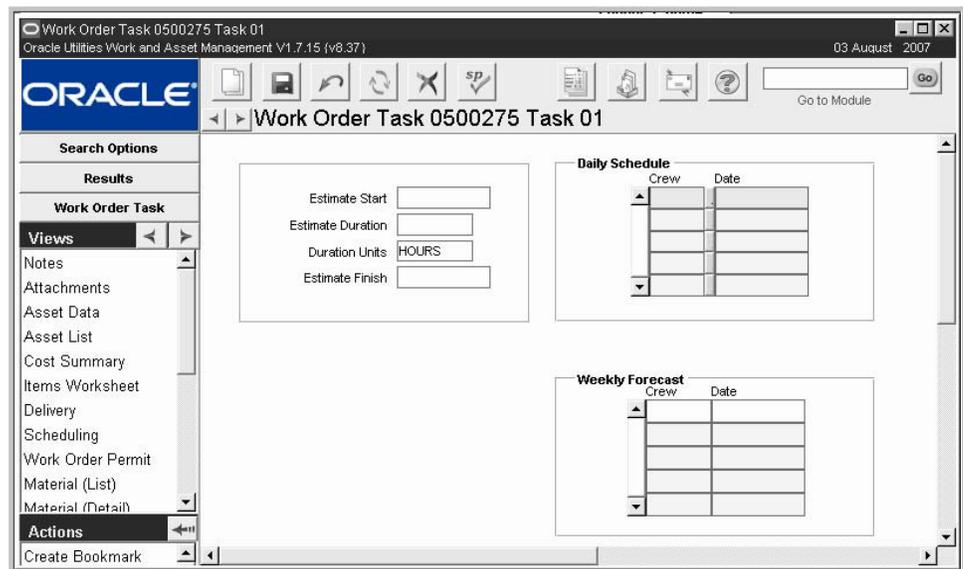
Delivery

Enter Delivery information by selecting Delivery from the Views list. This information is used for delivery of parts from the Storeroom.

Scheduling

This view is mainly to be used as a quick reference to see which crews have been scheduled in either of the scheduling modules. Crews can also be entered here to create a schedule in either module, however adding them in this way does not commit any craft hours. You must use the one of the scheduling modules to level the resources.

If you want to assign ONE crew to the task, enter that crew in the Crew/Backlog field on the Work Order Task record. If you want to assign multiple crews to the task, select Scheduling from the Views list, and enter crews in the fields provided. When you enter a crew here, the system automatically creates a scheduling record in the appropriate scheduling module assigning the date that you enter in the Date field. The scheduling module updated depends on which section in which you enter the crew and date.



Scheduling view

You can also enter Estimated Start Date, Estimated Duration, Duration Units, and Estimated Finish Date, however these estimates are informational only.

Please refer to the User Guide section on Workweek Schedule and Daily Schedule for a complete discussion of your scheduling options.

If you use MS Project, and you want the information that you enter to be exported to MS Project, or if you want to assign crafts as well as crews enter your crew assignments in the Assignments view.

Permits

When you create a work order referencing an asset with permit requirements, the system enters the Permit Type, Template ID, and the Asset ID in this view. You must create a permit using the action to associate a new or existing Permit ID to the Work Order. The Permits that can be selected will be limited to those that use the Template ID indicated and in any status except Released, Closed, or Canceled. Please refer to the guide specific to the Permit module for more information.

If the work order task was created from a work design, the reference ID for the work design is also indicated in this view.

Type	Permit Number	Acquired Date	Template ID	Asset	Work Design
SAFETY			ILB006	E ILB ASSET 1	
SAFETY			ILBTMPL5	E ILB ASSET 1	
SAFE			ILBPT1	E ILB ASSET 1	

Permits view

Work Order Items BOM Pick List

If both the Asset and Component ID have a BOM attached, the BOM for the Component ID is used.

If a Bill of Materials (BOM) list is attached to the Asset ID or Component ID, you can use the list to pick parts that will be required for the Task.

Breakdown	Stock Code	Code	Seq No.	BOM	Qty	Storeroom	Planned Qty
Breakdown		C					
Breakdown							
Breakdown							
Breakdown							

Bom Pick List view

The Bill of Materials number is displayed in the “Breakdown For” field. Stock codes are then displayed for that BOM ID. If a displayed Stock code has a breakdown (subset of parts), you can

access the breakdown by pressing the Breakdown button. You can pick parts from this list just as you would from the top-level list.

To return to the top level of the BOM, press the TOP Level button.

To reserve parts for the Task, enter a Storeroom and Planned Quantity, then save the record. The system either updates or inserts the appropriate Task Parts detail record. You can also enter or modify Parts Requirement records directly through the Task Parts view.

The fields in the BOM Picklist view are the same as the fields in the [Bill of Material](#) module.

Work Order Task Material (List)

This view shows a listing of all Work Order Task materials. To display more information about each item, select Materials (Detail) from the Views list. None of the information on the Task Material List view can be modified directly.

Item	Stock Code	Str	Quantity	Total Price	Required
Desc					

	Quantity	Total Amount
Original Estimate		
Revised Est		
Committed		
Accrued		
Actual		

Material (List) view

The upper section of the Task Material List shows the task description and asset data for the current task. The center section contains a brief description of each material item planned for the task. The lower section of the window shows costs for the craft currently selected in the middle section.

Task Data - The upper section of the Task Material List window shows the task description and asset data for the current task.

Material List - The center section contains a brief description of each material item planned for the task. You may need to use the scroll bar to see the entire list.

Costs - The lower section of the window shows costs for the craft currently selected in the middle section.

Original Estimate - Entries made before the Task is activated are considered estimates. The system populates this field with the Total Price indicated in the Total Price field.

Revised Estimate - This field shows any updates to the estimate before the Task is activated.

Committed - The quantity and cost of the items that have been ordered (appear on a Purchase Order in issued status). These values are updated when the prices are changed on a Purchase Order in updating status.

Accrued and Actual - These fields show the costs for the items. Accrued shows costs that have been committed but not yet invoiced. Actual shows costs that have been invoiced and paid out. These values are updated when the prices are changed on a Purchase Order in updating status.

Material (Detail)

These views allows you to enter and maintain a listing of items that are required to complete the Work Order Task. You can either enter a stock code to request a Storeroom item, or leave the Stock Code field blank to indicate that the item is a Direct Purchase item. For Direct Purchase items and requests for stock items that are not in stores, the system prompts you to enter additional information in the Direct Purchase section so that Requisitions can be created with the appropriate information.

Material (Detail) view

Services are entered as direct purchases. Planners can indicate the Vendor or Contractor who will perform the service in the Direct Purchase view and the appropriate follow-up documents will be created after the requirement is indicated here.

If an item is issued from the Storeroom against the Work Order Task that was not listed as a Material requirement first, the system automatically inserts a Materials (Detail) record without estimates. In the same way, if a Requisition or Purchase Order is written directly against the Work Order Task that did not originally have the Materials planned, the system generates a Materials (Detail) record without estimates on the Work Order Task when the Purchase Order is approved.

If needed, you can also add notes related to the material items using the Material Notes view, selected under Material (Detail) on the Views list. Notes entered in this view will be carried over to any resulting purchasing documents.

The system does not allow you to add duplicate material requirement items to a Work Order Task since this would result in duplicate stock checkouts. If you attempt to add a duplicate record, the system displays an error message telling you that the record already exists. If you need to request more of that item, simply add it to the original record.

Task Data - The upper section of the Task Material window shows the task description and asset data for the current task.

Material Item Section - The screen label for the Material item section changes to indicate the item number of the material items described.

Stock Code, Type, and Storeroom - Enter the stock code for the item needed. The system returns the stock type and populates the list of values for Storeroom with a listing of the storerooms where that item can be found. If you know that this is a non-stock item that will need to be purchased directly leave this field blank. The system will prompt you to enter Direct Purchase information when you save the record.

Please note that it is possible to enter multiple line items for the same stock code.

Item Description - The system enters the description of the stock item as it appears on the Master Catalog record. You can add to this description if necessary. If you do not enter a stock code, enter a description of the item needed here.

Inventory Quantity - If you entered a stock code, this field shows the amount of the item that is available in the storeroom.

Alternatives Button - The system indicates the number of alternate stock items as they are listed in the Master Catalog Associated Stock Codes view. The number of each item available for each stock code is calculated based on the settings in the Available Quantity Calculations business rule. Click the Alternates button to open the alternates window.

The screenshot shows a window titled "Alternate Stock" with a table of associated stock codes. The table has columns for "Associated Stock Code", "Storeroom On Hand", and "Price". The data is as follows:

Associated Stock Code	Storeroom On Hand	Price
ILB	ILB	8 20.00
ILBGO1	ILB	4 15.25
ILBGO1	IB1	5 15.21
ILBGO1	RJB	10 10.00

Below the table, there are fields for "Relationship Type" (set to ALTERNATE) and "Stock Type" (set to INVENTORY). There is also a "Relationship Comments" field and "Insert" and "Cancel" buttons at the bottom.

From this window you can select the alternate stock code and click the insert button to change the stock item on the Material record.

Quantity/Unit - If you entered a stock code, and the information is available in the Storeroom, the system enters the unit of purchase in the unit field. Indicate how much of the item you need for the Work Order Task in the Quantity field. You can modify the units if necessary.

Unit Price - If you entered a stock code, and the information is available in the Storeroom, the system enters the unit price for the item. Otherwise you should enter the estimated price manually.

Total Price - The system calculates the total price based on the Quantity and Unit Price entered.

Required Date - Enter the date that the item is needed. If you enter a date earlier than the Estimated Delivery Date, the system will display a warning. Settings in the Work Order Processing Business Rule determine if this field is automatically defaulted to equal the Estimated Delivery Date.

Estimated Delivery Date - Indicates the date that the item is estimated to arrive or to become available.

Lead Time - The estimated number of days it will take for the Vendor to supply the item after it is ordered. Settings in the Batch Stock Reorder business Rule determine if the Lead Time is retrieved from the Catalog or the Storeroom.

Issued to Date Qty - Shows the number of the item that have been issued to date.

Expense Code - If you entered a stock code, and the information is available in the Storeroom, the system enters the expense code for the item. This field can be modified if needed.

The Variable Expense Codes business rule determines how expense codes are handled in Work Order Task records.

Hazardous - If the item is toxic, place a check in this box. You can classify the type of hazard by selecting from the list of values in the field next to the box. Your organization can add or remove hazard codes by modifying code table 6.

Reported Used Qty - The amount of material reported used by field personnel.

Direct Purchase Section - You must provide Direct Purchase information in the lower section for the screen when you enter a direct type stock code or an item that has no stock code.

PO Item Type - Select the Item Type code from the list of values, for example M for material or S for services.

PO Commodity - Use this field to further describe the type of item. This information can help the Buyer to select a Vendor if you have not included on the request.

Buyer Code - The code for the buyer who should handle your request.

Blanket Contract - If the required items have already been pre-negotiated on a Blanket Contract, enter the contract number in this field.

If the Work Order Processing business rule DIRECT PURCHASE BLANKET option is set to ON, the system will check to see if there are active contracts that list the desired item when the work order task is saved. If it finds one or more contracts, the system requires completion of the Blanket Contract field. If the item is listed on only one active contract, the system supplies the contract's number. If more than one contract might apply, the system opens the list of values so that the user can select the appropriate contract.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Deliver to Location - Use this field to indicate where the materials should be delivered when the shipment arrives.

Vendor and Contact Name - If available, you can enter the Vendor and Contact for the items needed. This information will help the Buyer to process your request more quickly.

Leave the Vendor field blank if you want the system to generate only one requisition for all of your direct purchase items. Otherwise, a separate requisition is created for each Vendor code referenced on the work order task.

Generating only one requisition can be helpful in reducing the number of requisitions that need to be reviewed and approved for work order Material items. Purchasing personnel can then issue

purchase orders to the appropriate vendors once the requisition has been approved. Any Materials that are added after the work order has been activated or any items that reference a Blanket Contract number will have a separate requisition created.

Note: To facilitate this processing, make sure that the Vendor Code is NOT a required field. You can set the Vendor Code as required or not required in the Modules Administration - Forms module of the Administration subsystem.

Vendor and Manufacturer Information - When a Stock Code for a Direct Type item is entered on a Work Order Material record, the system populates the Vendor Part Number, Manufacturer Code and Manufacturer Part Number fields on the Direct Purchase view from the Vendor Manufacturer view on the Master Catalog record. This information is only copied if the Primary Vendor indicator is set on the Master Catalog Vendor Manufacturer view. The information copied over can be modified if necessary.

When requisitions or purchase orders are generated from the Work Order Task Materials records, the system populates the Requisition or Purchase Order Manufacturer Data view with the Manufacturer information from both the Catalog record AND the Work Order Task Materials Direct Purchase view if any changes were made to the information on the view. All of the Primary Vendor data and other data based on the various "Copy to PO" check boxes on the Catalog record is included. The Vendor Part Number field on the Line Item (Detail) Screen is always populated with the information from the Work Order Task Materials Direct Purchase view.

When a material record is created without a stock code, the system copies any Vendor or Manufacturer information that was entered on the Work Order Task Material screen to the resulting requisition or purchase order.

Requisition and Purchase Order Numbers - The system populates these fields with the requisition and purchase order numbers when they are generated from the Direct Purchase record.

If the Work Order Processing business rule DIRECT PURCHASE option is set to REQUISITION (and the Allow Automatic Work Order Release? check box is not checked), the system creates a requisition and enters the requisition number in the Requisition field when the work order status is set to Active.

The system will also record the purchase order number when the purchase order is issued (set to issued status).

Credit Card Purchase - If the materials should be purchased by credit card, check this box.

Courtesy Stores

If the item is a direct type stock item that should be tracked in the storeroom (held as a "courtesy"), check this box. If the box is not checked, the system assumes that the items will be used as soon as they are received, and on hand quantity is not tracked.

The PO Item Type must be "M" in order to check this box.

QC Required - If the materials require special handling, check this box.

Entering Direct Purchase Information

For direct purchases and on requests for stock items that are not in stores, the system prompts you to enter additional information so that Requisitions can be generated with the appropriate information.

In the Direct Purchases section of the Material (Detail) view you can enter basic purchasing information such as the Vendor name and the item type (usually Materials, Services, Misc.) and the PO Commodity (the category for the item such as office supply or lumber). Additional fields

The Credit Card Purchases business rule determines which types of documents can use a credit card on direct purchases.

The Work Order Processing business rule controls several settings relating to how the system handles materials purchases.

record the type of purchasing document that will be created or used with the Work Order, and Vendor and Manufacturer information.

Leave the Vendor code field blank if you want the system to only generate one Requisition for all of your Direct purchase items. Otherwise, a separate Requisition is created for each Vendor code referenced on the Direct Purchase record.

If the item should be tracked in the storeroom (held as a “courtesy”) check the Courtesy Stores check box. If the box is not checked, the system assumes that the item will be used as soon as it is received, and on hand quantity is not tracked. The PO Item Type must be “M” in order to check this box.

When a Stock Code for a Direct Type item is entered on a Work Order Material record, the system populates the Vendor Part Number, Manufacturer Code and Manufacturer Part Number fields on the Material (Detail) view from the Vendor Manufacturer view on the Master Catalog record. This information is only copied if the Primary Vendor indicator is set on the Master Catalog Vendor Manufacturer view. The information copied over can be modified if necessary.

When Requisitions or Purchase Orders are generated from the Work Order Task Materials records, the system populates the Manufacturer Data view with the Manufacturer information from both the Catalog record AND the Work Order Task Materials Direct Purchase view if any changes were made to the information on the view. All of the Primary Vendor data and other data based on the various “Copy to PO” check boxes on the Catalog record is included. The Vendor Part Number field on the Line Item (Detail) Screen is always populated with the information from the Work Order Task Materials Direct Purchase view.

When a material record is created without a stock code, the system copies any Vendor or Manufacturer information that was entered on the Work Order Task Material screen to the resulting Requisition or Purchase Order.

Creating Checkout Requests

Select Create Checkout Request from the Actions list to request all or some of the parts planned against the work order task. The Create Checkout Request action is available only when the task is in Active or Approved status and you have the appropriate function in your responsibility profile.

Note: Only inventory type checkout requests can be created using the Create Checkout Request action.

After you select the action and enter a required by date, a page opens containing a list of the parts planned against the work order task. This list does not include items that have already been issued or truck stock items. Select the parts you want to request by checking the Add box for each item or by clicking Select All. If you need to see parts that were already issued or truck items, click the Filter button.

When you have finished selecting the parts, click Next to open a page where you can indicate the quantities you want to request. The system displays the quantity planned against the task, but you can enter a smaller or larger quantity if necessary. You can also enter a decimal value in the Requested Qty field to indicate partial checkout request of an item, or you can enter a negative quantity here to indicate that you would like to return items.

You can also change expense codes if the system is configured to allow you to override expense codes. When you click Finish, the system creates the Checkout Request record and displays the request number.

Filtering Items

If a large number of stock items have been planned against the task, you may want to filter the list first to make it easier to find the parts you need. Click Filter to enter selection and order by criteria and narrow down the list of stock items to choose from.

The default list of stock items does not show items that have already been issued or truck stock items. If you need to see these items, click Filter and select the check box next to the additional type of items you would like to see. After resetting the filters, click Next to return to the Add Items form.

How to Create a Checkout Request from a Work Order Task

1. Open the appropriate Work Order Task record.

The work order task must be in Approved or Active status.

2. Select Create Checkout Request from the Actions list.

3. Enter a required date.

You can also enter delivery and priority information.

4. Click Next.

The system displays a list of parts planned against the Work Order Task record.

This list does not include items that have already been issued or truck stock items. If you need to see parts that were already issued or truck items, click the Filter button. You can also filter to narrow down the list of items that is shown.

5. Check the Add box for the items you want to request.

You can also click the Select All button to check all of the boxes.

6. When you finish selecting items, click Next.

7. Enter the quantity of each item you want to request.

You can enter any number, including a fractional quantity of up to five decimal places. You can also enter a negative quantity to indicate that you would like to return items. The fields below the grid provide additional information on the stock item selected above.

8. Click Finish.

The system creates a Checkout Request record and displays the request number.

9. Click Close to return to the Work Order Task record.

Creating Purchasing Documents for Work Order Task Materials

Creation of purchasing documents depends on settings of the Work Order Processing business rule. You can force the system to only create one Requisition for the Work Order by leaving the Vendor code field blank. Any Task Material record that does not have a Vendor code will be grouped together on the same Requisition for each Work Order. When a Vendor code is referenced the system creates a separate Requisition for each Vendor. Generating only one Requisition can be helpful in reducing the number of Requisitions that need to be reviewed and approved for Work Order Material items. Purchasing personnel can then issue Purchase Orders to the appropriate vendors once the Requisition has been approved. Any Materials that are added after the Work Order has been activated or any items that reference a Blanket Contract number will have a separate Requisition created.

Blanket Contract - If the Work Order Processing business rule DIRECT PURCHASE BLANKET rule key is set to ON, the system will check to see if there are active contracts that list the desired item when the Work Order Task is saved. If it finds one or more contracts, the system requires completion of the Blanket Contract field. If the item is listed on only one active contract, the system supplies the contract's number. If more than one contract might apply, the system opens the list of values so that the user can select the appropriate contract.

Requisition No. - If the Work Order Processing business rule DIRECT PURCHASE rule key is set to REQUISITION (and the Allow Automatic Work Order Release? check box is not checked), the system creates a Requisition and enters the Requisition number in the Requisition field when the Work Order record is set to Active status.

To facilitate this processing make sure that the Vendor Code is NOT a required field. You can set the Vendor Code as required or not required in the Modules Administration - Forms module of the Administration subsystem.

For more information regarding this or any other business rule, please refer to the Business Rule Supplement User Guide.

Purchase Order No. - If the Work Order Processing business rule DIRECT PURCHASE BLANKET option is set to ON, the system records the Purchase Order number when the Purchase Order is issued.

How to Plan Stock Items to be Used for a Work Order Task

1. **Open the appropriate Work Order record.**
2. **Select Task (Summary) from the Views list.**
3. **Select Material (Detail) from the Views list.**
4. **Click New.**
The system opens a blank record for you.
5. **Enter the Stock Code from the list of values.**
The system provides information (stock type, description, unit of issue and unit price, and any associated hazard).
6. **Enter the Storeroom from the list of values.**
The system supplies the unit price and expense code for that item.

Depending on how certain business rules and other features are structured for your organization, planners may be able to change this expense code if they want the materials charged differently.
7. **Enter the estimated quantity that will be needed to complete the task, and the Unit Price for that item.**
The system calculates the Total Price based on the Quantity and the Unit Price.
8. **Select an Expense Code from the list of values and save.**
The system updates the Original Estimate and Revised Estimate fields.

You can also plan the use of non-stock items.

How to Plan Non-Stock Items to be Used for a Work Order Task

1. **Open the appropriate Work Order Task record.**
2. **Select Materials (Detail) from the Views list.**
The system opens the Work Order Task window for the record.
3. **Click New.**
The system opens a blank record for you.
4. **Enter a Description.**
5. **Enter the Quantity.**
6. **Enter the Unit of Issue from the list of values.**
The list is controlled by Code Table 23.
7. **Enter the Unit Price.**
The system calculates the Total Price.
8. **Enter an Expense Code from the list of values.**
The list is controlled by the Expense Codes business rule.

If you enter a Stock Code and Storeroom, the system automatically provides the Expense Code for that combination. Depending on how some business rules and other features are structured for your organization, planners may be able to change this expense code if they want the materials charged differently.
9. **Enter any appropriate additional information.**
This includes the date the materials are required and any hazard associated with the material.
10. **Click Save.**

The Stock Code list is controlled by the Catalog module in the Resources subsystem.

The system prompts you for additional information.

11. **Enter the PO Item type and Approval Route.**
12. **Enter any additional information as appropriate.**
13. **Click Save.**

Activity Tracking

Select Activity Tracking (Insert) to open the module and create a new entry. If you select Activity Tracking (Query) the module opens to the search options screen, allowing you to execute a search.

Activating Work Order Task Materials

Activating Work Order Task Materials means that you have initiated the process of obtaining the materials, either by checking them out from the Storeroom or by ordering them via a Requisition then Purchase Order.

Generally, the system places demand on the Storeroom for the stock items or creates Requisitions for direct purchase items and items that are not in stock when the Work Order Task is set to active status. This automatic processing works well for typical work scenarios where the work order is created, planned, and work starts immediately after.

For cases where there is a significant lead time for one or more of the required items or when the type of work results in a long time frame between execution of tasks, the system also provides planners with more flexibility and control in placing demand or in purchasing items.

Users with the Activate WO Material responsibility in their User Profile can initiate processing of materials before the Work Order is set to Active.

If the Work Order is in “Approved, Waiting for Activation” status, you can select Activate WO Material from the Actions list to select which materials you would like to process. When you select the action, a window opens that lists all of the Work Order Task Material records that have not yet been activated. You can then select which items to Activate at that time by simply placing a check in front of them and clicking the Next button. The system shows a summary screen that tells you how many items were processed, how many remain to be processed, the number of Requisitions created, the storeroom demand, and the number of PO Blanket releases.

The system also displays "Activated" on the Work Order Task Material (Detail) record for all of the items that you activated.

If you need to activate any other items before the Work Order or Work Order task itself is activated, you can execute the action again. Otherwise, remaining material items will be released once the Work Order Task is placed in Active status.

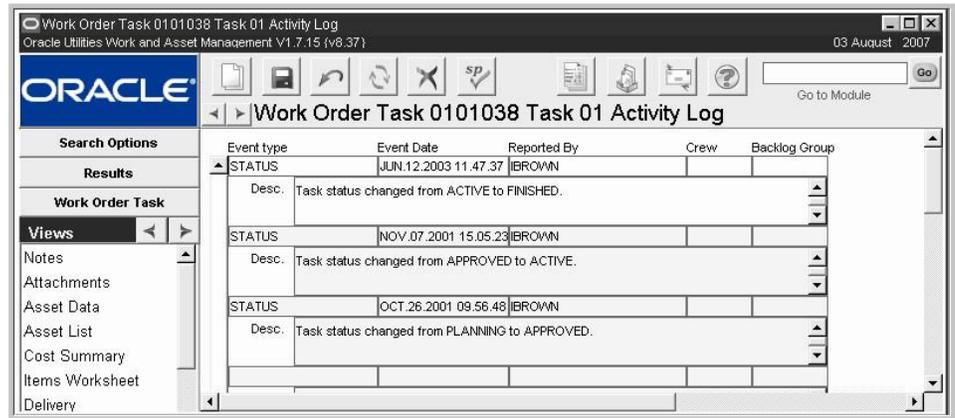
How to Activate Work Order Task Materials

1. **Select Activate WO Material from the Actions list.**
If the Work Order is in “Approved, Waiting for Activation” status, and you have the proper authority you can execute this action.
2. **Place a check next to each of the materials that you want to activate at that time.**
3. **Click the Next button.**

Activity Log

The Activity Log is populated by the system with a log record when the Work Order Task status changes. You can also enter and maintain Activity information related to a Crew, Backlog Group, and Event. Entries referencing a Crew are also accessible through the Crew Activity Log module in the Maintenance subsystem.

The relationship between Backlog Group and Crew is defined in the Default Backlog Groups business rule.



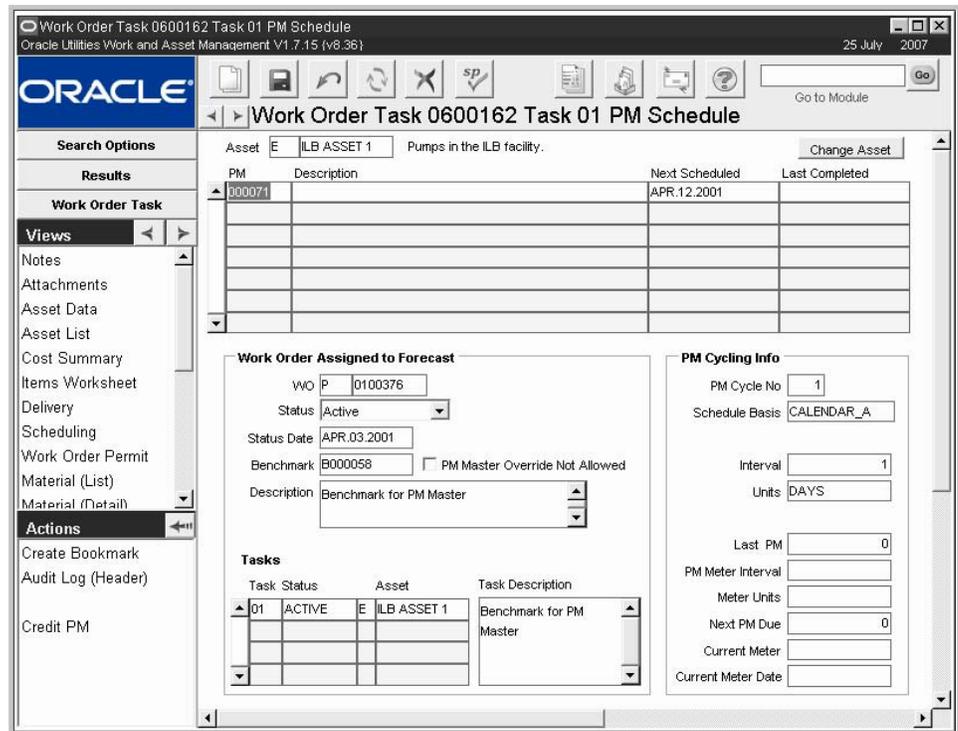
Activity Log view

Note: There is no Activity Log information relevant to Benchmarks.

PM Schedule

For more on using the Credit PM action, see the section on the Credit PM action in the Work Order module

The PM Schedule view presents the PM (Preventive Maintenance) Schedule for the asset specified on the Work Order Task. You can use this information to help determine if work completed for the current Work Order Task has satisfied a PM Master scheduled to cycle soon. If so, you can use the Credit PM action to reschedule the PM Master and credit a regular Work Order for having satisfied the requirements for the current maintenance cycle.



PM Schedule view

If more than one asset is present on the work order task, the PM Schedule view displays PMs associated to all assets. Select a PM number, and the Asset field displays which asset the PM applies to.

Service History

Through the Task Service History view, you can maintain a service history for the Asset ID/Component ID listed on the Work Order Task. Service History information is established via a two-step process:

1. Set up a Specification Template record for the type of service performed.
2. Reference it by entering Type and Category.

Users may later enter the Specification Values for each applicable Attribute. See the Specification Template sections of the Resource Users Guide for further information.

Once the information is established, users can enter the Specification Values for each applicable Attribute. See the Specification Template sections of the Resource User Guide for further information.

Type	Category
SERV_HIST	STBYGEN

Seq	Specification Attribute	Specification Value
1	the attribute	
2	the second attribute	
3	the third attribute	

Service History view

An example could be performing routine maintenance on a vehicle. First, set up a Specification Template, then a Specification record where you customize the list of Attributes for that type of work. The Specification Number and Category can then be used on Task Service History records, where users enter Specification Values for each Attribute such as the mileage, date, tire pressure, number of quarts of oil used, oil filter replaced (yes/no), etc.

Work Order Service History entered via Work Order Tasks can be accessed as views from the Asset and Component ID modules. See the Asset and Component ID sections of the Resource User Guide for further information.

Labor Requirements

Labor requirements are planned at the Work Order Task level. Initially, you can estimate the number of work hours and the crafts needed to complete the task. After you enter the initial estimate of how many people are needed from which crafts and the total number of hours, the system tracks the refinement of the estimate and the actual time required. Planners can use this information to refine future estimates and schedule crews accordingly.

The screenshot shows the Oracle Utilities Work and Asset Management V1.7.15 (v8.37) interface. The window title is "Work Order Task 0500275 Task 01 Labor Requirements". The description is "PM Route Benchmark for the ILB facility." The asset ID is "ILBF1" and the asset name is "PM Route Function for the ILB facility." The interface includes a search options section, a results section, a labor table, and a costs section.

Item	People	Craft	Duration	Total Craft Hours	Total Travel Hours	Regular Expense	Premium Expense
						0.	

	Total Hours	Total Amount
Original Estimate		
Revised Estimate		
Committed		
Actual Regular		
Actual Overtime		

Labor Requirements view

The upper section of the Task Labor Requirements window shows the task description, along with asset data and travel information for the current task. The center section contains the estimate for people and crafts required to complete the task. The lower section of the window shows costs for the craft currently selected in the middle section. The Original Estimate and Revised Estimates include the labor hours required to perform the work plus the number of travel hours.

If a Labor estimate is not entered for a particular Craft and the Craft is scheduled for the Task or time is entered against it, the system automatically inserts a Labor record (without any Estimate values). If you do select a Craft, the system completes the Regular and Premium Expense Codes fields using information from the Craft Rates business rule. You can change these expense codes if you want the work charged differently.

If Compatible Units are planned against the Work Order Task, the system inserts the labor items from the Items Worksheet onto the Labor Requirements view when the Work Order is set to Pending Approval or Approved status. You can change these items on the Labor Requirements view, but any changes you make are not reflected back to the Items Worksheet. The Original Estimate hours and amount fields are only updated when the Work Order is in Planning status.

Actual Regular and Actual Overtime hours are entered by the system when Timesheets are posted by batch processing.

Planning Travel Time

You can plan travel time on the main Work Order Task record by selecting the Work Region where the work will be done and entering the number of Trips anticipated to and from the work site. The system uses this information, together with the travel time estimates your organization has entered in the Work Order Travel Time business rule, to account for travel time in the scheduling process.

When you plan labor for the task on the Labor Requirements view, the system completes the Total Travel column for each labor record by multiplying the number People by the number of trips and the travel time. If your organization uses Compatible Units, the system populates the Labor Requirements view when you change the Work Order status from Planning to Pending Approval or a higher status.

The system also makes the travel time and trip information available in the Task and Labor views in the Workweek Schedule module and provides a Travel Time field in the Timekeeping module for recording the actual number of hours spent traveling.

How to Plan Labor Requirements for a Work Order Task

Labor requirements are planned at the work order task level. Initially, you can estimate the number of work hours and the crafts needed to complete the task. Then, as the work order moves toward completion, the estimate can be revised and schedulers can schedule crews.

1. **Open the Work Order record.**
2. **Open the appropriate Task record.**
3. **Open the Work Order Task Labor Requirements view.**
4. **Click the New icon.**

The system generates the Item number when the record is saved.

5. **Enter the number of individuals needed.**
6. **Select Craft from the list of values.**

The list is controlled by the Craft Rates business rule.

When you select the Craft, the system will complete the Regular and Premium Expense Codes fields using information from the Craft Rates business rule.

7. **Enter the estimated number of hours.**

You can enter either the duration or the total number of craft hours. When you do, the system calculates the other value.

8. **If necessary, change the Regular and Premium Expense Codes.**

The system supplies these expense codes from the Craft Rates business rule. However, depending on how certain business rules and other features are structured for your organization, planners may be able to change these expense codes (using the list of values) if they want the work charged differently.

9. **Click the Save icon.**

The system will complete the Original Estimate and Revised Estimate and save the record.

You can add additional crafts at this point by clicking the New icon and repeating steps 5 through 9.

How to Plan Travel Time for a Work Order Task

1. **Open the appropriate Work Order**

The Work Order must be in Planning status if you want the system to include travel in CU cost estimates.

2. **Open the appropriate Work Order Task.**
3. **Select a Work Region where the work will be done.**

When you select the Work region, the system supplies the default Travel Time from the Work Order Travel Time Business rule.

4. **Edit the Travel Time and Number of Trips as needed.**

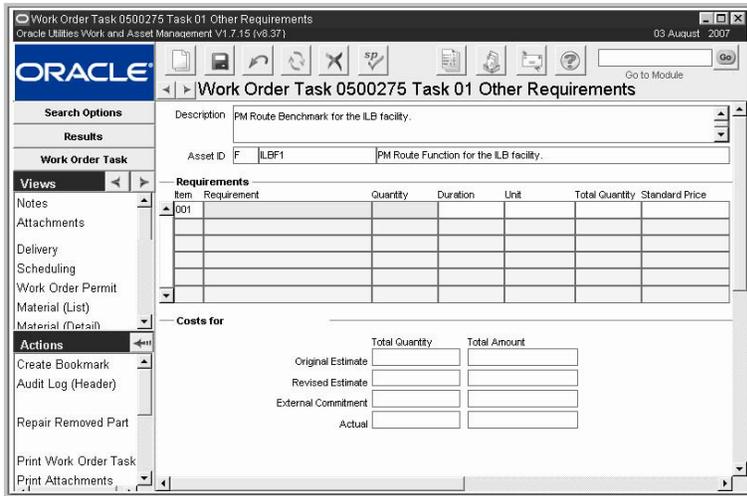
Both travel time and the number of trips reflect one-way travel. For a round trip with a travel time of each leg being one hour, for example, enter 1 in the Travel Time field and enter 2 in the Trips field. If you save the Task without entering the number of trips, the system automatically defaults the number of trips to 2.

5. **Click Save.**

When you plan labor for the task on the Labor Requirements view, the system calculates the Total Travel Hours for each labor record using the information you entered above.

Other Requirements

You can use the system to estimate and plan equipment and other direct charges associated with Work Order Tasks. With this information at hand, planners can refine their estimates based on historical data.

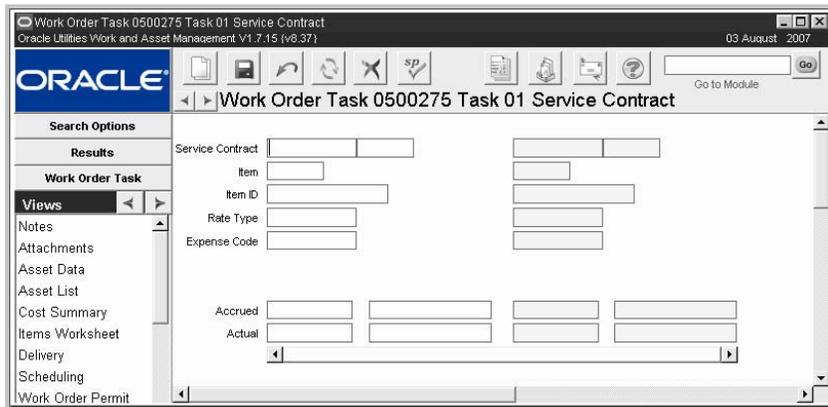


Other Requirements view

The upper section of the Task Other Requirements window shows the task description and asset data for the current task. The center section contains the estimate for equipment and other items required to complete the task. You must select a Requirement from the list of values, which is controlled by the Direct Charge business rule. If you enter duration, the system will calculate total hours by multiplying the duration by the quantity. If you enter total hours, the system will calculate duration by dividing total hours by the number of people. The lower section of the window shows costs for the craft currently selected in the middle section.

Service Contract

You can access a list of all Service Contract applied charges by selecting Service Contract from the Views list. This record is maintained by the system as Service Contract Invoices are entered and posted.



Service Contract view

Assignments

The Assignments view enables you to assign multiple employees from any Craft or Crew to the Work Order Task. You can then search for and display these assignments in the Work Order Task Assignment module.

Since the scheduling modules do not make use of the information from this view, make sure that you have indicated a primary Crew on the Work Order Task record if you want to be able to select the Work Order Task by Crew later in the scheduling modules.

Assignments view

Note: The Task Crew, Craft, and Other Crew radio buttons and associated fields control the list of values associated with the Employee fields.

Task Crew, Craft, and Other Crew - The Task Crew, Craft, and Other Crew radio buttons and associated fields located in the upper portion of the window control the list of values associated with the Employee fields.

The system fills in the Task Crew field using the primary Crew entered on the Work Order Task record. You cannot modify the Task Crew field from the Assignments view. The list of values associated with the Craft and Other Crew fields are controlled by the Craft Rates business rule and the Crew module, respectively.

Employee - The list of values for the Employee field is controlled by the Employee module, and includes employees that have both an Active Employee record and a User Profile. When you select an Employee, the system fills in the Name, Craft, Crew, and Supervisor fields.

Leave Request - Highlight the assigned employee to view Leave Request information for that employee in the middle portion of the window. The system displays Leave Requests with Start Dates the same or later than the current date.

Daily Schedule Assignments - The lower portion of the window displays all daily schedules the work order task is on, including the employees currently assigned to that task on the daily schedule. Note that this information is for planning purposes only and that assigning employees in this view does not update the Assignments view in the Daily Schedule module.

How to Assign Employees to a Work Order Task

Each employee that you want to assign must already be assigned to a Craft in the Employee module and/or a Crew (in either the Employee or the Crew module).

1. Select the Assignments view.

Work Order and Task - Enter the work order and task number for the task that is being entered as a predecessor.

Relationship - Enter a code to indicate the relationship between the task and its predecessor or successor. Since this field is not tied to processing, your organization can create codes unique to your business process.

Required - The value in this field determines whether or not users are allowed to ignore the precedence settings or if they are enforced by the system when the task status is changed.

- 0 - This predecessor is not required to be finished when status is activated.
- 1 - If this predecessor is not finished, a warning message is displayed when the status is activated, however the user can choose to continue without completing the precedence task.
- 2 - If this predecessor is not finished, an error message is displayed when the status is activated and the user will not be allowed to proceed.

Crew and Duration - The crew and duration are carried over when the precedence task is entered.

Benchmark to Work Order Processing

Predecessors and successors can only be a work order task related to the current benchmark work order. You are not allowed to make relationships to tasks outside of the current benchmark work order. This is due to the fact that when a work order is created from a benchmark it does not bring in tasks from other work orders or benchmark work orders.

Work Order History Processing

When a work order is moved to history all of the task precedence information is also copied.

Relationship Example

The relationship field has predefined codes of Finish to Start, Start to Finish, Start to Start and Finish to Finish. These relationships are not enforced by the system, but the codes can be used to mirror typical scheduling relationships used in programs such as MS Project. Your organization can tailor the codes to your specific business process.

In this example, the current task is Task B:

- If Task B cannot start until Task A is finished, enter Task A in the Predecessors section with the Relationship set as Finish to Start. This is the most basic relationship.
- If Task C can start at the same time as Task B, enter Task C in Predecessors section with the Relationship set as Start to Start.

This is a scenario that would rarely be defined, but Task C might have a more rigid relationship to Task A, so it would need to be defined for Task B just to make all of the relationships clear.

- If Task B has to be at least started before Task D can be finished, but it doesn't matter when Task D is started in relationship to Task B, enter Task D in the Predecessors section with the Relationship set to Start to Finish.
- If Task B has to be finished before Task E can be finished, but it does not matter when Task E is started in relationship to Task B, enter Task E in the Predecessors section with the Relationship set as Finish to Finish.

Work Order Task Actions

In addition to standard actions, the following can be completed from within the module.

Access to the Account Transaction Log and basic search and bookmark actions.

Note: The Actions list changes depending on the status of the work order.

Timesheet

You can select Timesheet from the Actions list for direct access to the Timekeeping module where you can enter time related to the Task.

When you select the action the system opens the first of several screens where you can create a timesheet for a single employee or for a crew. You must have the appropriate authority in the Timekeeping Authority business rule to create timesheets for a crew.

The Timesheet action is available when the Work Order Task is in Active and Finished statuses. Supervisors can use the Timesheet action to enter time for employees on their Crew.

How to Create a Timesheet for a Crew

- 1. Open the appropriate Work Order Task record.**
You can open the Task in the Work Order Task module or in the Task (Detail) view in the Work Order module
- 2. Select Timesheet from the Actions list.**
A screen opens where you can select to enter timesheet information for a single employee or for a crew.
- 3. Click the Crew radio button.**
If you are a supervisor entering time for a crew, the system defaults the Crew from your employee record. If you are responsible for multiple crews, no default Crew is supplied and the list of values provides a listing of crews to select.
- 4. Click the Next button.**
The system opens a new window listing the crew members. Each employee you want to include on the Timesheet must already be assigned to the Crew.
- 5. Remove the check mark for crew members you do not want to include on the Timesheet.**
- 6. Click the Next button.**
- 7. Enter Regular Time as appropriate and click the Next button.**
- 8. Enter Premium and Comp Time as appropriate and click the Next button.**
The system opens a window showing summary information from the previous screens.
- 9. Review Timesheet information and click the Create button.**
The system creates the Timesheet and displays a confirmation message.
- 10. Click the OK button.**

Direct Charges

Select Direct Charges from the Actions list to enter Direct Charges against the Work Order Task. This action is available when the Work Order Task is in Active and Finished statuses.

The system searches the Direct Charges module for your Employee Number and displays any existing records for the current date. You can add a new charge item to an existing record, or create a new Direct Charge record and then enter the charge item. When you begin entering the Direct Charge item, the system supplies the Work Order Task number and Account information.

How to Enter Direct Charges from a Work Order Task

- 1. Open the appropriate work order task.**

2. Select Direct Charges from the Actions list.

The Direct Charge Information window opens. The system automatically enters your Employee Number and the current date but you can change both if necessary.

3. Click OK.

The system searches the Direct Charges module for records matching the Employee Number and date. If it finds an existing record, it opens that record where you can add additional charges (skip to step 5). If it does not find an existing record, it asks if you want to create one.

4. Click Yes to create a new record if necessary.**5. Click in the first item block in the lower portion of the window or click the New icon.**

The system highlights the required fields where you can enter information for the first Direct Charge item. The system automatically enters the work order and work order task number and Account Number.

6. Select a Direct Charge Type from the list of values in the Type field.

The choices on this list are determined by your organization in the Direct Charge Types business rule. When you select a Direct Charge Type, the system supplies the Units, Standard Price, and Expense Code established in the business rule for the type you selected. If the processing for the Type selected is Open Entry, you must enter these values manually.

7. Enter the Quantity used.

This might be the number of miles driven or the number of days a piece of equipment was rented.

8. Enter other information required to describe the Direct Charge.

You can enter a brief comment that helps to describe the charge. You can also enter an Asset Type and ID in the Rented Asset fields if you need to identify an asset you rented.

9. Click the Save icon.

Continue entering Direct Charge line items until you have entered all the charges you want to include on this record. You must save the record after entering each charge.

When you have finished entering Direct Charges, set the status to Pending Approval and save the record.

Task Progress

Task Progress is only available on the Actions list when the Work Order Task record is in Active status. Selecting Task Progress from the Actions list opens the Task Progress Summary window where you can record progress on the relevant Work Order Task.

The window is the same as the summary screen at the end of the Finish Task wizard, only when you use the Task Progress action the system does not process the work as finished. Instead, after you save the summary information, the system opens a second window where you can either indicate that the task is finished, or indicate your progress toward completion. If you enter a % completed, the system updates that field on the Work Order Task record.

The associated lists of values for the following fields are controlled by the code tables listed below.

Code Table 10 - Failure Code
 Code Table 9 - Repair Code
 Code Table 222 - Component Code
 Code Table 51 - Failure Mode
 Code Table 52 - Root Cause
 Code table 222 - Next Action

Downtime Start and End Dates and Times - Downtime represents the period that the asset is not available for use because it is being worked on. This period can be longer or shorter than the time needed to perform the actual tasks associated with the Work Order.

The downtime Start Date field is filled in by the system if that information has already been provided (for example, from a previous task on the Work Order). If the information is not available to the system, the field will be blank. If the field is blank, enter the beginning of the period that the asset was down.

If the asset is down for work and completion of the task means that the asset is available for use, you can fill out the end date and time for the downtime. You do not have to fill out this field if, for example, the asset remains down pending finishing other tasks.

Duration - The system uses the Start Date and Finish Date information to calculate the duration of the downtime. This information is passed to other areas of the system, including the Asset Reliability module. If either field is left blank, the system cannot calculate the downtime.

If an asset is taken in and out of service for multiple tasks on one Work Order, the system does not automatically add the down periods for you.

Scheduled? - You can check the Scheduled box to indicate that the downtime involved was scheduled (for example, for Preventive Maintenance). This information affects the reliability record of the asset.

Reading - You can use these four fields to record the most current meter reading associated with the asset. The Reading field shows the measure taken, the Units field shows the units, and the Reading Date field shows date of the last reading. The Reason field is the code for the reason the reading was taken, you must select a code from the list of values for this field.

An example might be: “300 hours, on January 1, 1998 at 13:00 for Preventive Maintenance”.

Failure - Select a code from the list of values to record the type of problem that required the work on the asset. An example might be: “Hydraulic” for a leak in the hydraulic system of a piece of equipment.

Repair Code - Select a code from the list of values to record the type of work done on the asset. An example might be: “Resealed” for replacement of the seals in the hydraulic system of the equipment mentioned above.

Component Code - Select a code from the list of values to describe the component, if the work was done on a component of the asset. An example might be “Motor” for a motor in a hydraulic pump.

Failure Mode and Root Cause - Use of these field varies from organization to organization.

Primary Failure? - Click the Primary Failure check box if this failure was the primary failure that lead to the asset requiring work.

Next Action - If there is further action needed – for example an inspection after some period of operation – you can enter a code from the list of values to represent that action. When you select from the list, the system enters the associated description in the Description field immediately below the Required and Further Action fields.

Entering a code signals the system to make the ‘Create Work Request?’ option available. Using this option you can tell the system whether or not to automatically begin a second, follow-up Work Request (see ‘Create Work Request?’ below).

Required - If there is a deadline for the further action, enter the date and time in the Required field. The data can be entered manually or using the calendar feature. Entering a date signals the system to make the ‘Create Work Request?’ option available (see ‘Create Work Request?’ below).

Create Work Request? - The 'Create Work Request?' option only becomes available if the work order task was written against an asset, process or function and you give the system one or more of:

- a Further Action code,
- a (further action required on) Date or
- a (further action) Description.

If you check the Create Work Request? box, the system creates a new Work Request record in Created status when you click the Finish button on the Task Finished Summary window.

The Work Request that you create with this action must still be reviewed and go through the usual steps to become a new Work Order. Your organization's procedures determine whether or not you can do this, or whether someone else must activate the status change that creates the Purchase Order. If the system creates a new Work Request for you, it is important that you follow up by changing the Work Request status or sending a message to someone who can.

Description - Enter a description of the additional action that must be taken. If you used a code in the Further Action field, the system automatically places the description associated with the code into the Description field. You can use this basic description as it is, or you can adjust it. Entering a description signals the system to make the 'Create Work Request?' option available (see 'Create Work Request?' below).

Follow-up Work Request - The system generates a new Work Request at the time you save the Task Closeout information. The system automatically updates the Task Closeout record with the generated Work Request number.

Save - When you click the Save button, the system opens the Task Progress (Task Completion) window where you can either indicate that the task is finished, or indicate your progress toward completion.

The Finish Task Radio Button - Select this radio button if you have completed the task and want to set the task status to Finished. When you select this radio button, complete the associated fields and click the **OK** button, the system sets the Work Order Task status to Finished.

Task Start and Finish Dates and Duration - The Start Date field represents when the task was begun, and the Finish Date field represents when the task was completed. The start date and time for the task are filled in by the system if that information has already been provided. If the information is not available to the system, the field will be blank.

The finish date and time for the task are set to the time you changed the task status. However, you can change this information by manually entering it. For example, you might want to do this if the task was completed some time before you were able to change the task status in the application.

When the Start Date and Finish Date fields have been filled in, the system uses them to determine the task duration. Note that the system does not check that the finish is after the start. The duration will be calculated as a negative number if the dates are entered incorrectly. If you notice a negative duration check the 'Start' and 'Finish' fields.

Finished By - The system fills in this field using the user name of the person entering the information. It can be changed manually if necessary.

The Finish Later Radio Button - Select this radio button if the task is still in progress, and enter the percent of the task that has been completed in the %Complete field. When you save the record, the system updates the %Complete field on the Work Order Task record. The number you enter represents the total progress you have made. If you enter 90% the first time you use the Task Progress button, and revise your estimate to 50% the second time, the system

enters 95 in the %Complete field on the task the first time and set the percentage back to 50 the second time.

Finishing Work Order Tasks

The system allows individual tasks to be closed as they are completed. When parts are ordered against a task, the system places them in Hold for Parts status in the appropriate storeroom. Finishing a task triggers the system to take any of these items that are still on order, out of Hold for Parts status, making them available for use.

When all of the tasks are finished, the system changes the status for the entire Work Order to 'Finished' so that the Work Order can be reviewed and closed out.

Setting the status of a Work Order Task to Finished triggers the Task Finishing Process. This wizard guides you thorough a series of windows where you complete the necessary information to finish out the Work Order.

The fields presented in the wizard are the same fields that are described in the previous section. The wizard simply guides you through the process in a step by step manner to ensure that you do not forget to enter any data.

When you click the Finish button on the summary window, the system returns you to the Work Order Task record and changes the status of the record to Finished.

Start/Finish Dates

Start Date - The Start Date field represents when the task was begun. The start date and time for the task is filled in by the system if that information has already been provided. If the information is not available to the system, the field will be blank. You can manually enter the date and time, or you can use the calendar feature. The system uses this information - with the Finish Date information - to calculate how long the Task took to complete.

Finish Date - The Finish Date field represents when the Task was finished. The finish date and time for the task is set to the time you changed the task status, but you can change this information by manually entering it. For example, you might want to do this if the task was completed some time before you were able to change the task status. You can also use the calendar feature.

Duration - When the Start Date and Finish Date fields have been filled in, the system uses them to determine the task duration. Note that the system does not check that the finish is after the start, but the duration shows up as a negative number. If the duration appears to be negative, you need to go back and check the 'Start' and 'Finish' fields.

Finished By - The system fills in this field using your user name, but you can manually change this information. You might want to do this if someone else actually completed the work on the Task.

Finish Comments - Enter any comments related to finishing the task.

Asset Downtime

Start Date - Downtime represents the period that the Asset is not available for use because it is being worked on. As discussed in Task Start above, this period can be longer or shorter than the time needed to perform the actual tasks associated with the work order.

The downtime Start Date field is filled in by the system if that information has already been provided (for example, from a previous task on the work order). If the information is not available to the system, the field will be blank. If the field is blank, enter the beginning of the period that the asset was down.

End Date - If the asset is down for work and completion of the task means that the asset is available for use, you can fill out the end date and time for the downtime. You can enter the date and time manually or use the calendar feature. You do not have to fill out this field if, for example, the asset remains down pending finishing other tasks.

Duration - The system uses the Start Date and Finish Date information to calculate the duration of the downtime. This information is passed to other areas of the system, including the Asset Reliability module. If either field is left blank, the system cannot calculate the downtime.

If an asset is taken in and out of service for multiple tasks on one work order, the system does not automatically add the down periods for you.

Scheduled? - You can click here to flag that the downtime involved was scheduled (for example, for Preventive Maintenance). This information also affects the reliability record of the asset.

Last Readings

You can use these four fields to record the most current meter reading associated with the asset. The Reading field represents the measure taken, the Units field represents the units, and the Reading Date field represents date of the last reading. The Reason field is the code for the reason the reading was taken, you must select a code from the list of values for this field.

An example might be: "300 hours, on January 1, 1998 at 13:00 for Preventive Maintenance".

Cause of Failure

Failure - Use the Failure field to record the type of problem that required the work on the asset. You must select a code from the list of values. An example might be: "Hydraulic" for a leak in the hydraulic system of a piece of equipment. The field has an associated list of values that is controlled by Code Table 10 in the Code Table and Codes module of the Administration subsystem.

Repair Code - Use the Repair Code field to record the type of work done on the asset. You must select a code from the list of values. An example might be: "Resealed" for replacement of the seals in the hydraulic system of the equipment mentioned above. The field has an associated list of values that is controlled by Code Table 9 in the Code Table and Codes module of the Administration subsystem.

Component Code - If the work was done on a component of the asset, you can use this field to record a code from the list of values to describe the component. An example might be "Motor" for a motor in a hydraulic pump. The field has an associated list of values that is controlled by Code Table 222 in the Code Table and Codes module of the Administration subsystem.

Failure Mode - Use of this field varies from organization to organization. The field has an associated list of values that is controlled by Code Table 51 in the Code Table and Codes module of the Administration subsystem.

Root Failure Cause - Use of this field varies from organization to organization. The field has an associated list of values that is controlled by Code Table 52 in the Code Table and Codes module of the Administration subsystem.

Primary Failure? - Click the Primary Failure check box if this failure was the main reason to work on the Asset.

Further Required Actions

Further Action - If there is further action needed - for example an inspection after some period of operation - you can enter a code from the list of values (controlled by Code Table 222 in the Code Table and Codes module of the Administration subsystem) to represent that action. When

you select from the list, the system enters the associated description in the Description field immediately below the Further Action and Required fields.

Entering a code signals the system to make the 'Create Work Request?' option available. Using this option you can tell the system whether or not to automatically begin a second, follow-up work request (see 'Create Work Request?' below).

Required Date - If there is a deadline for the further action, enter the date and time here. The data can be entered manually or using the calendar feature. Entering a date signals the system to make the 'Create Work Request?' option available (see 'Create Work Request?' below).

Description - Enter a description of the additional action that must be taken. If you used a code in the Further Action field, the system automatically places the description associated with the code into the Description field. You can use this basic description as it is, or you can adjust it. Entering a description signals the system to make the 'Create Work Request?' option available (see 'Create Work Request?' below).

Create Work Request? - The 'Create Work Request?' option only becomes available if the work order task was written against an Asset, Process or Function and you supply at least one of the following:

- Further Action code
- (Further Action Required on) Date
- (Further Action) Description

If you check the Create Work Request? box, the system creates a new work request in Created status when you click the Finish button on the Task Finished Summary Window.

The work request that has been created must still be reviewed and go through the usual steps to become a new work order. Your organization's procedures determine whether or not you can perform this action, or whether someone else must activate the status change that creates the purchase order. If the system creates a new work request for you, it is important that you follow up by changing the work request status or sending a message to the person responsible for authorizing it.

Follow-up Work Request - The system generates a new work request at the time you save the Task Closeout information. The system automatically updates the Task Closeout record with the generated work request number.

Task Finished Summary

The Finish Task Summary window summarizes the information you enter using the other windows in the wizard. If you prefer to skip the intervening windows, you can go directly to this window and enter the information here. The system also gives a summary of this information for each finished task in the Work Order Closeout view of the Work Order module in the Maintenance subsystem.

If you have indicated that the system should create a follow-up work request, the system creates the request and opens a final window indicating the work request number when you click the Finish button on the summary window. Otherwise, when you click the Finish button. The system returns you to the Work Order Task record and changes the status of the record to Finished.

Repair Removed Part

If you have the Repair Removed Part function in your Responsibilities profile, you can use the Repair Removed Part action to create a Material Disposition record for stock items involved in the work order task, even if the parts involved are not marked as repairable in the storeroom.

The Repair Removed Part action can be used for both components and regular stock items. In both cases, the system creates a Material Disposition record referencing the work order task. You can then process the items through the repair cycle and set the Material Disposition status for the items accordingly.

This action is not displayed unless the record status is either Active or Finished.

Print PM Route

Select Print PM Route Report from the Actions list to print the PM Route report for route stops related to the work order task. The report is printed directly to your default printer. You can also run the PM Route report (S_RPT058) from the Reports module.

How to Print a PM Route Report from a Work Order Task

1. **Open the appropriate Work Order Task record.**
2. **Select Print PM Route Report from the Actions list.**
Stops on the route that reference this work order task are printed on the report.

You could give the printed report to the person(s) performing the work. When they have finished the work, use the information they entered on the report to log back into the system.

Work Planning Tool

You can add the Work Planning Tool to your home page for quick access to a summarization of work progress on work orders where the crews that you have selected are assigned. Planners will see summary information for any work orders where he or she is the assigned planner, whether or not the crews are selected. Click the plus next to each status to see the number of Work Order Tasks that are in each phase. Select a status or phase to see a listing of the Work Orders in that status.

Select Edit to select the options that you want to appear in this section. You can add and remove the crews that you want to view planning data for. You can also Select the Select check boxes to choose the Statuses that you want to display on your home page.

Work Planning		Options
Summary of work order statuses and phases.		
<input type="checkbox"/>	PLANNING (87)	
	INITIAL REVIEW (PHASE 1)(87)	
<input type="checkbox"/>	APPROVED (2)	
	INITIAL REVIEW (PHASE 1)(1)	
	PLAN RESOURCES (PHASE 2)(1)	
<input type="checkbox"/>	ACTIVE (6)	
	INITIAL REVIEW (PHASE 1)(2)	
	No Phase Assigned (4)	
<input type="checkbox"/>	FINISHED (4)	
	INITIAL REVIEW (PHASE 1)(2)	
	No Phase Assigned (2)	
	No Planner Assigned (1538)	

Work Planning Tool

If you select to display “No Planner Assigned” or “No Crew Assigned” the system displays a count of the number of records for which there is no planner or no crew assigned. Select this

link to see a list of the specific work orders. This list shows ALL records that do not have a planner assigned. For example, if Planner Bob and Planner Jill each clicked on the No Planner Assigned link from their home page, both lists would show the same work orders.

When you click a phase under a status the system opens the Work Planning Search Results screen which lists the specific work order numbers, a description, the phase, asset and crew information, priority, and required date. You can configure this window to display the columns you want to see by clicking the Options link and using the Add and Remove buttons to select and arrange the columns. You can also control the number of items to display.

You can then select one of the work order numbers to open a summary screen with detailed information about the individual work order. This screen also includes a link to open the actual work order record. The sections in the lower part of the detailed Work Planning screen vary depending on the information available and the status of the record. The Closeout Information and Asset Failure sections, for example, display only when the Work Order is in Active or Finished status.

Chapter 6

Project/Subproject

The Project/Subproject module provides a means to group work so that it can be planned and charged against large efforts. Typically, a project will be a task that is out of the ordinary, or that requires extra planning and resources. Examples would be adding new facilities or conducting a major overhaul of an assembly line. Projects can be divided into subprojects – facilities construction, wiring, installation of equipment, testing of automated systems, shakedown, etc. You can then plan, budget, and individually authorize each subproject. As with work orders, subprojects include an Approvals view and the approval process can be a simple or as involved as required by your organization.

Work orders can be grouped together below subprojects for cost roll-up calculations. The subproject costs are then summed to the project so that overall project costs can be tracked.

To associate a Project/Subproject record with a work order, you must enter the Project/Subproject Number directly on the work order. See the Work Order section for more information.

If your organization uses Microsoft Project it can also be integrated with the system to manage the project and import changes back into the database.

Project Business Rule Configuration

Initial configuration of the Project Budget Options rule will determine how project budgets are handled in the system, when and how alerts concerning budget limits are sent, and how approval processing works. While configuration of the remaining related Business Rules is important, this rule has the greatest affect on how projects are displayed and processed.

Business Rule PROJECT BUDGET OPTIONS
Oracle Utilities Work and Asset Management V1.7.15 (V8.2) 25 July 2007

ORACLE

Business Rule PROJECT BUDGET OPTIONS

Search Options: Rule ID: PROJECT BUDGET OPTIONS, Business, List, Limit?

Results: Desc: Options for Project Budget Display and Processing

Business Rule: Comment

Views: Key Configuration

Actions: Create Bookmark, Audit Log (Header)

Option	Status	Value
ALERT DOLLAR TOLERANCE	ON	5000
ALERT PERCENT TOLERANCE	OFF	10
ALLOW BUDGET UPDATE	ON	
CHECK APPROVAL DOCUMENT	OFF	
CHECK PROJECT LIMIT	OFF	
PROJECT BUDGET OPTIONS	ON	

Description: Batch Processing will send an Alert when the costs approach the budget amount less than this dollar tolerance and the status of this option is ON.

Project Budget Options business rule

Options

Alert Dollar Tolerance -If this option is set to ON, Batch Processing sends an alert when project costs approach the budget amount less than the dollar tolerance indicated in the Value field.

Alert Percent Tolerance - If this option is set to ON, Batch Processing sends an alert when project costs approach the budget amount less this percent tolerance or the budget amount indicated in the Value field.

Check Approval Document **Check Approval Document** – This option controls how the system processes approvals for subprojects and for work orders that reference a subproject. Your organization may choose to disable approval checking on work orders so that if a subproject is already approved, the system will accept the subproject approval as approval for the work order. This may simplify processing by allowing users to change work order status to Approved or Active without obtaining a redundant approval.

ON - A dollar limit approval authority is required to approve the subproject, but once the subproject is approved the related work order does not require approval checking. With this setting a user without work order approval authority can change the work order status to Approved or Active as long as the subproject has been approved.

Even with this option set to ON the user changing the Work Order status to Approved must still have the responsibility functions WO TO ACTIVE, WO TASK TO ACTIVE and ACTIVATE WO MATERIAL in order to be able to create a Work Order Task where charges can be applied. So there are still checks in place to only allow users with authority to create Work Order Tasks where charges can be applied.

OFF - There is no approval checking on subproject records. Any work order referencing the project/subproject must go through standard processing to obtain approval. With this setting there is no Pending Approval status on Subproject records.

Eliminating Pending Approval status on the project forces planners and approvers to communicate directly regarding the subproject rather than relying on system alerts. This

ensures that work orders and subprojects will not be approved haphazardly, yet your organization can benefit from simplified processing.

Check Project Limit - If this rule is set to ON the system checks that the budget amount totals for the project do not exceed the project limit when the subprojects are approved.

Project Budget Options - Set this rule key to ON to enable the other rules for processing in the project module.

Project Work Order Account Rule

The Project Work Order Account Rule controls the connection between a project or subproject and the account number on a work order or task.

Options - Acct Update determines if the account number on the work order and task can be updated when a project or subproject is entered. The Acct Cascade determines if the project account number is to be copied to all of the work order tasks when the work order is activated.

How to Set the System to Send an Alert when a Project/Subproject is Near Budget

1. **Decide when you want the system to send an alert.**
Options are when the Variance for the project or subproject comes within a dollar range of the Budget, within a percentage range of the Budget, or both.
2. **Open the Project Budget Options Business Rule.**
3. **Set the status for the appropriate option(s) to ON.**
Turn on the ALERT DOLLAR TOLERANCE option if you want an alert based on a flat dollar range. Turn on the ALERT PERCENT TOLERANCE option if you want an alert based on a percentage range. Turn both on if you want both alerts sent.
4. **Click Save.**

Project Records

Once your organization has decided on the business process related to Projects and has set the Business Rules accordingly the Project/Subproject module can be used to plan work.

The screenshot shows the Oracle Project ILB05 record form. The window title is "Project ILB05" and the application is "Oracle Utilities Work and Asset Management V1.7.15 (v8.8)". The date is "25 July 2007". The form displays details for Project ID "ILB05", Status "Approved", Supervisor "GSFORE", and Manager "IMANI BROWN". The description is "Build New Training Facility at the ILB plant." and the title is "Training Project". The Project Limit is 100,000.00 and the Project Budget is 3,000.00. There are also fields for Start and End Dates, Estimated, and Actual values.

Project record

The following fields are included:

The system changes the project status to Canceled when the status of all the subprojects is changed to Canceled. You can also cancel the entire project by changing the status to Canceled manually. You can only Cancel a project if you have the proper authority.

Project ID - The Project Identification code uniquely identifies the record. You can enter a unique code of your own, or your organization can configure the system to provide an identification number automatically.

The Project ID CAN include dashes or other special characters except for a tilde “~” and spaces. Special characters will also carry over to Microsoft Project data field.

Status

The status indicates the progress made on planning and approving the project. Possible statuses include:

Created - Indicating that the project is still in the planning stage.

Approved - The planning and budget has been approved and work orders can be charged against the budget. The system automatically changes the status of a project from Created to Approved if one or more of the subprojects’ statuses has been changed from Created to Approved. However, the subproject must have a budget greater than zero. The system completes this step as part of a batch procedure.

Canceled - The effort was not approved, and no charges can be made against it.

Closed - The subproject has been permanently closed. No new work can be added.

Finished - All current subprojects for the project have been completed, but additional work may need to be done. You can open new Subproject records against a project in finished status.

The system changes the project status from Approved to Finished when the status of at least one subproject is changed to Finished, and all remaining subprojects are in Closed or Canceled status.

Supervisor - The Supervisor field indicates the person responsible for the project. The associated list of values for the Supervisor field is controlled by Code Table 310.

Approval - The Approval field is a date field completed by the system when the record status is changed to Approved.

Description - The Description field contains a general description of the project. The field is included in the Search Options for the module, so you can search on important words in the description.

Title - The Title field represents the title for the project and is used on reports and analysis to identify one project from another.

Manager - The Manager field indicates the manager assigned to manage the effort. The system supplies a list of values controlled by the list of Usernames within the system.

Project Limit - The Project Limit is the ceiling placed on the Budget for planning purposes. When a subproject status is set to Approved, the system checks the total of the budgets for all the relevant approved subprojects. If the addition of the new budget carries the total over the Project Limit, the system warns you and does not save the status change. At that point your options are to:

1. Reduce the budget for the new subproject.
2. Change the status of the project back to Created, adjust the budgets of the other approved subprojects, then approve the project a second time.
3. Raise the Project Limit. The Project Limit can be approved when the project is in Approved status.

Project Budget - The Project Budget is calculated by the system by totaling the budgets from each of the relevant subprojects in Approved, Closed, and Finished status. An alert is sent to the

Supervisor indicated on the Subproject if the project exceeds budget amounts as they are set in the Project Budget Options Business Rule.

Start Dates and End Dates - The estimated start and end dates must be entered manually and are for information purposes only. They do not affect when work can be planned against a subproject, and the system does not use them for calculating start and end dates for the project. The actual start and end dates must be also entered manually and are for information purposes only.

If a project is exported to MS Project without an estimated start date, even if there are subprojects with start and end dates, Microsoft Project will use the current date as the start date. That date can later be changed.

How to Create a Project Record

Before you can create subprojects, you must first create the Project record.

1. **Open the Project/Subproject Search Options window.**
2. **Click the New icon.**

The system opens a blank record in Created status.

3. **Enter the Project ID, if required.**

The system can be configured to do this for you when the record is saved.

4. **Select a Supervisor from the list of values.**

The list is controlled by Code Table 310 in the Code Table and Codes module of the Administration subsystem.

5. **Enter any additional information required by your organization.**

6. **Click the Save icon.**

The system saves the changes. Once you have saved the Project record you can begin to create subproject records.

Subproject Records

Subproject records have three views: Summary by Subproject, Subproject (List), and Subproject (Detail). The Summary view shows cost information for each subproject and for the project as a whole. The List and Detail views provide details about a single subproject.

Summary by Subproject

The Summary by Subproject view shows summary cost information for each subproject and for the project as a whole. The three columns on the left of the screen show data for subprojects and the column on the right shows Totals for the overall project. If the project contains more than three subprojects, you can move the scroll bar immediately below the Balance fields to see the additional subprojects.

	1	2	3	Totals
Budget	500.00			500.00
Original Estimate	741.30	.00	.00	741.30
Revised Estimate	891.30	.00	.00	891.30
Internal Committed	.00	.00	.00	.00
Committed	180.50	.00	.00	70.50
Accrued	75.00	.00	.00	75.00
Actual	105.50	.00	.00	-4.50
Balance	319.50	.00	.00	429.50

Summary by Subproject view

Subproject ID - The Subproject ID identifies the subproject described in this column. To help you identify a specific subproject, the first 10 characters of the subproject description are included with the Subproject ID.

Budget - The amount budgeted for the subprojects and for the project.

Original Estimate - The estimated costs developed during the labor and materials planning for work orders. During the planning phase, the system tracks estimated costs from the work order header (which accumulates costs from the work order tasks) and records them in both the Original Estimate and the Revised Estimate field. As a work order enters Active status, the Original Estimate is 'locked' but the Revised Estimate continues to be adjusted so that - as the work progresses - the Revised Estimate can be compared to the Original Estimate.

Revised Estimate - The estimated costs developed for the labor and materials for work orders once the work orders have moved into Active status. During the planning phase, the system tracks estimated costs from the work order header (which accumulates costs from the work order tasks) and records them in both the Original Estimate and the Revised Estimate field. As a work order enters Active status, the Original Estimate is 'locked' but the Revised Estimate continues to be adjusted so that - as the work progresses - the Revised Estimate can be compared to the Original Estimate.

Internal Committed - The internal costs that have been committed to but which have not yet gone 'outside' the system. For example, a stock transfer is an internal commitment because demand is placed for the stock within the organization but no replacement stock has not yet been listed on a Purchase Order (an external commitment). Another example would be timesheet charges that have not yet been posted to the Payroll department. Over the life of a project, the value in the Internal Commitment field is likely to fluctuate.

Committed - The accumulated costs that have been committed. Over the life of a project, the value in the Committed field is likely only to grow as costs accumulate. Direct purchase costs are committed when the Purchase order is issued. Labor costs are committed when work time is posted and batch has run. Stock item costs are committed when the item is issued on a Checkout Request.

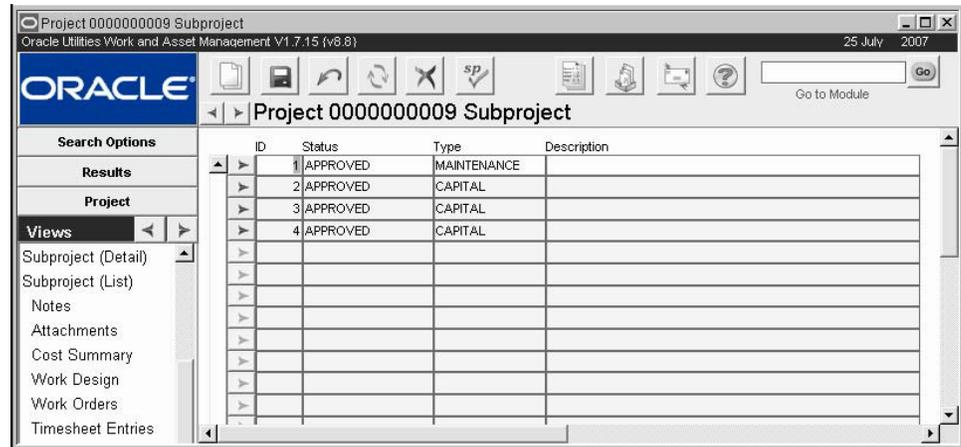
Accrued - The Accrued field shows costs that have been invoiced but not paid.

Actual - The Actual field shows costs that have been actualized.

Balance - The Balance field shows the Budget amount minus the committed amount.

List

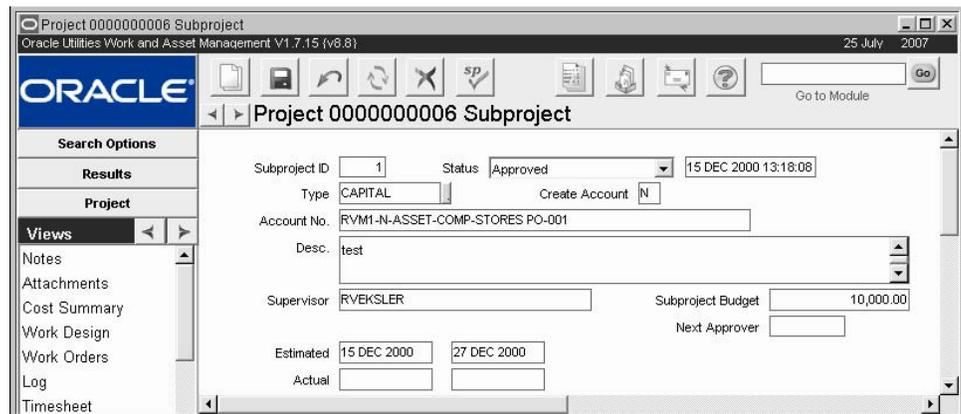
The Subproject (List) view presents a list of the subprojects for the project. You can use this window to navigate to the appropriate subproject then click the arrow button to open the subproject that you want to see.



Subproject (List) view

Detail

The Subproject (Detail) view provides additional details about a single subproject.



Subproject (Detail) view

Subproject ID - The Subproject ID number is provided by the system when you save the record. The system uniquely identifies each subproject by using the Project ID and the Subproject ID.

Status - The status is required and indicates the progress made on planning and approving the subproject. The status for the subproject are the same as the statuses for the overall project with the exception of Pending Approval. This option is only available when the [Check Approval Document](#) rule key in the Project Budget Options Business Rule is set to ON. No charges can be made against a subproject in Pending Approval status.

Type - The Type field is used to categorize the subproject. The system takes the list of possible types from the Project Work Order Account Business Rule.

Create Account - If the Create Account indicator is set to Y and the ALLOW AUTO CREATE option of the Account Creation From Projects Business Rule is set to ON, the system will build a list of values using Accounts that are not already committed to other charges. An

account with “PROJE” in segment 3 of the account number must already exist in the Accounts module for this function to work properly.

Account Number - The Account Number represents the default account that will be charged when work orders are charged against the project. This will only happen if the proper options are established in the Project Work Order Account Business Rule. When a new work order is created, the user can enter the project and subproject on the work order and the system supplies the Department, Area and this, the primary Account Number. If the Business Rule is set to cascade the account number, the system also provides the number for each of the work order tasks. You can change the work order account back to the Asset account if necessary.

Supervisor - Indicate the person responsible for the Subproject in this field. The list of values only shows users that are assigned to an approval title with Project as an authorized document type.

Subproject Budget - Enter the budget amount for each individual subproject in this field. Modification of this field depends on how the ALLOW BUDGET UPDATE rule key is set in the Project Budget Options Business Rule is set. If the rule key is set to ON the budget can be modified after the record is approved. Otherwise the system does not allow update of the budget after the subproject is in Approved status.

Requestor, Department and Phone - The Requestor indicates the person who originally requested the Purchase Order. The system enters their department and phone number automatically using data from the Employee module.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Approval processing for the project depends on the setting of the [Check Approval Document](#) rule key in the Project Budget Options business rule.

Start and End Dates

Estimated - The estimated start and end Dates must be entered manually and are for information purposes only. They do not affect when work can be planned against the subproject, and the system does not use them for calculating start and end dates for the project.

Actual - The actual start and end dates must be also entered manually and are for information purposes only.

Note: If a project is exported to MS Project without an estimated start date, even if there are subprojects with start and end dates, Microsoft Project will use the current date as the start date. That date can later be changed.

Request Date and Required Date - The Request Date indicates the creation date of the subproject. Required Date indicates when the subproject is needed.

Additional Project/Subproject Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Project and Subproject Cost Summary

Select Cost Summary from the Views list under either the project or the subproject. This window summarizes the costs associated with the subproject as work orders, timesheets, purchases, etc. are planned and activated against subprojects. The Project Costs total costs for all

subprojects, while the subproject costs total costs for the individual subproject. The fields can only be updated by the system as these costs are planned and charged.

The upper portion of the Cost Summary view contains actual cost information for each Cost Category. Depending on responsibilities in your User Profile, the Cost Summary view may also display overhead costs and information reported by your organization's external financial system.

Category	Original Estimate	Revised Estimate	Committed	Accrued	Actual
Premium Labor	.00	.00	40.00	.00	40.00
Labor Regular Burden	.00	.00	20.00	.00	20.00
Labor Premium Burden	.00	.00	20.00	.00	20.00
Regular Labor	.00	.00	392.00	.00	392.00
Inventory Stock	.00	.00	76.11	.00	76.11
Total	.00	.00	548.11	.00	548.11

Cost Summary view

Budget Amount - The Budget Amount field indicates the accumulated budget for all the Subprojects that are approved.

Variance - The Variance field indicates the difference between the Budget and the Committed costs. Depending on your organization's settings in the Project Budget Options Business Rule, the system also sends an alert to the person indicated in the Supervisor field on the Subproject when the value in this field reaches certain thresholds.

For each cost category, the system totals costs from related work orders, timesheets, inventory transfers, cost adjustments, etc. that are planned and activated against the Project/Subproject.

Budget Amount - The Budget Amount field indicates the budget for the subproject.

Variances - The Variances field indicates the difference between the Budget and the Committed costs. Depending on your organization's settings in the Project Budget Options business rule, the system will also send an alert to the person indicated in the Supervisor field on the Subproject when the value in this field reaches certain thresholds.

Category - Costs are listed by the categories defined in the Expense Code business rule.

Original Estimate - The total dollars planned before the work order is activated.

Revised Estimate - The current dollar estimates.

Committed - Commitments occur at different points depending on the nature of the cost category. Labor costs are committed when work time is posted and batch has run. Direct purchase costs are committed when the Purchase Order is issued. Material costs are committed when the item is issued on a Checkout Request.

Accrued - Accruals include all unpaid receipts (at the Purchase Order price).

Actual - Actual include all stock issues, posted labor charges, paid invoices.

External Actual Amount and Actual Quantity - If you have the appropriate function responsibility in your user profile, you can use these columns to compare actual amounts and quantities from an external financial system with estimates maintained by Oracle Utilities Work and Asset Management.

Overhead Class - Overhead Class types are defined for your organization in the Regulatory Account Overhead Class Type business rule. The Overhead Class provides the ability to allocate overhead costs to the appropriate capital, maintenance and operations regulatory accounts.

Original Estimate - The system calculates the Overhead Estimate value by multiplying the Original Estimates from the upper portion of the screen that have the same Expense Category as the Overhead Class record's Applied Expense Category by the Estimated Overhead Percentage defined in the Regulatory Account Overhead Class business rule.

Actual - The system calculates the Actual value by multiplying the appropriate Actual amounts from the upper portion of the screen by the Estimated Overhead Percentage defined in the Regulatory Account Overhead Class business rule.

Allocation - The overhead cost allocation is calculated as the sum of the allocation amounts from the Regulatory Account Overhead Cost records with the same Overhead Class and work order task.

Direct Allocation - The overhead cost totals resulting from actual work performed for the work order and not from year end processing calculations.

Original Estimate - The Original Estimate is the sum of the total original estimate from the upper and lower portions of the view.

Actual - The sum of the total Actual amounts from the upper and lower portions of the screen.

Actual + Allocation - Sum of the Actual from the upper portion of the screen and the total allocations from the lower portion of the screen.

Work Design

The work design view shows a display only listing of work design records that reference the project and subproject. the Estimated Amount column shows the final estimated total from the Design Estimate view on the Work Design record. There is also a view at the subproject level which tracks work designs referencing the subproject.

Work Design No.	Description	Estimate Amount	Required Date	Status
07000003	this design is for the new project	5,000.00	AUG.13.2007	CREATED

Work Design view

Work Design Details for the Project

The work design view shows a display only listing of work design records that reference the project and subproject. The Estimated Amount column shows the final estimated total from the Design Estimate view on the Work Design record. There is also a view at the subproject level which tracks work designs referencing the subproject.

Work Order

You can view a list of summary work order information for the project or the subprojects by selecting Work Order from the Views list. The window shows all the work orders that reference one of the subprojects for the project. This information cannot be updated.

The Work Order view for project will list all associated work orders, where the Work Order view for subprojects will only list the work orders associated with that particular subproject.

Work	Status	Work Desc	Required	Status
0600496	CANCELED	a project work order		13 DEC 2006
0600495	ACTIVE	a project work order		13 DEC 2006
0600494	CANCELED	a project work order		13 DEC 2006
0600493	CANCELED	a project work order		13 DEC 2006
0600492	ACTIVE	a project work order		13 DEC 2006

How to Create a Subproject Record

1. **Open the appropriate Project record.**
This is the project that acts as an umbrella for the subproject(s). The budget for each subproject in the project will roll up to the project budget, as will the subproject actual costs.
2. **Select Subprojects (List) from the Views list.**
3. **Click in the New icon.**
The system opens a new Subproject record.
4. **Select a Type from the list of values.**
5. **Enter any additional information required by your organization.**
6. **Click Save.**
The system assigns an identification number for the subproject and saves the record.

Work Order view

How to Create a Work Order for a Project/Subproject

1. **Open the Work Order Selection or Search Results window, or an existing record.**

If the Project Work Order Account Business Rule is set accordingly the system enters the Department, Area, and primary Account Number when you complete this step. Please review the Project Work Order Accounts Business Rule for more information.

You can also Open the Work Order module in the Maintenance subsystem by double-clicking the Work Order field in Subproject Work Orders view.

2. **Click New.**
The system opens a new Work Order record.
If you chose an existing work order simply work from that record.
3. **Enter a Description.**
Update the requestor if necessary.
4. **Select the Project and Subprojects from the lists of values.**
These lists are controlled by the Project/Subproject module and only show Projects and subprojects that are in Approved or Finished status.
5. **Add any additional information required by your organization.**
6. **Click Save.**
The system saves the record. When you begin adding work order tasks, you can plan and use parts and labor with this work order and the system automatically notes the charges on the project and subprojects.

How to Set the System to Create Account Numbers for Subprojects

1. **Open the Account Creation from Projects Business Rule.**
The business rules module is in the Administration subsystem.
2. **Set the ALLOW AUTO CREATE option to ON.**
3. **Click the Save icon.**

How to Set the System to Provide a Subproject Account on Work Orders

1. **Open the Project Work Order Account Business Rule.**
The Business Rules module is in the Administration subsystem.
2. **Set the Account Update option for the project Type to YES.**
3. **Click the Save icon.**

How to Set the System to Send an Alert when a Project/Subproject is Near Its Budget

1. **Decide when you want the system to send an alert.**
Options are:
when the Variance for the project or subproject comes within a dollar range of the Budget
when the Variance for the project or subproject comes within a percentage range of the Budget
both of the above
2. **Open the Project Budget Options Business Rule.**
The Business Rules module is in the Administration subsystem.
3. **Set the Status for the appropriate option(s) to ON.**
Turn on the ALERT DOLLAR TOLERANCE option if you want an alert based on a flat dollar range. Turn the ALERT PERCENT TOLERANCE option if you want an alert based on a percentage range. Turn both on if you want both alerts sent.
4. **Click the Save icon.**

Log

This view maintains a history of changes that have been made to the subprojects throughout the life of the project. This information is system maintained and cannot be updated.

Log view

Type - The Type field indicates the type of change.

Username and Date - The User Name field and the date field immediately below it, display who entered the change and when.

Column and Subproject - The Column field indicates the column on the table that was changed, the name of the column will roughly correspond with the name of the field. The Subproject field indicates which subproject was affected.

New Value/ Date - The New field contains the new information entered in the affected field. The (New) Date field indicates when the change was made (as does the Date field below the Username field).

Old Value/ Date - The Old field contains the old information that was replaced by the information shown in the New field. The (Old) Date field indicates the date and time that the information displayed in the Old field was first entered. This allows you to track changes to a given field by looking at the matching the (Old) Date against the (New) Date for older transactions.

Timesheet Entries

The Timesheet Entries view displays information from all the Timesheet charges made against the various subprojects. The system gathers this information from the various timesheets for display here and will not allow you to make changes. For an in depth description of the fields please see the User Guide section on [Timekeeping](#).

Timesheet view

Purchase Orders

The Purchase Orders view displays information gathered from all Purchase Orders written against the various subprojects. It shows each item for each Purchase Order on a separate line. This information cannot be updated.

Sub	PO No	Item	Status	Status Date	Type	Item Cost	Store	Stock T
1	02000070	001	ISSUED	22 JAN 2002	S	11,940.00		

Purchase Orders view

Closing the Project

Subproject statuses cannot be set to Finished until all of the work orders associated to that subproject are in Finished status. Work orders cannot be set to Finished status until all of the work order tasks are finished. This processing ensures that all work has actually been completed before record statuses are set to indicate otherwise. The system changes the project status from Approved to Finished when the status of at least one subproject is changed to Finished, and all remaining subprojects are in Closed or Canceled status. The project status can then be set to Closed manually to indicate that no more work needs to be done.

Managing Projects Using Microsoft Project

The Project Management view provides an interface between Oracle Utilities Work and Asset Management and Microsoft Project, a popular project management program. If you already use Microsoft Project to manage other projects within your organization, you can use this program to manage dates in your Oracle Utilities Work and Asset Management projects as well. From the Project Management view, you can create a Project Management file based on your Oracle Utilities Work and Asset Management project. You can then launch Microsoft Project to view and manage the file. Timeline changes you make in Microsoft Project are automatically exported back to the system when you save the Microsoft Project file. Similarly, time line changes you make in Oracle Utilities Work and Asset Management are reflected in Microsoft Project the next time you open the project file. If you need to add new subprojects, tasks or resources to your project, create them in Oracle Utilities Work and Asset Management and use the Export Wizard to add the additional items to the Project Management file.

Configuration

Before the Project Management interface can be used, Microsoft Project must be installed on each user computer, and the Default File Locations business rule must be configured with the location of the MS Project program file.

A typical path is entered during the installation process, but your DBA or System Administrator should verify that it is correct and change it if necessary.

The system is certified for MS Project 2003 and 2007.

If not all users have Microsoft Project installed in the same directory, individual users can override the path specified in the business rule by inserting an alternate path in their User Profile. To do this, open the User Profile and insert a new key name, selecting 'Default MS Project Path' from the drop-down list. Then enter the complete path (including the name of the executable file) as Key Value 4, and save the record.

While it is not necessary to configure, it is useful to note that the Report Output Physical Directory rule key in the Web Configuration Business rule indicates the physical location where the output of the generated xml file is temporarily stored when data is transferred from the Project/Subproject module to the MS Project application.

Processing

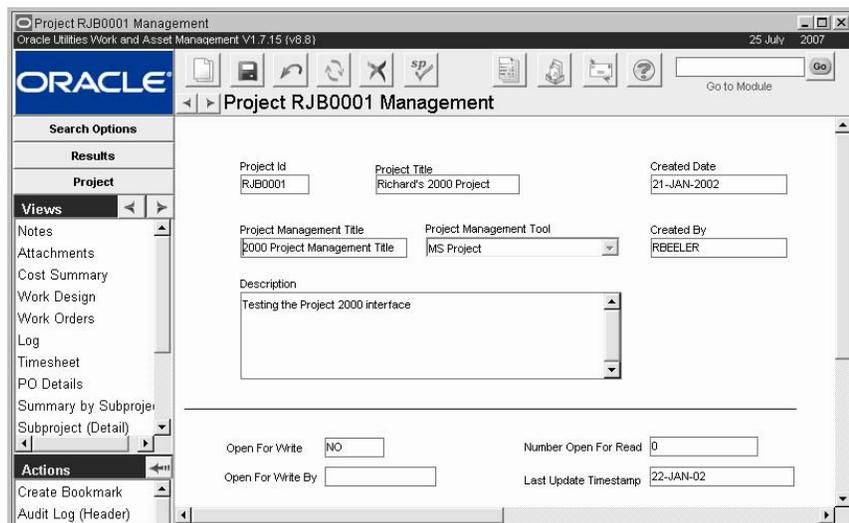
Once the project and subprojects have been established, the system posts a great amount of information to this module from other modules. As work is being completed you can export data to Microsoft Project to manage the subprojects, tasks and resources even further. Once all of the work is completed, and the project is closed, users must make sure that any necessary changes to the information in Microsoft Project are made manually.

The Project/Subproject module is designed to allow you to group work orders for jobs that are larger in scope and duration than would be appropriate for a single work order.

Together with the functionality in this module, you can also use the Microsoft Project interface to further manage subprojects, tasks and resources (staff) associated with projects. The Project Management view provides an optional interface between Oracle Utilities Work and Asset Management and Microsoft Project, the popular project management program. If you use Microsoft Project to manage other projects within your organization, you may want to use the same programs to manage dates in your database projects as well. From the Project Management view, you can launch Microsoft Project and export new project items to Microsoft Project files.

Project Management View

The fields in the upper portion of the Project Management window provide general information about the project, including the Project Management Title in Microsoft Project. The lower portion of the Project Management window provides information about copies of the project currently open in Microsoft Project. If another user has the Project Management file open in Microsoft Project, you will only be able to open a read-only copy the project. This is important in order to avoid two users making conflicting changes to the same project.



Project Management view

The Project Items view shows the subprojects, tasks and resources associated with the project.

Project ID - The Project ID is copied from the Project record and cannot be modified.

Title - This is the title of the Oracle Utilities Work and Asset Management Project. The system copies the title from the Project record and it cannot be modified here.

Created Date / Created By - The Created information is copied from the Project record and cannot be modified.

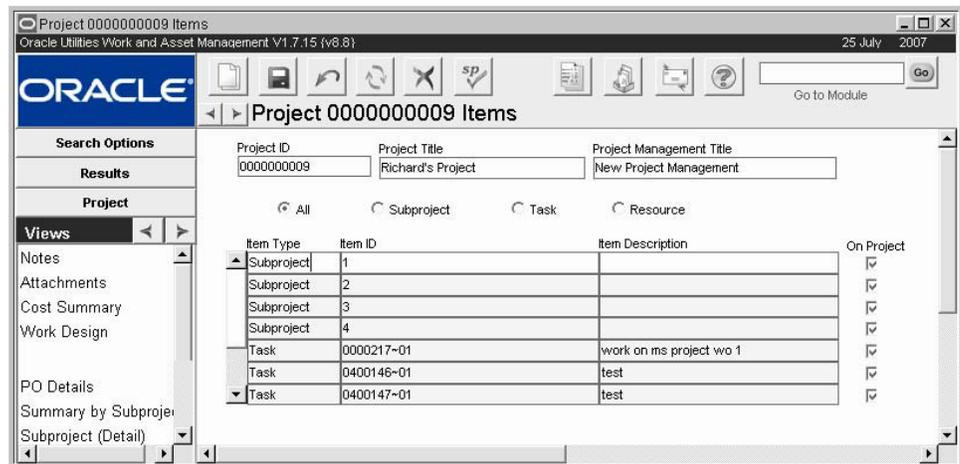
Project Management Title - The Project Management Title is the name of the project file in Microsoft Project. You enter the Project Management Title when you create the Project Management file.

Project Management Tool - The only current choice is Microsoft Project. When additional choices are added, you can select them from the drop-down list.

Description - You can enter a brief description of the Microsoft Project file here.

Project Items

The Project Items view shows a listing of all subprojects, work order tasks and Resources included on the project.



Project Items view

Project ID, Project Title, & Project Management Title - The system copies these fields from the Project Management record. They cannot be modified.

All, Subproject, Task and Resource Radio Buttons - The radio buttons control the type of Project Items that display on this view. The window opens showing All items on the project, but you can restrict the display to show only subprojects, Tasks or Resources (assigned staff) by clicking the corresponding button. If you have just saved a Project Management file, you may need to click the radio buttons (or the Refresh icon) to make the items display correctly.

You can use the Project Items view to verify that items have been correctly included on the project before using the Project Export Wizard. Since Microsoft Project manages dates at the Task level, the project must have at least one subproject and one work order task before it can be exported to Microsoft Project.

Note: If a project is exported to MS Project without an estimated start date, Microsoft Project will use the current date as the start date. That date can later be changed.

Updating Project Management Files

Note: When you create a project management file to use with Microsoft Project, the system includes all project items (subprojects, work order tasks, and resources) from your Oracle Utilities Work and Asset Management project in the Microsoft Project file. Any subsequent changes you make to start and end dates for work order tasks in Microsoft Project are automatically imported back into Oracle Utilities Work and Asset Management when you save the Microsoft Project file. If you want to add new subprojects, work orders, work order tasks, or resources, you must create them in the system and export them to the project management file in order to manage these new items in Microsoft Project.

Before you can add new items to a project management file, you must create them in the system. Use the Assignments view in the Work Order Task module to create new resources.

Project Export Wizard

You can use the Project Export Wizard to export a Oracle Utilities Work and Asset Management Project to Microsoft Project. You can either export a newly created project or update an existing Microsoft Project file with changes you have made in the Oracle Utilities Work and Asset Management Project. The Project Export Wizard is only available on the Project Management view.

When you select Project Export Wizard, the system opens an informational window explaining the wizard.

Click the Next button to continue or the Back or Cancel buttons to exit the Wizard.

The second Project Export Wizard window is similar to the Project Items view and shows a listing of all subprojects and work order tasks included on the project. Four radio buttons control which Project Items display. The window opens showing All items on the project, but you can restrict the display to show only subprojects, Tasks or Resources by clicking the corresponding button.

Two columns of check boxes indicate what items are already on the project and which items you want to add. Mark the corresponding Add check box for those items you want to export to the MS Project file.

If you make a mistake checking the Add check boxes, you can quickly remove all of the checks in the Add column by clicking the Clear Fields button. Clicking the Clear Fields button has no effect on the checks in the On Project column.

When you click the Next button the system exports the information to the MS Project file and displays a confirmation message.

Note: If a project is exported to MS Project without an estimated start date, Microsoft Project will use the current date as the start date. That date can later be changed.

Launch MS Project

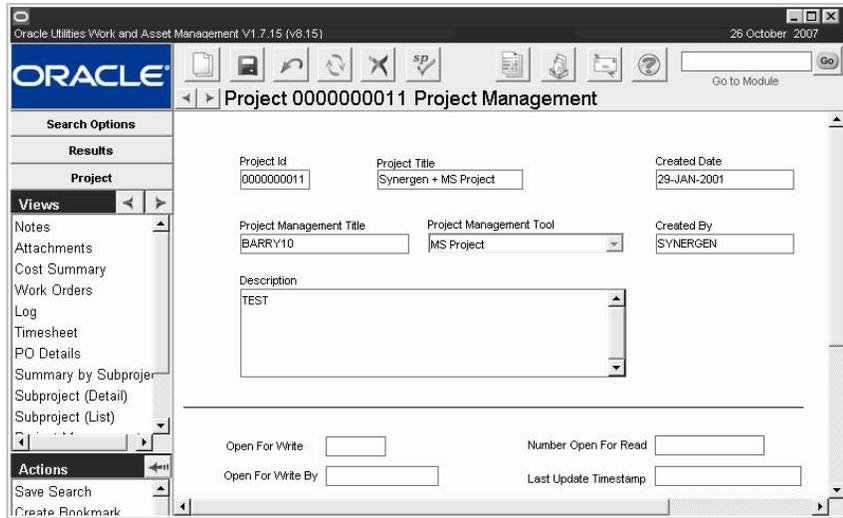
Select Launch MS Project from the Actions list to run the Microsoft Project program. The Launch MS Project action is only available on the Project Management view.

Note: Before you can Launch Microsoft Project with this action, the Microsoft Project program must be installed on your computer and your DBA or Systems Administrator must configure both Oracle Utilities Work and Asset Management and your computer to use the Project Management interface.

When you have finished viewing the project file, save the file (if you have made changes you want to appear in the Project record) and close Microsoft Project. The Project Management interface automatically imports your changes back into the Oracle database but you may have to click the Refresh icon to see the changes on the record.

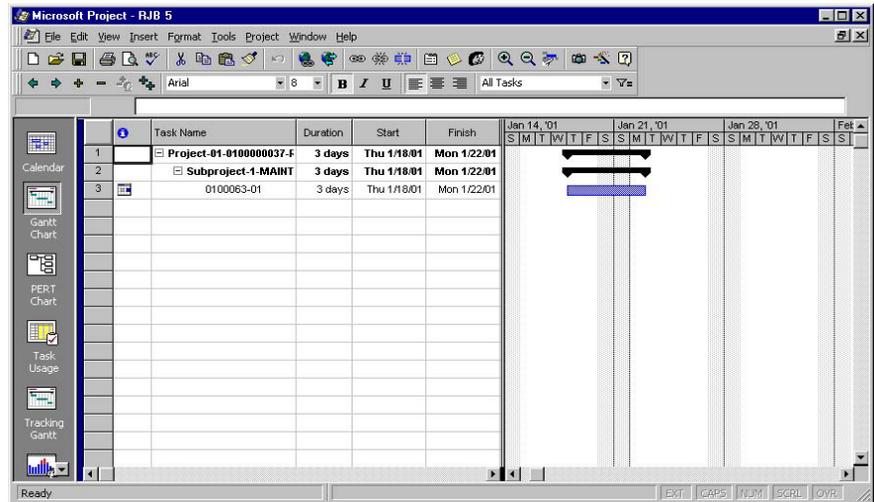
How to Create a Project Management File

1. **Open the Project/Subproject record that you want to access in Microsoft Project.**
 Since Microsoft Project manages dates by tasks, the project that you access must have at least one subproject, have a work order associated to it, and include at least one work order task. The project and subprojects must be in approved status, but work order tasks can be in any status. You can use the Scheduling view in the Work Order module to establish start and end dates for the tasks. You can use the Assignments view in the Work Order Task module to assign resources to the work order tasks.
2. **Select Project Management from the Views list.**
 The Project Management view opens.



3. **Enter a Project Management Title and, if necessary, a description.**
 The project management title is the name of the file in Microsoft Project.
4. **Click Save.**
5. **Select Launch MS Project from the Actions list.**
 Make sure that you are on the Project Management view of the appropriate project. Only one person can edit the project management file at a time, so if you try to access it and it is already open the system will display a message asking if you want to open a read only (not editable) copy.
6. **Click OK.**
 The project management file opens in Microsoft Project, where you can plan and schedule changes as you would with any other Microsoft Project file.

In order for the system to launch Microsoft Project, your user profile settings must be configured properly. If the program does not launch, consult your DBA or system administrator.



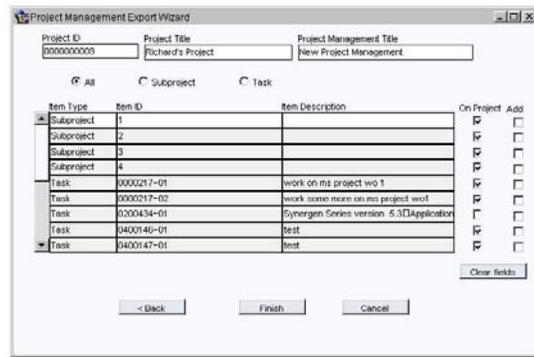
Microsoft Project manages datelines at the task level. That is why the project must have at least one work order task if you want to use the project management interface.

7. **Review the project management file as necessary.**
Date and time line changes that you make in Microsoft Project are communicated back to the Oracle Utilities Work and Asset Management system. Other changes, such as new work orders and work order tasks, must be made in the system and then exported to the Microsoft Project file as described in the next section.

You should save the Microsoft Project file under a different name if you want to look at “what if” scenarios or manipulate the data in other ways. This precaution will ensure that none of the data will be corrupted in the process.

How to Export a Project Management File

1. **Create the project file you want to export to Microsoft Project.**
At a minimum the project must contain at least one subproject and one WO Task. The project and subprojects need to be in approved status, although WO Tasks do not. You can use the Scheduling view in the Work Order module to establish start and end dates for the WO Task. You can use the Assignments view in the Work Order Task module to assign Resources to the WO Tasks.
2. **Open the project file you want to export in the Project/Subproject module.**
3. **Select Project Management from the Views list.**
4. **Enter a Project Management Title and, if necessary, a Description.**
The Project Management Title is the name of the Project in Microsoft Project.
5. **Click Save.**
Although it is not required, it is a good idea to select Project Items from the Views list under Project Management after saving the Project and before exporting it. Verify that the items you want to include on the Microsoft Project file are listed. Attempting to export a file without Task information, for example, can result in a Microsoft Project file with corrupt information that is not usable.
6. **Select MS Project Export Wizard from the Actions list.**
The Project Export Wizard is only available in the Project Management view. You may have to select Project Management from the Views list to display the Project Export Wizard before you can select it. When you do this, the first page of the Wizard displays information about the export process.
7. **Click the Next button.**
The second page of the Wizard appears, listing the items on the project. You can control what items are listed by selecting the All, Subproject, Task and Resource radio buttons, but you can only modify the information in the Add column.



8. **Check the Add box for any new items you wish to add to the Microsoft Project file.**
The first time you export the project, all items will show as being On Project, even though the initial export has not occurred. This is convenient for large projects because you do not have check the Add box for each item individually. Later, as you add new items to the Oracle Utilities Work and Asset Management Project, you will need to mark the corresponding Add check box to export the new items to the Microsoft Project file.

Each time you add new items to the project, you must the check the corresponding Add check box to export the new item to the project management file.

9. **Click the Next button to export the project.**
The system verifies that the project management file has been exported.
10. **Click the Done button to close the Wizard.**
The system returns you to the Project Management view. You can select Launch MS Project from the Actions list to view the project in Microsoft Project. If you do not see Launch MS Project on the Actions list, select Project Management from the Views list to display the Launch MS Project option.

How to Manage a Project in Microsoft Project

1. **Create a project and export it to Microsoft Project.**
See the Export a Project Management File for instructions on doing this.
2. **Open the project in Oracle Utilities Work and Asset Management and select Project Management from the Views list.**
The Project Management window shows if another user has the project open in Microsoft Project, either For Write (able to make changes) or for Read Only (not able to make changes). If someone else has the project open For Write, you will only be able to a Read Only copy.
3. **Select Launch MS Project from the Actions list.**
The Project Management file displays in Microsoft Project, where you can plan and schedule changes as you would with any other Microsoft Project file.
4. **Make any changes necessary in the Project Management file.**
Microsoft Project datelines are controlled at the Task level and you change the start and end dates of the project and subprojects by changing the start and end dates of the associated work order tasks.
5. **Save the Project Management file and Exit Microsoft Project.**
Dateline changes you have made in the Project Management file while working in Microsoft Project are automatically imported back into the Oracle database. You may have to click the Refresh icon to see the changes and the new Update Timestamp.

Similarly, dateline changes you make in the system are reflected in Microsoft Project the next time you open the project file.

Chapter 7

Benchmark Work Order

The concept of benchmarking revolves around building and maintaining template work order information that can be used repeatedly to create new work orders. Using benchmark work orders prevents you from having to replan work for similar jobs.

Benchmark Work Order records are used for work that is not performed on a regular basis. For regular jobs use a PM Master record.

Benchmark Work Order Records

The Benchmark Work Order record is comprised of the same type of information that work orders are, allowing you to pre-plan parts, direct purchase, and labor requirements at one time. Once the benchmark is set up like a template, you can reference it and modify information on the work order you generate from it. Benchmarks do not maintain actual cost, approval, and status information since work is not performed against them.

Work orders generated by benchmarks are accessed through the Work Order module.

Benchmark Work Order record

Work History Views

Since all of the fields and Views found in the Benchmark Work Order module mirror the fields and Views in the standard Work Order module, you can refer to the section on the [Work Order](#) module in this User Guide for detailed descriptions.

Benchmark Work Order Actions

In addition to standard actions, the following can be completed from within the module.

Benchmark work orders can be created either directly in the Benchmark Work Order module or from existing work orders.

How to Create a New Benchmark in the Benchmark Work Order Module

History work orders can also be used as template work orders.

1. **Open the Benchmark Work Order module.**
2. **Click New.**

A new Benchmark Work Order record opens.

3. **Complete the required fields.**

Description - Enter a detailed description of the work initiated by this benchmark.

Account - The Account field represents where the charges for the work order will be applied to unless the benchmark work order task account is different, or the account information is changed on the actual Work Order or Work Order Task records when they are produced. If you supply an Asset ID, the system provides the associated account number, department, and area. When only one account is associated with the asset the system automatically enters that account number in the Account field. When there are additional accounts for the asset, the system provides a list of values displaying all the accounts associated with the asset, so that you can select the appropriate one.

If you enter a partial account number the system opens a dialog box with correct possibilities. You can also double-click the account number field to drill-down and find the appropriate account number if you do not know it.

4. **Fill in additional fields according to your business requirements.**

This information can be extensive. See the User Guide section titled Work Orders for information on these other fields.

5. **Click Save.**

The system generates the benchmark work order number with the first character of the work order number set as “B” to distinguish it from regular work orders. You can now use it to produce work orders.

The screenshot shows the Oracle Utilities Work and Asset Management V1.7.15 (v8.38) interface for Benchmark Work Order B000235. The form is titled "Benchmark Work Order B000235" and includes a search bar and a "Go to Module" button. The main content area is divided into several sections:

- Search Options:** Results for Benchmark Work Order.
- Views:** Task (Summary), Task (Detail), Additional Data, Notes, Cost Summary, Activity Log, Warranty.
- Actions:** Create Bookmark, Audit Log (Header), New Record.
- Form Fields:**
 - Work Order: B000235
 - Description: Benchmark Work Order for the ILB facility
 - Class: CONTRACT
 - Category: DN
 - Approval Route: [Empty]
 - Defaults for Tasks:
 - Asset ID: ILB ASSET10
 - Component ID: [Empty]
 - Process: [Empty]
 - Department: ILB1
 - Area: ILBA1
 - Account: ILB1-Y-PROJECT-COMP-DIRECT PO-998
 - Priority: [Empty]
 - Planner: ILB
 - Crew: [Empty]
 - Deficiency Tag: [Empty]
 - Indicators from Tasks:
 - Change Req Required
 - Safety
 - ISO Related
 - Health
 - Environmental
 - Bottom Section:
 - Rough Est: [Empty]
 - Project: [Empty]
 - Inspection Required ?
 - Auto Close ?

Benchmark Work Order record

The next step is to add tasks to the Benchmark Work Order record.

How to Create a Benchmark Work Order Task Record

1. **Open the appropriate Benchmark Work Order record.**
2. **Select Task (Details) from the Views list.**

The system opens the Benchmark Work Order Task window at the first task for that benchmark work order.

3. **Click New.**
4. **Enter a description of the task.**
5. **Select the Account Number from the list of values.**

This list is controlled by the Accounts module of the resource subsystem.

If you supply a Department and Area before you select the Account number, the List of values will include only those Accounts associated with that Department and Area combination. If you do not supply a Department and area, the list of values will include only those accounts not associated with a Department and Area.

6. **Enter any appropriate additional information.**
7. **Click Save.**

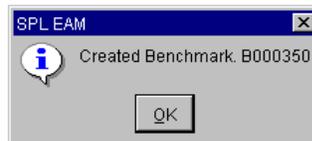
Instead of creating a benchmark from scratch in the Benchmark Work Order module, you can also create benchmarks from existing work orders provided you have the necessary responsibility function.

How to Create a Benchmark from an Existing Work Order

1. **Open the Work Order record that you want to create the benchmark from.**
2. **Select Create Benchmark from Work Order from the Actions list**

In order for Create Benchmark from Work Order to appear on the Actions list, you must have the UPDATE BENCHMARK WO responsibility function. The system creates a new benchmark work order using the data from the active work order and displays the new benchmark work order number.

If you want to create a new benchmark from an existing work order, select Create Benchmark from Work Order from the Actions list on the Work Order record.



Benchmarks generated from work orders are available only through the Benchmark Work Order module. Any modifications made to the benchmark do not affect the originating work orders.

Once created, benchmark work orders can be used to simplify work in a variety of ways.

Creating a Work Order from a Benchmark

Once you have created a benchmark, you can use it repeatedly to generate work orders.

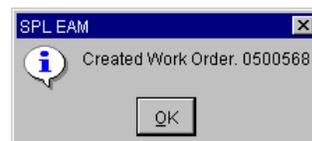
How to Create a Work Order from a Benchmark

1. **Open the benchmark work order that you want to use to create the work order.**
2. **Select Create Work Order from Benchmark from the Actions list.**

The system creates a Work Order record and displays the new Work Order number.

Open the Work Order module and select that work order number to view the new record.

You must have the Create WO from Benchmark function responsibility in your user profile to access this action.



Work orders generated from benchmarks are accessed through the Work Order module. Modifications made to work orders generated from benchmarks do not affect the originating benchmarks.

Updating a Work Order from a Benchmark

Select Update from Benchmark from the Actions list to update any work order in Planning status.

Updating from a benchmark overwrites all information on the work order except the information that you choose to retain.

Even if you have already created a work order you can benefit from a benchmark.

How to Update a Work Order from a Benchmark

1. **Open a Work Order record in Planning status.**
2. **Select Update from Benchmark from the Actions list.**

In order for Update from Benchmark to appear on the Actions list, you must have the UPDATE WO FROM BENCHMARK responsibility function. The Update from Benchmark window displays.

3. **Enter the benchmark work order number to use as a template or select the number from the list of values.**
4. **Select the information that you want to retain from the current work order.**
You can retain data such as the asset information, work or task attachments, work or task descriptions, crew information, criticality, and report codes. All of the other information will be copied from the benchmark to your work order.
5. **Click Finish.**
The system returns you to the work order with the changes applied.

Using Benchmarks With PM Masters

Remember that benchmark work orders are also used with PM masters for cycled work.

PM masters contain cycling information used by batch processing to periodically generate preventive maintenance work orders. PM masters are used to ensure routine work cycles at predefined intervals. Since the work associated with PM masters is the same each cycle, the template work remains unchanged. Thus, a benchmark work order is used as the template for system-generated PM work orders.

For more information please refer to the PM Master chapter.

Based on the criteria in the PM master, batch processing uses the benchmark to create new PM work orders. (The system changes asset information when creating the work order based on the PM master information.) PM work orders created are accessible from the Work Order module.

Modifying Benchmarks

Change the benchmark for universal frequent updates and the individual work orders for occasional updates.

Changing an occasional item should be done on the work order, not on the benchmark. This prevents you from having to reverse the change on each subsequent work order created from a benchmark that was modified. However, universal changes that you will want to keep for future work orders should be updated on the benchmark.

If you find yourself making the same changes to each work order you create from a benchmark work order, then you should change the benchmark. This way you are updating the information one time instead of many. But if you find yourself changing work order information only occasionally, leave the template alone. You should update the output for one time changes.

To update a benchmark, you can open the Benchmark record, make the changes then Click Save. However, if the changes you want to make have already been entered on a work order, you can update the benchmark with information from that work order.

How to Update a Benchmark from a Work Order

1. **Open the appropriate PM Master record.**
2. **Select PM History from the Views list.**
The PM History view opens showing a summary of work orders related to the PM master.
3. **Double-click the work order you want to use to update the benchmark.**
The Work Order module opens and displays the record that you selected.
4. **Select Update Benchmark WO from the Actions list.**
In order for Update Benchmark WO to appear on the Actions list, you must have the UPDATE BENCHMARK WO responsibility function. The system replaces the Benchmark Work Order header, tasks, and associated details with the corresponding data from the work order, and displays a confirmation message.
5. **Click the OK button to return to the work order.**

Using a History Work Order Like a Benchmark

Although history work orders are not truly benchmarks, you can use them in the same way.

History work orders are closed work orders that the system moves into a log stored in the History Work Order module after a predetermined amount of time. Although history work orders are not truly benchmark work orders, you can use them like benchmarks. Having an existing work order where parts, labor requirements, and so on were planned makes building new work orders a snap!

How to Create a Work Order from a History Work Order

1. **Open the History Work Order module and find the history work order to use as a template.**
2. **Select Create New Work Order from History from the Actions list.**
3. **Enter the Required Date for the work to be completed.**



The screenshot shows a window titled "Create Template Work Order". Inside the window, there is a label "Required Date" followed by a text input field containing the date "MAR.15.2005". Below the input field is a button labeled "Create Template".

4. **Click the Create Template button.**
The system creates a work order and displays the work order number.

Work orders generated from history can be accessed in the Work Order module.

The required date can be modified later on the actual Work Order record.

Chapter 8

PM Master

PM Master records contain cycling information which determines how often work orders should be automatically created by the system for preventative type work. When a PM Master comes due, the Benchmark Work Order listed on the PM Master is used as the template Work Order, producing a PM Work Order. A PM Work Order is created for work that is performed on a regular basis or by a defined event. For example, an elevator inspection must be performed on the fifth of each month. You can create a Calendar Anniversary based PM Master, specifying that a Work Order should be created on the fifth of each month.

PM Master Records

PM Masters are Created from Benchmark Work Orders. When the PM cycle triggers a new Work Order from the PM Master, the system uses information taken from the Benchmark Work Order Tasks to complete the Task information on the scheduled Work Order. Therefore, it is important to review the Benchmark Work Order Tasks to make sure they contain the correct information.

PM Master 000055
Oracle Utilities Work and Asset Management V1.7.15 (v8.8) 25 July 2007

Search Options

PM Master No: 000055 Status: Planning PM Category: []

Description: this is a pm master

Asset ID: E_RLW_RUNTIME or Component ID: []

Description: this is an asset

Benchmark No: B000009 Scheduled Basis: Calendar Anniversary

PM Route: [] Schedule Type: Daily

Critical No: [] Scheduling Interval: Every 1 MONTH

Cycles: 10

Mandatory

Disallow Credit Cycle Lead Time: 14 days

Force W.O. Creation

Use Asset/Component from Benchmark

Use Account Data from Benchmark

Initial Schedule Date: 01 MAR 2001 Last Complete Date: 01 MAR 2001

Next Schedule Date: 01 APR 2001 Critical Reference Date: 01 FEB 2001

Fleet PM Control No. [] PM Group Runtime Delay []

PM Group Calendar Delay []

Department: RLW_DEP1 Area: RLW_AREA1 BOM ID: RLW_BOM1

Spec No: RLW_SPEC1 Spec Type: ROOM_DATA Spec Category: 4

Account No: RLW1-N-PROCESS-NONE-WORK ORDER-005

Lead Crew [] Backlog Group: DEPOT1

Downtime Type [] Downtime? Downtime Hours []

Initial Work Status [] Approval Route []

PM Master record

The following fields are included:

PM Master Number - The PM Master number is generated by the system when the record is saved.

Status - If you are creating a new PM Master, the record will be entered in Planning Status. Since batch processing only reviews PM Masters that are in Active status, change the status when you have finished entering a new record. You can choose to set the PM Master to Closed or Cancelled status to suspend or terminate processing without actually deleting the record.

When you are updating an existing PM Master header record, the fields that can be modified are controlled by the Status. If the PM Master is in Planning status, you can modify all the fields that can be entered when inserting the record. Once the PM Master is set to Active status, only those fields which do not change scheduling information can be modified.

PM Category - If your organization has multiple departments using PM Masters, or other reasons for needing multiple categories for PMs you can use this Category field to make classifications. Later you can use Category as a search criteria on the Search Options screen to find a specific category. This field can only be updated when the record is in Planning status.

Asset ID or Component ID - Only enter an Asset ID if it will be different from the Asset ID on the Benchmark Work Order. The system uses this asset information to fill in asset information for the Tasks associated with the PM. The Asset ID or Component ID entered on the PM Master overwrites any Asset ID or Component ID listed on the associated Benchmark. This prevents you from having to create a different Benchmark for each PM Master if the work being performed is the same, just a different Asset or Component ID. If you do not want this to happen, check the Use Asset/Component from Benchmark check box.

If your organization has set the PM Master Parameters Business Rule to always pull the asset from the Benchmark Work Order, this setting overrides the Use Asset/Component from Benchmark indicator on the PM Master.

The PM Schedule Basis Business Rule determines which types of schedules are available.

Run to Failure - Place a check next to Run to Failure to indicate that the Asset should be used until it dies. A good example of this concept is the use of a light bulb. This check box is for information only and does not include any business processing. It is, however, copied to work order tasks when the asset is populated on the task. Having the information available at the task level is useful for metrics, especially for comparing the number of failures when the Asset was on a preventive maintenance program and was not.

Benchmark Number - Enter the Benchmark Number for the Benchmark Work Order on which you will base the PM Master. When entering a Benchmark number, use the list of values to ensure that the Benchmark record exists in the Benchmark module.

Schedule Basis - You are required by the system to select a schedule basis from the drop-down list. Choose Calendar Anniversary, Calendar Interval, Event, Runtime Interval, or Runtime. The cycling information for the PM Master changes depending on which Schedule Basis you choose.

Calendar Anniversary - PM Masters that are cycled on the same date each cycle, such as the first of each month. They cycle from Schedule Date to Schedule Date, not taking into consideration the date that the last associated Work Order was completed.

Calendar Interval - PM Masters that cycle so that the same time interval between Work Orders is achieved. If work is to be done every 6 weeks, the system cycles a Work Order 6 weeks after completion of the previous Work Order. Future Schedule Dates are automatically adjusted to always reflect the same time interval.

Event - PM Masters that cycle when a defined event has occurred. When the event occurs (such as a shutdown) all active PM Masters which list the event type cycle to create a Work Order as specified.

Runtime Interval - PM Masters that cycle based on meter readings taken for the listed asset and the scheduling information for that PM Master. Runtime Interval PM Masters cycle on fixed intervals, not the time from last maintenance. For example, a Runtime Interval set to every 1,000 hours of operation would cycle at 1,000, 2,000, 3,000 hours, etc., regardless of when the last associated Work Order was completed.

Runtime - PM Masters that cycle based on meter readings taken for the listed asset and the scheduling information for that PM Master. An example might be that every 2,000 hours of operation, a machine is checked and lubed. The 2,000 hour count would restart when the last associated Work Order was completed. If the work was finished at 2,037 hours, the next cycle would be scheduled to occur at 4,037 hours.

Schedule Type - Determines on which schedule the Work Orders generated by the PM Master should be placed. Valid options are DAILY and WEEKLY. The system automatically completes this field with the default value defined in the PM Master Parameters Business Rule, but you can change the value if necessary.

Scheduling Interval and Cycle Lead Time - The two Scheduling Interval fields and the Cycle Lead time field only appear on the record if the PM Master is based on a Calendar Anniversary or Calendar Interval cycle. The second field indicates the kind of unit on which the PM Master cycle is based. Typically the unit would be days, weeks or months. The first field indicates how many of those units make up a cycle.

Calendar based PM Masters can also be affected by the value set for the CYCLE_LEAD_TIME key in the PM Master Parameters Business Rule. This setting allows you to apply lead time to all your Calendar based PM Masters. If you know that you need at least five working days to gather the materials to do your PMs you can have the system trigger the Work Order five days before the date you want the work to start.

You can use the Cycle Lead Time field to provide specific lead times for PM Masters that require advanced preparation (such as gathering special materials or arranging a special crew). For example, if you enter 10, the system will initiate the work order 10 days before the actual due

date of the maintenance. Cycle Lead Time can only be updated when the record is in Planning status.

If you enter a value in this field, the value overrides the value assigned for CYCLE_LEAD_TIME in the PM Master Parameters Business Rule. If you do not enter a value, the system uses the value established in the Business Rule.

Critical Number and Cycles - The Critical Number indicates the relative lateness of work due for the asset, and is based on the date entered in the Critical Reference Date field. When the Critical Number reaches 100, the asset is due to be worked on. The system updates the critical number only when the PM Master is in Active status.

For calendar based PM Masters, future Forecast (Schedule) Dates are maintained. The number of future Forecast Dates is controlled by the number you enter into the Cycles field on the PM Master header. For all PM Masters, historical cycling information is maintained by the system in the PM Forecast view.

Disallow Credit - Check this box to prevent the Credit PM action in the Work Order module from using a regular Work Order to satisfy the PM Master. Checking this box also flags the PM Master Override Not Allowed indicator on the PM Schedule view in the Work Order module.

Mandatory - If the work is required, check the Mandatory check box. There is no functionality associated with the Mandatory check box; it is for informational purposes only. The system does not send any alerts or warnings based on whether or not the box is checked.

Force WO Creation - PM masters do not cycle another work order if the previous work order is not yet complete unless you check the Force WO Creation box. If this box is checked, the PM master will cycle work orders even if the previous was not completed. This functionality only works with runtime interval and calendar anniversary based PMs.

Force WO Creation is unrelated to the Cycle PM Now action. Even if this box is checked, you cannot use the action with incomplete work orders in your forecast.

You can also have the PM master use the asset ID listed on the benchmark instead of the asset ID listed on the PM master by checking the Use Asset from Benchmark check box.

Use Asset/Component from Benchmark - You can also have the PM Master use the Asset ID listed on the Benchmark instead of the Asset ID listed on the PM Master by checking the Use Asset from Benchmark check box.

Use Account Data from Benchmark - Check the Use Account Data from Benchmark check box if you want to use the Account information from the Benchmark Work Order.

The PM Master will force an Account Number for each Work Order Task it creates. Where it gets the Account number depends on what information you provide. There are three possibilities:

1. If you check the Use Account Data from Benchmark check box, the system automatically uses the Account Numbers from Benchmark Work Order (and Tasks) and will ignore any other Account information you enter on the PM Master.
2. If you do not check the Use Account Data from Benchmark check box and you enter an Account number in the lower section of the screen, the system will apply that Account Number to all Work Order Tasks when the PM Master creates a Work Order.
3. If you do not check the Use Account Data from Benchmark check box and you do not enter an Account Number, but you do enter an Asset ID on the PM Master, the system will apply the asset's Account Number to all Work Order Tasks when the PM Master creates a Work Order.

Initial and Next Schedule Dates - You must enter an Initial Schedule Date. This date is used to calculate future Forecast Dates for calendar based PM Masters. With this date entered the system provides the Next Schedule Date when you save the record.

After the first PM Master cycles, the system uses the Forecast date on the PM Forecast window to determine the Next Schedule Date. Or, if the Schedule Date on the Forecast view has been updated, the system uses that date in this field.

Last Completion Date - The system enters the Last Completion Date as the date the last Work Order was finished.

Event Group and Event Type - The Event Group and Event Type fields only appear on the record if the PM Master is based on an Event. You can use these fields to describe any aspects of the event that are important to your organization.

Event Group is controlled by Code Table 108, and Event Type by Code Table 109.

Last PM - This field only shows if the PM Master is based on Runtime or Runtime Interval. When a runtime based P-type Work Order is set to Finished status, the system updates this field with the meter reading from the work order. However, the system does not automatically update this field if a higher value exists in the runtime log. In that case, the system asks if you want to update the PM Master record with information from the work order.

When a PM is superseded by another PM in the same PM Group, the Last PM information for the superseded PMs is updated when the work order created for the higher level PM Master is set to Finished status.

Interval - The two Interval fields describe the cycle that the PM Master follows. The second field indicates the unit type and the first field indicates the number of those units (for example, '100 miles').

Note: The Next PM Due, Trigger Within, Current, Date/Time, and fields only appear on the record if the PM Master is based on Runtime or Runtime Interval.

Next PM Due - The Next PM Due information is provided by the system from the PM Forecast view.

Trigger Within - You can use the Trigger Within field to create a lead between when the PM initiates the work order and when the work actually begins. For example, if you know a PM Master requires parts that must be special ordered, you might want to trigger the PM 100 miles early, to give time to process the request for parts.

Current - The Current field indicates the most recent reading provided to the system.

Date/Time - The date/Time field indicates the date and time of the Current reading.

Or Every - You can use the two Or Every fields to make a Runtime based PM Master into a secondary Calendar Interval based PM Master. The second field represents the unit type and the first field represents the number of units. The system tracks the interval and if Runtime does not trigger a new PM before the period is up, the system triggers a PM based on the Calendar Interval. These fields are only displayed if the PM Master is Runtime based.

If you enter the interval units in the second field and the number of units in the first field, the system triggers the PM at that point (for example, '2 months').

Asset PM Control Number - If the PM Master was created from the Asset PM Control module, the system displays the PM Control record number.

PM Group Runtime or Calendar Delay - Enter an appropriate delay value in the PM Group Runtime or Calendar Delay field. Enter the corresponding interval units in the unlabeled field after PM Group Calendar Delay.

If the current PM Master is a lesser PM within a PM Group, it may be superseded by higher level PMs encompassing the same work. When the lower PM is ready to cycle, the system checks to see if a higher PM is due to cycle within the specified delay tolerance. If so, the lower PM does not cycle as forecast, but "delays" and waits to be superseded. The delay factor works the opposite of the tolerance shown on the PM Group view. Where group tolerance looks down the

group hierarchy for lesser PMs to supersede; the group delay looks up the hierarchy for higher PMs that can supersede the current record. Together, group delay and group tolerance can keep your maintenance schedule from drifting too far from the original forecast.

When a PM is delayed due to a runtime or calendar delay, an entry in the PM History view identifies the higher PM that is causing the delay and the system writes a similar entry to the Job Manager Log.

Additional Information: Equipment, Safety, & Crew - Use the fields at the bottom of the PM Master header record to access information such as Department, Area, BOM ID, Spec. No., Spec Type, and Spec Category (which cannot be modified) and enter a Lead Crew, Backlog Group, Downtime Type, and number of Downtime Hours. You can use the Initial Work Status information to determine which Status the PM Master uses when it generates work orders. If Initial Work Status is left blank, the system uses the PM Master Parameters Business Rule. This information is copied into the Work Order when the PM is cycled by batch processing.

Note: The relationship between Backlog Group and Crew is defined in the Default Backlog Groups Business Rule.

How to Create a PM Master

PM Masters are created from benchmark work orders. However, PM Masters only show header information. When the PM cycle triggers a new work order from the PM Master, the system uses information taken from the benchmark work order tasks to complete the task information on the scheduled work order. Therefore, it is important to review the benchmark work order tasks to make sure they contain the correct information.

1. Open the PM Master module.

The PM Master module is in the Maintenance subsystem.

2. Click the New icon.

3. Enter the Benchmark Number for the benchmark work order on which you will base the PM Master.

4. Enter the Asset ID if it will be different from the Asset ID on the benchmark work order.

The system uses this Asset information to fill in Asset information for the Tasks associated with the PM.

5. Check the Use Asset from Benchmark check box if you want to use the Asset information from the benchmark work order.

6. Select a Schedule basis from the pull-down list.

7. Enter the number of Cycles you want the PM Master to forecast.

8. Enter the Scheduling Interval (number of days, miles, etc.).

9. Select the Scheduling Interval units from the list of values.

The list is controlled by Code Table 19 in the Codes and Codes Tables module of the Administration subsystem.

10. Check the Mandatory check box if the PM is required by the manufacturer or some regulatory agency.

11. Check the Use Account Data from Benchmark check box if you want to use the Account information from the benchmark work order.

The PM Master will force an Account Number for each work order task it creates. Where it gets the Account number depends on what information you provide. There are three possibilities:

If you check the Use Account Data from Benchmark check box, the system automatically uses the Account Numbers from benchmark work order (and Tasks) and will ignore any other Account information you enter on the PM Master.

If you do not check the Use Account Data from Benchmark check box and you enter an Account number in the lower section of the screen, the system will apply that Account Number to all work order tasks when the PM Master creates a work order.

If you do not check the Use Account Data from Benchmark check box and you do not enter an Account Number, but you do enter an Asset ID on the PM Master, the system will apply the Asset's Account Number to all work order tasks when the PM Master creates a work order.

12. Enter the Initial Schedule Date.

The system provides the Next Schedule Date when you save the record.

13. Change the status from Planning to Active.

14. Click the Save icon.

How to Update a PM Master

The system will not allow you to update PM Masters in Active status.

1. **Open the appropriate PM Master record.**
2. **Change the status from Active to Planning.**
3. **Click the Save icon.**
4. **Make the changes.**
5. **Change the Status back to Active.**
6. **Click the Save icon.**

How to Categorize PM Masters

1. Create a PM Master.

You can also open a PM Master that is in Planning status to add or modify the Category.

2. **Find the PM Category field at the top of the window.**
3. **Select a Category from the list of values.**

Categories are determined by your organization in Code Table 198.

4. Click the Save icon.

Or continue creating the new PM Master and click the Save icon when you are finished.

How to Indicate that PM Master Involves Downtime

1. Open the appropriate PM Master.

2. Locate the Downtime Type field at the lower section of the screen and select a type from the list of values.

This list is controlled Code table 139 in the Codes and Code Tables module of the administration subsystem.

3. Enter the estimated downtime hours.

The system uses this information to fill in the work order. You can enter a decimal to represent a fraction of an hour.

4. Check the Downtime? check box.

5. Click the Save icon.

The system saves the downtime information. The next time you run the SDBP_PM_CYCLE batch process, new work orders based on the PM Master will include the downtime information.

How to Set the Status for Work Orders Created by the PM Master

1. Open the appropriate PM Master.
2. Locate the Initial Work Status field in the lower right section of the screen and select a status from the drop-down list.

Your options are: Planning, Active, Pending Approval and no status. If you select Pending Approval you must also select a Next Approver from the list of values.

3. Click the Save icon.

PM Master Views

In addition to standard notes, attachments, and approval views, the module includes the following:

PM Forecast

Select Forecast from the Views list to see a listing of scheduled cycles for the PM Master. The Forecast View is available for all types of PMs; however, the system only maintains forecasting information for active calendar anniversary and calendar interval PMs.

Cycle	Forecast Date	Schedule Date	Adjustment Type	Completed Date	Work Order	Group PM
79	12 OCT 2005	12 OCT 2005			P 0500757	
80	14 OCT 2005	14 OCT 2005				
81	16 OCT 2005	16 OCT 2005				
82	18 OCT 2005	18 OCT 2005				
83	20 OCT 2005	20 OCT 2005				
84	22 OCT 2005	22 OCT 2005				
85	24 OCT 2005	24 OCT 2005				
86	26 OCT 2005	26 OCT 2005				
87	28 OCT 2005	28 OCT 2005				
88	30 OCT 2005	30 OCT 2005				
1	01 MAR 2001	01 MAR 2001	FINISHED	01 MAR 2001	P 0100221	
12	01 MAR 2001	01 MAR 2001	FINISHED	01 MAR 2001	P 0100222	

PM Forecast view

For all cycle types, work order information displayed on the Forecast view is entered and maintained by the system and cannot be modified. When the PM cycles and generates a work order, the system completes the Work Order ID field. When the Work Order record status is set to Finished or Canceled, the system enters the Completed Date on the corresponding Forecast record, moves it to the bottom of the forecast list, and generates a new Forecast record. The system constantly maintains the number of future dates as defined in the Cycles field on the PM Master record.

Adjusting Future Forecast Schedule Dates

For Calendar Interval based PMs, changing a Schedule Date cascades the change until it reaches the end of the future Forecast list or until it reaches a record where the Adjust field is set to "LOCKED". If you do not want the Schedule Date change to cascade, be sure to "lock" the following record before you change the Schedule Date.

Also note that for Calendar Interval PMs, the system automatically changes Forecast Dates based upon the Completion Date of the associated Work Order (when the Work Order header status is set to "Finished").

Runtime Interval forecast dates do not change based on the completion date of the most recent PM cycle.

You have the option of canceling forecasted backlog for PM Masters. For example, if a PM master is a few months behind schedule, planners may decide to cancel the backlog and start over on the next schedule date.

If you set the Adjust field to “Cancelled” for a Forecast Date, the PM Master will not cycle on that date. The system also automatically generates a new future Forecast record so that the total number of future Forecast Dates matches the number of Cycles entered on the PM Master header.

For calendar anniversary and runtime interval based PM masters in Active status authorized users can select Cancel PM Master Backlog from the Actions list to cancel forecasted backlog for the PM master. The system automatically rechedules the PM master to trigger on the next future scheduled forecast date.

For all cycle types, Work Order information displayed on the Forecast view is entered and maintained by the system and may not be modified. When the PM Master cycles, generating a Work Order, the Work Order number is also entered onto the Forecast record. When the Work Order status is set to “Finished” or “Cancelled”, the system enters the Completed Date on the Forecast record, moves it to the bottom of the Forecast list, then generates a new Forecast record so that the total number of future Forecast Dates matches the number of Cycles entered on the PM Master header.

Completed and cancelled forecast dates are listed after future Forecast information for easy of readability. When a PM Master is deactivated (setting it to a status other than “Active”), future Forecast information is deleted. Historical information is not deleted from the Forecast view.

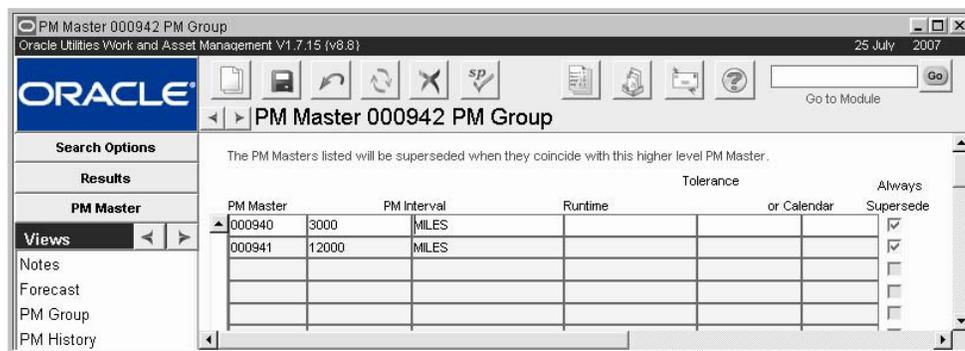
Cancel PM Backlog

The forecast schedules for Calendar Anniversary and Runtime Interval PM Masters do not change based on work order completion or calendar information. If work on these types of PM Masters falls behind for any reason, a PM forecast backlog may result.

If you have the appropriate responsibility in your user profile, you can select Cancel PM Backlog from the PM Forecast Actions list to bring the PM Master back to current. When you select the action, all forecasts with a schedule date in the past are cancelled, so long as a work order has not already been created for that cycle. Forecasts with future dates are not affected. If the forecasts are such that there are none with future dates, it will be necessary for you to select the Cycle PM Now action from the main PM Master record to schedule the next cycle.

PM Group

The PM Master module allows you to build more than one PM Master per Asset ID. If one PM Master encompasses the same work that another (lesser) PM Master does (for the same Asset ID), you can prevent the lesser PM Master from cycling at the same time the greater PM Master is due.



PM Group view

An example of this type of situation might be that you have PM Master B set up for a truck to perform an oil change and check critical fluid levels every 10,000. You also have PM Master A set up for the same truck to overhaul the engine every 26,000 miles. The work involved in the PM A encompasses the same work of the PM Master B, making B the lesser. In the PM Schedule

Group of A, you would enter the lesser PM Master (B) so that, if both PM Masters should come due at the same time, the lesser will not cycle.

When the vehicle has gone 26,000 miles and A triggers, the system checks for all PM Masters which A superceeds, and suppress the Work Orders for those PM Masters. The Work Order for PM Master B would be suppressed by A every fifth time A cycles (every 130,000 miles) – assuming all Work Orders for both A and B are always completed right on schedule.

However, since preventive maintenance cannot always be done on schedule, you can also set a tolerance for when A should superceed B. A tolerance of 2,000 miles would mean that A superceeds B every third cycle (at 78,000 miles) – again, assuming all Work Orders for both A and B are always completed right on schedule. The tolerance is measured against the lower level PM Master. If you set the tolerance for 2,000 miles, when A is ready to trigger a PM, the system will check to see if B is within 2,000 miles of triggering its PM. If it is, the system suppresses B's PM work order and resets B's Next Schedule Date if the PM Master is Calendar based or Next PM Due reading if the PM Master is Runtime-based.

Note that at the end of the third cycle of PM Master A, both PM Master A and PM Master B end within the 2,000 mile tolerance. In this case, PM Master A will suppress the work order for PM Master B.

Sometimes, work required to be done for a PM Master at the highest level of a PM Group must be delayed or canceled. When this happens, and the work order generated by the higher PM is rejected or canceled, settings in the PM Master Parameters business rule determine if the lower PMs are simply Canceled or if they are reset to cycle as previously forecast.

If you want the lesser PM to be superseded every time the higher PM cycles, regardless of tolerance factors, click the Always Supersede check box. When the check box is marked, the system ignores any tolerance factors that may have been entered and supersedes the PM each time the higher level PM Master record triggers.

If a PM supersedes lower PMs in the group, the Last PM information for the superseded PMs is updated when the work order created for the higher level PM Master is set to Finished status.

Some Cautions About Setting Up Groups of PM Masters

You can group Calendar Anniversary, Calendar Interval and Runtime PM Masters. However you can only group PM Masters of the same type and are based on the same unit type (e.g. miles and miles, not miles and hours). Also, we do not recommend grouping PM Masters that cannot regularly be done on time because variances from the schedule can cascade through your schedule, throwing it off.

You can also set up more than two layers of PM Masters, however, the more layers you create the more complex the interactions between the various cycles become, and the greater the chance that your schedule will be thrown off.

When you create Groups, the system does not check to make sure that you are using the appropriate Tolerance for the PM Master selected. If you indicate a Runtime Tolerance with a Calendar-based PM Master, for example, the system will make the changes but the lower level PM Master will never be within the tolerance and so will never be affected.

How to Set Up a Simple (Two-Level) PM Master Group

1. **Open the appropriate PM Master.**
2. **Open the PM Group view.**
3. **Click the first empty PM Master field.**
4. **Select the subordinate PM Master from the list of values.**
The list of values shows all PMs for the asset having the same scheduling basis. When you select a PM Master from the list, the system supplies the interval information from the selected PM Master.
5. **If both PM Masters are Runtime-based, indicate the Runtime Tolerance.**
This is the range within which the higher level PM Master will supercede the lower level one.
6. **If both PM Masters are Calendar-based, indicate the Calendar Tolerance.**
You can select the unit type (for example, Days) from the list of values.
7. **Click Save.**
The system saves changes to both PM Master records.

How to Set Up a Complex PM Master Group

You can set up a PM Master groups with more than two levels. However, the PM schedules for the middle levels are likely to drift farther and farther from you original plan over time. Eventually, the middle level PM Masters will trigger more frequently than you might expect (for example roughly every 1000 miles as scheduled, then after only 100 miles. This is especially likely if PM's are typically completed late.

If you want to set up a complex group, you must set up all lower levels for each upper level. For example, if you are setting up three levels; A, B and C, and you want A to suppress B and B to suppress C, A will not suppress C unless you include C on A's PM Group view.

1. **Open the appropriate PM Master for the top level.**
2. **Open the PM Group view.**
3. **Click the first empty PM Master field.**
This is the PM Master for the B level in the example above.
4. **Select the subordinate PM Master from the list of values.**
The list of values shows all PMs for the asset having the same scheduling basis. When you select a PM Master from the list, the system supplies the interval information from the selected PM Master.
5. **If both PM Masters are Runtime-based, indicate the Runtime Tolerance.**
6. **If both PM Masters are Calendar-based, indicate the Calendar Tolerance.**
7. **Click Save.**
The system saves changes to both PM Master records.
8. **Click the next empty PM Master field.**
9. **Select the next down subordinate PM Master from the list of values.**
This is the PM Master for the C level in the example above. The system supplies the interval information from the selected PM Master.
10. **If both PM Masters are Runtime-based, indicate the Runtime Tolerance.**
This is the range within which the higher level PM Master (A) will supercede the lower level one.
11. **If both PM Masters are Calendar-based, indicate the Calendar Tolerance.**
12. **Click Save.**
The system saves changes to both PM Master records.
13. **Repeat steps 8 through 12 for each lower level.**

PM History

The PM History view shows a summary of all activity that has occurred related to the PM Master. Field descriptions for the PM History view are similar to those for the PM Forecast view.

When a PM is delayed due to a runtime or calendar delay, the system writes a Delayed adjustment type entry and identifies the higher PM that is causing the delay in the PM Group column. A similar entry also appears in the Job Manager Log. When the higher level PM cycles and generates a work order, the adjustment type changes to Superseded and supplies the work order number.

Seasonal Adjustments

Some maintenance activities need to be performed more or less often depending on the season. Snow removal equipment, for example, may require more frequent servicing during the winter than during the rest of the year. You can use the Seasonal Adjustment view to set Calendar- and Runtime-based PM Masters to cycle differently during certain seasons.

To use Seasonal Adjustments, the Allow Seasonal Adjustment key in the PM Master Parameters Rule must be set to Yes and seasonal start and end dates must be defined in the PM Seasonal Adjustments Rule.

When you create a seasonal adjustment and set the PM Master record to Active status, the system calculates new forecast dates based on the adjusted interval. When calculating the Next PM Due value for Runtime-based PM Masters, the system compares the current meter reading date against the seasonal start and end dates.

Season	Start Month & Day	End Month & Day	New Interval
AUTUM_ACTUAL	09 / 22	12 / 21	250
SPRING_ACTUAL	03 / 22	06 / 21	250
	/ /	/ /	
	/ /	/ /	
	/ /	/ /	
	/ /	/ /	
	/ /	/ /	
	/ /	/ /	

Seasonal Adjustments view

Scheduled Basis and Interval - This information copies from the main PM Master record and shows the interval at which the PM Master will cycle when no Season Adjustment is defined.

Season - Select the season that you want to enter a new interval for from the list of values. The Seasons are defined in the PM Seasonal Adjustments Business Rule and cannot be modified here. The PM Master must be in planning status in order to select a season.

Start and End - When you select a season, the system supplies the Start and End dates defined in the PM Seasonal Adjustments Business Rule.

New Interval - Enter the cycling interval you want the PM Master to use during the Season identified.

How to Set Seasonal Adjustments for a PM Master

1. Open the appropriate PM Master.

Seasonal Adjustments can be entered for both Calendar- and Runtime-based PM Masters.

2. **If necessary, set the record to Planning status.**
You cannot create Seasonal Adjustments while the PM Master in Active status.
3. **Select Seasonal Adjustment from the Views list.**
4. **On the available line, select the Season from the list of values.**
Seasons are defined in the PM Seasonal Adjustments Business Rule and cannot be modified here. When you select a Season from the list of values, the system supplies the Start and End dates from the Business Rule.
5. **Enter a New Interval for the Season.**
During the Season selected, the PM Master will cycle at the interval entered here, not at the interval defined on the main record.
6. **Click Save.**
The system saves the adjustment. When the PM Master record status is set to Active, the system calculates forecast dates based on the adjustment interval.

Material Estimates vs. Actuals

The material estimates on the Benchmark Work Orders used by PM Masters can be more accurate if you periodically update them based on the actual material required to complete the maintenance tasks. Use the Material Estimates vs. Actuals view to review both the current estimates on the Benchmark and the materials charged to previous Work Orders.

Benchmark Estimates

Benchmark No: B000009

Task Stock Code	Storeroom	Quantity	Unit
01	RLW_INVENTORY1	RAY	10. EA
01	RLW_DIRECT1	RAY	10. EA
01	RLW_INVENTORY2	RAY	10. EA

Work Order Actuals

Work Order	Task Stock Code	Storeroom	Quantity	Unit	PM Master
0600032	01	RLW_INVENTORY1	RAY	10. EA	000614
0600036	01	RLW_INVENTORY1	RAY	10. EA	000679
0600056	01	RLW_INVENTORY1	RAY	10. EA	000904
0600057	01	RLW_INVENTORY1	RAY	10. EA	000903
0600058	01	RLW_INVENTORY1	RAY	10. EA	000902
0600093	01	RLW_INVENTORY1	RAY	0. EA	000505
0600118	01	RLW_INVENTORY1	RAY	10. EA	000906
0600141	01	RLW_INVENTORY1	RAY	10. EA	000434
0600146	01	RLW_INVENTORY1	RAY	10. EA	000908
0600147	01	RLW_INVENTORY1	RAY	10. EA	000906
Average				9.58	

Material Est vs. Actuals view

The upper portion of the view shows the stock codes planned for each Task on the Benchmark Work Order associated with the PM Master record. The lower portion of the view shows the parts actually charged to the Task highlighted in the upper portion, and the average for the Task. Information is displayed only for Work Orders in Closed and History status. The calculation

does not include tasks in Canceled status. This screen is blank if there is no benchmark associated to the PM Master.

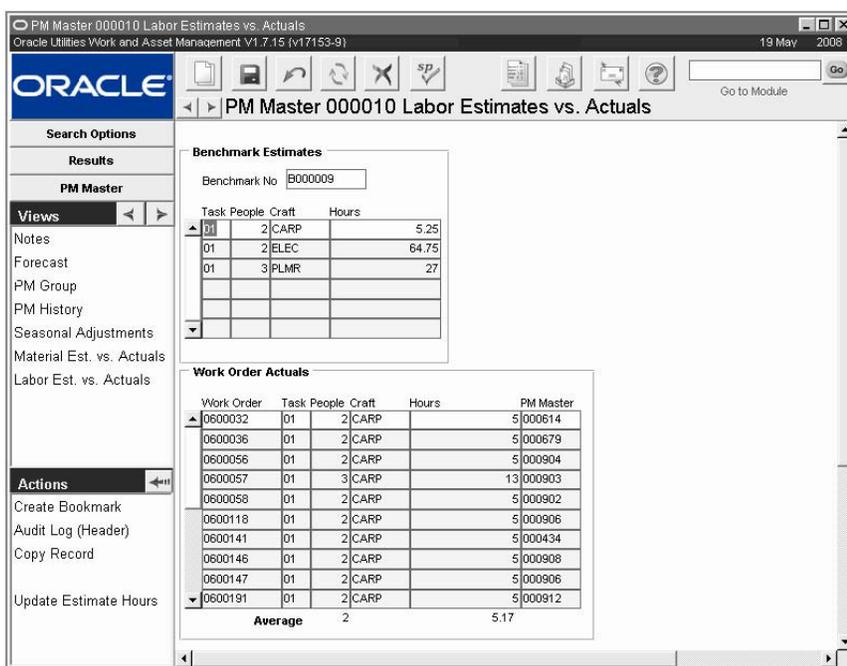
If you have the appropriate function in your responsibilities profile, you can select Update Estimate Quantity from the Actions list to update the estimate on the Benchmark Work Order with the average amount from this view.

How to Update PM Benchmark Materials Estimates

1. **Open the appropriate PM Master record.**
2. **Select Material Est. vs. Actuals from the Views list.**
3. **Select a Task/Stock Code under the Benchmark Estimates.**
 When you select a line in the upper portion of the view, the information in the lower portion changes to show actual and average quantities for the Task/Stock Code selected. Review this information and determine that you want to update the Benchmark materials estimate with the average shown.
4. **Select Update Estimate Qty. from the Actions List.**
 The System applies the average for the Task/Stock Code to the Task Materials view on the Benchmark Work Order and to the Benchmark Estimates of the current view.
5. **Repeat Steps 3 and 4 until you have finished updating the Benchmark.**

Labor Estimates vs. Actuals

The labor estimates on the Benchmark Work Orders used by PM Masters can be more accurate if you periodically update them based on the actual time required to complete the maintenance tasks. Use the Labor Estimates vs. Actuals view to review both the current labor estimates on the Benchmark and the labor charges on Work Orders based on the Benchmark.



Labor Estimates vs. Actuals

The upper portion of the view shows the labor requirements estimated for each task on the Benchmark Work Order associated with the PM Master record. The lower portion shows the actual hours worked on each task by craft. Information is displayed only for Work Orders in Closed and History status. The calculation does not include tasks in Canceled status. This screen is blank if there is no benchmark associated to the PM Master.

If you have the appropriate function in your responsibilities profile, you can select Update Estimate Hours from the Actions list to update the estimate on the Benchmark Work Order with the average amount from this view.

How to Update PM Benchmark Labor Estimates

1. **Open the appropriate PM Master record.**
2. **Select Labor Est. vs. Actuals from the Views list.**
3. **Select a Task/Crew under the Benchmark Estimates.**
When you select a line in the upper portion of the view, the information in the lower portion changes to show actual and average quantities for the Task/Crew selected. Review this information and determine that you want to update the Benchmark labor estimate with the average shown.
4. **Select Update Estimate Hours from the Actions List.**
The System applies the average for the Task/Crew to the Task Labor Requirements view on the Benchmark Work Order and to the Benchmark Estimates of the current view.
5. **Repeat Steps 3 and 4 until you have finished updating the Benchmark.**

PM Master Actions

In addition to standard actions, the following can be completed from within the module.

Cycle This PM Now

If you have the appropriate responsibilities in your user profile, you can select Cycle this PM Now from the Actions list to force the system to cycle the PM Master and immediately produce a Work Order. This action is available from any Active PM Master based on Run Time, Calendar Interval or Calendar Anniversary cycles. When you use this action, the system updates the next scheduled date for Runtime and Calendar Interval PMs to reflect the new completion date. For Calendar Anniversary PMs, however, the next scheduled date is not updated.

If the PM Master has lesser PMs, you can choose the Cycle PM Group Now action instead to also supersede and reforecast the lesser PMs in the group.

Note: If a work order already exists for the PM, you must first finish or cancel the existing work order before creating a new work order with the Cycle Now action. The system enforces this restriction to avoid scheduling problems for future PM cycles.

Caution: Using this action will cause the system to skip the next forecasted schedule date on calendar anniversary PMs. Please use it with discretion. The next scheduled date for Calendar Anniversary PMs are not reset after you cycle the PM.

How to Trigger Immediate Cycling of a PM

1. **Open the appropriate PM Master.**
2. **Select Cycle This PM Now from the Actions list.**
The system will force the completion of the PM cycle, perform any PM group processing, and produce a work order from the PM Master. A notification window appears telling you the work order has been created.
3. **Click the OK button to close the notice window.**

Using this action will cause the system to skip the next forecasted schedule date on calendar anniversary PMs. Please use it with discretion.

Cycle PM Group Now

If you have the appropriate responsibilities in your user profile, you can select Cycle PM Group Now from the Actions list to force the system to immediately cycle the current PM and update all lesser PMs in the PM Group. The lesser PMs will be superseded and reforecast using the appropriate new calendar or runtime data from the Work Order generated. This is the same processing that would occur if the higher PM was allowed to trigger on scheduled.

If the PM Master you are viewing is a mid level PM within a group, only the current and lesser PMs will cycle when you select the action. You must select the action from the highest level PM to cycle the entire group. If the PM has no lesser PMs, this action functions identically to the Cycle this PM Now action.

Associating PM Routes & PM Masters

PM routes (routes) and PM masters (PMs) have no direct relationship. While PM routes are used for small-scale work such as lubricating various pieces of equipment, PMs are used for large-scale work projects and may involve asset down time and significant expense.

Sometimes, however, you may want to combine the extra functionality of a PM master with a PM route. For example, you may want to use the cycle time of a PM to automate the scheduling of a route. Or you may want to allocate costs of performing a route to assets along the route. You can do both by associating the route with a PM, using a benchmark work order to make the connection. In addition, you can document the work done by adding notes and comments to the work order created in the process.

There are two methods of associating PM routes and PM masters. The first allows you to use the same benchmark work order for multiple PM routes, whereas the second method ensures that only one PM route can be associated to one benchmark work order.

Associating PM routes and PM masters using a benchmark work order as the link allows you the added functionality of tracking costs and work for PM routes. Creating associations will help you to streamline your work processes by facilitating better scheduling and allowing more efficient monitoring of expenditures.

Associating a PM route with a PM master accomplishes a few objectives:

1. Automates scheduling of the route.
2. Provides a means of attaching comments concerning the work.
3. Distributes the cost of performing the route evenly to assets on the route.
4. Adds more visibility to time and other charges incurred against a route.

Configuring the System

Before going further you should verify that on the PM Route Options Business Rule the Allocate Costs to Assets rule key is set to ON and the Value is set to Approved. Open the Business Rule module in the Administration subsystem to verify the rule. Depending on your system authorization you may or may not have access to this module.

Setting up the Association

Setting up a PM Master Association involves the following steps:

1. Create a PM Route
 - Create a new record with route stops using active assets in the Plan PM Routes module.
2. Create a Function

The Function module in the Resource subsystem can collect the costs from the route. Use the same function to capture costs from all routes.

3. Create a Benchmark

Create a benchmark with one task. Reference the function created in the previous step as the task Asset ID.

4. Create a PM Master

Create a new PM Master record that references the same benchmark, is charged to the same function, and references the PM route from the first step.

5. Cycle the PM Master

When the PM is cycled it creates a new work order based on the benchmark that you created.

6. Execute the Work Order

Once the work order is issued, work can begin. Perform the maintenance on the route stops.

7. Log the Completed Work

Log the work as described in the entitled Using PM Routes. You will also need to finish the task and close the work order.

8. Apply the Costs

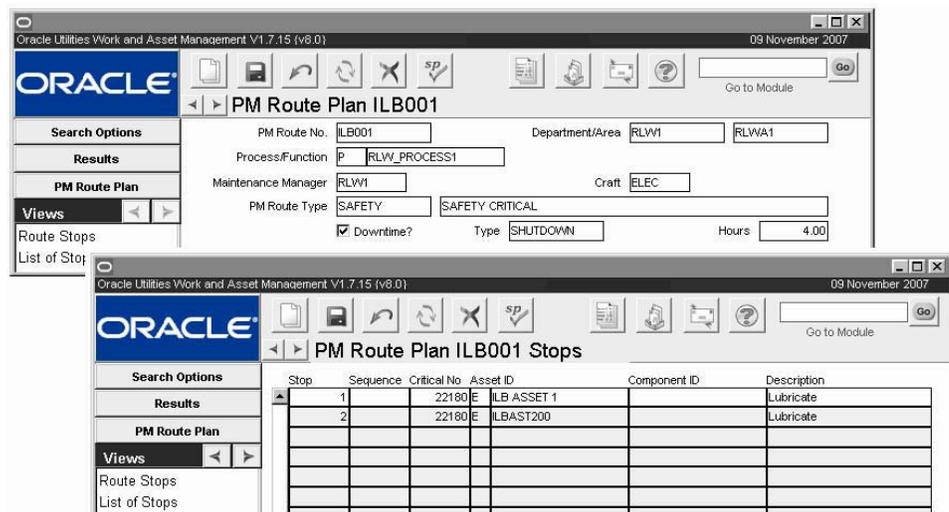
The system runs an automatic batch procedure that distributes costs appropriately throughout the system.

How to Associate a PM Route with a PM Master Using a Benchmark

1. Create a PM Route record with stops on each active asset that you want to manage with the associated PM Master.

Be sure to list all of the assets by route stop.

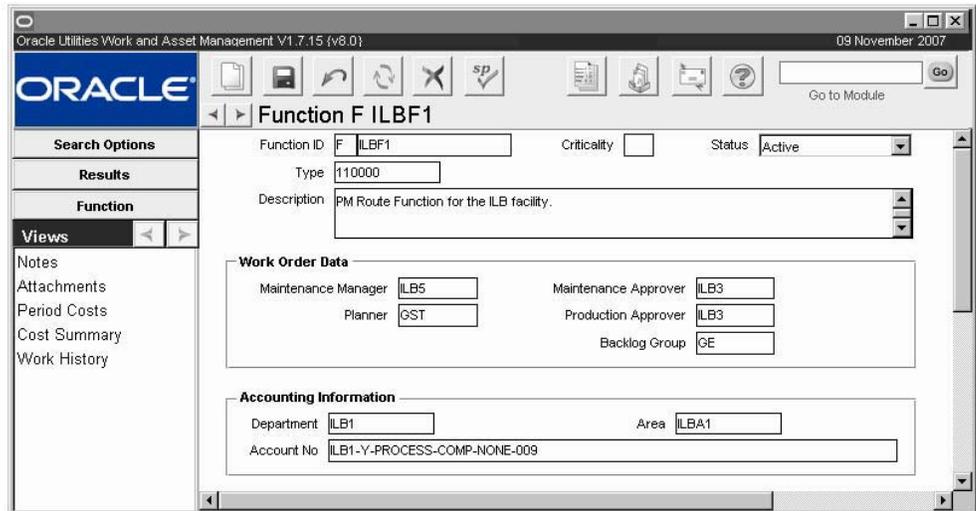
PM Route record



2. Create a Function record to collect the costs from the route.

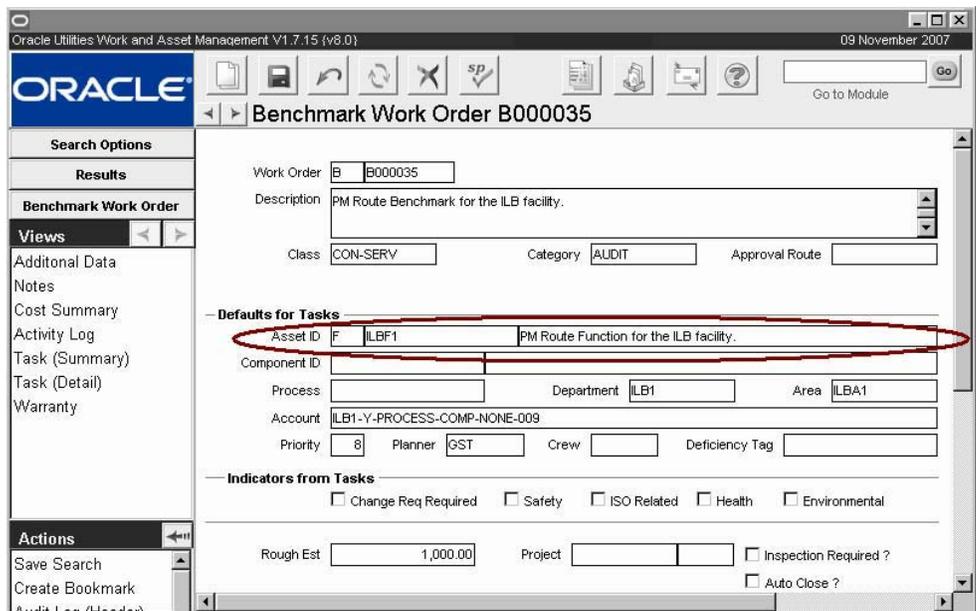
The Function module is located in the Resource subsystem. You can use the same function to capture costs from all routes.

Function record



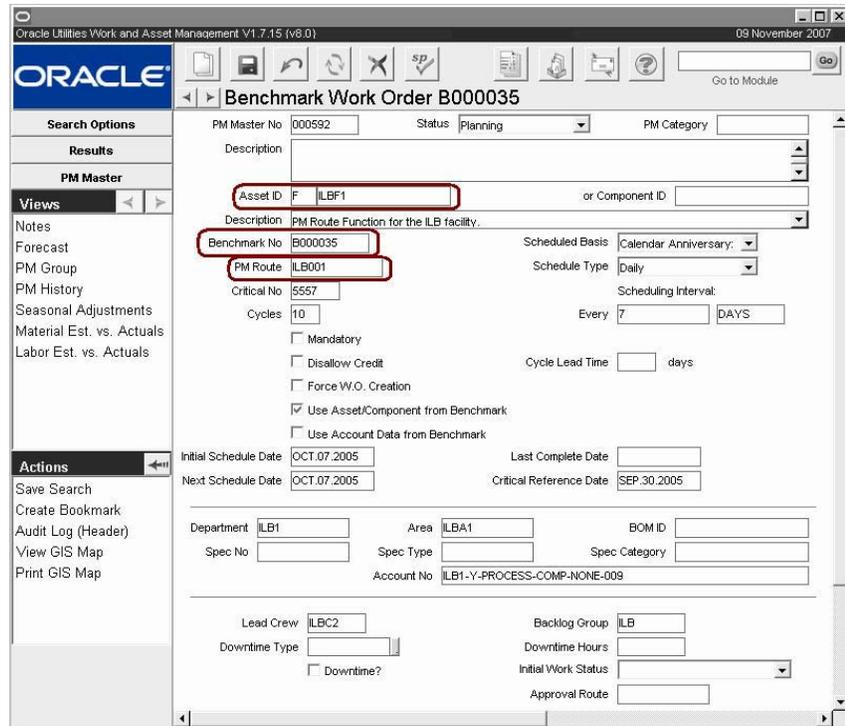
Benchmark Work Order record

3. **Create a Benchmark Work Order record that references the function above.**
The description for the task should reference the route. Use the function created in the previous step as the Asset ID for the task. You can enter the function on either the Task window or in the default Asset ID field on the Benchmark record.



4. **Create a PM Master record.**
Be sure to enter the benchmark number and the PM route number in the allotted fields. Enter the appropriate schedule basis and scheduling interval values to specify when the PM should cycle.

You can also enter a PM route number on the Benchmark Work Order Task record Asset Data view, and if the PM Route field on the PM Master record is left blank the route will be copied to the work order task when the PM cycles. This method would only be used if you want to make sure that the benchmark work order and the PM master are only used with one PM Route.



The association between the PM Route and the PM master is complete.

Rather than using the cycling date on the PM, the system uses the activation date on the Work Order record to determine the scheduling date of the route.

5. Cycle the PM, execute work, and execute the route.

When the PM cycles, the system uses information from the benchmark work order to create a new work order. When this work order is activated the system automatically schedules the route associated to the PM Master record.

6. Finish the route and log completed work.

When the route is finished, you can select the Update All Stops as Finished from the Actions list in the Scheduled PM Route module to mark each stop as finished. If a stop is skipped for any reason, make sure to mark it as missed in the Display Scheduled PM Route module so that expenses for the route will not be charged to that asset.

The work order is processed like any other work order. Workers can enter time spent working on the route and add comments to the Work Order Activity Log documenting the work. When the timesheet is posted, labor costs are applied to the function. Materials added to the work order task are also applied to the function. The work order should then be set to Finished status.

If this batch job does not run automatically, it might not be included in Run ALL Batch and will need to either be included or run manually.

7. Apply costs to assets.

The system runs a batch process (sdbp_cost_route.cost_route) to reverse the charges against the function on the route. Once this batch job is run the system creates a Cost Adjustment record which must be approved and then posted to split all charges evenly against the assets on the route.

Allocation of Costs

If the Allocate to Assets box is checked in the PM Route Options Business Rule, batch processing creates adjustment records to remove costs from the function and reallocate them evenly across the assets listed on the route. Batch does not allocate costs to assets that have been marked as missed.

Chapter 9

PM Events

Use the PM Events module to group PM Masters that you want cycle when certain events occur. The system lists all active event type PM Masters based on the event information entered. You can chose one, many, or all to cycle on the defined date, generating work orders in the same way as calendar based and run time PMs are generated.

Event Group	MAJOR	Status	SCHEDULED
Event Type	SHUTDOWN	Trigger Date	29 JAN 2002
Schedule Date	29 JAN 2002	Event Start	
		Finish	
Description			

List of PM Masters to be Done
000195 FILBF1 PM Master for ILB PM Route 1

Buttons: ^Add, ^Add All, Available PM Masters, Remove v, Remove All v

PM Events record

PM Event Records

Using the PM Events module, you can group PM Masters that you want to cycle only when planned event, such as a plant shutdown, occurs. You can define events meaningful to your organization and choose the PM Masters to associate with those events.

PM Event records are defined by unique Event Group, Event Type, and Schedule Date combinations. To use the full functionality of this module, PM Events must be scheduled occurrences, which you can predict accurately. However, you may also want to create a few unplanned or emergency events that can be used as needed. For events of this type, you will want to set the Schedule Date far in the future and then change the Trigger date only you want the PM Masters associated with the Event to cycle.

After you have entered a unique Event Group, Event Type and Schedule Date combination, you can select the PM Masters you want to cycle on the Schedule Date.

When batch processing generates a work order for the PM Masters listed for the PM Event, a Forecast record is inserted into the PM Master view, listing the Schedule Date and Work Order Number.

Event Group and Event Type - The Event Group and Event Type fields are used to define Event-type PM Masters. You can use these fields to describe event that are important to your organization.

Code Table 108 and Event Type control Event Group by Code Table 109, in the Codes and Code Tables module of the Administration subsystem.

Status - PM Event status changes are controlled by the system. There are only two valid statuses.

Open - PM Event records are created in Open status and remain Open until they are processed by batch. You can modify some of the information on PM Event records in Open status, but you cannot change the Event Group, Event Type, or Schedule Date.

Scheduled - When batch processing is complete for the record, the system sets the status to Scheduled and no further modifications can be made.

You cannot cancel a PM Event record once it is in Open status. However, you can insure that the PM Event does not cycle any PM Masters by removing all PMs from the List of PM Masters to be Done.

When a work order is generated by batch processing for a PM master, a Forecast record is inserted into the PM Master view, listing the Schedule Date and Work Order Number.

Schedule Date - The system uses the Schedule Date to place generated work orders on the work schedule.

Trigger Date - The date you want batch processing to cycle the associated PM Masters and generate the work orders. The Trigger date must either coincide with the Schedule Date or come before the Schedule Date. Trigger Date information is not reflected on the PM Master record.

Event Start and Finish - Event Start and Finish Dates are for information purposes only.

Description - You can enter a brief description of the PM Event record if necessary. As there is only one line displayed, you may find it easier to double-click in the Description field and type your description in the Text Editor window that opens.

How to Create a PM Event

1. **Open the PM Event module.**
The PM Event module is in the Maintenance subsystem
2. **Click the new icon**
3. **Enter an Event Group and Type**
You can enter this information by selecting from the list of values on both fields.
4. **Enter a Schedule Date**
5. **Enter a Trigger Date.**
6. **Click the Save icon.**
You can now associate PM Masters with the PM Event.

How to Associate a PM Master to a PM Event

1. **Create PM Masters referencing the appropriate Group and Type.**
2. **Set the PM Masters to Active status.**
3. **Open the PM Event that references the Group and Type.**
The PM Masters referencing the Group and Type appear in the bottom list.
4. **Select the PM to add to the Event.**
5. **Click the Add button.**

The PM Master moves to the List of PM Masters to be Done in the top window. You can click the Add All button if you want to add all the displayed PM Masters to the list to be done.

6. Click the Save icon.

Selecting PM Masters to Cycle

After entering the Event header information, active Event-based PM Masters which are of the same Category and Type are listed in the bottom window. Select the PM that you want to add and press the Add or Add All button. The selected one or all (respectively) PM Masters are copied from the bottom window to the top.

In the same manner, you can remove PM Masters from the list to cycle by selecting the PM to delete and pressing the Remove or Remove All button. The selected one or all (respectively) PM Masters are removed from the list to cycle.

You cannot cancel a PM Event record once it has been saved and is in Open status. However, you can insure that the PM Event does not cycle any PM Masters by removing all PMs from the List of PM Masters to be Done.

Chapter 10

Asset PM Control

You can use the Asset PM Control module to create and manage identical PM Masters for assets in a specified class except for Process (P) and Function (F). This also includes fleet assets.

This is useful when your operations require the same maintenance to be performed on a group of similar assets. By using the Asset PM Control module, you save the effort of having to update each Asset record independently with the same PM Master information.

Asset PM Control Records

An Asset PM Control record includes the scheduling parameters that are common to all assets in the specified Class. The record can also be set to apply only to certain Makes and Models within the specified class in the case of fleet assets (vehicles).

The screenshot shows the Oracle Asset PM Control 020001 record form. The form is divided into several sections:

- Search Options:** PM Control No. 020001, PM Control Type MMY, Status Closed.
- Results:** Description: Test of Description for my PM Fleet Type... test
- Asset PM Control:**
 - PM Master Criteria:** Asset / Fleet Class 4EM1, Description: Test of new Fleet PM Control module.
 - Scheduling:** Benchmark WVO B000070, Cycles 12, Schedule Basis Run-Time, Default Last PM 200.00, Interval 500.00 MILES, Trigger Within or Every.
- Assets Table:**

Asset ID	Meter - Last PM	Next PM Due	Current Meter	PM Master	Next Schedule	PM Status
MMN-4EM1-001	3,222.00	3,722.00	38,989.00	000303	OCT 24 2002	Closed
MMN-4EM1-002	6,500.00	7,000.00	8,000.00	000304	OCT 24 2002	Closed
MMN-4EM1-003	3,111.00	3,611.00	.00	000305	OCT 24 2002	Closed
MMN-4EM1-004	4,500.00	5,000.00	5,500.00	000306	OCT 24 2002	Closed
MMN-4EM1-005	4,253.00	4,753.00	5,555.00	000307	OCT 24 2002	Closed

Asset PM Control record

When the status of an Asset PM Control record is changed from Created to Planning, the system creates an Asset PM Master record for each asset belonging to the specified Class (and Make and Model if these values are also specified for a vehicle). The PM Master records are created using the scheduling information from the Asset PM Control record. You can then adjust the meter readings or other scheduling information as necessary for each vehicle. When you make changes to the Asset PM Control record, the associated PM Master and PM Forecast for the Asset are also updated.

As assets are added to or retired from your plant, you can add or remove them from the Assets List on the Asset PM Control record.

When you change the status of the Asset PM Control record to Active, the system sets all the associated Asset PM Master records to Active and generates Forecast records for each. So long as the Asset PM Control status remains Active, the individual Asset PM Master status can be switched between Planning and Active by changing the value in the Status column.

The Forecast view on the Asset PM Control record lists all incomplete forecast cycles for each asset, sorted by schedule date. You can use this information for scheduling assets for service and to identify outstanding or overdue maintenance.

The PM Master records created for a class of assets can be viewed in the regular PM Master module, but you can only make changes to those records from within the Asset PM Control module.

The following fields are included:

PM Control Number - You can insert a unique number to identify the PM Control record or the system can be configured to generate a number.

PM Control Type - Select a PM Type from the list of values. PM Types classify the type of work being done on the PM Master and are established in the PM Control Types Business Rule.

Status - Records in higher statuses cannot be returned to Created status.

Created - Asset PM Control records are inserted in Created status. Once the record has been set to a higher status, you cannot return it to Created status.

Planning - When you change the status to Planning, the system inserts a Asset PM Master record for each Asset belonging to the Class (and Make and Model) specified on the record.

Active - When you change the status of the Asset PM Control record to Active, the system also sets all the associated PM Master records to Active and generates Forecast records for each. Setting the Asset PM Control record back to Planning status also sets all the associated PM Master records back to Planning.

Closed

Cancelled

Description - The system enters a description of the PM Master from the PM Control Types Business Rule, but you can update this description if necessary

PM Master Criteria Fields

Asset/Fleet Class - The Class identifies the group of Assets to which the PM Masters specified on the record apply. Your organization can classify the assets in any way you like. An example would be to classify vehicles by the type of work they do, such as graders, rollers, shovels, etc. The field has an associated list of values controlled by Code Table 11 in the Code Table and Codes module of the Administration subsystem. Class can be further subdivided into Make and Model for fleet if appropriate.

Criticality - Use the Criticality field to indicate the work or safety impact this asset carries. The field has an associated list of values controlled by a code table. If the asset were to be taken off-line or break down, what work or safety effect would it have? Values from "1" to "9" represent 'little or no impact' to 'severe production or safety impact'. This information is used by the system when work orders are generated for the asset. The criticality helps determine the overall work priority

Specification - The Specifications field is for information only and is generally used to indicate the primary related engineering specifications, which define the attributes, and specifications for each attribute, that describe the asset.

BOM ID - The Bill of Material ID field displays the reference number for any Bill of Materials record associated with the asset. The field has an associated list of values that is controlled by the Bill of Materials module in the Resource subsystem.

Fleet Make - For vehicles, you can select a Make if you want the PM Control record to create and manage PM Masters for all vehicles in the Class and Make. The Make and Model fields have associated lists of values that are linked so that the model list changes depending on the make you select.

Fleet Model - For vehicles, you can select one if you want the PM Control record to create and manage PM Masters for all vehicles in the class, make and model you select.

Asset Type - For non-fleet assets, select the type of asset from the list of values.

FMEA System - Select the FMEA system that this asset belongs to. For example, a pump might belong to an HVAC (air conditioning) system. Grouping assets by system allows the maintenance planner to perform maintenance for all similar assets in a system. Values for this field are defined by a code table.

PM Master Scheduling Fields

Use the Scheduling fields in the middle section of the Asset PM Control record to define the parameters for the PM Masters controlled by this record. You can enter this information when you first create the record or return and complete the scheduling information later. You can continue to update the Scheduling fields as long as the Asset PM Control record is in Created or Planning status.

The screenshot shows the Oracle Asset PM Control 020011 interface. The Scheduling section is highlighted with a red box and contains the following fields:

- Benchmark WO: B000019
- Cycles: 10
- Schedule Basis: Run-Time
- Mandatory:
- Force W.O. Creation:
- Use Account Data From Benchmark:
- Schedule Type: Daily
- Initial Work Status:
- Approval Route:
- Default Last PM: 4000.00
- Interval: 200.00 MILES
- Trigger Within: or Every:

Below the Scheduling section is the Assets table:

Asset ID	Meter - Last PM	Next PM Due	Current Meter	PM Master	Next Schedule	PM Status
✓ M.MV-4EM1-001	200.00	400.00	27,599.00	000317	OCT 31, 2002	Planning
✓ M.MV-4EM1-002	200.00	400.00	8,000.00	000318	OCT 31, 2002	Planning
✓ M.MV-4EM1-003	200.00	400.00	.00	000319	OCT 31, 2002	Planning
✓ M.MV-4EM1-004	200.00	400.00	5,500.00	000320	OCT 31, 2002	Planning
✓ M.MV-4EM1-005	200.00	400.00	60.00	000321	OCT 31, 2002	Planning

Scheduling Section

Note: The Scheduling fields are identical to those in the PM Master module and function the same way.

Benchmark Number - The system will enter the default Benchmark number from the PM Control Types business rule, but you can delete that number and select any Benchmark Work Order from the list of values.

Cycles - Enter the number of future cycles you want the system to forecast. The system automatically enters a default value of 10, but you can change this number if necessary. -

Schedule Basis - You must select a Schedule Basis. The specific cycling information for the PM changes depending on the Schedule Basis you choose.

Calendar Anniversary - Calendar Anniversary PM Masters are cycled on the same date each cycle, such as the first of each month. They cycle from Schedule Date to Schedule Date, not taking into consideration the date the last associated Work Order was completed.

Calendar Interval - Calendar Interval PM Masters cycle so that the same time interval between Work Orders is achieved. If work is to be done every 6 weeks, the system cycles a Work Order 6 weeks after completion of the previous Work Order. Future Schedule Dates are automatically adjusted to always reflect the same time interval.

Run-Time Interval - Run-Time Interval based PM Masters cycle based on meter readings taken for the listed Asset, along with the scheduling information for that PM Master. Run-Time Interval PM Masters cycle on fixed intervals, not the time from last maintenance. For example, a Run-Time Interval set to every 1,000 hours of operation would cycle at 1,000, 2,000, 3,000 hours, etc., regardless of when the last associated Work Order was completed.

Run-Time - Run-Time based PM Masters cycle based on meter readings taken for the listed Asset, along with the scheduling information for that PM Master. An example might be that every 2,000 hours of operation, a machine is checked and lubed per Benchmark number 746638. The 2,000 hour count would restart when the last associated Work Order was completed. If the work was finished at 2,037 hours, the next cycle would be scheduled to occur at 4,037 hours.

Mandatory - If the work is required check the Mandatory check box. There is no functionality behind the Mandatory check box, i.e. the system does not send any alerts or warnings based on whether or not to box is checked. It is informational only.

Force WO Creation - PM Masters do not cycle another Work Order if the previous Work Order is not yet complete unless you check the Force WO Creation box. If this box is checked, the PM Master will cycle Work Orders even if the previous was not completed. This functionality only works with Runtime Interval and Calendar Anniversary based PM Masters.

You can also have the PM Master use the Asset ID listed on the Benchmark instead of the Asset ID listed on the PM Master by checking the Use Asset from Benchmark check box.

Use Account Data from Benchmark - Check this box if you want the PM Master use the Asset/Component ID listed on the Benchmark instead of the Asset/Component ID listed on the PM Master.

Default Last PM - You must enter a default last PM value when creating an Asset PM control record with a Runtime or Runtime Interval schedule basis. The value you enter is used by the system when creating the PMs for the all assets in the class, but you can later update the Last PM information for the individual assets as needed.

Interval - The Interval field indicates the frequency with which the work should be completed on the asset. You can then specify what units that frequency should be calculated in units such as miles, months, or hours. For example, you may want to specify that oil changes be performed on a vehicle every 3,000 miles.

Trigger Within - This field only shows if the schedule basis is Runtime or Runtime Interval. You can use the Trigger Within field to create a lead between when the PM initiates the Work Order and when the work actually begins. For example, if you know a PM Master requires parts that must be special ordered, you might want to trigger the PM 100 miles early, to give time to process the request for parts.

Or Every - These fields do not show if the schedule basis is Runtime Interval. You can use the Or Every fields to make a Runtime based PM Master behave like a Calendar Interval based PM Master. The system will track the interval and if a new PM does not trigger before the period is up, the system will trigger a PM based on the Calendar Interval.

If you enter the number of units in the first field and the interval units in the second field, the system will trigger the PM at that point (for example, 2 months).

Lead Time - The Lead Time field only shows when the schedule basis is Calendar Anniversary or Calendar Interval cycle. You can provide specific lead times for PM Masters that require advanced preparation (such as gathering special materials or arranging a special crew). For example, if you enter 10, the system will initiate the Work Order 10 days before the actual due date of the maintenance.

If you enter a value in this field, the value over-rides the value assigned for CYCLE_LEAD_TIME in the PM Master Parameters Business Rule (in the Business Rule module of the Administration subsystem). If you do not enter a value, the system uses the value established in the business rule.

Default Next Schedule Date - The Default Next Schedule Date field is only available if the schedule basis is Calendar Anniversary or Calendar Interval. You can use this field to set the next schedule date for all PMs listed on the control record to the date selected. Since this change cannot be undone, you should be very sure you want to do change ALL of the scheduled dates before entering a Default Next Schedule Date. The Default Next Schedule Date cannot be changed when the Asset PM Control record is in Active status.

Schedule Type - Determines on which schedule the Work Orders generated by the PM Master should be placed. Valid options are DAILY and WEEKLY. The system automatically completes this field with the default value defined in the PM Master Parameters business rule, but you can change the value if necessary.

Initial Work Status - You can use the Initial Work Status information to determine which Status the PM Master uses when it generates Work Orders. If Initial Work Status is left blank, the system uses the PM Master Parameters business rule in the Business Rules module of the Administration subsystem. This information is copied into the Work Order when the PM is cycled by batch processing.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Asset Data Fields

The system inserts information in these fields (and creates PM Master records for each Asset) when the Asset PM Control record is first set to Planning Status.

The lower section of the Asset PM Control window displays information for each asset in the specified Class.

Asset ID	Meter - Last PM	Next PM Due	Current Meter	PM Master	Next Schedule	PM Status
V MJW-4EM1-001	200.00	400.00	27,599.00	000317	OCT 31 2002	Planning
V MJW-4EM1-002	200.00	400.00	8,000.00	000318	OCT 31 2002	Planning
V MJW-4EM1-003	200.00	400.00	.00	000319	OCT 31 2002	Planning
V MJW-4EM1-004	200.00	400.00	5,500.00	000320	OCT 31 2002	Planning
V MJW-4EM1-005	200.00	400.00	60.00	000321	OCT 31 2002	Planning

Asset List

Asset ID - Each asset in the Class selected is identified by an Asset ID. You can update this field only when the Asset PM Control record is in Planning status. If you need to insert or delete an Asset ID listed on an Active Asset PM Control record, return the record to Planning Status and make the required change. Before you can add a new asset, a corresponding Asset record must be created for that asset.

Meter - Last PM - You can update this field when the PM Master schedule basis is Runtime or Runtime Interval.

Next PM Due - The system enters a value when the Meter - Last PM value is saved. Next PM Due is calculated as the Meter - Last PM value plus the Meter PM Interval.

Current Meter - The Current Meter reading from the PM Master. This value cannot be updated manually.

PM Master - The PM Master number identifies the PM Master record created for this asset. You can double click this field to open the PM Master record.

Next Schedule - When you enter a Next Schedule date on the PM Control record and save the record, the system updates the Next Schedule Date on each PM Master. For calendar and runtime based PM Masters, you can update a specific asset's Next Schedule date (from the Asset PM Control record) so long as the PM Master is in Planning status.

PM Status - The system inserts PM Master records in Planning status when the control record is set to Planning and changes them to Active when the control record is set to Active status. If the control record is taken back to Planning for any reason, the PM statuses are also returned to Planning status.

However, you can update a specific asset's PM status to Closed or Canceled so long as the PM Master is in Planning status. PMs in Closed or Canceled status are not reset if the status of the Asset PM Control header is changed to Planning or Active status.

Asset PM Control Views

The module includes the following views:

If you don't want the PM Masters for one asset to cycle, set the PM status for that asset to Planning.

Later, when the Asset PM Control record is set to Planning status, the system creates PM Master records for all Assets in the Class you select. When you select the Class, the system enters the Description of the Class from the list of values.

For vehicles, you can also select make and model information if you want PM Masters to be created only for those makes and models.

6. Select a Benchmark Number from the list of values.

The Benchmark number references the Benchmark Work Order that will be the basis for PM Masters created from this Asset PM Control record. The system enters a default Benchmark from the PM Control Types business rule, but you can clear this value and select any Benchmark Work Order.

7. Select a Schedule Basis from the drop-down list.

The Schedule Basis options are similar to those on PM Master records.

8. Enter the number of Cycles you want the PM Masters to forecast.

The system automatically enters 10, but you can enter another value if you want to forecast a different number of Cycles.

9. Enter Scheduling information appropriate for the Schedule Basis you selected.

Default scheduling information can be adjusted later for each Asset on the Asset list.

10. Click Save.

The system saves the record in Created Status. So long as it remains in Created status, you can open the record later and make required updates or complete the scheduling information. However, once the record is put to Planning Status, and the system creates PM Masters for each asset, only the scheduling information can be updated.

How to Adjust Asset Information on a Asset PM Control record

1. Open the appropriate Asset PM Control Record.

If the record is in Created status, review and complete the basic information as required.

2. Set the status to Planning and save the record when prompted.

The system inserts PM Master records for each Asset in the specified Class (and Make and Model if these values are also specified for vehicles). Data for each asset displays in the grid in the lower section of the control record.

3. Update information for each asset as needed.

For Runtime basis PM Masters, you can adjust the Meter-Last PM values to have the system calculate the Next PM Due correctly for each asset. For calendar basis PM Masters, you can adjust the Next Schedule date value as appropriate for each asset.

4. Set the status of the Asset PM Control Record to Active and save the record.

The system updates the PM Masters for each asset with the specific information you have entered for each asset. You can review the forecasted cycles by selecting Forecast from the Views list.

How to Add an Asset to an Active Asset PM Control Record

1. Open the appropriate Asset PM Control Record.

2. Set the status to Planning and save the record when prompted.

3. Select an empty line in the Asset list.

4. Select the Asset ID of the asset you want to add.

You can only select active Asset IDs for assets in the Class specified on the PM Control Record. In the case of vehicles, you are also restricted to vehicles of the appropriate Make and Model if those values are specified.

5. Enter Last PM or Next Schedule information for the asset as appropriate.

Enter Last PM reading for runtime based PM Masters. Enter a Next Schedule date for calendar based PM Masters.

6. Click Save.
7. Repeat Steps 3-6 for each new asset you are adding.
8. Set the status of the Asset PM Control Record to Active and save the record.

How to Remove an Asset from an Asset PM Control Record

1. Open the appropriate Asset PM Control Record.
2. Set the status to Planning and save the record when prompted.
3. Select the Asset ID for the asset you want to remove.
4. Click the Delete icon.
5. Click Save.
6. Repeat Steps 3-5 for each new asset you are removing.
7. Set the status of the Asset PM Control record to Active.
8. Click Save.

Chapter 11

FMEA Template

You can manage a Preventive Maintenance (PM) program based on Reliability Centered Maintenance (RCM) principles for assets in your organization using the FMEA Template module. RCM provides a structured framework for analyzing the functions and potential failures for assets and fleet asset (such as an electric motor, water pump or a van etc.) with a focus on preserving system functions.

The FMEA Template module allows you to group assets which are similar by class and type and manage their PM program. A successful RCM implementation leads to cost-effectiveness through:

- reduction in time-based maintenance hours and asset downtime hours and
- reduction in catastrophic failure and resultant costs.

After assets are grouped on the FMEA Template and FMEA items are defined to identify potential problems, the Asset PM Control module can be used to create PM Master records for each asset individually. The PM Master then automatically creates work orders for the required work based on the schedule defined on the PM Master.

FMEA Template Records

An FMEA Template record consists of an FMEA header and a list of FMEA items. The FMEA header contains information that helps you select assets that have the same type of problems or failures, so you can perform preventive maintenance on them as a group. The FMEA items define the types of problems that can occur with this group of assets and provide analysis into the impact of each asset's failure. You can choose to either enter the items manually line by line, or choose to use the action to walk them through the questions that help to define the failure.

Failure Mode	Failure Code	Repair Code	PM Task Description	Criticality	Severity	Occurrence	Detection	RPN	Failure Type	PM Control
FATIGUE	EROSION	INSTALL	Inspect the windsnapper hinge assembly		9	9	10	810	HS	110001
FATIGUE	EROSION	INSTALL	test		9	9	10	810	HS	110001

FMEA Template record

FMEA Template

The following fields are included:

FMEA Template ID - A unique identifier to distinguish the FMEA Template record. Depending on your business practices this can be system generated or user-defined.

FMEA System - This is a way to categorize assets based on the FMEA system that they belong to. For example, a HVAC (air conditioning) system would consist of assets such as pumps, cooling towers, heat exchangers and other supporting equipment all of which require specific maintenance to keep the HVAC system from failing due to breakdown. Using the FMEA system field, the maintenance planner can create FMEA Template records for all similar assets within an FMEA system. FMEA systems are defined by your organization using Code Table 344.

Status - This is the current status of the FMEA Template record. Possible statuses include:

Active - In this state, you can add FMEA items to the record.

Created - This is the default state that a new FMEA Template record is in.

Inactive - The entire FMEA Template record is locked. The only thing you can do is to change the status of the record back to "Active".

Asset Class - Asset classes are defined by your organization in the Asset Class module. They are used as another way to categorize assets based on common characteristics. The system uses the asset class to select the assets that are grouped on the FMEA template. After the asset class is added, the Associated Assets view is populated with any asset that references the asset class entered.

Asset Type - The asset type is another form of asset classification defined for an asset on the Asset record header. If you enter an asset type the system will use the combination of asset class and asset type to further refine the list of assets included as associated assets for the FMEA Template.

Fleet Make and Model - If the FMEA Template is for fleet assets, you can select a vehicle make and model to define the set of assets included in the FMEA Template. The Make and

Model fields have associated lists of values that are linked so that the model list changes depending on the make you select.

Specification - The Specification field is for information only and is generally used to indicate the primary related engineering specifications, which define the attributes, and specifications for each attribute, that describe the asset.

BOM ID - The Bill of Material ID field displays the reference number for any Bill of Materials record associated with the asset. The field has an associated list of values that is controlled by the Bill of Materials module in the Resource subsystem.

Function Description - Enter a description for the FMEA Template that you are creating.

Failure Mode - Use of this field varies from organization to organization. The field has an associated list of values that is controlled by a code table.

Failure Code - The Failure Code indicates what went wrong with an asset. It shows a predetermined code to categorize the failure. This information can be useful for analyzing problem areas. The system provides a list of values controlled by a code table.

Repair Code - The Repair Code indicates what must be done to solve the problem of the asset failure. Use the Repair Code field to record the type of work done on the asset. You must select a code from the list of values.

PM Task Description - This is the description of the PM task that needs to be performed on this asset.

Criticality - The criticality helps determine the overall work priority and indicates the work or safety impact this asset carries. The field has an associated list of values controlled by a code table. This value answers the question: "If the asset were to be taken off-line or break down, what work or safety effect would it have?" Values from 1 to 9 represent 'little or no impact' to 'severe production or safety impact'. This information is used by the system when work orders are generated for the asset.

Settings in the Criticality Override Business Rule determine whether or not users can modify the criticality on work records that reference the asset.

Severity - Use this field to indicate the severity impact that the failure of this asset has. The field has an associated list of values controlled by a code table. This value answers the question: "How severe is the impact of this asset's failure?" Values from 1 to 10 represent severity ranging from none to hazardous.

Occurrence - Use this field to indicate the likelihood of this asset's failure to occur. The field has an associated list of values controlled by a code table. Values from 1 to 10 denote occurrences from remote to very high chances of failure occurrence.

Detection - Use this field to indicate the ease of detection of this asset's failure. The field has an associated list of values controlled by a code table. Values from 1 to 10 denote almost certain to almost impossible chances of failure detection.

RPN - The Risk Priority Number gauges and quantifies the severity of failure modes, with 1000 being the worst and 1 being the least. It is derived from this equation:

$$\text{RPN} = \text{Severity} \times \text{Occurrence} \times \text{Detection}.$$

You cannot modify this field.

Failure Type - The type of problem that required maintenance on the asset. The Failure Type is yet another way to categorize the problem. Is it evident or hidden? Is it related to an economic problem, operational problem, or a safety problem?

PM Control - This is the record number for the Asset PM Control record that you want to associate with this FMEA template.

How to Create an FMEA Template Record

1. **Open the FMEA Template module.**
2. **Click New.**
The system opens a new FMEA Template record in Created status.
3. **Enter an FMEA Template ID if applicable.**
If this field is system-generated, the value will be entered for you upon save.
4. **Select an Asset Class.**
5. **Enter FMEA Template Functional description of the Asset records to be gathered.**
6. **Enter additional fields as appropriate.**
7. **Enter a description.**
8. **Click Save.**

How to Enter FMEA Template Items Manually

The status of the FMEA Template must be set to Active to enter items. Follow these steps to add FMEA items one by one.

1. **Open the appropriate FMEA Template record.**
Ensure that the record is in Active status.
2. **Create FMEA Failure detail manually by selecting Failure Mode, Failure Code and Repair Code.**
3. **Enter a PM Task Description, Asset Criticality and existing Asset PM Control record.**
4. **Repeat steps 2 and 3 above in order to create more rows if needed.**
5. **Select Create PM Control from the Actions list.**
You must have appropriate responsibility to be see Create PM Control in the Actions list.

The system copies the FMEA Template header information into Asset PM Control module in insert mode.
6. **Populate the PM Control Type and PM Master interval scheduling data.**
7. **Click Save.**
The system copies the Asset PM Control No back to the FMEA line item from where you clicked the Create PM Control action.
8. **You may continue using Create FMEA Line Item wizard to create multiple line items for different Failure Mode, Failure Code, Asset Criticality and Repair Code combinations.**

How to Enter FMEA Template Items using the Wizard

You can also choose to use the FMEA Create Item Wizard in order to create FMEA Template line items. Follow these steps to use the wizard to create FMEA items.

1. **Open the appropriate FMEA Template record.**
Ensure that the record is in Active status.
2. **Select Create FMEA Line Items from the Actions list.**
The Create FMEA Template Item Wizard opens.

The Function Description is displayed.
3. **Enter Failure Mode and Failure Code.**
4. **Answer the series of questions that the wizard presents by choosing either Yes or No.**
The questions are posed in order to determine FMEA severity for this item.

5. Complete the questionnaire to determine the default FMEA RPN number derived from Business Rule.
6. Change the default values for Severity, Occurrence and Detection from the FMEA Template RPN Defaults rule if the default values are deemed incorrect for the failure mode.
7. Enter Repair Code and the recommended action in the Proposed PM Task Description.
8. Click Finish and insert a new row.
9. Click Start Over in order to create more rows if needed.
10. Select Create PM Control from the Actions list.

You must have appropriate responsibility to be see Create PM Control in the Actions list.

The system copies the FMEA Template header information into Asset PM Control module in insert mode.

11. Populate the PM Control Type and PM Master interval scheduling data.
12. Click Save.

The system copies the Asset PM Control No back to the FMEA line item from where you clicked the Create PM Control action.

13. You may continue using Create FMEA Line Item wizard to create multiple line items for different Failure Mode, Failure Code, Asset Criticality and Repair Code combinations.

FMEA Template Views

In addition to standard notes, attachments views, this module includes the following:

Associated Assets

The Associated Assets view is a read-only view that displays all assets that match the selection criteria you specify in the FMEA Template header. The view displays a list of similar assets along with their Asset Type, Asset ID, Description, Criticality and Status. You cannot modify any of the values that appear in this view. This view is for informational purpose and you could use it to determine if you want to group Preventive Maintenance for all these assets.

Asset ID	Description	Criticality	Status
RLW_64_FIXED	Fixed Asset for Testino the CU process.	9	Active
RLW_ADDRESS_1	this is an address asset	9	Depreciation Only
RLW_ASSET1	This is the first of many assets. Top Level, No Process	9	Active

Associated Assets view

FMEA Items

Selecting the FMEA Items view redirects focus to the list of FMEA Items along with their related information. Please refer to the section [FMEA Template](#) for detailed information on each of the fields.

The screenshot displays the Oracle Utilities Work and Asset Management V1.9.0 (r19-5) interface for the FMEA Template 11000000000003 Item. The main content area includes a form with the following fields:

- FMEA Template ID: 11000000000003
- Status: Active
- Asset Class: RUBBERDUCKY
- Fleet Make: [Empty]
- Specification: [Empty]
- Asset Type: 00
- Fleet Model: [Empty]
- BOM ID: RLW_BOM1
- Function Description: Primary pumping for recirculation system

Below the form is a table titled "FMEA Items" with the following columns: Failure Mode, Failure Code, Repair Code, PM Task Description, Criticality, Severity, Occurrence, Detection, RPN, Failure Type, and PM Control. The table contains one row of data:

Failure Mode	Failure Code	Repair Code	PM Task Description	Criticality	Severity	Occurrence	Detection	RPN	Failure Type	PM Control
FATIGUE	EROSION	INSTALL	Inspect the windsnapper hinge assembly		9	9	10	810	HS	110001

FMEA Items view

Asset Failures View

The Asset Failures View displays asset records which match the Failure Mode, Failure Code and Repair Code for the line item from where the detail view was accessed. Along with this information, it also lists the asset type, asset id and occurrences of asset failure. This view is also for information purposes and you cannot modify anything in this view.

The screenshot displays the Oracle Utilities Work and Asset Management V1.9.0 (r19-5) interface for the FMEA Template 11000000000003 Asset Failures. The main content area shows a table with the following columns: Asset ID, Failure Mode, Failure Code, Repair Code, and Occurrences. The table contains one row of data:

Asset ID	Failure Mode	Failure Code	Repair Code	Occurrences
	FATIGUE	EROSION	INSTALL	

Asset Failures view

FMEA Template Actions

The main actions executable from the FMEA Template module are the ability to create an FMEA failure item and FMEA PM Control record. In order for these options to appear on the Actions list, you must have the appropriate responsibility.

How to Create an FMEA Template Item

In order to create an FMEA Template Item, you must have the appropriate responsibility.

1. **Open the FMEA Template record for which you want to create an FMEA Failure Item.**
2. **Select Create FMEA Failure Item from the Actions list.**
The Create FMEA Template Item Wizard opens.
3. **Answer the series of questions presented to you in the Create FMEA Template Item wizard.**
This wizard walks you through the process of creating a new FMEA item by presenting you questions that determine the FMEA item failure type.

How to Create an FMEA PM Control

If you wish to create an Asset PM Control record with the information that is populated in the FMEA Template module, you can create an FMEA PM Control. In order to create an FMEA PM Control record, you must have the appropriate responsibility.

1. **From the FMEA Items list, select the item that you want to create the FMEA PM Control record for.**
2. **Select Create FMEA PM Control from the Actions list.**
The Create Asset PM Control wizard opens.
3. **Select the PM Control type from a list of values.**
4. **Click Finish to create the Asset PM Control record.**
The system returns the Asset PM Control No for the newly created record.
5. **Press OK to return to the FMEA Template module or press Asset PM Control > to be redirected to the Asset PM Control module.**

Chapter 12

Runtime Entry

Use the Runtime Entry module to enter and maintain asset readings such as mileage, hours of uptime, hours of downtime, number of start-stops, and so on. Since they almost entirely depend on the usage of the related asset, readings cannot be calculated or predicted accurately by the system. Instead, readings must be collected and entered into the system by a user.

Readings can also be populated through the PM Master module, Consumables module, or through an external interface (such as a process control unit interfaced into Oracle Utilities Work and Asset Management). Information collected here is automatically used to update PM Master runtime based records (for the listed Asset and runtime type).

When you create a Runtime Entry record the system returns the previous reading for the asset and meter unit. If the system validation finds that the new entry is less than the previous entry when the record is saved, the system asks whether or not you actually want to save the record to make sure that the lesser reading is accurate.

Once a reading is entered into the system, it serves two purposes:

- Building and maintaining Asset Usage History;
- Facilitating Runtime PM Master records so that they cycle when the work is due.

Runtime Entry Records

You can access and enter meter readings for one or many Assets in the RunTime Entry module. This information is also automatically populated by the system when readings are entered in the PM Master, Fleet Work Order, Consumables modules or through an external interface. Information collected here is automatically used to update PM Master run-time based records (for the listed asset and run-time type).

The screenshot shows the Oracle Runtime Entry window. The main area contains a table with the following data:

Asset ID	Meter Units	Reading	Reading Date/Time	Reason
E LB ASSET 1	MILES	#####	10 MAR 2006 14:16:51	
E LB ASSET 1	MILES	2,200.00	10 MAR 2006 14:15:49	
E LB ASSET 1	GALLONS FLOW	#####	10 MAR 2006 14:14:03	
E LBAST4	KILOMETERS	300.00	04 FEB 2005 11:30:20	RUNTIME
E LB ASSET10	MILES	35.00	03 FEB 2005 13:31:19	
E LB ASSET 1	HOURS	15.00	02 FEB 2003 00:00:00	RUNTIME
E LB ASSET 1	HOURS	15.00	01 FEB 2003 00:00:00	RUNTIME
V LB-V-001	MILES	73,452.00	24 OCT 2002 08:56:13	
V LB-V-002	MILES	54,000.00	20 SEP 2001 10:04:14	
V LB-V-002	MILES	52,000.00	20 SEP 2001 10:02:56	
V LB-V-002	MILES	47,300.00	16 MAR 2001 10:22:03	
V LB-V-001	MILES	42,500.00	13 MAR 2001 10:07:00	
V LB-V-001	MILES	20.00	22 JUL 0003 00:00:00	

Below the table, there is a form for entering a new record:

Previous Reading: 15.00 | 28 FEB 2003 00:00:00 | Entered: 03 MAR 2003 15:03:31
 Description: Pumps in the ILB facility.

Runtime Entry window

You can also use the Runtime Entry module to record a meter replacement or changeout. The system correctly maintains runtime by noting the difference in readings between the old meter and the replacement meter when the change was made. When you enter a record for the old meter showing the final reading and the reason code “changeout”, the system automatically creates another record for the new meter showing a zero reading. For vehicle assets, the system displays meter replacement and meter offset information in the Operational/Maintenance view of the Fleet Asset module.

Place your cursor on one of the records in the Runtime Entry window, and the system displays additional information about the asset runtime including the reason for the reading, the previous reading, and the description of the asset across in the bottom section of the screen.

How to Enter RunTime for an Asset

Once you save an entry, you cannot change or delete it.

1. **Select the Asset ID type and number from the lists of values and click the Search button.**

The two lists are controlled by the Asset module.

If there have been previous entries, the system shows them to you. If not, the hints line will tell you there are no records to be retrieved – this means that this is will be the first entry for the asset. In either case you can continue in the same way.

2. **Click New.**

The system opens a new line.

3. **Select the Asset ID type and number from the lists of values.**

Tip: If there are previous entries for this asset, you can also use the F3 button to copy the contents of the field immediately above the field you are filling in. This is a fast way to enter the Asset ID and other information that is the same from one line to the next.

4. **Enter the new reading.**

Specify the Asset ID, meter units, reading, and reading date. The system supplies the current date and time for the reading, but these can be changed as needed.

The system does not verified that the reading you enter is higher than the previous reading at this point.

5. **Select a reason the reading was taken from the list of values.**

The list of reasons is controlled by a code table

6. **Click Save.**

When you save the record, the system checks to see if the entered reading is less than the previous entry. If it is, you receive a message verifying if you want to save the entry or try again.

Since the system cycles runtime PM masters based on asset readings, the reading cannot be modified once it has been saved. Instead, you must create a new entry to correct the reading information. When cycling PM masters, the system uses the latest asset reading entered, so be sure the correct reading has the latest Date and Time.

The Asset Runtime Business Rule defines how Asset Runtime per month or per period will be calculated. The Rule is used in conjunction with the stored database procedure SDBP_RUNTIME.

How to Enter a Meter Replacement

1. **Open the Runtime Entry module and search for the appropriate asset.**

2. **Click New.**

The system opens a blank line for a runtime entry.

You can also schedule a PM Route to facilitate the collection of asset readings.

- 3. Select the Asset ID type and number from the Lists of Values.
- 4. Enter the final reading or the old meter.

The system supplies the current date and time for the reading but you can change this information if necessary.

- 5. Select "Changeout" as the reason code.
- 6. Click Save.

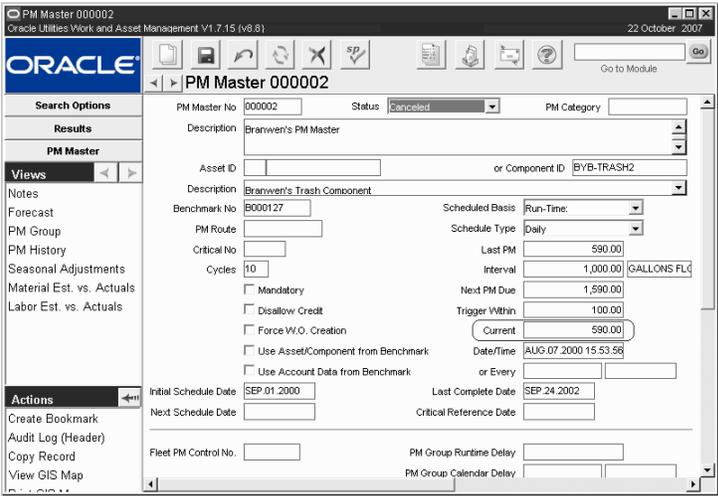
The system records the meter replacement. If you click the Refresh icon after saving the record, you will see that the system has created a closeout entry for the old meter and an entry for the new meter with a ".00" runtime entry. For vehicle assets, the system displays meter replacement and meter offset information in the Operational/Maintenance view of the Fleet Asset module.

If you do not want the new meter set to zero, enter a runtime entry for the new meter to reflect the appropriate reading.

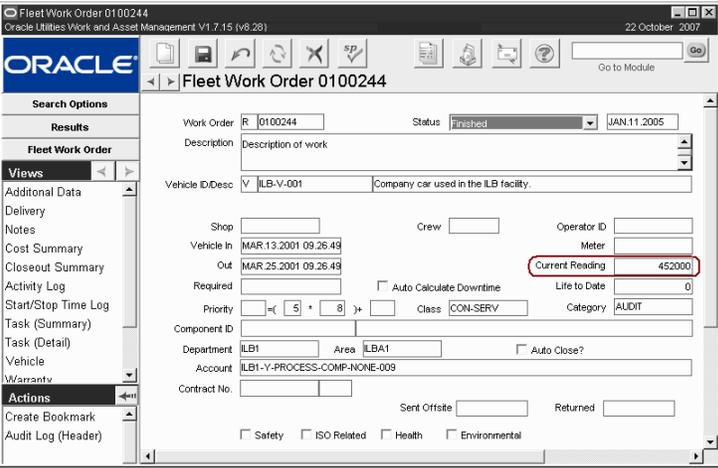
Other Ways to Enter Runtime Information

When defining a Runtime PM Master record, you can enter a current reading for the listed asset that displays in the runtime log.

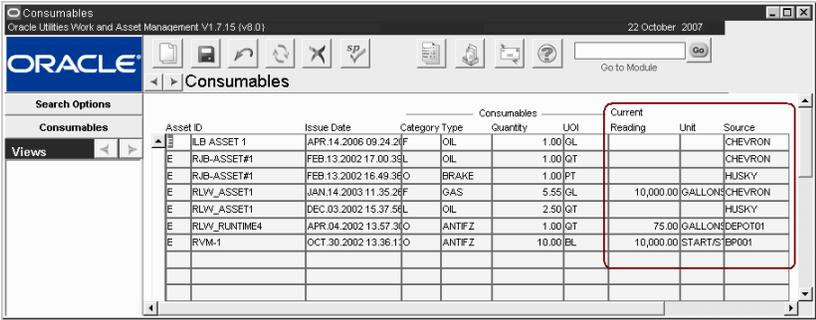
The system provides several other ways to enter asset reading information. When you enter a new PM Master, Fleet Work order, or Consumable record there is a Current Reading field where you can enter the necessary asset information.



Asset Reading on a Runtime PM Master

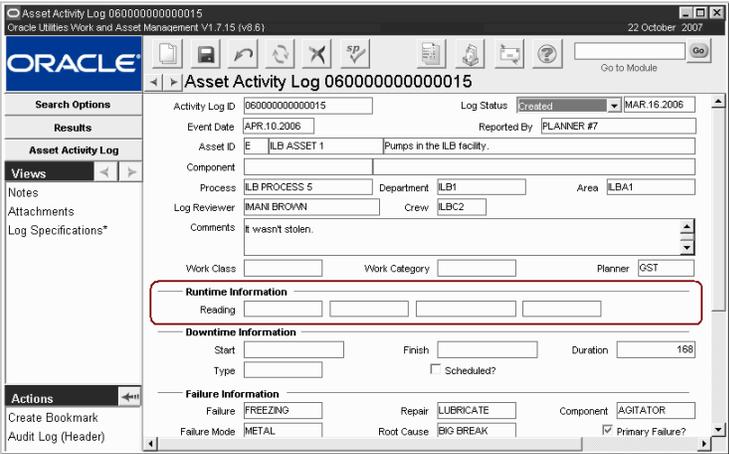


Asset Reading on a Fleet Work Order



Asset Reading on the Consumables Transaction Window

You can also enter asset readings from within the Asset Activity Log module when you are logging information for the asset.



Asset Reading on an Asset Activity Log record

External Applications

Your organization can also set up interfacing with third party applications to pass asset reading information into the Runtime Entry module. As with readings that are entered manually, this information is used by the system to update Asset, Fleet Asset and PM Master records.

Chapter 13

PM Route

Preventive Maintenance Routes (PM routes) are work paths where work is performed on specified assets. Assets are defined as stops along the work path. Routes are used for performing preventative maintenance work of a small or relatively simple nature, such as equipment lubing or asset reading collections; work that does not merit the use of a work order with a separate task for each asset listed. From one route to the next, the type of work performed (usually by location) varies. As work is performed along a route and results are entered, the system automatically logs work history information for future reference.

The following steps must be completed to create and use a PM Route:

1. Establish a PM Route

Describe the work to be done, and assign a route number.

The same asset can be placed on multiple routes. Each route is specific to a certain type of work (for a given area).

2. Define the Pm Route Stops

List the assets and components that should be worked on and the sequence them in the order that they are to be worked.

3. Schedule the PM Route

Use the Plan PM Routes module to set the schedule for the route.

4. Print the Schedule PM Route

Print the route from the Display Scheduled Routes module.

5. Log the Work Results

Update the asset information obtained after the work is completed to close the route. This can be done in the Display Scheduled Routes module.

The system includes three distinct modules in the Maintenance subsystem that support route processing: Plan PM Routes, Create Scheduled PM Routes, and Display Scheduled PM Routes.

The same asset can be placed on multiple routes. Each route is specific to a certain type of work (for a given area).

The following process diagram outlines the steps in creating and using a PM route.

Once you have set up a route and scheduled it the work comes due for completion at the interval that you specified. Work can be completed on a regular basis with little additional planning after the initial set up.

If you enter the PM Route on a PM Master, the system will create a work order to work the route when the PM Masters cycles. The resulting costs, including time charges, will be distributed evenly among all assets along the route.

Plan PM Routes

Enter and maintain preventive maintenance routing requirements for assets using the Plan PM Route module. A PM Route is usually established for tasks that are to be accomplished through a standard path rather than by using individual Work Orders per item.

A PM Route (or path) is built by creating a series of “Stops” in a sequential order. The same work is to be performed per Stop on the Route, moving from asset to asset in the order listed for that Route, thus creating a path. These Routes are typically completed on a routinely scheduled basis, dealing with routine work such as lubrication maintenance, sample gathering, or inspection.

For each Stop on a path, the system maintains a Critical Number, normalized to 100. In other words, the day the work comes due, the critical number is 100. As time continues to pass without the work being done, the Critical Number for that Stop continues to grow. Once work is completed, the Critical Number is reset to zero and begins to grow once again. The critical number is noted in the Route Stops view.

This module allows you build PM Routes, listing all of the Stops that comprise the Route, along with the work that is to be performed at each Stop. Once a PM Route is defined, you can then create lists of PM Route work to be done through the Schedule PM Route module. Based on selection criteria you enter (such as all Stops on a specified Route where the Critical Number is greater than or equal to 100), Stops along the Route which meet the selection criteria are placed on a list. This list is uniquely numbered and can be printed so that work can be performed.

Once you have scheduled the PM Route, you can use the Display Scheduled PM Routes module to print and update the Scheduled Route by marking Stops as Finished or Missed. After stops are marked as Finished, batch processing updates PM Route Stops with the Status Date so that the critical number for the stop is maintained.

Distributing Costs

Costs for doing the maintenance on the route can be charged against the Process or Function identified on the PM Route. To distribute costs evenly among all assets along the route, or to make sure that labor charges are specifically applied against the route, you can associate a PM Route with a PM Master using a benchmark work order.

The screenshot shows the Oracle PM Route Plan application window. The window title is "PM Route Plan" and the Oracle logo is visible. The interface includes a search bar, a "Results" section, and a "Views" section with options for "Route Stops" and "List of Stops". The main form area contains fields for "PM Route No.", "PM Route Type", "Process/Function", "Department", "Area", "Maintenance Manager", "Craft", "Crew", "Downtime Required" (checkbox), "Downtime Type", and "Downtime Hours".

PM Route record

The following fields are included:

PM Route No. - The PM Route number is manually entered. The system will verify that the number is unique when the record is saved.

Process/Function - Enter the code for the Process or Function that should be associated to the PM Route. If you want to associate the Route to a PM Master you should reference the same Process or Function on both the PM Master and the Benchmark Work Order.

Department/Area and Maintenance Manager - When you enter the Process or Function code, the system will automatically fill in the Department, Area, and Maintenance Manager fields with information from the Process or Function module. Only the Maintenance Manager can be modified.

Craft - Enter the code for the Craft that is responsible for work on the Route, if applicable.

PM Route Type - Select the type of work to be completed on the PM Route from the list of values associated to this field.

Downtime? - Check this box if the work will require Downtime on the assets. The Downtime check box is informational only and does not carry over to other documents that are associated to the PM Route. However, these other records also have a check box that can be manually checked to indicate Downtime.

Type and Hours - Select an option from the list of values to indicate the type of Downtime involved with the PM Route. You can also enter the number of hours of Downtime involved, if applicable.

How to Create a PM Route Record

1. **Open the Plan PM Route module.**
2. **Click the New icon.**
3. **Enter a PM Route number.**

The system will do this for you if the system generated numbering option has been established for PM Routes in the Sequence Numbers module of the Administration subsystem.

4. **Enter a Process/Function type code from the list of values.**

This list of Process/Function codes is controlled by Code Table 229.

The list contains three possible codes: P for Process, F for Function and V for Vehicle.

5. **Select a Process, Function, or Vehicle ID number from the list of values.**

The Function/Process entered is used solely for the associated Account Number. The Function/Process listed on the PM Route header does not in any way limit which assets may be placed on the Route.

The corresponding number is controlled by the appropriate module - Function or Process in the Resource subsystem, or Fleet Asset in the Maintenance subsystem.

If there is a Maintenance Manager or Craft associated with the Process or asset, the system supplies this information.

6. **Select the PM Route Type from the list of values.**

PM Route type is controlled by Code Table 20.

7. **Check the Downtime? check box if the maintenance requires downtime.**
8. **Click the Save icon.**

PM Route Stops

You can enter PM Route Stops on the Route Stops view. Each stop is uniquely numbered by the system. The sequence number controls the order of the stops when scheduled and printed. Sequence numbers should be incremented by ten so that if you need to add another stop later, you can place the Stop in the correct sequence.

Once an Asset ID has been selected, you can select a Component ID if the work is to be done on a specific component attached to the asset. You can also enter descriptive information about the work to be performed at the stop. Since the person doing the maintenance will not have a work order describing the work to be performed, a clear description here can help insure that the required work is done.

PM Intervals/Units and Last Complete date are used by the system to calculate the Critical Number for the stop, helping you gauge how “overdue” work is for the Stop. (The Critical Number is normalized to 100, meaning that when work is due for the stop, the critical number is 100. As time continues to pass without work being done, the Critical Number continues to grow. When work is done, the Critical Number starts to grow from zero again.)

List of Stops

The PM Route Plan Stops window displays a summary of PM Route Stop information, including Stop and Sequence numbers, Critical Number, Asset Type and ID, Component ID and a description of the work to be done. None of the information on this view can be updated directly. If you need to modify the information displayed, switch to the Route Stops view.

How to Add a Stop to a PM Route

1. Open the appropriate PM Route in the Plan PM Route module.
2. Select Route Stops from the View menu.

The system opens the PM Route Plan Stops view. As you add stops, you can review a summary of the stops by selecting List of Stops from the Views list.

3. Click the New icon.

PM Route Plan Stop view

4. Enter a sequence number.
The Sequence Number controls the order of the Stops when scheduled and printed. Sequence Numbers should be incremented by 5 or 10 so that if you need to add another Stop later, you can place the Stop in the correct sequence.
5. Select an Asset ID type from the list of values.

The list of values for Asset ID is controlled by Code Table 230 in the Codes and Code Tables module.

6. Select an Asset ID number from the list of values.

This list is controlled by the Asset module and the code in Asset ID type field.

7. Select a Task Type from the list of values.

This list is controlled by Code Table 49 in the Codes and Code Tables module in the Administration subsystem.

8. Select a Component ID if appropriate.

Select a Component ID only if the work is to be done on a specific component attached to the asset.

9. Enter a Description of the task to be performed and the location.

10. Enter the Interval between times when the PM stop should be made.

11. Enter any additional information required by your organization.

Planners, for example, may require Task Duration information to develop an estimate of the total time required to complete the PM Route.

12. Click the Save icon.

PM Intervals/Units and Last Complete date are used by the system to calculate the Critical number for the Stop, helping you gauge how “overdue” work is for the stop.

Distributing Costs to Assets on a PM Route

To distribute costs evenly among all assets along the route, you must establish a relationship between a PM Route, a PM Master and a Benchmark Work Order. When the PM Master cycles, the system creates a Work Order and a PM Scheduled Route. Once the Work Order is approved and started, the status options and the Update All Stops as Finished action in the Scheduled PM Route header can be used to finish all stops on the route.

You can specify a Function on either the PM Master or Benchmark to receive the cost roll up. When the Work Order is finished, costs for labor, materials, and other charges incurred on the PM Route are captured by the function and evenly distributed to assets on the on the PM Route by batch processing. The PM Route Options business rule must be set to allocate costs to assets in order to enable this process.

There are two ways of establishing relationships between PM Routes, PM Masters, and Benchmark Work Orders:

- [Associate the Benchmark with a PM Route](#)

This method of distributing costs to assets on a PM Route allows the same benchmark to be used with any number of PM Master / PM Route combinations.

- [Associate a PM Route and a PM Master Using a Benchmark](#)

This method of distributing costs to assets on a PM Route requires a separate benchmark work order for each PM Master / PM Route combination.

How to Associate a Benchmark with a PM Route

1. **Create a PM route, listing assets by route stop and defining the steps to be preformed at each stop.**
2. **Create a benchmark work order, planning labor, material and other requirements as needed.**
3. **Add an “F” or function type asset to the benchmark work order.**
4. **Create a PM master, setting the PM scheduling type and frequency as appropriate.**
5. **Add the “F” or function type asset to the PM master.**

This method allows the same benchmark to be used with any number of PM Master / PM Route combinations.

The setting of the Use Asset/Component from Benchmark check box determines if the F-type asset entered on the PM Master or on the Benchmark receives the cost roll up when work is completed.

6. **Add the PM route created in step 1 to the PM master.**
7. **Add the benchmark work order created in step 2 to the PM master.**
8. **Set the PM route to Active status.**

You can now create additional PM Masters as needed using the same benchmark but different PM routes.

The next step is to [Associate a PM Route and a PM Master Using a Benchmark](#).

Create Scheduled PM Routes

Once PM Routes have been defined, you can use the Create Scheduled PM Route module to schedule the work.

To create a Scheduled Route, you must enter or select the PM Route number, the date you want to schedule for, and a Critical Number. Only the stops on the PM Route that match or exceed the Critical Number you enter will appear on the Scheduled Route.

Schedule PM Routes window

How to Schedule a PM Route

1. **Enter the PM Route Number for the route you want to schedule.**
2. **Enter the date.**
3. **Click the Schedule Route button.**

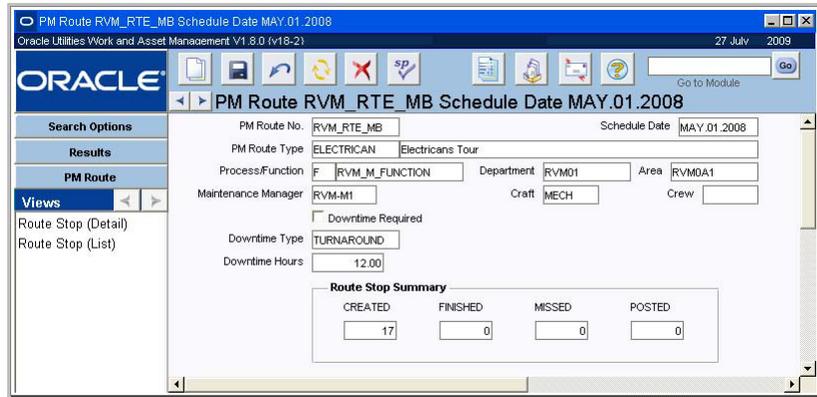
The system informs you if the entered Route Number and Schedule Date already exists as a Scheduled PM Route List. If the route is not already scheduled, the system creates a new Scheduled PM Route list, ordering Stops by Sequence Number.

The system then asks if you wish to view the new Scheduled PM Route List. If you answer Yes, the Display Scheduled PM Routes module opens showing the scheduled route on the list. Otherwise, you remain on the Create / Schedule PM Routing Path window where you can continue to create new Scheduled PM Route Lists.

Display Scheduled PM Routes

You can use the Display Scheduled PM Route module to print PM Route lists and update individual stops (marking them as finished or missed).

The main Scheduled PM Route record contains general and summary information concerning the scheduled route. You cannot insert a new Scheduled PM Route here, but the Actions list includes an option to access the Create Scheduled PM Route module where you can insert a new route list.



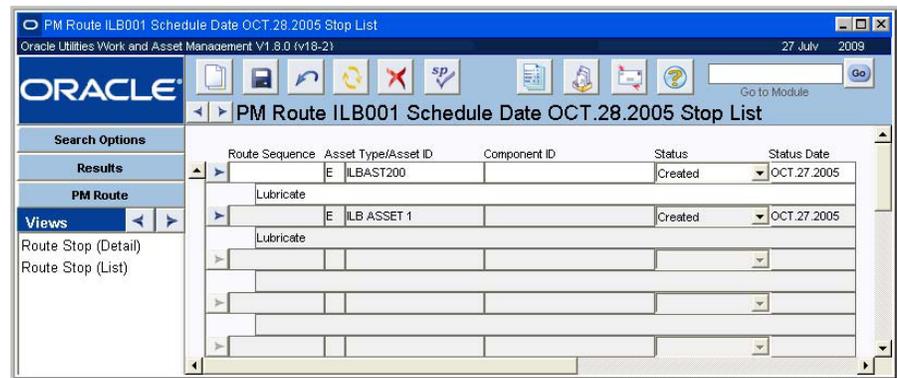
Scheduled PM Routes record

Display Scheduled PM Routes Views

In addition to standard notes, attachments, and approval views, this module includes the following:

Route Stop (List)

The Route Stop (List) view shows each of the stops selected for the route.



Route Stop (List) view

For each Stop presented, only the Stop status can be modified. You can set the status of each Stop to Finished or Missed. You can also select Update all stops as Finished from the Views list to mark the entire list as Finished, then update individual Stops to Missed as required. This can save you time with long Routes, where you would otherwise have to update a large number of Stops.

For those Stops marked as Finished, batch processing updates PM Route Stops (in the Plan PM Route module) with the Status Date so that the Critical Number for the Stop is maintained. When batch processing updates a Stop record, the Scheduled Stop record status is set to Posted and cannot be modified.

Route Stop (Detail)

The Route Stop (Detail) view contains information about the work done at each stop. Much of the information on the Route Stop (Detail) view is the same as found in the Plan PM Route module.

Route Stop (Detail) view

Printing a PM Route Report

Now you are ready to print the route and begin the work.

Select Print PM Route Report from the Actions list to print a copy of the route to your default printer. You can also run the PM Route report (S_RPT058) from the Reports module.

How to Print a PM Route

1. Select **Display PM Routes** under **PM Routes** on the **Maintenance** subsystem.
2. Open the **PM Route** record that you created.
3. Select **Print PM Route Report** from the **Actions** list.

Only stops on the route in either Created or Missed status are printed on the report.

Now the route is ready to be worked. Give the printed report to the person(s) performing the work. When they have finished the work, use the information they entered on the report to log back into the system.

Logging Completed Work

Once a route has been worked, it is important to log completion information back into the system so the Last Complete Date and Critical Number fields can be maintained on the Stop records.

There is no charge number directly associated with a PM route in the system. If your business practices do not allow material and labor to be charged against assets, processes, and/or functions, you will have to provide a valid charge number to the person performing the work.

How to Log Completed Work

1. Select **Display Scheduled PM Routes** under **PM Routes** in the **Maintenance** subsystem.
2. Locate your **PM Route** record.
3. Select **Route Stop (List)** from the **Views** list.
4. Set the status of each stop that was completed to **Finished**.
5. Click the **Save** icon.
6. Set the **Status Date** field to the date that the work was completed.
7. Click the **Save** icon.

If you have a large number of stops to update, you can select Update All Stops As Finished from the Actions list.

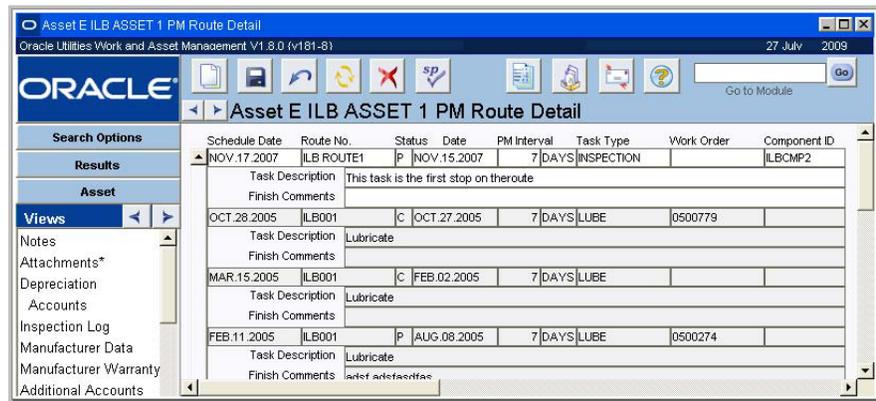
The system uses the current date as the completion date, but you can override it if necessary. You can also manually reset the status of any individual stops that were not finished to Missed. Stops in Created or Missed status will print again if the route report is rerun.

Status options on the Asset PM Route Detail view are C (created), F (finished), M (missed), P (posted).

Scheduled stops marked as Finished are set to Posted by the system when they are processed. The system updates the Last Completed Date as it was entered, and resets the critical number to zero. The critical number for scheduled stops that are in Created or Missed status is not reset; instead, it continues to grow.

Access PM Route Information by Asset

You can view scheduled route information for a particular asset in the Asset module of the Resource subsystem. Open the appropriate Asset record and choose PM Route Detail from the Views list. The system displays scheduled route information collected over time.



Asset Module PM Route Detail

Chapter 14

Permits Overview

Some work is so sensitive or dangerous that you must show that you have met certain requirements before you can begin the work. Some examples of this kind of work include tasks that require certification from OSHA, work using materials that may have a negative effect on the environment, or maintenance on specialized and valuable equipment that must be handled in a certain way. Often, planning for these requirements is very important because the work cannot be easily stopped while the requirements are met and the certifications acquired.

Permits Modules

The Permit module in the Maintenance subsystem helps you to plan these requirements. In Oracle Utilities Work and Asset Management you use permit templates to automate much of the planning process, then you create specific permits from the templates to supplement your work orders.

Working with permit templates and permits involves four basic stages:

1. Creating the Permit Template record
2. Associating it with one or more Asset records
3. Editing the Permit record that the system creates based on the Permit Template record
4. Closing the Permit record after work is completed

If your organization's business practices also require the use of tag points to manage the isolation of assets during work, the system also has the ability to manage this processing through the Tag Points, Tag List and Permit modules.

Tag Point Processing

Lockout/Tagout functionality allows you to use permits to manage information related to tag points. Tag points are identified in the Tag Points module then added to tag lists and associated to Asset records. When a permit is created for work related to that asset, tag point information is carried over based on the permit template requirements on the asset. This information can then be accessed in the tag point detail views on the Permit record.

Please refer to [Permits Using Lockout/Tagout](#) for more information.

Chapter 15

Permit Template

Performing certain types of work requires internal permits. These permits are usually required by outside regulation demanding creation of an audit trail to show proper procedures were followed. For example, working with hazardous materials typically requires permits indicating that the person doing the work has been trained and certified, that isolation procedures were followed, etc. The Permit Templates and Permit modules of the Maintenance subsystem provide a way to record and monitor information about required permits.

Permit Template Records

Once a permit template is created from a permit template, changing the Template does not change the permit template. It is therefore a good idea to plan your permit templates very carefully and include as much detail as possible.

Working with Permits is a three-step process: create the permit template, associate the permit template with one or more assets, and create a Permit record when work against the associated asset is required

The screenshot shows the Oracle Permit Template record form. The window title is "Permit Template" and the version is "Oracle Utilities Work and Asset Management V1.7.15 (v17153-3)". The date is "13 May 2008". The form includes a search bar with "Go to Module" and "Go" buttons. The main area is titled "Permit Template" and contains fields for "Template ID", "Type", and "Status" (set to "Active"). Below these is a "Description" field. A "Checklist" table is present with columns for "Checklist" and "Sequence". At the bottom, there is a "Items for Checklist" section with a grid of checkboxes.

Permit Template record

When you are building a permit template, you can create checklists indicating steps for how certain tasks should be done. You can also indicate any special equipment that may be needed, training certifications that are required for the people doing the work, and the specific readings and settings that need to be established before work can begin.

Once a permit template is created and associated with an Asset record, any work order tasks for that Asset will be flagged with the word PERMIT in red near the top of the window. This notifies planners that they need to create a permit record to ensure that the permit requirements are met for the work.

The following fields are included:

Template ID and Type - The Template ID field contains the unique identifying number for the permit template. Depending on how your system is set up you can enter this number or the system will supply it for you. If you enter it yourself, the system verifies that it is not a duplicate number when you save the record.

You can select a Permit Type to identify the permit template from the associated list of values. This list is controlled by the Permit Types business rule.

Description - Enter a detailed description of the permit. Later you can search for permits based on the description.

Status - The Status field indicates where the permit template is in its lifecycle. If a permit template is in Active status, and it has been associated with an asset, it will flag all new Work Order Tasks relating to the asset. If it is in Inactive status it is not in use.

Checklist - You can store checklists of items, tasks, etc. related to the work. The Checklist field represents the name of a list. You can create as many checklists as you need, but you should give each a distinctive name.

If you add a new checklist to a permit template after the template has been associated with Asset records, the new checklist will not show up in the existing associations. You will have to open the appropriate assets and delete the existing associations, then create the new associations. This can be a tedious process, so it is worthwhile to try to include all checklists before you begin adding the permit templates to the assets.

Sequence - Indicate an order for the checklists. Alternatively, you can assign more than one checklist the same sequence number, allowing you to group checklists.

Checklist check boxes - Each checklist has 12 check boxes that can be labeled here. When the actual Permit record is created, these check boxes are also available on that record and can be checked-off there. If you are creating a checklist with more than 12 items, you will have to divide it up into two or more checklists.

How to Add a Checklist to a Permit Template

1. **Open the appropriate Permit Template record.**

2. **Click a blank Checklist field.**

The system opens a new checklist record.

3. **Select a Checklist from the list of values.**

4. **Enter a sequence number.**

The sequence number allows you to determine the order in which the checklists should be completed. This is especially important if you have to break a long checklist up into more than one list.

5. **Click to the immediate right of the first blank check box.**

6. **Enter a checklist step.**

The check boxes are in the lower section of the window and, although the area beside them is gray, you can enter text in this area. A step would be a discrete action, such as "Close Valve."

The Permit Type Business Rule determines which Code Tables control the list of values for the Checklist fields.

Since the system only allows 12 steps per checklist, you might have to break up a long list of steps into several checklists, then give each list a sequence number.

You can enter your own steps in the areas to the right of the check boxes, or you can select steps from the associated lists of values.

Permit Template record

7. Repeat steps 5 and 6 for up to 12 checklist steps per checklist.
8. Click the Save button.

The system saves the checklist and the checklist steps.

Permit Template Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Special Equipment

If the work that requires a permit also requires equipment, you can indicate those items by selecting Special Equipment from the Views list. An example of such equipment would be decontamination equipment that must be available when working with hazardous materials.

Special Equipment view

To list equipment needs select the item of equipment from the list of values, enter any necessary comments, enter a stock code if necessary, and Click the Save button to commit your changes.

How to List Equipment Needs for a Permit Template

1. Open the appropriate Permit Template record.
2. Select Special Equipment from the Views list.
3. Select an item of equipment from the list of values.

The list of values is controlled by a User table your organization must create in the Code table and Codes module of the Administration subsystem. This Code Table must also be linked to the Special Equipment view in the Permit Template business rule.

4. Enter any comments.

5. Select a Stock Code from the list of values, if appropriate.

If a storeroom carries the item, you can enter a stock code to make it easier to locate the item. The list of values is controlled by a User table your organization must create in the Code table and Codes module of the Administration subsystem. This Code Table must also be linked to the Special Equipment view in the Permit Template business rule.

6. Click Save.

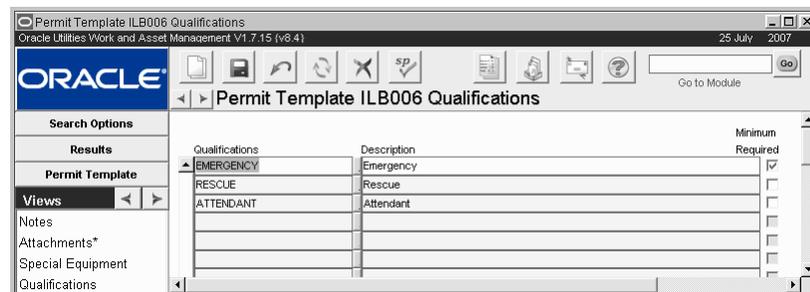
The system saves the record. You can add line items for other required equipment as long as the equipment is listed on the Code Table for the Template Type.

Qualifications

Many work permits require certificates of training for the personnel completing the work. Use this view to indicate the types of qualifications that are required for the permit template. Employee training information can be recorded in the employee module where you can also identify and list the employees with the required course work.

If you list an employee here, and his or her training expires, the system does not update the view by removing the employee from the list. work order planners should always check to make sure the employee's certification is current.

The Permit Types Business Rule, the user-defined Code Table for Qualifications, and Code Table 45 must be set appropriately in order to link employees to Permit records. Please review the discussion of the Permit Types business rule for more information.



Qualification view

Qualifications - The Qualifications code field corresponds to the Course field on the Training view of the Employee module in the Resource subsystem.

When you list a Qualification on the Permit Template, the system records the requirement in the Qualification view of the Permit records that are based on the template. When you complete the Qualification detail for a given Permit record, you will be able to select employees with the appropriate training.

Note: The Permit Types business rule, the user-defined Code Table for Qualifications, and Code Table 45 must be set appropriately in order to link employees to Permit records. Please review the discussion of the Permit Types Business rule for more information.

Description - The Description field contains a brief description of the Qualification. The system completes this field when the Qualifications code is selected.

Minimum Required - The Qualifications View also has a Minimum Required check box that indicates whether the qualification listed for the Permit Template is actually required or only suggested. If you check the box, the system considers the qualification to be necessary to do the

work, and will ensure that the qualification cannot be deleted from any Permit records based on the Permit Template record. If you do not check the box, the system assumes that the qualification is only suggested or preferred, and the line can be deleted from the Permit Qualifications record. For example, if the permit was for doing underwater welding on an oil pipe, an industrial diving certification and an underwater welding certification might be required, while a first aid certification might only be suggested.

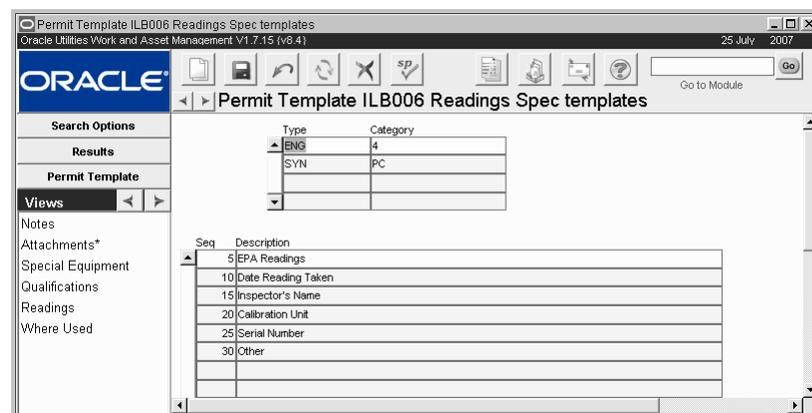
The Minimum Required check box cannot be updated from a Planned Qualifications detail record (of a permit). In order to change a qualification from required, to 'not required' you must change the Permit Template record, then recreate the Permit record. This is because the system only checks against the template (and its qualifications) when the permit is first created. This situation also means that any other existing Permit records based on the template will not be changed when the template is changed. Therefore, when you are planning Permit Template records, you should be careful to determine which qualifications should be required and which should not be required, to avoid having to update Permit records due to changes to their permit template record.

How to Add a Qualification to a Permit Template

1. **Open the appropriate Permit Template record.**
The Permit Template module is in the Maintenance subsystem.
2. **Open the Qualification view.**
3. **Click an empty Qualification field.**
The system inserts a new line.
4. **Select the Qualification from the list of values.**
When you select the qualification code, the system supplies the Description.
5. **Check the Minimum Required check box if the qualification is required.**
6. **Click Save.**
The system saves the new line.

Readings

Select Readings from the Views list if you want to enter specific conditions that must be met before work can begin. For example, inspection of the interior of high-pressure steam pipes might require that the pressure and temperature be reduced to an acceptable level before opening the access ports.



Readings view

The actual specification template records that are used in this View can be found in the Specifications Template module. You must create a Specification Template listing the

appropriate readings in that module, and link it to various Code Tables before it can be listed under Readings.

The Permit Templates Readings view does not allow you to enter the required readings for the specifications, nor does the Specification Templates module. The readings must be added to the Permit (not its Template) in the Readings view.

So, to add reading requirements to a Permit, you must first create the Specification Template, then associate it to a permit template, then define the reading values in the Readings view for the actual Permit.

Type - The Type field has an associated list of values that is controlled by a code table.

Category - The Category field has an associated list of values that is controlled by a linked Code Table in the Code Table and Codes module of the Administration subsystem. The list only shows the categories that are appropriate to the type indicated in the Type field.

Sequence - The Sequence field indicates the sequence number for readings that must be taken in a set sequence.

Description - The Description field can be used to indicate appropriate ranges and other information about the reading.

How to List Readings Required for a Permit Template

1. **Open the appropriate Permit Template record.**
2. **Select Readings from the Views list.**

The system opens the Readings Specifications Template window with any previous reading requirements. If there are no specifications already associated with the permit template, the system opens the window with the first specification template Type field highlighted and ready for information.

3. **Click an empty specification Type field and Click New.**

The system opens a new line, ready to create a record.

4. **Select a specification template Type from the list of values.**
5. **Select a specification template Category from the list of values.**
6. **Click Save.**

When you save the record the system adds the Sequence number and Description from the Specification Template.

Where Used

Select Where Used from the Views list to open a window listing the Asset records that reference the permit template from either the Permit Template Requirements view or the Associated Permit Requirements view in the Asset module. The Where Used view cannot be updated and includes the Asset ID, status, and description from the Asset record as well as the tag list associated with the asset, if applicable.

Asset ID	Status	Description	Tag List
ILB ASSET 1	ACTIVE	Furnos in the ILB facility.	
ILB ASSET 2	ACTIVE	Ventilation Asset	
ILB C10	ACTIVE	pipe	

Where Used

Associating a Permit Template with an Asset

In order to make an association between a permit template and an asset, you need to select the following from the Views list in the Asset module:

- Permit Template Requirements, in which you make the basic association and modify any checklists;
- Associated Permit Requirements, in which you can show other assets that are related or connected to the asset and which may have permit requirements of their own.

As you make the association, you can customize the template to better fit the requirements for the individual asset. For example, working on a storage tank for toxic materials would have one set of requirements. A similar tank underwater might have similar requirements with the addition of specific requirements relating to working below the surface. In this case, the same basic template would be used for the assets, but you would add requirements to the association between the template and the second asset.

Associate a Permit Template via Tag List

A second way to associate a permit template to an Asset is through a Tag List. Please refer to the guide specific to the Tag List module for more details.

Chapter 16

Permit

After you have created a Permit Template record and have associated it with an asset, the system flags any work orders that are created referencing the asset to show that there is a permit requirement for the work. The planner then creates a base-line Permit record by selecting Create Permit from the Actions list on the Work Order Task record. This Permit record can be edited to reflect the conditions specific to the work. Once the permit is complete and the work is done, the permit should be updated and closed.

When you create a new Work Order and the system flags the record with a permit requirement, you need to decide which permits are required and what modifications, if any, need to be made to the permit to make it specific to the Work Order that you are working on. Since any single Work Order might include several tasks that require one or more different permits each, you should review the Work Order Task records first to find out which permits are required.

There are two ways to create a Permit record for a Work Order Task. You can create a permit using a method similar to how you would create any record: opening the Permit module, start a blank record, enter the needed information, and save the record. However, since Permit records use information from the Permit Template, Asset, and Work Order modules, creating these records manually can be time-consuming. Fortunately, the system allows you to quickly create a permit (based on the available templates) directly from the Work Order. Once you have created a new permit you can still edit the permit in the Permit module if necessary.

Note: If your organization uses tag point processing, please also refer to the guide titled “Permits Using Lockout/Tagout” for more information. Views and Actions related to tag points do not appear as options when the Tag Pt Ctrl rule key in the Permit Types Business Rule is set to NO for a permit type.

You can establish a customized template or form with your company headers and footers that the permit will be printed on by creating the template and setting the Attachment Printing Business Rule.

Permit Records

Work Order Task permits are stored in the Permit module. Occasionally, a Permit record can be applied to more than one Work Order Task, but since the permit is a very specific application of the more general template, if there are significant differences from one task to another, you should create a separate permit for each task. For example, a Work Order to inspect and repair a pipeline that carries flammable liquids (possibly semi-refined petroleum) might include three Work Order Tasks; one for sections of pipe in the open, one for sections that run underwater, and one for sections that run through populated areas. Each task could use the same permit template because the tasks are essentially similar, but each task might include special directions and restrictions based on the individual circumstances. In this case each task would have its own Permit record but each would be based on the same Permit Template record.

Any permits that have been created for associated assets are listed in the Work Order Permits view for the Work Order.

Permit Record with no Tag Point processing in use

Modify the fields as necessary to ensure that the Permit record meets the requirements for the work that needs to be done.

If your organization uses tag point processing, additional views and actions are available to manage the functionality. Views and Actions related to tag points do not appear as options when the Tag Pt Ctrl rule key in the Permit Types Business Rule is set to NO for a permit type.

The following fields are included:

Permit and Type - These fields show the permit number and the permit type.

Depending on how your organization has configured sequence numbering for this module, the record ID is either automatically generated by the system or you must enter a number manually. The system validates whether or not the number is unique when you save the record.

If you create this record ID manually, avoid the use of the special characters ', ', '&', or '%' as they may result in processing errors.

The Permit Type business rule allows your organization to define the various types of permits that are required. This business rule also defines whether tag point processing is used with a given permit type. This setting affects the status processing on the record. Please refer to the document titled Permits Using Lockout/Tagout for information on tag point processing.

Template ID - The Template Identification field indicates the Permit Template record used to create the Permit record. The field has an associated list of values that lists the Permit Template records that are of the type indicated in the Type field. When you select the Template ID, the system will supply the permit description from the template.

Description - The description might indicate the specifics of how the permit is to be used or provide other details according to your business practices. The system initially uses the description from the permit template, however you can modify it if necessary.

Permit Statuses - Status (when no Tag Point processing is used)

Created - Indicates that the Permit has been created. The only valid status changes from Created status are to Pending Approval, Approved, or Canceled.

Pending Approval - This status indicates that the record is waiting for approval. The only valid status changes from Pending Approval status are to Created, Approved, Active, or Canceled.

Approved - Indicates that the Permit has been authorized. The only valid status changes from Approved status are to Active, Created, or Canceled.

Active - Indicates that the Permit is complete and ready to be used. The only valid status changes from Active status are to Created, Approved, Closed, Canceled, and Secured.

Before a Permit status can be set to Active, you must assign an employee to each of the Qualifications listed in the Qualifications view.

Closed - Indicates that work is complete and the Permit is closed.

Canceled - Cancels the entire permit. When you set a Permit status to Canceled, the system opens a window to ask why you are canceling. You can select a reason code from the list of values, which is controlled by a code table.

Asset - The Asset field indicates the asset that the permit is linked to. This field cannot be changed, although you can drill-down to the referenced Asset record.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Start and Duration - The Start field represents the date and time that the permit becomes active. The Duration field indicates how long the permit will remain active after the date and time in the Start field.

Expiration - The system calculates the Expiration for you based on the Start and the Duration.

Entry Date, Installed and Removed Dates - Use these fields to record dates as required by your business process.

Associated Permit - Enter another permit number in this field if you need to cross-reference this record to an associated Permit record. An example would be a permit to handle hazardous materials that also requires a permit based on CPR training.

Authorized Personnel - Use this field to create a list of persons authorized on the permit.

Personnel Change - This check box indicates that the work against the permit has continued while more than one person has been on duty.

Bumping Required - The Bumping Required? check box indicates that the equipment requires 'bumping' (a brief start and shutdown to seat the equipment for further tightening or adjustment) before the work can be completed.

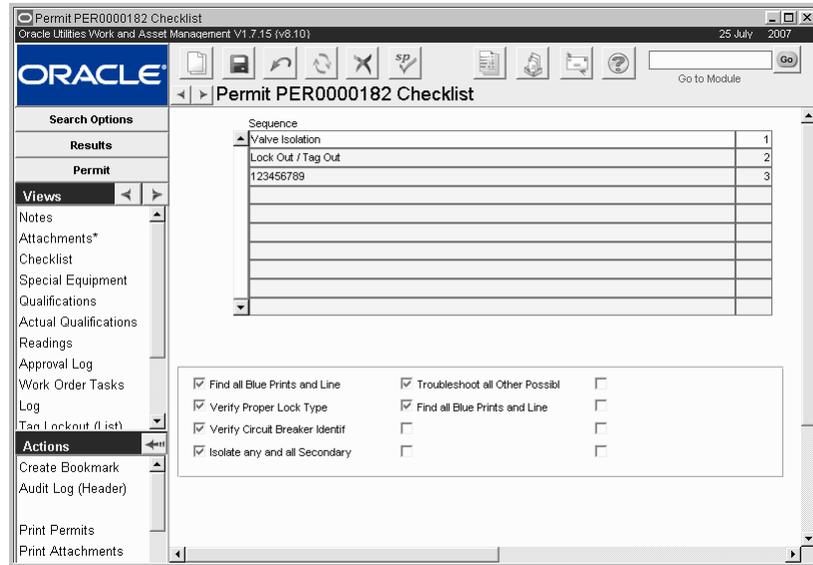
Owner - When a new record is created this field is automatically populated with the username of the person currently logged on to the system. The list of values for this field displays all active employees.

Permit Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Checklist

The Checklist view displays the checklists for the permit that were initially established when the permit template was created. Checklists cannot be modified from the permit. If you need to add checklist steps or an entirely new checklist, your options are to modify the permit template and then create a new permit that references it, or you could add the steps as Notes or Attachments.



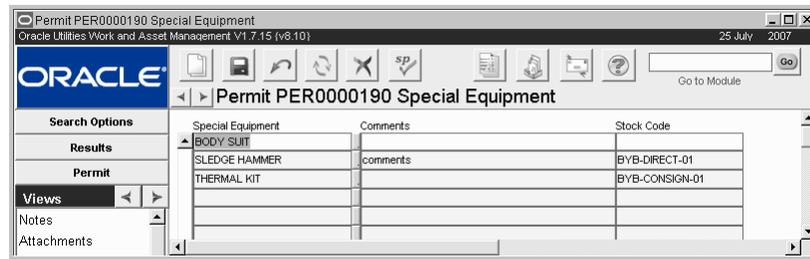
Checklist view

How to Check Off Items on a Permit Checklist

- Open the appropriate Permit record.**
The Permit module is in the Maintenance subsystem.
- Open the Checklist view.**
The Checklist view opens showing the Checklists associated with the Permit Template for the Permit.
- Click the checklist Title you want to check.**
The system shows the checklist steps in the lower section of the window. All the check boxes will be empty.
- Check the check boxes beside the steps you want to check off.**
- Click Save.**

Special Equipment

Select Special Equipment from the Views list to display the Special Equipment that is required (or suggested) for the permit. This window can serve as a checklist for the special equipment that should be on hand before work begins. The equipment list is taken from the permit template, but it can be modified to suit the permit.



Special Equipment view

Special Equipment - The Special Equipment field specifies the equipment that is needed. The field has an associated list of values that is controlled by a code table.

Comments - The Comments field can be used to give more detailed notes on use, proximity requirements, etc. for the equipment.

Stock Code - If your organization keeps the equipment in stock, you can enter the Stock Code here.

How to Adjust the Equipment List for a Permit

You can also delete an equipment item by selecting it and clicking the Delete button. And you can make changes to existing line items, as well.

1. **Open the appropriate Permit record.**
2. **Open the Special Equipment view.**
3. **Select an item of equipment from the list of values.**

The list of values is controlled by a User table your organization must create in the Code table and Codes module of the Administration subsystem. This Code Table must also be linked to the Special Equipment view in the Permit Template business rule.

4. **Enter any Comments.**
5. **Select a Stock Code from the List of values, if appropriate.**

If a storeroom carries the item, you can enter a stock code to make it easier to locate the item. The list of values is controlled by a User table your organization must create in the Code table and Codes module of the Administration subsystem. This Code Table must also be linked to the Special Equipment view in the Permit Template business rule.

6. **Click Save.**

The system saves the record. You can add line items for other required equipment as long as the equipment is listed on the Code Table for the Template Type.

Qualifications

Many work permits require certificates of training for the employees who will perform the work. The system uses the Qualifications identified on the permit template to populate the fields in this window. You can then select the employees that have the necessary certifications from the lists of values associated to the Qualification.

The Permit Types Business Rule, the user-defined Code Table for Qualifications, and Code Table 45 must be set appropriately in order to link employees to Permit records. Please review the discussion of the Permit Types Business Rule for more information.

Qualifications	Description	Employee No	Employee Name	Minimum Required
ATTENDANT	Attendant			<input type="checkbox"/>
EMERGENCY	Emergency			<input checked="" type="checkbox"/>
RESCUE	Rescue			<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

Qualifications view

If an employee is listed here, and his or her training expires, the system does not update the view by removing the employee from the list. Work order planners should always check to make sure the employee's certification is current.

Qualifications - The Qualifications code field shows the qualifications that are needed to perform the work. The system enters any qualifications that have been listed on the Qualification view of the Permit Template record, and you can add additional qualifications (using the list of values). You can also delete qualifications that are not marked with a check in the Minimum Required check box.

The code in this field corresponds to the Course field on the Training view of the Employee module in the Resource subsystem.

When you list a Qualification on the Permit Template, the system records the requirement in the Qualification view of the Permit records that are based on the template. When you complete the Qualification detail for a given Permit record, you will be able to select employees with the appropriate training.

Description - The Description field contains a brief description of the Qualification. The system completes this field when the Qualifications code is selected.

Employee - The Two Employee fields indicate the Employee number and name the employee who is appropriately qualified. You can enter more than one person, but each needs his or her own line. The Employee number field has an associated list of values that is controlled by the Employee module of the Resource subsystem and that shows only those employees with the listed coursework.

Minimum Required - The Minimum Required check box indicates whether the qualification listed for the Permit Template is actually required or only suggested. If the box is checked, the qualification has been identified on the template as being required to do the work. If the box is not checked, the qualification is only suggested or preferred, and the line can be deleted from the Permit Qualifications record. For example, if the permit was for doing underwater welding on an oil pipe, an industrial diving certification and an underwater welding certification might be required, while a first aid certification might only be suggested.

The Minimum Required check box cannot be updated from a Planned Qualifications record. In order to change a qualification from required, to 'not required' you must use the Permit Template module, then recreate the Permit record. This is because the system only checks against the template (and its qualifications) when the permit is first created.

How to Adjust the Qualifications Listed from a Permit Template

If necessary, you can add new Qualifications that are not listed from the permit template. You can also delete unneeded Qualifications that are listed from the permit template as long as they are not marked as Minimum Required.

1. **Open the appropriate Permit record.**
2. **Select Qualifications from the Views list.**

In order to change a Qualification from required, to 'not required' you must change the Permit Template record, then recreate the Permit record.

The system opens the Planned Qualifications window, which shows the Qualifications associated with the permit template.

3. Click an empty Qualification field.

The system inserts a new line.

4. Select the Qualification code from the list of values.

The code in this field corresponds to the Course field on the Training view of the Employee module in the Resource subsystem.

The system completes the Description field with a brief description of the Qualification when you select the Qualifications code.

5. Select an Employee from the list of values.

The two Employee fields indicate the Employee number and name the employee who is appropriately qualified. You can enter more than one person, but each needs his or her own line. The Employee number field has an associated list of values controlled by the Employee module of the Resource subsystem and that only shows the employees that have completed the necessary course work.

6. Click Save.

Actual Qualifications

You can use the Actual Qualifications View to identify the employee that completed the work for the Work Order, and his or her related qualifications. The Qualifications code field corresponds to the Course field on the Training view of the Employee module in the Resource subsystem, and the Qualifications field of the Qualifications view of the Permit module (and the Permit Templates module).

The Two Employee fields indicate the Employee number and name the employee who is appropriately qualified. As in the Planned Qualification window, you can enter more than one person, but each needs his or her own line. Enter the dates when the employee completed the work in the Date/Time field.

Readings

The Readings view in the Permit module is the same as in the Permit Template module, only there are fields where you can enter the specific values (readings) for the permit.

Type	Category
ENG	4
SYN	PC

Seq	Description	Value
5	EPA Readings	
10	Date Reading Taken	
15	Inspector's Name	
20	Calibration Unit	
25	Serial Number	
30	Other	

Readings view

Reading values can only be defined on a permit after they have been created in the Specification Template and associated to a permit template.

How to Adjust a Readings Value for a Permit

1. **Open the appropriate Permit record.**
2. **Select Readings from the Views list.**
The system opens the Readings window showing the Specification templates that have been associated with the permit template.
3. **Click the specification type that contains the reading you want to adjust.**
The fields at the bottom of the screen change to show the Sequence number, Description, and Value for the Type selected. The sequence field indicates the sequence number for readings that must be taken in a set sequence, while the Description usually indicates appropriate ranges and other information about the reading.
4. **Click in the Value field for the Reading you want to adjust, and enter the appropriate Value.**
5. **Repeat steps 3 and 4 for all the readings you want to adjust.**
6. **Click Save.**

Work Order Tasks

The Work Order Tasks view lists all of the Work Order Tasks and Work Designs that reference this permit. These fields are populated by the system, and cannot be modified.

Work Order	Description	Work Design
0500198	Benchmark for PM Master	
0500198	Benchmark for PM Master	

Work Order Tasks view

Log

The Log View is a standard transaction log that shows the activity that has occurred regarding the permit including modification dates, and the username of the person who made the changes.

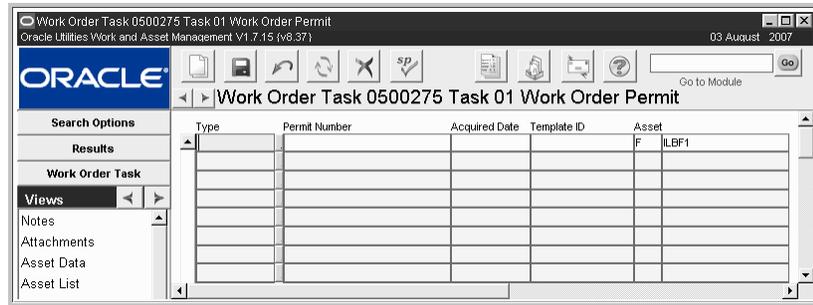
Permit Actions

Basic [search](#) and [bookmark](#) actions.

If your organization uses [tag point processing](#), additional actions are used.

Permits View on a Work Order

When you create a Work Order referencing an Asset with permit requirements, the system enters the Permit Type, Template ID, and the Asset ID in the Permits view on the Work Order Task record. You must create a permit using the action to associate a new or existing Permit ID to the Work Order. The Permits that can be selected will be limited to those that use the Template ID indicated and in any status except Released, Closed, or Canceled.



Permits view on Work Order

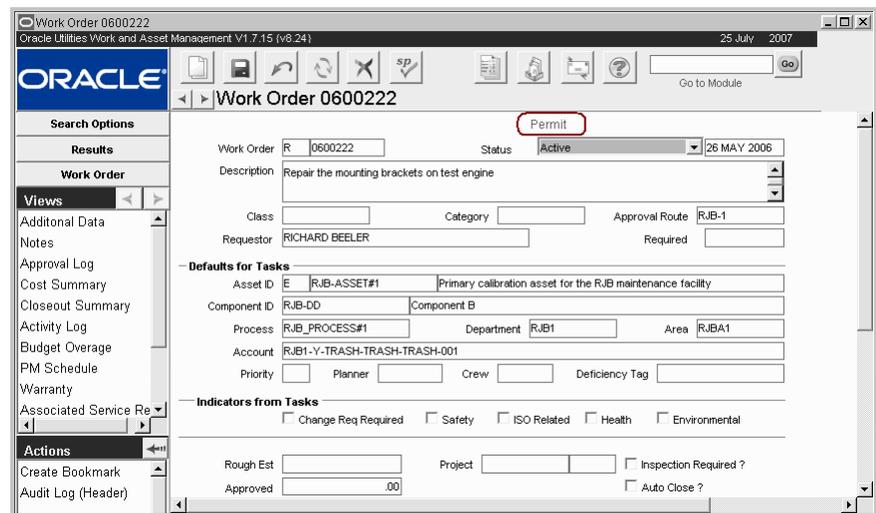
How to Create a Permit from a Work Order (Create Permit Action)

You can only add a permit to the work order when it is in Planning, Approved, and Active status.

1. Open the appropriate Work Order Task record.

You can also create the permit from the Work Order header level, but if you want to create the permit for the asset on the task, work from the task level instead.

When permits are required, the Work Order record is flagged with the word PERMIT.



Work Order record

2. Select Create Permit from the Actions list.

The asset, permit type, and template ID from the work order task are automatically entered. You can choose to alter this information if necessary, but in general the permit that is created should match the default information. If you start from the Work Order header, this information is not automatically entered.

3. Click Next.

The system shows a listing of the permit tasks on the assets.

4. Select the tasks that the permit applies to, and Click Next.

Select to create a new permit or to update an existing permit.

Going forward, follow the screen prompts to complete adding the permit. If you create a new permit, the system prompts you to enter an approval route, description, and tag list if you use tag point processing.

If you update an existing permit the list of values is limited to permits that match the permit type and template ID entered in the first screen.

Click the Refresh icon in the Permits view to see the permit that you added to the task. If the asset requires more than one permit, you should complete this action for every permit that needs to be added.

Duplicate Permits

There may be times when you create a new permit for a task, but there is an existing permit on another task or elsewhere. Select Search for Duplicate Permits from the Actions list to find potential duplicates.

How to Search for Duplicate Permits

1. **Open the appropriate Work Order Task record to the Permits view.**
2. **Select Search for Duplicate Permits from the Actions list.**
3. **Enter the Asset ID, Permit Type, and Template ID to search for.**

The list of values for the Asset ID shows assets that are included on all Task Permits views on the work order. The Permit Type field list includes all permit types from the Permit Type business rule. The Template ID field list includes all active templates that match the selected type. If a type was not selected, the list displays all templates in active status.

4. **Click Next.**

The system displays all of the permits that meet the search criteria and are not Released, Rejected or Closed. You can review these and determine how to proceed.

Finishing Work and Closing the Permit

Once the permit has been edited, approved and activated, the work continues to completion. You can close the Permit record when the all work that relates to the permit has been finished. Before changing the Permit record status to Closed, you should update the qualifications which were actually used (as opposed to the planned qualifications) in the Actual Qualifications detail of the Permit module.

Chapter 17

Permits Using Lockout/Tagout

Lockout/Tagout functionality allows you to use permits to manage information related to tag points. Tag points are identified in the Tag Points module then added to tag lists and associated to Asset records. When a permit is created for work related to that asset, tag point information is carried over based on the permit template requirements on the asset. This information can then be accessed in the tag point detail views on the Permit record.

How tag points are used depends on your business processes, but in general physical tags are placed on assets or related assets in particular areas called tag points. These tags are used to isolate assets, usually for safety reasons, while work is being done. The Permit module is designed to manage the status of these tags so that workers have better visibility into the lockdown and release process on the assets.

Users with the necessary level of authority can add Tag Points if necessary by selecting Add Tag Points from the Actions list. Tag Points can be deleted manually in the Tag Points (Detail) view. In order to modify Tag Points, the rule keys in the Permit Processing business rule must be set to YES.

When your system is set to use tag point processing the Permit module includes several fields, views, and actions that apply to using tag points.

The screenshot displays the Oracle Permit ILBPMT10 record. The left sidebar contains a 'Views' section with 'Tag Lockout (List)', 'Tag Release (List)', and 'Tag Points (Detail)' highlighted. The main area shows permit details for 'ILBPMT10' (Type: SAFETY) and 'ILBTMPL5' (Status: Created). Fields include Description, Asset (ILB ASSET 7), Approval Route (ILB1), Start, Duration, Expiration, Entry Date, Created Date (MAY.14.2008 10.33.54), Created by (BROWN), Closed Date, Closed by, Installed, Removed, Personnel Change, Bumping Required, Tag Point Changes in Progress, Assoc. Permit, Authorized Personnel, and Owner. A 'Tag Point Summary' table is located at the bottom of the main area.

Tag Point Summary					
PENDING	TAGGED	VERIFIED	LIFTED	RELEASED	TOTAL
5	0	0	0	0	5

Permit Record with Tag Point processing in use

Permit Business Rules

Settings in the Permit Types business rule and the Permit Processing business rule control when tag point processing is in use and how tag points can be updated. The system offers tremendous flexibility in that the processing can be set to be in use by permit type rather than being an all or nothing functionality.

Permit Status

If your organization uses tag points to isolate assets before work is done, permit status processing becomes very important when working with Permit records. Permit statuses are restricted based on tag point statuses. For instance, all tag points must be in Tagged status before the permit status can be changed to Secured. These relationships are outlined in detail below.

Allowed changes: **Created** to Pending Approval, Approved, or Canceled.

Allowed changes: **Pending Approval** to Approved, Created, or Canceled.

Allowed changes: **Approved** to Active, Created, or Canceled.

Allowed changes: **Active** to Created, Approved, Closed, Canceled, or Secured.

Allowed changes: **Secured** to Permitted. All tag points must be in Tagged status. Secured to Active when no tag points are in Verified status.

Allowed changes: **Permitted** to Released or Suspended. All tag points must be in Released status before the entire permit can be released.

Created

Indicates that the permit has been created. The only valid status changes from Created status are to Pending Approval, Approved, or Canceled.

Pending Approval

Indicates that the user is ready to route the permit for approval. The only valid status changes from Pending Approval status are to Created, Approved, Active, or Canceled.

Approved

Indicates that the permit has been authorized. The only valid status changes from Approved status are to Active, Created, or Canceled.

Active

Indicates that the permit is complete and ready to be used. The only valid status changes from Active status are to Created, Approved, Closed, Canceled, and Secured.

Before a permit status can be set to Active, you must assign an employee to each of the Qualifications listed in the Qualifications view. To change the status from Active to Secured, all of the tag points must be in Tagged status.

Tag points can still be added to the permit when it is in Active status.

Secured

Indicates that all of the tag points are in Tagged status and the asset is ready to be worked on as soon as the isolation procedures have been verified.

The only valid status changes from Secured status is to Permitted or back to Active status. In order to change the permit from Secured status to Permitted status, all of the tag points must be in Tagged status. If none of the tag points are in Verified status yet, the status can be changed from Secured to Active.

If the permit is in Secured status and the Verify All action is selected, the system sets all Verified tag points to Tagged status and asks the user how Released tag points should be processed.

Permitted

Indicates that all of the tag points have been verified, the asset is secure, and work can begin. The only valid status change from Permitted status is to Suspended or Released. In order to set the permit status to Released, all of the tag points must be in Released status. Tag points can be added when the permit is in this status.

The permit status would be changed from Permitted to Suspended if any changes needed to be made to any tag points. If a change is necessary on a tag point, that tag point's status must be changed to Lifted before any changes can be made. The system will also allow a mix of tag points in Released and Verified status. The permit can be changed to Suspended

status, changes can be made to the tag points, and the permit can be changed back to Permitted status with the tag points still in these various statuses.

When the permit goes from Permitted to Suspended status, all Secured tag points are set to Released status. All tag points in other statuses are reset to Tagged.

Allowed changes: **Suspended** to Secured or Permitted.

Suspended

Indicates that work on the asset has been halted. Users would normally suspend the permit to make changes to the tag points. The only valid status change from Suspended is to Secured or back to Permitted status.

When the permit status is changed to Suspended the system automatically sets the Tag Point Changes In Progress? indicator to show other users that changes are in progress. Tag points can be added or existing tag points can be modified when the permit is in this status. All tag points must be returned to Verified status via the following process before the permit can be returned to Permitted status.

If the Tag All action is selected when the permit is in Suspended status, all tag points are set to Tagged status except the tag points that were in Released status. At this point, tag points in Released status stay in Released unless the user indicates that they should be reset to Tagged status.

Tag points must be placed in Lifted status to be modified.

To return the permit status to Permitted after suspending it:

1. Any tag points that are in LIFTED status must be changed to Tagged status.
2. Once all tag points are in Tagged status the permit status can be changed to Secured.
3. Once the permit status is changed to Secured, all of the tag points must be changed to Verified.
4. Once all tag points are changed to Verified, the permit status can be changed to Permitted.

The permit must be in Suspended status before the tag points can be released.

Allowed changes: **Released** to Closed or Canceled.

Released

Indicates that the tag points can be brought back on line. Most likely work on the asset is complete and the lockout process is at an end. The only valid status change from Released is to Closed or Canceled.

All tag points must be in Released status before the entire permit can be released.

Closed

Indicates that work is complete and the permit is closed. The system will not allow the permit status to be set to Closed if any tag points are in any status other than Released.

Allowed changes: **Canceled** to Created.

Canceled

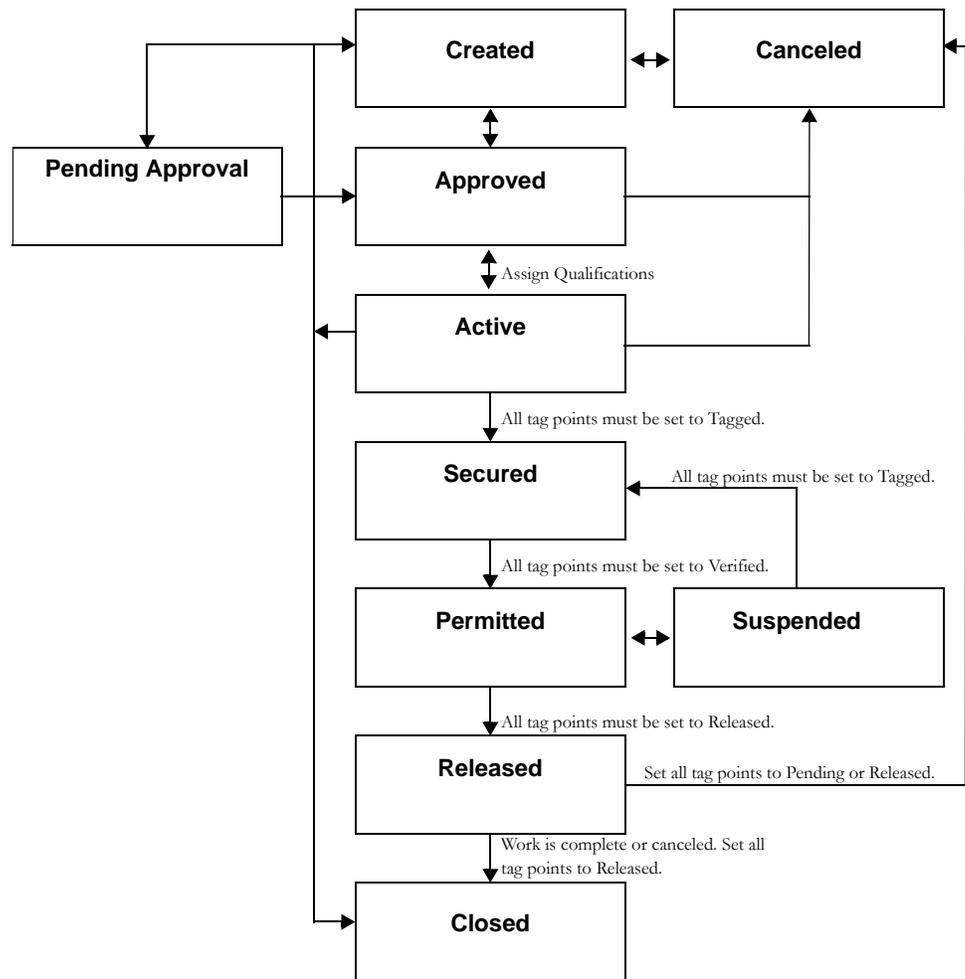
Cancels the entire permit. When you set a permit status to Canceled, the system opens a window to ask why you are canceling the permit. You can select a reason code from the list of values, which is controlled by a code table.

Tag points can only be set to Canceled status by the system when the permit status is set to canceled first. This processing will not allow the permit status to be set to Canceled if any of the tag points are in a status other than Pending or Released. The only valid status change from Canceled is to Created.

The following diagram represents allowed permit status changes as well as the tag point status and other conditions required for those status changes.

Permit Status (Process Flow)

Permit Status Changes



Statuses for Tag Point Processing

One of the most important features of the Lockout/Tagout functionality is the ability to track and control the status of each tag point as work is being completed on the asset. This information can be very useful in ensuring that safety measures are completed in the correct order. Each time a tag point status is changed, information about the change is recorded in the Permit Log. The system will not allow tag point statuses to be changed unless particular conditions are met and the Permit record is in the proper status. Statuses include:

Pending

Initial status for tag point. No lock or tag has been applied. The only allowed status change for a tag point in Pending status is to Tagged. The permit must be in Active status, and the Current Position must be the same as the Lockout Position before this status change can be made.

Allowed change: Pending to Tagged. The permit must be in Active status.

Tagged

Indicates that the Lock or Tag has been applied. The only allowed status change for a tag point in Tagged status is to Verified. The permit must be in Secured status. The system checks to make sure that the tag point has a Lockout Sequence number and a Release Sequence number when this status change is made. The Tagged By field must be filled in when the status is changed to Tagged.

Allowed change: Tagged to Verified. The permit must be in Secured status. Tagged to Pending only when Permit is in Active status.

Verified

Indicates that the Lock or Tag has been inspected by an authorized person and that the tag point has been isolated properly. The Verified By field must be filled in when the status is changed to Verified. The only allowed status change for a tag point in Verified status is to Lifted or Released.

The permit must be in Suspended status for the tag point status to be changed to Lifted. When the tag point status is changed from Verified to Lifted, the system clears the Verified By and Tagged By fields for that tag point only.

For the status to be changed to Released, the permit must be in Suspended status, and the Current Position must be the same as the Release Position.

Allowed changes: Verified to Lifted or Released. The permit must be in Suspended status to change to Lifted. To change to Released the permit status must be Permitted.

Lifted

Indicates that the Lock or Tag has been removed temporarily. The only allowed status change for a tag point in Lifted status is back to Tagged.

Allowed change: Lifted to Tagged.

Released

Indicates that the Lock or Tag has been removed. The Released By field must be filled in when the status is changed to Released. The only allowed status change is to Canceled.

The Current Position and the Released Position must be the same in order to change the status to Released unless the Locked at Release indicator is set. The system also searches other permits to make sure that the same tag point is Released on other records as well. If it is not Released on any other record, the system displays an error message and indicates which permit does not have the proper status.

Once a tag point has been Released the processing is complete and the tag point cannot be returned to any other status.

Allowed change: Released to Canceled only if the permit is canceled.

Canceled

The tag point status can only be set to Canceled by the system when the permit status is set to Canceled by a user.

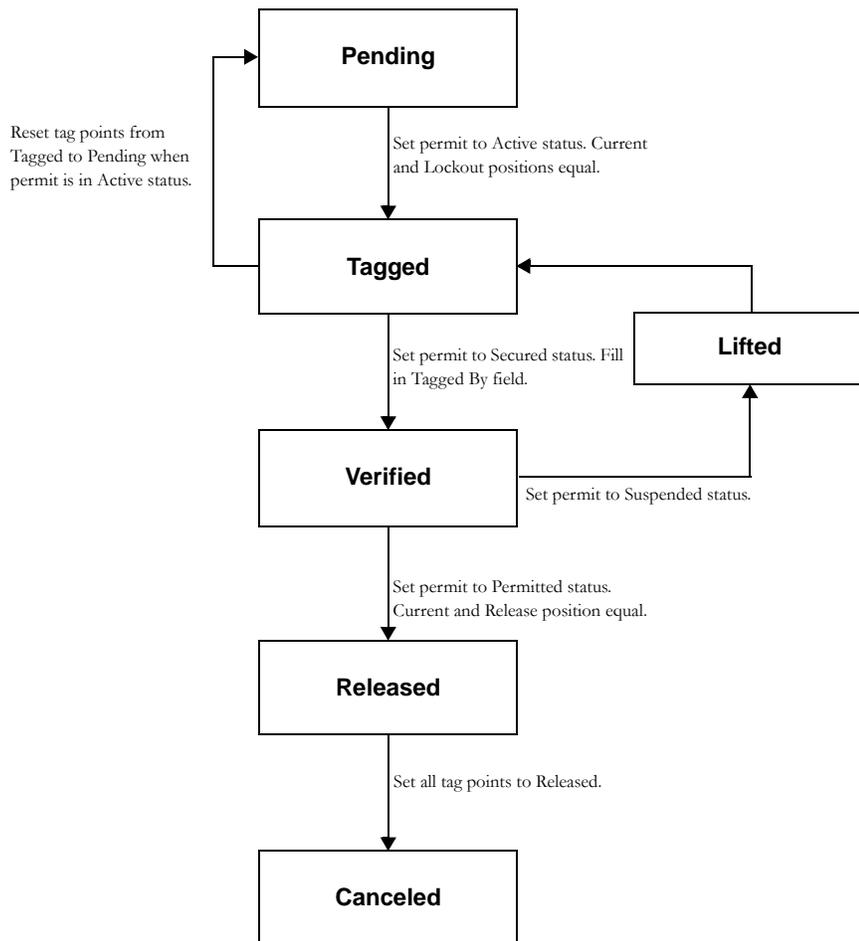
The following diagram represents allowed tag point status changes as well as the permit status and other conditions required for those status changes.

Tag points can only be canceled when the Permit record is canceled and all of the tag points are in Released status.

States for Tag Point Processing

Updates to permit statuses are restricted based on tag point statuses. For instance, ALL tag points must be in TAGGED status before the permit status can be changed to SECURED.

Tag Point Statuses



Tag Point Fields on the Permit

The following fields are only present on a Permit record when the selected permit type has the Tag Pt Ctrl rule key in the Permit Types business rule set to allow tag point processing. The remaining fields are described in the guide for regular permits.

Tag Point Changes In Progress - Since work can continue on a permit even when an update is being made to tag points, the system uses this indicator to let other users know when permit tag points are being modified.

When the permit status is changed to Suspended, the system automatically checks this indicator. Changes can be made to the permit at this time. When the permit status is changed back to Permitted, the system un-checks the indicator.

Tag Point Summary - This section shows the number of tag points active on the permit and their current statuses.

Tag Point Views on the Permit

The following views are only present on a Permit record when the selected permit type has the Tag Pt Ctrl rule key in the Permit Types business rule set to allow tag point processing. The remaining views are described in the guide for regular permits.

The views related to tags can be used to:

1. Maintain statuses and other data for each individual tag point.
2. Add and delete tag points in groups or individually.
3. Identify the person that Tagged, Verified, and Released the tag point.
4. Identify the person responsible for the isolation procedures indicated on the permit.
5. Log changes to tag points (status changes, additions, or deletions) and ownership.

Tag Lockout (List) and Tag Release (List)

The Tag Lockout (List) view screen shows a listing of tag points that have to be isolated in order to complete work on the asset. The Tag Release (List) view shows a listing of tag points that have to be brought back on line after work is completed on the asset. The system populates both of these views from the Tag Points record. All changes to the information must be made in the Tag Points (Detail) view.

Users with the necessary level of authority can add or delete tag points if necessary by selecting Add Tag Points from the Actions list and by adding or deleting them manually from the Tag Lockout or Release (List) views. Tag point add or delete tag points the rule keys in the Permit Processing Business Rule must be set to YES.

Seq	Status	Current Position	Required Position	Lockout Action	Description	Tag Point ID	Asset ID
1	PENDING	OFF	OFF	turn it off		T	ILBTP1
2	PENDING	ON	ON	flip it up		T	ILBTP2
3	PENDING	OPEN	OPEN	open it		T	ILBTP3
4	PENDING	NEUTRAL	NEUTRAL	wipe it off		T	ILBTP4
5	PENDING	NEUTRAL	NEUTRAL	clear it		T	ILBTP5

PENDING	TAGGED	VERIFIED	LIFTED	RELEASED	TOTAL
5	0	0	0	0	5

Tag Lockout (List) view

Seq	Status	Current Position	Required Position	Release Action	Description	Tag Point ID	Asset ID
1	PENDING	NEUTRAL	NEUTRAL			T	ILBTP5
2	PENDING	NEUTRAL	NEUTRAL			T	ILBTP4
3	PENDING	CLOSED	CLOSED	close it		T	ILBTP3
4	PENDING	OFF	OFF	flip it down		T	ILBTP2
5	PENDING	ON	ON	turn it off		T	ILBTP1

PENDING	TAGGED	VERIFIED	LIFTED	RELEASED	TOTAL
5	0	0	0	0	5

Tag Release (List) view

Seq - Each step (tag point) for isolating the asset is numbered sequentially to indicate the order in which the steps should be performed. The steps for release are not necessarily in the reverse order of the Lockout procedure, so it is important to follow the Release order carefully.

Status - Statuses give the user information on where each point is in the process. Possible statuses include Pending, Tagged, Verified, Lifted, Released, and Canceled. Please review the User Guide section regarding tag point statuses for more information.

Current Position - This field indicates the current state of the tag point. For example, if a valve is usually open, the value for this field would be Open. If you need to close the valve to lock the tag point and work on the asset the user should change the value for the field to closed.

Required Position - This field indicates the state that the tag point must be in to secure the asset or to bring it back on line. Before the tag point status can be changed to Tagged or Released the Current Position and the Required Position must be the same to indicate that the tag point is in the proper position.

Lockout Action/Release Action - This field indicates the action that is to be performed on the tag point to secure the asset, or to bring it back on line.

Description - Describes the asset and/or the procedural step depending on how it was originally entered on the Tag Points record.

Tag Point ID - This field indicates the ID for the Tag Point record being referenced.

Asset ID - Shows the ID for the asset that the action should be performed on.

The bottom of the screen shows the number of tags that are in a given status and the total number of tags.

You can only change tag point statuses in the Tag Point (Detail) view. Users with the necessary responsibilities set can also delete a tag point in this view.

Tag Points (Detail)

Only the Current Position, Status, Locked at Release indicator, the Primary Isolation Point indicator, the Tagged By, Verified By, and Released By fields can be modified on this screen. Tag Point records can only be created, updated, or deleted when the permit is in Created or Suspended status. The Primary Isolation Point can only be changed when the permit status is Created, Pending Approval, or Suspended.

Select Tag Points (Detail) from the Views list to display in depth information about each individual tag point. All of the information is carried over from the Tag Point record.

Tag Points (Detail) view

Note: Changes can only be made to a tag point when it is in Pending or Lifted status.

Whenever changes are made to Tag Point records, the system updates the Permit Log with the changes. This feature is useful in helping your organization to monitor tag point activity.

From the Tag Points (Detail) screen you also have access to three actions: Tag All, Verify All and Release All. These options are only viewable on the Actions list if the user's Responsibility profile has been specifically set to show them.

Status - Please review the section regarding [Statuses for Tag Point Processing](#) for more information. The unlabeled field next to the status field shows that time and date that the status was last updated.

Current Position - This field indicates the current state of the tag point. For example, if the tag point is a generator that should be either ON or OFF, the field value will be either ON or OFF depending on the state of the generator.

Primary Isolation Point - A check in this box indicates that this tag point is the most critical step in the Lockout procedure. This may be the location where all employees hang their identification tags to show that they are working on a particular job or it could be the main circuit breaker that would disconnect power and complete a shut down procedure once all of the other safety or lock-down points are secured. Only one tag point can be the primary. The Primary Isolation Point can be changed with the permit status is Created, Pending Approval, or Suspended.

If the Primary Isolation point is changed, the record that originally had the indicator checked will be unchecked. Updates to the Primary Isolation Point are recorded in the Permit Log.

If all of the tag points have been Tagged and Verified, the permit must be in Suspended status for the Primary Isolation Point to be changed. After all the necessary changes are completed to the Tag Point (Detail) information, the normal status processing associated to Suspended permits is applied.

Locked At Release - Check this indicator to override the system's validation of Release Position. If for some reason the tag point has been left in the Lockout Position and should remain in that position even after work is complete and the tag point is released, you can check this box so that the system will allow the tag point status to be set to Released without the Release Position and the Current Position being the same.

The Lockout Sequence and the Release Sequence can only be changed if the Allow Tag Point Update rule key in the Permit Processing Business Rule is set to Yes. Lockout Sequence can also only be changed when the tag point is in Pending or Lifted status and the Tag Point Changes in Progress indicator is checked. The Release Sequence can also only be changed when the tag point is in Pending, Lifted, or Verified status.

In order for the system to correctly enforce tag point release processing all, tag points require a unique Asset ID. If a tag point is present on two or more permits in Tagged or Verified status, the Locked At Release indicator must be checked on the Tag Point record that needs to be released.

Lockout Seq and Position / Release Seq and Position - These fields indicate the necessary state of the tag point for it to be Locked out or Released. These fields are populated by the system using the information entered on the Tag Points record showing the proper sequence number for this specific tag point at the Lockout stage, the Release stage, and the appropriate Lockout and Release positions.

Enter the tag point's current position to enable status changes. For instance, the system will not allow you to change the status to Tagged unless the Current Position and the Lockout Position are the same. In this way the system validates that the lockout point is in the correct position before allowing work to continue.

The Lockout Sequence and the Release Sequence can only be changed if the Allow Tag Point Update rule key in the Permit Processing Business Rule is set to Yes. Lockout Sequence can also only be changed when the tag point is in Pending or Lifted status and the Tag Point Changes in Progress indicator is checked. The Release Sequence can also only be changed when the tag point is in Pending, Lifted, or Verified status.

Lockout Action/ Release Action - Indicates the action that must be performed to isolate the asset.

Asset ID - The system populates this field with the unique identifier for the asset that the tag point is related to.

Building and Location - The system populates these fields with the physical location of the asset being worked on. This information is taken from the Asset record in the Resource subsystem.

Source Type, Magnitude, and Breaker Panel - The system populates these fields with the information that was entered in the Tag Points record.

Valve Tag - The Valve Tag field is an additional information only field that can be used to indicate further details.

Lockout Information - The fields in the lockout information allow you to enter details about the lockout device, an ID, location, and description of the device. The lockbox ID can be manually entered or selected from the list of values. The Lockout Device must be a stock code from within the system. The Device Description is automatically entered when the device is entered.

Tagged, Released, and Verified By Fields - These fields can be used to record the username of the person that applied the tags, verified the tags were secure, and released the tags. The lists of values only show active employees.

Adding Tag Points

The ideal set-up and use of tag point/permit functionality would be to create tag points, add them to tag lists, then associate the tag lists to assets. The system automatically adds the permit and tag list to the Permit Template Requirements on the asset and whenever you create a work record referencing the asset the permit along with the appropriate tag points is automatically associated to the work record via the tag list.

However, there may be situations where it becomes necessary to add additional tag points to a permit after the original tag points have been established. You have the option of copying tag points from another permit template, copying tag points from another permit, or creating new tag points. You can add to permits in Created, Active or Suspended status if your business rule settings and responsibilities allow it.

To add Tag Points, the following conditions must be met:

1. The Allow Tag Point Update rule key in the Permit Processing business rule must be set to Yes;
2. The user's responsibilities must be set properly;
3. The Permit status must be in Created, Permitted or Suspended status;
4. An Asset ID must be entered on the Permit header.

If these conditions are not met, the Add Tag Points action does not appear on the Actions list.

The system makes sure that no duplicate Tag Points are added to the Permit.

If the Tag Point being added has the Primary Isolation Point indicator set, the indicator is cleared when the Tag Point is copied to a LOCK type permit. For all other types of permits, the indicator remains set when the record is copied to the Permit. After the points are copied, you can reset the Primary Isolation Point in the Tag Point (Detail) view if necessary.

In most cases, if the Tag Point being added has the Primary Isolation Point indicator set, the indicator remains set when the record is copied to the Permit. However, the Primary Isolation Point indicator is cleared if the Tag Point is added to a LOCK type permit. After the points are copied, you can reset the Primary Isolation Point in the Tag Point (Detail) view if necessary.

The Tag Points being added are inserted in Pending status and retain the same Lockout Sequence and Release Sequence as on the record they were copied from. You can change the

sequence numbers for both the original and the new Tag Points as long as the Permit is in Created or Suspended status and the Tag Point is in Pending or Lifted status.

After new Tag Points are added they can be set to Tagged and Verified status and work can continue.

How to Add Tag Points to a Permit Record

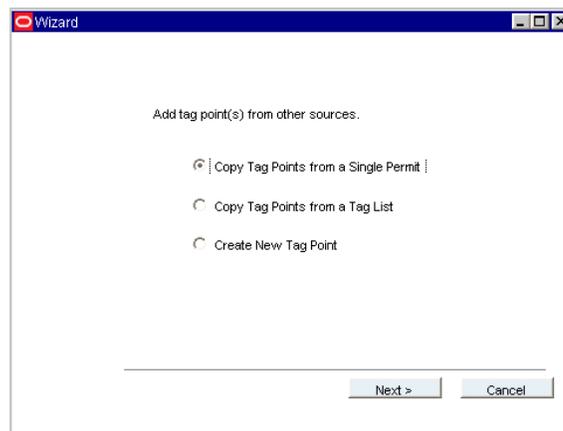
1. Open the appropriate Permit record.

Make sure that the permit status is set to Created, Active, Permitted, or Suspended.

2. Select Tag Point (Details) from the Views list.

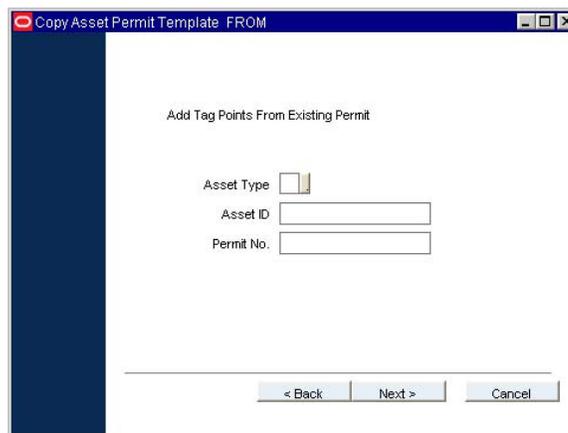
3. Select Add Tag Points from the Actions list.

The Permit Wizard opens.

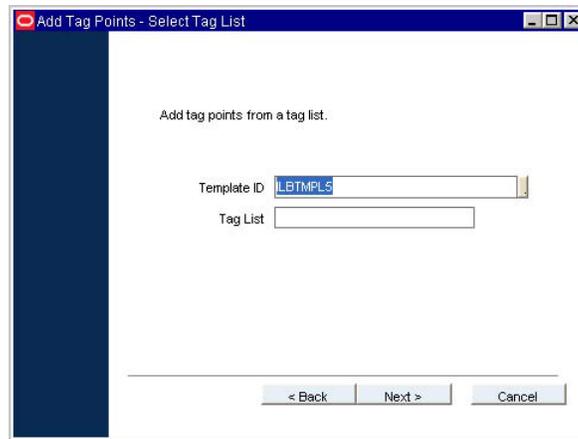


4. Select the desired option.

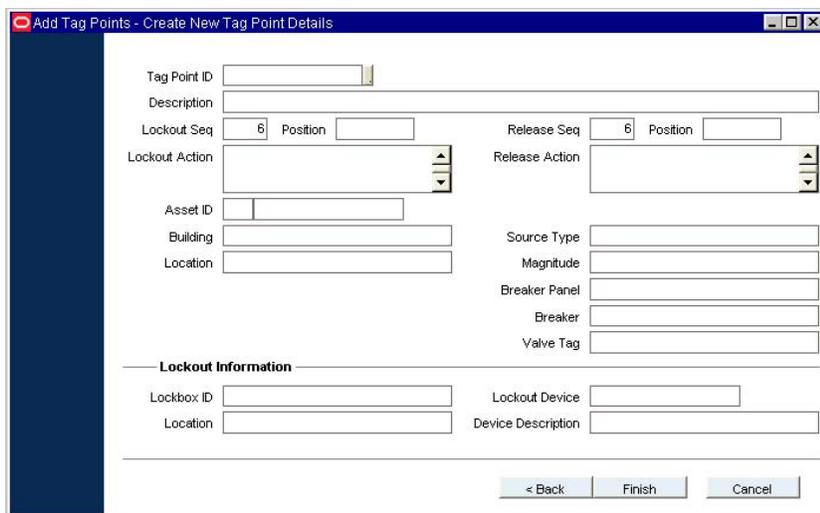
Depending on your selection the system will open one of the following screens:



Copy Tag Points from a Single Permit



Copy Tag Points from a Tag List

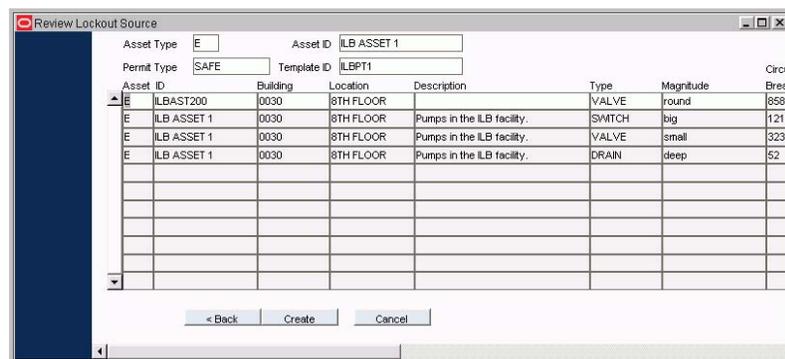


Create New Tag Point

You can choose to enter search criteria for the permit or not. Once you click next you must verify the lockout sources.

5. Fill in the necessary information and click the Finish button.

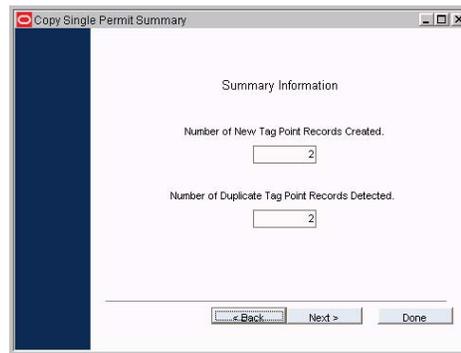
The system shows a listing of the tag points that are being copied.



This screen does not open if you chose to create a new permit.

6. Click the Create button.

A window showing the summary of items copied displays.



7. Click the Done button.

The new tag points are added.

When a new tag point is added to a permit, it must be Tagged then Verified before the Permit record can be returned to Permitted status.

If a tag point being added has the Primary Isolation Point indicator set, the indicator remains set when the record is copied to the permit. After the points are copied, you can reset the Primary Isolation Point in the Tag Point (Detail) view if necessary.

The tag points being added are inserted in Pending status and retain the same Lockout Sequence and Release Sequence as on the record they were copied from. You can change the sequence numbers for both the original and the new tag points as long as the permit is in Created, Permitted or Suspended status and the tag point is in Pending or Lifted status.

After new tag points are added they can be set to Tagged and Verified status and work can continue.

How to Modify the Primary Isolation Point, Lockout Sequence, or Release Sequence for a Tag Point

After you add new tag points, you may need to change the Primary Isolation point or modify the Lockout or Release sequence.

- 1. Make sure that the permit is in Created or Suspended status.**
- 2. Select Lockout or Release (List) from the Views list.**
- 3. Highlight the tag point that you want to modify.**
- 4. Select Tag Point (Details) from the Views list.**
- 5. Change tag point status to Lifted.**

If the tag point is already in Pending status, changes can be applied without setting the status to Lifted.

It is also not necessary to change the status to Lifted if you want to change the Primary Isolation Point. Simply click the box to place a check in it.

- 6. Make necessary changes.**
- 7. Click Save.**
- 8. Change the tag point status back to the Tagged or Verified.**

Deleting Tag Points

You can delete tag points in the Tag Lockout or Release (List) views or the Tag Point (Detail) view. Before you can delete tag points the permit must be in Created or Suspended status. Open the Tag Point (Detail) record for the tag point that you want to delete and click the Delete icon. The system creates a log entry indicating when the tag point was deleted and by whom.

Tag points can only be deleted when the Allow Tag Point Update rule key in the Permit Processing Business Rule is set to Yes.

Tag All Action

As a shortcut you can select Tag All from the Actions list to set the status to Tagged for all tag points. The system also sets the Current Position to equal the Lockout Position. This action saves you from having to change the positions and statuses one by one.

When this Action is selected the system opens a dialog box that prompts for the username of the person who placed the tag. The system then fills in the Tagged By field with that name.

Verify All Action

Select Verify All from the Actions list to indicate that all of the tag points have been properly reviewed. All of the tag point statuses must be set to Tagged before this action can be performed. If the Verify All action is executed and any Tag Point record has a status other than Tagged, the system displays an error message.

When this Action is selected the system opens a dialog box that prompts for the username of the person who verified the tag. The system then fills in the Verified By field with that name.

Release All Action

Select Release All from the Actions list to set the status of all tag points to Released. Released status indicates that work has been completed on the asset and the tag points can be reset to their working position. The existing tag point statuses must be Verified before you can execute this action. If the Release All action is executed and any of the tag points has a status other than Verified, the system displays an error message.

The permit must be in Suspended status before the Release All Action can be used. When you select the action, the system opens a dialog box that prompts for the username of the person who removed the tag. The system then fills in the Released By field with that name.

Exporting the Tag Point List

Select Export Tag Point List from the Actions list on the Tag Lockout or Release screens to create an export of the list. The system uses standard Export processing to accomplish this task.

Chapter 18

Tag List

Use the Tag List module to create reusable lists of tag points that can be attached to assets and permits to support lockout/tagout processing.

Tag List Records

The most efficient way to create a tag list is to open the Tag Point module, search for the tag points that should be included on the list, then select “Create Tag List” from the Actions list on the results of search screen. You can also create a tag list by manually adding tag points to the Tag List record.

Primary Tag Point ID	Tag Point Description	Seq	Position	Action	Lockout	Seq	Position	Action	Release
<input checked="" type="checkbox"/>	000000000000072	Tag Point.LB	1	OFF	turn it off	5	ON	turn it off	
<input type="checkbox"/>	000000000000073	Tag Point.LB	2	ON	flip it up	4	OFF	flip it down	
<input type="checkbox"/>	000000000000078	Tag Point.LB	3	OPEN	open it	3	CLOSED	close it	
<input type="checkbox"/>	000000000000080	Tag Point.LB	4	NEUTRAL	wipe it off	2	NEUTRAL		
<input type="checkbox"/>	000000000000123	Tag Point.LB	5	NEUTRAL	clear it	1	NEUTRAL		

Tag List record

After tag points are added, you must enter sequence numbers to indicate the order in which the tag points should be locked and released. The record status can not be changed to Active until this is complete.

The following fields are included:

Status - Valid statuses are Active, Inactive, and Created. New records remain in Created status until you enter the appropriate sequence numbers and set the status to Active to indicate that the tag list is available to associate to assets and permits. The record cannot be updated if it is in Inactive status.

Primary - Select the tag point that is considered the most critical step in the Lockout procedure according to your business processes. This may be the location where all employees hang their identification tags to show that they are working on a particular job or it could be the main circuit breaker that would disconnect power and complete a shut down procedure once all of the

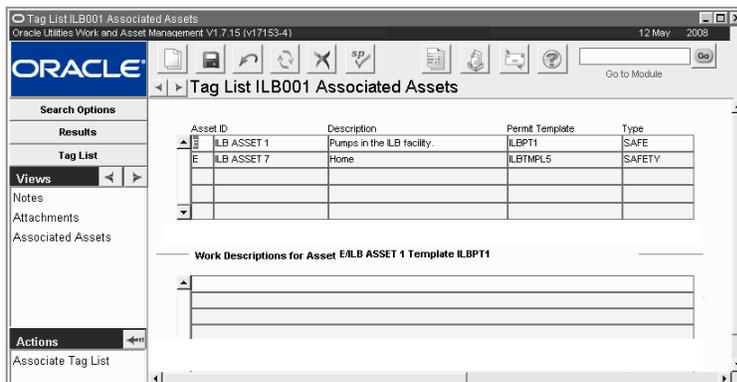
other safety or lock-down points are secured. Only one tag point can be the primary. The remaining fields on the Tag List record are the same as the fields on the tag point.

Tag List Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Associated Assets

Use the Associated Assets view to review or create a list of assets to which the tag list applies.



Associated Assets view

Tag lists are particularly useful in that they can be attached to more than one asset. If modifications are made to a tag point that is included on the list, that change is automatically reflected on the associated assets. This eliminates the need to locate the tag point on each individual asset and make the change multiple times.

Work Description for Tag List - You can use the fields in the bottom section of the screen to enter text describing the type of work that would need to be done on the asset in association with the tag points. You can also enter other informational text. This is carried over to the Permit Template Requirements view on the referenced asset.

How to Associate a Tag List to an Asset

1. Open a Tag List record in Active status.
2. Select Associated Assets from the Views list.
3. Select Associate Tag List from the Actions list within the view.
4. Enter the appropriate Asset ID and Permit Template ID to associate.

The lists of values show assets and permit templates in active status.

5. Click the Finish button.

The system adds the asset and permit template to the listing of associated assets in the Tag List module. The permit template and tag list are added to the Permit Template Requirements view of the Asset record.

Chapter 19

Tag Points

The Tag Point module allows you to identify areas on an asset that may need to be shut down, disconnected, or otherwise isolated, before work begins on the asset. Each area would be defined as a tag point.

Tag Point Process

Isolation points should be established when an asset is initially put into the system or shortly after. Although this information can be modified later, these are procedures that should be well defined before any work is done on the asset.

The following steps define the ideal process flow for establishing tag points for assets:

1. Create tag points in the Tag Points module
2. Create tag lists in the Tag List module using tag points
3. Associate the tag lists along with permit templates to assets using the Tag List module

Permits with Tag List IDs are automatically listed in the Permit Template Requirements view on the Asset record when the association is made.

4. Reference the asset on work orders

Associated permits are automatically listed in the Permits view of the Work Order record when the asset is referenced.

5. Create permits in the Work Order module based on the association with the asset

Note: Please refer to the guide titled Permits Using Lockout/Tagout for more information on general lockout/tagout functionality.

Once tag points are established and are organized as systems in tag lists, they can be attached to multiple assets. If a tag point exists on a tag list, any changes made to the tag point cascade to the tag list when they are saved. In this way, tag lists are kept up to date with current tag point information, and any new permit using the tag list will likewise be kept up to date. As work records are created for the assets associated with the tag list, the system automatically carries over tag point information via permits so that users have easy access to isolation information.

Tag Point Records

Details such as lockout and release positions for the tag point, lockout device and description, and other details are defined here in the Tag Points module. The module also provides space to indicate the steps to isolate the asset as well as steps for bringing the asset back on line. Associate tag points to a primary asset, or on any related assets that need to be shut down, disconnected, or otherwise isolated, before work begins.

You can also attach procedures to the Asset record to detail the lockdown process, but using tag points and tag lists is a more direct method of including this procedural information with the Asset record.

The screenshot shows the Oracle Utilities Work and Asset Management V1.7.15 (v17153-4) interface. The main window is titled 'Tag Point IBTP001'. The status is 'Active'. The description is 'shut off valve'. The category is 'VALVE' and the PID is '552'. The lockout position is 'OFF' and the release position is 'ON'. The lockout action is 'Turn it off' and the release action is 'Turn it on.'. The asset ID, building, location, lockout device, device description, source type, magnitude, breaker panel, breaker, and valve tag fields are empty.

Tag Point record

The following fields are included:

Tag Point ID and Description - Depending on your system configuration the Tag Point ID may be manually entered or automatically generated by the system. A description is required and can be entered in the free-form Description field.

Status - Possible statuses are Active and Inactive. The record can be placed in either status at any time. An inactive tag point cannot be added to tag lists or permits.

Category - Use the Category field to classify the tag point. This field is controlled by a validated list of values defined in a code table.

PID - PID stands for “Piping and Instrumentation Diagram Number.” This field allows free form text entry and is informational only.

Lockout Position / Release Position - These fields indicate the state that the tag point must be in to secure the asset or to bring it back on line.

Lockout Action/ Release Action - Indicates the action that must be performed to isolate the asset.

Asset ID - When an asset ID is selected, the building, location, breaker panel and breaker from the Asset record are automatically populated.

Building and Location - The system populates these fields with the physical location of the asset being worked on. This information is taken from the Asset record in the Resource subsystem.

Source Type, Magnitude, Breaker Panel, Breaker and Valve Tag - The Source Type and Magnitude fields indicate what type of setting is being adjusted and what value should be set. For example, a temperature might be set to a tolerable level for the safety of the worker, while an air pressure setting might simply be reduced to one atmosphere. The Source Type field has an associated list of values which is controlled by a code table. The Magnitude field is a short free-form field, you can enter both isolation and release (or reintegration) settings.

If the isolation process requires circuit breaker settings, they can be entered in the Breaker Panel and Breaker fields. The Valve Tag field is an additional information only field that can be used to indicate further details.

Lockout Device and Description - If you indicate an actual lockout device, the device must be defined in the Catalog module with a stock code. The list of values for this field only shows stock codes in active status.

How to Associate a Tag List to an Asset

1. **Open the Associated Assets view in the Tag List module.**
2. **Select Associated Assets from the Views list.**
3. **Select Associate Tag List from the Actions list within the view.**
4. **Enter the appropriate Asset ID and Permit Template ID to associate.**

The lists of values show assets and permit templates in active status.

5. **Click the Finish button.**

The system adds the asset and permit template to the listing of associated assets in the Tag List module. The permit template and tag list are added to the Permit Template Requirements view of the Asset record.

Tag Point Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Where Used

Select Where Used from the views list to see a listing of all the permits and assets where the tag point is referenced. This listing shows where the tag point is on permits with statuses of Approved, Active, Secured, Permitted and Suspended. The Asset ID displayed is from the permit header, not the Tag Point Details view on the permit.

Permit	Status	Description	Asset ID
CD1-P-T9	ACTIVE	CD's Permit Template T9	CD1-T9

Where Used view

Tag Point Actions

In addition to standard actions, the following can be completed from within the module.

Create Tag List

The Create Tag List action is only available from the Results of Search screen. Select the action from the Actions list to open a the wizard which will guide you toward the creation of a tag list. If the action is selected with several results from a search shown, the system automatically includes all of the tag points in the results that are in Active status.

After you create the tag list, you must still open the Tag List record to enter sequence numbers for the tag points as the appear on the list and to set the record to active so that the tag list can be used.

Adding Tag Points Directly to Permits

The ideal set-up and use of tag point/permit functionality would be to create tag points, add them to tag lists, then associate the tag lists to assets. The system automatically adds the permit and tag list to the Permit Template Requirements on the asset and whenever you create a work record referencing the asset the permit along with the appropriate tag points is automatically associated to the work record via the tag list. However, once permits are established, you can add tag points to them directly as well. You can add to Permits in Created, Active or Suspended status if your business rule settings and responsibilities allow it. This can be completed by selecting Add Tag Points from the Actions list in the Permit module.

How to Add Tag Points to a Permit

1. **Navigate to an existing Permit record in Created, Active, or Suspended status.**
2. **Select the Tag Point (Detail) view.**
3. **Select Add Tag Points from the Actions list.**

When a new tag point is added to a permit, it must be Tagged then Verified before the Permit record can be returned to Permitted status.

4. **Follow the steps in the wizard to add tag points.**

Choose to add individual tag points, copy some tag points from a tag list, or to create a new tag point.

When you add from an existing permit you have the option to narrow down by Asset ID. You can also leave the asset fields blank and just select from all available permits.

Likewise if you choose to add from a tag list, you can narrow down by permit template, or not.

If a tag point being added has the Primary Isolation Point indicator set, the indicator remains set when the record is copied to the permit. After the points are copied, you can reset the Primary Isolation Point in the Tag Point (Detail) view if necessary.

The tag points being added are inserted in Pending status and retain the same Lockout Sequence and Release Sequence as on the record they were copied from. You can change the sequence numbers for both the original and the new tag points as long as the permit is in Created or Suspended status and the tag point is in Pending or Lifted status.

After new tag points are added they can be set to Tagged and Verified status and work can continue.

Chapter 20

Fleet Asset

You have the option of tracking and recording information on your organization's vehicle assets in the general Asset module or in the Fleet Asset module. While the Asset module is equipped to hold a great deal of general information, the Fleet Asset module is specifically designed to hold data specific to vehicles such as Year, Make, Model, etc.

Due to differences in data requirements between assets and fleet assets it is NOT recommended that fleet assets be created in the standard Asset module. However, the Asset module can be used to associate warranties to fleet assets. Associating the warranty in this way also means that the standard Work Order module must be used to manage warrantied work.

Fleet Asset Records

The system uses the asset information that you enter in this module in other Fleet modules to record maintenance of the vehicle. As maintenance is performed, the system updates asset data as appropriate.

Enter all of the information required on the Fleet Asset record and the associated views.

The screenshot shows the Oracle Fleet Asset V ILB-V-001 record form. The form is titled "Fleet Asset V ILB-V-001" and is part of the Oracle Utilities Work and Asset Management V1.8.0 (v181-5) application. The form contains the following fields and sections:

- Search Options:** Vehicle ID (V ILB-V-001), Status (Active)
- Description:** Company car used in the ILB facility.
- Criticality:** 5
- Class:** 2AC1
- License No:** (empty)
- Class Type:** (empty)
- Current Meter Info:** 73,452.00 MILES
- Shop:** (empty)
- Building:** (empty)
- Location:** (empty)
- Log Reviewer:** (empty)
- Parent Asset:** (empty)
- Organization:** (empty), Sub-Org: (empty)
- Department:** ILB1
- Area:** ILBA1
- Account No:** ILB1-Y-PROCESS-COMP-NONE-009
- RIVA Asset Type:** (empty)
- Planner:** (empty)
- Maint Manager:** (empty)
- Specifications:** Year, Make (JETTA), Model, Color
- Checkboxes:** Safety, Health, ISO Related, Environmental

Fleet Asset record

The following fields are included:

Vehicle ID - The Fleet Asset ID is comprised of the Fleet Asset Record Type and an ID. The Fleet Asset Record Type will always be set to V to signify that the Fleet Asset record is for a vehicle.

The associated lists of values for the following fields in the Fleet Asset module can be found in the listed Code Table in the Code Tables and Codes module:

Field	Code Table
Criticality	40
Shop	12
Building	25
Location	25
Make	67
Organization	10
Sub-Organization	

If you create this record ID manually, avoid the use of the special characters ', “, &, or % as they may result in processing errors.

Status - The Fleet Status field enables you to “include” or “remove” the Fleet Asset ID from all other processing by simply setting the status to Active or Inactive. Inactive and Retired assets are not available for reference on other records. Fleet Asset records in Retired status cannot be updated.

Organizations that do not use depreciation can retire a asset by simply changing the status. If depreciation is in use, the asset must be retired through the Change Request module. In this case, the system checks the Retired check box on the Depreciation view and enters the retirement date.

Class - The Class field allows you to classify the vehicle in any way you like. An example would be to classify vehicles by the type of work they do, such as graders, rollers, shovels, etc.

Description - Remember that only the first few words of the description will be visible elsewhere in the system.

Criticality - Use the Criticality to indicate the work or safety impact that this vehicle. If the vehicle were to be taken off-line or break down, what work or safety effect would it have? Values from “1” to “9” represent ‘little or no impact’ to ‘severe production or safety impact’. This information is used by the system when Fleet Work Orders are generated for the asset. The Criticality helps determine the overall work priority.

License Number - Indicates the vehicle license plate number.

Current Meter Info - This field notes the last meter reading taken on the vehicle.

Shop - This field indicates which shop is responsible for maintaining the vehicle.

Building and Location - These fields indicate where the vehicle can generally be found.

Log Reviewer - This is the name of the person responsible for reviewing any Asset Activity Log records that are created for the asset. This person receives an alert when the Asset Activity Log record status is changed to Pending Review.

Year, Make, Model and Color - These fields are used to describe the vehicle so that it can be identified in a fleet lot. The Make and Model fields have associated lists of values which are linked so that the model list changes depending on the Make you select.

Parent Asset - Parent Asset information is only entered on Fleet Asset records that are children of another Fleet Asset record.

If you want to search for all the children for a given Fleet Asset record, enter the Fleet Asset ID into the Parent Asset ID field on the Fleet Asset Search Options window. The search returns a list of all “children” Fleet Asset record for the parent.

Organization and Sub-Organization - Organization and Sub-Organization allow you to identify which group and sub-group the vehicle belongs to.

Department, Area and Account Number - When work is done on this asset, the system applies related costs to the Department, Area, and Account indicated in these fields. Based on the Department and Area you enter (or if you leave them blank), the Account Numbers listed in the Account list of values is narrowed to only those Accounts with matching Department/Areas as entered on the Fleet Asset record.

Safety, ISO Related, Health, Environmental - These check boxes allow users to easily recognize equipment that has been identified as requiring special considerations for ISO, Safety, Environmental or Health reasons. This will ensure that the proper procedures, if necessary, are used in planning and working the jobs related to the asset. When a asset is entered on a Fleet Work Order, or Fleet Benchmark Work Order the system carries over the settings of each indicator. The indicators cannot be modified on work records. If the indicators are changed on

the Fleet Asset record after a work record that references the asset has been created the information is not updated on the older work records. Users can search work records by the indicator settings by selecting them on the Search Options screen of those records.

RIVA Asset Type - If your organization uses Riva asset planning software, you can record the RIVA asset type for the asset in this field. RIVA asset types are defined in Code Table 2502.

Maintenance Manager - The Maintenance Manager code determines which Maintenance Manager will bear the costs associated with the asset when work is done. The field is controlled by a list of values the system builds using the Maintenance Manager module in the Resource subsystem. When the asset is referenced on a work record, the maintenance manager will be defaulted in from the value indicated here.

Planner - The Planner field represents the person responsible for planning work and materials for the asset if your organization uses planning and scheduling when processing work records. The field is controlled by a list of values the system builds using the Planner Business Rule). When the asset is referenced on a work record, the Planner will be defaulted in from the value indicated here.

How to Create a Fleet Asset Record

1. **Select Fleet Asset under Fleet in the Maintenance subsystem.**
2. **Click the New icon.**

A New Fleet Asset record opens.

The system uses V (vehicle) as the ID type. This value cannot be modified. This distinguishes the fleet assets from other assets.

3. **Fill in the required fields.**
4. **Enter the Year, Make, Model, and Color of the vehicle in the Specifications area of the record.**
5. **Click the Save icon.**

Fleet Asset Views

In addition to standard notes, attachments, and approval views, the module includes the following:

More Data

Enter additional vehicle information such as engine, tire, transmission, drive, fuel, vehicle license, title, and serial numbers by selecting More Data from the Views list. These fields can be useful in adding more detail to the description of the asset.

More Data view

Engine, Tire, and Transmission Size - The Engine, Tire, and Transmission Size fields are free form. They can be used to describe specific vehicle attributes.

Specification - Use this field to indicate which record from the Specification module applies to this vehicle.

Drive and Fuel Type - The Drive Type field indicates the type of transmission while the Fuel Type indicates the type of fuel to be used in the vehicle.

The Drive Type field is controlled By Code Table 38, and the Fuel Type field is controlled by Code Table 39.

Gross Vehicle Weight - This field indicates the vehicle's weight for transport and road use purposes.

License, Title and Serial Number - These fields contain key registration and identification information.

Options - Checking these check boxes indicates the presence of typical options.

Inspection Date - The Inspection Date field indicates the date of the last government inspection, for example, you might use it to contain the last smog check date.

Extras - The Extras field is a free form field that you can use to contain information about additional features. Your organization might also use it to contain other information such as the vehicles phone number, if applicable.

BOM ID - The Bill of Material ID field displays the reference number for any Bill of Materials record associated with the asset.

The associated list of values for the Bill of Material ID field is controlled by the Bill of Materials module.

Asset Activity Log

If you have information about the asset that needs to be recorded but you do not need to create a work order for it, you can use the Asset Activity Log module to store the information. Select Create Activity Log from the Actions list to open the a blank log record with some of the information from the Asset record that you are viewing filled in. Otherwise you can open the log module directly from the Resource subsystem.

Accounting

Select Accounting from the Views list to information necessary for accounting purposes. This includes the vehicle's original acquisition information, In Service Date and Retirement Date, the vehicle Residual Rate, and Warranty, Insurance, and Accident information.

The residual rate is derived according to your organization's business practices.

How to Associate a Warranty to a Fleet Asset Record

If you would like to associate more information about the warranty of a fleet asset than the Fleet Asset module allows, you must use warranty functionality in the Asset module. If you are using the Asset module to manage warranty processing for fleet assets, your overall business process should follow these guidelines:

1. **Create all fleet assets in the Fleet Asset module.**
2. **Open the fleet asset in the standard Asset module to associate a warranty.**
3. **Use the Work Order module (not Fleet Work Order) to manage work associated to the warranty for the fleet asset.**
4. **Manage all other data and information related to the fleet asset in the Fleet Asset module.**
5. **Manage all non-warranty work in the Fleet Work Order module.**

NOTE: Failure to adhere to this recommended practice could result in additional critical data and system processing errors.

Depreciation/Depreciation Accounts

These views are only needed if your organization uses depreciation functionality. Please refer to the document entitled "Depreciation" in the System Basics User Guide.

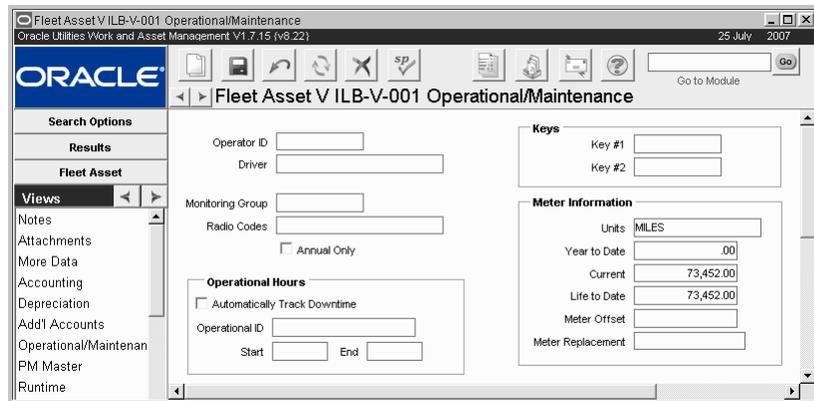
Additional Accounts

Select Additional Accounts from the Views list to set up alternate default accounts for the asset. If more than one default Account exists for the asset the system automatically displays a list of default Accounts for the user to select from when the asset is referenced on a Fleet Work Order.

The Department, Area, and Account entered are used for cost roll-ups. Based on the Department and Area you enter (or if you leave them blank), the Account Numbers listed in the Account list of values is narrowed to only the Accounts with matching Department/Areas.

Operational / Maintenance

Select Operational/Maintenance from the Views list to enter an Operator ID and Driver Name, Vehicle Key Numbers, the date the meter was replaced, Monitoring Group, Radio Codes, and Operational Hours. Remaining information (Units, Begin Year, Current, Life to Date, and Meter Offset) is maintained by the system and cannot be modified.



Operational Maintenance view

The Operational Hours fields can be used with information in the Operational Schedule module to automatically calculate vehicle downtime based on the in and out times entered on a Fleet Work Order.

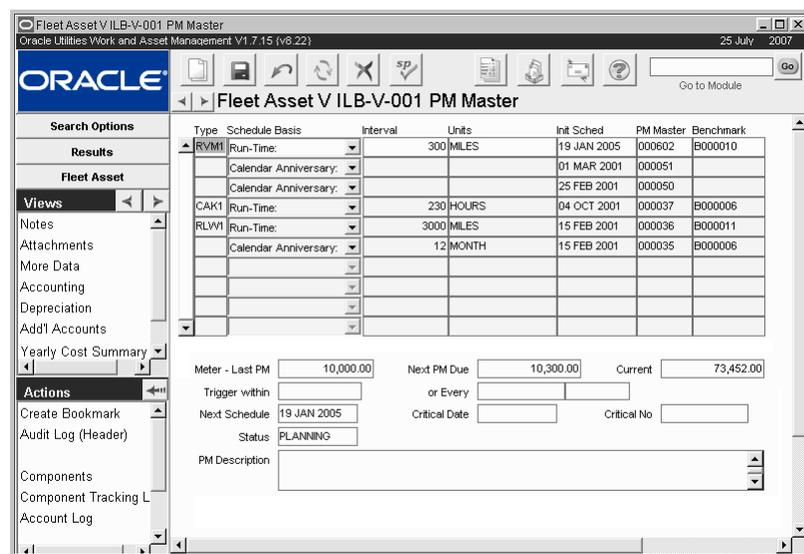
Automatically Track Downtime - Check this indicator to enable the automatic tracking of vehicle downtime.

Operational ID - Enter the Operational Schedule record to use when calculating vehicle downtime. Only Operational Schedule records in Active status appear on the list of values.

Start and End times are not required for the automatic calculation of vehicle downtime.

PM Master

The system can be set to automatically generate work orders for regular work that has to be done using PM Masters. The action of the system generating a Work Order is called “cycling a PM.” The user establishes a PM Schedule telling the system how often these automatic Work Orders should be created. When the time for the work comes up, the system references a Benchmark Work Order to use as a template for the new Work Order that it is to create. Once generated, the PM Work Order continues through the workflow process like other Work Orders, where it is placed on a schedule, finished, and closed-out.



PM Master view

PM Masters related to assets can either be created in the PM Master module or in the Fleet Asset module PM Master view. Both can be used to manage preventative maintenance of assets. Generally, PM Masters created in the Fleet Asset module are for the MOST basic preventative maintenance such as routine oil changes, or other straightforward tasks. More complex task cycles are better managed using the general PM Master module in the Maintenance subsystem. PM Masters that you create in the PM Master module are listed in the PM Master view of the Fleet Asset module so that the information can be easily referenced.

There are 3 steps in setting up preventative maintenance cycles for assets:

1. The first step in setting up preventative maintenance for assets is to create a Fleet Benchmark Work Order so that the system will have a source to draw the Work Order information from when it cycles the PM Master.
2. The next step is to create a PM Fleet Type in the PM Fleet Types Business Rule for each newly created Fleet Benchmark Work Order. Before you create the PM Master you should make sure that the meter readings for the vehicle are current.
3. The final step in setting up regular maintenance work on the asset is to establish a PM Cycle. As an example you might set up the PM Cycle by creating PM Master records using the PM Master view in the Fleet Asset module. You can use this View to create one or more PM Masters, each with a different Schedule. In this way, you can schedule all preventative maintenance for the vehicle.

Type and Benchmark - PM Fleet Types classify the type of work being done on the PM Master. They are established in the PM Fleet Types Business Rule. The system automatically enters the associated Benchmark number for the type entered. You cannot enter a Benchmark number manually.

Schedule Basis - The specific cycling information for the PM Master (located in the block to the right of the Schedule Basis field) changes dependent upon the Schedule Basis you choose.

Calendar Anniversary - Calendar Anniversary PM Masters are cycled on the same date each cycle, such as the first of each month. They cycle from Schedule Date to Schedule Date, not taking into consideration the date the last associated Work Order was completed.

Calendar Interval - Calendar Interval PM Masters cycle so that the same time interval between Work Orders is achieved. If work is to be done every 6 weeks, the system cycles a Work Order 6 weeks after completion of the previous Work Order. Future Schedule Dates are automatically adjusted to always reflect the same time interval.

Run-Time Interval - Run-Time Interval based PM Masters cycle based on meter readings taken for the listed Asset, along with the scheduling information for that PM Master. Run-Time Interval PM Masters cycle on fixed intervals, not the time from last maintenance. For example, a Run-Time Interval set to every 1,000 hours of operation would cycle at 1,000, 2,000, 3,000 hours, etc., regardless of when the last associated Work Order was completed.

Run-Time - Run-Time based PM Masters cycle based on meter readings taken for the listed Asset, along with the scheduling information for that PM Master. An example might be that every 2,000 hours of operation, a machine is checked and lubed per Benchmark number 746638. The 2,000 hour count would restart when the last associated Work Order was completed. If the work was finished at 2,037 hours, the next cycle would be scheduled to occur at 4,037 hours.

Interval and Units - The Interval field indicates the frequency with which the work should be completed on the vehicle. You can then specify what units that frequency should be calculated in units such as miles, months, or hours.

When you enter an interval the system updates the Current field with the last meter reading entered in the Runtime Entry module.

Init Sched - For Calendar based PM Masters, enter the date that the PM should cycle for the first time in this field.

PM Master Number - The PM Master number is generated by the system when the record is saved.

This field only shows if the PM Master is based on Runtime or Runtime Interval.

Meter - Last PM - When a runtime based P-type Fleet Work Order is set to Finished status, the system updates this field with information from the work order. However, the system does not automatically update this field if a higher value exists in the runtime log. In that case, the system asks if you want to update the PM Master record with information from the work order.

If the PM is part of a PM Group and supersedes lesser PMs in the group, the Meter - Last PM information for the superseded PMs is also updated when the work order created for the higher level PM Master is set to Finished status.

Next PM Due - This field only shows if the PM Master is based on Run-Time or Run-Time Interval: The Next PM Due information is provided by the system from the PM Forecast view. You can update the information in this field if necessary.

Current - You can enter the most recent meter reading for the vehicle in this field. You do not need to enter a value in this field when creating a Calendar based PM Master.

Trigger Within/Or Every - These fields are only applicable with Run-Time Schedule Basis type PM Masters. You can use the Trigger Within field to create a lead between when the PM initiates the Work Order and when the work actually begins. For example, if you know a PM Master requires parts that must be special ordered, you might want to trigger the PM 100 miles early, to give time to process the request for parts.

Next Schedule - When the Initial Schedule date is entered the system also updates the Next Schedule field with that same date. The Next Schedule field will always show the next time that the work is schedule to be run.

Critical Date and Number - You can enter the date when non-completion of the work becomes critical.

Critical Number indicates the relative lateness of work due for the asset. When the Critical Number reaches 100, the asset is due to be worked on.

PM Description - You can enter as many lines of Description as are necessary to describe the PM Master.

How to Set Up a Fleet PM Cycle in the Fleet Asset Module

1. **Open the Fleet Asset module.**
2. **Find the asset that should be scheduled for maintenance and open the Fleet Asset record.**
3. **Select PM Master from the Views list.**
4. **Enter or select the Type that you created in the last section in the Type field.**
5. **Select a Schedule Basis.**
6. **Enter a value for the regular Interval that the work should be done.**
7. **Enter the date when the first job should be initiated in the Init Sched field.**
You do not need to enter a value in this field for a Runtime based PM Master.
8. **Enter the Meter reading for the vehicle at the last time the work was performed on the vehicle.**
You do not need to enter a value in this field for a Calendar based PM Master.
9. **Indicate a number of miles in the Trigger within field as appropriate.**

10. Click Save.

Once the record is saved no changes can be made to any of the fields. If you need to make changes you can delete the record and enter a new one.

RunTime

The Runtime view displays meter readings for one or many assets. The system populates this view with information entered in the Runtime Entry module.

Cost Summary by Year

View cost information per year by selecting Cost Summary from the Views list. This information is maintained by the system. Costs include Parts and Labor, Fuel consumption, Oil consumption, Miles, MPG, and Total Cost per Mile. Summary information is displayed at the bottom of the window.

Cost Summary by Period

View cost information per period by selecting Period Costs from the Views list. This information is maintained by the system. Costs include Parts and Labor, Fuel consumption, Oil consumption, Miles, MPG, and Total Cost per Mile. Place the cursor on a year to display totals for that year at the bottom of the window.

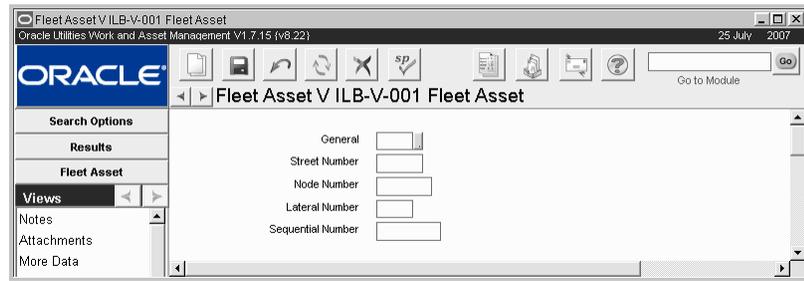
Work History

To view a list of all Work Orders written against the vehicle, select Fleet Work History from the Views list. If a listed Work Order has Service History information available, the words "Has Service History" appear to right of the description field for that Work Order. Select Service History from the Views list to access the Work Order Service History information.

Segments

The Asset Key Segments Business Rule is used to establish the segments to be used. A value must be entered in Segment 1 to enable to rule and show the Segments view in the Asset and Fleet Asset modules.

Asset Key Segments are used to categorize vehicles according to structured Asset ID's.

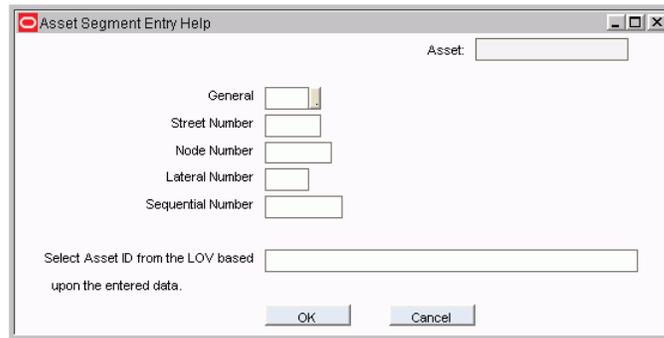


Segments

Set up structured Asset IDs in the Segments view by selecting options from the lists of values associated to the fields. You can then search for assets by segment using the Fleet Asset Search Options screen.

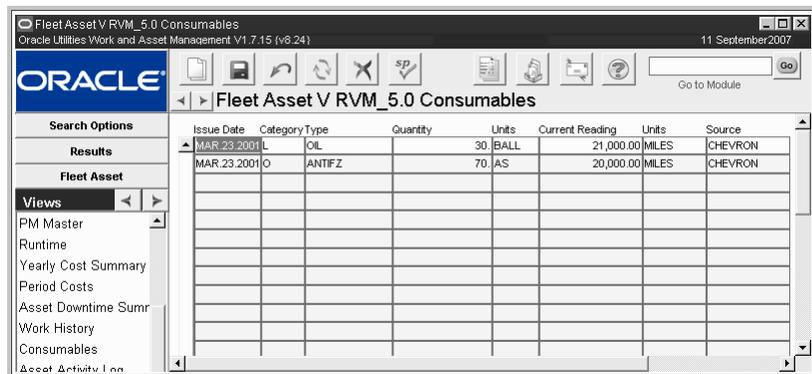
The system allows you to enter search criteria based on segments then select from a list of values that only shows assets that meet the criteria that you have entered.

Place the cursor in the Vehicle ID field on the Fleet Asset Search Options screen and press F1 to open a special search window that allows you to enter search criteria specific to segments.



Consumables

Usage of consumable items is displayed in the Consumables view. This includes the Issue Date, the Category and Type of item issued, Quantity and Units, the vehicle meter Reading and Units, and the Source from which the consumable was issued. You can enter Consumables information into the system directly through this module or through the Consumables module within the Inventory subsystem (typically used to enter Consumables information for many assets at once.



Three categories are defined for consumables: F (fuel), L (lubricant) and O (other). The system uses these categories to determine the cost breakdown by consumables category.

The list of values on the Type field shows all consumable types, no matter which category is selected, so be careful to record a correct type for the category.

It is important to note that when entering new Consumables information into the system, meter reading information required for (run-time) PM Master processing is automatically updated. The system maintains the Current Meter Reading in the PM Master module as the “latest” meter reading (date) value.

Fleet Asset Actions

In addition to standard actions, the following can be completed from within the module.

Create Work Order or Work Request

Select Create Work Order or Create Work Request from the Actions list to create a follow-up work document related to the asset. Once you select the Action the system walks you through the steps required to create the new document. Make sure to take note of the Work Order or Work Request number when it is created so that you can find the new record easily in the Fleet Work Order module later.

Since there is no Fleet Work Request module, Work Requests created using this Action will be created in the regular Work Request module. However, Work Orders created from these Requests will be Fleet Work Orders since they reference a V type Asset ID.

Fleet Mileage Reasonability Report

Select Vehicles Exceeding Mileage from the Fleet Asset Search Options screen Actions list to search for vehicles that have exceeded the mileage set in the Fleet Mileage Reasonability Business Rule. The system will generate a report based on your search criteria.

Associating Components to Fleet Assets

In order to associate a component to a fleet asset you must have two records already created in the system:

1. A Fleet Asset record. creating fleet asset records
2. A component stock code to reference. creating a component stock code

Once these records are established, you can open the Component ID module, create a new record, and install the component on the fleet asset.

Chapter 21

Fleet Work Order

Work orders related to an organization's vehicles can be processed in the Fleet Work Order module. The Fleet Work Order module should be used to process basic maintenance such as an oil change or tire rotation. The Work Order module can be used for vehicles if more complex fleet management activities need to be performed. Such activities would include assigning multiple fleet assets to one work order, routing approvals, processing direct charges, and closeout processing.

Fleet Work Order Records

As with regular work orders, these records can be generated by PM Masters or manually.

The screenshot shows the Oracle Fleet Work Order record for 0500193. The interface includes a search options panel on the left with a 'Views' list containing: Additional Data, Delivery, Notes*, Cost Summary, Closeout Summary, Activity Log, Start/Stop Time Log, Task (Summary), Task (Detail), Vehicle, Warrantv, and Actions. The main form displays the following data:

Work Order	P 0500193	Status	Finished	Permit	01 FEB 2005	
Description	Replace Filters					
Vehicle ID/Desc	ILB-V-001 Company car used in the ILB facility.					
Shop	SHOP1	Crew	CAK1	Operator ID		
Vehicle In	01 DEC 2004 13:27:00	Meter	MILES			
Out	01 FEB 2005 13:27:05	Current Reading				
Required	01 FEB 2005 00:00:00	Life to Date	73452			
Priority	=(4 * 8)+		Class	CON-SERV	Category	AUDIT
Component ID						
Department	ILB1	Area	ILBA1	Auto Close?	<input type="checkbox"/>	
Account	ILB1-Y-PROCESS-COMP-NONE-009					
Contract No.						
Sent Offsite			Returned			
<input type="checkbox"/> Safety <input type="checkbox"/> ISO Related <input type="checkbox"/> Health <input type="checkbox"/> Environmental						

Fleet Work Order record

The following fields are included:

Work Order - The system automatically assigns a Work Order number when the record is saved. The first field classifies the work order with a letter such as "R" for repair. The second field is a unique identifying number.

Status - Valid statuses include: Planning, Active, Finished, Closed, Rejected, and Canceled.

The system sets the Status Date to the current date whenever the status is changed.

Description - Enter general information about the job to be completed in the Description field. More detailed information should be entered at the Task level so that it will show when the work order is printed.

Vehicle ID/Description - The first Vehicle ID field identifies the type of asset. All Fleet Assets have a Vehicle ID type of “V.” Enter the Vehicle ID number or select one from the list of values. You can also double click the field to open the Fleet Asset module where you can use the Asset Search Options window to quickly locate the asset record. The system fills in the Vehicle Description field with information from the Fleet Asset record for the Vehicle ID chosen. This description cannot be modified. The system also fills in the Department, Area, and Account number fields from the Fleet Asset record. The account number can be changed if there are other accounts that are associated to the vehicle to choose from.

Shop - Enter or select from the list of values the Shop where the vehicle will be worked on.

Crew - Enter or select from the list of values the Crew that will work on the vehicle.

Operator ID - Enter or select from the list of values the ID of the primary operator of the vehicle.

Vehicle In/Out, Required - The system automatically fills in the Vehicle In field with the date and time that the Fleet Work Order record is created. This information can be changed if necessary.

When work is completed, the appropriate date and time must be entered in the Vehicle Out field before the work order can be set to Finished status.

You can use the Required field to indicate the date that the work is must be completed.

Auto Calculate Downtime - When this box is checked, and the work order status is changed from Active to Finished, the system calculates asset downtime using the vehicle in/out times and information from the Operational Schedule module. If no Operational Schedule information is available, the system uses the difference between the dates and times to determine the vehicle's downtime.

Meter Units, Current Reading, Life to Date - Enter the Meter units (such as “hours” or “miles”), and the Current Meter Reading. Life to Date is maintained by the system as the vehicle's total meter value to date. When you enter a current value and save the record, the system updates the asset runtime log.

If you enter a current reading lower than that already recorded in the runtime log, the system asks if you want to update the log and any associated PM Master records.

Priority - Each Fleet Asset record has a Criticality field. If this field is completed on the Fleet Asset record for the fleet asset indicated in the Vehicle ID field, the system carries over the Criticality code to the second Priority field.

The criticality code is carried over from the Fleet Asset record. This number gives an indication of the vehicles relative importance to the organization. A high criticality code says that downtime on this vehicle will affect operations greatly.

The screenshot shows a software interface for creating a Fleet Work Order. On the left is a vertical menu with options: Closeout Summary, Activity Log, Start/Stop Time Log, Task (Summary), Task (Detail), Vehicle, Warranty, and an expanded 'Actions' menu containing Save Search, Create Bookmark, and Audit Log (Header). The main form area contains the following fields and controls:

- Out:** 01 FEB 2005 13:27:05
- Required:** 01 FEB 2005 00:00:00
- Priority:** A dropdown menu showing a sequence of numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9. The number 8 is highlighted with a red box.
- Auto Calculate Downtime:** An unchecked checkbox.
- Life to Date:** 73452
- Class:** CON-SERV
- Category:** AUDIT
- Component ID:** (Empty field)
- Department:** ILB1
- Area:** ILBA1
- Auto Close?:** An unchecked checkbox.
- Account:** ILB1-Y-PROCESS-COMP-NONE-009
- Contract No.:** (Empty field)
- Sent Offsite:** (Empty field)
- Returned:** (Empty field)
- Checkboxes:** Safety, ISO Related, Health, and Environmental (all unchecked).

You can then select a code from the list of values in the third Priority field. The system will then calculate a Priority number based on the criticality of the asset.

You can also use the fourth Priority field to adjust the Priority by entering a negative or positive number that will be added to the overall Priority value.

Class and Category - The Class and Category fields are further ways of classifying the work to be done on the vehicle. Select codes from the associated lists of values.

Component ID - If the Get Asset From Component ID option in the Component Processing Business Rule is set to YES and you select an installed component, the system fills in the fields for the asset. If the Work Installed Without Asset option is set to YES, you can create a Work Order against an installed component without having to list the asset. However, remember that the Get Asset From Component ID option overrides the Work Installed Without Asset option since with that option on the system must retrieve an Asset.

If the work to be done involves a component, you can enter the Component ID. A list of values is attached, finding all Component IDs associated with the entered Vehicle number.

Department/Area/Account - These fields are automatically filled in by the system when the Vehicle ID is chosen at the top of the record. The account number can be changed if there are other accounts associated to the Fleet Asset. The system will apply costs associated to the work order to the Department, Area, and Account number indicated in these fields.

Auto Close? - Check this box to allow the system to automatically close the work order if it remains in FINISHED status for the number of days defined in the WO Aging Business Rule. Work orders created from benchmarks have a check in this box if it is checked on the benchmark. You can remove the check if necessary.

The default for this value can be set in the Modules Administration - Forms module in the Enter Data view. Set Y or N for the HEADER block for the field name CLOSE_WO_IND.

Contract Number, Sent off Site, Returned - If the vehicle is to be sent out for services, you can enter a blanket contract and revision number, the date it was sent off site, and the date that it is returned.

Safety, ISO Related, Health, Environmental - These check boxes are checked by the system according to the settings on the record for the asset that is indicated in the Asset ID field. These check boxes allow users to easily recognize if any equipment on a fleet work order has been identified as requiring special considerations for ISO, safety, environmental or health reasons so that proper procedures, if necessary, are used in planning and working the job

How to Create a Fleet Work Order Record

Creating a Fleet Work Order record is a two step process. First you must create the header record with information about the whole fleet work order. Then you address the tasks that need to be completed.

1. **Open the Fleet Work Order module.**
2. **Click the New icon.**
The system opens a blank record in Planning status.
3. **Enter a Description of the work to be completed.**
Remember that only the first few words will be visible on the Search Results screen.
4. **Select a Vehicle ID from the list of values.**
5. **Enter an Account Number.**
If the Vehicle ID entered has an associated account, the system fills in this field for you. You can change the account number if needed.
6. **Enter any additional information required by your organization.**
7. **Click the Save icon.**

The system saves the record in Planning status, supplies a work order number and creates the first task record using the fleet work order description for the task description and a sequence number of one.

Fleet Work Order Views

There are two sets of views for the Fleet Order module. The first is for the fleet work order itself and the second is for the fleet work order tasks.

Additional Data

You can enter Maintenance Manager and Planner titles by selecting Additional Data from the Views list. If the work order was generated by PM master, the PM master number and associated benchmark are listed. If the work order was generated by a benchmark (not using a PM master), the benchmark number is listed. You can also enter the name of the person(s) requesting the work.

Additional Data view

Delivery

Select Delivery from the Views list to enter delivery information. This information can be used for delivery of parts from the Storeroom.

Cost Summary

The Cost Summary view presents summary cost information for the fleet work order for both actual and indirect overhead costs. Costs are listed by category (expense). For each category, the dollar amounts for original and revised estimates, commitments, accruals, and actuals are displayed in rows.

If you have the appropriate responsibilities in your User Profile, the lower portion of the Cost Summary view contains additional indirect overhead cost information.

Category	Original Estimate	Revised Estimate	Committed	Accrued	Actual
Regular Labor	25.00	25.00	.00	.00	.00
Total	25.00	25.00	.00	.00	.00

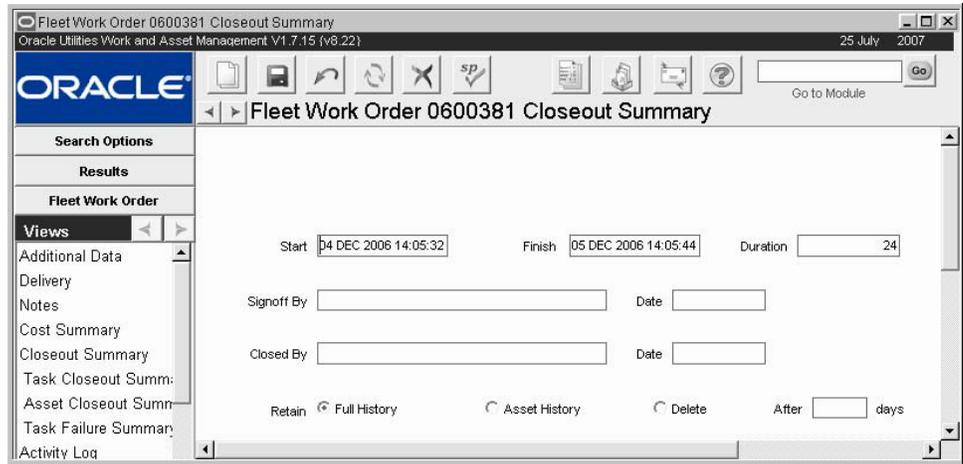
Cost Summary view

The system maintains the following information using the sum of the values for the fleet work order tasks:

- Category** - Costs are listed by the categories defined in the Expense Code business rule.
- Original Estimates** - Total dollars planned before the Work Order is activated
- Revised Estimates** - Current dollar estimates
- Committed** - Direct purchase costs are committed when the Purchase order is issued. Labor costs are committed when work time is posted and batch has run. Stock Item costs are committed when the item is issued on a Checkout Request.
- Accrued** - Unpaid receipts (at P.O. price)
- Actual** - Stock issues, posted labor charges, paid invoices.
- External Actual Amount and Actual Quantity** - If you have the appropriate function responsibility in your user profile, you can use these columns to compare actual amounts and quantities from an external financial system with estimates maintained by Oracle Utilities Work and Asset Management.

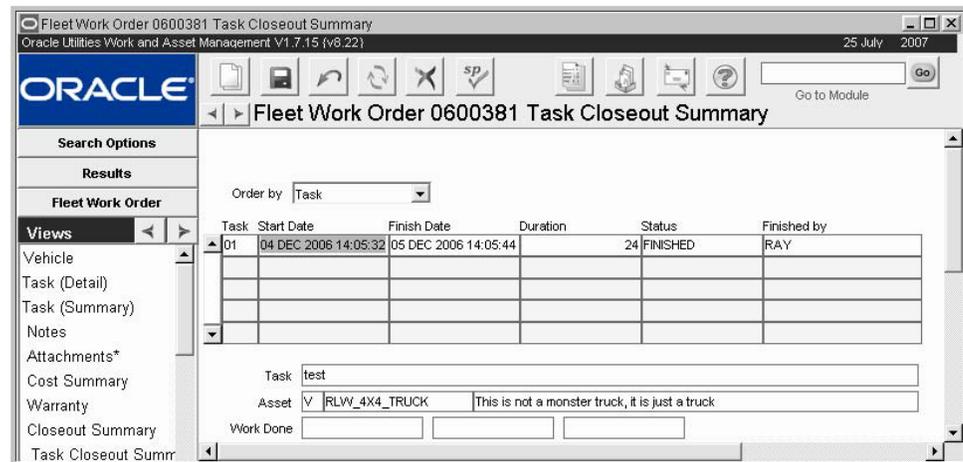
Closeout Summary

Before setting the status of a work order to “Closed”, you can enter Closeout information into the Fleet Work Order Closeout view. This is summary work information used later to perform failure analysis.

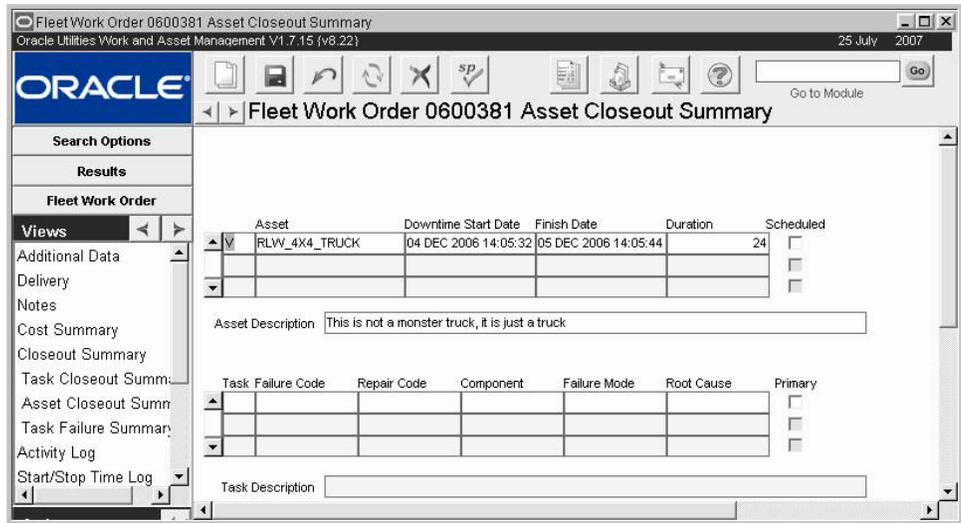


Closeout Summary view

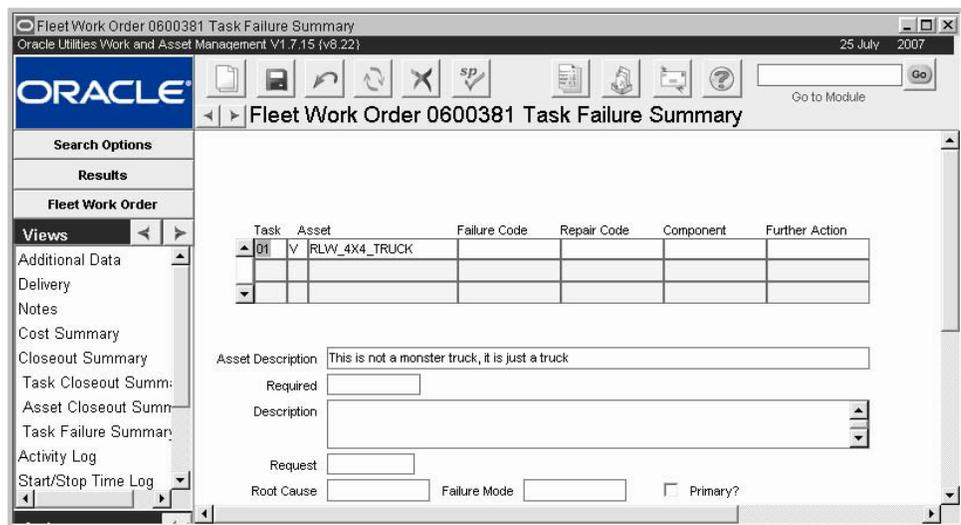
When the fleet work order status is changed to Finished, the system completes the start and finish dates, using the vehicle in and out Dates from the main record, and calculates the duration in hours. Select the Full History, Asset History, or Delete After # days radio buttons to indicate how the system should retain the data entered. You can also select Task Summary, Asset Summary, or Task Failure Summary from the Views list to enter more detailed information about the task completion.



Task Closeout Summary



Asset Closeout Summary



Task Failure Summary

Enter the appropriate codes and supplemental information in the fields provided.

Task (Summary)

Select Task (Summary) from the Views list to see a summarized listing of all tasks. You can also modify the Job Code, Task Description, and Sequence Number. Sequence Number is used to list the tasks in a specified order. If left blank, the system lists tasks by Task Number.

Task (Detail)

Select Task (Detail) from the Views list to begin breaking work down into Tasks. The Task is comprised of a system generated Task Number, a Job Code, a Description, and other relevant information. The Description is initially retrieved by the Job Code but can be overwritten if necessary.

The screenshot shows the Oracle Fleet Work Order 0500193 Task 01 interface. The window title is "Fleet Work Order 0500193 Task 01" and the date is "25 July 2007". The interface includes a search options section, a results section, and a task detail view. The task details include fields for Work Order (P 0500193), Description (Replace Filters), Vehicle ID/Desc (V ILB-V-001), System, Assembly, Component, Task (01), Seq (1), Job (333), Reason, Action, % Comp, Component ID, Assigned To (SIMON), and Report Codes (REPORTCD2, REPORTCD3, REPORTCD5).

Task (Detail) view

System, Assembly, Component - These three fields are controlled by linked code tables that can be set up by your organization to reflect VMRS (Vehicle Maintenance Reporting Standard) codes. The code tables for the Job Code, Reason, and Action fields below can also be set up and used as a part of this reporting standard.

When these fields are entered, the system automatically writes a description based on the descriptions for the values entered. If these fields are updated, you can select the Update Task Description action to have the system automatically rewrite the description based on the new values. If you do not select the action the description remains unchanged.

Job, Reason, Action - These fields are controlled by linked code tables that can be set up to provide additional detail into the work specifications for the asset.

Seq - The Sequence Number is optional, allowing you to have the system list Tasks in a specified order so that, for example, Task 03 is listed before Task 01. If left blank, the system lists Tasks by Task Number.

% Comp - Workers can enter the percentage of work completed in this field. It is informational only.

Component ID - If a Component is involved for the listed Task, you can enter a Component ID. The list of values presents only those Component IDs that are currently installed in the listed Vehicle.

Assigned To - If your organization generally assigns tasks to one person, enter the name of that person in this field. Maintenance employees can then enter their name in the Assigned To field of the Search Options screen to find all of the tasks that they are assigned to complete.

If you need to assign the task to more than one person select Assignments from the Views list.

Held for Parts - The system checks the Held for Parts indicator automatically if the On-Hand quantity in the storeroom is not enough to meet demand across all active Work Order Tasks. The system un-checks the indicator if there is enough on-hand.

Report Codes - Report codes allow you to place a variety of grouping codes on tasks so that you can run reports against the tasks, grouping or identifying them by the entered report code. The system uses the Validate Task Report Codes business rule to verify the codes entered.

A list of values controlled by Code Tables 281 through 285 is associated with each Report Code field.

Vehicle

To quickly access further information about the listed Vehicle ID, select Vehicle from the Views list. Since the system retrieves this information from the Fleet Asset module, none of the displayed fields can be modified from within this window.

Warranty

The warranty view displays warranty information on fleet work orders that reference an asset with components that are under warranty. When these work records are created or updated, the system notifies the user that the asset contains components that are under warranty. This functionality assists users in identifying jobs that may be under warranty.

PM Schedule

This view shows the Preventive Maintenance schedule for the asset on the Work Order.

PM	Description	Asset	Next Scheduled	Last Completed
000139		RLW_ISO1	15 AUG 2006	27 SEP 2005
000515		RLW_ISO1	04 DEC 2012	27 SEP 2005
000524		RLW_ISO1	27 SEP 2005	06 SEP 2005
000572	dfa sdfas asdf asdf sa	RLW_ISO1	09 MAR 2006	
000673		RLW_ISO1	05 APR 2005	

Task	Status	Asset	Task Description

PM Schedule

Use this information to help determine if the work completed has satisfied a PM Master scheduled to cycle soon. If so, and if you have the proper responsibility in your User Profile, you can select Credit PM from the Actions list to reschedule the PM Master and credit a regular fleet work order for having satisfied the requirements for the current maintenance cycle.

The information in the upper portion of the screen describes the PM masters associated with the fleet asset. When you select a PM master by clicking anywhere on the line, the fields in the lower section of change to display information about work orders assigned to the PM master and additional cycling information. If a work order has been generated and has not been completed, the work order number is displayed. Otherwise, the next schedule date is listed without a work order number, indicating that a work order will be generated for that date.

A check in the PM Master Override Not Allowed box indicates that you cannot use a regular type Work Order to satisfy the PM Master.

Credit PM

If you have the proper responsibility in your user profile, you can use the Credit PM action to credit a regular work order as having satisfied the requirements for a PM master. The Cycle PM action is available on the PM Schedule view.

To ensure that batch processing properly records readings for the asset and updates the PM schedule, you must credit the PM before finishing the Work Order. Therefore, to use the Credit PM action, at least one Work Order Task referencing the asset on the Work Order must be in Planning, Approved or Active status.

You cannot use the Credit PM action if the PM already has an active PM (P-type) work order associated with it. In this case, you will need to cancel the existing PM work order and wait for the PM finish batch processing to run. You can then use the Credit PM action to assign another Work Order to the PM.

To credit a Work Order to a PM, highlight the PM in the PM Schedule view for the Work Order you wish to credit and select Credit PM from the Actions list. The system inserts the current Work Order number and type into the PM Forecast and updates the scheduling information.

Caution: The scheduling information for Calendar Anniversary and Runtime Interval type PM Masters will not be reset. You can credit regular Work Orders as having satisfied these types of PM Masters, but you should be aware that the resulting interval until the next PM may exceed your requirements.

Fleet Work Order Permit

You can enter and maintain a list of permits required to complete the Task. Once permits have been acquired, you can also enter the Permit Number and the Date Acquired. When you enter permit requirements, the system flags the Fleet Work Order record with the word Permit in red.

Material

By selecting Material (List) or Material (Detail) from the Views list you can enter and maintain a list of items required to complete the Task. You can either enter a stock code to request a Storeroom item, or leave the Stock Code field blank to indicate that the item is a Direct Purchase item. On Direct Purchases and on requests for stock items that are not in stores, the system prompts you to enter additional information in the Direct Purchase view so that Requisitions can be generated with the appropriate information.

Note: If needed, you can also add notes related to the material items using the Material Notes view - selected under Material (Detail) on the Views list. Notes entered in this view will be carried over to any resulting purchasing documents.

The screenshot displays the Oracle Fleet Work Order 0500203 Task 01 Material form. The form is titled "Fleet Work Order 0500203 Task 01 Material" and shows details for a material item. The "Material Item" section includes Stock Code CAK-9000, Type DIRECT, and Storeroom CK2. The "Direct Purchase" section includes PO Item Type M, PO Commodity SUPPLIES, and Vendor CAK-VENDOR1. The form also shows fields for Inventory Quantity, Price, and Estimated Deliver Date.

Material view

The system does not allow you to add duplicate material requirement items to a fleet work order task since this would result in duplicate stock checkouts. If you attempt to add a duplicate record, the system displays an error message telling you that the record already exists. If you need to request more of that item, simply add it to the original record. Services are entered as direct purchases. Planners can indicate the Vendor or Contractor who will perform the service in the Direct Purchase view and the appropriate follow-up documents will be created after the requirement is indicated here.

If an item is issued from the Storeroom against the fleet work order task that was not listed as a Material requirement first, the system automatically inserts a Fleet Materials (Detail) record without estimates. In the same way, if a Requisition or Purchase Order is written directly against the fleet work order task that did not originally have the Materials planned, the system generates a Materials (Detail) record without estimates on the Fleet Work Order Task record when the purchase order is approved.

Description and Asset ID - The system carries these fields over from the header record.

Stock Code, Type, and Storeroom - Enter the stock code for the item needed. The system returns the stock type and populates the list of values for storeroom with a listing of the storerooms where that item can be found. If you know that this is a non-stock item that will be purchased directly leave this field blank. The system prompts you to enter direct purchase information when you save the record.

Item Desc - The system enters the description of the stock item as it appears on the Master Catalog record. You can add to this description if necessary. If you do not enter a stock code, enter a description of the item needed here.

Inventory Quantity - If you entered a stock code, this field shows the amount of the item that is available in the storeroom.

Alternatives Button - The system indicates the number of alternate stock items as they are listed in the Master Catalog Associated Stock Codes view. The number of each item available for

each stock code is calculated based on the settings in the Available Quantity Calculations Business Rule. Click the Alternates button to open the alternates window.

Associated Stock Code	Storeroom On Hand	Price
CAK-8002	CK1	361 8.03
CAK-8002	CK2	21 8.52

From this window you can select the alternate stock code and click the insert button to change the stock item on the Material record.

Hazardous - If the item is toxic, place a check in this box. You can classify the type of hazard by selecting from the list of values in the field next to the box. Your organization can add or remove hazard codes by modifying code table 6.

Quantity/Unit - If you entered a stock code, and the information is available in the Storeroom, the system enters the unit of purchase in the unit field. Indicate how much of the item you need for the Work Order Task in the Quantity field. You can modify the units if necessary.

Unit Price - If you entered a stock code, and the information is available in the Storeroom, the system enters the unit price for the item. Otherwise you should enter the estimated price manually.

Total - The system calculates the total price based on the Quantity and Unit Price entered.

Required Date and Issued to Date Qty - Use the Required Date field to enter the date that the item is needed. The Issued to Date Qty field shows a number indicating how much of the item has been issued as of the current date.

Expense Code - If you entered a stock code, and the information is available in the Storeroom, the system enters the expense code for the item. This field can be modified if needed.

Direct Purchase Section - You must provide Direct Purchase information in the lower section for the screen when you enter a direct type stock code or an item that has no stock code.

PO Item Type - Select the Item Type code from the list of values, for example M for material or S for services.

PO Commodity - Use this field to further describe the type of item. This information can help the Buyer to select a Vendor if you have not included on the request.

Buyer Code - The code for the buyer who should handle your request.

Blanket Contract - If the required items have already been pre-negotiated on a Blanket Contract, enter the contact number in this field.

If the Work Order Processing Business Rule DIRECT PURCHASE BLANKET option is set to ON, the system will check to see if there are active contracts that list the desired item when the Work Order Task is saved. If it finds one or more contracts, the system requires completion of the Blanket Contract field. If the item is listed on only one active contract, the system supplies the contract's number. If more than one contract might apply, the system opens the list of values so that the user can select the appropriate contract.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Deliver to Location - Use this field to indicate where the materials should be delivered when the shipment arrives.

Vendor and Contact Name - If available, you can enter the Vendor and Contact for the items needed. This information will help the Buyer to process your request more quickly.

Leave the Vendor field blank if you want the system to generate only one Requisition for all of your direct purchase items. Otherwise, a separate Requisition is created for each Vendor code referenced on the Work Order Task.

Generating only one Requisition can be helpful in reducing the number of Requisitions that need to be reviewed and approved for Work Order Material items. Purchasing personnel can then issue Purchase Orders to the appropriate vendors once the Requisition has been approved. Any Materials that are added after the Work Order has been activated or any items that reference a Blanket Contract number will have a separate Requisition created.

To facilitate this processing, make sure that the Vendor Code is NOT a required field. You can set the Vendor Code as required or not required in the Modules Administration - Forms module of the Administration subsystem.

Vendor and Manufacturer Information - When a Stock Code for a Direct Type item is entered on a Work Order Material record, the system populates the Vendor Part Number, Manufacturer Code and Manufacturer Part Number fields on the Direct Purchase view from the Vendor Manufacturer view on the Master Catalog record. This information is only copied if the Primary Vendor indicator is set on the Master Catalog Vendor Manufacturer view. The information copied over can be modified if necessary.

When Requisitions or Purchase Orders are generated from the Work Order Task Materials records, the system populates the Requisition or Purchase Order Manufacturer Data view with the Manufacturer information from both the Catalog record AND the Work Order Task Materials Direct Purchase view if any changes were made to the information on the view. All of the Primary Vendor data and other data based on the various "Copy to PO" check boxes on the Catalog record is included. The Vendor Part Number field on the Line Item (Detail) Screen is always populated with the information from the Work Order Task Materials Direct Purchase view.

When a material record is created without a stock code, the system copies any Vendor or Manufacturer information that was entered on the Work Order Task Material screen to the resulting Requisition or Purchase Order.

Requisition and Purchase Order Numbers - The system populates these fields with the Requisition and Purchase Order numbers when they are generated from the Direct Purchase record.

If the Work Order Processing Business Rule DIRECT PURCHASE option is set to REQUISITION (and the Allow Automatic Work Order Release? check box is not checked), the system creates a Requisition and enters the Requisition number in the Requisition field when the Work Order status is set to Active.

The system will also record the Purchase Order number when the Purchase Order is issued (set to issued status).

Credit Card Purchase - If the materials should be purchased by credit card, check this box.

Courtesy Stores - Check this box if the item is a courtesy stored item.

QC Required - If the materials require special handling, check this box.

BOM Pick List

If a Bill of Materials (BOM) list is attached to the Vehicle ID or Component ID, you can use the list to pick parts that will be required for the Task. (If both the Vehicle and Component ID have a BOM attached, the BOM for the Component ID is used).

Stock Code	Code	Seq No.	BOM	Qty	Storeroom	Planned Qty
RLW_INVENTORY1	C	1	EA	2.55555		
Inventory Stock Code Non-Lot / Non Quality						
RLW_INVENTORY2	C	2	EA	10.99998		
Inventory Stock Code Non-Lot / Non Quality						
RLW_INVENTORY5	C	3	EA	5		
Inventory Stock Code Lot(internal) / Non-Quality /						
RLW_INVENTORY22	C	4	EA	1.89998		
this aint any kinda tingamajig, but whadda you gon						
RLW_INVENTORY	C	6	EA	1.		
Inventory Stock Code Non-Lot / Non Quality						
CU_BOLTS	C	7	EA	10.		
Compatible Units - Cross Arm bolts						
RLW_INVENTORY4	C		EA	5.		
Inventory Stock Code Lot (none) / Non-Quality						
MJM003	C		EA	3.		
Expense Widget						

BOM Picklist view

The Bill of Materials number is displayed in the Breakdown For field. Stock codes are then displayed for that BOM ID. If a displayed Stock code has a breakdown (subset of parts), you can access the breakdown by pressing the Breakdown button. You can pick parts from this list just as you would from the top-level list.

You cannot add, modify, or delete items from the BOM list or any breakdown in this Task view.

To return to the top level of the BOM, press the TOP Level button.

To reserve parts for the Task, simply enter a Storeroom and Planned Quantity, then save the record. The system either updates or inserts the appropriate Task Parts detail record. You can also enter or modify Parts Requirement records directly through the Task Parts view.

The fields in the BOM Picklist view are the same as the fields in the [Bill of Material](#) module.

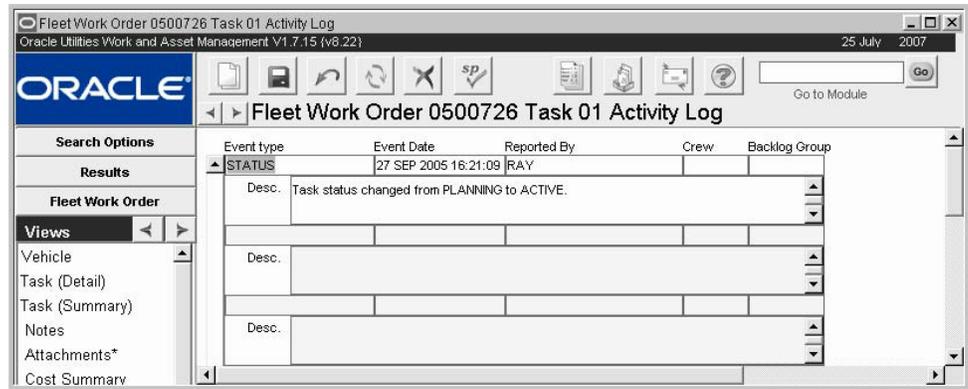
Drawing Number - The Drawing Number field shows the code or number for a drawing provided by the manufacturer.

Drawing Item Number - The Drawing Item Number field shows the reference number of the item on the manufacturer's drawing.

Service - This field shows a description of any service notes.

Activity Log

The Activity Log is populated by the system with a log record when the Work Order or Task status changes. You can also enter and maintain Activity information related to a Crew, Backlog Group, and Event. Entries referencing a Crew are also accessible through the Crew Activity Log module in the Maintenance subsystem.



Activity Log view

Start/Stop Log

As you use the Start / Stop Work action, the system automatically maintains a log of entries. This log can be viewed by selecting Start/Stop Log from the Views list.

Information displayed on this screen cannot be modified.

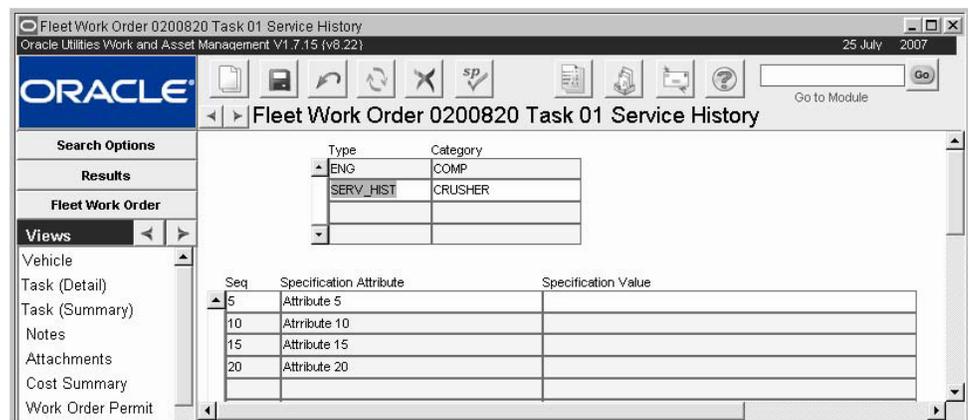
Service History

Select Service History from the Views list to maintain a service history for the Vehicle ID / Component ID listed on the Work Order Task. Service History information is established via a two-step process:

1. Set up a Specification Template record for the type of service performed, then
2. Reference it by entering Type and Category.

Users can enter the Specification Values for each applicable Attribute later. Please see the sections regarding Specification Template in the Resource User Guide for further information.

For example, set up a Specification Template, then a Specification record where you customize the list of Attributes for that specific type of work. The Specification Number and Category may then be used on Task Service History records, where users enter Specification Values for each Attribute such as the mileage, date, tire pressure, number of quarts of oil used, oil filter replaced (yes/no), and so on.



Service History view

Service History entered via Work Order Tasks can be accessed as Fleet Asset and Component ID view options. See the Asset and Component ID sections of the Resource User Guide for further information.

Assignments

The Assignments view allows you to assign multiple employees from any Craft or Crew to the fleet work order task. You can then search for and display these assignments in the Work Order Task Assignment module.

Employee	Name	Craft	Crew	Supervisor
0002	DEADHEAD,FREDRICK	MECH	DP1	EXFORE
0002	USERSON,NEWIOUS	MECH	ILBC2	GSF0RE
101	BROWN,MANI	ELEC	ILBC2	EXFORE

Assignments view

Since the Scheduling module does not make use of the information from this view, make sure that you have indicated a primary Crew on the Work Order Task record if you want to be able to select the Work Order Task by Crew later in the scheduling modules.

Task Crew, Craft, and Other Crew - The Task Crew, Craft, and Other Crew radio buttons and associated fields located in the upper portion of the window control the list of values associated with the Employee fields.

The system fills in the Task Crew field using the primary Crew entered on the Work Order Task record. You cannot modify the Task Crew field from the Assignments view. The list of values associated with the Craft and Other Crew fields are controlled by the Craft Rates Business Rule and the Crew module, respectively.

Employee - The list of values for the Employee field is controlled by the Employee module, and includes employees that have both an Active Employee record and a User Profile. When you select an Employee, the system fills in the Name, Craft, Crew, and Supervisor fields.

Leave Request - Highlight the assigned employee to view Leave Request information for that employee in the lower portion of the window. (Click the Refresh button if you just assigned the employee). The system displays Leave Requests with Start Dates the same or later than the current date.

How to Assign Employees to a Fleet Work Order Task

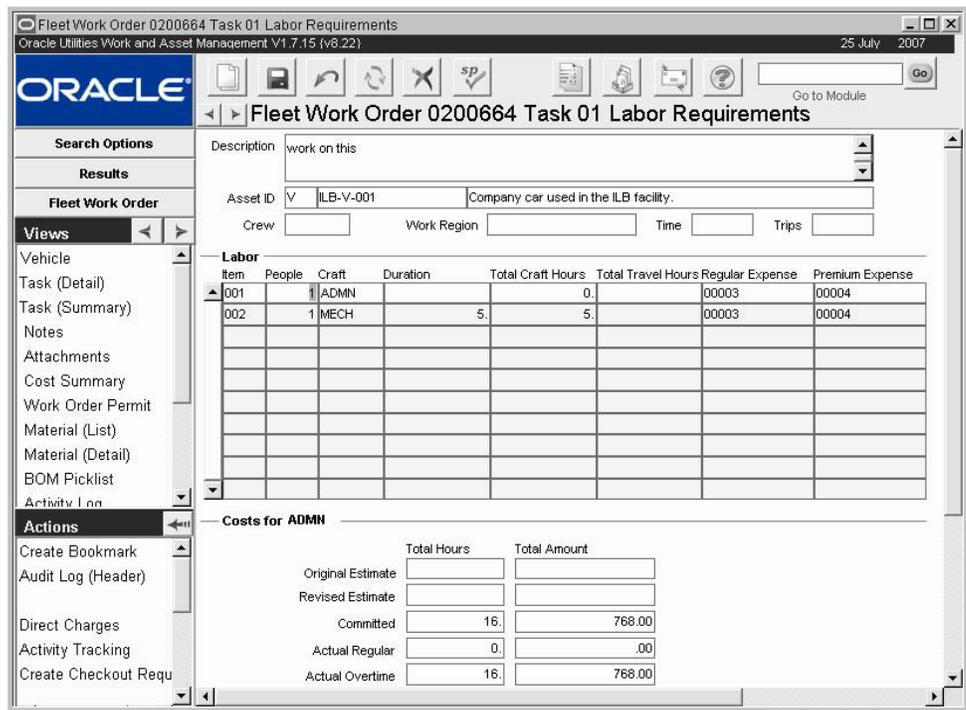
Each employee that you want to assign must already be assigned to a Craft in the Employee module and/or a Crew (in either the Employee or the Crew module).

1. Select the Assignments view.
2. Select the Task Crew, Craft, or Other Crew radio button.
3. Enter the employee's Craft or Crew according to the radio button selected.
4. Select the employee from the list of values.
5. Click Save.

The system assigns the employee. Select the appropriate radio button and the employee's Craft or Crew for each additional employee you want to assign. Click the Refresh button to view Leave Request information for the highlighted employee.

Labor Requirements

For each Work Order Task, you can enter Labor Requirement estimates. The Item number is system generated when the labor record is first saved. When entering estimates, you must enter the total number of people required for that Craft, the Craft Code, and the total hours required to complete the task.



Labor Requirements view

The Total Hours is not hours per person but the number of craft hours required to complete the task.

For the entered Craft, the Regular and Premium Expense codes are retrieved from the CRAFT RATES Rule (Admin subsystem). Estimated Hours is then multiplied by the Craft Rate to produce a total dollar estimate for the labor record.

Estimates are copied into both the Original and Revised Estimates until the Task is activated. After that, only the Revised Estimates can be updated.

Internal Commitments are system entered when the Task is activated. External Commitments are entered by the system when entered Timesheets are approved. Actuals are entered by the system when Timesheets are posted (via batch).

If a Labor estimate is not entered for a particular Craft and the Craft is scheduled for the Task or time is entered against it, the system automatically inserts a Labor record without any Estimate values.

Fleet Work Order Actions

In addition to standard actions, the following can be completed from within the module.

The Fleet Work Order Actions list includes:

Log In/Out as Downtime

Select Log In/Log as Downtime from the Actions list to record the vehicle in/out time and calculate the downtime based on the Operational Schedule for the Fleet Asset. Typically, you will use the Log In/Out action if you have to return the vehicle to service before closing the work order, in order to wait for parts to arrive, or some other event in preparation to finish the repair.

Before selecting the Log In/Out as Downtime action, enter the appropriate Vehicle In/Out times and remove the check from the Auto Calculate Downtime box. After you select the Log In/Out action, click the OK button to record the in/out information currently shown on the work order.

You can select the Log In/Out action as many times as necessary to capture each time the vehicle is moved into and out of the shop before the work order is finished. When finishing the work order, use the action a final time to record the vehicle's return to service.

You must have the appropriate responsibility in your user profile to select the Log In/Log as Downtime action.

Start/Stop Work

Select Start/Stop Work from the Actions list to log timesheet entries related to the fleet work order. This action allows you to quickly enter timesheet information directly from the Fleet Work Order module.

When you select Start/Stop Work from the Actions list, a new window opens where you can enter your Employee number. The system automatically enters the Employee number of the person currently logged onto the application, but you can change the number if needed. Press Next> to continue (or Cancel to cancel) then enter the shift and task. Press Finish when done. The system automatically inserts an entry in the Start/Stop Log which can be accessed from the Views list.

When you have completed work or are stopping work (for lunch, the end of day, or other reason), choose Start/Stop Work Time Entry from the Actions list again and complete the procedure to stop the time.

The information entered using this action automatically creates a Timekeeping record and then updates that record. If corrections need to be made after the "Finish" entry is entered, you must make those changes in the Timekeeping module.

As you use the Start / Stop Work action, the system automatically maintains a log of entries. This log can be viewed by selecting Start/Stop Log from the Views list. Information displayed on this screen cannot be modified.

If you make updates to the actual Timesheet record in the Timekeeping module at a later time, the system updates the Start/Stop Log with the more up to date information.

Update from Benchmark

Select Update from Benchmark from the Actions list to modify a Work Order record based on information from a benchmark work order. In order for Update from Benchmark to appear on the Actions list, you must have the UPDATE WO FROM BENCHMARK responsibility function.

When you select this action, the system walks you through the process of updating the fleet work order. Enter the Benchmark number that you want to update from and select the information that you want transferred to the work order. You can transfer data such as the asset information, work or task descriptions, crew information, criticality, and report codes. If there is a subproject referenced on the benchmark, the subproject must be in approved status. Refer to [How to Update a Work Order from a Benchmark](#) for more information and specific instructions.

Add Tasks from Benchmark

Select Add Tasks from Benchmark to only add certain tasks from a Benchmark record. In order for Adds Tasks from Benchmark to appear on the Actions list, you must have the UPDATE WO FROM BENCHMARK responsibility function. When you select this action the system walks you through the process of adding the tasks.

Create Benchmark from Work Order

Select Create Benchmark from Work Order to have the system make the current Work Order into a template that can be reused. In order for Create Benchmark from Work Order to appear on the Actions list, you must have the UPDATE BENCHMARK WO responsibility function. Once you select this action the system displays the new Benchmark number. Be sure to make note of this number so that you can find the Benchmark easily in the Fleet Benchmark Work Order module.

Update Task Description (Fleet WO Task)

When the System, Assembly or Component fields are entered, the system automatically writes a description based on the descriptions for the values. If these fields are updated, you can select the Update Task Description action to have the system automatically rewrite the description based on the new values. If you do not select the action the description remains unchanged.

Repair Removed Part

Use the Repair Removed Part action to create a Material Disposition record for stock items involved in the fleet work order task, even if the parts involved are not marked as repairable in the storeroom.

The Repair Removed Part action can be used for both components and regular stock items. In both cases, the system creates a Material Disposition record referencing the task. You can then process the items through the repair cycle and set the Material Disposition status for the items accordingly.

If you have the Repair Removed Part function in your Responsibilities profile, you can use the Repair Removed Part action.

Chapter 22

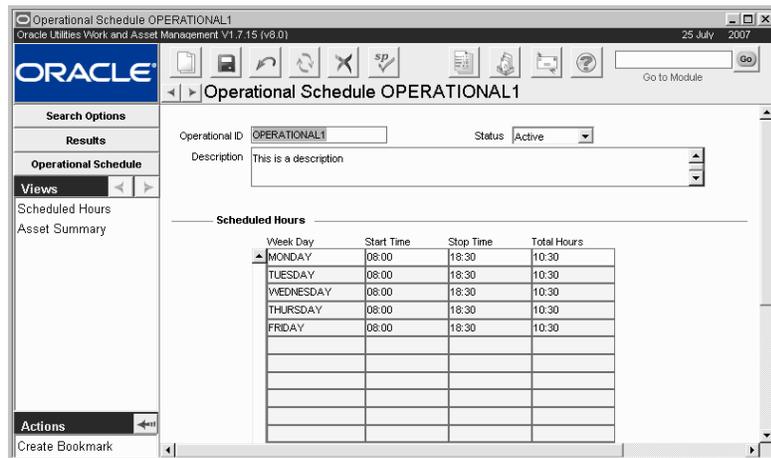
Operational Schedule

Use the Operational Schedule module to track fleet asset downtime automatically based on an operational schedule and the vehicle in and out times entered on the fleet work order. This saves fleet maintenance managers from having to manually calculate the total downtime when finishing the work order.

Operational Schedule Records

Operational schedules can only be used with fleet assets and fleet work orders.

The grid in the lower section of the Operational Schedule window contains either the weekly schedule or a listing of fleet assets associated with the schedule. You can change the grid display by selecting from the Views list.



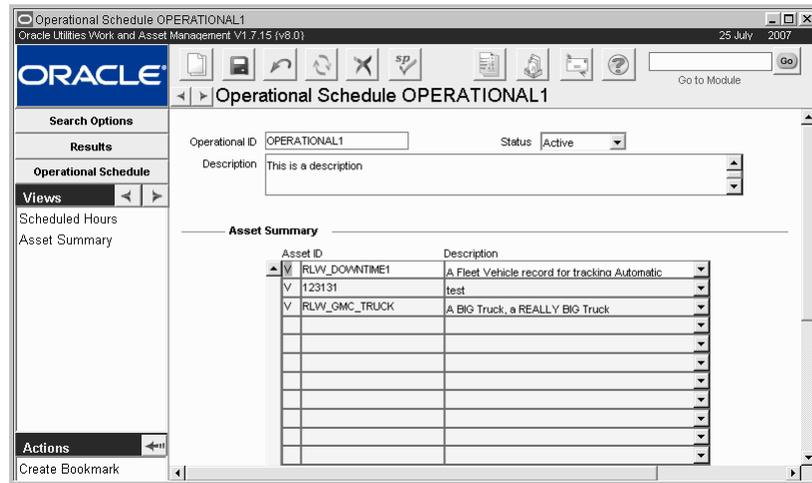
Operational Schedule record Scheduled Hours view

Once Operational Schedule records are created and placed in Active status, they must be associated with the vehicles operating on the schedule. To associate an asset with a particular operational schedule, open the Operational / Maintenance view of the Fleet Asset record, enter the appropriate Operational Schedule ID, and check the Auto Calculate Downtime box.

The Downtime Type by Work Type Business Rule defines downtime type by work order type and allows the system to automatically calculate the downtime for the fleet asset when the fleet work order is set to Finished status.

The Scheduled Hours view contains the weekly schedule (day of the week, start time, stop time, and total daily hours) for vehicles associated with the Operational Schedule record.

Each day of the week can have multiple entries to accommodate split shifts, for example 7:00-11:00 and 13:00-17:00. Multiple entries for the same day of the week, however, cannot have overlapping hours on the same Operational Schedule record.



Operational Schedule Record Asset Summary view

The Asset Summary view lists all fleet assets associated with this Operational Schedule record. None of the information on this view can be modified directly. You can drill-down on the Asset ID to open the corresponding Asset record.

To associate an asset with the operational schedule, open the Operational Maintenance view of the Asset record, enter the appropriate Operational Schedule ID, and check the Auto Calculate Downtime box.

If the vehicle is placed back in service before work is completed, use the [Log In/Out as Downtime](#) action to record the in/out of service times.

How to Create an Operational Schedule

1. **Open the Operation Schedule module.**
The Operational Schedule module is located in the Inventory subsystem.
2. **Click New.**
3. **Enter a unique Operational ID number if not supplied by the system.**
4. **Enter a description for the schedule.**
5. **Define the weekly schedule in the lower grid.**
Do this by selecting start and stop times for each day of the week. Lists of values are available for the Day, Start and Stop Time fields. Start and stop times can be entered directly, using the 24-hour clock format, or by first selecting the hour component and then selecting the minute component. When you enter the start and stop values, the system calculates the total number of hours for that line of the schedule.
6. **Set the record to Active status.**
7. **Click Save.**

How to Add Operational Schedule to a Fleet Asset

1. **Open the appropriate Fleet Asset record.**
2. **Open to the Operational/Maintenance view.**
3. **Select an Operational Schedule ID from the list of values.**
4. **Check the Automatically Track Downtime box.**
5. **Click Save.**

This process can also begin when a PM Master cycles for a fleet asset associated with an operation schedule and creates a work order.

How to Automatically Calculate Downtime at WO Finish

1. **Create a Fleet Work Order and add a Fleet Asset to the Work Order.**
The Fleet Asset must have an associated Operational Schedule record.
2. **Add the Vehicle In time and set the status to Active.**
3. **When work is completed, add the Vehicle Out time.**
4. **Check the Auto Calculate Downtime indicator.**
5. **Set the work order to Finished status.**
The system accesses the associated Operational Schedule information and calculates the downtime based on the Work Type, Vehicle In and Vehicle Out times. The system records downtime in the Asset Closeout Summary view.

Operational Schedule Views

In addition to standard views, the module includes the following:

Scheduled Hours

The Scheduled Hours view contains the weekly schedule (day of the week, start time, stop time, and total daily hours) for vehicles associated with the Operational Schedule record.

Lists of values are available for the Day, Start and Stop Time fields. Start and stop times can be entered directly, using the 24-hour clock format, or by first selecting the hour component and then selecting the minute component. When you enter the start and stop values, the system calculates the total number of hours for that line of the schedule.

Each day of the week can have multiple entries to accommodate split shifts, for example 7:00-11:00 and 13:00-17:00. Multiple entries for the same day of the week, however, cannot have overlapping hours on the same Operational Schedule record.

Asset Summary

The Asset Summary view lists all fleet assets associated with this Operational Schedule record. None of the information on this view can be modified directly, but you can double-click an Asset ID to open the corresponding Asset record.

To associate an asset with the operational schedule, open the Operational Maintenance view of the Asset record, enter the appropriate Operational Schedule ID, and check the Auto Calculate Downtime box.

Operational Schedule Actions

In addition to standard actions, the following can be completed from within the module.

Log In/Out as Downtime

You must have the appropriate responsibility in your user profile to select the Log In/Log as Downtime action.

Select Log In/Log as Downtime from the Fleet Work Order Actions list to record the vehicle in/out time and calculate the downtime based on the operational schedule for the asset. If the asset has no operational schedule, the system calculates downtime as simply the difference between the in time and the out times.

Typically, you will use the Log In/Out as Downtime action if you have to return the vehicle to service before closing the work order, in order to wait for parts to arrive, or some other event in preparation to finish the repair.

Before selecting the Log In/Out as Downtime action, enter the appropriate vehicle in/out times and remove the check from the Auto Calculate Downtime box.

You can select the Log In/Out as Downtime action as many times as necessary to capture each time the vehicle is moved into and out of the shop before the work order is finished. When finishing the work order, use the action a final time to record the vehicle's return to service.

Chapter 23

Fleet Benchmark Work Order

Enter and maintain template Fleet Work Order information that can be used to generate new Fleet Work Orders in the Fleet Benchmark Work Order module. Benchmarks prevent you from having to enter and reenter the same type of information each time similar work needs to be performed on a Fleet Asset. You can modify a Benchmark or create a new Fleet Work Order from the Benchmark and then modify the new Fleet Work Order as needed.

Fleet Benchmark Work Order Records

Benchmarks are comprised of the same information that Work Orders are, allowing you to pre-plan parts, purchases, and labor requirements, set up Attachments, and so on. The Work Orders generated from Benchmarks copy information directly from the Benchmark. Since no work is performed against them, Benchmarks do not maintain cost information other than estimates.

Fleet Work Orders can be generated in any of the following ways:

- Cycling of a PM Master (which points to a Benchmark)
- From within the Benchmark module – choose the Create Work Order from Benchmark Action option
- From within the Work Order module: for a Work Order in Planning status, choose the [Update from Benchmark](#) [Update from Benchmark](#) Action.

The screenshot shows the Oracle Fleet Benchmark Work Order record for B000340. The interface includes a search bar, a list of views (Additional Data, Delivery, Notes, Cost Summary, Task, Vehicle, Warranty), and a list of actions (Create Bookmark, Audit Log). The main form displays the following information:

Work Order	B000340	Permit
Description	Replace Filters	
Vehicle ID/Desc	ILB-V-001 Company car used in the ILB facility.	
Shop	SHOP1	Crew CAK1 Operator ID
Priority	4	Class CON-SERV Category AUDIT
Component ID		
Department	ILB1	Area ILBA1
Account	ILB1-Y-PROCESS-COMP-NONE-009	
Contract No.		
<input type="checkbox"/> Safety <input type="checkbox"/> ISO Related <input type="checkbox"/> Health <input type="checkbox"/> Environmental		

Fleet Benchmark Work Order record

The first step in setting up preventative maintenance for Fleet Assets is to create a Fleet benchmark work order so that the system will have a source to draw the work order information from when it cycles the PM Master. In this lesson we will set up a PM Master for regular oil changes on a vehicle.

You will want to create a Fleet benchmark work order for each vehicle and each type of preventative maintenance on that vehicle, i.e. rotating tires, regular oil changes, tune-ups, etc.

Since all of the fields and Views found in the Fleet Benchmark Work Order module mirror the fields and Views in the standard Fleet Work Order module, you can refer to the section on the [Fleet Work Order](#) module for detailed descriptions.

How to Create a Fleet Benchmark Work Order

1. **Open the Fleet Benchmark Work Order module Search Options window.**
2. **Click New.**
3. **Enter a Description of the Fleet Benchmark Work Order.**
4. **Enter an Account number.**

If you enter a partial account number the system opens a dialog box with correct possibilities. You can also double-click the account number field to drill-down and find the appropriate account number if you do not know it.

5. **Enter any additional required information.**

This information can be extensive. See the User Guide section titled Fleet Work Orders for information on these other fields.

6. **Click Save.**

When you create a new Benchmark, the Work Order number is generated by the system when you first save the record with the first character of the Fleet Work Order number set as "B" to distinguish it from Fleet Work Orders.

The next step is to add tasks to the Benchmark Work Order.

How to Create a Fleet Benchmark Work Order Task Record

1. **Open the appropriate Fleet Benchmark Work Order record.**
2. **Select Task (Details) from the Views list.**

The system opens the Fleet Benchmark Work Order Task window at the first task for that Fleet Benchmark Work Order.

3. **Click New.**
4. **Enter a description of the task.**
5. **Select the Account Number from the list of values.**

This list is controlled by the Accounts module of the resource subsystem.

6. **Enter any appropriate additional information.**
7. **Click Save.**

How to Create a Fleet Work Order from the Benchmark

Select Create Work Order from Benchmark from the Actions list. The system generates the Fleet Work Order and notifies you of the Fleet Work Order number. Open the Fleet Work Order module and select that Fleet Work Order number to view the new record.

If you supply a Department and Area before you select the Account number, the List of values will include only those Accounts associated with that Department and Area combination. If you do not supply a Department and area, the list of values will include only those accounts not associated with a Department and Area.

Chapter 24

Reservation/Motorpool

Through the Fleet Reservation / Motorpool module, you can access a list of available vehicles (Motorpool) and reserve vehicles as needed (Reservation).

Reservation No	000000013	Status	Closed
Requestor	Imani Brown	Requested	22 JUL 2003
Department/Phone	ADMIN	Rental Type	DAILY
Driver	Imani Brown	Destination	Chicago
License No	A5002940		
Vehicle Out		Vehicle In	
Scheduled	22 JUL 0003 00:00:00	Scheduled	28 JUL 0003 00:00:00
Actual	22 JUL 0003 00:00:00	Actual	22 JUL 0003 15:00:00
Miles	20	Hours	
Vehicle ID	ILB-V-001	Vehicle Year	
License		Make	JETTA
		Model	
		Class	2AC1

Fleet Reservation record

Reservation/Motorpool Records

The system uses pickup and return dates to determine the availability of vehicles.

Reservation No. - When you create a new Reservation record and Save, the system automatically generates the reservation number.

If you create this record ID manually, avoid the use of the special characters ', ', '&', or '%' as they may result in processing errors.

Requestor - Enter the name of the person requesting the reservation.

Department/Phone - Enter the department ID and phone number of the requestor or driver.

Driver - When you fill in the Requestor field, the system automatically enters the same name into the Driver field. This information can be changed if necessary.

License No - Enter the Driver's License number of the driver.

Status - Set the status of the record to reflect the current state of the reservation. When the vehicle is checked out, the status should be changed to Active, and when it is returned the status should be changed to Closed. Any vehicles that are currently checked out will not appear on the motorpool list until the Reservation record status is set to Closed.

Requested - The system enters the current date as the requested date. This can be changed if necessary.

Rental Type - Select a rental type of Daily, Monthly, or Weekly.

Destination - Enter the final destination.

Actual - When the Reservation record is complete enter the actual date and time that it was taken out. When the vehicle is returned, enter the date and time that it was returned to the motorpool. Filling in these fields inform the system that the vehicle is available again.

Vehicle ID, Year, Make, Model, Class and License - The system completes these fields based on the information in Fleet Asset record of the vehicle selected in step 6. They cannot be updated.

How to Create a New Reservation Record

1. **Open the Reservations/Motorpool module.**
2. **Select Motorpool from the Actions list.**
3. **Enter a Pickup Date and a Return Date.**

You must enter pickup and return dates so that the system can locate available vehicles.

4. **Click the Search icon.**

The system returns a listing of all available vehicles.

5. **Select a vehicle.**

The vehicle detail screen opens.

6. **Click the New Reservation button.**

The new reservation screen opens.

7. **Fill in the reservation information.**

Reservation/Motorpool Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Billing/Costs

Select Billing/Costs from the Views list to enter billing and cost information. This includes a Billing Code and charge numbers, and rental and fuel cost information. The system maintains the “Used Miles/Hours” as the difference between the Vehicle Out and In meter readings.

Billing	
Billing Code	ASD
Work Order	0000201
Department/Area	RVM01 RVM0A1
Account No.	RVM1-Y-ASSET P-ASSETC-DIRECT PO-001

Costs	
Rental Rate	30.00
Used Miles/Hours	200
Free Miles/Hours	10.00
Fuel Used	100.00
Cost Per Gallon	1.65

Billing/Costs view

Motorpool

You can check the availability of a vehicle by selecting Motorpool from the Actions list at any time. Enter the Pickup Date and Return Date that the vehicle is needed, along with any other selection criteria, and click the Search button. The system returns a listing of all vehicles that match your criteria and that are available during the date range entered. If a particular vehicle is not available on the entered date it will either not appear on the list, or the search will not return any records.

Motorpool Search Options screen

Vehicle ID	Class	Year	Make	Model	Radio	A/C	CC	Phone
E 0-01P01-MG	BRIDGES				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E 0-01S02-M					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E 0-02					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V 000000000003CD2		2005	JEEP	GC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M 000384739	RVM_VEHC				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M 000384740	1AD0				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M 000384741					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M 000384742	BRIDGES				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M 000384743	1AB0				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M 000384744					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M 000384745					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Motorpool Results of Search screen

Details

The Motorpool Details window presents detailed Vehicle information. You can make a reservation by clicking the New Reservation button, change an existing reservation by clicking the Update Reservation button, or exit Motorpool information by clicking the Cancel button.

Motorpool
Oracle Utilities Work and Asset Management V1.7.15 (v8.1) 25 July 2007

ORACLE
Motorpool

Search Options
Results
Fleet Reservation
Views
Billing/Costs

Selection List Details

Vehicle ID: 000000000000001 License No: 1XX999
Description: Fleet Asset with no account number. There is no account number associated to this fleet

Department/Area: Shop: Annual Only
Year: 2005 Color: BLACK Radio
Make: JEEP Drive Type: Air Condition
Model: GC Engine Size: Cruise Control
Class: 3CD2 Fuel Type: Car Phone
Miles Hours
Life to Date

Actions
Create Bookmark
Audit Log (Header)

New Reservation Cancel Update Reservation

Motorpool Details view

Chapter 25

Fleet Work Order History

You can open the Fleet Work Order referenced by double-clicking the Work Order number that you want to view.

Fleet Work Order History Records

The top portion of the window displays vehicle information. The middle displays summary information for each Fleet Work Order written against the listed Vehicle ID. For the highlighted Work Order record, the Shop, Odometer reading, and Out Date are displayed at the bottom of the window. When you select a different Work Order record, the Shop, odometer reading, and out date change to reflect the information on the selected record.

Work Order	Task	Work Class	Work Category	Sys	Assem Comp	Job	Reason	Action
0600016	01	CON-SERV	AUDIT			333		
0500193	01	CON-SERV	AUDIT			333		
0200664	01	CON-SERV	AUDIT					
0200082	01	CON-SERV	AUDIT					
0100245	01	CON-SERV	AUDIT					
0100244	01	CON-SERV	AUDIT					
0100180	01	CON-SERV	AUDIT					

Fleet Work Order History record

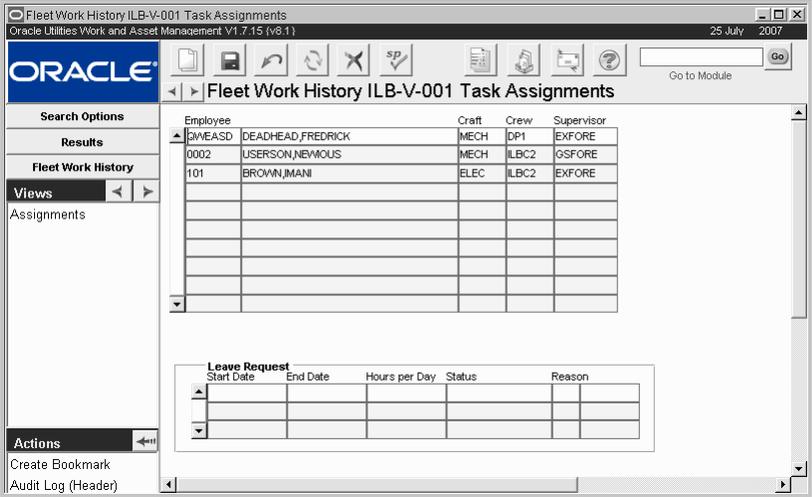
Fleet Work Order History Views

The module includes the following views:

Assignments

The Assignments view is available when a work order number on the Fleet Work Order History record is highlighted. Select Assignments from the Views list to see employee assignments for the highlighted Work Order record. This information is view-only.

View summary work order information for any vehicle that you have completed work for in the Fleet Work Order History module. This module is display only.



Assignments view

Chapter 26

Scheduling Overview

In addition to having the ability to plan maintenance work using work order tasks or projects, a third level of planning is the ability to schedule work. While scheduling is not required to perform and complete work order tasks, it can help planners and schedulers level their workloads. Work can be scheduled in the Scheduling view of the Work Order Task module, in the Workweek Schedule module and in the Daily Schedule module. Schedule forecasting can be done in the Schedule Plan module.

Please refer to the User Guides for the individual modules for detailed instructions on creating and using records.

- **Work Order Task Scheduling view** - This view is mainly to be used as a quick reference to see which crews have been scheduled in either of the scheduling modules. Crews can also be entered here to create a schedule in either module, however adding them in this way does not commit any craft hours. You must use one of the scheduling modules to level the resources.

Remember, work order tasks can also be simply assigned to one employee or one crew by using the Assigned To or Crew field on the Work Order Task record.

- **Daily Schedule module** - Create a schedule for crafts and crews on a daily basis. Any schedule created here is automatically entered in the Scheduling view of the Work Order Task module for quick reference.
- **Workweek Schedule module** - Manage schedules for crafts and crews on a weekly basis. Any schedule created here is automatically entered in the Scheduling view of the Work Order Task module for quick reference.
- **Schedule Plan** - Design schedules of work orders that are not tied to a date. As opposed to a Daily or Workweek Schedule, a schedule date is not required on a schedule plan, so planners are afforded quite a bit of flexibility in planning the work that will later be scheduled. This can help planners who often know what work will need to be accomplished in the near future, but do not necessarily know the exact date. Planners can also use the module to keep a list of work that needs to be scheduled and later use the list to create actual Daily Schedule records. The plan can be used like a template, however it is limited in the sense that work orders are only applicable to a certain time period, so the plan should not be reused beyond that time frame.

Since most business practices only require the use of one module or the other, the Daily Schedule and Workweek Schedule modules do not work together in the sense that a week of daily schedules is not automatically create a workweek schedule. However, you can add tasks to a daily schedule from a workweek schedule and vice versa.

The Schedule Plan module is only used with Daily Scheduling.

Each schedule record is uniquely identified by a combination of the crew (a grouping of one or many crafts) and schedule date. Once the crew and date are entered and saved, they cannot be modified, only deleted.

After work is planned and scheduled all that is left is for the work to be completed. While work is being done workers may need to enter meter readings taken from assets, make changes to an asset, or facilitate any other asset management. Workers also have to log their time worked in the Timekeeping module. Once all of the work is done the tasks should be noted as finished and the work order closed.

Crafts and Crews

Please refer to the user guide for the Crew module for more information.

Crafts and crews are two types of labor classifications in the Oracle Utilities Work and Asset Management system. Crews are a grouping crafts. For example, a building crew may be broken down in to an electrician craft, a carpenter craft, and a painter craft. Employees are assigned to a craft on their Employee record, and crews are assigned in the Crew module. Each employee can only be assigned one craft, but that craft can appear on multiple crews.

Crew/Craft availability for daily schedules is managed in the Crew Daily Hours view of the Crew module. For workweek schedules, availability is defined in the Work Week business rule.

When scheduling work, you create a schedule record and assign the entire record to a crew. Later you can break down the schedule by assigning hours to different crafts.

Scheduling on the Work Order Task

Any changes made in the scheduling modules will update the Scheduling view on the Work Order Task record, and vice versa.

The first and most straightforward way to schedule work order tasks is to select Scheduling from the Views list in the Work Order Task module. When you enter a crew here, the system automatically creates a scheduling record in the module corresponding to the section where the crew was entered (Daily Schedule or Workweek Schedule).

Crew	Date
ILBC2	NOV.28.2006
ILBC2	DEC.19.2006
ILBC2	DEC.20.2006
ILBC2	DEC.21.2006
ILBC2	DEC.22.2006

Crew	Date
ILBC2	JUN.21.2006

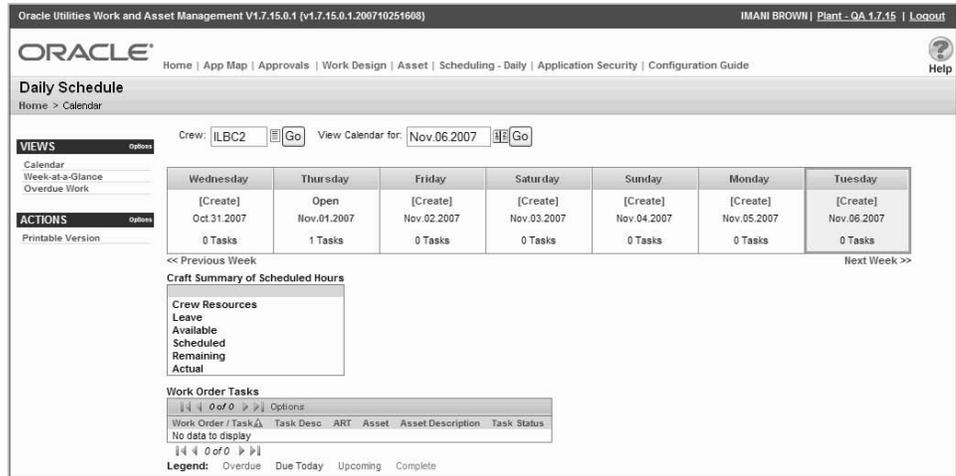
Work Order Task Scheduling View

You can also enter Estimated Start Date, Estimated Duration, Duration Units, and Estimated Finish Date, however these estimates are for informational purposes only.

If you use MS Project, and you want the information that you enter to be exported to MS Project, or if you want to assign crafts as well as crews, enter your crew assignments in the Assignments view.

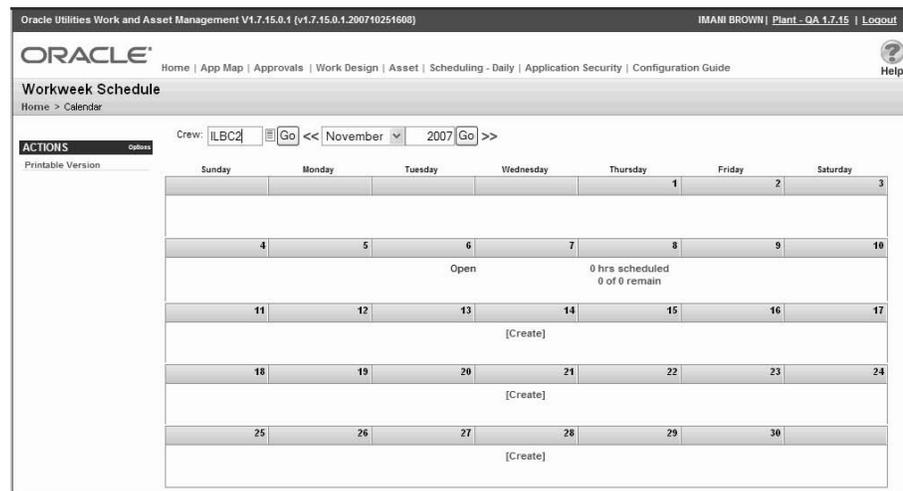
Creating Schedules

The Daily and Workweek Schedule modules differ slightly in that they present different types of calendar views when the module is first opened. The Daily Schedule module opens to a calendar view which provides a visual representation of a week of schedules. Days of the week are shown beginning with the work start day defined for the crew in the Work Week business rule.



Daily Schedule Calendar view

The Workweek Schedule module opens to a calendar view that shows a summary of schedules for a crew in the current month.



Workweek Schedule Calendar view

Beyond these differences, creating a new scheduling record from either module is essentially the same process.

How to Set the System to Automatically Generate Schedules

1. Define crew schedules in the Crew module.
2. Open the Auto Generate Weekly Schedule or the Auto Generate Daily Schedule business rule.

Use the business rule that reflects the type of scheduling used by your organization. You can set the system to define schedules by day, by week, or both.

3. Click the New icon.
4. Enter the name of the crew that you want to automatically generate schedules for.

5. **Enter ON in the corresponding Generate? column.**

If you later decide not to automatically generate schedules for this crew, you can simply set this field to OFF.

6. **Click the Save icon.**

Scheduling Records

Both the Daily Schedule and Workweek Schedule modules include sections to display schedule information, summary of scheduled hours, task lists, and various views and actions to support use of the module.

Schedule Information

The upper left section of the screen identifies the crew and date for the schedule. Where the Daily schedule module shows a simple Schedule Date, the Workweek Schedule shows a start and End Date as well as the corresponding days of the week.

Daily Schedule

The day of the week that the specified crew can start work is defined in the Work Week business rule.

Type - Use the Type field to indicate the type of work being performed on the schedule. This field is controlled by a code table so that you can create any codes that satisfy your business practices.

Workweek Schedule

Schedule Status - Available statuses are open and closed.

Craft Summary of Scheduled Hours

The upper right section of the screen keeps a running summary of the time available and scheduled for each craft in the crew.

Crew Resources - Changes to the Crew module do not affect the Crew Resources on any schedule that has already been created. Likewise, changes made to the Crew Resources on a schedule do not have any affect on the Crew module.

	ELEC	TECH
Crew Resources	1	1
Leave	0	0
Available	1	1
Scheduled	0	0
Remaining	1	1
Actual	0	0

The total available hours for the entire crew is broken down by number of hours per craft assigned to the crew. These values are originally defined in the Crew module Crew Daily Hours view and defaulted to the Schedule record when it is initially created. Although available hours are pre-determined in the Crew module, you can click the Crew Resources link here or select the view from the Views list to modify these hours, add or remove a craft, or make other adjustments to the crew resources.

Leave - If any employee on a scheduled craft has approved or posted leave hours, the system displays the number of hours here. This information is useful in determining if any employee absences will impact scheduling. Click the Leave link here or select Leave Summary from the Views list to display more detailed information about the leave time requested.

Available - The number of crew resource hours minus the number of leave hours. This value shows the actual number of hours available for the crew once leave hours are taken into account.

Scheduled - The number of hours scheduled in the Task List.

Remaining - The difference between the available hours and scheduled hours.

Actual - The actual cumulative time that the craft has posted for the work order tasks listed in the Task List. For example, if you were to open the Timekeeping Log module and search for the craft and the work order tasks listed in the Task List, the total number of hours posted to the log would equal the value in the Actual row.

Tasks on Scheduling Records

After the schedule is created, the next step is to add the work order tasks that should be included on the schedule. If you know the work order and task number for the task that you want to add, you can enter these directly into the Work Order and Task fields on the Task List.

In addition to adding tasks directly to the Task List, you can also use actions to copy from another schedule or select tasks directly from the Work Order records. Select the appropriate action from the Actions list in any scheduling module to add tasks.

Removing Tasks

Place a check in the box next to the task in the Task list and click the delete icon.

Adding Tasks

Every Add Task wizard is the same in that you search for then add tasks. The system opens the Add Tasks Wizards to the results of your last saved search. If you do not have any previously saved searches, the default results are of all active tasks that reference the crew from the schedule.

Tasks that are already included on the current schedule are not included in the list. If the task is already included on another similar schedule it appears with an asterisk (*) next to it. For example, if you are adding tasks to a Daily Schedule, only tasks that are included in another Daily Schedule appear with an asterisk(*) next to them.

When you are presented with the list of work order tasks to choose from, place a check in the boxes next to the tasks you want to add and click the appropriate button.

Modify Tasks - If you need to change the picklist, click the Modify Results button to open a search screen where you can modify your search criteria to obtain a different list of resulting tasks.

Save and Add More - Save the tasks that you checked and add more tasks. This is used when there are more tasks than are displayed on the first screen. Note the record count at the top of the work order list. If you are not displaying the full number of records found (for example you only see 1-20 of 50), you can either select the Options link and set the system to display more records, or you can select work orders from the first page, then click Save and Add More to save what you checked then select more tasks.

Add to Other Days - Add the selected tasks to other schedule days. This screen allows you to add tasks to one day, or to a range of days. If you click this button, the selected tasks are NOT added to the schedule that you are currently viewing, unless you include this date in the range for the days to add the tasks to.

Finish - Save the checked tasks, and return to the Schedule screen.

Cancel - Discard your changes and return to the Schedule screen.

The Add Task wizard in Workweek schedule is slightly different in that you must select how you want to add tasks in the first screen of the wizard. The following searching and task selection process is the same. Add to Other Days does not apply to a workweek.

Adding Tasks on Workweek Schedule

The Add Task wizard in Workweek schedule is slightly different in that you must select how you want to add tasks in the first screen of the wizard. The rest of the process is the same. Add to Other Days does not apply to a workweek schedules.

Add Tasks from Daily Plan

You can also add tasks from a Daily Schedule in both the Daily Schedule and Workweek Schedule modules. Enter the name of the daily schedule to add from, or enter a crew name and/or a day number then click Next. The system shows the Daily Plans that meet your selection criteria. Select the appropriate Daily Plans then click the Finish button. The system adds the tasks from the selected Daily Plan (s) to the schedule.

Copying Tasks

The Copy Task wizards indicate that you are copying from one schedule to another schedule; workweek to workweek, daily to daily. When you select Copy All Tasks or Copy Selected Tasks the system opens a screen where you enter the Crew and Schedule Date that you want to copy to. In Daily Schedule you also have the option of copying to multiple schedules, so you can enter the Number of Days.

Number of Days - When copying to a Daily Schedule you have the option of copying to multiple schedules. If there is no existing schedule on a given day the system creates a new schedule on valid days of the week with the entered criteria. This option only appears on Daily Schedule.

Include Days Off - When adding to multiple days you must indicate whether or not new schedules should be added to holidays, weekends or days that are not defined as work days. If this box is checked the system simply creates new schedules on consecutive days for the number of days indicated. This option only appears on Daily Schedule.

Remove From Originating Schedule - Check this option to have the tasks removed from the original schedule. This defines the activity as a move rather than a copy. This option appears on both Daily Schedule and Workweek Schedule.

Set scheduled hours to - When the tasks are copied to another schedule, the system needs to know which scheduled hours to use. Select Current Scheduled Hours to use the hours entered in the Task List of the originating schedule. Select Labor Estimates to use the hours entered in the Labor Requirements view on the work order task record. Also, you have the option to leave the fields blank. This option appears on both Daily Schedule and Workweek Schedule.

Day No. - In Schedule Plan, the number entered in the Day No. field indicates which day of the plan will be modified with the copied tasks. If the field is left blank, the system automatically uses the next available valid day. This option only appears on Schedule Plan.

How to Copy Selected Tasks

1. **Open the appropriate Daily Schedule record.**
2. **Place a check in the box next to the tasks you want to copy.**
3. **Select Copy Selected Tasks from the Actions list.**

The Copy Tasks Wizard opens.

4. **Enter the Crew and Schedule Date to create the new schedule.**

Enter the a date in the Schedule Date field to copy to one date, or enter a date range in the From Date and To Date fields to indicate a date range to copy to. The system does not copy to schedules within the range that are in Closed status.

You can add to an existing schedule by entering the crew/date combination of an existing schedule.

The Auto Generate Daily Schedule and the Auto Generate Weekly Schedule business rules can be configured to set the system to automatically copy incomplete schedules from one day to the next.

For Workweek Schedule you must select a schedule date that falls on the correct start day for the crew selected. The start of the work week is defined in the Work Week business rule.

5. Select a radio button to determine how to handle the scheduled hours on the current schedule.

Current Scheduled Hours - Copies the hours exactly as they appear on the current schedule.

Labor Estimates - Copies the labor estimates from the work order task, and enters them as the scheduled hours.

Leave Blank - Does not copy over any hours.

6. Check the Remove from Originating Schedule box if you want to move the tasks from the existing schedule to the other schedule referenced.

The effect of checking this box is that the tasks are deleted from the originating schedule.

7. Click the Finish button.

The system copies the tasks to the crew/schedule date combination entered and returns to the record that tasks were copied from.

Merging Tasks

The Merge Task wizards indicate that you are copying tasks from a schedule of one type to a schedule of a different type; workweek to daily. When you select Merge All Tasks to Daily Schedule or Merge Selected Tasks to Daily Schedule the system opens a screen where you enter the crew and schedule date you want to copy to. Here you also have the option of copying to multiple daily schedules, so you enter the Number of Days.

Crew & Schedule Date - A unique Crew and Schedule Date combination defines the schedule. If there is no existing schedule with the combination that you enter, the system creates a new schedule to fit the criteria.

Number of Days - When copying to a Daily Schedule you have the option of copying to multiple schedules. If there is no existing schedule on a given day the system creates a new schedule on valid days of the week with the entered criteria.

Include Days Off - When adding to multiple days you must indicate whether or not new schedules should be added to holidays, weekends or days that are not defined as work days. If this box is checked the system simply creates new schedules on consecutive days for the number of days indicated. This option only applies to Workweek Schedule.

Remove From Originating Schedule - Check this option to have the tasks removed from the original schedule. This defines the activity as a move rather than a copy.

Fields on the Task List

Daily Schedule - Crew RJB - 07 Aug 2007

Schedule Information

Crew: RJB \ Schedule Status: OPEN
 Type: ROUTINE \ Schedule Date: 07 Aug 2007

Craft Summary of Scheduled Hours

	ADMIN	ELEC	TECH
Crew Resources	1	2	1
Leave	0	0	0
Available	1	2	1
Scheduled	2	3	2
Remaining	-1	-1	-1
Actual	0	0	0

Task List

Seq No.	Work Order / Task	Task Desc	Interruption Code	ADMIN	ELEC	TECH	Add
1	060054 / 01 \ Labor Summary	work on the primary asset	SUPPORT	1/0	2/0	0/0	Finish Task N/A
2	0300548 / 01 \ Labor Summary	work on this	WEATHERADD	0/0	2/0	2/0	Finish Task N/A
3	060056 / 01 \ Labor Summary	Another work order to use up parts	SUPPORT	0/0	1/0	0/0	Finish Task N/A
	060055 / 01 \ Labor Summary	Use up these parts	TRAINING	1/0	0/0	1/0	Finish Task No

Daily Schedule record

Sequence No - If needed, you can enter a number in the Sequence No field to reorder the tasks. Enter any whole number in this field to represent the sequence that the tasks should be completed in, and Click Save. To actually reorder the tasks, click the Sequence No label, as with any other column, and the system sorts the rows in ascending or descending order.

Only the fields that cannot be removed through options are described here. The remaining fields are basic Work Order Task fields. Please refer to the documentation for Work Order Task for more information.

Interruption Code - Interruption codes are mainly used for compliance tracking to identify what occurred to impact the planned schedule.

Scheduled Craft Hours - The system adds a column for every craft that is assigned to the specified crew, or that has been added in crew resources. To schedule hours for each craft, enter the number of hours for that craft in the row corresponding to the scheduled work order task and Click Save. As you update the craft hours, the system updates the values in the Craft Summary of Scheduled Hours section.

Craft hours scheduled here are not linked with hours scheduled to an individual in the Assignments view.

Finish Task Button - Click the Finish Task button to launch the Finish Task wizard which is also available in the Work Order Task module. Please refer to the section entitled “[Finishing Work Order Tasks](#)” in the Work Order Task user guide for more specific details.

Labor Summary Values - The ratio displayed below the scheduled hours field represents the total number of hours scheduled for the craft for the task on every schedule over the number of hours estimated for the craft in the Labor Requirements view on the Work Order Task record.

Seq No.	Work Order / Task	Task Desc	Interruption Code	ADMIN	TECH	ART	Asset	Add
	0600220 / 01 \ Labor Summary	Do this that and the other.		6/0	4/0		ILB ASSET10	Finish Task N/A
	0600220 / 01 \ Labor Summary	BENCHMARK WORK ORDER #1		7/0	7/0		ILB ASSET10	Finish Task N/A
	0200082 / 03 \ Labor Summary	Exhausting work.		2/5	2/7		ILBASST5	Finish Task N/A
	0200082 / 02 \ Labor Summary			4/4	4/4		ILBASST5	Finish Task N/A

If you were to open the Work Order Task record and update the duration estimates for the task, the changes would be reflected in this summary.

The system displays the number of estimated hours from the Labor Requirements view in the Work Order Task module on the Daily and Workweek Schedules.

Item	People	Craft	Duration	Total Craft Hours	Total Travel Hours	Regular Expense	Premium Expense
001	1	MECH	2	2	0	00007	00005
002	1	ELEC	1	1	0	00006	00009
003	1	TECH	1	1	0	00010	00012

Estimated Hours shown on the Work Order Task Labor Requirements View

Labor Summary - Click the link below the work order number to open the Labor Summary view. This screen shows the labor estimates that were entered in the Labor Requirements view of the Work Order Task record.

Craft	Craftsmen	Quantity	Labor Duration	Remaining Hours	Revised Est	Scheduled Hours
ADMN		5		-412	0	412
TECH		7		-412	0	412

Labor Summary view

Crafts that were not in the original Work Order Task Labor Requirements but that appear in the schedule DO NOT appear in this view. Crafts must be represented on the actual Task record to be represented here.

Autofill Estimates

If this functionality is enabled, you can select the Autofill Estimates link on the toolbar to fill in all of the blank schedule fields with the estimated value when planning labor resources. Fields with existing values are not overwritten. Also, if you select Autofill Estimates, the values will be populated for all blank scheduled hours fields for every task that is present on the schedule. This cannot be applied for just one line.

Note: Your administrator controls access to this functionality using installation parameter settings.

Hide/Unhide Columns

Each of the columns in the Task List has a small box with a plus or minus. You can click these boxes to hide the column. For example, you may want to view or print the screen without seeing interruption codes, so this feature allows you to click the minus to have the column removed from the display. Click Unhide Columns to show the column again.

Hidden Columns by Crew

If one user tends to work with scheduling records for more than one crew, the user might notice that hidden column settings do not carry over between crews. The displayed columns must be

set for each different crew. Once the columns are hidden for a crew, however, they will remain hidden until the browser cookie controlling the setting expires.

Printing Schedule Records

Select one of the print options from the Actions list in Daily Schedule, Workweek Schedule, or Schedule Plan module to print a report based on the criteria specified. Select [Printable Version](#) for a formatted version of the schedule.

Daily Schedule Business Rules

The following describes the business rules that affect the Daily Schedule module:

Auto Generate Daily Schedule Rule - Controls automatic cycling of unfinished Work Order Tasks to the Crew's next day's schedule. When batch processing is done, Work Order Tasks that are not in Finished or Canceled status are placed on the next day's schedule for that Task's Crew.

Craft Rates Rule - Defines craft codes.

Default Backlog Groups Rule - Defines the relationship between crews and backlog groups (sometimes called backlog crews).

Work Week Rule - Defines the days of the week that a crew is available for work. For example, you might have a crew that is only available on weekends.

Workweek Schedule Business Rules

The following describes the business rules that affect the Workweek Schedule module:

Auto Generate Weekly Schedule Rule - Controls automatic cycling of unfinished work order tasks to the crew's next week's schedule. When batch processing is done, Work Order Task records that are not in FINISHED or CANCELED status are placed on the next week's schedule for that task's crew.

Craft Rates Rule - Defines craft codes.

Default Backlog Groups Rule - Defines the relationship between crews and backlog groups (sometimes called backlog crews).

Work Week Rule - Defines the days of the week that a crew is available for work. For example, you might have a crew that is only available on weekends.

Chapter 27

Daily Schedule

The Daily Schedule module organizes work order tasks on a daily basis. Although scheduling is not required to complete work orders, this module is an invaluable tool helping planners to ensure that there is enough manpower available to complete required work.

Crew and craft availability are defined in the Crew Daily Hours view of the Crew module. The work week is defined in the Work Week business rule.

Use the Auto-Generate Daily Schedule business rule to set the system to automatically create schedules.

Scheduling Calendar

The Daily Schedule module opens to a calendar view which provides a visual representation of a week of schedules. Days of the week are shown beginning with the work start day defined for the crew in the Work Week business rule.

Oracle Utilities Work and Asset Management V1.7.15.3.1 (v1.7.15.3.1.200806171330)

ORACLE Home | App Map | Approvals | Business Rules | Work Design | Scheduling - Daily | Scheduling - Plan | Scheduling - Workweek

Daily Schedule
Home > Calendar

Crew: ILBC2 Go View Calendar for: Jul.10.2008 Go

VIEWS Options
Calendar
Week-at-a-Glance
Overdue Work

Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday
[Create] Jul.09.2008	Open Jul.10.2008	[Create] Jul.11.2008	[Create] Jul.12.2008	[Create] Jul.13.2008	[Create] Jul.14.2008	[Create] Jul.15.2008
0 Tasks	0 Tasks	0 Tasks	0 Tasks	0 Tasks	0 Tasks	0 Tasks

<< Previous Week Next Week >>

Craft Summary of Scheduled Hours

Crew Resources
Leave
Available
Scheduled
Remaining
Actual

Work Order Tasks

1 of 0 Options
Work Order / Task Task Desc ART Asset Asset Description Task Status
No data to display
1 of 0

Legend: Overdue Due Today Upcoming Complete

Daily Schedule Calendar view

Crew - When the module opens, the Crew field defaults to the default crew entered on the logged on user's employee record. The calendar below shows the schedules for that crew. If you change the crew, click the Go button to refresh the calendar.

View Calendar for - This field represents the date that the displayed week should include. If you change the date click the Go button to refresh the calendar. You can also click the Previous Week and the Next Previous Week arrows to go back or advance the weeks.

Calendar - When a schedule exists for a particular day, the calendar shows the schedule status (Open or Closed), the date, and the total number of tasks on the schedule. Select one of these links to open the schedule for that day.

If no schedule exists there is a [Create] link that you can click to create a new schedule.

Below the calendar the system shows the Summary of Scheduled Hours and the Work Order Tasks on the schedule.

The work order numbers in the table are color coded to correspond with the scheduling status for the work order. Scheduling statuses and colors are:

Upcoming (blue) - The most future scheduled date for this task is in the future.

Due Today (green) - The most future scheduled date for this task is today.

Overdue (red) - The most future schedule date for this task is in the past.

Complete (grey) - The task is in Canceled, rejected, finished or closed status.

Week at a Glance

Select Week at a Glance from the Calendar screen Views list, to open a view showing all of the tasks for the chosen week. Change the week to view by modifying the date next to View Calendar for.

Overdue Work

Select Overdue Work from the Views list on the Calendar screen to open a view showing all overdue tasks scheduled for the crew, irrespective of the schedule date. Tasks become overdue when the most future date for the task is in the past.

Creating Daily Schedules

If there are no existing schedules on the Calendar, click the [Create] link to create a new schedule.

How to Create a Daily Schedule

1. **Open the Daily Schedule module.**
2. **Click the [Create] link on the date that you want to create a schedule.**
3. **Enter the Crew ID in the Crew field.**

The module opens with the default crew of the logged in user entered in this field. It can be changed if needed.

4. **Enter a schedule type in the Type field, if necessary.**

You can also change the date on this screen, if necessary.

The Crew, Type, and Date fields uniquely identify a Schedule record. Once the record is saved, these fields cannot be modified.

5. **Click Save.**

Now you can add tasks to the schedule.

New Schedule Record

Scheduling Craft Hours

Now that you have added the task(s), it is time to commit resources to your schedule.

How to Schedule Craft Hours

1. **Open the appropriate scheduling record.**
2. **Enter the number of hours to schedule for each craft.**
The system adds a column to the table for every craft that is on the schedule. In order to schedule hours for each craft, enter the number of hours for that craft in the row corresponding to the scheduled work order task.
3. **Click Save.**
As you update the craft hours, the system updates the numbers in the Summary of Scheduled Hours section.

Adjusting Resources

Before finishing your schedule, take another look at the Summary of Scheduled Hours section at the top of the window. A negative number in the Available field indicates that you have scheduled more hours than you have resources.

If you find that you have overcommitted your staff, you will need to level the workload by:

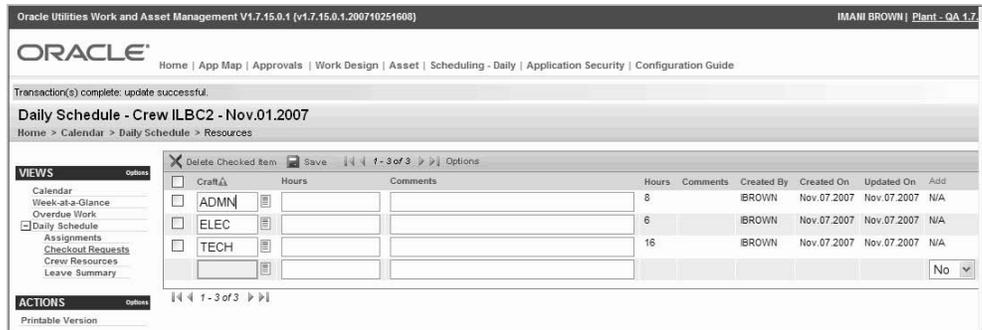
- Adding a craft or more craft hours,
- Copying one or more tasks to another schedule (either your crew's schedule for a different day or an entirely different crew's schedule), or
- Copying the entire schedule to another day when more resources are available.

How to Create Unplanned Resources for a Craft

1. **Select Crew Resources from the Views list.**
2. **Either add a new craft and the available hours, or increase the number of available hours for an existing craft.**

The information in the Crew Resources view is initially defined in the Crew module Crew Daily Hours view, however crafts can be added and hours adjusted in this view by clicking the New icon and entering the craft and hours.

To increase the number of hours for an existing craft enter the number of hours next to the craft name.

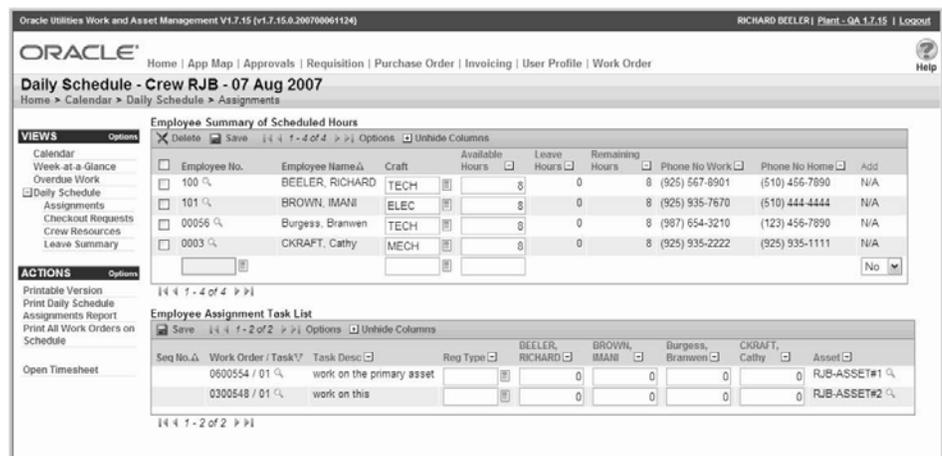


Daily Schedule Crew Resources view

- Click the Save icon and navigate back to the daily schedule record.
The Summary of Scheduled Hours section reflects the newly added craft or craft hours.
Now you can enter hours for the craft in the task list.

Assignments

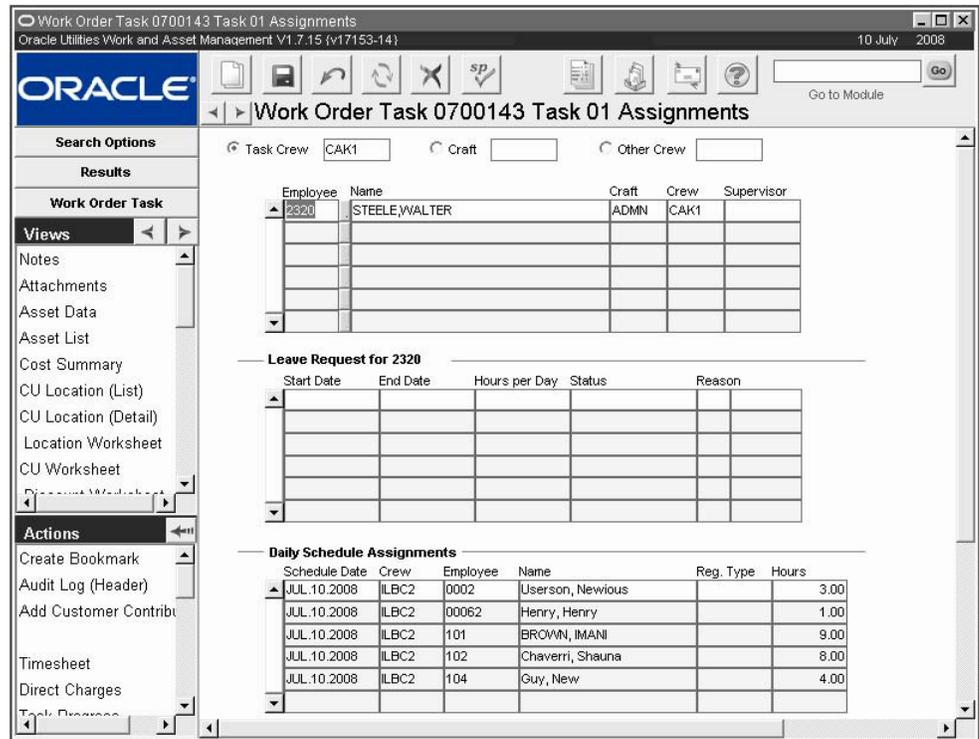
Select Assignments from the Views list to display the employees that are assigned to the crew. This information is entered in the Crew Employee Assignments view of the Crew module and can not be modified here.



Assignments view

You can add and remove members, update available hours and modify the employee crafts as appropriate. If the crew is set to allow scheduling to individuals, you can use the assignments view to schedule tasks to individuals on the crew or to those who do not already appear on the crew. Set the crew to allow this by checking the Schedule to Individual box on the Crew record. Updates made to the crew here will not be reflected on the originating crew record.

Simply adding employees to the upper section of this view will not also add them to the Work Order Task Assignments view. However, if you add hours to any employee in the lower section, the employee and number of hours will also be displayed in the Daily Schedule Assignments section of the Assignments view in the Work Order Task module.



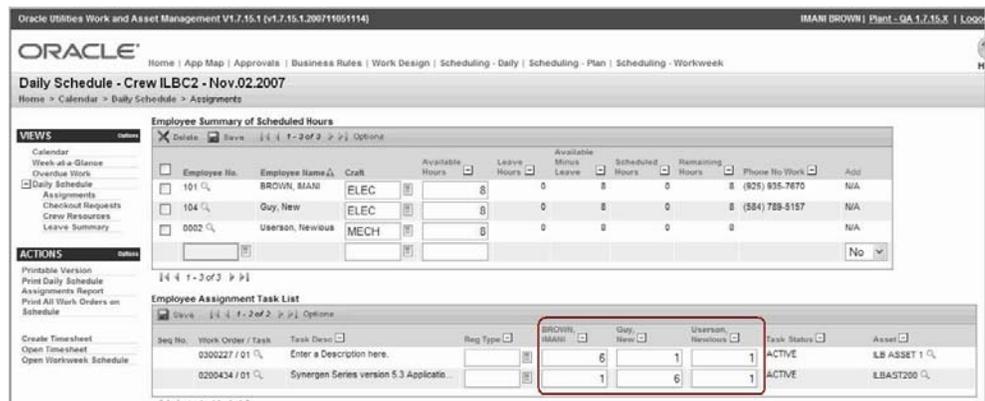
Work Order Task module Assignments view

How to Schedule an Individual Crew Member

1. Open or create the appropriate Daily Schedule record.
2. Add the appropriate work order tasks if necessary.
3. Select Assignments from the Views list.

The Assignments view contains two components. The Employee Summary of Scheduled Hours section contains information on all hours currently scheduled for each employee in the crew. The Employee Assignment Task List contains a listing of tasks on the current schedule and the hours each crew member is scheduled for each task.
4. Review the Employee Summary information.

You can add or remove employees if necessary. You can also update the craft for each employee.
5. Enter the number of hours scheduled to each employee in the bottom portion of the screen under the employee name.



6. Click Save.

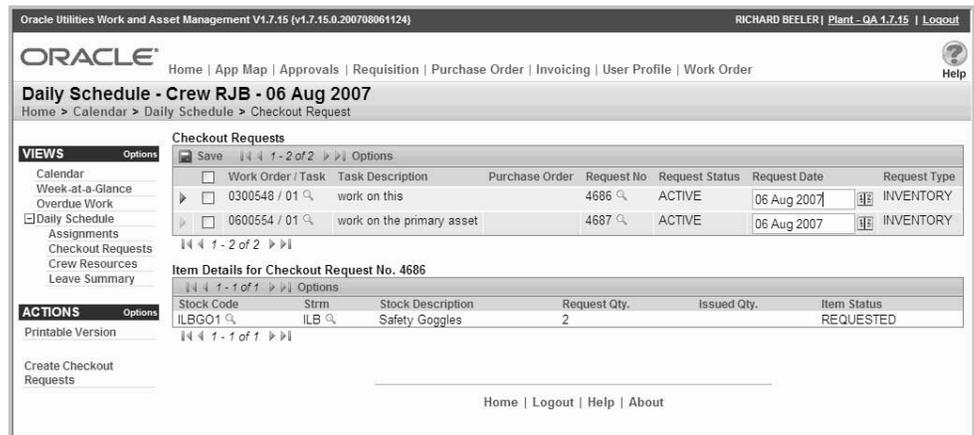
The assignments entered here are also reflected in the Work Order Task Assignments module, and in the Work Order Task Scheduling view.

Open Timesheet

Select Open Timesheet from the Actions list on the Assignments view to open the Timesheet module filtered for the date on the daily schedule and the employees on the crew. Settings in the Timekeeping Authority business rule determine your authority to view and modify records in the Timesheet module.

Checkout Requests

The Checkout Request view lists all checkout requests with items planned against work order tasks on the schedule and purchase orders related to work orders on the schedule.



Checkout Request view

The upper grid contains limited information about all Created or Active checkout requests associated with scheduled the Work Order Task records, including record status, type, and required date. You can drill down on the record number to review the full record.

When you select a record in the upper grid by clicking the selector at the beginning of the row, the lower grid changes to show the items included on the request selected above, along with the requested and issued quantities and item status.

Create Checkout Requests

If you have the appropriate function in your responsibilities profile, you can create checkout requests from the Daily Schedule record.

How to Create a Checkout Request from a Daily Schedule

1. Open the appropriate Daily Schedule to the Checkout Requests view.
2. Select Create Checkout Requests from the Actions list.
3. Fill in the information as required by your business practices.

If you select inventory as the type, you can then select the appropriate work order task from the list of tasks on the Daily Schedule. If you select courtesy stores as the type, you can then select both the work order task and the appropriate purchase order from a list of purchase orders associated with the work order task selected.

4. Click Next.

The screen shows a listing of the parts planned against the work order task or held as courtesy stores.

5. Click the Add box for each item you want to check out.

Or click Select All to select all the items. If a large number of stock items are associated with the task, you may want to filter the list first to make it easier to find the parts you need. Click Filter to enter selection and order by criteria.

6. Click Next.

7. Enter the quantities of each stock item you want to request.

The system displays the quantity planned against the task, but you can enter a smaller or larger quantity if necessary. You can also change expense codes if the system is configured to allow you to override expense codes.

8. Click Finish.

The system creates the Checkout Request record and displays the request number.

9. Click Restart or Close.

If you want to create additional checkout requests, click Restart to repeat the process, otherwise, click Close to return to the Daily Schedule.

Activate Selected Checkout Requests

If you have the appropriate function in your responsibilities profile, you can activate checkout requests on the Checkout Request view by first select the box for each request you want to activate and then selecting Activate Selected Checkout Requests form the Actions list.

When you activate checkout requests using this action, the system does not perform budget checking. If you want to include budget checking you must active the requests from within the [Checkout Request](#) module.

Crew Resources

Select Crew Resources from the Views list to review the crafts and craft hours available to the crew. This information is initially defined in the Crew module Crew Daily Hours view, however crafts can be added and hours adjusted in this view by clicking the New icon and entering the craft and hours.



Crew Resources view

Changes to the Crew module do not affect the Crew Resources on any schedule that has already been created, and changes made to the Crew Resources on a schedule do not have any affect on the Crew module.

Leave Summary

Select Leave Summary from the Views list to display the leave time that has been approved for employees on the crafts you need to schedule. The leave time shown only applies to the date that you are scheduling for.

Oracle Utilities Work and Asset Management V1.7.15 (v1.7.15.0.200708130904) RICHARD BEELER | Plant - QA 1.7.15 | Logout

ORACLE Home | App Map | Approvals | Requisition | Purchase Order | Invoicing | User Profile | Work On  Help

Daily Schedule - Crew RJB - 15 Aug 2007
 Home > Calendar > Daily Schedule > Leave Summary

Employee No.▲	Employee Name	Craft	Leave Reason	Hours
100	RICHARD BEELER	TECH	VACATION	8.00

VIEWS Options

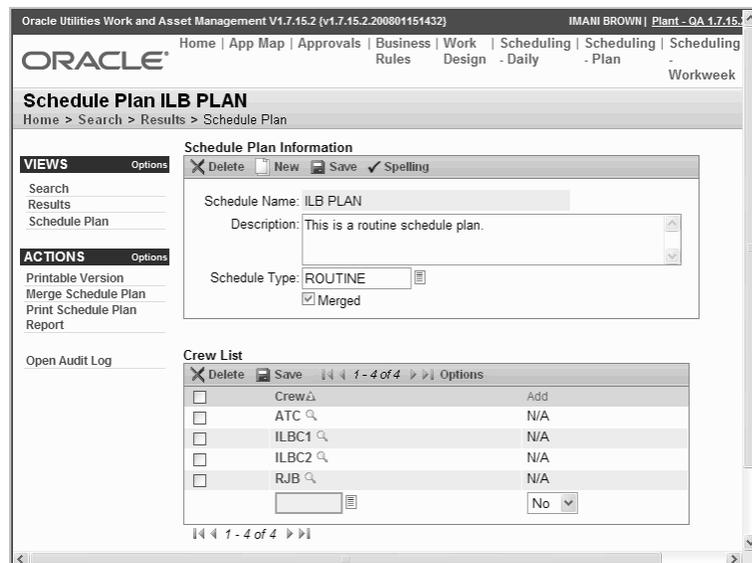
- Calendar
- Week-at-a-Glance
- Overdue Work
- Daily Schedule

Leave Summary view

Chapter 28

Schedule Plan

The Schedule Plan module allows you to plan a schedule of work orders that are not tied to a date. As opposed to a Daily or Workweek Schedule, a schedule date is not required here, so planners are afforded quite a bit of flexibility in planning the work that will later be scheduled.



Schedule Plan module

This functionality can help planners who often know what work will need to be accomplished in the near future, but do not necessarily know the exact date. Planners can also use the module to keep a list of work that needs to be scheduled and later use the list to create actual Daily Schedule records. The plan can be used like a template, however it is limited in the sense that work orders are only applicable to a certain time period, so the plan should not be reused beyond that time frame.

Crew and craft availability are defined in the Crew Daily Hours view of the Crew module. The work week is defined in the Work Week business rule.

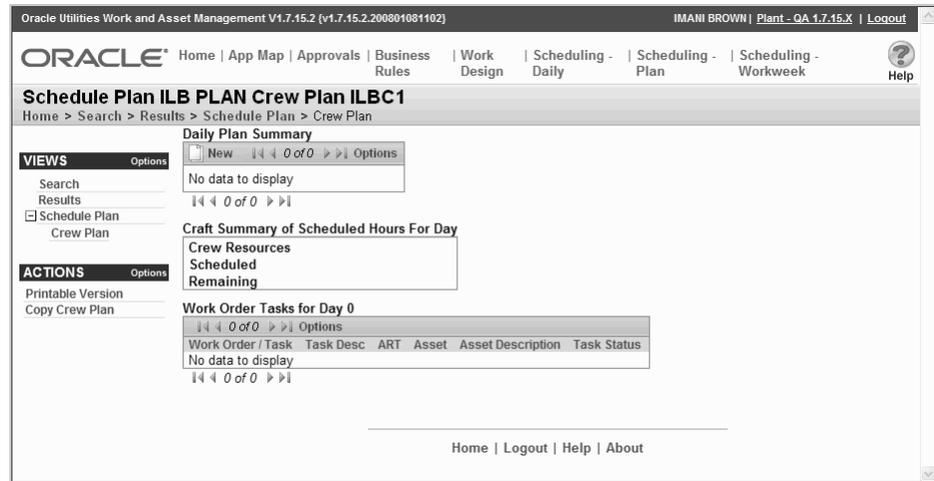
Schedule plans are constructed by adding one or many crews then adding one or many day plans for each crew. Each day plan consists of one or many tasks. Resource hours can be allocated and tracked as they are with any schedule. Once the plan is created, it can be copied to existing daily schedules or used to create new ones.

Add crews to the schedule plan by entering the crew name in the first blank row of the Crew List section of the screen. Continue entering new rows until all necessary crews have been added. In order to have a complete Schedule Plan you must then add daily plans for each crew listed.

Crew Plan

Use the Crew Plan screen to add Daily Plans for each crew.

Select a crew name from the Crew List to open the Crew Plan view. This screen shows detail for the crew including the daily plans that have been created, a craft summary of resources, and the summary of work order tasks on the day plan. You can also create day plans from this screen.

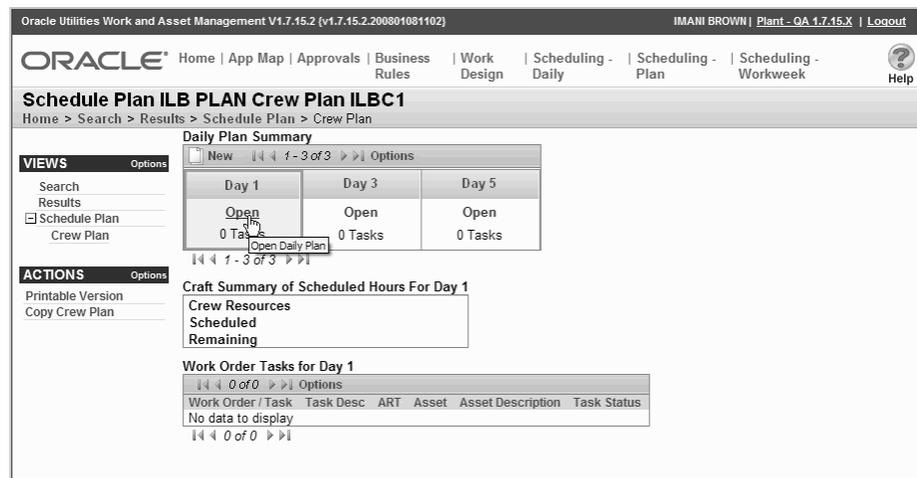


Crew Plan screen

The Crew Plan screen is similar to the Calendar view in Daily Schedule providing a visual representation of daily plans. Each cell represents a day showing a link to open the daily plan for that day, and the number of work order tasks included on that day. Click the day number to refresh the bottom sections of the screen to show summaries for that particular day. Select Open to view the actual Daily Plan record.

The Craft Summary of Scheduled Hours shows the Available Crew Resources along with Scheduled and Remaining resource hours by craft for the selected day. The Work Order Tasks for Day shows a summary of the Work Order Tasks that are listed on a particular Daily Plan.

Add daily plans by clicking the New icon in the Daily Plan Summary section.



Schedule Calendar View

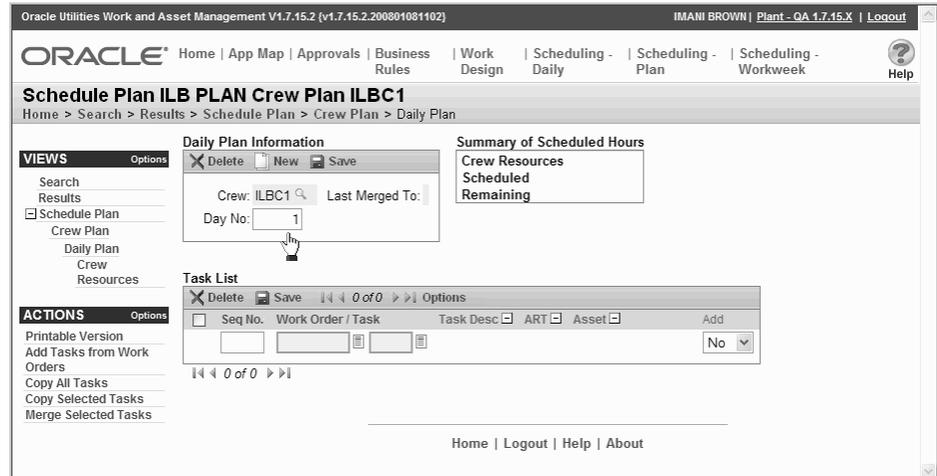
Daily Plan

Very similar to the Daily Schedule screen, the Daily Plan window is divided into three sections:

The Daily Plan Information section identifies the specific schedule.

The Summary of Scheduled Hours section keeps a running summary of the number of hours available, scheduled, and remaining for each craft on the plan.

The Task List contains details about the specific work order tasks.



Daily Plan Task List

Daily Plan Information

The upper left section of the screen identifies the crew, day and the last day that the plan was merged to a daily schedule.

Instead of associating work order tasks to a specific day of the week, tasks are associated to a day number. The planner can then conceptualize the days as falling into succession according to the workweek that is defined for the crew in the Work Week business rule. For example, if the work week is defined as starting on a Tuesday, then Day 1 will be placed on a Tuesday when the schedule plan is merged to a daily schedule.

When merging schedule plans, the system verifies whether or not the days land on valid work days, and if they do not, the date is moved up by one day until a valid day is found.

Task List

The Task List component displays the work order tasks that have been added to the daily plan.

This section includes columns for each craft included in the crew for the schedule. Place the number of hours to schedule for each craft in the box below the craft name in the row for the appropriate work order task and Click Save. As you update the craft hours, the system updates the numbers in the Summary of Scheduled Hours section.

Adding Tasks - If you know the work order and task number for the task that you want to add, you can enter these directly into the Work Order and Task fields on the Task List. Otherwise, select one of the Add Tasks actions from the Actions list to add to the schedule.

Sequence No - If needed, you can enter a number in the Sequence No field to reorder the tasks. Any whole number can be entered into this field. Enter numbers to represent the sequence that the tasks should be completed in, and Click Save. To actually reorder the tasks,

Only fields that cannot be removed through options are described here. The remaining fields are basic work order task fields.

click the Sequence No label, as with any other column, the system reorders the rows in ascending or descending order.

Schedule Craft Hours - The system adds a column to the table for every craft that is on the schedule. In order to schedule hours for each craft, simply enter the number of hours for that craft in the row corresponding to the scheduled work order task and Click Save. As you update the craft hours, the system updates the numbers in the Summary of Scheduled Hours section.

Labor Summary Values - The ratio circled in the example below represents the total number of hours scheduled for the craft for the task on every schedule over the number of hours estimated for the craft in the Labor Requirements view on the Work Order Task record.

Seq No.	Work Order / Task	Task Desc.	Interruption Code	ADMIN	TECH	ART	Asset	Add
0500220 / 01	Labor Summary	Do this that and the other.		6	4	E	ILB ASSET10	Finish Task N/A
0500220 / 01	Labor Summary	BENCHMARK WORK ORDER #1		60	40	E	ILB ASSET10	Finish Task N/A
0200082 / 03	Labor Summary	Exhausting work.		70	70	E	ILBASST5	Finish Task N/A
0200082 / 02	Labor Summary			4	4	E	ILBASST5	Finish Task N/A

If you were to open the work order task and update the labor summary values, the changes would be reflected in this summary.

Labor Summary - Click the link below the work order number to open the Labor Summary view. This screen shows the labor estimates that were entered in the Labor Requirements view of the Work Order Task record.

Crafts that were not in the original Work Order Task Labor Requirements but that appear in the schedule DO NOT appear in this view. Crafts must be represented on the actual Task record to be represented here.

How to Create a Schedule Plan

1. **Open the Schedule Plan module.**
2. **Click New.**
Enter a Schedule Name, Description, and select a Schedule Type.
3. **Click Save.**
The system displays the Crew on Schedule Plan section at the bottom of the screen.
4. **Enter a Crew and save.**
The system populates information for the fields related to the selected crew.

Once you have entered the crews on the plan, you must enter the individual daily plans for each crew.

5. **Continue to repeat step 4 to include as many crews as needed.**

How to Enter Individual Daily Plans for Schedule Plan Crews

1. **Open the appropriate Schedule Plan.**
2. **Select the appropriate crew from the Crew List.**
3. **Click the New icon in the Daily Plan Summary section.**
4. **Enter the day that the plan applies to and save.**

The system displays the Task List section at the bottom of the screen where you can enter the work order tasks that should be scheduled on the day entered.

Add work order tasks manually or by using the Add Tasks from Work Orders action.

Once all of the tasks are entered you must enter the craft and available hours for the plan.

5. **Continue to enter new Daily Plans to complete a full Crew Plan.**

You can enter as many days as necessary for the crew to complete a Crew Plan.

How to Enter Craft and Available Hours for a Schedule Plan

1. **Open the appropriate Schedule Plan.**
2. **Select a crew then a daily plan on that crew.**
3. **Select Crew Resources from the Views list.**
4. **Enter a craft and the number of hours that craft is available on one day for the plan.**
5. **Enter as many crafts as needed for this day on the plan.**

How to Copy a Crew Plan

Copying Crew Plans allows you to duplicate the daily plans including the crew resources and work order tasks that exist on the crew plan. This can be a great time saver if you are creating a Schedule Plan for multiple crews with similar work days. It can also be used to copy the values for one crew to different Schedule Plans.

1. **Open a Schedule Plan.**
2. **Select a Crew.**
3. **Select Copy Crew Plan from the Actions list.**
4. **Enter a Schedule Plan and Crew and click Finish.**

You have the option of copying just the crew to a different crew on the plan, or you can copy the crew to an entirely different schedule plan. The only restriction is that the crew already exist on the Schedule plan that you are copying to.

The system copies all Daily Plans including work order tasks not in FINISHED status, crafts, available hours and schedule hours to the new Crew Plan.

How to Create a Daily Schedule from a Schedule Plan (Merge)

1. **Open the Schedule Plan that you want to use to create the Daily Schedule.**
2. **Select Merge Schedule Plan from the Actions list.**
3. **Enter a Schedule Date and select merge options.**

Replace existing Daily Schedule - If you want to add to an existing schedule, do not check the box. If the Schedule Date already exists and is not in closed status and the box is checked, the system removes all detail from the existing schedule and overwrites it with details from the Schedule Plan. If the existing schedule is in closed status, the system increments the date by one day until it reaches a schedule date that is not closed.

Include Days Off - When adding to multiple days you must indicate whether or not new schedules should be added to holidays, weekends or days that are not defined as work days. If this box is checked the system simply creates new schedules on consecutive days for the number of days indicated. Valid work days and days off are defined in the Crew Daily Hours view of the Crew module.

4. **Click the Finish button.**

The system copies all crews, crafts, available hours, and scheduled hours to the new daily schedule. Only copies work order tasks that are not in finished status.

If the Schedule Date does not fall within the workweek for the Crew as it is defined in the Work Week business rule, the system increments the Schedule Date by one day until it reaches a day that falls within the workweek.

The Last Merged To date on the Daily Plans are populated with the date that the action is completed, and the Merged box is checked on the Schedule Plan header.

How to Copy Tasks on a Schedule Plan

1. **Open the Daily Plan that you want to copy tasks from.**
2. **Select Copy All Tasks or Copy Selected Tasks form the Actions list.**
3. **Enter the schedule name, crew, and the day to copy to.**

If you do not enter a day that already exists on the Crew Plan the system creates a new day on the crew plan. If the day already exists then the system copies any information that is not already on the existing record.

Leave the Day No. field blank to have the system automatically use the next available day.

4. **Click Finish.**

The system copies all work order tasks that are not in finished status and that do not already exist in the daily plan. The crafts, available hours, and schedule hours are also copied. Any crafts that already exist on the plan are not duplicated.

How to Merge Tasks from a Schedule Plan

1. **Open the appropriate Daily Plan.**
2. **Select the work order tasks to merge to a daily schedule.**
3. **Select Merge Selected Tasks from the Actions list.**
4. **Enter the Schedule Date and click Finish.**

If the schedule date did not already exist, the system creates a daily schedule with the Schedule Date entered. The selected work order tasks, and scheduled crafts hours are also copied. If the Schedule Date already existed, the system copies over any information that was not already included on the existing record.

Chapter 29

Workweek Schedule

The Workweek Schedule module organizes work order tasks weekly basis. While scheduling is not required to complete work orders, this module is an invaluable tool in helping planners to ensure that there is enough manpower available to complete required work.

Crew and craft availability are defined in the Crew Daily Hours view of the Crew module. The work week is defined in the Work Week business rule.

Use the Auto-Generate Weekly Schedule business rule to set the system to automatically create schedules.

Scheduling Calendar

The Workweek Schedule module opens to a calendar view that shows a summary of schedules for a crew in the current month. Select a schedule or create a new schedule to open the module.

The screenshot shows the Oracle Workweek Schedule calendar interface. At the top, it displays the Oracle logo and navigation links: Home | App Map | Approvals | Requisition | Purchase Order | Invoicing | User Profile | Work Order. The page title is "Workweek Schedule" with a breadcrumb "Home > Calendar". Below the title, there is a search bar for "Crew" with the value "RJB" and a "Go" button. To the right, there are navigation controls for the month and year: "<< July 2007 >>". A "Printable Version" link is also present. The main area is a calendar grid with columns for days of the week (Sunday through Saturday) and rows for dates (1 through 31). Each date cell contains a "[Create]" button. The interface is clean and professional, typical of an enterprise software application.

Workweek Schedule calendar

The Workweek Calendar is not separated into days of the week, but rather handles all of the days in a defined work week as one schedule.

Crew - The Crew field defaults to the default crew indicated on the logged on user's employee record. The calendar shows the schedules for that crew. If you make changes to the crew or date, Click the Go button to refresh the calendar.

Date - This field represents the month and year displayed on the calendar. Click the arrows to move forward or back a month.

Calendar - When a schedule exists for a particular day or week, the calendar shows the schedule status (Open or Closed), the schedule type (if applicable), and the total number of hours that remain available to be scheduled out of the total that were originally available for the specified crew. Click any of these links to open the schedule for that week.

Creating Workweek Schedules

If there are no existing schedules on the Calendar, click the [Create] link to create a new schedule.

How to Create a Schedule

- Open the Workweek Schedule module.**
 When a schedule exists for a particular week, the calendar shows the schedule status (Open or Closed) and the total remaining of the total crew resources (number of hours that remain available to be scheduled out of the total that were originally available). Select one of these links to open the schedule for that day or week.
- Select the [Create] link on the date that you want to create a schedule.**
- Enter the Crew ID in the Crew field.**
- Enter a schedule type in the Type field, if necessary.**
 You can also change the date on this screen, if necessary.
- Click Save.**

The screenshot shows the Oracle Utilities Work and Asset Management V1.7.15 interface. The main title is "Workweek Schedule - Crew ILBC2 - 02 Jul 2007". The interface includes a navigation menu with options like "Calendar", "Workweek Schedule", "Crew Employees", "Crew Resources", and "Leave Summary". The "Schedule Information" section contains fields for "Crew: ILBC2", "Schedule Status: OPEN", "Type: ROUTINE", "Start Date: 02 Jul 2007", and "End Date: 06 Jul 2007". A "Summary of Scheduled Hours" table is displayed on the right, and a "Task List" table is at the bottom.

	ADMIN	TECH
Crew Resources	40	80
Leave	0	0
Available	40	80
Scheduled	0	0
Remaining	40	80
Actual	0	0

Seq No.	Work Order / Task	Task Desc	Interruption Code	ADMIN	TECH	ART	Asset	Required	Add
				0/0	0/0				No

New Workweek Schedule record

Now you can add tasks to the schedule.

Scheduling Craft Hours

Now that you have added the task(s), it is time to commit resources to your schedule.

How to Schedule Craft Hours

- Open the appropriate scheduling record.**
- Enter the number of hours to schedule for each craft.**
 The system adds a column to the table for every craft that is on the schedule. In order to schedule hours for each craft, enter the number of hours for that craft in the row corresponding to the scheduled work order task.
- Click Save.**

As you update the craft hours, the system updates the numbers in the Summary of Scheduled Hours section.

Adjusting Resources

Before finishing your schedule, take another look at the Summary of Scheduled Hours section at the top of the window. A negative number in the Available field indicates that you have scheduled more hours than you have resources.

If you find that you have overcommitted your staff, you will need to level the workload by:

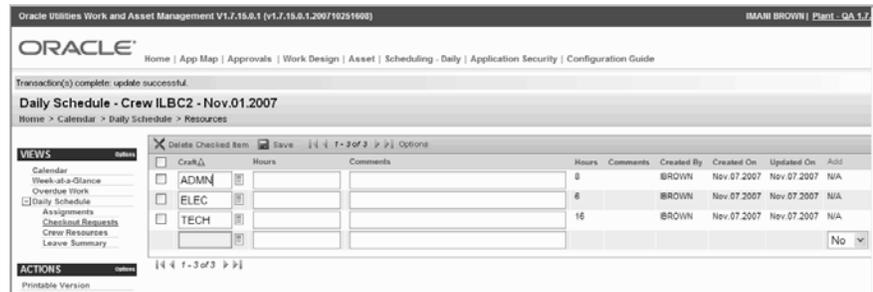
- Adding a craft or more craft hours,
- Copying one or more tasks to another schedule (either your crew’s schedule for a different day or an entirely different crew’s schedule), or
- Copying the entire schedule to another day when more resources are available.

How to Create Unplanned Resources for a Craft

1. Select Crew Resources from the Views list.
2. Either add a new craft and the available hours, or increase the number of available hours for an existing craft.

The information in the Crew Resources view is initially defined in the Crew module Crew Daily Hours view, however crafts can be added and hours adjusted in this view by clicking the New icon and entering the craft and hours.

To increase the number of hours for an existing craft enter the number of hours next to the craft name.

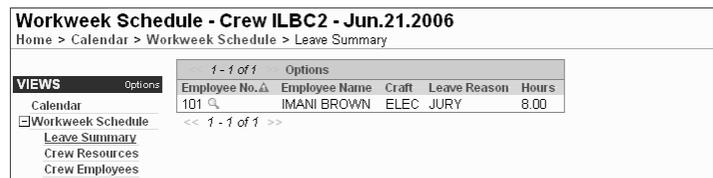


3. Click the Save icon and navigate back to the daily schedule record. The Summary of Scheduled Hours section reflects the newly added craft or craft hours.

Now you can enter hours for the craft in the task list.

Leave Summary

Select Leave Summary from the Views list to display the leave time that has been approved for employees on the crafts you need to schedule. The leave time shown only applies to the date that you are scheduling for.



Leave Summary view

Crew Resources

Select Crew Resources from the Views list to review the crafts and craft hours available to the crew. This information is initially defined in the Crew module Crew Daily Hours view, however crafts can be added and hours adjusted in this view by clicking the New icon and entering the craft and hours.

Workweek Schedule - Crew ILBC2 - Jun.21.2006			
Home > Calendar > Workweek Schedule > Resources			
VIEWS Options Calendar <input checked="" type="checkbox"/> Workweek Schedule Leave Summary Crew Resources Crew Employees	<input type="button" value="New"/> 1 - 3 of 3 Options		
	Craft Δ	Hours	Comments
	ADMIN	48	
	ELEC	5	We didn't think we would need a...
	TECH	96	
	<< 1 - 3 of 3 >>		

Crew Resources view

Changes to the Crew module do not affect the Crew Resources on any schedule that has already been created, and changes made to the Crew Resources on a schedule do not have any affect on the Crew module.

Crew Employees

Select Crew Employees from the Views list to display the employees that are assigned to the crew. This information is entered in the Crew Employee Assignments view of the Crew module and can not be modified here.

Workweek Schedule - Crew ILBC2 - Jun.21.2006						
Home > Calendar > Workweek Schedule > Crew Employees						
VIEWS Options Calendar <input checked="" type="checkbox"/> Workweek Schedule Leave Summary Crew Resources Crew Employees	<input type="button" value="New"/> 1 - 4 of 4 Options					
	Employee No. Δ	Employee Name	Employee Status	Phone No	Work	Craft
	0002	Userson, Newious	ACTIVE			MECH
	100	BEELE, RICHARD	ACTIVE	(925) 567-8901		TECH
	101	BROWN, IMANI L.	ACTIVE	(925) 935-7670		ELEC
	104	Guy, New	ACTIVE	(584) 789-5157		ELEC
<< 1 - 4 of 4 >>						

Crew Employees view

Chapter 30

Timekeeping

Use the Timekeeping module to enter, review, and approve time charges. Once charges are entered, processing allows employees to receive proper compensation for their work and applies labor charges to the appropriate accounts throughout the system.

Employees can also use the Auto Timesheet Schedule view in the Employee module to set up charge types and days of the week for auto creation of time sheets.

Most employees will have employee level access to these modules, meaning that they can only access their own timesheets. Supervisor level access allows managers to view the timesheets of everyone in their crew or department/area. There are also payroll-level authorities defined that enable payroll staff to view and modify all timesheets. These levels are set in the Timekeeping Authority Business Rule.

Employees enter their timesheet information in the Timekeeping module and save the record in Pending Approval status. Once a supervisor reviews the timesheet and changes the record status to Approved, the system posts approved charges throughout the system to the charge numbers specified per timesheet item and sets both item and record statuses to Posted.

Employees enter their leave request information in the Leave Request module and save the record in Pending Approval status. Once this record is approved the system posts the time to the timesheet (if requested) or the employee can enter the time on the timesheet manually. After that point the leave time is handled by the system in the same way as any other time charge.

Individual charges cannot be modified by most users once they are approved. Supervisors and payroll personnel can modify approved items that have not yet been posted. However, as long as the defined pay period remains open, new charges can be added. In this case the system sets the status to Reopened when changes are saved. The status of the original charge items is not changed. All timesheets in Reopened status must be reviewed and approved again before the system posts charges and sets their status to Posted.

There are direct links to the Timesheet in the Work Order Task, Work Order Task Assignment, and Service Request modules. Part of the Work Order Task Finishing process is filling in the timesheet.

Timekeeping Records

The Timesheet window is divided into two sections: the upper section contains summary information about the employee, and the lower section contains line items for describing specific time charges.

As you record time and save each charge line, the system calculates the total Regular, Premium and requested Comp hours at the bottom of the window.

When creating a new Timesheet record you must complete the upper section first then save the record. After the record is saved, you can complete individual time charge line items.

Charge Number	Sub	Status	Craft	Shift	Diff	Type	Hours	Shift	Diff	Type	Hours	Expenses				
												Regular	Premium			
0600043	01	CREA	ELEC	AA	1.00	135	2.00					00006	00009			
Total Hours												Regular	2.00	Premium/Comp	.00	.00

Timesheet record

The following fields are included:

Date - The Date field indicates the day of the recorded time. The date you enter must fall within an “open” period in both the Pay Period and Accounting Period modules.

Status - Timesheets have five associated statuses: Created, Pending Approval, Approved, Reopened, Posted, and Closed.

Created - When the employee enters the work charges for the day.

Pending Approval - When the employee has finished entering work charges and is ready to route the timesheet to the Next Approver for approval. The system sends an alert to the Approver to make them aware of the record.

Approved - When the employee’s supervisor checks and approves the time entered. To approve and post Timesheets, update the Timesheet status to Approved.

Reopened - If new items are added, the system changes the Timesheet status to Reopened.

Posted - When the timesheet has been approved and posted to bookkeeping.

Closed - When a timekeeping period is closed.

Next Approver - The approval title for the person responsible for approving the record. The list of values for this field is controlled by the Approval Limits module in the Administration subsystem.

A Next Approver must be entered before you can change the status to Pending Approval

For more detailed information on approvals, please refer to the document entitled Approvals in the System Basics User Guide.

Employee (and Employee Name) - When you select the identification number for the employee from the list of values, the system enters the employee’s name in the second field.

Supervisor (and Supervisor Name) - When you select the code for the position responsible for supervising the employee, the system enters the positions name in the second field.

The associated list of values for the Supervisor field is controlled by Code Table 310.

Craft/Crew - These fields indicate the employee’s craft and crew assignments. Both the Craft and the Crew are taken from the Employee record for the employee. This designation may

Many of the fields on the Timekeeping record are controlled by Business Rules. Please see the section on the Timekeeping Business Rules at the end of this chapter for more information.

different from the Craft that appears in the timesheet line item below because the employee may have worked a different craft for the time being recorded.

Department and Area - These fields indicate the employee's department and area assignment.

Work Day Start / End Time - The system copies this information from the Employee module for employees scheduled to use automatic timesheets. Other employees can enter the work day start and stop times to show their normally scheduled work times.

Both fields use a colon to separate hours and minutes (5pm, for example, is entered as 17:00). You can enter the times directly or select from one list of values for hours and then from a second list for minutes.

Time Sheet Details

Enter one line for each charge number or code that applies to the timesheet.

Charge Number Field (#1) - The Charge Number is comprised of four fields. The first field, Charge Type, controls which of the other three can be used and what the function of each will be.

The Charge Type field has an associated list of values controlled by the Timekeeping Charge Types Business Rule. The way that your charge types are defined depends on the business practices of your organization.

When you select a charge type from the list, the system supplies the Charge Description below the Comments field.

Charge Number Field (#2) - The associated list of values for the second Charge Number field is controlled by Code Table 230.

The second Charge Number field represents the Asset Type. This field can only be used if the Asset Charge Type has been selected in the first field.

Charge Number Field (#3) - The third Charge Number field functions differently depending on the charge type entered in the first field. Some examples are:

Account - If the Charge Type is for an account the third field contains the Account Reference ID for the account which receives the charges. The associated list of values is based on the Account module in the Resource subsystem, and only lists account numbers that have a Reference ID.

Work Order - If the Charge Type is for a Work Order the third field contains the Work Order number. Only Work Orders in Active status, or with at least one Work Order Task in Active status, are displayed on the list of values.

Asset - If the Charge Type is for an asset the third field contains the Asset ID for the asset which receives the charges. The associated list of values is based on the Asset module in the Resource subsystem and is limited by the type of asset indicated in the second field. If the asset has more than one associated account number, the system opens a second list of values that shows all the accounts indicated for the asset in the Work Order Defaults and Additional Accounts views for the asset.

Project - If the Charge Type is for a project the third field contains the project number. Also the fourth field contains the subproject.

Charge Number Field (#4) - The fourth Charge Number field represents a work order task number and can only be used if a work order charge type has been selected in the first fields. The field has an associated list of values that is controlled by available tasks for the work order selected in the third field.

Charge Number Field (#5) - The fifth Charge Number field represents a subproject number and can only be used if a project was selected as the charge type. The field has an associated list of values that is controlled by available subprojects for the project in the third field.

Status - The system maintains the Status field for individual time charges.

Craft - The system supplies the craft from the Craft field at the top of the window, but you can select a different craft from the list of values, if appropriate. This would apply if the employee worked a different craft than is assigned on his or her Employee record. As with the Craft field at the top of the window, the list is controlled by entries in the Craft Rates business rule.

Regular and Premium Shift and Differential fields - In the Shift field, enter the Regular or Premium shift worked for the charged time.

The Differentials not a multiplier, but a dollar amount added for each hour of work on the shift.

For example, you normally work the regular day shift and your hourly wage is \$20.00. One week you swap shifts with someone and to work the night shift, which has a differential of \$1.50. For that week, working that shift, your effective hourly wage is \$21.50.

Regular and Premium Type - The Type field indicates the Earnings Code Type for the time charged. Earnings Codes are defined by your organization in the Timekeeping Labor Earning Types Business Rule and can include both multipliers and adders to the base wage rate.

Regular, Premium, and Comp Hours - Enter the number of hours to be charged in the appropriate Hours field. You must enter either regular or premium hours but you cannot mix the two on the same charge line.

Premium work would be overtime or work done under hazardous conditions.

You can also request comp time by entering the number of hours in the Comp hours field. You can only ask for comp time against premium hours worked and your request cannot exceed the number of hours worked on that charge line.

For example, you worked 2 hours of overtime on the first task of a work order, and three hours of overtime on the second task. You would enter each task as a separate charge line. If you wanted to request 5 hours of comp time, you would request 2 hours on the first line and 3 hours on the second.

Expense Codes - The system provides the Expense Codes when you select a chargeable account for the time under either Regular or Premium.

The Variable Expense Codes Business Rule determines how expense codes are handled for Timekeeping records.

Work Started and Work Stopped - You can enter the actual work start and stop times in these fields. Double click the field to open the calendar tool. Time should be entered in military format. The start and stop date and time are logged in the Timekeeping Log.

Travel Time - Travel Time is that portion of the time entered in the Hours column that was used for traveling. If you traveled for 1 hour and worked for 3 hours, enter 4 hours in the Hours column for the appropriate Charge Number and 1 hour in the Travel Time field.

Comments - Using the Comments field, you can enter a short note about the charges. Some examples would be an explanation about a premium charge, or an explanation of emergency leave.

Charge Description - The system supplies the Charge Description when you complete the Charge Type fields.

Task Progress - Task Progress appears on the Actions list when you are making charges against work order tasks in Active status. Selecting Task Progress from the Actions list when you have highlighted a work order task in Active status opens the Task Progress Summary window where you can record progress on the relevant work order task. You can finish the task in a manner very similar to the process initiated from the work order task, or you can record the task as only partially completed, which updates % Complete field on the work order task.

How to Create a Timesheet Record

1. **Open the Timekeeping module.**
2. **Click the New icon.**
3. **Enter the Date, Employee Number, and Crew.**
The system displays the Employee Name and related information. Enter a Date within the current pay period.
4. **Enter any additional information as needed in the remaining fields in the upper portion of the window.**
5. **Click the Save button.**
You can now Enter Time on the Timesheet.

You can also create timesheets and enter time using the Timesheet Wizard located on the home page.

How to Enter Time on a Timesheet

1. **Open the appropriate Timesheet record.**
If you have not yet created a timesheet, see How to Create a Timesheet Record.
2. **Enter Charge Number information as appropriate.**
There are four Charge Number fields.
3. **Select the Craft from the list of values.**
4. **Enter Regular and/or Premium Shift information.**
Shift - Select the Shift from the list of values. The system fills in the Diff (Shift Differential) field.

Shift Type - Select the Shift Type from the list of values.

Hours - Enter the number of hours worked.
5. **Enter Comp Time hours as needed.**
6. **Click the Save icon.**
The system saves the line item in Created status. Click the next line to enter additional charge information. Once you have finished entering time, you need to Route the Timesheet for Approval.

You can also create timesheets and enter time using the Timesheet Wizard located on the home page.

How to Modify Timesheet Charges

1. **Open the appropriate timesheet.**
2. **Make the appropriate changes.**
You must have the appropriate authority to modify charges.
3. **Click the Save icon.**
If the Timesheet was in Approved status before the changes were made, the system resets the status to Reopened. Then the Timesheet must be routed for approval once again.

Automatically Creating Timesheets

Settings in the Scheduled Holidays Business Rule determine holiday dates and charge numbers for all employees with automatically created timesheets.

If an employee routinely works a fixed schedule and charges time against the same charge numbers, the system can be configured to automatically create timesheets for that employee. When the relevant information is entered on the Auto-Timesheet Schedule view in the Employee module and the Automatically Create Timesheet box is checked, the system creates timesheets for each workday within the pay period and sends an alert to the employee informing them that the timesheet was created. You can enter the information required for automatic

timesheets in the Employee module, or by using the User Enrollment Action when you are creating a new Employee record.

Timekeeping Views

In addition to standard notes, attachments, and approval views, the module includes the following:

Comp Time Request

The Comp Time Request view shows Premium hours worked during the pay period together with accrued Comp Time. You can adjust the hours in the Comp Time column only. When you enter a change and save the record, the system adjusts the Comp Time Accrual column automatically. Once the pay period is closed, and you have been compensated for the Premium hours worked, you cannot make any further changes.

Requested Comp Time hours cannot total more than the premium hours worked on a line item. For example, you work 5 hours of overtime, but you want to be compensated for 3 of those hours by accumulating comp time (time off received in exchange for overtime hours worked). You would enter 5 hours in the Premium Hours field, and 3 hours in the Comp Hours field. The premium hours shows the total number of overtime hours worked, and the Comp Hours field represents how much of that time you would like to put toward comp time. It is not possible to request more hours than were actually worked.

Because of Shift Differentials that may apply to premium time, however, you may accumulate more comp time than you actually worked. Two hours of premium time worked at a 1.5 differential, for example, results in 3 hours of accrued comp time.

If you enter a vacation charge on your timesheet against your accumulated Comp Time the system checks to see that you have enough Comp Time hours to cover the requested time off. If not, an error message appears and you cannot save the record.

Depending settings in the Timekeeping Edit checks business rule, a similar error may result if you enter a Leave Request for more Comp Time than you have accumulated. In this case, however, you can proceed to save the Leave Request and route it for approval. This is allowed since you might accumulate sufficient comp time before you take the leave.

Compensatory time cannot be entered on a Timesheet once the Timesheet is in approved status. If your organization has enabled the Timekeeping Comp Time Request rule, however, you can adjust your Comp Time requests for the current pay period.

Weekly, Bi-Weekly, Semi-Monthly, and Monthly Time Views

Select one of the views to display information according to the specified time period. For Weekly, Bi-Weekly and Semi-Monthly the system determines the first and last day of the week for based on your organization's settings in the Work Week Business Rule. To view the weekly period over a different date range, modify either the Start Date or End Date and click the Search button.

Weekly - Timesheet information summarized for the week.

Bi-Weekly - Timesheet information summarized over a two-week period.

Semi-Monthly - Timesheet information summarized over a 15 or 16 day period, either from the first to the fifteenth of the month or from the sixteenth to the last day of the month.

Monthly - Timesheet information summarized for the month.

Pay Period Time - Timesheet information summarized for the pay period.

Start Date and End Date - The system determines the first and last day of the two week period based on your organization's settings in the Work Week Business Rule.

Search Button - To view the two-week period over a different date range, modify either the Start Date or End Date and click the Search button. The bottom portion of the screen updates to reflect the information relevant to the new date range.

Regular, Premium, and Comp Time radio buttons - Select the Regular, Premium, or Comp Time radio buttons to toggle the display to show information for each category.

Total Hours - Totals for all of the charge types (regular, premium, and comp time) are shown at the bottom of each section.

Comments View

When reviewing the Weekly, Bi-Weekly and Semi-Monthly or Monthly Time views, you can select Comments from the Views list to open another window showing all comments entered on timesheets during the specified period.

Actions

While in these views, the Approve Timesheets action appears on the Actions list, allowing you to approve timesheets within the period displayed.

These views are view only. If you need to modify line item information, drill-down on the specific line item to open the associated daily timesheet. Modify the item, then close the daily timesheet to return to the bi-weekly timesheet view. Click the Refresh button to update changes.

Timekeeping Actions

In addition to standard actions, the following can be completed from within the module.

Route Timesheets for Approval

When viewing Timesheets by Period, you can select Route Timesheets for Approval from the Actions list to route all the timesheets in the period for approval. The system routes the timesheets to the Next Approver for review and displays a confirmation message. If no Next Approver is specified, a message prompts you to enter a Next Approver before continuing.

Approve Timesheets

Users must have the following settings to approve timesheets:

Timekeeping Authority Business Rule - Supervisor, Superuser, or Payroll authority.

Responsibility Function - Approve All Timesheets (if user will approve all timesheets).

Approval Title - approver username must be included on at least one Approval Title with enough limit and authority to approve timesheets.

Once these settings are in place for individuals who will conduct approvals, those users can select Approve Timesheets, Approve All Timesheets, access the Timesheet Wizard, or approve time directly in the Timekeeping module. The system approves all Regular, Premium, and Comp Time charges for all timesheets within the current pay period that are not yet in Approved or Posted status.

While viewing timesheets by period (using the Weekly, Bi-Weekly, Semi-Monthly or Monthly Time views), select the action to approve all timesheets within the displayed period only.

Regardless of settings, approvers cannot modify Approval For field on the approval screen to select specific employees. If you need to approve timesheets for certain employees by period, select the Approve Timesheets action while viewing Timesheets by Period.

Approve All Timesheets

The Approve All Timesheets action is available from the Results of Search window in the Timekeeping module.

You can use the Approve All Timesheets action to approve timesheets for one or more employees over a specified date range. You can approve Timesheets for the current pay period and any previous pay period in Open status. If you are a supervisor in charge of multiple crews, you can use the Approve All Timesheets action to approve the timesheets for all crews assigned you supervise.

When you select the Approve All Timesheets action from the Results of Search window, the system opens the Timesheet Approval Selection window and fills in the Approval For field according to your approval authority in the Timekeeping Authority Business Rule. Even if you have Supervisor or Payroll approval authority, you cannot modify the Approval For field to select specific employees. Also, a user must have the Approval All Timesheets function in his or her Responsibility profile to perform this action.

The system also fills in the Period No and date fields. You can modify these fields as needed. The Period No field has an associated list of values controlled by the Pay Periods module of the Administration subsystem.

Timesheet Approval Selection screen

When you click the OK button, the system approves all timesheets that are not in Approved or Posted status for the date range, Period No, and employee(s) specified.

How to Route a Timesheet for Approval

1. **Open the appropriate Timesheet record.**
The Timekeeping module is in the Maintenance subsystem.
2. **Select an Approval Title from the list of values in the Next Approver field.**
3. **Change the record status to Pending Approval.**
4. **Click the Save icon.**

The system issues an alert to everyone with the selected Approval Title.

How to Route Period Timesheets for Approval

1. **Open the appropriate period time view.**
The Period time views are Weekly, Bi-Weekly, Semi-Monthly, Monthly and Pay Period.

2. **Verify that an Approval Title is selected in the Next Approver field.**
If no Approval Title has been entered, select one from the list of values.
3. **Select Route Timesheets for Approval from the Actions list.**
The system routes the timesheets shown in the period time view to the Next Approver and displays a confirmation message indicating how many timesheets were routed.

How to Approve a Timesheet

1. **Open the appropriate timesheet.**
The most common way of opening the timesheet is through the alert requesting the approval.
2. **Determine that you want to approve the timesheet.**
You also have the option of routing the timesheet for additional approval, waiting while you check for details about record, or rejecting the record.
3. **Change the Status to Approved.**
4. **Click the Save icon.**
The system clears the Next Approver field in the timesheet window and inserts a record in the Approvals view to log the activity.

You can only approve a timesheet if you have an active Approval Title with Timekeeping Authority. If not, you can Route the Timesheet for Approval.

How to Route a Timesheet for Higher or Additional Approval

1. **Open the appropriate timesheet.**
The most common way of opening the record is through the alert requesting the approval.
2. **Determine that you want the record to go to another Approval Title.**
3. **Open the Approvals view.**
4. **Enter your Approval Title.**
The system supplies the Approver's Name, Status, and Status Date.
5. **Change the Status to Agree.**
6. **Select an Approval Title from the list of values in the Next Approver field.**
7. **Click the Save icon.**
The system updates the Next Approver field in the Timesheet window and issues corresponding alerts.

You can only enter information in the Approvals view if you have an active Approval Title with Timekeeping Authority. If not, you can Route the Timesheet for Approval.

Direct Charges

Select Direct Charges from the Actions list to enter Direct Charges associated with the work you have completed. The system searches for your Employee Number in the Direct Charges module and displays any existing charges. You can add a new charge item to an existing record, or create a new Direct Charge record and then enter the item.

How to Enter Direct Charges from a Timesheet

1. **Open the appropriate Timesheet.**
2. **Select Direct Charges from the Actions list.**
The system searches the Direct Charges module for Direct Charge records that reference your Employee Number and displays either a single record (if only one is found) or a list of records that reference your Employee Number. If no records are found, the Direct Charges Search Option window displays.

3. Select a Direct Charge record from the list or click the New icon to create a new record, as necessary.

If only one record is found and you want to add a Direct Charge item to that record, no action is required here. Proceed to the next step.

If you are creating a new Direct Charge record, complete and save the required Employee, Date and Crew information at the top of the window before continuing.

4. Click in the first item block in the lower portion of the window.

The system highlights the required fields where you can enter information for the first Direct Charge item.

5. Select a Direct Charge Type from the list of values in the Type field.

The choices on this list are determined by your organization in the Direct Charge Types business rule. When you select a Direct Charge Type, the system supplies the Units, Standard Price, and Expense Code established in the business rule for the type you selected. If the processing for the Type selected is Open Entry, you must enter these values manually.

6. Enter the Quantity used.

This might be the number of miles driven or the number of days a piece of equipment was rented.

7. Enter a Charge Type and Number.

The information required on the Charge Number line changes with the type of Charge you select. The list of values for the Charge Type is controlled by the Timekeeping Charge Types business rule and may include assets, functions and work orders.

If you are charging to an asset, enter the Asset type and ID (or select from the Lists of Values). If you are charging against a work order, select the work order and work order task number. When you identify the charge, the system supplies the Account Number and Expense Code information.

8. Enter other information required to describe the Direct Charge.

You can enter a brief comment that helps to describe the charge. You can also enter an Asset Type and ID in the Rented Asset fields if you need to identify an asset you rented.

9. Click the Save icon.

Continue entering Direct Charge line items until you have entered all your charges you want to include on this record. You must save the record after entering each charge.

When you have finished entering Direct Charges, set the status to Pending Approval and save the record.

Task Progress

Task Progress is only available on the Actions list when charges against Work Order Tasks in Active status are recorded.

Select a work order charge line then select Task Progress from the Actions list to open the Task Progress Summary window. Here you can record your progress toward completing a task. The window is the same as the summary screen at the end of the Finish Task wizard, only when you use the Task Progress action the system does not process the work as finished. Instead, after you save the summary information, the system opens a second window where you can either indicate that the task is finished, or indicate your progress toward completion. If you enter a % completed, the system updates that field on the Work Order Task record.

Task Progress view

Please refer to the section on Work Order Task [Task Progress](#) for a detailed description of the functionality in this window.

Timesheet Wizard

The Timesheet Wizard is located on the Actions list of the home page.

The Timesheet wizard allows you to create large sets of timesheets in an efficient manner. You can access the Timesheet wizard from the Actions list on the home page.

The Timesheet wizard is especially useful when members of a crew work the same work orders and tasks for the day. You can create a timesheet for one crew member, then use that timesheet copy time charge information for the other members of the crew.

The two options available on the Timesheet Wizard are the following:

[Copy Single Timesheet](#) - Use this option to copy time charges from an existing timesheet to one or more new timesheets.

[Create Timesheets / Enter Time](#) - Use this option to create new timesheets and enter time.

Depending on how your organization has set the Timekeeping Copy Options business rule, the system may allow you to enter future pay period dates when using the Copy Single Timesheet option. Even when future pay periods are entered, the system does not allow them to be approved until the actual time period.

Settings in the Timekeeping Charge Type business rule determine which record types are retrieved by the Timesheet Wizard.

How to Copy a Single Timesheet

Select the Copy Single Timesheet option to copy line item time charges from an existing timesheet to one or more new timesheets.

1. **Open the home page.**
2. **Select Timesheet Wizard from the Actions list.**
3. **Select the Copy Single Timesheet option and click Next.**
4. **Select an Employee Number and enter a Timesheet Date.**

This is for the timesheet you want to copy information from. Click in one of the line items to display the time charges for the selected timesheet.

5. **Check the Copy Crafts from Timesheet Line Items box if you want to copy the crafts.**
6. **Click the Next button.**

7. Select an Employee Number and enter a date range.

This is for the timesheet(s) you want to create and copy information to.

Since timesheets will be created for all dates within the range selected, be sure to enter a date range that does not contain gaps. For example, to create timesheets over a two-week period, excluding weekends, create the first week and then create the second week separately.

When creating timesheets for non-standard work days, the system does not automatically change Regular Hours to Premium Hours. You need to open the individual timesheets later to make any necessary changes.

8. Click the Next button.

The system creates only those timesheets that do not already exist. If all exist within the date range selected, the system displays a warning message. If only some exist, the system confirms the number created and/or ignored in the Summary Information screen.

9. Click the Return button to return to the Timesheet Wizard Options screen.

In this screen you can create or copy additional timesheets. Click the Done button to exit the Wizard.

The system confirms the number of timesheet records and line items created, as well as the number of timesheet records that already exist (existing timesheet records are ignored).

From the Summary Information window, click the Back button to copy the timesheet selected to additional timesheets, or click the Done button to return to the Timesheet Wizard Options window.

The system places the new timesheet records and copied line items in created status. When creating timesheets for non-standard work days, the system does not automatically change Regular Hours to Premium Hours. You need to open the individual timesheets later to make any necessary changes.

How to Create Timesheets / Enter Time

Select this option to create timesheets and enter time. The system places all new timesheet records and line item time charges in created status. The Create Timesheets / Enter Time option consists of the following windows:

1. Open the home page.**2. Select Timesheet Wizard from the Actions list.****3. Select Create Timesheets / Enter Time and click the Next button.****4. Select the Employee Number from the list of values.**

The Employee Numbers available on the list of values depends on your privileges in the Timekeeping Authority business rule. If you have Employee privileges, you will only be able to access your own Employee number.

5. Enter a Timesheet Date, then click the Next button.

The system verifies that the timesheet does not already exist and falls within open pay and accounting periods, then displays the Timesheet Detail screen.

6. Enter Regular time charge information.**7. Click the Next button to enter Premium Shift information and/or Comp hours.**

If you do not need to enter Premium or Comp Time, you can skip this step.

8. Click the Create button.

The system saves the Regular and/or Premium & Comp Time information and opens the Timesheet Detail screen.

9. Repeat the steps to enter additional time charges as needed.**10. Click the Done button when you are finished entering time.**

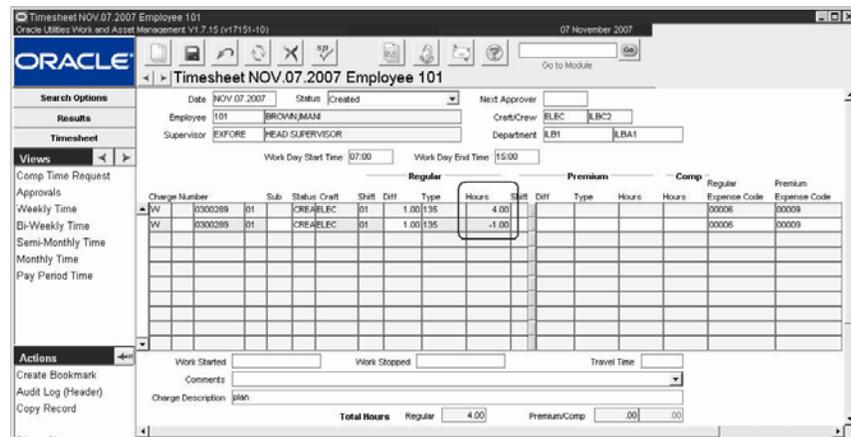
The system saves the timesheet and time charge information and opens the Timesheet Wizard options screen. From here you can either create additional timesheets or copy timesheets using Copy Single Timesheet.

Logging Time after Approval

Occasionally you may need to change a timesheet after it has been approved. If you neglected to fill in some hours, charged too many hours, or used the wrong charge number you can correct the mistake by reopening the Timesheet record.

How to Log Time After the Record Has Been Approved

1. **Open the Timesheet record that needs modification.**
Since you cannot modify the posted line items to make the changes, you need to add new charge items for each change required.
2. **Click in the next available row.**
If the next row is not visible, click the New icon to add a new line.
3. **Enter time charge information on the row selected.**
If you mistakenly selected the wrong Charge Number or charged too many hours, you will need to create a negative time entry to back out the charges.



You can enter negative hours on the Timesheet record to reverse charges whenever necessary.

For example, this employee mistakenly logged four hours instead of three hours to Charge Number 0300269 (see the first line of charge items) and the timesheet was approved. Realizing his mistake, he created a new line (line two) with the same charge number and -1.00 in the Hours field. This way, the system backs out two hours from Charge Number 108.

After you make changes to an approved timesheet, the record status is set to reopened and the additional charge items are set to created.

4. **Click Save.**
Notice that the system sets the record status to Reopened and the new charges to Created without changing the status of the existing line items.
You can choose to have your supervisor modify your timesheet for you if appropriate.
Once you are finished adding line items, you need to route the timesheet again for approval.
5. **Complete the Next Approver field with the appropriate approval title.**
6. **Change the status to Pending Approval.**
7. **Click Save.**
The system routes the timesheet for approval and sends an alert to the approval title indicated in the Next Approver field.

Creating a Timesheet for a Crew

Supervisors can create a timesheet for their crew from the Work Order Task (Detail) in the Work Order module or from the Work Order Task module. This can be a big time saver for the crew members if the entire crew worked the same hours on the same task.

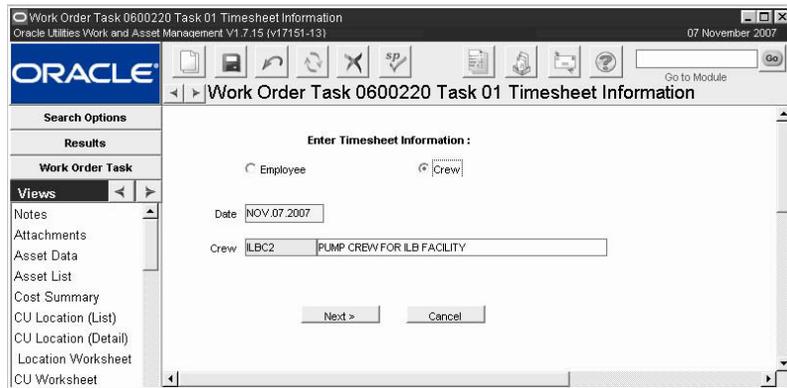
How to Create a Timesheet for a Crew

1. Open the appropriate Work Order Task record.

You can open the Task in the Work Order Task module or in the Task (Detail) view in the Work Order module

2. Select Timesheet from the Actions list.

A screen opens where you can enter timesheet information for a single employee or for a crew.



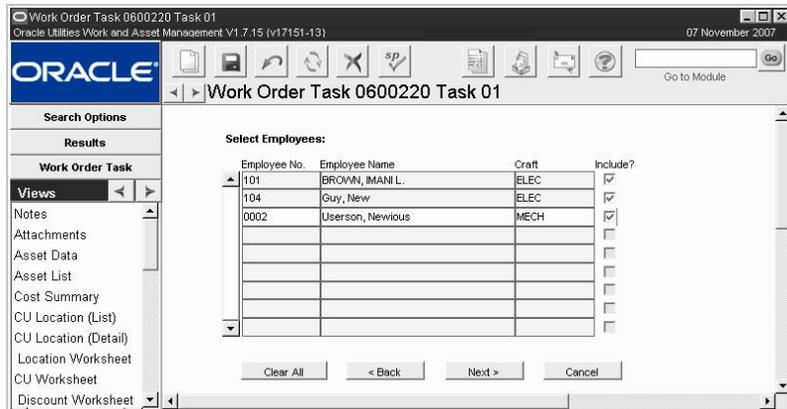
3. Click the Crew radio button.

If you are a supervisor, the system will default the crew from your employee record. If a crew is not supplied by default, select from the list of values.

4. Click Next.

The system opens a new window listing the crew members.

Each employee you want to include on the Timesheet record must already be assigned to the crew.



5. Remove the check mark for crew members not to include on the timesheet and click Next.

6. Enter regular time, as appropriate.

7. Click Next.
8. Enter premium and comp time, as appropriate and click Next.
The system opens a window with summary information from the previous screens.

Employee No.	Employee Name	Craft
101	BROWN, IMANI L.	ELEC
104	Guy, New	ELEC
0002	Userson, Newious	MECH

9. Click the Create button.
The system creates the timesheet and displays a confirmation.
10. Click OK.

Monitoring Tasks from the Timesheet Record

Task Progress appears on the Actions list when you are making charges against Work Order Task records in Active status. Selecting Task Progress from the Actions list when you have highlighted a work order task in Active status opens the Task Progress Summary window where you can record progress on the relevant work order task. You can finish the task in a manner very similar to the process initiated from the work order task, or you can record the task as only partially completed, which updates % Complete field on the work order task.

Saving the Timesheet to your Home Page

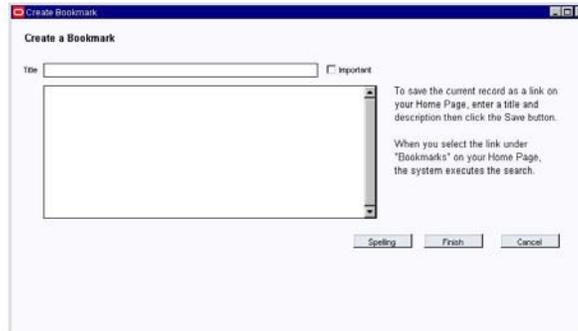
Once you save the Timesheet record, it is a good idea to create a link to the timesheet on your home page so that you can find your current timesheet to log additional hours if necessary.

Use this procedure to search for any other search criteria in any other module that you need to have fast access to in the system.

How to Create a Link to your Timesheet Record

1. **Open the appropriate Timesheet record.**
2. **Select Create Bookmark from the Actions list.**

A Create Bookmark window opens.



3. **Enter a descriptive title for the bookmark and a description if desired.**
4. **Click Finish.**

The system saves the search and adds a link on your home page under Saved Searches.

Timesheet Business Rules

The following business rules are involved in Timesheet entry and processing:

Craft Rates Rule - Defines Craft codes along with associated wage rates and expense codes.

Labor Burden Multipliers Rule - Associates labor burden rates to employees. These costs will be applied to the craft labor rates and rolled up in the system.

Labor Costing Markup Rule - Applies additional markup transactions to labor costs based on the Area being charged for the work. If a timesheet charge is against an Area other than the Employee's Area on the Timesheet header, the markups for that Area will be included in the Account Log transactions and rolled up in the system.

Labor Costing Wage Rates Rule - Determines where the wage rate is drawn from for labor costing. Wage rates can be drawn from the Employee Wage Rate view in the Employee module or from the Craft Rates Business Rule. Only one option can be set to YES, and the other must be set to NO.

Overtime Standings Rule - Controls Overtime Standing processing. The Overtime Standing Process is only used to track overtime worked. Work offered and refused is not taken into consideration when ranking employees. This Rule also allows you to produce an overtime list for holiday overtime based solely on seniority.

Shift Differential Rates Rule - Determines valid shift codes and shift differential rates.

Timekeeping Authority Rule - Lists users authorized to access and maintain timesheets. Approval Authorization is granted through the Approval Limits module.

Timekeeping Charge Types Rule - Controls which charge types are valid in the Timekeeping module and which record types are retrieved by the Timesheet Wizard.

Timekeeping Comp Time Request Rule - Determines if the Comp Time Request view displays on the Views list in the Timesheet module.

Timekeeping Copy Options Rule - Controls whether or not the system will allow users to enter future pay period when using the Copy Single Timesheet Option of the Timesheet Wizard.

Timekeeping Editchecks Rule - Determines whether or not edit checks for timekeeping verification of pay codes, hours, leave type, etc. is to be executed.

Timekeeping Labor Earning Type Rule - Determines the Earnings Code values for Regular and Premium Type time, the Earnings Code Type, Multiplier (%) and/or Adder (\$), and the Overtime Rate Multiplier associated with each Earning Code that can be applied to the employee's base pay rate and hours when calculating Actual Labor Costs and Payroll data.

Timekeeping Leave Types - The Timekeeping Leave Types rule defines which of the Charge Types (in the Charge Types rule) are leave types.

Variable Expense Codes Rule - Determines how expense codes are handled in the Timekeeping module. Any changes to Expense Codes can only be made before costs are applied. Once actual costs are applied, the Expense Code on the record cannot be changed.

Understanding Timesheet Calculations

The system calculates Labor Costs as follows:

Regular Amount = (Regular Wage Rate + Adder) x Regular Multiplier x Hours

Regular Shift Amount = Regular Shift Differential x Regular Multiplier x Hours

Premium Amount = (Premium Wage Rate + Adder) x Premium OT Rate Multiplier x Premium Multiplier x Hours

Premium Shift Amount = Premium Shift Differential x Premium OT Rate Multiplier x Premium Multiplier x Hours

Null items simply drop out of the calculation. If a timesheet contains no premium time, for example, the premium calculations result in zero. Likewise, if no adder or multiplier applies, the system either adds 0 or multiplies by 1, resulting in no change.

Settings in the Shift Differential Rates rule determine if the Premium OT Multiplier is used in timesheet calculations.

Comp time is a special type of Premium Time that rolls up within the system but does not result in a wages paid to the employee.

Examples

An employee works 8 hours on a normal swing shift and 2 hours overtime on the graveyard shift. His regular wage rate is defined in the Craft Rates business rule as \$28/hr. A premium overtime multiplier is defined in the Timekeeping Labor Earnings Types business rule as 1.5. A shift differential of \$0.75 for the swing shift and \$1.25 for the graveyard shift are defined in the Shift Differential Rates business rule. In this example, assume there is no adders (null value = 0) or multipliers (null value = 1) defined other than the Premium OT Rate Multiplier.

Labor costs are calculated as:

Regular Amount = (\$28 + 0) x 1 x 8 hrs = \$224

Regular Shift Amount = .75 x 1 x 8 hrs = \$6

Premium Amount = (\$28 + 0) x 1.5 x 2 hrs = \$84

Premium Shift Amount = 1.25 x 1.5 x 1 x 2 hrs = \$3.75

If the same employee, working the same hours, also receives a \$2.50 'adder' and a 10% multiplier because of the nature of the work done (defined in the Timekeeping Labor Earnings Types business rule), labor cost are calculated as:

Regular Amount = (\$28 + \$2.50) x 1.1 x 8 hrs = \$268.40

Regular Shift Amount = .75 x 1.1 x 8 hrs = \$6.60

Premium Amount = (\$28 + \$2.50) x 1.1 x 1.5 x 2 hrs = \$100.65

Premium Shift Amount = 1.25 x 1.1 x 1.5 x 1 x 2 hrs = \$4.13

Chapter 31

Timekeeping Log

The Timekeeping Log module records summary Timesheet transaction information. The module is view only, and records cannot be updated here. It simply provides quick access to detailed Timesheet information when it is needed. Timesheet items are entered and processed through the Timesheet module.

↑	Timesheet	Emp No	Employee Name	T	Charge	Tsk	Sut	Craft	Req	Reg Hrs	Prem	Prem Hrs	Stat	Reg Shift
▲	11 JUN 2007	101	BROWN, JMANI	WV	0500274	01		ELEC	SCHED	8.00			CREAT	1
	30 NOV 2006	101	BROWN, JMANI	WV	0300269	01		ELEC	BYB/HL	5.50			CREAT	2
	28 SEP 2006	101	BROWN, JMANI	WV	0600247	01		ELEC	135	8.00			CREAT	0A
	28 APR 2006	101	BROWN, JMANI	WV	0300381	02		ELEC	SCHED	8.00			CREAT	1
	20 APR 2006	101	BROWN, JMANI	WV	0600044	01		ELEC	BYBADD	8.00	DT	6	CREAT	01
	18 APR 2006	101	BROWN, JMANI	WV	0600044	01		ELEC	SCHED	8.00			CREAT	01
	18 APR 2006	101	BROWN, JMANI	WV	0600044	01		ELEC	SCHED	8.00			CREAT	01
	10 FEB 2006	101	BROWN, JMANI	WV	0600043	01		ELEC	135	2.00			CREAT	AA
	03 FEB 2006	101	BROWN, JMANI	WV	0600030	01		ELEC	135	1.00	135OT	1	CREAT	01
	03 FEB 2006	101	BROWN, JMANI	WV	0600031	01		ELEC	BYBADD	2.00			CREAT	2
	03 FEB 2006	101	BROWN, JMANI	WV	0600032	01		ELEC	135	1.00			CREAT	01
	01 FEB 2006	101	BROWN, JMANI	WV	0600028	01		ELEC	SCHED	8.00			CREAT	01
	01 FEB 2006	101	BROWN, JMANI	WV	0600028	01		ELEC			DT	4	CREAT	
	31 JAN 2006	101	BROWN, JMANI	WV	0600027	01		ELEC	135	8.00	135OT	3.5	CREAT	01
	30 JAN 2006	101	BROWN, JMANI	WV	0600027	01		ELEC	135	4.00			CREAT	01

Timekeeping Log

This module uses standard functionality used in all Transaction Logs to rearrange columns, save the layout, and sort data. Please refer to the System Basics guide chapter on Transaction logs for more information.

Related Topics

- [Timekeeping](#)
- [Transaction Logs](#)
- [Transaction Codes Guide](#)

Chapter 32

Leave Request

Use the Leave Request module to request time off and to route these requests for Approval. The module can also automatically post approved leave request information to Timesheets. Only you can create Leave Request records for your employee number.

Leave Request processing does not skip weekends automatically. Therefore, if you enter dates between a Friday and a Monday, the system will assume that four days have been requested. The employee should create two separate records for Friday's date and Monday's date to avoid requesting weekend days.

Leave Request Records

Since the information on the Leave Request record is transferred directly to the timesheet record when charges are ready to be posted, nearly all of the Leave Request record's fields are required. They are the same as the required fields on the Timesheet record.

When you save a leave request, and if your organization has set the Timekeeping Editchecks business rule to verify leave amounts, the system automatically verifies whether you have sufficient leave available to satisfy the request. If not, a warning message appears but you can still save the record since you may accumulate enough time before the leave starts. The approving supervisors receive a similar message if you do not have enough leave when they review your request. If they anticipate you having sufficient available leave later, they can clear the warning and approve your request.

The screenshot shows the Oracle Leave Request record form. The title bar indicates the record is for Employee 101, created on 18 April 2008. The form fields include:

- Status: Created
- Next Approver: LB4
- Create Timesheet:
- Employee: 101 (BROWN, JMAN)
- Craft/Crew: ELEC (ILBC2)
- Start Date: MAY.19.2008
- End Date: MAY.22.2008
- Supervisor: EXFORE (HEAD SUPERVISOR)
- Department: ILB1 (ILBA1)

The "Leave Request Details" table is as follows:

Reason	Charge No.	Shift	Type	Hours per Day	Balance Remaining
V VACATION	ILB1	1	LEAVE	3.00	.00
Comment					

Leave Request record

Modifying Leave Requests - You can modify leave requests you created as long as they remain in Created or Pending Approval status. Your supervisor and payroll personnel can modify approved leave requests that have not yet been posted. Once the time charges have been posted, any new leave requests that apply to that pay period can be applied to the timesheet for the pay period and the record status is set to Reopened. Once the pay period is closed, no further

charges can be applied to the timesheet and it is up to the supervisor to see that the employee is compensated appropriately.

Deleting Leave Requests - A Leave Request can only be deleted by an authorized user and if it is in Created, Pending Approval, or Canceled status. Access to this module is controlled by the Timekeeping Authority business rule.

To create a new leave request, click the new icon and enter required fields and additional fields as required by your business practices using the following field descriptions as a guide.

Status

Created - The record is initially inserted in Created status.

Pending Approval - Set the status to Pending Approval when you are ready to route it to the Next Approver for approval. The system sends an alert to the Approver to make them aware of the record.

Approved - The Next Approver sets the status to Approved in order to approve the request.

Rejected - If an approver rejects the Leave Request, the system displays a box where the approver can enter a reason. The system then sends an alert to the initiator on the request to notify them that the request was rejected. The rejection reason is shown in the Approvals View of the Leave Request record. The comments field is only shown if the record is in Rejected status.

After receiving an alert, the initiator can make any necessary changes and try for approval again or leave the record in Rejected status.

Canceled - If the request is denied, the Approver should set the status to Canceled.

Posted - After the record has been Approved, the system automatically sets the status to Posted when it is run through batch processing. If the Create Timesheet indicator was checked on the record when it was created, the leave time on the record is posted to a new timesheet during batch processing as well. The record remains in the system, however this status indicates that the record is closed and will not undergo any further processing.

Next Approver - The approval title for the person responsible for approving the record. The list of values for this field is controlled by the Approval Limits module in the Administration subsystem.

A Next Approver must be entered before you can change the status to Pending Approval.

For more detailed information on approvals, please refer to the document entitled Approvals in the System Basics User Guide.

Create Timesheet - Check this box if you want the system to create your timesheet record for you with the leave information posted to it. If the box is checked the system will create the timesheet after the request is approved and during the batch process that posts the leave request records to timesheets. The timesheet is NOT created at that moment.

When the record is created this box is not checked.

Employee - Employee Number is the unique record identifier for each employee. Once this field is populated, the system automatically fills in the Name and Supervisor fields. Generally you will only be able to view records related to your own Employee number. Supervisors may be able to view records for all employees under their charge, depending on your organization's business practices and the settings in the Timekeeping Authority Business Rule.

You can also double-click the Employee Number field to see a list of other modules related to the Employee information.

Only records in Created and Pending Approval status can be modified. A leave request can only be deleted if it is in Created, Pending Approval, or Canceled status, Approved and Posted Leave Requests cannot be deleted.

Craft/Crew - The Work group that the Employee is assigned to. Crew can be selected from the list of values. If the Employee belongs to more than one Craft/Crew he or she can modify this field to reflect the appropriate Craft/Crew to charge this time against if necessary.

Start Date - The day that the leave begins.

End Date - The day that the leave ends.

Supervisor - The employee's immediate Supervisor. When the Employee Number is entered, the system automatically populates this field with the corresponding Supervisor. The contents of this field can be modified if necessary.

Department - The Department that the Employee is assigned to. Department can be selected from the list of values. If the Employee belongs to more than one Department he or she can modify this field to reflect the appropriate Department to charge this time against if necessary.

Leave Request Details

Enter one line for each Reason code that applies to the leave taken. The system will not allow you to enter lines with the same Reason code. You can, however, have the same value in the Type field for any row.

Reason - A Reason code can be selected from the list of values to indicate the purpose of the leave request.

Charge No. - Select the account that your leave time should be charged to from the list of values.

Shift - The Shift field contains the shift worked for the charge time. The field has an associated list of values controlled by the Shift Differential Rates Business Rule in the Business Rules module of the Administration subsystem.

Type - The nature of the time off can be selected from the list of values associated with this field. The nature of the time off can be selected from the list of values associated with this field. Create as many rows as necessary to request different leave types on one request. Leave types are established in the Timekeeping Leave Types Business Rule.

Hours Per Day - The Employee should enter the number of hours they will be absent for each day during the scheduled leave. For example, if the employee will be out for one full work day, 8 hours should be entered. If the employee will be out for one full work day, and a half of a day he or she can do one of two things:

1. Create two leave request records; one that with 8 hours entered in the Hours Per Day field for the first day and one with 4 hours entered in the Hours Per Day field for the second day.
2. Create one leave request records with 8 hours entered in the Hours Per Day field. Then modify the number of hours on the actual timesheet (after the leave is approved) and write a note in the comments field indicating that only 4 hours will be taken on the second day.

The employee cannot enter 12 hours on one record since the field asks "How many hours will be taken on each day" not "How many hours will be taken total."

Balance Remaining - The system automatically shows the leave hours available when you select the Charge Type. The number of hours available is managed in the Employee module Leave Summary view.

How to Submit a Leave Request

1. **Open the Leave Request module in the Maintenance subsystem.**
2. **Click New.**

The system opens a new record with your Employee Number, Name, Supervisor, Craft/Crew, and Department filled in.

You can modify these fields (except Employee Number and Name) if necessary.

3. **Complete the required fields.**
4. **(optional) Place a check in the Create Timesheet? check box if you want the system to automatically post the time indicated on this Leave Request to your timesheet for the relevant pay period.**

If this box is checked the system will create your timesheet record for you with the leave information posted to it. The system creates the timesheet after the request is approved and during the batch process that posts the leave request records to timesheets. The timesheet is NOT created at that moment. When the record is created this box is not checked.

5. **Complete the Next Approver field with the appropriate approval title.**
6. **Change the status to Pending Approval.**

If your organization has configured the system to verify remaining leave balances, the system checks to see that you have enough accumulated leave to satisfy the Leave Request. If not, a warning appears asking if you would like to continue anyway. Click Yes to save the record. The amount of available hours is defined in the Leave Accrual view of the Employee module.

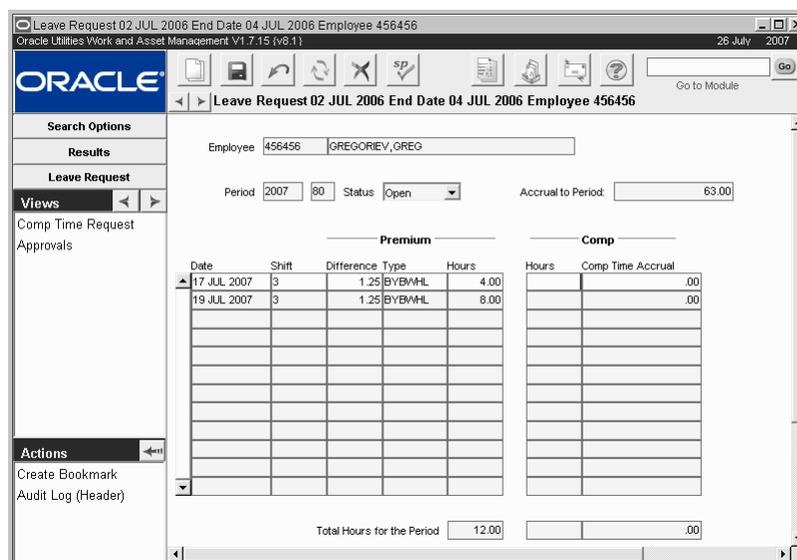
If you checked the Create Timesheet? check box the system logs the time requested on your timesheet record for the pay period that the Leave Request falls under after the request has been approved.

Leave Request Views

The module includes the following views:

Comp Time Request

Compensatory Time cannot be entered on a Timesheet once the Timesheet is in approved status. You can, however, select Comp Time Request from the Views list to open a window where you can change your Comp Time requests for the current pay period.



Comp Time Request view

The Comp Time request view shows Premium hours worked during the pay period together with accrued Comp Time. You can adjust the hours in the Comp Time column only. When you

enter a change and save the record, the system adjusts the Comp Time Accrual column automatically. Once the pay period is closed, and you have been compensated for the Premium hours worked, you cannot make any further changes.

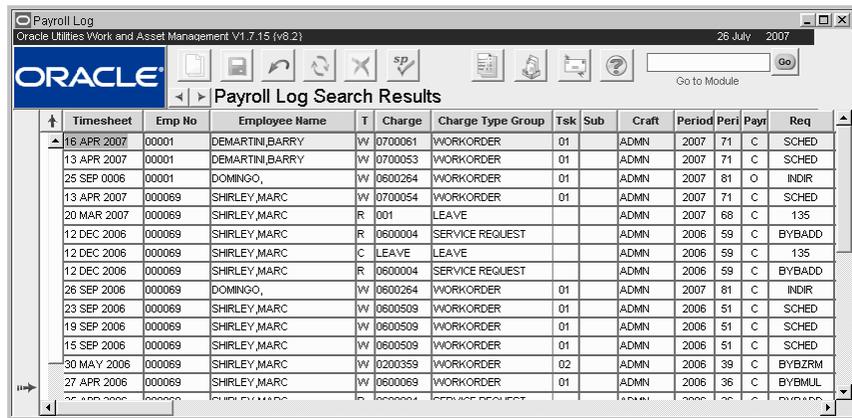
Requested Comp Time hours cannot total more than the Premium hours worked for the charge. Because of Shift Differentials that may apply to Premium Time, however, you may accumulate more Comp Time than you actually worked. Two hours of Premium Time worked at a 1.5 differential, for example, results in three hours of accrued Comp Time.

Depending on settings in the Timekeeping Editchecks Business Rule, when you enter attempt to save a Leave Request for more time Comp Time than you have accumulated, the system will check to see that you have enough time hours to cover the requested time off. If not, a warning message appears. You can proceed to save the Leave Request and route it for approval. This is allowed since you may accumulate sufficient Comp Time before you take the leave.

Chapter 33

Payroll Log

The Payroll Log module records summary timesheet transaction information as well as the corresponding wage rate information. It is basically an exact copy of the Timesheet Log with the addition of all fields on the Timekeeping record. A separate log is necessary to keep confidential cost and wage rate information private and only accessible to authorized users. The module is view only, and records cannot be updated here.



↑	Timesheet	Emp No	Employee Name	T	Charge	Charge Type Group	Tsk	Sub	Craft	Period	Peri	Payr	Req
▲	16 APR 2007	00001	DEMARTINI,BARRY	W	0700061	WORKORDER	01		ADMN	2007	71	C	SCHED
	13 APR 2007	00001	DEMARTINI,BARRY	W	0700053	WORKORDER	01		ADMN	2007	71	C	SCHED
	25 SEP 2006	00001	DOMINGO,	W	0600264	WORKORDER	01		ADMN	2007	81	O	INDR
	13 APR 2007	000069	SHIRLEY,MARC	W	0700054	WORKORDER	01		ADMN	2007	71	C	SCHED
	20 MAR 2007	000069	SHIRLEY,MARC	R	001	LEAVE			ADMN	2007	68	C	135
	12 DEC 2006	000069	SHIRLEY,MARC	R	0600004	SERVICE REQUEST			ADMN	2006	59	C	BYBADD
	12 DEC 2006	000069	SHIRLEY,MARC	C	LEAVE	LEAVE			ADMN	2006	59	C	135
	12 DEC 2006	000069	SHIRLEY,MARC	R	0600004	SERVICE REQUEST			ADMN	2006	59	C	BYBADD
	26 SEP 2006	000069	DOMINGO,	W	0600264	WORKORDER	01		ADMN	2007	81	C	INDR
	23 SEP 2006	000069	SHIRLEY,MARC	W	0600509	WORKORDER	01		ADMN	2006	51	C	SCHED
	19 SEP 2006	000069	SHIRLEY,MARC	W	0600509	WORKORDER	01		ADMN	2006	51	C	SCHED
	15 SEP 2006	000069	SHIRLEY,MARC	W	0600509	WORKORDER	01		ADMN	2006	51	C	SCHED
	30 MAY 2006	000069	SHIRLEY,MARC	W	0200359	WORKORDER	02		ADMN	2006	39	C	BYBZRM
	27 APR 2006	000069	SHIRLEY,MARC	W	0600069	WORKORDER	01		ADMN	2006	36	C	BYBMUL
	26 APR 2006	000069	SHIRLEY,MARC	R	0600004	SERVICE REQUEST			ADMN	2006	59	C	BYBADD

Payroll Log

This module uses standard functionality used in all Transaction Logs to rearrange columns, save the layout, and sort data. Please refer to the System Basics guide chapter on Transaction logs for more information.

Related Topics

- [Timekeeping](#)
- [Transaction Logs](#)
- [Transaction Codes Guide](#)

Chapter 34

Direct Charges

You can use the Direct Charges module to store and track direct charges or other expenses incurred while completing work. For example, maintenance staff may need to rent equipment for a Work Order and then relate the rental cost to the Work Order.

Usually, Direct Charges are incurred and tracked by Work Order Task, Service Request, or when timesheets are filled out. You can select the Direct Charges action in the Work Order Task, Work Order Task Assignment, Timekeeping, and Service Request modules to enter Direct Charges from these modules.

Direct Charges Records

Before Direct Charges can be entered, the Direct Charge Types Business Rule must be configured to list the types of Direct Charges tracked by your organization and the standard price for each type of charge. Approved Direct Charges are posted to the Account Log by batch processing. Like other costs, direct charges roll up to work order tasks, assets, processes, functions and subprojects. Direct charges are also posted to the direct charges log, where you can search for log entries using specific criteria, such as direct charge type or rented Asset ID.

The screenshot shows the Oracle Direct Charges window for record 0500000009. The window title is "Direct Charges 0500000009" and the application is "Oracle Utilities Work and Asset Management v1.7.15 (v8.15)". The date is 26 July 2007. The record is in "Posted" status. The employee is USERSON, NEVMOUS, dated 07 JAN 2005. The item is a COMPRESSOR for 16.0000 hours at a standard price of 35.0000, totaling 560.00. The charge number is 0500025, account number is 01, and expense code is 00020. The vendor code is BDGT-N-BUDGET-NONE-INVOICE PO-004.

Item No	Type	Units	Quantity	Standard Price	Amount
001	COMPRESSOR	HOUR	16.0000	35.0000	560.00

Direct Charges record

The upper section of the Direct Charges window contains information about the employee, approver and the charges entered on the record. The lower section contains line items for describing specific Direct Charges. When creating a new Direct Charge record you must first complete the upper section and save the record. Then you can describe and save individual charges in the table below.

The following fields are included:

Status

Created - The record is initially inserted in Created status.

Pending Approval - Set the status to Pending Approval when you are ready to route the record to the Approval Route for approval. The system sends an alert to the Approver to make them aware of the record.

Approved -The record is set to Approved status when an Approver selects final approval in the Approvals view. You cannot modify records in Approved status.

Posted - After the record has been approved, the system automatically sets the status to Posted during batch processing. The system does not post a line item until an expense code has been entered.

Rejected - Approvers can reject a record by setting the status to Rejected. Rejected records can be activated by setting the status back to Created.

Canceled - Records in Canceled status are not processed by the system. Canceled records can be activated by setting the status back to Created.

Approval Route - The approval route specifies a series of approvers that will review the record for approval before processing can continue. An approval route must be entered before you can change the status to Pending Approval. Please refer to [Approval Routing](#) in the System Basics user guide for more information.

Employee (and Employee Name) - When you are creating a record, the system will default to your employee number and your name. Select an employee number from the list of values and the system will supply the name.

Category and Owner - The Category field can be used to identify broad categories of Direct charge records. Your organization can create codes to suit your business practices. The Owner field indicates which account is associated to the Category code selected. If the Processing rule key in the Direct Charge Types Business Rule is set to Open Entry then the Quantity, Standard Price, and Total Amount fields in the lower portion of the record are open to entry by the user.

To add a user to the list of Owner's enter the appropriate credit card information into their User Profile on the Credit Card Info view.

Note: The Category and Owner fields provide a way to further distinguish a Direct Charge for example, multiple categories could be created for different types of Credit Card expenses or to distinguish Truck expenses from regular Vehicle expenses.

Description - You can enter a brief description of the charges included on this record. You might describe the activity that required the acquisition of the items listed below.

Type - Select a Direct Charge type from the list of values. The column on the far right of the list of values contains a description of the Direct Charge types defined by your organization in the Direct Charge Types Business Rule.

Units - When you select a Type, the system supplies the Units from information in the Direct Charge Type Business Rule.

Quantity - Enter the Quantity of the Direct Charge type used. Depending on the type selected, this might be the number of miles a vehicle was driven or the number of days a piece of rental equipment was used.

Standard Price - When you select a Type, the system supplies the Standard Price from information in the Direct Charge Type Business Rule.

Amount - The system enters the amount based on the quantity and the standard price. You cannot modify the amount but you can adjust the quantity.

Charge Number - The Timekeeping Charge Types Business Rule controls what valid charge types are, such as charging to Work Orders, to Assets, or to Functions. Leave charge types do not appear on the list of values associated with this field.

Number - The three Number fields function differently depending on the Charge Type. For example, if you are charging against an Asset, the first and second number fields contain the Asset Type and Asset ID. If you are charging against a Work Order, the second field holds the Work Order number and the third field identifies the Work Order Task. Lists of values are available to assist you in entering the information.

Account No. - The system enters the account number based on the Charge type and Charge number. When you are charging against a Work Order, you must identify the Work Order Task before the system can populate the Account No.

Expense Code - The system supplies the expense code identified in the Direct Charge Types Business Rule based on the Charge Type entered. If necessary, you can change the expense code as long as the record status has not been set to Posted and your organization has configured the Variable Expense Code Business Rule. The system does not post line items until an expense code has been entered.

Reference Number - You can enter any reference number supplied by the Vendor to help identify this item.

Vendor Code - You can select from all Vendor Codes in Active status.

Vendor Name - When you select the Vendor Code, the system supplies the Vendor Name associated with that code.

Comments - You can add a brief comment to help describe the line item.

Rented Asset - If you need to identify a rented asset, you can enter that information in these two fields. The first field has a list of values for Asset types controlled by a code table.

Beginning and Ending Reading - You can use the Beginning and Ending Reading fields to record odometer readings for mileage charges or other similar readings. If you enter data in the Beginning and Ending Readings fields, the system calculates the quantity for you.

Usage Date - Indicates the date that the charges were made.

Comments - You can add a brief comment to help describe the line item.

Total Amount - This is a user enter field indicating the total charges.

How to Create a Direct Charge Record

1. **Open the Direct Charges module.**
The Direct Charges module is in the Maintenance subsystem.
2. **Click New.**
The system opens a blank Direct Charge record in created status showing the current date and your name and employee number.
3. **Enter an Approval Route and brief Description of the Direct Charges if appropriate.**
4. **Click Save.**
The system saves the Direct Charge record and assigns a Direct Charge number if your system is set up to assign sequence numbers. You can now continue to enter charges on this record, or you can enter the charges later.

How to Enter Direct Charges

1. **Open the appropriate Direct Charge record.**
The Direct Charges module is in the Maintenance subsystem. You can also access the module from the Actions list in the Work Order Task, Work Order Task Assignment, Service Request, and Timekeeping modules.
2. **Click in the first item block in the lower portion of the window or Click New.**

You can also create and enter Direct Charge information from the Work Order Task, Work Order Task Assignment, Service Request, and Timekeeping modules.

The system highlights the required fields where you can enter information for the first Direct Charge item.

3. Select a Direct Charge Type from the list of values in the Type field.

The choices on this list are determined by your organization in the Direct Charge Type Business Rule. When you select a Direct Charge Type, the system supplies the Units, Standard Price, and Expense Code established in the Business Rule for the type you selected.

4. Enter the Quantity used.

This might be the number of miles driven or the number of days a piece of equipment was rented.

5. Enter a Charge type and Number.

The information required on the Charge Number line changes with the type of Charge you select. The list of values for the Charge Type is controlled by the Timekeeping Charge Types Business Rule and may include assets, functions and Work Orders.

If you are charging to an asset, enter the Asset type and ID (or select from the lists of values). If you are charging against a Work Order, select the Work Order and Work Order Task number. When you have identified the charge, the system will supply the Account Number and Expense Code information.

6. Enter other information required to describe the Direct Charge.

You can enter a brief comment that helps to describe the charge. You can also enter an Asset Type and ID in the Rented Asset fields if you need to identify an asset you rented.

7. Click Save.

Continue entering Direct Charge line items until you have entered all your charges you want to include on this record. You must save the record after entering each charge.

When you have finished entering Direct Charges, set the status to Pending Approval and save the record.

Remember, if the Processing rule key in the Other Direct Charges Business Rule is set to Open Entry then you can enter values in the Standard Price and Total Amount fields. This is helpful if you are entering Credit Card charges.

How to Enter Credit Card Charges in the Direct Charges Module

1. Open the appropriate Direct Charge record.

The Direct Charges module is in the Maintenance subsystem. You can also access the module from the Actions list in the Work Order Task, Timekeeping modules, Work Order Task Assignment, and Service Request modules.

2. Click in the first item block in the lower portion of the window or click the New icon.

The system highlights the required fields where you can enter information for the first Direct Charge item.

3. Select a Direct Charge Type from the list of values in the Type field.

The choices on this list are determined by your organization in the Direct Charge Types business rule. Make sure to select a type that indicates that this is a credit card charge. The processing for the Type selected should be Open Entry so that you can manually enter the Units, Standard Price and Amount fields. If the processing is set to Standard these fields are filled in by the system based on the values set in the business rule.

4. Enter the Quantity used.

This might be the number of miles driven or the number of days a piece of equipment was rented.

5. Enter a Charge type and Number.

The information required on the Charge Number line changes with the type of Charge you select. The list of values for the Charge Type is controlled by the Timekeeping Charge Types business rule and may include assets, functions and work orders.

If you are charging to an asset, enter the Asset type and ID (or select from the Lists of Values). If you are charging against a work order, select the work order and work order task number. When you have identified the charge, the system will supply the Account Number and Expense Code information.

6. Enter other information required to describe the Direct Charge.

You can enter a brief comment that helps to describe the charge. You can also enter an Asset Type and ID in the Rented Asset fields if you need to identify an asset you rented.

7. Click the Save icon.

Continue entering Direct Charge line items until you have entered all your charges you want to include on this record. You must save the record after entering each charge.

When you have finished entering Direct Charges, set the status to Pending Approval and save the record.

Direct Charges Log

You can access the Direct Charges Log module directly from the Employee Timekeeping menu, or from the Views list in the Direct Charges module.

In the Direct Charges Log module you can view the log entries for all charge numbers or you can search for log entries for particular criteria, such as a rented Asset ID. You cannot modify any of the information displayed.

DC No	Date	Emp No.	Employee Name	Category	Owner	CT	AT
0700000022	21 JUN 2007	888150	SANTIAGO,			A	
0700000020	05 JUN 2007	CMW953	WOLAK,CHRISTINE			F	F
0700000019	05 JUN 2007	CMW953	WOLAK,CHRISTINE			W	
0700000018	05 JUN 2007	CMW953	WOLAK,CHRISTINE			F	F
0700000017	20 MAY 2007	00140	SALVADOR,CALOY			W	
0700000016	14 MAY 2007	00069	THE BIG GUY,	CODE 1	ERIK	A	
0600000087	26 OCT 2006	456456	GREGORIEV,			W	
0600000085	25 OCT 2006	456456	GREGORIEV,			W	
0600000084	25 OCT 2006	456456	GREGORIEV,			W	
0600000083	25 OCT 2006	456456	GREGORIEV,			W	
0600000081	05 OCT 2006	456456	GREGORIEV,			W	
0600000080	04 OCT 2006	456456	GREGORIEV,			W	

Direct Charges Log

Budget Overage

This view displays account/expense code combinations that have been caused to go over budget by the approval or processing of the current record.

The screenshot shows the Oracle Direct Charges Accounts/Expense Budget window. The window title is "Direct Charges 0700000017 Accounts/Expense Budget". The Oracle logo is visible in the top left. The window contains a search options section, a results table, and an actions section.

Account Number	Expense Code	Document Amt	Budget Amt	Budget Balance
ANA-N-A/D-ASSETC-ADJUST-005	00008	.00	.00	-1,142.30
ANA-N-A/D-ASSETC-ADJUST-005	00010	100.00	.00	-100.00
ANA-N-A/D-ASSETC-ADJUST-005	00020	.00	.00	-2.40

Account Number	Document Amt	Budget Amt	Budget Balance
ANA-N-A/D-ASSETC-ADJUST-005	100.00	.00	-1,244.70

Budget Overage view

Budget amounts are entered in the Period Costs view of the Account module.

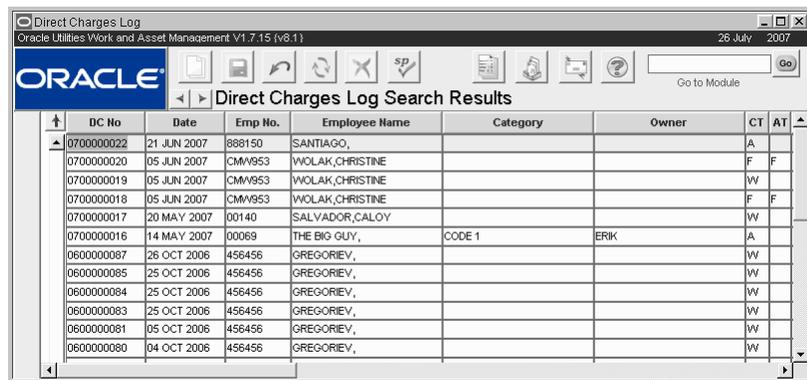
The Budget Checking by Document and Budget Checking Business Rules control this functionality.

Please refer to the topic on [Budget Checking](#) for more information on budget functionality.

Chapter 35

Direct Charges Log

The Direct Charges Log module records summary Direct Charges transaction information. The module is view only, and records cannot be updated here. It simply provides quick access to detailed Direct Charges information when it is needed. Direct Charges items are entered and processed in the Direct Charges module.



DC No	Date	Emp No.	Employee Name	Category	Owner	CT	AT
0700000022	21 JUN 2007	888150	SANTIAGO,			A	
0700000020	05 JUN 2007	CMW953	WOLAK,CHRISTINE			F	F
0700000019	05 JUN 2007	CMW953	WOLAK,CHRISTINE			W	
0700000018	05 JUN 2007	CMW953	WOLAK,CHRISTINE			F	F
0700000017	20 MAY 2007	00140	SALVADOR,CALOY			W	
0700000016	14 MAY 2007	00069	THE BIG GUY,	CODE 1	ERIK	A	
0600000087	26 OCT 2006	456456	GREGORIEV,			W	
0600000085	25 OCT 2006	456456	GREGORIEV,			W	
0600000084	25 OCT 2006	456456	GREGORIEV,			W	
0600000083	25 OCT 2006	456456	GREGORIEV,			W	
0600000081	05 OCT 2006	456456	GREGORIEV,			W	
0600000080	04 OCT 2006	456456	GREGORIEV,			W	

Direct Charges Log

This module uses standard functionality used in all Transaction Logs to rearrange columns, save the layout, and sort data. Please refer to the System Basics guide chapter on Transaction logs for more information.

Related Topics

[Direct Charges](#)

[Transaction Logs](#)

[Transaction Codes Guide](#)

Chapter 36

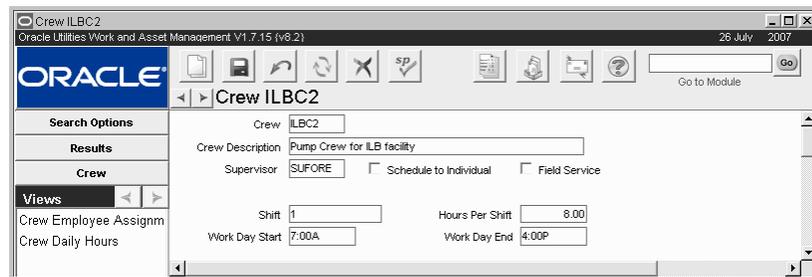
Crew

A crew is a group of workers that can be assigned to complete work. They are used to group workers, to complete timesheets for multiple employees at one time, and to help organize work schedule.

Use the Crew module to create new Crews and assign employees to Crews. While you can also assign employees to existing Crews using the Employee module or the User Enrollment Action in the User Profile module, you must use the Crew module to create new crews. An employee can be assigned to more than one crew. Once a crew is created and employees are assigned to the crew, you can assign Work Order Tasks to the crew or to a particular individual on the crew.

Crew Records

Basic information concerning crews is entered and maintained on crew records.



The screenshot shows a web-based form for creating or editing a crew record. The window title is 'Crew ILBC2' and the application is 'Oracle Utilities Work and Asset Management V1.7.15 (v6.2)'. The date is '26 July 2007'. The form has a sidebar with 'Search Options', 'Results', 'Crew', and 'Views'. The main area contains the following fields:

- Crew: ILBC2
- Crew Description: Pump Crew for ILB facility
- Supervisor: SUFORE
- Options: Schedule to Individual, Field Service
- Shift: 1
- Hours Per Shift: 8.00
- Work Day Start: 7:00A
- Work Day End: 4:00P

Crew record

The following fields are included:

Crew - The system requires a unique crew identification code in this field.

Crew Description - You can enter a brief description of the crew in this field.

Supervisor - Select the supervisor's title from the list of values associated with this field. The list of values is controlled by a code table.

If your organization uses Oracle Utilities Work and Asset Management for Timekeeping, and you want the supervisor to approve Timesheets for the crew, you must also set the Supervisor's authority in the Timekeeping Authority Business Rule and add the Supervisor as a member of the crew.

Schedule to Individual - Check this box to enable scheduling to individuals on the crew in the Daily Schedule module. When this box is checked, the Employee Assignment Task List can be accessed on the Daily Schedule Assignments view.

Shift - Select a shift differential from the list of values, which shows the values your organization has established in the Shift Differential Rates Business Rule. This value is used to calculate premium pay.

Hours Per Shift - Enter the number of hours for the shift. This number is informational only and is not used to calculate premium pay.

Work Day Start - Enter the time normal work day starts for this crew. You can enter the time in any format.

Work Day End - Enter the time normal work day ends for this crew. You can enter the time in any format.

How to Create a Crew Record

1. Open the Crew module.

The Crew module is in the Maintenance subsystem.

2. Click New.

3. Enter an identifying name in the Crew field.

4. Enter any other information to describe the Crew.

You can use the available list of values when entering Supervisor and Shift information.

The Shift differential you select will be used to calculate premium pay.

5. Click Save.

If you are creating a Crew record that duplicates much of the information on another crew record, you can speed up this process by using the Duplicate Last Record or the Dupl. w/ Crew Assignment actions.

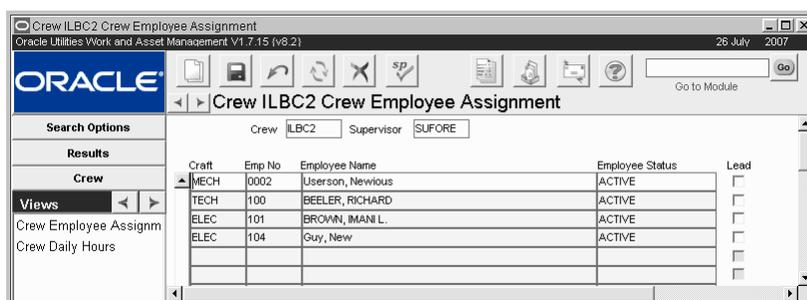
Crew Views

The module includes the following views:

Crew Employee Assignment

Employees can be assigned to more than one crew.

Select Crew Employee Assignment from the Views list to specify employees on the Crew.



Crew Employee Assignment view

Crew - The Crew ID code is copied from the Crew record and cannot be changed here.

Supervisor - The supervisor's title is copied from the Crew record and cannot be changed here.

Craft - Select a craft if appropriate. Some employees may not have a Craft assignment.

Emp No - When you select an employee from the list of values, the system fills in the Employee Number, Employee Name and Employee Status fields. The list of values shows only Active employees with User Profile records.

If a craft is selected, the list of values shows employees who have the craft on their employee record and are not already on the crew. If no craft is selected, the list of values shows employees who are not already on the crew.

Employee Name - Completed by the system when you select an employee number.

Employee Status - Completed by the system when you select an employee number.

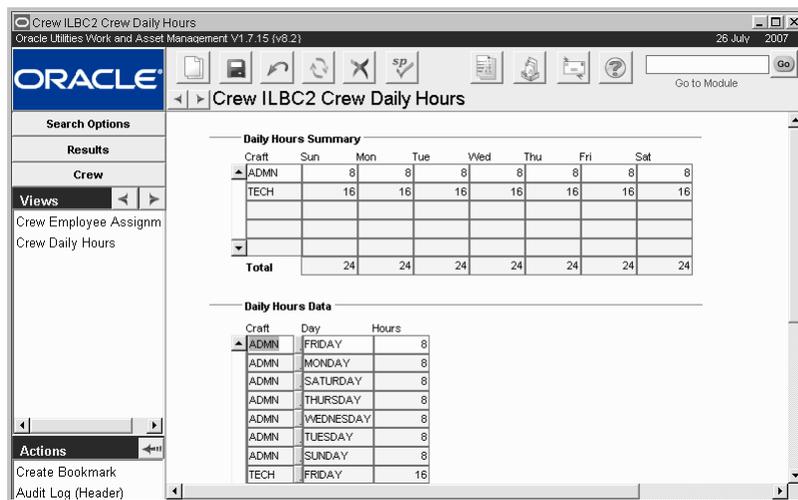
Lead - Select the check box next to the name of the employee that should be designated as the lead for the project.

How to Assign a User to a Crew

1. **Open the appropriate crew record.**
The Crew module is in the Maintenance subsystem.
2. **Select Crew Employee Assignment from the Views list.**
The Crew Employee Assignment window opens showing Employees currently assigned to the crew.
3. **Click the New Icon or in any blank line in the table.**
The system creates a new line in the table.
4. **Select a Craft from the list of values if appropriate.**
If you select a craft, only active employees with that craft assignment and not already on the crew are available for assignment.
5. **Select an employee number from the list of values.**
When you do this, the system completes the employee name and status fields as well. If you do not know the employee number, you can search by employee name using the find box on the list of values.
6. **Click Save.**
The system saves the record. You must save the record after assigning each employee. You can then continue adding additional employees as necessary.

Crew Daily Hours

Select Crew Daily Hours from the Views list to define the work week and applicable crafts for the crew.



Crew Daily Hours

In the Daily Hours Data section enter the craft names as well as the days of the week and number of hours that the craft is available on each day. For example, if a craft is available for 8 hours Monday through Friday, you must enter each day and number of hours separately. If 3 crew members are available to work the craft you would enter 24 hours to represent 3 people working 8 hour shifts.

As lines are entered in the Daily Hours Data section, the system updates the Daily Hours Summary section with the corresponding information. This summary information populates the Resources view of the Daily Schedule module.

The system can automatically generate daily schedules based on settings in the Auto Generate Daily Schedule business rules. This rule looks to the guidelines set in this view to automatically create the schedules.

How to Define Scheduling Information for a Crew

1. Open the appropriate crew record.

The Crew module is in the Maintenance subsystem.

2. Select Crew Daily Hours from the Views list.

3. Click the New icon.

4. Select a craft from the list of values.

5. Enter a day of the week.

6. Enter the number of hours available to that craft on that day of the week.

For example, if a craft is available for 8 hours Monday through Friday, you must enter each day and number of hours separately. If 3 crew members are available to work the craft you would enter 24 hours to represent 3 people working 8 hour shifts.

7. Click the Save icon.

Continue to enter craft days and hours to define a full schedule for each craft in the crew.

Chapter 37

Activity Tracking

There are some businesses where tracking the volume of work performed on one task is as important as planning the entire body of work. The Activity Tracking module can be used to break down tasks, or other work, into units of activity so that the amount of time or space (such as acres mowed or words typed) is accounted for and tracked. Planners and supervisors can then use this information to establish goals, plan future workloads, or quantify expenditures and budgets.

Activity Tracking module

For example, if a work order is planned to “Landscape in Golden Gate Park” and Task1 is to mow the lawns, Task 2 is to prune the trees, and Task 3 is to fertilize the flowers, the Activity Tracking module would then be used to enter the number of acres mowed each day, the number of trees pruned, and the amount of flowers fertilized. As planners look at the work load for the next year they can use these metrics to determine if they need to add more manpower to the crews assigned to these tasks, or if they can afford to cut back and still have the same amount of grass mowed each week.

Activity Tracking Records

Enter and maintain work activity information in the Activity Tracking module.

Use the designated fields to enter the Date work was performed, the amount of work, the units, hours, and any comments.

The tracking number is system generated and cannot be updated.

Use the fields in the lower portion of the screen to track any work order, service request, asset ID, crew or employee references. When planners use the module to derive metrics, the values in these fields can be useful in establishing filters or to group information.

Activity tracking information can also be entered in the Cost and Closeout module.

The tracking number is system generated and cannot be updated.

How to Enter Activity Tracking Information

- 1. Open the Activity Tracking module.**
- 2. Click New.**
- 3. Enter the date the work was performed, the amount of work, the unites, hours, and any comments.**
- 4. Enter additional information as needed.**

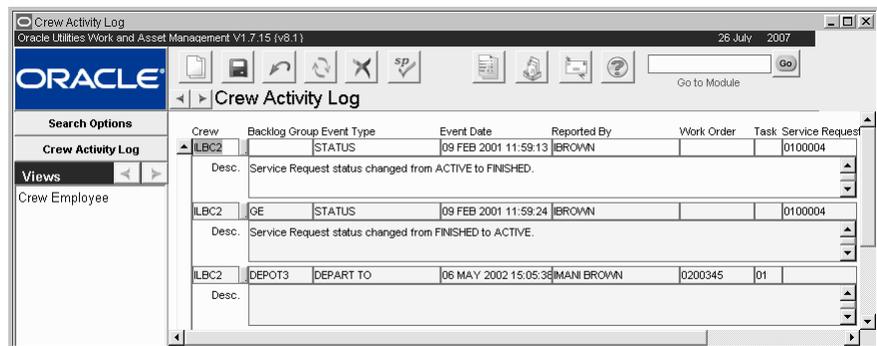
Use the fields in the lower portion of the screen to track any work order, service request, asset ID, crew or employee references. When planners use the module to derive metrics, the values in these fields can be useful in establishing filters or to group information.

Planners can use the information gathered in the Activity Tracking module to level their work load and manpower for future projects. This can later impact crew assignments, scheduling, and other methods of labor allocation.

Chapter 38

Crew Activity Log

The Crew Activity Log allows you to enter and maintain activity information related to a crew, Backlog Group and Event. This information is tied to a Work Order Task and creates a convenient cross-reference. Crew Logs can be accessed in the Crew Activity Log module, or through the specific Work Order Task that they relate to.



Crew Activity Log

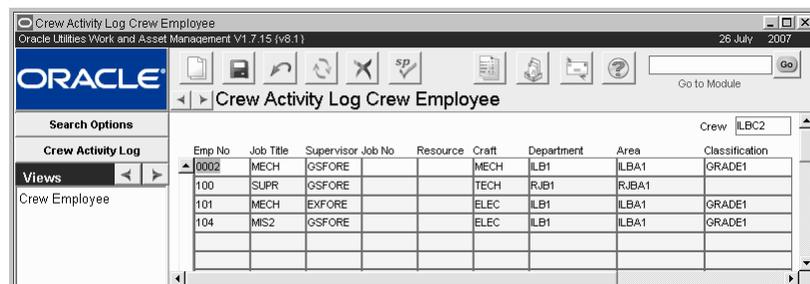
An important feature of this module is the ability to enter unforeseen factors that influenced the work schedules of crews, such as delays due to faulty machinery. Quick access to crew status facilitates rescheduling of resources if problems arise. You can enter new line items in this window if necessary.

Activity Tracking Views

The module includes the following views:

Crew Employee

Select Crew Employee from the views list to see key information regarding crew members for the chosen line item such as Employee Number, Job Title, Supervisor, Craft, etc.



Crew Employee view

Chapter 39

Work Order Task Assignment

The Work Order Task Assignment module provides a way to view Work Order Task Assignments that have already been created in the Assignments view of the Work Order Task and Fleet Work Order Task modules.

A standard Search Options screen is available that enables you to search for and sort Work Order Task Assignments by Employee, Crew, Work Order Task, or other convenient selection criteria.

Each Work Order Task Assignment record displays view-only information about the assigned employee and Work Order Task. You cannot update information in this module. Select the Work Order Task action to open and update the Work Order Task record as needed.

The screenshot shows the Oracle Work Order Task Assignment record for Work Order 0200402 Task 01. The interface includes a search options panel on the left and a main data entry area. The data is as follows:

Employee	
Employee	0002 USERSON, NEVMOUS
Supervisor	OSFORE GENERAL SERVICES SUPERVISOR
Craft/Crew	MECH ILBC2

Work Order Task	
Work Order	0200402
Task	D1
Status	ACTIVE
Required By	23 JUL 2002
Priority	0
Crew/Backlog	ILBC2
GE	
% Comp	
Held For Parts	<input type="checkbox"/>
Description	Benchmark Work Order for processes on Asset 4 in the ILB facility
Asset ID	E ILBAST4
Asset	Asset 4
Component ID	ILBCMP2
Component Installed on Asset	4
Building	
Location	

Work Order Task Assignment record

Only assignments made in the Assignments view of the Work Order Task module will display in this module.

Work Order Task Assignment Views

The module includes the following views:

Attachments

The Attachments view provides access to the Work Order Task Attachments. You cannot update the attachments in the Work Order Task Assignment module.

Work Order Task Assignment Actions

In addition to standard actions, the following can be completed from within the module.

Timesheet

Select Timesheet from the Actions list for direct access to the Timekeeping module where you can enter your time related to the Work Order Task. Users can only create timesheets from Work Order Task Assignment records where their own employee number is entered on the header, regardless of their timekeeping authority.

The Timesheet action is available when the Work Order Task is in Active and Finished statuses.

The screenshot shows a dialog box titled "Enter Timesheet Information :". The window title is "WO Task Assignment Work Order 0200029 Task 01". The Oracle logo is visible in the top left. The dialog contains two input fields: "Date" with the value "26 JUL 2007" and "Employee" with the value "100" and "BEELER,RICHARD". There are "OK" and "Cancel" buttons at the bottom.

Timesheet action

When you select the Timesheet action, the system opens a screen with the current date filled in. Enter your employee number and modify the date if necessary. Click the OK button to search for an existing Timesheet record where you can add additional time charges. If no record is found, the system asks if you want to create a new timesheet record.

Direct Charges

Select Direct Charges from the Actions list to enter Direct Charges against a Work Order Task.

The Direct Charges action is available when the Work Order Task is in Active and Finished statuses.

The screenshot shows a dialog box titled "Enter Direct Charges Information :". The window title is "WO Task Assignment Work Order 0200029 Task 01". The Oracle logo is visible in the top left. The dialog contains two input fields: "Date" with the value "26 JUL 2007" and "Employee" with the value "100" and "BEELER,RICHARD". There are "OK" and "Cancel" buttons at the bottom.

Direct Charges action

When you select this action, the system opens a screen with the current date and your employee number filled in. Both can be modified if necessary. Click the OK button to search for existing Direct Charge records where you can add additional charge items. If no records are found, the system asks if you want to create a new record.

When you begin entering the Direct Charge item, the system supplies the Work Order Task number and Account information.

How to Enter Direct Charges

1. **Select Direct Charges from the Actions list.**
The system enters the current date in the Date field.
2. **Modify the Date if necessary.**
You would need to change the date to enter charges for work done in the past.
3. **Enter the Employee Number of the person who completed the work.**
4. **The system automatically populates the name fields.**
5. **Click the OK button.**
The system opens the direct charges record or asks you if you want to create a new record.
6. **Click on Yes to create a new record if necessary.**
7. **Enter the required Direct Charges.**
8. **Click Save.**

Task Progress

Task Progress is only available on the Actions list when charges against Work Order Tasks in Active status are recorded. Selecting Task Progress from the Actions list when you have highlighted a Work Order Task in Active status opens the Task Progress Summary window where you can record progress on the relevant Work Order Task.

Task Progress view

The window is very similar to the Finish Task Summary window at the end of the Finish Work Order Task Action, with the difference that system does not assume that you have finished the task. Instead, after you save the summary information, the system opens a second window where you can either indicate that the task is finished, or indicate your progress toward completion. You can record the task as only partially completed and the system updates %Complete field on the Work Order Task.

Please refer to the section on Work Order Task [Task Progress](#) for a detailed description of the functionality of this window.

Chapter 40

Account Log

The Account Log tracks all account transactions that are posted throughout the system. This information is for display only and cannot be modified.

Year	Mon	Trans Date	Typ	Trans. Armt	Account	Expense	Work No	Task	WO
2007	07	20 JUL 2007 00:00	LR	260.00	JJC1-N-ASSET-NONE-NONE-002	00007	0700251	02	Y
2007	07	20 JUL 2007 00:00	LR	158.13	CAK1-N-NONE-NONE-STORES PO-001	00007			
2007	07	19 JUL 2007 00:00	LR	158.13	CAK1-N-NONE-NONE-STORES PO-001	00007			
2007	07	19 JUL 2007 00:00	LR	210.00	JSG1-Y-BUDGET-NONE-NONE-001	00007	0700251	01	Y
2007	07	19 JUL 2007 00:00	LP	379.50	JSG1-Y-BUDGET-NONE-NONE-001	00005	0700251	01	Y
2007	07	19 JUL 2007 00:00	AJ	-379.50	JSG1-Y-BUDGET-NONE-NONE-001	00005	0700251	01	Y
2007	07	19 JUL 2007 00:00	AJ	341.55	CAK1-N-ASSET P-ASSETC-TIMESHEET-001	00005	0700251	01	Y
2007	07	19 JUL 2007 00:00	AJ	21.00	CAK1-N-ASSET P-ASSETC-TIMESHEET-001	00007	0700251	01	Y
2007	07	19 JUL 2007 00:00	AJ	189.00	CAK1-N-ASSET P-ASSETC-TIMESHEET-001	00007	0700251	01	Y
2007	07	19 JUL 2007 00:00	AJ	-210.00	JSG1-Y-BUDGET-NONE-NONE-001	00007	0700251	01	Y
2007	07	19 JUL 2007 00:00	AJ	37.95	CAK1-N-ASSET P-ASSETC-TIMESHEET-001	00005	0700251	01	Y
2007	07	18 JUL 2007 06:04	PC	00	BYB1-N-ASSET-NONE-NONE-003	00002			
2007	07	17 JUL 2007 00:00	LR	208.00	JSG1-Y-BUDGET-NONE-NONE-001	00007	0700244	01	Y
2007	07	17 JUL 2007 00:00	LP	189.75	JSG1-Y-BUDGET-NONE-NONE-001	00005	0700244	01	Y
2007	07	15 JUL 2007 00:00	LR	158.13	CAK1-N-NONE-NONE-STORES PO-001	00007			

Account Log

This module uses standard functionality used in all Transaction Logs to rearrange columns, save the layout, and sort data. Please refer to the System Basics guide chapter on Transaction logs for more information.

Related Topics

- [Account](#)
- [Transaction Logs](#)
- [Transaction Codes Guide](#)

Chapter 41

Work Order History

The Work Order history module maintains a record of work orders and tasks that have been completed, rejected or canceled and moved out of the active Work Order and Task tables. This information cannot be modified from within Oracle Utilities Work and Asset Management. Work Orders are moved from the active tables to the history tables by batch processing to keep the active Work Order tables from growing too large. For a complete discussion of the fields and views, please refer to the sections on the Work Order and Work Order Task modules.

The amount of data moved to work order history is determined during the work order closeout process. Options available on the WO Closeout Summary view include moving the entire work order, only asset information, or simply delete the Work Order and Task records from the database. If compatible unit data exists on the work order history task, only the CU Worksheet, CU Items and regulatory accounting data are copied to the new work order.

The screenshot shows a web-based interface for Oracle Utilities Work and Asset Management. The window title is 'WO History 0100648'. The main content area displays the details for a work order with ID '0100648'. The status is 'HISTORY' and the date is '06 SEP 2001'. The description is 'this is the first repair in place work order'. The requester is 'RAY'. The asset ID is 'E_RLW_MATL_DISP1' and the component ID is 'RLW_MATL_DISP1'. The account is 'RLW1-N-MATLDISP-COMP-NONE-005'. The interface includes a search options section, a results section, and a views section with options like 'Additional Data', 'Notes', 'Approval Log', 'Cost Summary', 'Closeout Summary', 'Activity Log', 'Task (Summary)', and 'Task (Detail)'.

WO History record - Notice that the record is in History status

The Auto Close box on the Work Order record must be checked to allow the system to automatically close the work order if it remains in FINISHED status for the number of days defined in the WO Aging business rule.

Work History Views

For an overview of the views in the Work History module, please refer to the corresponding view in the [Work Order](#) module.

Create New Work Order from History

Use a Work Order record that has been moved to history as a template, creating a new Work Order record with all of the same header and task information, including details, except for actual cost and quantity information. The History Work Order record remains unchanged.

Copy Work History as Closed Work Order

This action moves the Work Order record out of the “history” tables back into the “active” Work Order tables, placing the Work Order record in “Closed” status. You might have to move a work order back to the “active” tables if all costs have not yet posted (such as a late invoice). According to the information in the Work Order / Task Closeout view, the Work Order will eventually be moved back into the “history” tables.

Note: This action is not available for work orders in "canceled" or "rejected" status.

Chapter 42

Failure History

The system builds a complete failure history for Assets as work is performed and Asset failure information is entered into the Work Order and Task Closeout view. You can access this information through the Asset Failure History module, where you can also perform Asset Failure analysis. Failure History records are drawn from Work Order information stored in the Work Order History module.

Asset Failure History is a view-only module.

More data is retrieved (per record) than can be displayed on the window. To view more data, use the scroll bar located at the bottom of the window to scroll left and right across the screen.

Work No	A	Asset	Failure	Repair	Process	Duration	Component
0000004	E	CAK-ASSET01			CAK-PROCESS1		CATHYS BE
0000007	E	CAK-ASSET01			CAK-PROCESS1		CATHYS BE
0000008	V	RVM-FLEET1	FRETTED				Rotate Tires
0000010	V	RLW_4X4_TRUCK					Oil Change
0000023	E	RLW_RUNTIME					RLW - PM M
0000025	E	RLW_RUNTIME					RLW - PM M
0000026	E	RLW_RUNTIME					RLW - PM M
0000027	E	RLW_RUNTIME	ELECTRICAL				RLW - PM M
0000032	E	RLW_RUNTIME	FORGNMTRL				this is a des
0000039	E	RLW_ASSET3			RLW_PROCESS1		this is a des
0000044	E	RVM-2					adasda
0000054	E	RLW_RUNTIME3					this is a des
0000055	E	RVM-2	CORROSION	ADJUSTED		24	ALARM test
0000059	E	RVM-1			RVM-PROCESS1		ajdfjfa,sj

Failure History record

Selected records are displayed on the Asset Failure History Analysis window in the same format as the other Transaction Logs in the system. You can sort and reorder the rows and columns as you can with all Transaction logs. Please see the Transaction Logs section in the System Basics User Guide for more details on how Transaction Logs work within the system.

Cue Cards

Overview

Work Request

- [How to Create a Work Request](#)
- [How to Add a Work Request to an Existing Work Order](#)
- [How to Create a New Work Order from a Work Request](#)

Work Design

- [How to Create a Work Order from a Work Design](#)

Work Order

- [How to Create a Work Order Record](#)
- [How to Create a Work Order Record for a Project/Subproject](#)
- [How to Close a Work Order](#)
- [How to Review Work Order Closeout Information](#)
- [How to Manually Associate a Service Request to a Work Order on the Work Order Record](#)
- [How to Create a Benchmark from a Work Order](#)
- [How to Update a Work Order from a Benchmark](#)
- [How to Update a Benchmark from a Work Order](#)
- [How to Print a PM Route Report from a Work Order](#)

Work Order Task

- [How to Create a New Work Order Task Record](#)
- [How to Create a Checkout Request from a Work Order Task](#)
- [How to Plan Stock Items to be Used for a Work Order Task](#)
- [How to Plan Non-Stock Items to be Used for a Work Order Task](#)
- [How to Activate Work Order Task Materials](#)
- [How to Plan Labor Requirements for a Work Order Task](#)
- [How to Plan Travel Time for a Work Order Task](#)
- [How to Assign Employees to a Work Order Task](#)
- [How to Create a Timesheet for a Crew](#)
- [How to Enter Direct Charges from a Work Order Task](#)
- [How to Print a PM Route Report from a Work Order Task](#)

Project/Subproject

- [How to Set the System to Send an Alert when a Project/Subproject is Near Budget](#)
- [How to Create a Project Record](#)
- [How to Create a Subproject Record](#)
- [How to Create a Work Order for a Project/Subproject](#)
- [How to Set the System to Create Account Numbers for Subprojects](#)
- [How to Set the System to Provide a Subproject Account on Work Orders](#)
- [How to Set the System to Send an Alert when a Project/Subproject is Near Its Budget](#)
- [How to Create a Project Management File](#)
- [How to Export a Project Management File](#)

[How to Manage a Project in Microsoft Project](#)

Benchmark Work Order

[How to Create a New Benchmark in the Benchmark Work Order Module](#)
[How to Create a Benchmark Work Order Task Record](#)
[How to Create a Benchmark from an Existing Work Order](#)
[How to Create a Work Order from a Benchmark](#)
[How to Update a Work Order from a Benchmark](#)
[How to Update a Benchmark from a Work Order](#)
[How to Create a Work Order from a History Work Order](#)

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