

Oracle® Enterprise Asset Management

User's Guide

Release 11*i*

July, 2002

Part No. A95930-02

ORACLE®

Oracle Enterprise Asset Management User's Guide, Release 11*i*

Part No. A95930-02

Copyright © 2002, Oracle Corporation. All rights reserved.

Primary Author: Amy Sonczalla

Contributors: Hart Levy, Lenore Siegler, Connie Afshar, Naveen Gupta, Suresh Sundaram, Di Zhao, Kenichi Nagumo, Saurabh Raval, Anirban Dey

The Programs (which include both the software and documentation) contain proprietary information of Oracle Corporation; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent and other intellectual and industrial property laws. Reverse engineering, disassembly or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. Oracle Corporation does not warrant that this document is error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of Oracle Corporation.

If the Programs are delivered to the U.S. Government or anyone licensing or using the programs on behalf of the U.S. Government, the following notice is applicable:

Restricted Rights Notice Programs delivered subject to the DOD FAR Supplement are "commercial computer software" and use, duplication, and disclosure of the Programs, including documentation, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement. Otherwise, Programs delivered subject to the Federal Acquisition Regulations are "restricted computer software" and use, duplication, and disclosure of the Programs shall be subject to the restrictions in FAR 52.227-19, Commercial Computer Software - Restricted Rights (June, 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065.

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy, and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and Oracle Corporation disclaims liability for any damages caused by such use of the Programs.

Oracle is a registered trademark, and Enabling the Information Age, Oracle7, Oracle8, Oracle8i, Oracle 9i, Oracle 9iAS Discoverer, Oracle Quality, Oracle Mobile, Oracle Discoverer, PL*SQL, Pro*C, Pro*C/C++, SQL*Net, and SQL*Plus are trademarks or registered trademarks of Oracle Corporation. Other names may be trademarks of their respective owners.

Contents

Send Us Your Comments	xi
------------------------------------	----

Preface.....	xiii
---------------------	------

Audience for This Guide	xiii
How To Use This Guide	xiii
Documentation Accessibility	xv
Other Information Sources	xv
Online Documentation.....	xvi
Related User's Guides	xvi
Guides Related to All Products	xvi
User Guides Related to This Product.....	xvii
Installation and System Administration	xvii
Other Implementation Documentation	xviii
Training and Support.....	xx
Do Not Use Database Tools to Modify Oracle Applications Data	xx
About Oracle	xxi
Your Feedback.....	xxi

1 Oracle Enterprise Asset Management Overview

Overview of Oracle Enterprise Asset Management.....	1-2
Asset Management.....	1-3
eAM Work Management.....	1-4
Rebuildable Spare Tracking.....	1-5
Planning	1-5

Self Service Maintenance	1-5
--------------------------------	-----

2 Setting Up

Oracle Enterprise Asset Management Setup Overview	2-3
Organization Setup	2-5
Setting Up Organizations	2-5
Enabling Organizations for Enterprise Asset Management.....	2-7
Defining eAM Parameters	2-9
General eAM Setup	2-12
Setting Up Asset Areas	2-12
Defining Departments and Resources	2-13
Defining Department Approvers	2-17
Defining Miscellaneous Documents	2-18
Defining Lookups	2-20
Asset Activity Types.....	2-20
Asset Activity Causes.....	2-22
Asset Criticality Codes.....	2-23
Work Request Statuses.....	2-25
Work Request Types	2-27
Work Order and Work Request Priority Codes	2-28
Work Order Failure Codes	2-30
Work Order Reconciliation Codes	2-31
Work Order Types	2-33
Asset Setup	2-36
Setting Up Category Codes and Sets	2-36
Defining Asset Groups.....	2-39
Setting Up Asset Attributes.....	2-42
Defining Asset Numbers	2-46
Defining Asset Documents.....	2-53
Defining Asset Activities	2-54
Asset/Asset Activity Association	2-56
Defining Asset Routes.....	2-58
Setting Up Asset Bills of Material.....	2-60
Defining Maintenance Routes.....	2-64
Setting Up Maintenance Bills of Material.....	2-68

Defining Asset Statuses	2-70
Rebuildable Spare Setup.....	2-72
Defining Rebuildable Spares.....	2-72
Rebuildable Spare/Asset Activity Association.....	2-75
Quality Integration Setup	2-77
Outside Processing Integration Setup	2-78
Cost Management Integration Setup	2-79
Process and Discrete Manufacturing Integration Setup	2-80
Project Manufacturing Integration Setup	2-81

3 eAM Work Management

Overview eAM Work Management	3-3
eAM Work Orders.....	3-5
Routine Work Orders.....	3-5
Preventive Maintenance Work Orders.....	3-11
Rebuild Work Orders.....	3-12
Easy Work Orders	3-18
eAM Work Order Statuses	3-18
Defining Work Order Documents.....	3-20
eAM Operations and Tasks.....	3-22
Preparing Work Order Operations	3-22
Viewing Work Order Operations.....	3-26
Defining Material Requirements	3-27
Viewing Material Requirements	3-30
Defining Resource Requirements.....	3-32
Viewing Resource Requirements	3-36
eAM Work Order Transactions	3-38
Operation Completion	3-38
Work Order Completion	3-41
Rebuild Work Order Completion	3-44
Transacting Material	3-47
Transacting Resources	3-50
Viewing Resources Transactions.....	3-52
Closing Work Orders	3-54
eAM Work Order Planning.....	3-59

Using the Maintenance Workbench.....	3-59
--------------------------------------	------

4 Preventive Maintenance

Overview of Preventive Maintenance	4-2
Meters	4-3
Defining Meters.....	4-3
Associating Meters with Assets.....	4-5
Entering Meter Readings	4-7
Preventive Maintenance Scheduling	4-11
Entering Preventive Maintenance Schedule Definitions	4-11
Suppression Activities.....	4-16
Generating Work Orders	4-20

5 eAM Planning and Scheduling

Overview of eAM Planning and Scheduling	5-2
eAM Planning	5-3
Defining a Master Demand Schedule Name	5-4
Defining a Material Requirements Plan Name	5-5
Defining Plan Options.....	5-6
Launching the Planning Process.....	5-10
Viewing Suggested Demand.....	5-11
eAM Scheduling	5-14
Enabling eAM Scheduling.....	5-14
Using the Scheduler Workbench	5-17

6 eAM Cost Management

Overview of eAM Cost Management	6-2
eAM Costing Methods and Mappings	6-2
Setting Up eAM Cost Management	6-5
eAM Cost Estimation	6-8
Viewing Cost Information	6-11
Transferring Invoice Variances to Maintenance Work Orders	6-20
Viewing Simulated Transfer Details	6-20
Transferring Invoice Variances.....	6-21

7 Direct Item Procurement for eAM Work Orders

Overview of Direct Item Procurement for eAM Work Orders	7-2
Enabling Direct Item Procurement	7-4
Entering Requisitions for Direct Items	7-5
Creating Purchase Orders from Requisitions.....	7-11
Entering Purchase Orders for Direct Items.....	7-18
eAM Direct Procurement Accounting.....	7-22

8 Contractor Services

Overview of eAM Contractor Services	8-2
Setting Up Outside Service Processing	8-2

9 eAM Property Manager

Overview of eAM Property Manager	9-2
Setting Up eAM Prerequisites	9-2
Running the Export Process.....	9-2
Property Manager Integration	9-5

10 eAM Process and Discrete Manufacturing

Overview of eAM Process and Discrete Manufacturing	10-2
Organization Setups.....	10-2
Associating Assets with Production Equipment	10-4
Viewing Resource Usage.....	10-6

11 eAM Project Manufacturing

Overview of eAM Project Manufacturing	11-2
Project Definition	11-3
Associating a Work Order with a Project.....	11-7
Creating Requisitions or Purchase Orders.....	11-8
Viewing the Requisition within the Maintenance Work Order.....	11-15
Updating the Commitments for a Project	11-16
Viewing Commitments.....	11-18

12 eAM Quality

Quality Setup	12-2
Creating Collection Elements.....	12-2
Creating eAM Quality Collection Plans	12-8
Adding Collection Plan Attachments	12-13
Triggering a Work Request	12-15

13 eAM Self Service Maintenance

Overview of eAM Self Service Maintenance	13-2
Home Page	13-3
Assets	13-5
Obtaining Asset Information	13-5
Viewing Asset Details	13-7
Displaying the Asset Hierarchy.....	13-8
Viewing and Updating the Configuration History	13-9
Viewing Cost Information	13-10
Viewing Associated Work Requests	13-13
Viewing Quality Information.....	13-14
Work Requests	13-18
Work Request Statuses.....	13-18
Obtaining Work Request Information	13-19
Work Orders	13-22
Viewing Work Orders.....	13-22
Creating Easy Work Orders	13-23
Work Plans	13-26
Viewing Asset and Rebuildable Work Orders	13-26
Managing Operations.....	13-29

14 Reports and Processes

Overview of Reports	14-2
Maintenance Work Order Detail Report	14-2
Simulate Transfer Shop Floor Invoice Variance	14-5
Shop Floor Invoice Variance Report	14-7

A Windows and Navigation Paths

Windows and Navigation Paths.....	A-1
-----------------------------------	-----

B eAM Open Interfaces and APIs

eAM Interfaces and APIs	B-2
eAM Item Open Interface.....	B-2
eAM Asset Number Open Interface	B-9
eAM Asset Genealogy Open Interface	B-16
eAM Work Order Open Interface	B-19
eAM Meter Reading Open Interface.....	B-23

Glossary

Index

Send Us Your Comments

Oracle Enterprise Asset Management User's Guide, Release 11*i*

Part No. A95930-02

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this document. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most?

If you find any errors or have any other suggestions for improvement, please indicate the document title and part number, and the chapter, section, and page number (if available). You can send comments to us in the following ways:

- Electronic mail: mfgdoccomments_us@oracle.com
- FAX: 1-650-506-7200 Attn: Oracle Enterprise Asset Management
- Postal service:
Oracle Corporation
Manufacturing Applications Documentation and Curriculum
500 Oracle Parkway
Redwood Shores, 94605
United States

If you would like a reply, please give your name, address, telephone number, and (optionally) electronic mail address.

If you have problems with the software, please contact your local Oracle Support Services.

Preface

Audience for This Guide

Welcome to Release 11*i* of the Oracle Enterprise Asset Management User's Guide.

This guide assumes you have a working knowledge of the following:

- The principles and customary practices of your business area.
- Oracle Enterprise Asset Management.

If you have never used Oracle Enterprise Asset Management, Oracle suggests you attend one or more of the Oracle Enterprise Asset Management training classes available through Oracle University.

- The Oracle Applications graphical user interface.

To learn more about the Oracle Applications graphical user interface, read the *Oracle Applications User's Guide*.

See Other Information Sources for more information about Oracle Applications product information.

How To Use This Guide

This guide contains the information you need to understand and use Oracle Enterprise Asset Management.

- Chapter 1 provides an overview of Enterprise Asset Management.
- Chapter 2 describes the required components and the necessary steps for setting up Enterprise Asset Management.

- Chapter 3 discusses Enterprise Asset Management work orders and the Maintenance Workbench.
- Chapter 4 illustrates Enterprise Asset Management's Preventive Maintenance solution.
- Chapter 5 presents Enterprise Asset Management's method of ensuring cost savings and work management efficiencies for your organization. Through planning and scheduling, predictive work activities are generated and then used in a planning process to balance the work load for resource management.
- Chapter 6 explains eAM's integration with Cost Management and presents how costs are generated as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies defined within eAM.
- Chapter 7 introduces Enterprise Asset Management's Direct Item Procurement method, used to enable you to order items directly to your maintenance organization.
- Chapter 8 explains eAM's integration with Outside Processing. In this chapter, titled Contractor Services, you will learn how to enable your maintenance environment to track outside service purchasing transaction and costing information for maintenance work orders.
- Chapter 9 describes eAM's integration with Property Manager. You will learn how to integrate Property Manager locations with eAM assets.
- Chapter 10 presents eAM's integration with process and discrete manufacturing. You will learn how to enable your maintenance environment to identify eAM asset relationships with production equipment.
- Chapter 11 discusses eAM's integration with Project Manufacturing. You will learn how to enable a seamless, integrated business solution for financial project management and reporting, and project supply chain management and execution.
- Chapter 12 discusses eAMs integration with Quality. You will learn how to enable collection of quality results on your assets.
- Chapter 13 details Oracle Enterprise Asset Management's self service maintenance capabilities.
- Chapter 14 describes each Oracle Enterprise Asset Management report.
- Appendix A provides a list of navigation paths used to access programs in Oracle's Forms application.

- Appendix B lists and describes all APIs and Open Interfaces used by Enterprise Asset Management.

Conventions

The following conventions are used in this manual:

Convention	Meaning
.	Vertical ellipsis points in an example mean that information not directly related to the example has been omitted.
...	Horizontal ellipsis points in statements or commands mean that parts of the statement or command not directly related to the example have been omitted
boldface text	Boldface type in text indicates a term defined in the text, the glossary, or in both locations.
< >	Angle brackets enclose user-supplied names.
[]	Brackets enclose optional clauses from which you can choose one or none.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Standards will continue to evolve over time, and Oracle Corporation is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For additional information, visit the Oracle Accessibility Program Web site at <http://www.oracle.com/accessibility/>.

Other Information Sources

You can choose from many sources of information, including online documentation, training, and support services, to increase your knowledge and understanding of Oracle Enterprise Asset Management.

If this guide refers you to other Oracle Applications documentation, use only the Release 11*i* versions of those guides.

Online Documentation

All Oracle Applications documentation is available online (HTML or PDF).

- **Online Help** - The new features section in the HTML help describes new features in 11*i*. This information is updated for each new release of Oracle Enterprise Asset Management. The new features section also includes information about any features that were not yet available when this guide was printed. For example, if your administrator has installed software from a mini-packs an upgrade, this document describes the new features. Online help patches are available on MetaLink.
- **11*i* Features Matrix** - This document lists new features available by patch and identifies any associated new documentation. The new features matrix document is available on MetaLink.

Readme File - Refer to the readme file for patches that you have installed to learn about new documentation or documentation patches that you can download.

Related User's Guides

Oracle Enterprise Asset Management shares business and setup information with other Oracle Applications products. Therefore, you may want to refer to other user's guides when you set up and use Oracle Enterprise Asset Management.

You can read the guides online by choosing Library from the expandable menu on your HTML help window, by reading from the Oracle Applications Document Library CD included in your media pack, or by using a Web browser with a URL that your system administrator provides.

If you require printed guides, you can purchase them from the Oracle Store at <http://oraclestore.oracle.com>.

Guides Related to All Products

Oracle Applications User's Guide

This guide explains how to enter data, query, run reports, and navigate using the graphical user interface (GUI) available with this release of Oracle Enterprise Asset Management (and any other Oracle Applications products). This guide also

includes information on setting user profiles, as well as running and reviewing reports and concurrent processes.

You can access this user's guide online by choosing "Getting Started with Oracle Applications" from any Oracle Applications help file.

User Guides Related to This Product

Oracle Internet Procurement Implementation Manual

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

Installation and System Administration

Oracle Applications Concepts

This guide provides an introduction to the concepts, features, technology stack, architecture, and terminology for Oracle Applications Release 11*i*. It provides a useful first book to read before an installation of Oracle Applications. This guide also introduces the concepts behind Applications-wide features such as Business Intelligence (BIS), languages and character sets, and Self-Service Web Applications.

Installing Oracle Applications

This guide provides instructions for managing the installation of Oracle Applications products. In Release 11*i*, much of the installation process is handled using Oracle Rapid Install, which minimizes the time to install Oracle Applications, the Oracle8 technology stack, and the Oracle8*i* Server technology stack by automating many of the required steps. This guide contains instructions for using Oracle Rapid Install and lists the tasks you need to perform to finish your installation. You should use this guide in conjunction with individual product user's guides and implementation guides.

Upgrading Oracle Applications

Refer to this guide if you are upgrading your Oracle Applications Release 10.7 or Release 11.0 products to Release 11*i*. This guide describes the upgrade process and lists database and product-specific upgrade tasks. You must be either at Release 10.7 (NCA, SmartClient, or character mode) or Release 11.0, to upgrade to Release 11*i*. You cannot upgrade to Release 11*i* directly from releases prior to 10.7.

Maintaining Oracle Applications

Use this guide to help you run the various AD utilities, such as AutoUpgrade, AutoPatch, AD Administration, AD Controller, AD Relink, License Manager, and others. It contains how-to steps, screenshots, and other information that you need to run the AD utilities. This guide also provides information on maintaining the Oracle applications file system and database.

Oracle Applications System Administrator's Guide

This guide provides planning and reference information for the Oracle Applications System Administrator. It contains information on how to define security, customize menus and online help, and manage concurrent processing.

Oracle Alert User's Guide

This guide explains how to define periodic and event alerts to monitor the status of your Oracle Applications data.

Oracle Applications Developer's Guide

This guide contains the coding standards followed by the Oracle Applications development staff. It describes the Oracle Application Object Library components needed to implement the Oracle Applications user interface described in the *Oracle Applications User Interface Standards for Forms-Based Products*. It also provides information to help you build your custom Oracle Forms Developer 6*i* forms so that they integrate with Oracle Applications.

Oracle Applications User Interface Standards for Forms-Based Products

This guide contains the user interface (UI) standards followed by the Oracle Applications development staff. It describes the UI for the Oracle Applications products and how to apply this UI to the design of an application built by using Oracle Forms.

Other Implementation Documentation

Oracle Applications Product Update Notes

Use this guide as a reference for upgrading an installation of Oracle Applications. It provides a history of the changes to individual Oracle Applications products between Release 11.0 and Release 11*i*. It includes new features, enhancements, and changes made to database objects, profile options, and seed data for this interval.

Multiple Reporting Currencies in Oracle Applications

If you use the Multiple Reporting Currencies feature to record transactions in more than one currency, use this manual before implementing Oracle Enterprise Asset Management. This manual details additional steps and setup considerations for implementing Oracle Enterprise Asset Management with this feature.

Multiple Organizations in Oracle Applications

This guide describes how to set up and use Oracle Enterprise Asset Management with Oracle Applications' Multiple Organization support feature, so you can define and support different organization structures when running a single installation of Oracle Enterprise Asset Management.

Oracle Workflow Guide

This guide explains how to define new workflow business processes as well as customize existing Oracle Applications-embedded workflow processes. You also use this guide to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes.

Oracle Applications Flexfields Guide

This guide provides flexfields planning, setup and reference information for the Oracle Enterprise Asset Management implementation team, as well as for users responsible for the ongoing maintenance of Oracle Applications product data. This manual also provides information on creating custom reports on flexfields data.

Oracle eTechnical Reference Manuals

Each eTechnical Reference Manual (eTRM) contains database diagrams and a detailed description of database tables, forms, reports, and programs for a specific Oracle Applications product. This information helps you convert data from your existing applications, integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on Metalink

Oracle Manufacturing APIs and Open Interfaces Manual

This manual contains up-to-date information about integrating with other Oracle Manufacturing applications and with your other systems. This documentation includes API's and open interfaces found in Oracle Manufacturing.

Oracle Order Management Suite APIs and Open Interfaces Manual

This manual contains up-to-date information about integrating with other Oracle Manufacturing applications and with your other systems. This documentation includes API's and open interfaces found in Oracle Order Management Suite.

Oracle Applications Message Reference Manual

This manual describes all Oracle Applications messages. This manual is available in HTML format on the documentation CD-ROM for Release 11*i*.

Training and Support

Training

Oracle offers a complete set of training courses to help you and your staff master Oracle Enterprise Asset Management and reach full productivity quickly. These courses are organized into functional learning paths, so you take only those courses appropriate to your job or area of responsibility.

You have a choice of educational environments. You can attend courses offered by Oracle University at any one of our many Education Centers, you can arrange for our trainers to teach at your facility, or you can use Oracle Learning Network (OLN), Oracle University's online education utility. In addition, Oracle training professionals can tailor standard courses or develop custom courses to meet your needs. For example, you may want to use your organization structure, terminology, and data as examples in a customized training session delivered at your own facility.

Support

From on-site support to central support, our team of experienced professionals provides the help and information you need to keep Oracle Enterprise Asset Management working for you. This team includes your Technical Representative, Account Manager, and Oracle's large staff of consultants and support specialists with expertise in your business area, managing an Oracle8*i* server, and your hardware and software environment.

Do Not Use Database Tools to Modify Oracle Applications Data

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

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

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

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

About Oracle

Oracle Corporation develops and markets an integrated line of software products for database management, applications development, decision support, and office automation, as well as Oracle Applications, an integrated suite of more than 160 software modules for financial management, supply chain management, manufacturing, project systems, human resources and customer relationship management.

Oracle products are available for mainframes, minicomputers, personal computers, network computers and personal digital assistants, allowing organizations to integrate different computers, different operating systems, different networks, and even different database management systems, into a single, unified computing and information resource.

Oracle is the world's leading supplier of software for information management, and the world's second largest software company. Oracle offers its database, tools, and applications products, along with related consulting, education, and support services, in over 145 countries around the world.

Your Feedback

Thank you for using Oracle Enterprise Asset Management and this user's guide.

Oracle values your comments and feedback. At the beginning of this guide is a Reader's Comment Form you can use to explain what you like or dislike about Oracle Enterprise Asset Management or this user's guide. Mail your comments to the following address or call us directly at (650) 506-7000.

Oracle Applications Documentation Manager
Oracle Corporation
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Or, send electronic mail to **mfgdoccomments_us@oracle.com**.

Oracle Enterprise Asset Management Overview

Oracle Enterprise Asset Management (eAM) enables you to schedule and plan maintenance activities, and track all work activity and costs related to assets throughout an organization. eAM provides you with a set of tools that address asset maintenance requirements for environments that are asset intensive. You can carry out the tasks of asset management in the most cost effective, efficient way. This chapter contains the following topics:

- Overview of Oracle Enterprise Asset Management on page 1-2
- Asset Management on page 1-3
- eAM Work Management on page 1-4
- Component Tracking on page 1-5
- Planning on page 1-5
- Self Service Maintenance on page 1-5

Overview of Oracle Enterprise Asset Management

Today's asset intensive companies need to optimize capacity and increase utilization, while lowering unit production costs. Oracle Enterprise Asset Management (eAM) enables you to adopt maintenance strategies to meet this challenge. eAM improves operation performance, and with preventive, scheduled maintenance, increases safety.

Oracle eAM enables organizations to create optimal asset management strategies they can increase revenue and decrease costs. By effectively monitoring operational data such as maintenance history, performance trends, meter readings, and operating conditions, organizations can proactively manage available resources such as inventory, equipment, and skilled personnel, to match them to asset maintenance demand.

eAM fits the needs of all organizations that utilize assets (for example, machines, equipment, etc.) as part of their business operations and activities. This product bridges the gap between ERP/MRP solutions and asset maintenance for industries such as Utilities, Metals/Mining, Manufacturing, Pulp/Paper, Petrochemicals, Facilities, and Education, that rely heavily on asset maintenance systems. eAM eliminates the need for spreadsheets and disparate data repositories, by enabling companies to manage reactive, planned, preventive maintenance, and adopt a centralized, proactive strategy for managing asset maintenance across an enterprise.

eAM enables an organization to do the following:

- Create a preventive maintenance strategy
- Maximize resource availability
- Optimize scheduling and resource efficiency
- Integrate with Oracle's e-business suite for enterprise-wide solutions

The following topics are included in this section:

- [Asset Management](#) on page 1-3
- [eAM Work Management](#) on page 1-4
- [Rebuildable Spare Tracking](#) on page 1-5
- [Planning](#) on page 1-5
- [Self Service Maintenance](#) on page 1-5

Asset Management

eAM eliminates the need for point solutions that offer a limited, "flat" view of an asset by expanding the visibility and ownership of an asset throughout an entire organization. Different entities may describe an asset in several ways:

- fixed asset to an accounting department
- leased asset to facilities management
- piece of production equipment to operations
- inventory item to materials management
- maintainable asset to mechanical engineers

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

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

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

Oracle eAM enables you to quickly identify plants and facilities using an Asset Navigator (See: [Assets](#) on page 13-5). You can view details of an asset, such as cost, hierachal (parent/child) information, and launch transactions. You can also view current or historical configurations, and work details of an asset. As components of an asset are removed and re-installed from an asset, the asset genealogy and parent/child meter readings are tracked automatically. Attributes, such as cost history, bills of material, and document attachments can be associated with a specific asset.

Asset Hierarchies

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

See Also:

- [Asset Setup on page 2-36](#)
- [Obtaining Asset Information on page 13-5](#)
- [Viewing Asset Details on page 13-7](#)
- [Displaying the Asset Hierarchy on page 13-8](#)
- [Viewing and Updating the Configuration History on page 13-9](#)
- [Viewing Cost Information on page 13-10](#)
- [Viewing Associated Work Requests on page 13-13](#)
- [Viewing Quality Information on page 13-14](#)

eAM Work Management

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

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

See Also:

- [Obtaining Work Request Information on page 13-19](#)
- [Creating and Updating Work Requests on page 13-21](#)
- [Work Orders on page 13-22](#)

Rebuildable Spare Tracking

You can keep track of the history of a rebuildable spare (for example, a motor) every time it was installed, removed, or rebuilt. You can view the history of all work performed, and the cost associated with the maintenance of a rebuildable spare. When a rebuildable spare is replaced into the asset, Oracle eAM generates a pre-planned work order that defines the related work required to repair that item.

See Also:

[Rebuildable Spare Setup](#) on page 2-72

[Viewing Asset and Rebuildable Work Orders](#) on page 13-26

[Rebuild Work Orders](#) on page 3-12

Planning

You can ensure that sufficient resources, equipment, and materials are available for all necessary maintenance tasks. You can focus on a period of time, and collect all the known maintenance work for that planning time frame, associated with a responsible crew or department. This enables you to process each item of work into a planned work order.

See Also:

[Work Plans](#) on page 13-26

[Overview of eAM Planning and Scheduling](#) on page 5-3

Self Service Maintenance

Oracle eAM provides a self-service user interface that is specifically designed for users, such as tradespeople or supervisors. You can navigate through self-service screens that direct you to functional areas, commonly associated with maintenance personnel, for daily planning and work execution.

See Also:

[Overview of eAM Self Service Maintenance](#) on page 13-2

2

Setting Up

This chapter discusses setting up the Oracle Enterprise Asset Management system, including the following topics:

- ❑ Oracle Enterprise Asset Management Setup Overview on page 2-3
- ❑ Setting Up Organizations on page 2-5
- ❑ Enabling Organizations for Enterprise Asset Management on page 2-7
- ❑ Defining eAM Parameters on page 2-9
- ❑ Setting Up Asset Areas on page 2-12
- ❑ Defining Departments and Resources on page 2-13
- ❑ Defining Department Approvers on page 2-17
- ❑ Defining Miscellaneous Documents on page 2-18
- ❑ Defining Lookups on page 2-20
- ❑ Setting Up Asset Attributes on page 2-42
- ❑ Defining Asset Groups on page 2-39
- ❑ Setting Up Category Codes and Sets on page 2-36
- ❑ Defining Asset Numbers on page 2-46
- ❑ Defining Asset Documents on page 2-53
- ❑ Defining Asset Activities on page 2-54
- ❑ Asset/Asset Activity Association on page 2-56
- ❑ Defining Asset Routes on page 2-58
- ❑ Setting Up Asset Bills of Material on page 2-60

-
- Defining Maintenance Routes on page 2-64
 - Setting Up Maintenance Bills of Material on page 2-68
 - Defining Asset Statuses on page 2-70
 - Defining Rebuildable Spares on page 2-72
 - Rebuildable Spare/Asset Activity Association on page 2-75
 - Quality Integration Setup on page 2-77
 - Outside Processing Integration Setup on page 2-78
 - Cost Management Integration Setup on page 2-79
 - Process and Discrete Manufacturing Integration Setup on page 2-80
 - Project Manufacturing Integration Setup on page 2-81

Oracle Enterprise Asset Management Setup Overview

Oracle Enterprise Asset Management (eAM) can have unique setups for each organization. This includes parameters, user defined lookups, and asset attributes. During the implementation process, the implementation team should discuss system and user options for Enterprise Asset Management. The user that is implementing Enterprise Asset Management should also have determined the structure of their organizations and user access through Oracle System Administrator. This chapter covers the following topics:

- [Organization Setup](#) on page 2-5
 - Setting Up Organizations
 - Enabling Organizations for Enterprise Asset Management
 - Defining eAM Parameters
- [General Enterprise Asset Management Setup](#) on page 2-12
 - Setting Up Asset Areas
 - Defining Departments and Resources
 - Defining Department Approvers
 - Defining Miscellaneous Documents
- [Defining Lookups](#) on page 2-20
 - Asset Activity Types
 - Asset Activity Causes
 - Asset Criticality Codes
 - Work Request Statuses
 - Work Request Note Types
 - Work Request Types
 - Work Order and Work Request Priority Codes
 - Work Order Failure Codes
 - Work Order Reconciliation Codes
 - Work Order Types
- [Asset Setup](#) on page 2-36

- Setting Up Category Codes and Sets
- Defining Asset Groups
- Setting Up Asset Attributes
- Defining Asset Numbers
- Defining Asset Documents
- Defining Asset Activities
- Asset/Asset Activity Association
- Defining Asset Routes
- Setting Up Asset Bills of Material
- Defining Maintenance Routes
- Setting Up Maintenance Bills of Material
- Defining Asset Statuses
- [Rebuildable Spare Setup](#) on page 2-72
 - Defining Rebuildable Spares
 - Rebuildable Spare/Asset Activity Association
- [Quality Integration Setup](#) on page 2-77
- [Outside Processing Integration Setup](#) on page 2-78
- [Cost Management Integration Setup](#) on page 2-79
- [Process and Discrete Manufacturing Integration Setup](#) on page 2-80
- [Project Manufacturing Integration Setup](#) on page 2-81

Organization Setup

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

- [Setting Up Organizations](#) on page 2-5
- [Enabling Organizations for Enterprise Asset Management](#) on page 2-7
- [Defining eAM Parameters](#) on page 2-9

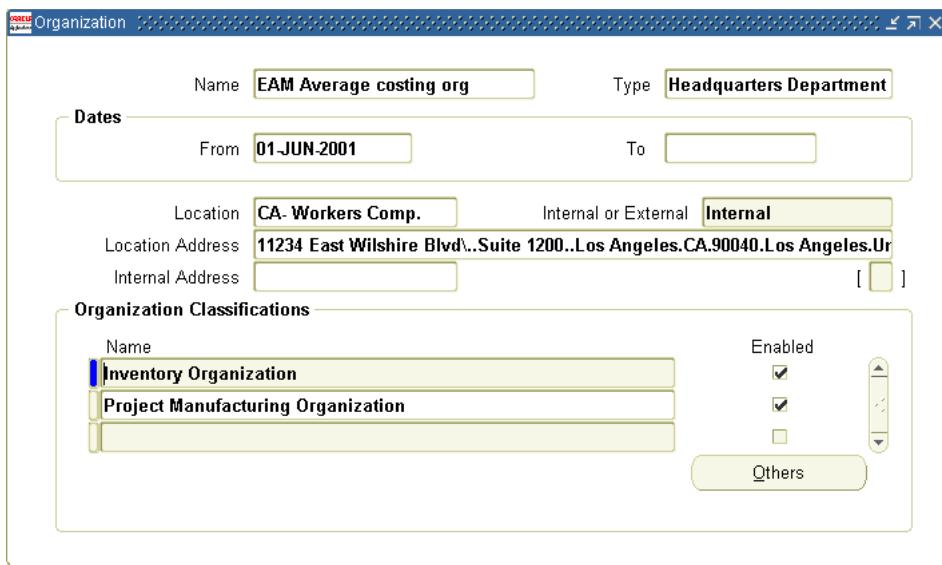
Setting Up Organizations

A valid organization is a requirement for Enterprise Asset Management setup. Decisions are made during implementation as to which organization(s) will be enabled for Enterprise Asset Management. If the decided upon organization(s) already exists, you can skip this section and proceed to [Enabling Organizations for Enterprise Asset Management](#) on page 2-7.

To set up Organizations:

1. From the Inventory Responsibility, navigate to the [Organization](#) window. In the Find Organization window, select New.

Figure 2–1 Organization Window



2. Enter an organization Name.
3. Select an organization Type from the list of values. For information on Type, Dates region fields, Location, Internal or External, Location Address, and Internal Address fields, See: [Creating an Organization](#), *Oracle Human Resources User's Guide*.
4. Save your work. A valid Location needs to be set up before you can save (See: [Creating an Organization](#), *Oracle Human Resources User's Guide*).
5. In the Organization Classifications region, establish this organization as an Inventory Organization. From the Name field list of values, select Inventory Organization.
6. Optionally, you can establish that this organization is a Project Manufacturing Organization.
7. Save your work.

See Also:

[Creating an Organization](#), *Oracle Human Resources User's Guide*

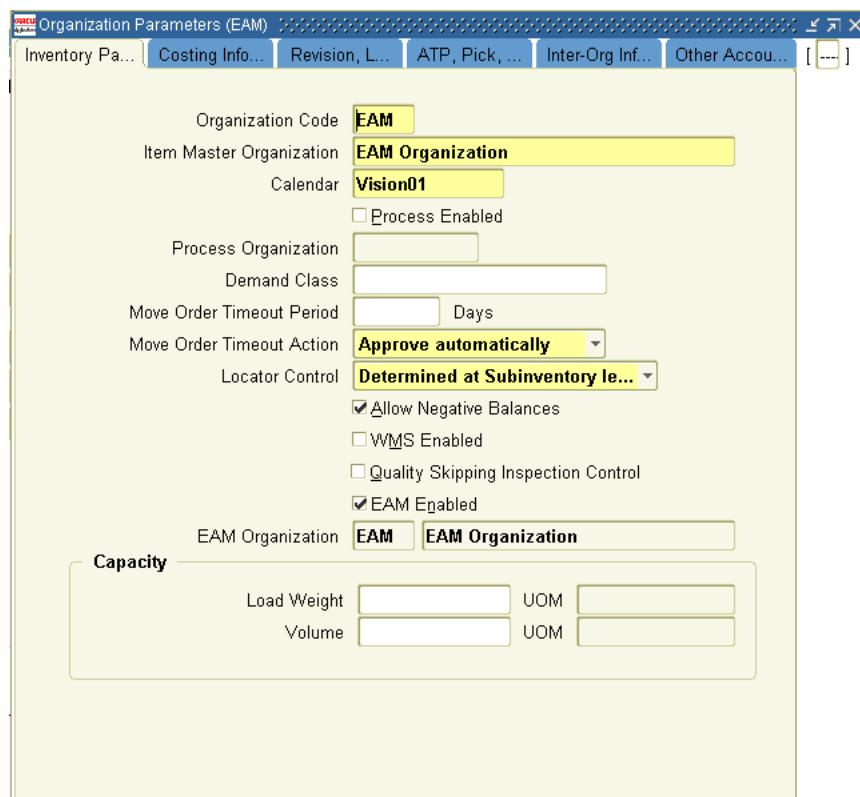
Enabling Organizations for Enterprise Asset Management

Decisions are made during implementation as to which organization(s) will be enabled for Enterprise Asset Management. A valid organization must exist before you can enable the organization for Enterprise Asset Management (See: [Setting Up Organizations](#) on page 2-5).

To define an Enterprise Asset Management enabled organization:

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

1. From the Enterprise Asset Management responsibility, navigate to the [Organization Parameters](#) window.

Figure 2–2 Organization Parameters Window

2. Enter a valid organization code. For information on how to create a valid organization, See: [Setting Up Organizations](#) on page 2-5.
3. Select the EAM Enabled check box to enable Enterprise Asset Management for this organization. This check box cannot be unselected once Enterprise Asset Management items or Enterprise Asset Management parameters are defined in the current organization.
4. If Enterprise Asset Management is enabled for the current organization, the EAM Organization field will default and cannot be updated; the current organization code will default.

For organizations that are not Enterprise Asset Management enabled, you can populate the EAM Organization field with an Enterprise Asset Management enabled organization code. For example, if the current organization is a

production organization, this is how you would identify a maintenance organization to associate with the production organization (See also: [Overview of eAM Process and Discrete Manufacturing](#) on page 10-2). This field can be updated if asset equipment association does not exist in this organization.

- For instructions on the remaining fields, See: [Organization Parameters Window](#), *Oracle Inventory User's Guide*.

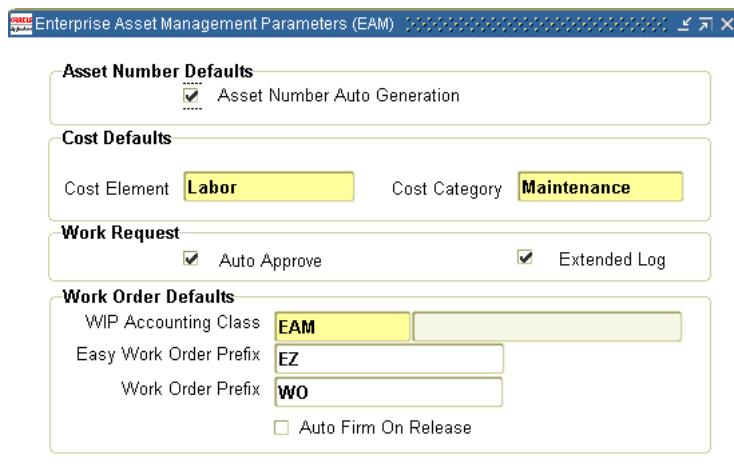
Defining eAM Parameters

Now that you have established an Enterprise Asset Management enabled organization, you need to set up specific Enterprise Asset Management parameters that determine organization level defaults for individual transactions. You will set up information, such as Asset Number defaults, Cost defaults, Work Request information, and Work Order defaults.

To define Enterprise Asset Management parameters:

- Navigate to the [Enterprise Asset Management Parameters](#) window.

Figure 2–3 Enterprise Asset Management Parameters



- Optionally, indicate whether this organization has system generated asset numbers within individual asset groups. See: [Setting Up Asset Groups](#).

3. The Cost Defaults region represents default cost information for future work orders, without defined cost elements within the work order.
Select an Enterprise Asset Management Cost Element to indicate how to capture cost overheads, and any miscellaneous resource costs. Valid values are Equipment, Labor, and Material. See: [Overview of eAM Cost Management](#) on page 6-2.
4. Select a Cost Category to be used as the default for departments that do not have a cost category defined. Department costs are then posted to the appropriate cost elements. Valid values are Maintenance, Operations, and Contract. See: [Overview of eAM Cost Management](#) on page 6-2.
5. Indicate whether work order requests are automatically approved upon creation, or if every user, with the responsibility assigned to the asset's current owning department, will get a notification via Workflow (See: *Oracle Applications 11i Workflow* and [Defining Department Approvers](#) on page 2-17). This notification can be viewed within self service, within the responsibility you use to log in.

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

Note: A work request status needs to be Awaiting Work Order before it can be linked to a work order. The Awaiting Work Order status means that the work request is approved.

6. If you choose the Extended Log check box, the system will keep an audit trail of records, when defining or updating work requests.
7. Indicate the WIP Accounting Class default to ensure that work orders generated within Enterprise Asset Management will have an established account code structure assigned, to accept charges incurred by that work order. The WIP accounting class codes available in the list of values will be of type, Maintenance. If a Maintenance type WIP accounting class does not exist, you can define a new one (See: [Defining WIP Accounting Classes](#), *Oracle Work in Process User's Guide*).

Note: Oracle Cost Management handles maintenance work orders as non-standard, expense jobs.

8. Indicate an Easy Work Order Prefix. See: [Creating Easy Work Orders](#) on page 13-23. This enables your organization to identify work orders that are not planned, but rather created as an unplanned work order response to an asset failure.
9. Indicate a Work Order Prefix. This enables your organization to identify routine work orders.
10. If you choose the Auto Firm On Release check box, the dates on the work order cannot automatically be re-scheduled.
11. Save your work.

General eAM Setup

General Enterprise Asset Management Setup tasks include the following:

- [Setting Up Asset Areas](#) on page 2-12
- [Defining Departments and Resources](#) on page 2-13
- [Defining Department Approvers](#) on page 2-17
- [Defining Miscellaneous Documents](#) on page 2-18

Setting Up Asset Areas

Areas are user defined lookups that can be utilized to logically sort assets by the zones your assets will reside in. These areas divide the maintenance plant or facility into zones, which help in tracking and accounting of assets. These values will later be entered into the asset.

To set up Asset Areas:

1. Navigate to the [Area](#) window.

Figure 2–4 Area Window

The screenshot shows a software interface titled "Area (EAM)". The main area is a table with three columns: "Area", "Description", and "Effective Dates". The "Area" column contains "RED", "Blue", and "Green". The "Description" column contains "High Risk Area", "Moderate Risk Area", and "No Risk Area". The "Effective Dates" column shows "From" and "To" dates all set to "29-JAN-2002". There are 12 empty rows below the data, indicating space for more entries. The table has a header row and a data row for each item listed.

Area	Description	Effective Dates
RED	High Risk Area	From 29-JAN-2002 To 29-JAN-2002
Blue	Moderate Risk Area	From 29-JAN-2002 To 29-JAN-2002
Green	No Risk Area	From 29-JAN-2002 To 29-JAN-2002

2. Using the Add icon from the tool bar, add an area.

3. Enter a Description for this location.
4. Save your work.

Defining Departments and Resources

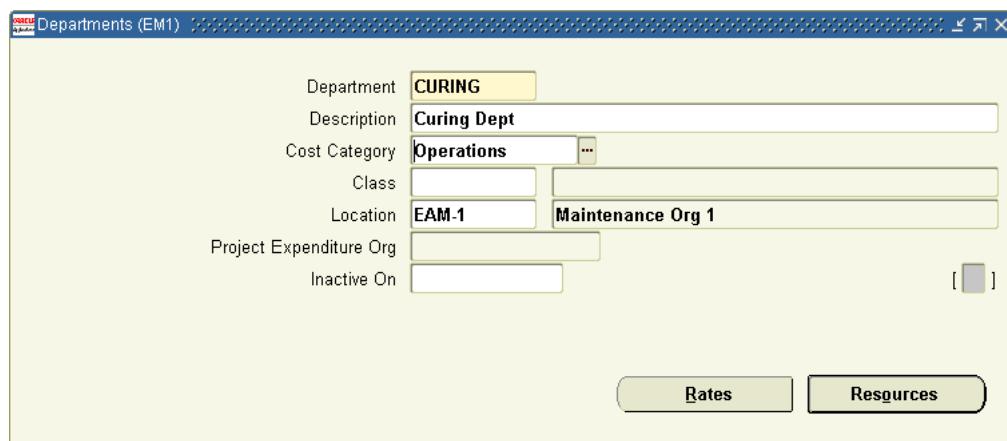
A department represents a crew within your organization, containing one or more people, machines, or suppliers, where you want to collect costs, apply overhead, and compare load to capacity. You assign a department to each operation of a routing and assign resources that are available for that department.

When you define a department, you specify available resources. A resource represents a craft. You can enter multiple resources for each department. For each resource, you can specify the shifts that the resource is available. For each resource shift, you can also specify capacity modifications that change the available hours per day, units per day, or workdays.

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

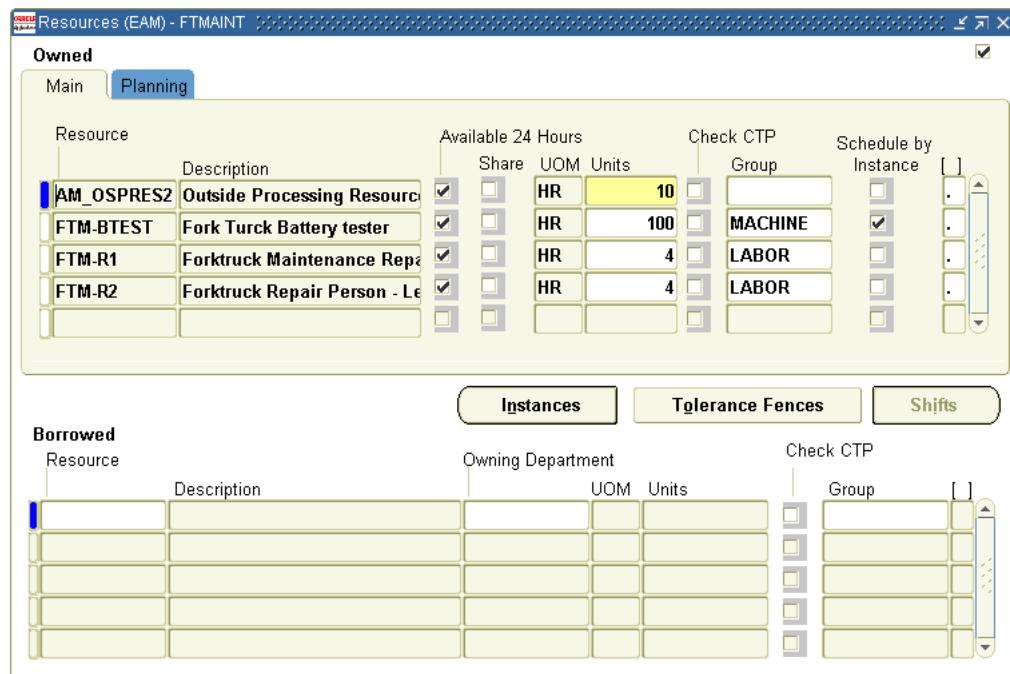
1. Navigate to the [Departments](#) window.

Figure 2–5 Departments Window



2. Enter a name for the Department, unique to the Organization.
3. Optionally, select a department Class from the list of values (See: [Creating Department Classes](#), *Oracle Bills of Material User's Guide*).

4. Select a Location from the list of values. You are required to enter a location for a department if it is the receiving department following outside processing (See: [Overview of eAM Contractor Services](#) on page 8-2 and [Outside Processing, Oracle Work in Process User's Guide](#)).
 5. Enter a Project Expenditure Organization.
 6. Optionally, enter an Inactive On date on which you can no longer assign this department to routing operations.
- For instructions on all remaining fields, See: [Defining a Department, Oracle Bills of Material User's Guide \(Bills of Material, Routings, Departments\)](#).
7. Choose Resources to add resources or crafts to the current department.

Figure 2–6 Resources Window

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

9. Optionally, for owned resources, indicate whether the resource is available 24 hours a day. You cannot assign shifts to a resource that is available 24 hours a day.
10. For owned resources, indicate whether this department can share the resource and capacity with other departments.
11. For borrowed resources, enter the Owning Department.
12. Enter the number of capacity Units (resource units) available for this department, for example, the number of machines for a machine resource.

Each resource can be assigned to any number of departments; multiple resources can be assigned to each department.
13. Optionally, enter a resource Group for the resource in this department.
14. Optionally, select the Check ATP check box to indicate that this resource will be used in a Capable to Promise (CTP) check (See: [Capable to Promise, Oracle Master Scheduling/MRP and Supply Chain Planning User's Guide](#)).
15. Optionally, select the Schedule by Instance check box to indicate whether the department resource should be scheduled at the instance level (specific employee name or piece of equipment).
16. Select the Planning tabbed region. Optionally, enter an Exception Set. The exception sets that you assign help to identify capacity problems (See: [Planning Exception Sets, Oracle Master Scheduling/MRP and Supply Chain Planning User's Guide](#)).
17. Choose Instances to add employees or equipment to the current resource. An instance is a specific employee name or piece of equipment.

Figure 2–7 Instances Window

The screenshot shows a software window titled "Instances (EAM) - FTM-R1". It displays a table with two columns: "Number" and "Employee Name". The "Number" column contains values 25, 251, 43, 43, and 50. The "Employee Name" column contains the names Black, Mr. Chris; Abbott, Ms. Lorraine; Ackroid, Mr. Daniel; Ackroid, Mr. Daniel; and Bailey, Mr. David James. A vertical scroll bar is visible on the right side of the table.

Number	Employee Name
25	Black, Mr. Chris
251	Abbott, Ms. Lorraine
43	Ackroid, Mr. Daniel
43	Ackroid, Mr. Daniel
50	Bailey, Mr. David James

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

Figure 2–8 Shifts Window

The screenshot shows a software window titled "Shifts (EAM) - DEP1, RES2". It displays a table with three columns: "Shift Num", "Description", and "Units". The "Shift Num" column contains the value 1. The "Description" column contains the text "Normal daily shift". A vertical scroll bar is visible on the right side of the table. At the bottom of the window, there is a button labeled "Capacity Changes".

Shift Num	Description	Units
1	Normal daily shift	

- a. Select a Shift Number from the list of values.

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

- b. Choose Capacity Changes to define capacity changes for a shift.

See Also:

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

Defining Department Approvers

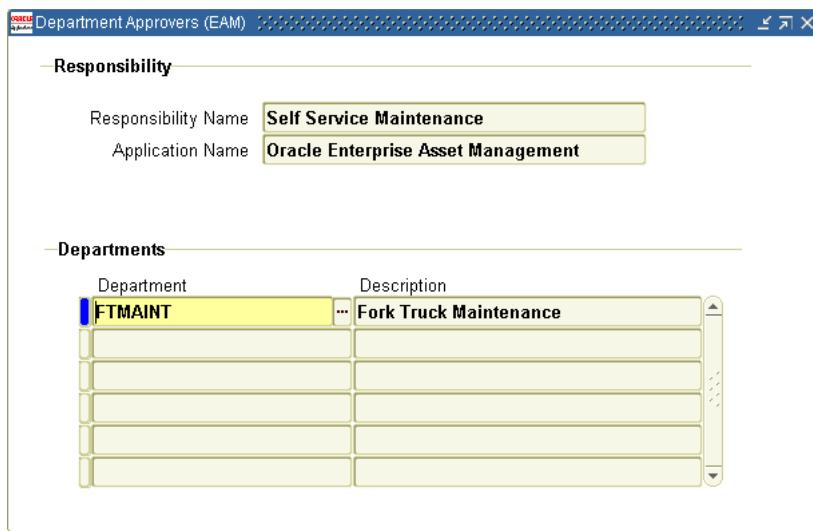
You can set up department approvers to enable Work Request notifications to be sent to everyone, via workflow, with a responsibility assigned to the current asset's (work requests are created against assets) owning department (See: [Defining Departments and Resources](#) on page 2-13 and [Defining Asset Numbers](#) on page 2-46). They can view these notifications on the Enterprise Asset Management Self Service Maintenance Home Page (See: [Home Page](#) on page 13-3). Everyone who receives the notification can access the work request to change the status, or add additional information to the log of the work request. Once one user approves the work request, the notification will be removed from the users' notification lists, and the work request status will change from Open to Awaiting Work Order.

A work request can also be rejected. If a user rejects a work request, the notification will be removed from users' notification lists. You can also re-assign a notification to another user for approval or additional information, for example, the originator may need to provide additional information on the work request.

To define Department Approvers:

1. Navigate to the [Department Approvers](#) window.
2. Select a Responsibility Name from the list of values. For Enterprise Asset Management work request notifications to function, this responsibility must have the user menu name, Self Service Maintenance (EAM_MAIN_SS), associated with it. A department can be assigned to only one responsibility.

Figure 2–9 Department Approvers Window



3. In the Departments region, select a Department from the list of values. You can select an unlimited number of departments.
4. Save your work.

See Also:

[Work Requests](#) on page 13-18

[Home Page](#) on page 13-3

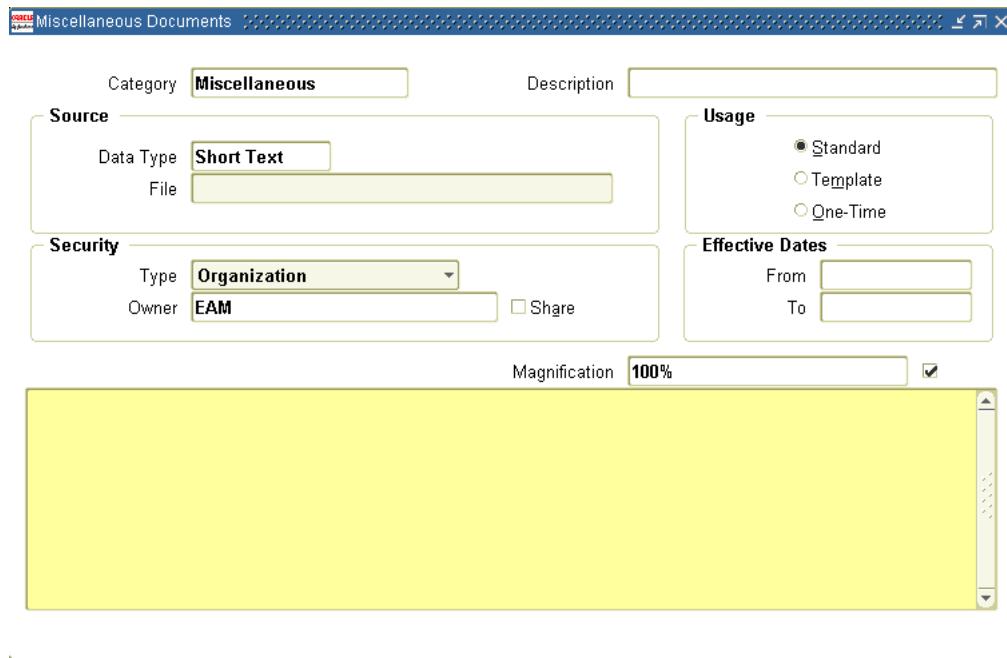
Oracle Applications 11i Workflow

Defining Miscellaneous Documents

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

To define miscellaneous documents:

1. Navigate to the [Miscellaneous Documents](#) window.

Figure 2–10 Miscellaneous Documents Window

2. Select a Data Type from the list of values.

See Also:

For information on all fields, See: [Working With Attachments, Oracle Applications User's Guide](#)

Defining Lookups

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

You will define Asset Lookups, Work Request Lookups, and Work Order Lookups.

This section includes the following topics:

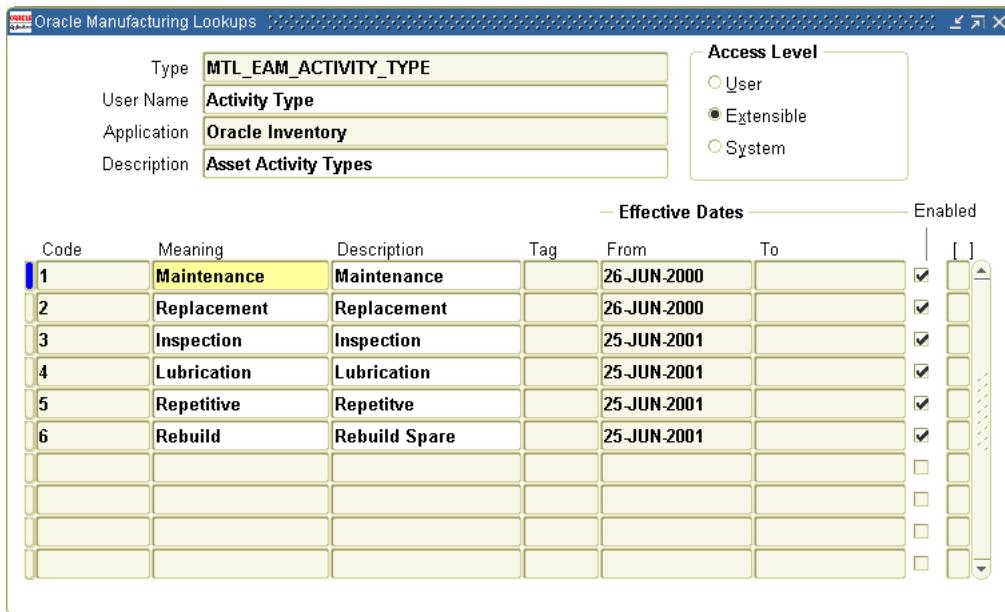
- [Asset Activity Types](#) on page 2-20
- [Asset Activity Causes](#) on page 2-22
- [Asset Criticality Codes](#) on page 2-23
- [Work Request Statuses](#) on page 2-25
- [Work Request Types](#) on page 2-27
- [Work Order and Work Request Priority Codes](#) on page 2-28
- [Work Order Failure Codes](#) on page 2-30
- [Work Order Reconciliation Codes](#) on page 2-31
- [Work Order Types](#) on page 2-33

Asset Activity Types

Asset Activity Types are used to describe the type of maintenance work that is performed on an asset (See: [Defining Asset Activities](#) on page 2-54). For example, Inspections, Lubrications, Overhauls, Calibration, and Repetitive work. Asset Activity Types are extensible (See: [Defining Lookups](#) on page 2-20).

To define asset activity types:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–11 Oracle Manufacturing Lookups Window

2. Select the flashlight Find icon.
3. Select MTL_EAM_ACTIVITY_TYPE from the Type list of values.
4. Enter a numeric value in the Code field. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

5. Enter the Meaning of the code, for example, Lubrication.
6. Enter a Description for the code.
7. Optionally, enter a Tag to categorize lookup values. This field is informational only.
8. The Effective From Date will default as the system date, but you can update this. Optionally, enter a Effective To Date to indicate an expiration of the code.

9. Select the Enabled check box to enable this code for Enterprise Asset Management.
10. Save your work.

Asset Activity Causes

Asset Activity Cause codes are reasons for an asset failure. For example, Preventive, Normal Wear, Rework, and Breakdown. This information enables you to understand the dynamics that affect an asset's ability to perform. They establish critical data that can be used for reporting and analysis of asset failure causes and the frequency of such conditions. Asset Cause Codes are referenced when setting up an asset activity (See: [Defining Asset Activities](#) on page 2-54). Asset Activity Cause codes are extensible (See: [Defining Lookups](#) on page 2-20).

To define asset activity cause codes:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–12 Oracle Manufacturing Lookups Window

The screenshot shows the Oracle Manufacturing Lookups window with the following details:

- Type:** MTL_EAM_ACTIVITY_CAUSE
- User Name:** Activity Cause
- Application:** Oracle Inventory
- Description:** Asset Activity Cause
- Access Level:** Extensible (selected)
- Effective Dates:** A table listing 8 rows of data with columns: Code, Meaning, Description, Tag, From, To, and Enabled (checkboxes).

Code	Meaning	Description	Tag	From	To	Enabled
1	Breakdown	Breakdown		26-JUN-2000		<input checked="" type="checkbox"/>
2	Preventive	Preventive		26-JUN-2000		<input checked="" type="checkbox"/>
3	Modification	Modification		15-JUN-2001		<input checked="" type="checkbox"/>
4	Non-Equipment Work	Non-Equipment Work		15-JUN-2001		<input checked="" type="checkbox"/>
5	Normal Wear	Normal Wear		25-JUN-2001		<input checked="" type="checkbox"/>
6	Vandalism	Vandalism		25-JUN-2001		<input checked="" type="checkbox"/>
7	Rework	Rework		25-JUN-2001		<input checked="" type="checkbox"/>
8	Severe Wear	Severe Wear		04-FEB-2002		<input checked="" type="checkbox"/>

2. Select MTL_EAM_ACTIVITY_CAUSE from the Type list of values.
3. Enter a numeric value in the Code field. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

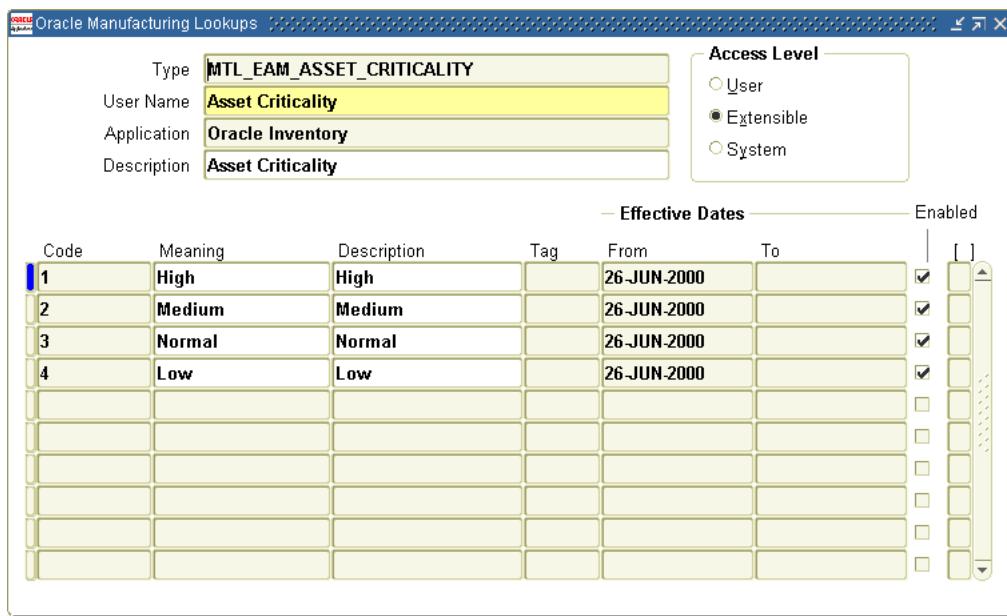
4. Enter the Meaning of the code, for example, Breakdown.
5. Enter a Description for the code.
6. Optionally, enter a Tag to categorize lookup values. This field is informational only.
7. The Effective From Date will default as the system date, but you can update this. Optionally, enter a Effective To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

Asset Criticality Codes

Asset Criticality Codes suggest the importance of an asset to an organization. For example, High and Low. An asset that has a direct impact on production or that is difficult to replace may be considered a critical asset. Asset criticality helps you to determine the urgency of requested work. Asset Criticality Codes are referenced when defining an asset (See: [Defining Asset Numbers](#) on page 2-46). Future Enterprise Asset Management functionality will use these values to automatically assign the priority of work. Asset Criticality Codes are extensible (See: [Defining Lookups](#) on page 2-20).

To define asset criticality codes:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–13 Oracle Manufacturing Lookups Window

2. Select MTL_EAM_ASSET_CRITICALITY from the Type list of values.
3. Enter a numeric value in the Code field. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

4. Enter the Meaning of the code, for example, High.
5. Enter a Description for the code.
6. Optionally, enter a Tag to categorize lookup values. This field is informational only.
7. The Effective From Date will default as the system date, but you can update this. Optionally, enter a Effective To Date to indicate an expiration of the code.

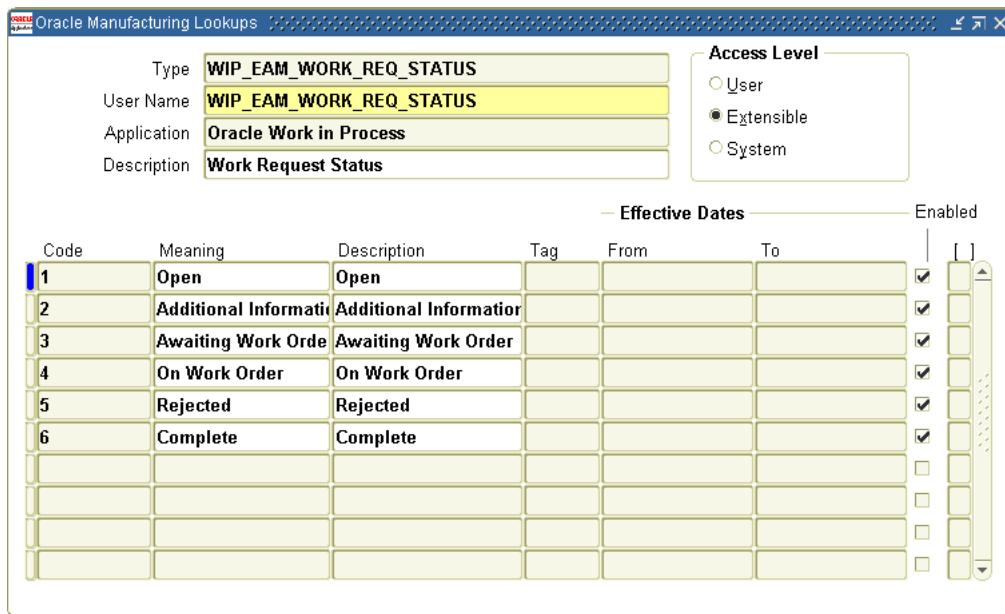
8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Work Request Statuses

Work Request Approval is the process of changing a work request status from Open to Awaiting Work Order. Maintenance work orders can only be linked to work requests with a status of Awaiting Work Order. When defining the Enterprise Asset Management parameters (See: [Defining eAM Parameters](#) on page 2-9), if the Auto Approve check box is selected, work requests are created with an automatic status of Awaiting Work Order, for that organization. If the check box is not selected, work requests are created with a status of Open; any user who receives the notification (See: [Defining Department Approvers](#) on page 2-17) can change the work request status to Awaiting Work Order. A plant or facility may need to include additional statuses. Work Request Approval statuses are extensible (See: [Defining Lookups](#) on page 2-20).

To define work request statuses:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–14 Oracle Manufacturing Lookups Window

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

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

4. Enter the Meaning of the code, for example, Open.
5. Enter a Description for the code.
6. Optionally, enter a Tag to categorize lookup values. This field is informational only.
7. Optionally, enter Effective From and To Dates to indicate an expiration of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Work Request Types

Work Request Types describe and categorize work requests. For example, Manual, System, Routine, Capital, and Furniture. Work Request Types are user defined (See: [Defining Lookups on page 2-20](#)).

To define a work request type:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–15 Oracle Manufacturing Lookups Window

The screenshot shows the Oracle Manufacturing Lookups window. At the top, there are four input fields: Type (WIP_EAM_WORK_REQ_TYPE), User Name (WIP_EAM_WORK_REQ_TYPE), Application (Oracle Work in Process), and Description (Work Request Type). To the right of these fields is a group of radio buttons labeled "Access Level" with "User" selected. Below this is a table titled "Effective Dates" with columns for Code, Meaning, Description, Tag, From, To, and Enabled. The table contains six rows, each with a unique code (10, 20, 30, 40, 50, 60) and meaning (Manual, System, Routine, Capital, Move Order, Furniture). The "From" and "To" fields for all rows show the date 02-JUL-2002. The "Enabled" column has checkboxes checked for all rows except the last one, which is uncheckable. The entire window has a standard Windows-style border and title bar.

Effective Dates						
Code	Meaning	Description	Tag	From	To	Enabled
10	Manual	Manually Created		02-JUL-2002		<input checked="" type="checkbox"/>
20	System	System Generated		02-JUL-2002		<input checked="" type="checkbox"/>
30	Routine	Routine Work Approval		02-JUL-2002		<input checked="" type="checkbox"/>
40	Capital	Capital Work Approval		02-JUL-2002		<input checked="" type="checkbox"/>
50	Move Order	Internal Office Change		02-JUL-2002		<input checked="" type="checkbox"/>
60	Furniture	Furniture Request		02-JUL-2002		<input checked="" type="checkbox"/>

2. Select WIP_EAM_WORK_REQ_TYPE from the Type list of values.
3. Enter a numeric value in the Code field. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

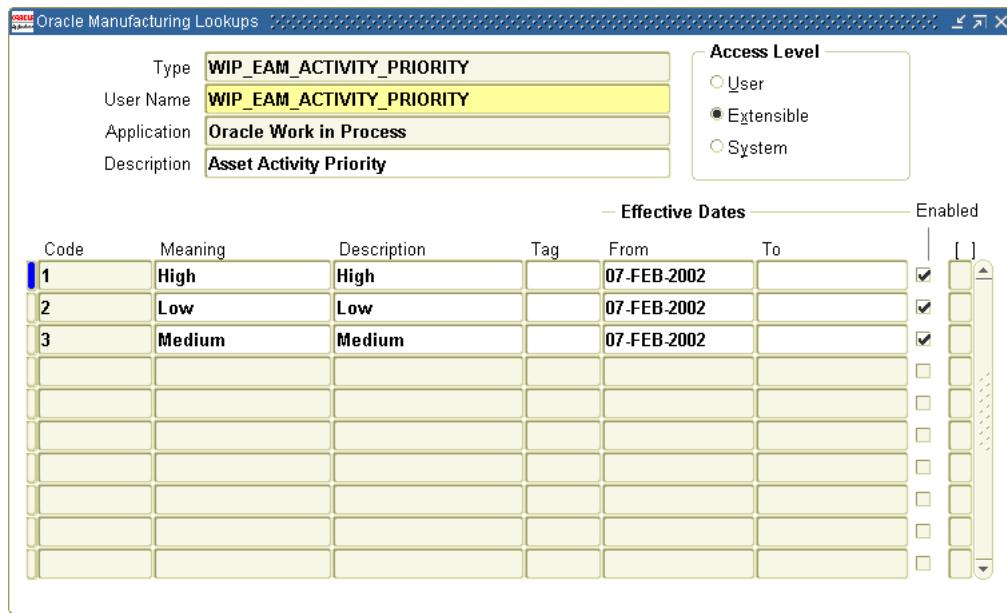
4. Enter the Meaning of the code, for example, Manual.
5. Enter a Description for the code.
6. Optionally, enter a Tag to categorize lookup values. This field is informational only.
7. The Effective From Date will default as the system date, but you can update this. Optionally, enter a Effective To Date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

Work Order and Work Request Priority Codes

Work Order Priority Codes contribute to the organization and execution of work orders. For example, High, Medium, and Low, or 1,2, and 3. Typically, a priority is assigned by the people entering work requests and work orders. The planner or supervisor compares this priority to the asset criticality (See: [Asset Criticality Codes](#) on page 2-23). These codes can be entered when creating both work orders and work requests (See: [Routine Work Orders](#) on page 3-5 and [Work Requests](#) on page 13-18). Work Order Priority Codes are extensible (See: [Defining Lookups](#) on page 2-20).

To create work order priority codes:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–16 Oracle Manufacturing Lookups Window

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

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

4. Enter the Meaning of the code, for example, High.
5. Enter a Description for the code.
6. Optionally, enter a Tag to categorize lookup values. This field is informational only.
7. The Effective From Date will default as the system date, but you can update this. Optionally, enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Work Order Failure Codes

Work Order Failure Codes are similar to Asset Activity Cause Codes in that they describe what caused an asset to fail. This code may differ from the Activity Code; it is typically entered to further explain the preliminary cause of failure. It is recommended to create these codes by asset type. A prefix may assist you in identifying the list of failures. For example, ENGOVHT (Engine Overheating) or TRUCKBRAKE (Truck's Brake Failure). These codes will be referenced upon work order completion (See: [Work Order Completion](#) on page 3-41). Failure Codes are extensible (See: [Defining Lookups](#) on page 2-20).

To define work order failure codes:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–17 Oracle Manufacturing Lookups Window

The screenshot shows the Oracle Manufacturing Lookups window with the following details:

- Type:** WIP_EAM_FAILURE_CODE
- User Name:** EAM Failure Code
- Application:** Oracle Work in Process
- Description:** (empty)
- Access Level:** Extensible (selected)
- Effective Dates:** From: 02-JUL-2002, To: (empty)
- Enabled:** Checked
- Table Data:** A grid of rows showing failure codes. The first row is highlighted in yellow and contains:
 - Code:** 10
 - Meaning:** ENGOVHT
 - Description:** Engine Overheated
 - Tag:** (empty)
 - From:** 02-JUL-2002
 - To:** (empty)
 - Enabled:** Checked (with a checkmark icon)
- Buttons:** Standard window controls (Minimize, Maximize, Close) are visible at the top right.

2. Select WIP_EAM_FAILURE_CODE from the Type list of values.
3. Enter a numeric value in the Code field. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

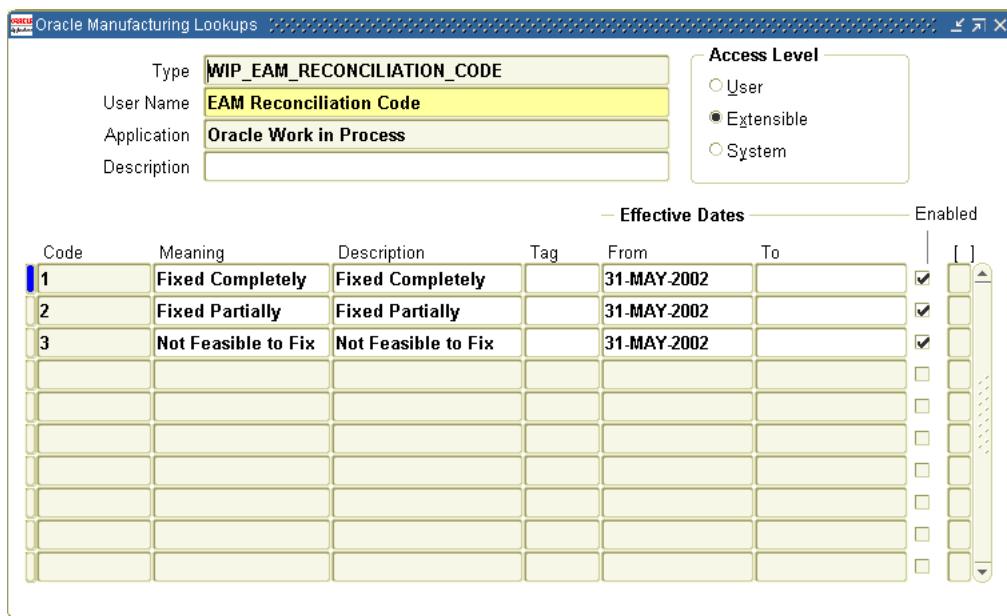
4. Enter the Meaning of the code, for example, ENGOVHT.
5. Enter a Description for the code.
6. Optionally, enter a Tag to categorize lookup values. This field is informational only.
7. The Effective From Date will default as the system date, but you can update this. Optionally, enter a Effective To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

Work Order Reconciliation Codes

Reconciliation Codes detail how work orders and operations were completed. These codes usually fall within two categories: Completed as Planned or Partial Completion. You can further define the condition within these two types of completion statuses. These codes enable you to evaluate work orders by percentage completed or delayed, and if they were delayed, the reason for the delay. Reconciliation Codes are user defined (See: [Defining Lookups](#) on page 2-20).

To define work order reconciliation codes:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–18 Oracle Manufacturing Lookups Window

2. Select WIP_EAM_RECONCILIATION_CODE from the Type list of values.
3. Enter a numeric value in the Code field. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

4. Enter the Meaning of the code, for example, Fixed Completely.
5. Enter a Description for the code.
6. Optionally, enter a Tag to categorize lookup values. This field is informational only.
7. The Effective From Date will default as the system date, but you can update this. Optionally, enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Work Order Types

Work Order Types enable you to differentiate work orders. For example, Routine, and Rebuild. Maintenance management can use this information to sort and monitor work activity for reporting and budgeting. Work Order Types are referenced in the asset activity and work order.

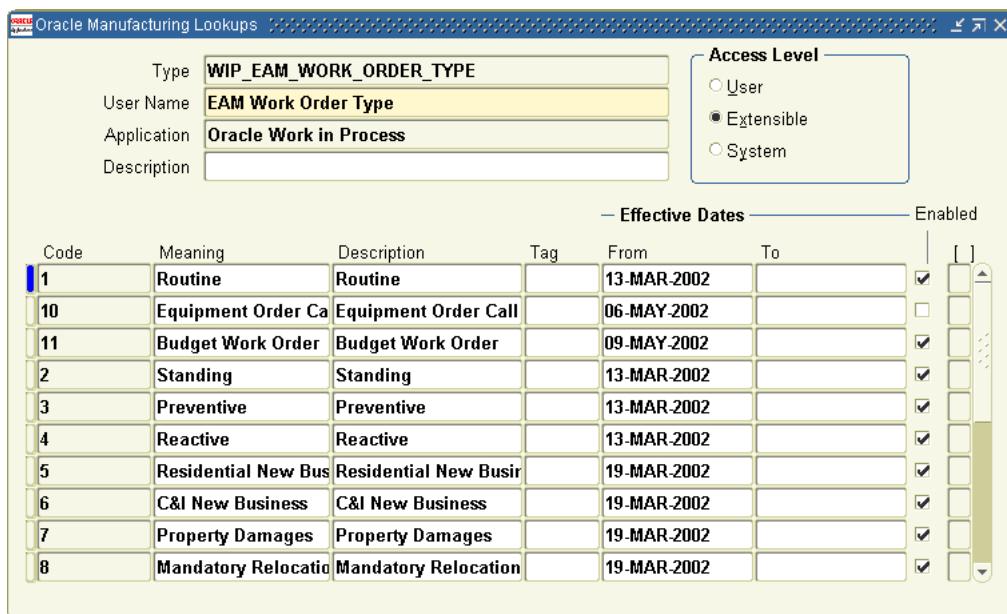
Work Order Types are created manually or automatically. For example, Rebuildable work orders can be created automatically or manually (See: [Rebuild Work Orders](#) on page 3-12). Preventive Maintenance work orders are created automatically, based on meter readings (See: [Preventive Maintenance Work Orders](#) on page 3-11).

Work Order Types are extensible (See: [Defining Lookups](#) on page 2-20).

To define work order types:

1. Navigate to the [Oracle Manufacturing Lookups](#) window.

Figure 2–19 Oracle Manufacturing Lookups Window



2. Select WIP_EAM_WORK_ORDER_TYPE from the Type list of values.
3. Enter a numeric value in the Code field. Oracle recommends that you enter values in increments of 10, enabling you to easily add codes later.

Warning: Do not use alpha codes. Entry of alpha codes will cause database errors in the application.

4. Enter the Meaning of the code, for example, Routine.
5. Enter a Description for the code.
6. Optionally, enter a Tag to categorize lookup values. This field is informational only.
7. The Effective From Date will default as the system date, but you can update this. Optionally, enter a Effective To Date to indicate an expiration of the code.

8. Select the Enabled check box to enable this code for Enterprise Asset Management.
9. Save your work.

Asset Setup

Asset Setup includes the following tasks:

- [Setting Up Category Codes and Sets](#) on page 2-36
- [Defining Asset Groups](#) on page 2-39
- [Setting Up Asset Attributes](#) on page 2-42
- [Defining Asset Numbers](#) on page 2-46
- [Defining Asset Documents](#) on page 2-53
- [Defining Asset Activities](#) on page 2-54
- [Asset/Asset Activity Association](#) on page 2-56
- [Defining Asset Routes](#) on page 2-58
- [Setting Up Asset Bills of Material](#) on page 2-60
- [Defining Maintenance Routes](#) on page 2-64
- [Setting Up Maintenance Bills of Material](#) on page 2-68
- [Defining Asset Statuses](#) on page 2-70

Setting Up Category Codes and Sets

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

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

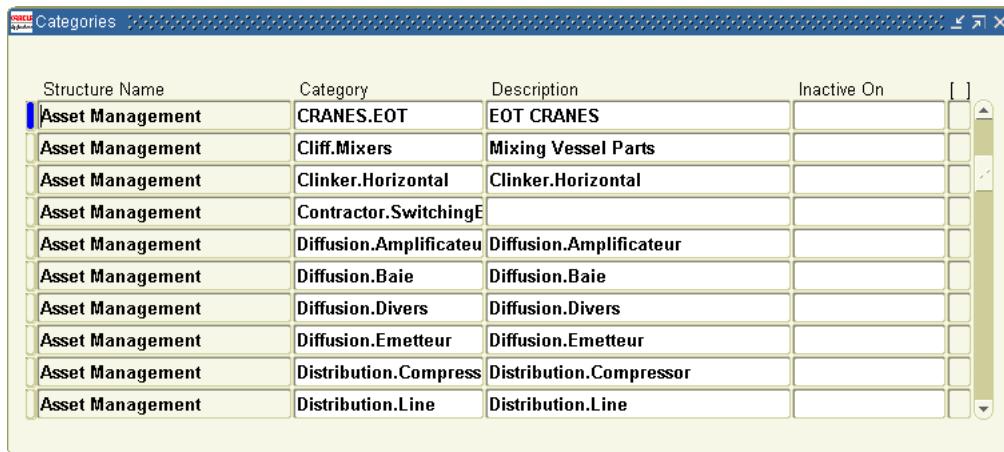
Category codes are first defined, then they are added to the Enterprise Asset Management Category Set. Once they belong to this category set, they can be associated with asset groups, which tie to individual assets.

To set up Category Codes:

1. Navigate to the [Find Categories](#) window. You can find existing category codes, or create new ones.

2. Select New.

Figure 2–20 Categories Window



The screenshot shows a software window titled "Categories". The window contains a table with four columns: "Structure Name", "Category", "Description", and "Inactive On". There are ten rows of data, each representing an asset management category. The first row is selected, indicated by a blue border around the "Structure Name" cell. The data is as follows:

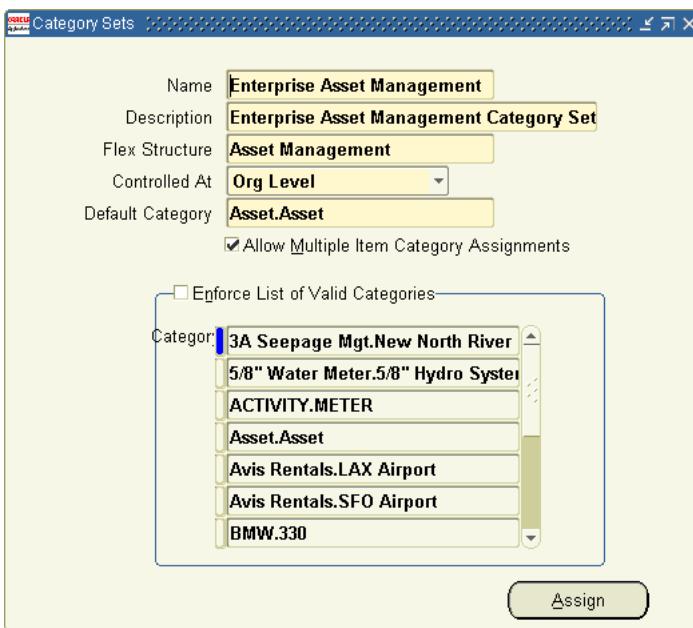
Structure Name	Category	Description	Inactive On
Asset Management	CRANES.EOT	EOT CRANES	
Asset Management	Cliff.Mixers	Mixing Vessel Parts	
Asset Management	Clinker.Horizontal	Clinker.Horizontal	
Asset Management	Contractor.SwitchingE		
Asset Management	Diffusion.Amplificateu	Diffusion.Amplificateur	
Asset Management	Diffusion.Baie	Diffusion.Baie	
Asset Management	Diffusion.Divers	Diffusion.Divers	
Asset Management	Diffusion.Emetteur	Diffusion.Emetteur	
Asset Management	Distribution.Compress	Distribution.Compressor	
Asset Management	Distribution.Line	Distribution.Line	

3. Select the Asset Management category to create a new Class/Subclass from the Structure Name list of values.
4. Enter in a new Category, for example TRUCK.FRKLFT. Once you enter a value, an Asset Management window displays, prompting you to enter a Subclass.
5. Add a long Description for this category.
6. Optionally, enter an Inactive On date.
7. Save your work.

To set up Category Sets:

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

1. Navigate to the [Category Sets](#) window.

Figure 2–21 Category Sets Window

2. Select the flashlight icon from the tools menu, then select Enterprise Asset Management from the list of values.
3. A description is defaulted, but you can optionally change it.
4. Indicate a Flex Structure.
5. Indicate the Controlled At level. Valid values are Master Level, and Organization Level.
6. Enter a Default Category code for assets that are not associated with asset groups.
7. If you select Allow Multiple Item Category Assignments, you can define a series of categories, such as Crane.Jib, and Crane.Overhead, that can be associated to a single asset group.
8. If you select Enforce List of Valid Categories, you will prevent users from entering incorrect categories that are not associated with the asset group associated with the asset being created.

9. Enter the Category Codes that you want to associate with this category set.
10. Select Assign to display a table enabling you to associate the categories with an asset group.
11. Save your work.

See Also:

[Defining Categories](#), *Oracle Inventory User's Guide*

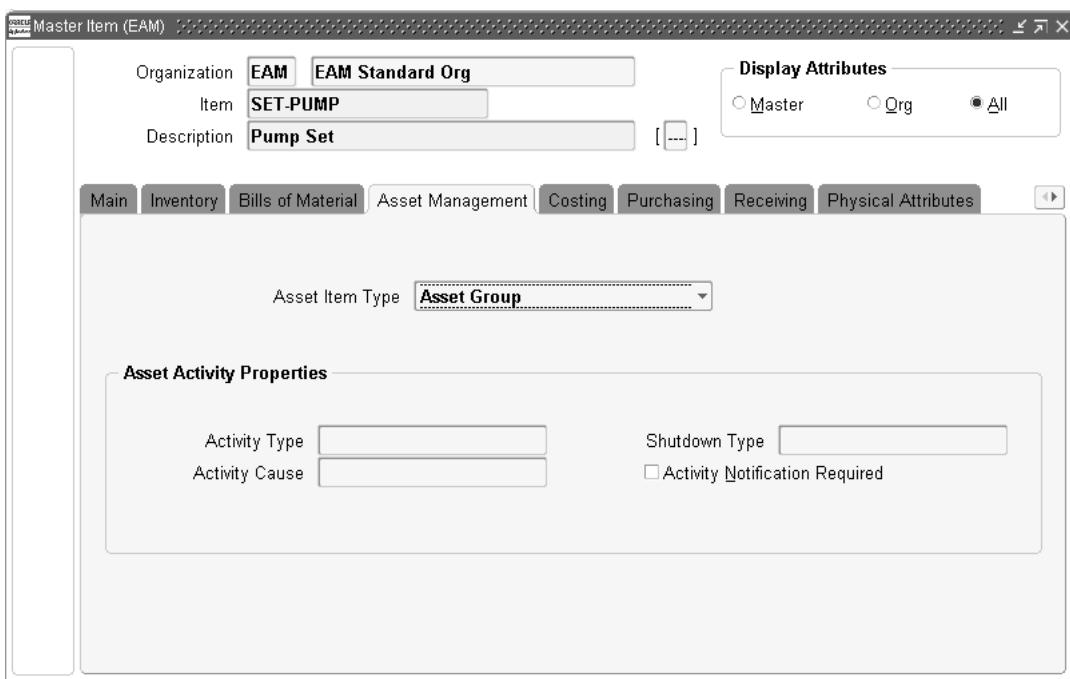
[Defining Category Sets](#), *Oracle Inventory User's Guide*

Defining Asset Groups

During implementation, Asset Group names should be established. Asset Groups represent the classification of assets. Examples include Trucks, Pumps, Towers, Buildings, Storage Tanks, and Turbines.

To set up Asset Groups:

1. Navigate to the [Asset Group \(Master Item\)](#) window. The Master Item window is used to create asset groups, asset activities, and rebuildable spares.

Figure 2–22 Master Item Window

2. Enter the Asset Group name in the Item field.
3. Enter a Description for this Asset Group, up to 240 characters.
4. Use the @Asset Group template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.
 - a. Select TOOLS from the Tools menu. From the drop down list, select COPY FROM.
 - b. Select the @Asset Group template from the list of values.

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

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

Figure 2–23 Asset Group Attributes

Attribute	Value
User Item Type	Asset Group
Item Status	Active
Inventory Item	Enabled
Transactable	Disabled
Serial Number Generation	Predefined
Effectivity Control	Model/Unit Number
EAM Item Type	Asset Group

5. Access the Inventory Tab. In the Serial region, select Predefined for the Generation value.
6. Define a Starting Prefix and Starting Number for this asset group. When a new asset is created for this asset group, the system will default the prefix, along with the starting number sequence.
7. If the current organization is Enterprise Asset Management enabled (See: [Enabling Organizations for Enterprise Asset Management](#) on page 2-7), you can access the Asset Management tab.

Note: The Asset Activity Property region is used when setting up Asset Activities. See: [Defining Asset Activities](#) on page 2-54.

8. Optionally, select the paperclip Attachments icon to attach relevant documents, such as drawings, standard procedures, and reference guides, to this asset group. You can attach file, URL, and text attachments.
9. After saving your work, this asset group can then be associated with an asset.

To associate Asset Groups to multiple organizations:

1. From the [Master Item](#) window, select TOOLS from the Tools menu.

2. Select Organization Assignment.
3. Enter additional organizations in the available table.
4. Save your work.

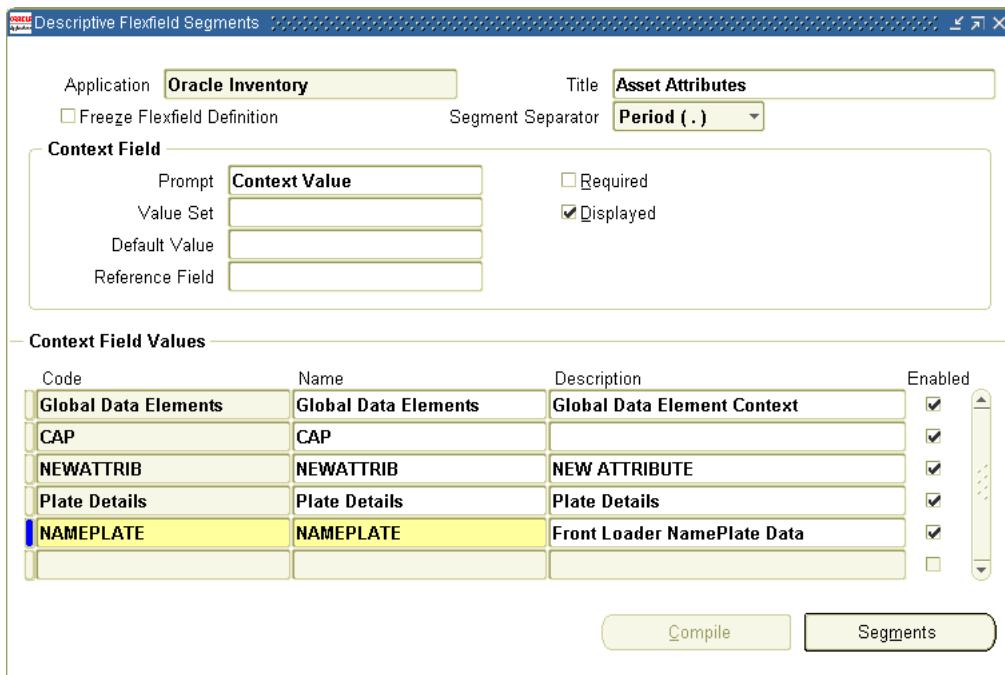
Setting Up Asset Attributes

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

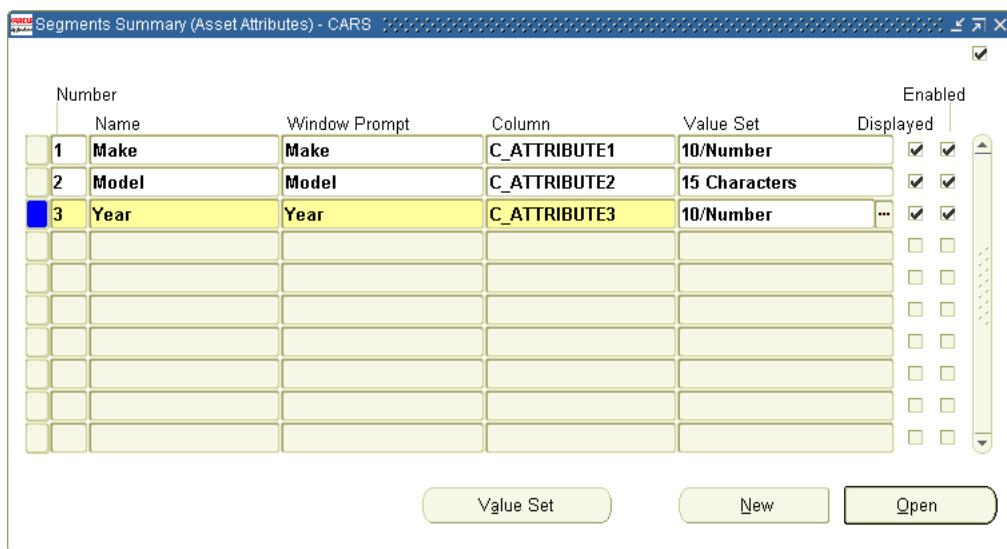
For example, you can define an asset attribute template, Front Loader Nameplate data. This template can then be associated with the CARS asset group. When defining an asset within the CARS asset group, you can optionally utilize this template to specify nameplate data (specified data such as make, year, and model) for the asset. This creates a simplified way of entering specified data (See: [Defining Asset Numbers](#) on page 2-46) related to a specific asset group.

To set up Asset Attributes:

1. Navigate to the [Descriptive Flexfield Segments](#) window.

Figure 2–24 Descriptive Flexfield Segments Window

2. Select the flashlight icon from the tool bar. From the list of values, select the Oracle Inventory Application with the Title of Asset Attributes.
3. Unfreeze the Flexfield Definition by deselecting the Freeze Flexfield Definition check box.
4. In the Context Field Values region, select a row, then click the New icon. A blank row will be added for you to create an attribute group.
5. Enter the attribute group name in the Code field.
6. Optionally, enter a Description for this attribute group.
7. Select Segments to add attributes to the attribute group you just created.

Figure 2–25 Segments Summary Window

8. Enter a Number to sequence the data.
9. Define the Name of the specific attribute. The Window Prompt will default to this name.
10. Select a Column value from the list of values.
11. Select a Value Set from the list of values, or optionally, select Value Set to create a new one.
12. If the Displayed check box is selected, this attribute will display to the user when defining data for an asset within the asset group (for example, CARS) associated with the attribute group (for example, NAMEPLATE) that this attribute (for example, Make) resides in.
13. Optionally, select the Enabled check box to enable the attribute to be available when defining assets (See: [Defining Asset Numbers](#) on page 2-46).
14. Save your work, and return to the Descriptive Flexfield Segments window.
15. Select the Freeze Flexfield Definition check box. Failure to do this will prevent you from querying the segments from the Asset Attribute window.
16. Save your work.

See Also:

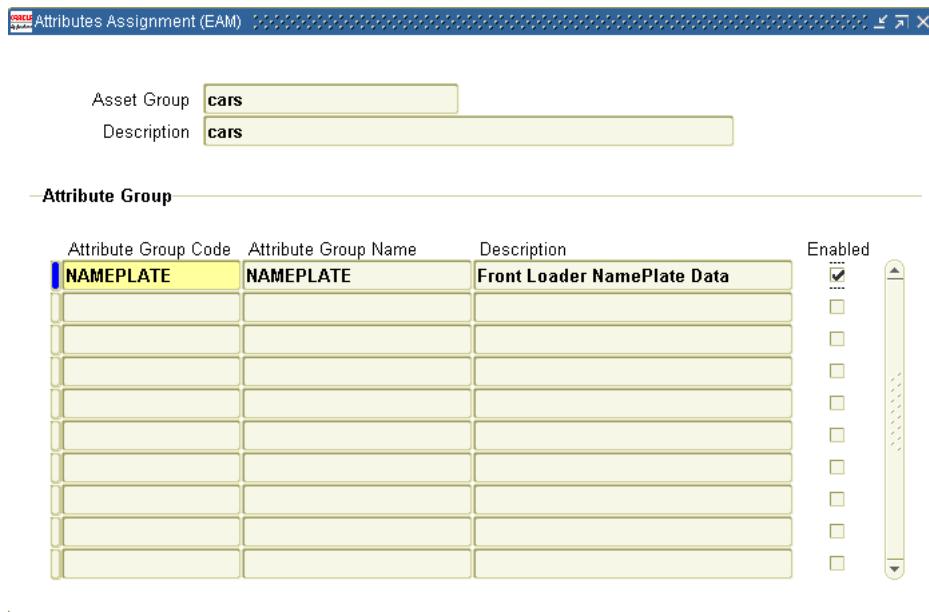
Oracle Applications Flexfield User's Guide

To associate the Asset Attribute Group to an Asset Group:

1. Navigate to the [Attributes Assignment](#) window.

In the below example, any asset created within the CARS asset group will have the NAMEPLATE attribute group template available as an option for data entry.

Figure 2–26 Attributes Assignment Window



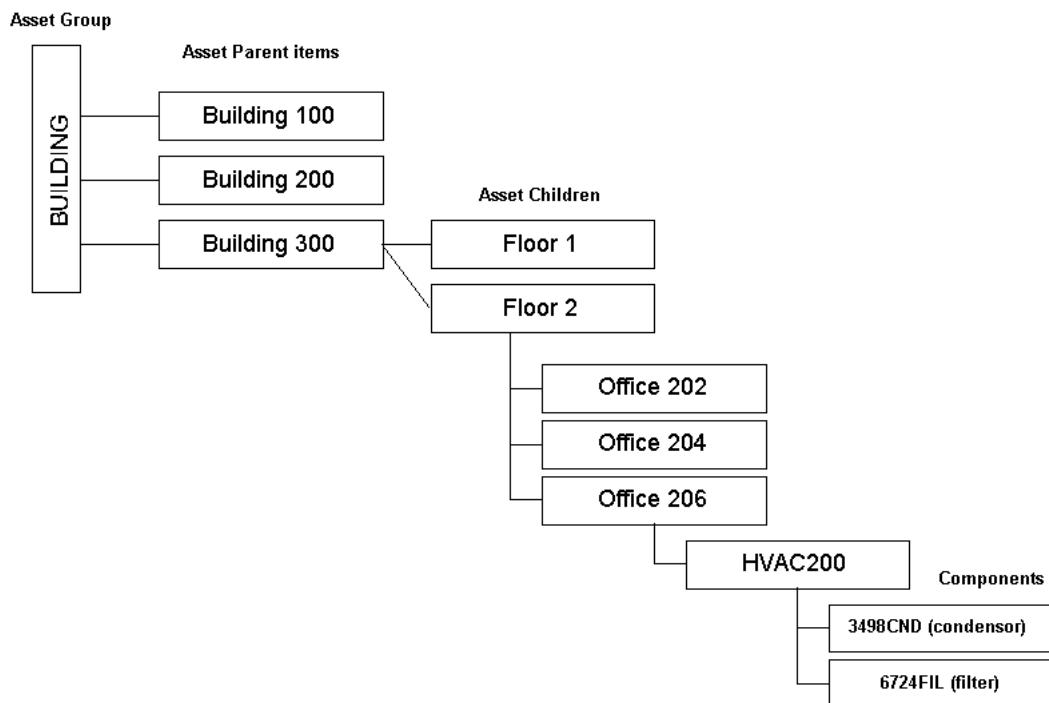
2. Select an Asset Group from the list of values. See: [Defining Asset Groups](#) on page 2-39.
3. Select an asset attribute group from the Attribute Group Code list of values. You can have an unlimited number of Asset Attribute Groups associated with an asset.
4. Save your work.

Defining Asset Numbers

There are four methods to entering a new asset into Enterprise Asset Management. You can create them individually, by copying information from an existing asset, utilize the multiple asset entry method, or use the Import Asset Number interface (See: Oracle Manufacturing APIs and Open Interfaces Manual).

You must first set up an asset group, before defining asset numbers. See: [Defining Asset Groups](#) on page 2-39. The diagram below illustrates the parent/child (asset hierarchy) relationship that can be created when creating asset numbers. In this example, the asset group is BUILDING, containing the asset numbers Building 100, Building 200, and Building 300. Those asset numbers have their own child assets, Floor 1 and Floor 2.

Figure 2-27 Hierarchy Example



Note: All assets with similar attribute groups (See: [Setting Up Asset Attributes](#) on page 2-42) should be defined within the same asset group (See: [Defining Asset Groups](#) on page 2-39).

To set up assets individually:

1. Navigate to the [Define Asset Number](#) window.

Figure 2–28 Define Asset Number Window

Asset Group	BMW	BMW Car Group
Asset Number	BMW1	Car #1
Asset Category	ASSET.ASSET	Default Asset Group Category
Owning Department	ASSEMBLY	Area CA []
Asset Criticality	High	<input checked="" type="checkbox"/> Maintainable
WIP Accounting Class	MAINT	
Production Equipment		
Production Org	M2	Asset Group BMW
Item	BMW	Asset Number BMWZ3
Serial Number	BMW1	
Parent Asset		
Category		
Number		
Fixed Asset		
Category		
Number		
Property Management		
Location Name		
Location Code		
Resource Usage Associate Activity Attributes		

2. Select an Asset Group from the list of values. This Asset Group will be associated with this asset.
3. Enter an Asset Number if you do not have them automatically generated, or accept or modify the default, if you have automatic generation enabled (See: [Defining eAM Parameters](#) on page 2-9).

Once an asset has been saved, it cannot be deleted. The asset can only be deactivated if there are no open work orders for the asset, or if the asset is not part of an asset hierarchy.

4. Optionally, enter an Asset Description, up to 240 characters.
5. Optionally, associate this asset to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: [Setting Up Category Codes and Sets](#) on page 2-36.
6. Select an Owning Department for this asset from the list of values. This represents the crew responsible for the asset. Notifications, regarding work requests, are sent to everyone with a responsibility assigned to the work request's associated asset's current owning department (See: [Defining Department Approvers](#) on page 2-17 and [Defining Asset Numbers](#) on page 2-46).
7. Optionally, select an Asset Criticality code from the list of values, indicating the importance of the asset to the organization. This field is for information only.
8. Optionally, select a WIP Accounting Class from the list of values. This will identify the Expense cost elements associated with the work performed, such as materials, labor, and resources.
9. Optionally, enter the area where this asset resides. This is a user defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See: [Setting Up Asset Areas](#) on page 2-12).
10. Indicate whether this asset is maintainable. If the Maintainable check box is selected, you can create work requests and work orders for this asset.

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

Note: Once work orders are created for this asset, this check box cannot be unchecked unless those work orders are at Complete or Closed statuses.

11. In the Production Equipment region, optionally enter a Production Organization. The list of values displays the production inventory organizations maintained by the current asset's organization.

-
12. Select an Item from the list of values. This is mandatory if you populated the Production Organization field. Only items that were defined with an equipment template (See: [Item Templates](#), *Oracle Inventory User's Guide*), or with the Equipment item attribute enabled (See: [Physical Attributes](#), *Oracle Inventory User's Guide*), will be available.

This is the equipment type associated with the equipment that corresponds to the asset. If the asset group associated with the current asset is of type Equipment (See: [Defining Asset Groups](#) on page 2-39), then the fields in the Production Equipment region will default, and will not be updateable; the Item will default as the current asset group.

13. Enter a Serial Number. This is mandatory if you populated the Production Organization field. This is the specific name of the component within the Equipment Type, defined above.
14. In the Parent Asset region, optionally enter an Asset Group. This defines asset hierarchy information, enabling you to review all cost associated with an asset or asset hierachal view.
15. Enter a parent Asset Number. This defines asset hierarchy information. If an asset group was created in step 14, then this field is mandatory. For example, in the diagram example above, you would need to enter Building 100 in this field if you were currently defining the Floor 1 asset.
16. Optionally, enter the Fixed Asset region information if Oracle Fixed Assets is installed. This is Enterprise Asset Management's integration with Fixed Assets. Enter a Category, which is a grouping of fixed assets, defined within Oracle Fixed Assets. This category is tied to a set of books, and must be the same set of books that is assigned to the current Enterprise Asset Management organization. See: [Setting Up Asset Categories](#), *Oracle Assets User's Guide*.
17. Optionally, enter the Number if Oracle Fixed Assets is installed. This represents a fixed asset number that belongs to a fixed asset category, associated with the asset.
18. The Property Management fields, Location Name, and Location Code, will default from a Property Manager export process (Export Locations to Enterprise Asset Management) if Oracle Property Management is installed. These fields are not updateable. The Location Code and Asset Number fields reflect as the same number, and cannot be changed.

Note: Before the above information can be passed from Property Manager into Enterprise Asset Management, Asset Groups need to first be established. See: [Defining Asset Groups](#) on page 2-39, and [Setting Up eAM Prerequisites](#) on page 9-2.

19. You can select Resource Usage only if the fields in the Production Equipment region are populated. This enables you to view production work orders and resources associated with this equipment.
20. Optionally, select Attributes to directly apply an asset attribute group template to this asset. See: [Setting Up Asset Attributes](#) on page 2-42.

Only existing, enabled asset attribute groups will display (See: [Setting Up Asset Attributes](#) on page 2-42). These asset attribute templates are optional; you do not need to enter values for all existing asset attribute groups. From this window, you cannot generate attribute groups.

21. Optionally, select Associate Activity to directly associate this Asset with an Asset Activity. See: [Asset/Asset Activity Association](#) on page 2-56.
22. Optionally, enter file, URL, or text attachments to this asset by choosing the paperclip Attachments icon. You can then choose Document Catalog to add asset specific documents. See: [Defining Asset Documents](#) on page 2-53.
23. Save your work.

To copy assets from existing assets:

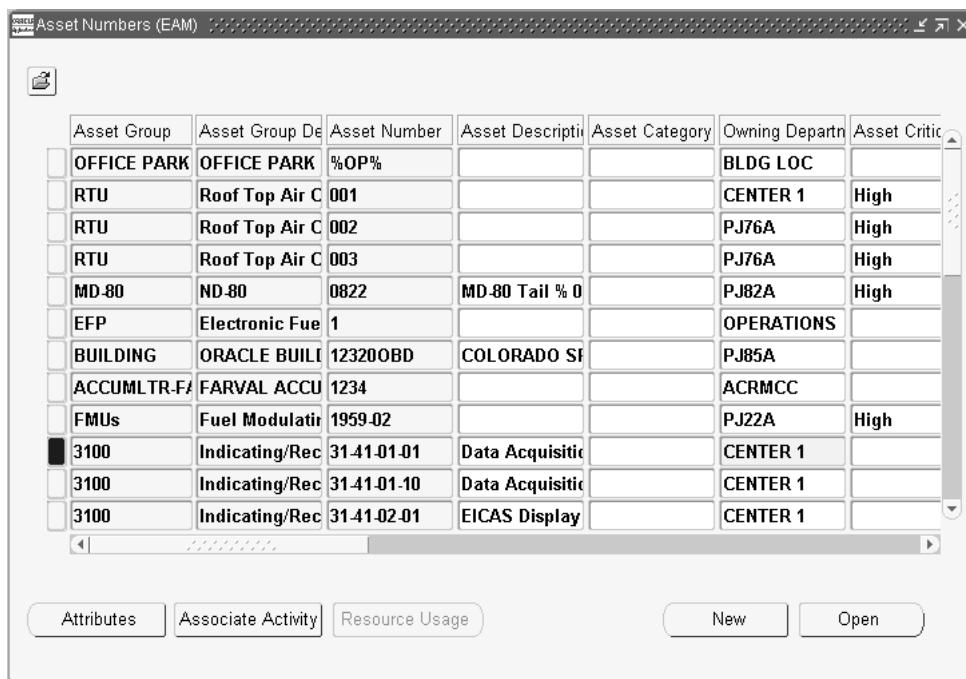
You can copy asset information from existing assets. When you use this method, everything will copy over to the new asset, including attributes and attachments.

1. Navigate to the [Define Asset Number](#) window.
2. Select an Asset Group from the list of values. This asset group will be associated with this asset.
3. Enter an Asset Number if you do not have them automatically generated, or accept or modify the default, if you have automatic generation enabled (See: [Defining eAM Parameters](#) on page 2-9). Once an asset is saved, you can disable but not update the asset.
4. Optionally, enter an Asset Description, up to 240 characters.
5. From the Tools menu within the Tool bar, select Copy Asset Number From.

6. Select the desired asset from the list of values.
7. Optionally, associate this Asset to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD, or BUILDING.FLOOR. See: [Setting Up Category Codes and Sets](#) on page 2-36.
8. Select an Owning Department for this asset from the list of values. E-mail notifications, regarding work requests, are sent to everyone with a responsibility assigned to the work request's associated asset's owning department (See: [Defining Department Approvers](#) on page 2-17 and [Defining Asset Numbers](#) on page 2-46).
9. Save your work.

To utilize the multiple asset entry method:

1. Navigate to the [Define Asset Number](#) window.
2. Select the flashlight Find icon, displaying the Find Asset Number window.
3. Select Find to display the Asset Numbers window.

Figure 2–29 Asset Numbers Window


The screenshot shows a software window titled "Asset Numbers (EAM)". The main area is a grid table with columns: Asset Group, Asset Group Description, Asset Number, Asset Description, Asset Category, Owning Department, and Asset Criticality. The rows contain various asset entries such as OFFICE PARK, RTU, MD-80, EFP, BUILDING, ACCUMLTR-F, FMUs, and several 3100 entries. At the bottom of the window are buttons for Attributes, Associate Activity, Resource Usage, New, and Open.

Asset Group	Asset Group Description	Asset Number	Asset Description	Asset Category	Owning Department	Asset Criticality
OFFICE PARK	OFFICE PARK	%OP%			BLDG LOC	
RTU	Roof Top Air C	001			CENTER 1	High
RTU	Roof Top Air C	002			PJ76A	High
RTU	Roof Top Air C	003			PJ76A	High
MD-80	ND-80	0822	MD-80 Tail % 0		PJ82A	High
EFP	Electronic Fue	1			OPERATIONS	
BUILDING	ORACLE BUIL	12320OBD	COLORADO SF		PJ85A	
ACCUMLTR-F	FARVAL ACCU	1234			ACRMCC	
FMUs	Fuel Modulat	1959-02			PJ22A	High
3100	Indicating/Rec	31-41-01-01	Data Acquisition		CENTER 1	
3100	Indicating/Rec	31-41-01-10	Data Acquisition		CENTER 1	
3100	Indicating/Rec	31-41-02-01	EICAS Display		CENTER 1	

- Using this tabular format, you can enter multiple assets at once.

Once an asset has been saved, it cannot be deleted. The asset can only be deactivated if there are no open work orders for the asset, or if the asset is not part of an asset hierarchy.

To deactivate an asset:

- Select the asset to deactivate.
 - From the Tools menu, select De-Activate Asset Number.
 - Save your work.
- Optionally, enter file, URL, or text attachments to this asset by choosing the paperclip Attachments icon. You can then choose Document Catalog to add asset specific documents. See: [Defining Asset Documents](#) on page 2-53
 - Save your work.

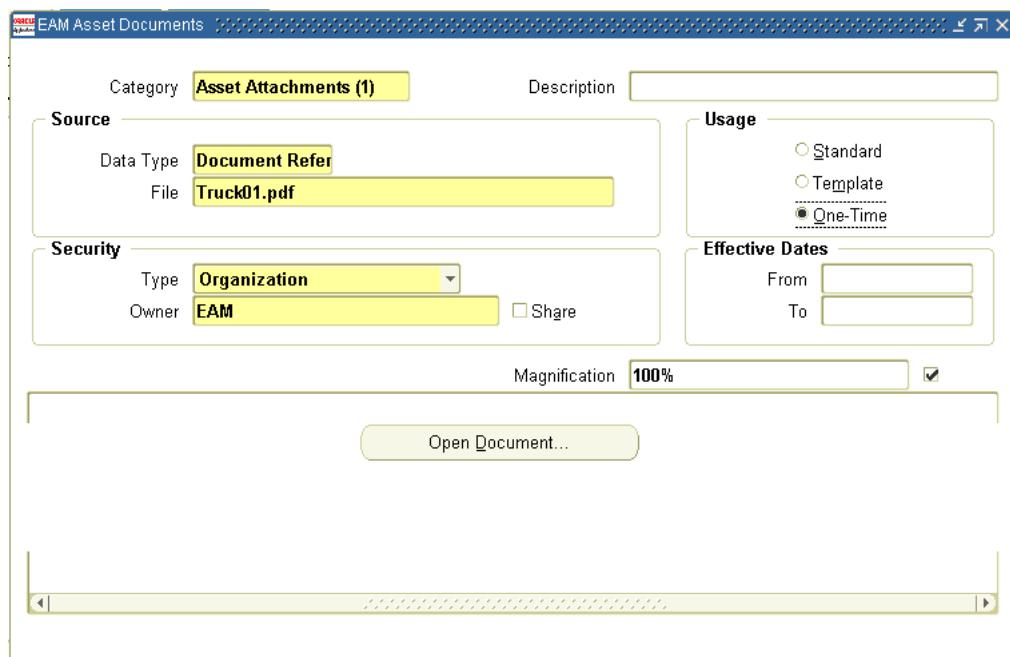
Defining Asset Documents

You can attach existing documents to an asset, and create text to associate with an asset. You can attach text and files, such as spreadsheets, graphics, and OLE objects.

To define asset documents:

1. Navigate to the [EAM Asset Documents](#) window.

Figure 2–30 EAM Asset Documents Window



2. Select a Data Type from the list of values.

See Also:

For information on all fields, See: [Working With Attachments, Oracle Applications User's Guide](#)

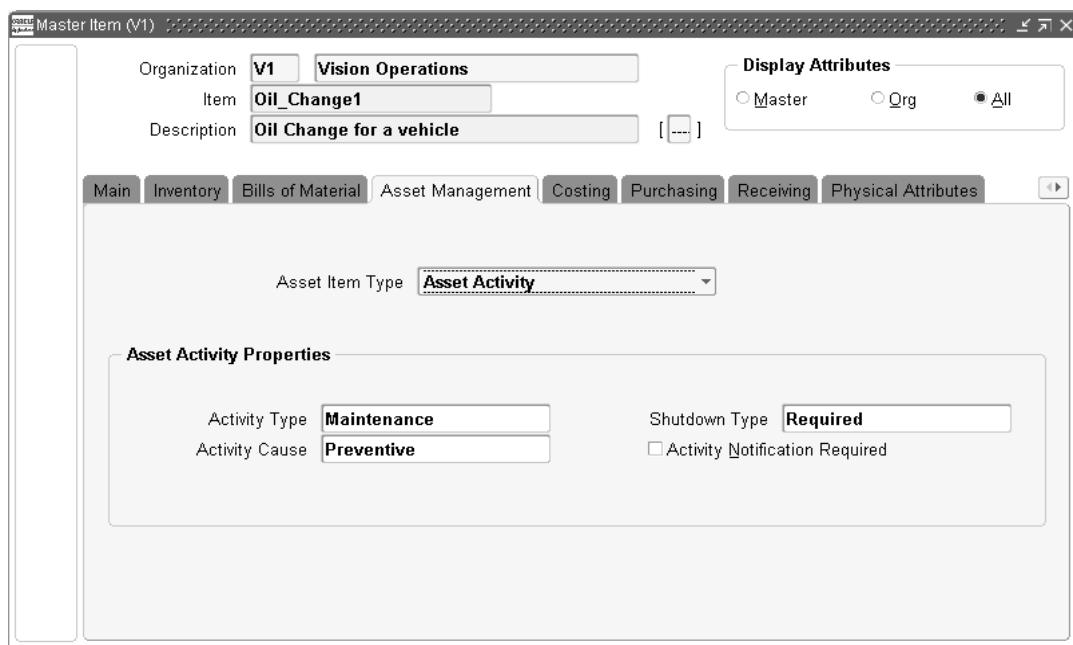
Defining Asset Activities

Asset Activities provide you with a standard template of jobs, which can be applied to preplanned work orders, such as Routine or Preventive Maintenance. Once these asset activity templates are created, they can be associated with one or more asset numbers or rebuildable spares (See: [Asset/Asset Activity Association](#) on page 2-56 and [Rebuildable Spare/Asset Activity Association](#) on page 2-75). They also need to be associated to an maintenance BOM (See: [Setting Up Activity Bills of Material](#) on page 2-68) and activity routing (See: [Defining Maintenance Routes](#) on page 2-64), containing the materials and resources needed for operations, respectively. When preplanned work orders are then created for assets associated to the asset activity, the material and resources associated with the current asset activity automatically attach to the work orders created.

To set up Asset Activities:

1. Navigate to the [Asset Activity \(Master Item\)](#) window. The Master Item window is used to create asset groups, asset activities, and rebuildable spares.

Figure 2–31 Master Item Window



2. Enter the name of the asset activity in the Item field.
3. Enter a Description for this asset activity, up to 240 characters.
4. Use the @Asset Activity template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.
 - a. Select TOOLS from the Tools menu. From the drop down list, select COPY FROM.
 - b. Select the @Asset Activity template from the list of values.

Note: You can create asset activities using the template described above, or you can copy an asset activity from an existing asset activity (See: [Defining Items, Oracle Inventory User's Guide](#)).

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

Figure 2–32 Asset Activity Attributes

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

5. If the current organization is Enterprise Asset Management enabled (See: [Enabling Organizations for Enterprise Asset Management](#) on page 2-7), you can access the Asset Management tab.
6. In the Asset Activity Property region, optionally enter an Activity Type. This code indicates the type of maintenance for this asset activity. It is used when defining a work order. It should remain generic, and should not describe in detail the job to be done. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning.
7. Optionally, select an Activity Cause from the list of values, to specify what situation caused this work to be generated. For example, Breakdown, Vandalism, Normal Wear, or Settings.

8. Optionally, select a Shutdown Type from the list of values. This indicates whether a shutdown is necessary to perform this maintenance activity. For example Required, and Not Required. This field is informational only.
9. Optionally, select the Activity Notification Required field to indicate whether the asset requiring work is mobile, and needs to be brought into the shop for repairs. This field is for information only.
10. Optionally, select the paperclip Attachments icon to attach relevant documents, such as drawings, standard procedures, and reference guides, to this asset activity. You can attach file, URL, and text attachments.
11. Save your work. After saving your work, this asset activity can be associated with an asset (See: [Asset/Asset Activity Association](#) on page 2-56).

To associate Asset Activities to multiple organizations:

1. From the [Master Item](#) window, select TOOLS from the Tools menu.
2. Select Organization Assignment.
3. Enter additional organizations in the available window.
4. Save your work.

Note: Multiple work orders (See: [eAM Work Orders](#) on page 3-5) associated with the same asset activity cannot have the same work order status (See: [eAM Work Order Statuses](#) on page 3-18).

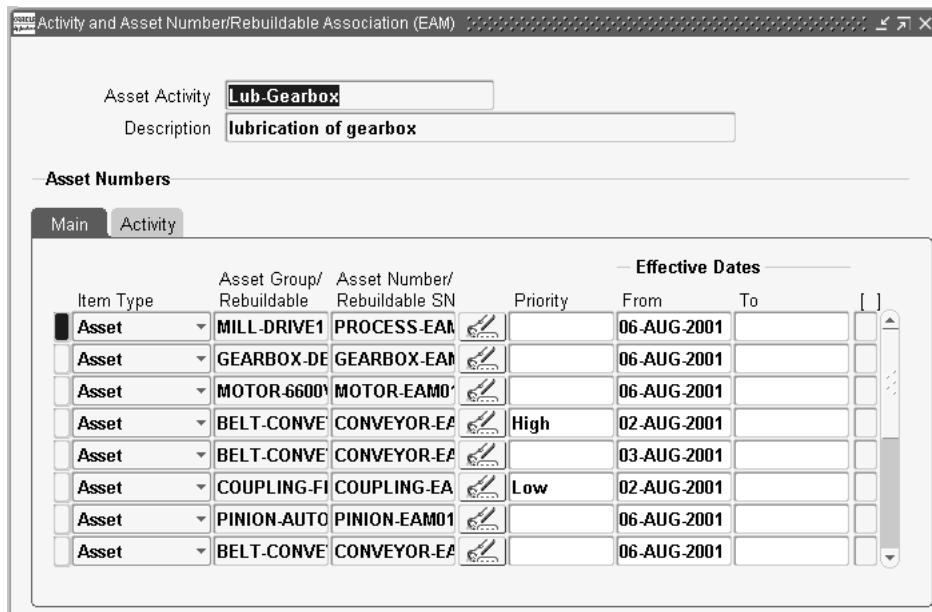
Asset/Asset Activity Association

Once you have defined Asset Groups, Assets, and Asset Activities, you can then associate the asset activities with assets and/or rebuildable spares (See: [Rebuildable Components/Asset Activity Association](#)). This is a required procedure before entering the asset activity into a Preventive Maintenance Schedule. See: [Entering PM Scheduling Definitions](#) on page 4-11.

To associate Assets with Asset Activities:

1. Navigate to the [Activity and Asset Number/Rebuildable Association](#) window.

Figure 2–33 Asset/Asset Activity Association Window



2. Select an Asset Activity from the list of values.
3. Within the Asset Numbers region, select the Main tab.
4. Select Asset from the Item Type list of values.
5. Enter an Asset Group from the list of values in the Asset Group/Rebuildable field.
6. Select an Asset Number from the list of values in the Asset Number/Rebuildable Serial Number field. Only Asset Numbers associated with the previously selected Asset Group will be available. Asset numbers are always serial controlled.
7. Optionally, select a Priority Code from the list of values. This field is for information only.
8. Optionally enter Effective Dates. If the Effective From field is left blank, it will default to the system date. If the Effective To field is left blank, it will default to NULL.
9. Select the Activity tab.

10. The Activity Cause will default from the asset activity definition (See: [Defining Asset Activities](#) on page 2-54), specifying what situation caused this work to be generated. For example, Breakdown, Vandalism, Normal Wear, or Settings. Optionally, you can select an Activity Cause from the list of values to update this field.
11. The Activity Type will default from the asset activity definition (See: [Defining Asset Activities](#) on page 2-54). This code indicates the type of maintenance activity needed to be done for this asset activity. It is used when defining a job or a standard job. It should remain generic, and should not describe in detail the job to be done. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. Optionally, you can select an Activity Type from the list of values to update this field.
12. Indicate whether Tag Out procedures are required. The asset area may need to be secured for operations required for carrying out a work order. Tags are generally printed and placed on an asset, warning the plant that the asset is shutdown, and should not be started. This check box helps the planner isolate those jobs that require a tagout. This is for information only.
13. The Owning Department responsible for this activity or asset will default from the asset definition (See: [Defining Asset Numbers](#) on page 2-46). Optionally, you can update this field by selecting an owning department from the list of values. This is normally a Planner or Supervisor.
14. Save your work.

See Also:

[Rebuildable Spare/Asset Activity Association](#) on page 2-75

Defining Asset Routes

You may need to perform an asset activity on multiple assets. To eliminate the possibility of creating multiple work orders for the same activity, you can define Asset Routes. You can define a Preventive Maintenance schedule for your asset route to specify when an asset activity should be scheduled for the asset route. Only day interval rules can be defined for asset routes (See: [Preventive Maintenance Scheduling](#) on page 4-11).

To define Asset Routes:

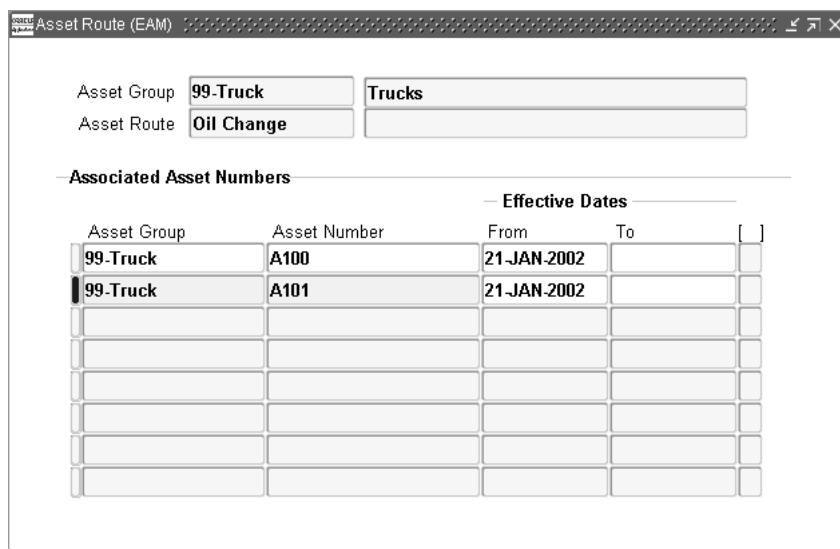
1. Navigate to the [Define Asset Route](#) window.

Figure 2–34 Define Asset Route Window

The screenshot shows the 'Define Asset Route (EAM)' window. It contains several input fields and checkboxes:

- Asset Group:** 99-Truck (selected), Trucks (list view)
- Asset Number:** Oil Change
- Asset Category:** (empty)
- Owning Department:** Centre1
- Asset Criticality:** (dropdown menu with ellipsis)
- WIP Accounting Class:** (empty)
- Maintainable:**
- Production Equipment:** Production Org, Item, Serial Number
- Fixed Asset:** Category, Number
- Parent Asset:** Asset Group, Asset Number (with a pencil icon)
- Property Management:** Location Name, Location Code
- Buttons at the bottom:** Asset Route, Resource Usage, Associate Activity, Attributes

2. Select an Asset Group from the list of values.
3. Enter the name of the asset route in the Asset Number field.
4. Select Asset Route to display the Asset Route window.

Figure 2–35 Asset Route Window

5. In the Associated Asset Numbers region, select an Asset Group from the list of values.
6. Select an Asset Number from the list of values. Only asset numbers associated with the previously selected asset group will be available.
You can associate an unlimited number of asset numbers.
7. Optionally, enter Effective Dates. If the Effective Date From field is left blank, the system date will default.
8. Save your work.

Note: Only asset numbers can be associated with asset routes. An asset route cannot be associated with another asset route.

Setting Up Asset Bills of Material

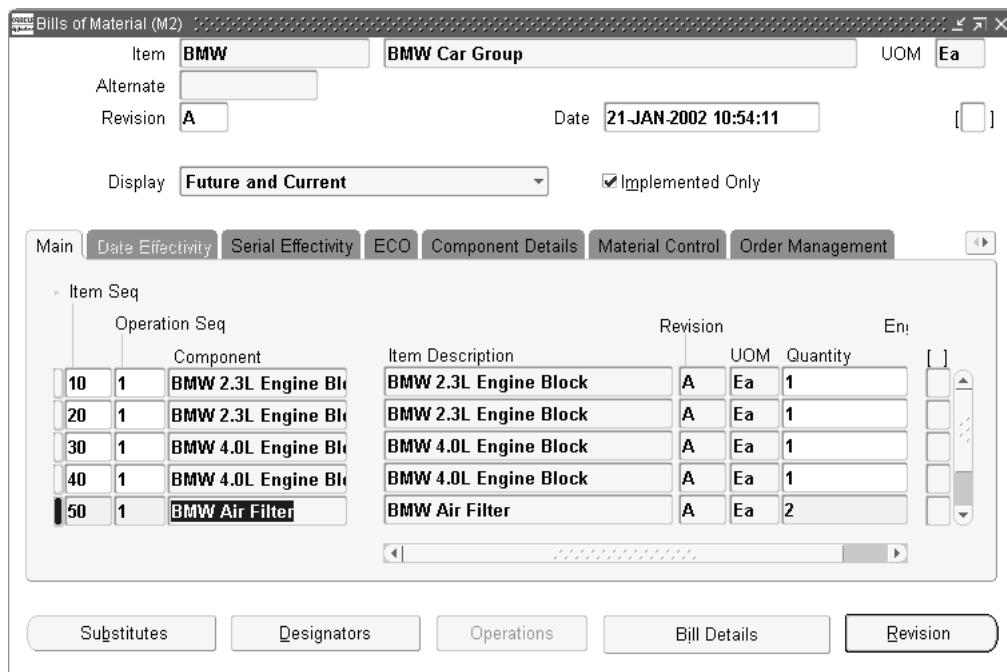
You can identify and select the required items that make up an asset. A bill of material (BOM) can be used to list all items and components that make up a particular asset, and can be defined for each asset group. The items defined on an

asset BOM are standard inventory items (set up in the Master Item window), and not maintainable (See: [Defining Items](#), *Oracle Inventory User's Guide*).

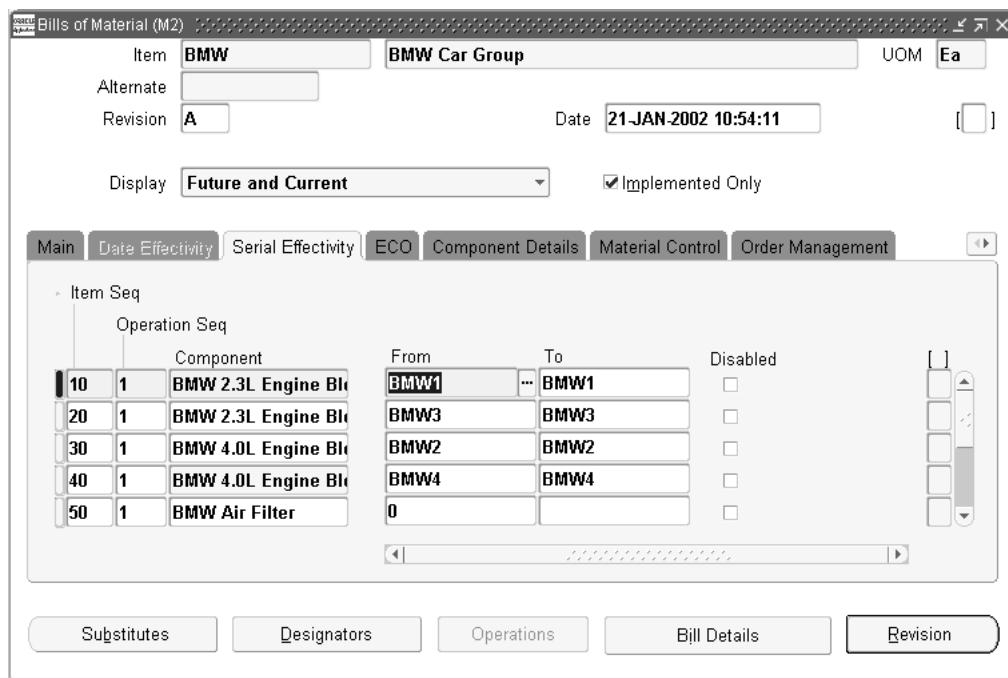
To set up an Asset BOM:

1. Navigate to the [Bills of Material](#) window.

Figure 2–36 Bills of Material Window



2. Select an asset group from the Item field list of values.
3. Select the Main tabbed region. The Item Sequence and an Operation Sequence will default.
4. Enter the inventory Component to make up the asset. For more information on rebuildable spares, See: [Rebuildable Spare Setup](#) on page 2-72.
5. Enter the Quantity of that component necessary for the asset.
6. Select the Serial Effectivity tabbed region.

Figure 2–37 Bills of Material Window

7. Select the asset (asset numbers are always serialized) from the list of values that the inventory items are going to be associated to in the From and To fields. Only asset numbers associated with the current asset group are available.
8. Optionally, select the Component Details tabbed region to view the component item Type, and to choose whether this inventory component will be included in the current asset's cost rollup.

Note: The Component Details tabbed region is referring to the material items making up the asset, NOT rebuildable components. For more information on rebuildable components, See: [Rebuildable Spare Setup](#) on page 2-72.

9. Save your work.

See Also:

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

Defining Maintenance Routes

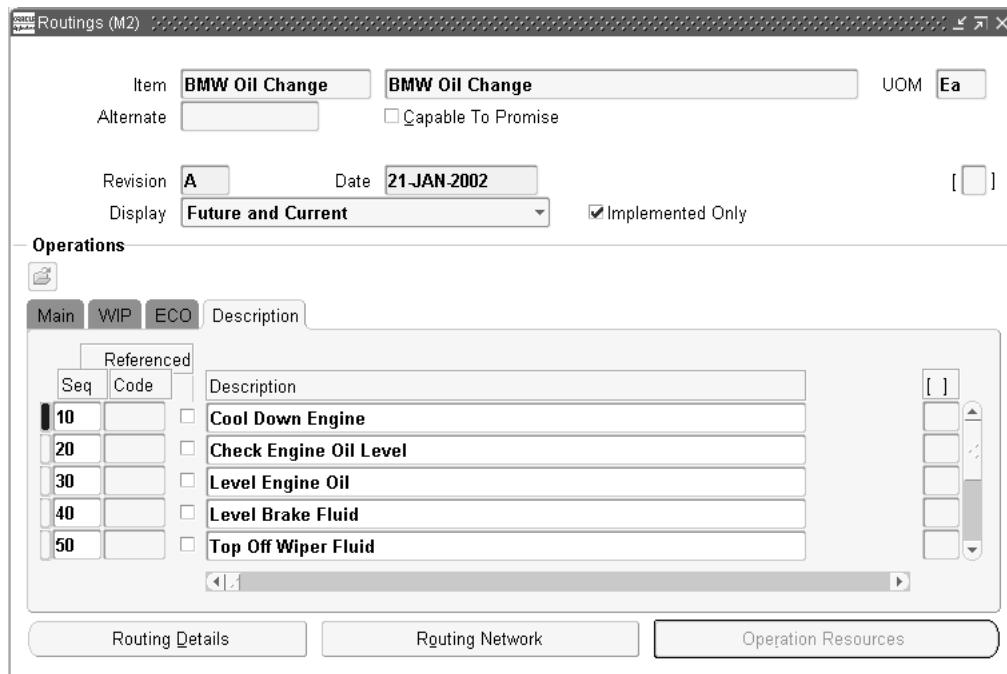
Operations are the instructions or tasks to perform a repair. Because each operation is associated with a department, each operation contains assigned resources, for example, trades people, outside service providers, and equipment (See: [Defining Departments and Resources](#) on page 2-17). A maintenance route is the set of operations or jobs necessary to perform an asset activity. When a work order is created for an asset activity, the maintenance route corresponding to the asset activity explodes to the work order (See: [Defining Asset Activities](#) on page 2-54).

Maintenance routes are not asset routes. For information on asset routes, See: [Defining Asset Routes](#) on page 2-58.

Enterprise Asset Management operations are different from manufacturing operations in that manufacturing operations must be sequential. In Enterprise Asset Management, operations may not be sequential. You can specify that one operation is dependent on another. Also, it is possible that two unrelated operations can happen concurrently. One operation can be dependent on multiple operations. Multiple operations can be dependent on only one operation. The dependency may not be totally connected.

To define an maintenance route:

1. Navigate to the [Routings](#) window.

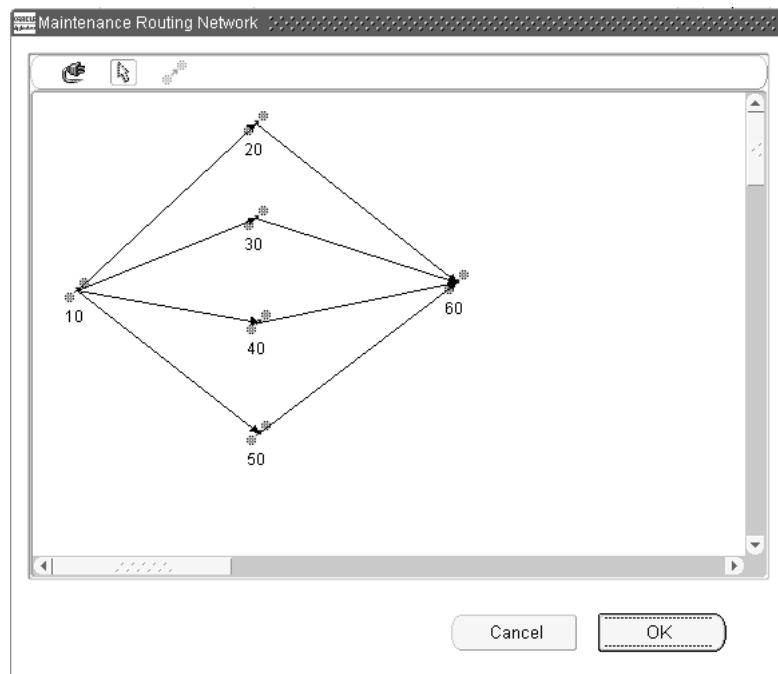
Figure 2–38 Routings Window

2. Select an asset activity from the Item field list of values.
3. Select the Main tabbed region.
4. Enter an operation Sequence, or let the system automatically generate it for you, according to your profile setup (See: [Item and Operation Sequence](#), *Oracle Bills of Material User's Guide*).
5. To copy or reference standard operations into a routing, use the operation Code list of values. You can define a new standard operation by selecting Standard Operations from the Tools menu.

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

6. Select a Department from the list of values, where the operation will be performed.
7. Select the Referenced check box to indicate that any changes to standard operations will be reflected in the routing. If the standard operation is selected, this check box is selected by default.
8. The Effective date will default to the system date, but you can optionally change this (See: [Effective Date Fields](#), *Oracle Bills of Material User's Guide*).
9. Optionally, enter a Disabled date to indicate the current operation's expiration.
10. Select the Description tabbed region. Enter a Description for the current operation.
11. Optionally, select Routing Network to view the operation dependencies for this asset route.

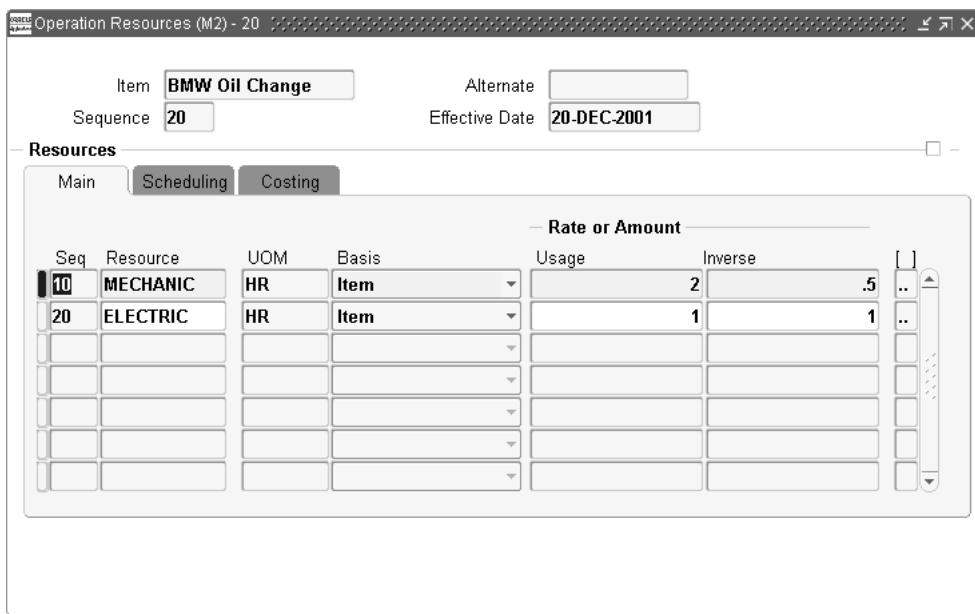
Figure 2–39 Maintenance Routing Network Window



Operations can be scheduled to run in parallel, sequence, or through dependent steps. In the screen shot above, for example, Operations 20, 30, 40, and 50 are dependent on Operation 10, since there is a line connecting the operations. These operations also run in parallel to each other. The operation numbers identify the sequence that they need to be performed (See: [Preparing Work Order Operations](#) on page 3-22).

12. Optionally, select an operation, then select Operation Resources to view the resources associated with the current department attached to this operation (See: [Defining Departments and Resources](#) on page 2-13). Optionally, you can modify the resources listed (See: [Assigning Operation Resources](#), *Oracle Bills of Material User's Guide*).

Figure 2–40 Operation Resource Window



13. Save your work.

See Also:

For information on all remaining fields, See: [Creating a Routing](#), *Oracle Bills of Material User's Guide*.

Setting Up Maintenance Bills of Material

You can identify and select the required items used by an asset activity. A bill of material (BOM) can be used to list all items needed to perform a particular asset activity, and can be defined for each asset activity. For example, you may have an asset activity titled, Oil Change. The items necessary to perform this activity, include a filter, oil, etc. As Maintenance BOMs are created, they are associated to an asset activity (See: [Defining Asset Activities](#) on page 2-54).

When a work order is created for an asset activity, the maintenance BOM corresponding to the asset activity explodes to the work order (See: [Defining Asset Activities](#) on page 2-54).

To set up an maintenance BOM:

1. Navigate to the [Bills of Material](#) window.

Figure 2–41 Bills of Material Window

Item Description	Revision	UOM	Quantity
BMW Engine Oil	A	Ea	5
BMW Brake Fluid	A	Ea	2
BMW Wiper Fluid	A	Ea	10
Generic Wiper Fluid	A	Ea	1

-
2. Select an asset activity from the Item field list of values.
 3. Select the Main tabbed region. The Item Sequence will default.
 4. Enter the Operation Sequence that this Component (material item necessary for the operation sequence, NOT rebuildable component) is needed for (See: [Defining Maintenance Routes](#) on page 2-64).
 5. Enter necessary Components and their Quantities that are required to perform the asset activity. You can enter an unlimited number of material items.

Note: This is referring to the material items necessary for the asset activity, NOT rebuildable components. For more information on rebuildable components, See: [Rebuildable Spare Setup](#) on page 2-72.

6. Optionally, select the Date Effectivity tabbed region to specify effectivity dates per component.
7. Save your work.

See Also:

For information on all remaining fields, See: [Creating a Bill of Material, Oracle Bills of Material User's Guide](#)

Defining Asset Statuses

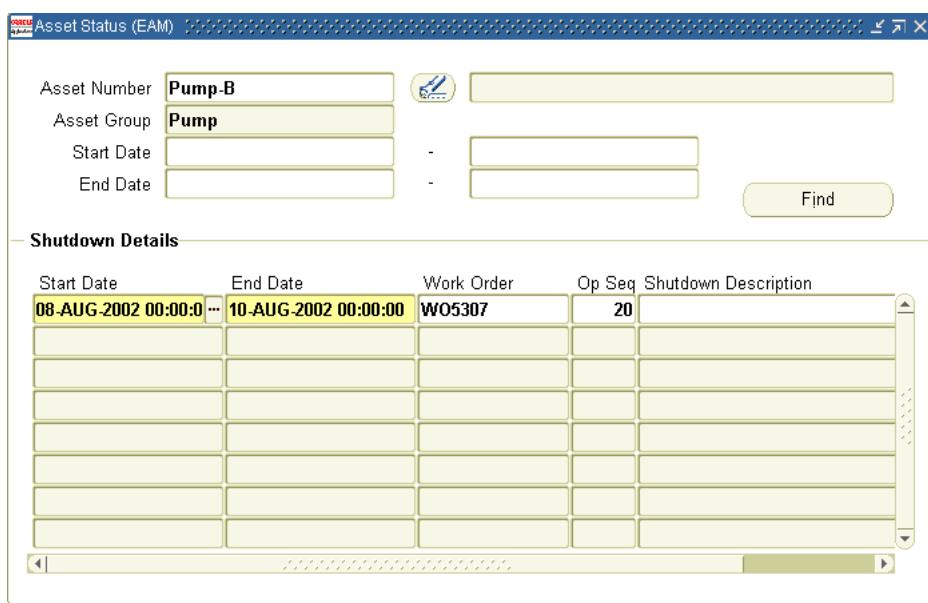
Shutdown of an asset is sometimes necessary to perform a maintenance activity. You can create new shutdown information associated with an asset or view existing shutdown history information, already recorded to an asset. Shutdown information consists of start and end dates, work order numbers requiring maintenance on the asset, and specific operation sequences.

All shutdown information entered within the Asset Status window is for informational purposes only.

To view and define shutdown information for an asset:

1. Navigate to the [Asset Status](#) window.

Figure 2–42 Asset Status Window



2. Select an Asset Number from the list of values.
3. Choose Find. All shutdown information for the current asset displays in the Shutdown Details region.

4. To add new shutdown information for the current asset, Select a Start Date from the list of values.
5. Select an End Date from the list of values.
6. Optionally, associate the shutdown information to a specific work order requiring maintenance on the current asset. Only work orders created for the current asset are available from the list of values.
7. Optionally, associate shutdown information to the operation level of a work order by choosing a specific Operation Sequence.
8. Optionally, enter a Shutdown Description.
9. Save your work.

Rebuildable Spare Setup

Rebuildable Spare Setup tasks include:

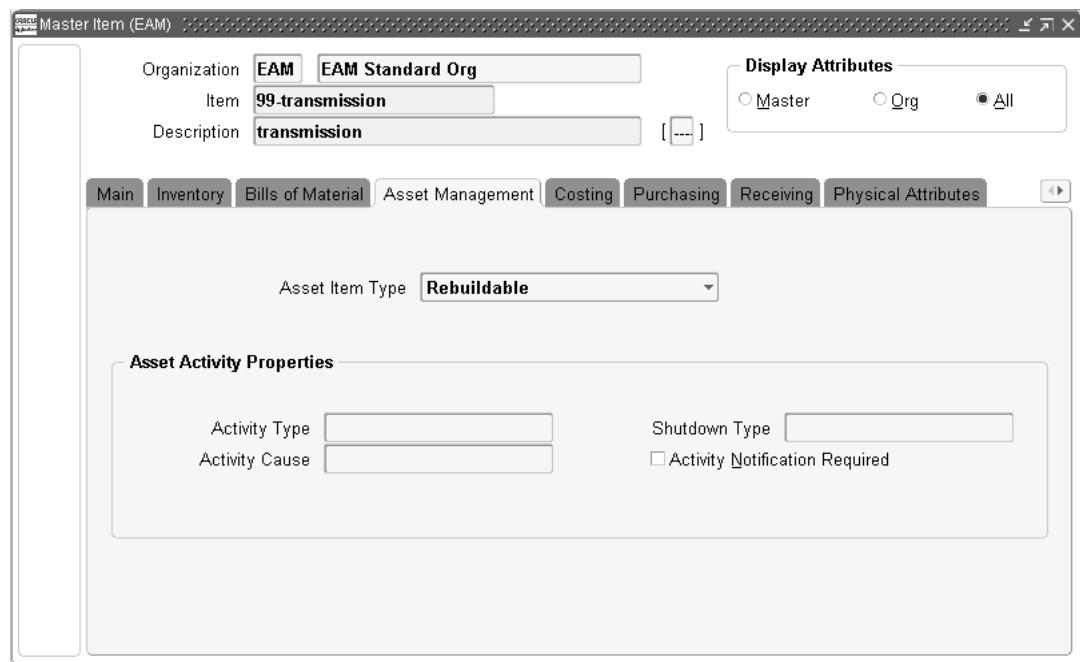
- [Defining Rebuildable Spares](#) on page 2-72
- [rebuildable Spare / Asset Activity Association](#) on page 2-75

Defining Rebuildable Spares

Items that are installed, removed, and refurbished are referred to as rebuildable spares. Examples of rebuildable spares include motors, control boxes, and computer boards. Rebuildable spares are not assets, however, they need to be associated with work orders for maintenance purposes. Rebuildable spares are inventory items; you have the option to serialize them.

To set up rebuild items:

1. Navigate to the [Rebuildable Spare \(Master Item\)](#) window. The Master Item window is used to create asset groups, asset activities, and rebuildable spares.

Figure 2–43 Master Item Window

2. Enter the rebuild item name in the Item field.
3. Enter a Description for this Rebuild Item, up to 240 characters.
4. Use the @Rebuildable template to quickly apply attribute values, and to ensure that the appropriate attributes are applied.
 - a. Select TOOLS from the Tools menu. From the drop down list, select COPY FROM.
 - b. Select the @Rebuildable template from the list of values.

Note: You can create rebuildable spares using the template described above, or you can copy a rebuildable spare from an existing rebuildable spare (See: [Defining Items, Oracle Inventory User's Guide](#)).

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

Figure 2–44 Rebuildable Spare Attributes

Attribute	Value
User Item Type	Rebuildable
Item Status	Active
Inventory Item	Enabled
Transactable	Enabled
EAM Item Type	Rebuildable

5. If the current organization is Enterprise Asset Management enabled (See: [Enabling Organizations for Enterprise Asset Management](#) on page 2-7), you can access the Asset Management tab.

Note: The Asset Activity Property region is used when setting up asset activities. See: [Defining Asset Activities](#) on page 2-54.

6. Optionally, select the paperclip Attachments icon to attach relevant documents, such as drawings, standard procedures, and reference guides, to this rebuildable spare. You can attach file, URL, and text attachments.
7. Save your work. After saving your work, this rebuildable spare can be associated with an asset activity (See: [Rebuildable Spare/Asset Activity Association](#) on page 2-75).

To associate rebuildable spares to multiple organizations:

1. From the [Master Item](#) window, select TOOLS from the Tools menu.
2. Select Organization Assignment.
3. Enter additional organizations in the available window.
4. Save your work.

See Also:

[Defining Items](#), *Oracle Inventory User's Guide*

Rebuildable Spare/Asset Activity Association

Once you have defined rebuildable spares (See: [Defining Rebuildable Spares](#) on page 2-72) and asset activities (See: [Defining Asset Activities](#) on page 2-54), you can associate asset activities to the rebuildable spares. For example, you may have a Rebuild Engine asset activity, and an Engine rebuildable spare. Once you create a rebuild work order (See: [Rebuild Work Orders](#) on page 3-12) for the engine, the associated Rebuild Engine asset activity will attach its associated maintenance BOM (material) and maintenance routing (resources) to the work order (See: [Defining Maintenance Routes](#) on page 2-64 and [Setting Up Maintenance Bills of Material](#) on page 2-68).

To associate rebuildable spares with Asset Activities:

1. Navigate to the [Activity and Asset Number/Rebuildable Association](#) window.

Figure 2–45 Rebuildable and Asset Activity Association Window

Item Type	Asset Group/ Rebuildable	Asset Number/ Rebuildable SN	Effective Dates	
			Priority	From
Rebuildable	CHEVY-ENGIN	CE100		06-DEC-2001
Rebuildable	Chevy-Eng 4-			07-DEC-2001

2. Select an Asset Activity from the list of values.
3. Within the Asset Numbers region, select the Main tab.

4. Select Rebuildable from the Item Type list of values.
5. Select a rebuildable spare from the list of values in the Asset Group/Rebuildable field.
6. If the rebuildable spare is serial number controlled (See: [Defining Rebuildable Spares](#) on page 2-72), select a Rebuildable Serial Number from the list of values in the Asset Number/Rebuildable Serial Number field.
7. Optionally, select a Priority Code from the list of values. This field is for information only.
8. Optionally enter Effective Dates. If the Effective From field is left blank, it will default to the system date. If the Effective To field is left blank, it will default to NULL.
9. Select the Activity tab.
10. The Activity Cause will default from the asset activity definition (See: [Defining Asset Activities](#) on page 2-54), specifying what situation caused this work to be generated. For example, Breakdown, Vandalism, Normal Wear, or Settings. Optionally, you can select an Activity Cause from the list of values to update this field.
11. The Activity Type will default from the asset activity definition (See: [Defining Asset Activities](#) on page 2-54). This code indicates the type of maintenance activity needed to be done for this asset activity. It is used when defining a job or a standard job. It should remain generic, and should not describe in detail the job to be done. For example, Inspection, Overhaul, Lubrication, Repair, Servicing or Cleaning. Optionally, you can select an Activity Type from the list of values to update this field.
12. Indicate whether Tag Out procedures are required. For example, associated documents may need to be printed along with the activity. This field will be used in future functionality.
13. The Owning Department field is used when associating asset numbers to asset activities (See: [Asset/Asset Activity Association](#) on page 2-56), and is not relevant to rebuildable components.
14. Save your work.

Quality Integration Setup

A maintenance work order goes through various steps in its lifecycle (See: [eAM Work Order Statuses](#) on page 3-18). One of the steps in the lifecycle is Completion. When completing a maintenance work order, if the asset has associated, mandatory quality collection plans, you will need to enter quality results for the work order's asset. A list of quality collection plans associated with the asset and requiring completion will display during the completion process.

While creating a collection plan, you have the option of adding collection triggers to the plan. Triggers are restrictions that you define for a collection plan. For example, only work orders for assets that belong to the TRUCK asset group will require the entry of quality results for the collection plan. Data collection is initiated only if all collection trigger conditions are satisfied.

Quality Setup tasks for Enterprise Asset Management include the following:

- [Creating Collection Elements](#) on page 12-2
- [Creating eAM Quality Collection Plans](#) on page 12-8

Outside Processing Integration Setup

Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work based on an agreed upon contract or agreement. For example, a contractor service may be a painting service. It is also important to associate the purchasing transactions, such as the requisition and purchase order, to the work order. In order for this to be executed, the appropriate steps must be completed in Purchasing and Enterprise Asset Management.

Outside Service Processing provides the functionality to create items that are contractor services, such as landscaping, include these items on a work order, and execute the related purchasing transactions as the work order is released. By creating a contract service as an Outside Service Processing item, the purchasing requisition is created when the work order is Released. The additional purchasing transaction, including the creation of the purchase order, the approval, and invoicing process, are then managed by Purchasing. This optional process ensures that the actual charges are applied to the work order.

The other option is to enable Standard Rate. This applies pre-determined standard rates, for contractor services, to the work order, without invoking the purchasing transaction.

Outside Processing Setup tasks for Enterprise Asset Management include the following:

- [Setting Up Outside Service Processing](#) on page 8-2

Cost Management Integration Setup

Costs are generated as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies defined within Enterprise Asset Management, and can roll up to any level within an asset hierarchy. Labor, Materials, and Equipment charges can be further classified into maintenance cost categories: Maintenance, Contract, and/or Operations.

All work is captured and retained by Enterprise Asset Management. You can reference work that has been completed to review operations, resources, and costs. This information can help you understand the scope of work and the process by which it is completed.

This section includes the following topics:

- [eAM Costing Methods and Mappings](#) on page 6-2
- [Setting Up eAM Cost Management](#) on page 6-5

Process and Discrete Manufacturing Integration Setup

Enterprise Asset Management integrates with Process and Discrete Manufacturing, enabling your maintenance environment to identify Enterprise Asset Management asset relationships with production equipment. This feature associates an asset or many assets to the production equipment located in an Outside Processing organization. Once established, you can view the resource usage (maintenance work orders, batches, or FPOs) emanating from production, associated with a maintainable asset.

This section includes the following topics:

- [Organization Setups](#) on page 10-2
- [Associating Assets with Production Equipment](#) on page 10-4

Project Manufacturing Integration Setup

Enterprise Asset Management supports a variety of ways to define work breakdown structures, as commonly needed for program management, using third party project management systems (with on-line integration), project templates, Seiban number wizard, copy, and manual entry. To support financial project management and reporting, the combination of Oracle Projects and Oracle Project Manufacturing enables budgeting, project costing and tracking, project billing, project revenue recognition, project cash forecasting, and project cost collection, including multi-currency and tax regulations.

To support project supply chain management and execution, Project Manufacturing provides functionality for project sales management, project advanced supply chain planning, project procurement, project execution, and project quality management.

First, a maintenance work order is linked to a project or task. If a requisition or purchase order is created for that work order, the commitments for the work order's associated project or task will be updated. The cost collection process then passes the costs to the work order's associated project WIP accounting class accounts, rather than the WIP accounting class associated with the eAM asset or eAM organization.

This section includes the following topics:

- [Project Definition](#) on page 11-3

3

eAM Work Management

This chapter discusses managing work in Oracle Enterprise Asset Management, including the following topics:

- ❑ Overview of eAM Work Management on page 3-3
- ❑ Routine Work Orders on page 3-5
- ❑ Preventive Maintenance Work Orders on page 3-11
- ❑ Rebuild Work Orders on page 3-12
- ❑ Easy Work Orders on page 3-18
- ❑ eAM Work Order Statuses on page 3-18
- ❑ Defining Work Order Documents on page 3-20
- ❑ eAM Operations and Tasks on page 3-22
- ❑ Preparing Work Order Operations on page 3-22
- ❑ Viewing Work Order Operations on page 3-26
- ❑ Defining Material Requirements on page 3-27
- ❑ Viewing Material Requirements on page 3-30
- ❑ Defining Resource Requirements on page 3-32
- ❑ Viewing Resource Requirements on page 3-36
- ❑ eAM Work Order Transactions on page 3-38
- ❑ Operation Completion on page 3-38
- ❑ Work Order Completion on page 3-41
- ❑ Rebuild Work Order Completion on page 3-44

-
- Transacting Material on page 3-47
 - Transacting Resources on page 3-50
 - Viewing Resource Transactions on page 3-52
 - Closing Work Orders on page 3-54
 - eAM Work Order Planning on page 3-59
 - Using the Maintenance Workbench on page 3-59

Overview eAM Work Management

The work order is the foundation of all maintenance organizations. Work orders define what resources and items are needed to conduct work. They can automatically generate through the use of Preventive Maintenance Schedules, the issue of an inventoried rebuildable spare, or manually generated as a routine work order. These work orders are then reviewed and shared with Operations to produce an estimated schedule.

Enterprise Asset Management integrates with Oracle Quality. You can use Quality Collection Plans to predefine required feedback information that must be entered into the Enterprise Asset Management system upon a work order's completion. For example, data to collect can include inspection points for an asset, and Downtime variables. If a variance is recorded into the quality plan, the system will create a work request. You can define quality collection plans directly on the work order, or define them as attributes of an Asset Activity to ultimately default into future work orders generated for specific asset/asset activity combinations.

For each work order, the system can aggregate the estimated costs from the associated BOM and resources, to develop a costing profile for the current work order. Costing Profiles are then used for future Budgeting and Forecasting.

For each work order, the system can aggregate the actual costs during the lifecycle of the work order. These costs are rolled up based on the hierarchy of the current work order's associated asset. You can view these actual costs by period, at a transaction level, or at a summary level.

This chapter is divided into the following sections:

- [eAM Work Orders](#) on page 3-5
 - Routine Work Orders
 - Preventive Maintenance Work Orders
 - Rebuild Work Orders
 - Easy Work Orders
 - eAM Work Order Statuses
 - Defining Work Order Documents
- [eAM Operations and Tasks](#) on page 3-22
 - Preparing Work Order Operations
 - Defining Material Requirements

- Defining Resource Requirements
- Viewing Operations
- Viewing Material Requirements
- Viewing Resource Requirements
- [eAM Work Order Transactions](#) on page 3-38
 - Operation Completion
 - Work Order Completion
 - Rebuild Work Order Completion
 - Transacting Material
 - Transacting Resources
 - Viewing Resource Transactions
 - Closing Work Orders
- [eAM Work Order Planning](#) on page 3-59
 - Using the Maintenance Workbench

eAM Work Orders

Enterprise Asset Management Work Orders are created against assets. They can be defined manually, or generated automatically based on a scheduled activity. If you attach a manually created work order to an asset activity (normally the role of a Planner), the work order will inherit the asset activity's attributes, such as the maintenance BOM, maintenance route (operations), attachments, quality plans, cost information, and scheduling rules. The following diagram illustrates how when preplanned work orders are created for assets, the asset activity information associated with the work order's current asset automatically attaches material and resource requirement information to the work order.

This section includes the following topics:

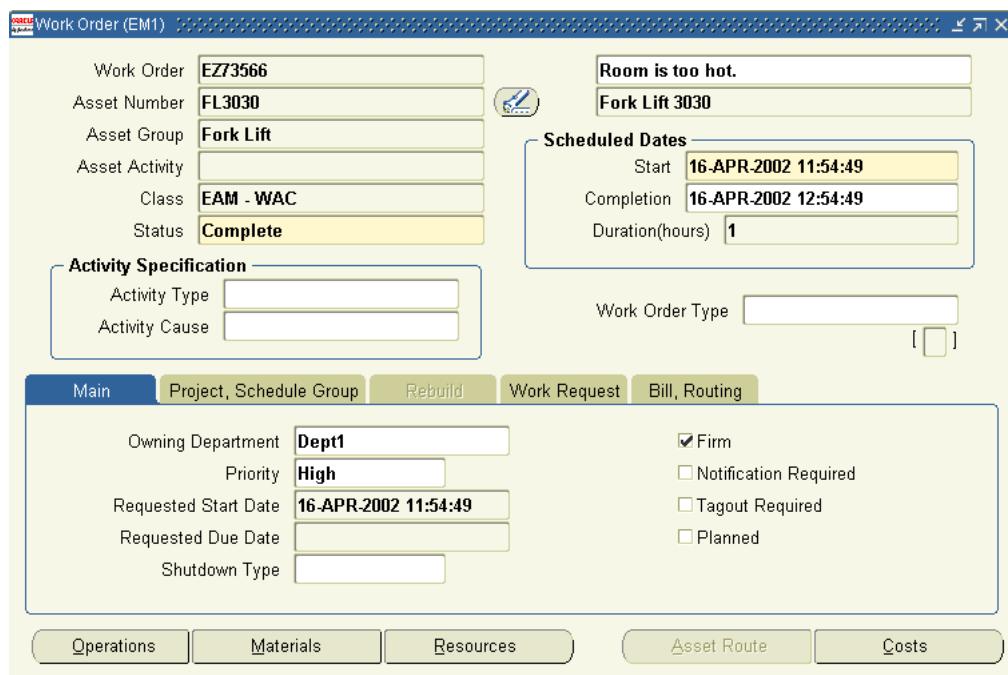
- [Routine Work Orders](#) on page 3-5
- [Preventive Maintenance Work Orders](#) on page 3-11
- [Rebuild Work Orders](#) on page 3-12
- [Easy Work Orders](#) on page 3-18
- [eAM Work Order Statuses](#) on page 3-18
- [Defining Work Order Documents](#) on page 3-20

Routine Work Orders

Routine work orders are normally created by a Planner from the Maintenance Workbench (See: [Using the Maintenance Workbench](#) on page 3-59), and can also be created using a menu option. Material and resource planning (See: [Overview of Planning and Scheduling](#) on page 5-2) is used at each status of the routine work order (See: [eAM Work Order Statuses](#) on page 3-18).

To manually create a work order:

1. Navigate to the [Find Work Orders](#) window.
2. Choose New.

Figure 3–1 Work Order Window

The header information displays general information about the asset and the type of work required.

3. The work order number is assigned by the system but is updateable.
4. Enter an Asset Number requiring maintenance. The asset group will default (See: [Defining Asset Numbers](#) on page 2-46).
5. Select an asset activity from the list of values. Only asset activities associated with this asset are available.

Note: If this work order was previously created, you can add an asset activity as long as the work order is at an Unreleased or Draft status, or an asset activity has not been previously defined. If any tasks, material, or resource requirements exist, these must be deleted before adding an asset activity to a pre-existing work order.

Once you select an asset activity, the system will load the associated maintenance BOM (material) (See: [Setting Up Maintenance Bills of Material](#) on page 2-68) and maintenance route (resources) associated with the activity (See: [Defining Maintenance Routes](#) on page 2-64). Once an activity is saved to a work order, you can no longer change or delete the activity.

6. Enter a WIP accounting Class code. This represents the charge (expense) accounts associated with the asset. This can default from the asset (See: [Defining Asset Numbers](#) on page 2-46) and can be updated.
7. Enter the Status. For example, Unreleased, Released, On Hold, and Draft. Certain transactions update this status automatically, including Work Order Completion, for example (See: [eAM Work Order Statuses](#) on page 3-18).
8. In the Scheduled Dates region, enter the scheduled Start date of the work order if it is to be based on a forward schedule. The scheduling process will use this date as a starting point to calculate the scheduled end date and duration for allocated resources and materials. If the materials/resources are not available by this date, the scheduling process will move the start date forward (See: [eAM Scheduling](#) on page 5-14).

Note: Actual dates will be entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: [Overview of Setting Up, Oracle Manufacturing Scheduling User's Guide](#)). Otherwise, the WIP scheduler will calculate the dates.

9. Enter a scheduled Completion date to be used for backward scheduling. This indicates the requested end by date of the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and materials. If the materials and resources are not available by that date, the scheduling process will move the start date backwards to ensure completion by the required end date (See: [eAM Scheduling](#) on page 5-14).

Note: Actual dates will be entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: [Overview of Setting Up, Oracle Manufacturing Scheduling User's Guide](#)). Otherwise, the WIP scheduler will calculate the dates.

10. In the Activity Specification region, optionally select an Activity Type from the list of values. This code indicates the type of maintenance for this asset activity. It is used when defining a job or a standard job. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This can default from the asset activity (See: [Defining Asset Activities](#) on page 2-54).
11. Optionally, select an Activity Cause from the list of values to specify what situation caused this work to be generated. For example, Breakdown, Vandalism, Normal Wear, or Settings. This can default from the asset activity (See: [Defining Asset Activities](#) on page 2-54).
12. Optionally, select a user defined Work Order Type, such as Maintenance or Preventive.
13. Select the Main tabbed region. The Owning Department defaults in from the selected asset (See: [Defining Asset Numbers](#) on page 2-46). This indicates the persons or department responsible for this asset.

Note: When viewing a rebuild work order, the owning department will have defaulted from the owning department of its parent work order. See: [Rebuild Work Orders](#) on page 3-5.

14. Optionally, select a Priority Code from the list of values. For example, High, Medium, or Low.
15. The Shutdown Type defaults from the asset activity. This helps the planner group work orders that may require shutdowns, so that they can be planned together.
16. If the Firm check box is checked, planning and scheduling will not adjust the schedule, regardless of material or resource availability (See: [Overview of Planning and Scheduling](#)). This check box will default as checked or unchecked, depending on the Auto Firm On Release check box setting, established in the Enterprise Asset Management Parameters setup for the current organization

(See: [Defining eAM Parameters](#) on page 2-9). This will default only after the work order is released.

If the check box is selected, the end date will be calculated based on the work order duration. The scheduler automatically calculates the duration based upon the operations (resource duration setup) on the work order. This check box is updateable for a work orders at Draft, Released, Unreleased, On-Hold, or Cancel statuses (See: [eAM Work Order Statuses](#) on page 3-18).

17. Optionally, select the Tagout Required check box to indicate that the asset area needs to be secured for operations required for carrying out this work order. Tags are generally printed and placed on an asset, warning the plant that the asset is shutdown and should not be started. This check box helps the planner isolate those jobs that require a tagout.

To store tagout documents using the Attachments feature:

- a. Select the paperclip Attachments icon to attach relevant tagout documents. You can attach URL, file, or text attachments. See: [Defining Work Order Documents](#) on page 3-20.
18. Optionally, select the Project/Schedule Group tab. This tab is enabled only if Project Manufacturing is installed and enabled.
 - a. Optionally, select a Project from the list of values.
 - b. Optionally, select a Task from the list of values.
19. You can select the Rebuild tab if this work order is created for a rebuildable spare (non-maintainable asset). See: [Rebuild Work Orders](#) on page 3-12.
20. Optionally, select the Work Request tab to display work requests associated with this work order. You can add work requests to a work order by selecting a Request Number from the list of values. Only work requests at an Awaiting Work Order status are available in the list of values. You can link multiple work requests to a single work order. However, only one work order can be associated with a work request. You can de-link a work request from a work order.

To de-link a work request from a work order:

- a. Highlight the work request.
- b. Choose Delete.

21. Select the Bill, Routing tab. This tab enables you to select alternate, predefined BOMs and Routings. See: [Setting Up Asset Bills of Material](#) on page 2-60 and [Defining Maintenance Routes](#) on page 2-64.

Once the alternate BOM and Routing are selected, the system will use the associated items and assign the associated resources needed to execute this work order.

22. Optionally, choose Operations to prepare necessary operations. These operations will default from the maintenance route (See: [Defining Maintenance Routes](#) on page 2-64) associated with the current asset activity, but can optionally be updated (See: [Preparing Work Order Operations](#) on page 3-22).
23. Optionally, choose Materials to view or update the associated asset's items list (See: [Setting Up Asset Bills of Material](#) on page 2-60 and [Defining Material Requirements](#) on page 3-27). From the Material Requirements window, you can optionally choose Select Materials to add this asset BOM to the material requirements for the current work order.
24. Optionally, choose Resources to view or update the resources assigned to each operation. See: [Defining Resource Requirements](#) on page 3-32.
25. Optionally, choose Asset Route to view the asset route associated with the current work order's asset group. You may need to perform one asset activity on multiple assets. To eliminate the possibility of creating multiple work orders for the same activity, you can define asset routes. See: [Defining Asset Routes](#) on page 2-58.

You can only choose Asset Route if an Asset Route is associated with the current asset.

26. Optionally, choose Costs to view work orders falling in the specific accounting periods, specified in the Accounting Information by Period region. Accounting Periods are defined within Oracle General Ledger. See: [Defining Period Types](#) and [Defining Calendars, Oracle General Ledger User's Guide](#).

Actual Costs: This is the accumulation of all cost for material and resource transactions for the asset's associated maintenance work orders, based on a specified period.

Estimated Costs: A BOM (material parts list) and routing (resources) can be associated with a work order. When you select Estimated Costs type from the list of values, the estimated costs of all materials and resources associated with a work order display, enabling you to budget costs.

Variance Costs: The difference between the actual costs recorded and estimated costs.

Material: All material and material overhead transaction costs will display.

Labor: All employee resource and resource overhead transaction costs will display.

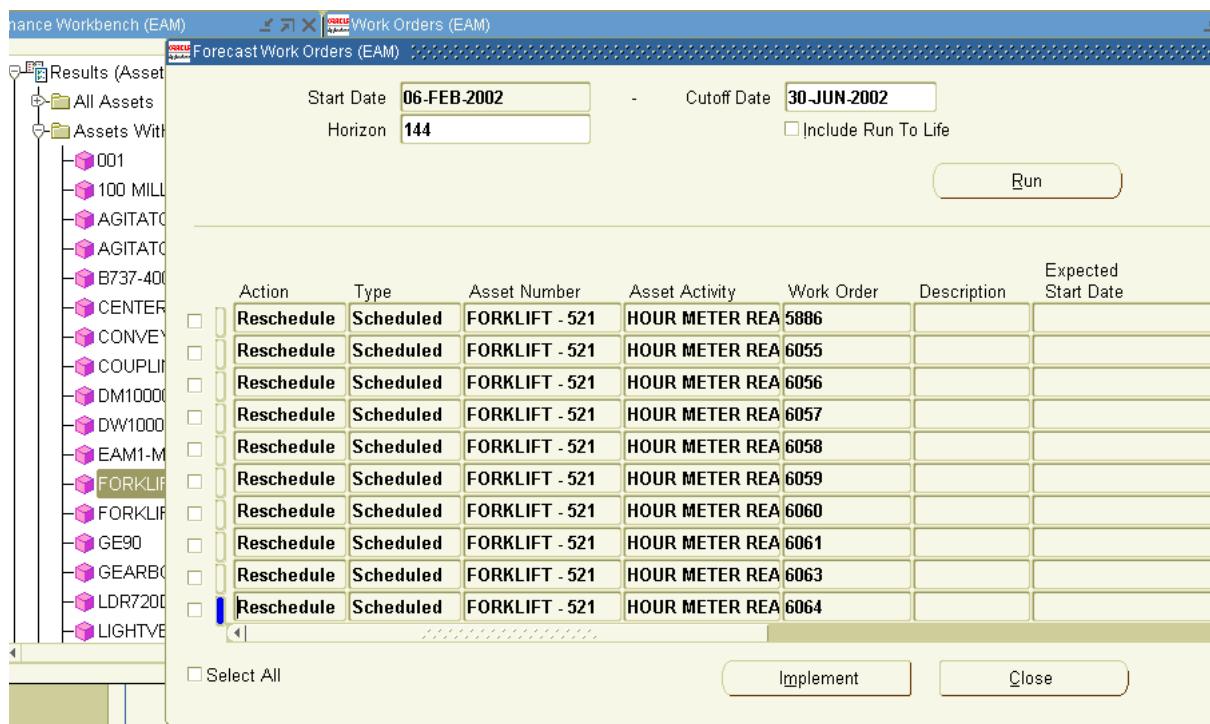
Equipment: All material resource and resource overhead transaction costs will display.

27. Optionally, select a work order, then choose Value Summary to view a summary of the actual, estimated, and variance costs for labor hours, equipment hours, and materials against the current work order.
28. Optionally, choose Details to view actual, estimated, and variance costs for labor hours, equipment hours, and materials for specific operations of the current work order.
29. Save your work.

Preventive Maintenance Work Orders

Enterprise Asset Management enables you to generate work orders automatically based on meter readings, runtime intervals, and calendar days. Preventive maintenance activities reduce the probability of failure or degradation of the assets' physical conditions. These activities are carried out periodically, by usage, or based on the condition of an asset. Meters are entered to measure any asset that needs to be measured and periodically serviced, based on the measurement. For example, a pipe may start out at 12 millimeters, but when it wears to only four millimeters, it needs to be replaced (See: [Meters](#) on page 4-3).

Scheduling definitions are defined to create forecasted, scheduled work orders, based on meter readings. You can create a Preventive Maintenance scheduling definition (See: [Entering Preventive Maintenance Scheduling Definitions](#) on page 4-11) for an asset/asset activity combination (See: [Asset/Asset Activity Association](#) on page 2-56), or an asset route (See: [Defining Asset Routes](#) on page 2-58). Once you have defined Preventive Maintenance scheduling definitions, the Preventive Maintenance scheduler process can run. You can view these forecasted work orders using the Maintenance Workbench (See: [Maintenance Workbench](#)). You can execute the Generate Preventive Maintenance Work Orders process. When this process runs, the WIP Mass Load process runs in the background, creating forecasted work orders in a status of Unreleased. (See: [Generating Work Orders](#) on page 4-20). You can choose the Implement button to change the status of the Unreleased work orders to Released work orders.

Figure 3–2 Forecasted Work Orders Window**See Also:**

[Overview of Preventive Maintenance](#) on page 4-2

Rebuild Work Orders

Rebuild work orders are created as child work orders.

For example, a work order was issued for the inspection of a pump. During the pump inspection, you found that the motor, one of the components of the pump, is problematic. You have two options: You can repair and then re-install this motor rebuildable spare, or you can replace the rebuildable spare by issuing a new motor rebuildable spare from inventory. If you choose to perform a material issue from inventory, the new motor rebuildable spare will attach to the work order, automatically creating the child, rebuild work order number associated to the parent work order. In this case, the asset genealogy would automatically update to

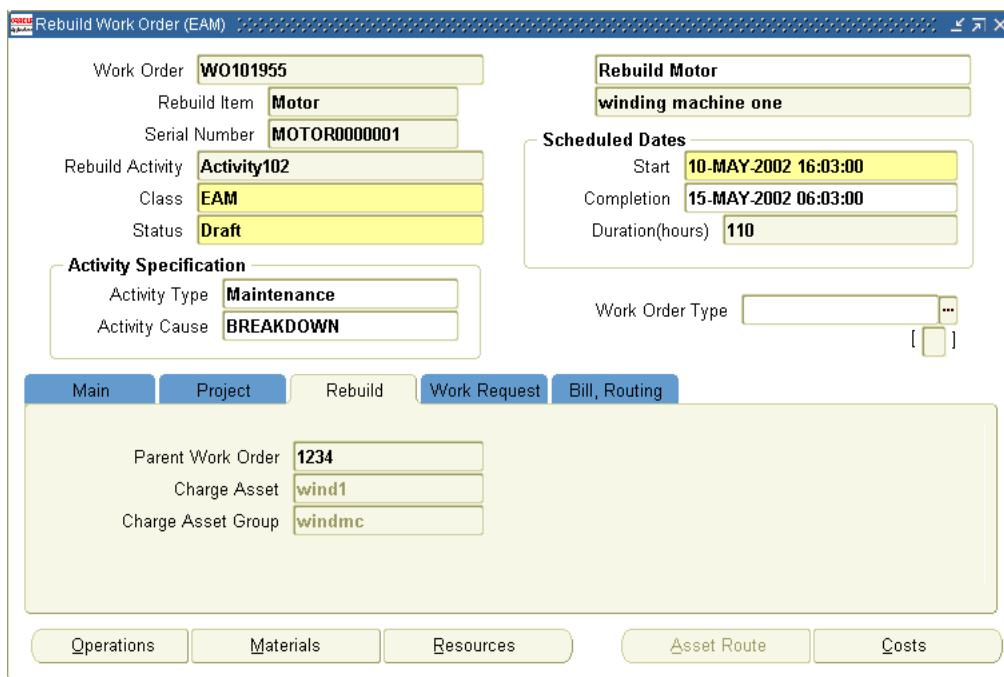
identify this new item number. See: [Overview of Inventory Transactions](#), *Oracle Inventory User's Guide*.

If you choose to repair and then re-install the problematic motor rebuildable spare, you can manually create the child rebuild work order for the old motor rebuildable spare.

The instructions below show you the option of creating a rebuild work order without issuing any new material. The rebuildable spare needing to be rebuilt will be replaced back into the asset (motor placed back into the pump, for example), and will not go to a subinventory when the work order has completed. In this case, the asset genealogy will not be updated.

To create rebuild work orders:

1. Navigate to the [Find Rebuild Work Orders](#) window.
2. Choose New.

Figure 3–3 Rebuild Work Order Window

The header information displays general information about the rebuildable spare and the type of work required.

3. A work order number is assigned by the system but is an updateable field.
4. Optionally, enter a Description for this work order, up to 240 characters.
5. Enter a Rebuild Item requiring maintenance.
6. Select a Serial Number from the list of values (See: [Defining Rebuild Spares](#) on page 2-72 and [Generating Serial Numbers](#), *Oracle Inventory User's Guide*).
7. Optionally, select a Rebuild Activity (asset activity) from the list of values. Only activities associated with this rebuildable spare are available (See: [Rebuildable Spare/Asset Activity Association](#) on page 2-75). If an activity does not exist, you can add operations, and material/resource requirements to this work order manually. See: [Defining Material Requirements](#) on page 3-27, [Defining Resource Requirements](#) on page 3-32, and [Preparing Work Order Operations](#) on page 3-22. If an asset activity does exist, you can update the material and

resources by choosing the Materials or Resources buttons from this window or by utilizing the Maintenance Workbench (See: [Using the Maintenance Workbench](#) on page 3-59).

8. Enter a WIP accounting Class code. This represents the charge (expense) accounts associated with the asset. This can default from the asset (See: [Defining Asset Numbers](#) on page 2-46) and can be updated.
9. Enter the Status. For example, Unreleased, Released, On Hold, and Draft. Certain transactions update this status automatically, including Work Order Completion, for example (See: [eAM Work Order Statuses](#) on page 3-18).
10. In the Scheduled Dates region, enter the scheduled Start date of the work order if it is to be based on a forward schedule. The scheduling process will use this date as a starting point to calculate the scheduled end date and duration for allocated resources and materials. If the materials/resources are not available by this date, the scheduling process will move the start date forward (See: [eAM Scheduling](#) on page 5-14).

Note: Actual dates will be entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: [Overview of Setting Up, Oracle Manufacturing Scheduling User's Guide](#)). Otherwise, the WIP scheduler will calculate the dates.

11. Enter a scheduled Completion date to be used for backward scheduling. This indicates the requested end by date of the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and materials. If the materials and resources are not available by that date, the scheduling process will move the start date backwards to ensure completion by the required end date (See: [eAM Scheduling](#) on page 5-14).

Note: Actual dates will be entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: [Overview of Setting Up, Oracle Manufacturing Scheduling User's Guide](#)). Otherwise, the WIP scheduler will calculate the dates.

12. In the Activity Specification region, optionally select an Activity Type from the list of values. This code indicates the type of maintenance for this asset activity. It is used when defining a job or a standard job. For example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning. This can default from the asset activity (See: [Defining Asset Activities](#) on page 2-54).
13. Optionally, select an Activity Cause from the list of values to specify what situation caused this work to be generated. For example, Breakdown, Vandalism, Normal Wear, or Settings. This can default from the asset activity (See: [Defining Asset Activities](#) on page 2-54).
14. Optionally, select a user defined Work Order Type, such as Maintenance or Preventive.
15. Select the Rebuild tabbed region, then select a Parent Work Order number from the list of values. This is the work order that the rebuild work order is associated with. In the example above, the Parent Work Order was the pump inspection.
16. Optionally, choose Operations to prepare necessary tasks. These operations will default from the maintenance route (See: [Defining Maintenance Routes](#) on page 2-64) associated with the current asset activity, but can optionally be updated (See: [Preparing Work Order Operations](#) on page 3-22).
17. Optionally, choose Materials to view or update the associated asset's items list (See: [Setting Up Asset Bills of Material](#) on page 3-22 and [Defining Material Requirements](#) on page 3-27).
18. Optionally, choose Resources to view or update the resources assigned to each operation. See: [Defining Resource Requirements](#) on page 3-32.
19. Optionally, choose Asset Route to view or update the asset route associated with the current work order's asset group. You may need to perform one asset activity on multiple assets. To eliminate the possibility of creating multiple work orders for the same activity, you can define asset routes. You can only choose Asset Route if an Asset Route is associated with the current asset. See: [Defining Asset Routes](#) on page 2-58.
20. Optionally, choose Costs to view cost information specified by accounting period. You can change the accounting period information in the Accounting Information by Period region. Accounting Periods are defined within Oracle General Ledger. See: [Defining Period Types](#) and [Defining Calendars, Oracle General Ledger User's Guide](#).
 - a. Select a work order, then choose Value Summary to view actual, estimated, and material costs for material, labor, and equipment.

Figure 3-4 Maintenance Work Order Value Summary Window

The screenshot shows the 'Maintenance Work Order Value Summary' window for work order WO101955. At the top, there are date filters for 'Period From' (01-JUL-2002) and 'Period To' (31-JUL-2002), and a 'Refresh' button. Below the filters, the work order details are listed in two columns:

Asset Group	windmc	Completion Date	15-MAY-2002
Asset Number	wind1	Work Order Status	Draft
Asset Activity	Activity102	Parent Work Order	1234
Rebuild Asset Group	Motor	Estimation Status	Complete
Rebuild Asset Number	MOTOR0000001	Last Estimate Id	1718377
Owning Department	Service	Last Estimate Date	21-MAY-2002

Below the details is a checkbox labeled 'Reestimate'. At the bottom left, there are tabs for 'Actual Costs' (selected), 'Estimates', and 'Variances'. The 'Actual Costs' tab displays a grid with columns for Cost Category (Total, Material, Labor, Equipment) and rows for operations. The 'Job Total' row shows the sum for each category. A vertical scroll bar is on the right side of the grid.

Actual Costs: This is the accumulation of all cost for material and resource transactions for the asset's associated maintenance work orders, based on a specified period.

Estimated Costs: A BOM (material parts list) and routing (resources) can be associated with a work order. When you select Estimated Costs type from the list of values, the estimated costs of all materials and resources associated with a work order display, enabling you to budget costs.

Variance Costs: The difference between the actual costs recorded and estimated costs.

Material: All material and material overhead transaction costs will display.

Labor: All employee resource and resource overhead transaction costs will display.

- b. Optionally, choose Details to view the Material, Labor, and Equipment costs for each individual operation on the current work order's routing. You can

view totals for actual, estimated, or variance costs, depending on the tabbed region you select.

21. Save your work.

Note: A requirement for rebuild work orders that are created automatically via a material transaction is that the completion subinventory must be an expense subinventory (See: [Subinventory General Ledger Account Fields](#), *Oracle Inventory User's Guide*) and [Work Order Completion](#) on page 3-41.

Note: A rebuild work order's owning department will default from the owning department of its parent work order. This can be viewed if you select the Main tabbed region.

See Also:

[Overview of eAM Cost Management](#) on page 6-2

Easy Work Orders

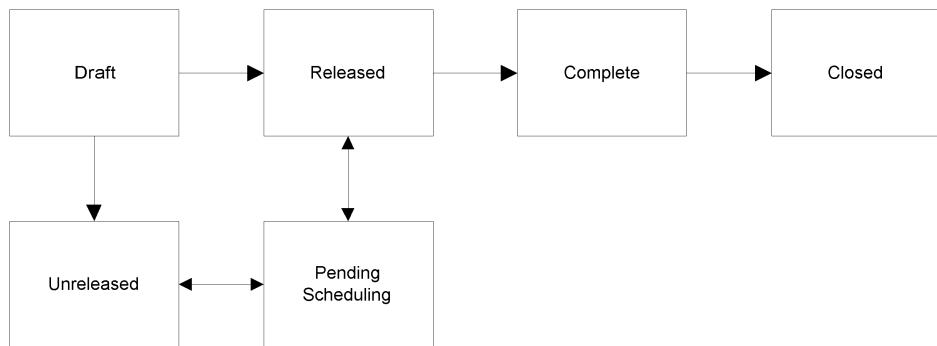
Easy Work Orders are unplanned work orders, and enable you to avoid operation and resource planning. When creating an easy work order, an asset activity will not default into the work order, based on the asset/asset activity association (See: [Asset/Asset Activity Association](#) on page 2-56), as with planned work orders. These work orders can only be created in Enterprise Asset Management Self Service (See: [Creating Easy Work Orders](#) on page 13-23). Once created, the work order is automatically at a Released status (See: [eAM Work Order Statuses](#) on page 3-18), enabling you to execute the work order. For example, request materials, charge labor, etc.

eAM Work Order Statuses

An Enterprise Asset Management work order may progress through several statuses throughout its lifecycle duration. The diagram below illustrates how Enterprise Asset Management work orders may start at a Draft status, then move to Released, Complete, and finally Closed. These statuses can vary depending on the type of work order created. For example, easy work orders are created in a Released status, completely bypassing the Draft status (See: [Creating Easy Work Orders](#) on page 13-23).

Multiple work orders associated with the same asset activity combination (See: [Defining Asset Activities](#) on page 2-54) cannot be at a Released status.

Figure 3-5 eAM Work Order Lifecycle



Status	Description
Draft	No scheduling of work orders at a Draft status can take place. You cannot charge labor, or request materials for work orders at this status.
Released	Once a work order is Released, you can execute a work order. You can charge labor, request materials, and scheduling for this work order takes place (See: eAM Scheduling on page 5-14) to create the scheduled start or end date. You can release a work order from the Work Orders window (See: Routine Work Orders on page 3-5), and the Maintenance Workbench (See: Using the Maintenance Workbench on page 3-59).
Unreleased	You can move an Enterprise Asset Management work order in Draft or Released status to Unreleased. Scheduling can take place for these work orders (See: eAM Scheduling on page 5-14) but you cannot charge labor or request materials. An Unreleased work order cannot be changed to a Draft status.
Pending Scheduling	If the Constraint Based Scheduler is enabled, the work order status changes to Pending Scheduling, if a status of Released is chosen. Once the Scheduler process finishes running, the status changes back to Released. The work order will be scheduled, based on the constraint option chosen at the organization level.

Status	Description
Complete	A Complete status for an Enterprise Asset Management work order does not require any operation to be completed. When a work order is completed, you can still charge labor. You can uncomplete a work order to take it back to a Released status from the Work Plans tab (See: Work Plans on page 13-26).
Closed	You cannot charge any accounts once an Enterprise Asset Management work order is closed. If a work order was at a Released status at the time of closing it, you can unclose the work order to bring it back to a Released status. If a work order was at a Complete status at the time of closing it, you can unclose the work order to bring it back to a Complete status. For all other statuses during the closing of a work order, unclosing the work order will bring it to an Unreleased status. See: Closing Work Orders on page 3-54.
On-Hold	Enterprise Asset Management work orders at Released and Unreleased statuses can be put on hold. You cannot charge labor or request materials for a work order at this status.
Cancel	You can cancel an Enterprise Asset Management work order at any status in its lifecycle.

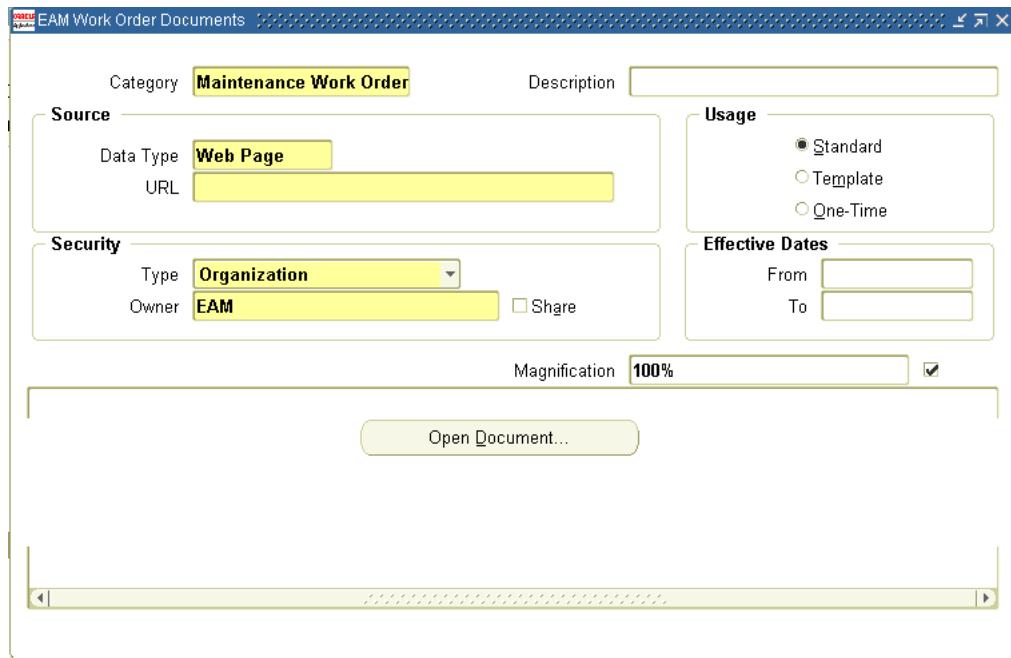
Defining Work Order Documents

You can attach existing documents to an work order, and create text to associate with a work order. You can attach text and files, such as spreadsheets, graphics, and OLE objects.

To define work order documents:

1. Navigate to the [EAM Work Order Documents](#) window.

Figure 3–6 EAM Work Order Documents Window



2. Select a Data Type from the list of values.

See Also:

For information on all fields, See: [Working With Attachments, Oracle Applications User's Guide](#)

eAM Operations and Tasks

Operations on a work order are the instructions or tasks to perform a repair. These operations are assigned resources, for example, trades people, outside service providers, and equipment.

This section includes the following topics:

- [Preparing Work Order Operations](#) on page 3-22
- [Viewing Work Order Operations](#) on page 3-26
- [Defining Material Requirements](#) on page 3-27
- [Viewing Material Requirements](#) on page 3-30
- [Defining Resource Requirements](#) on page 3-32
- [Viewing Resource Requirements](#) on page 3-36

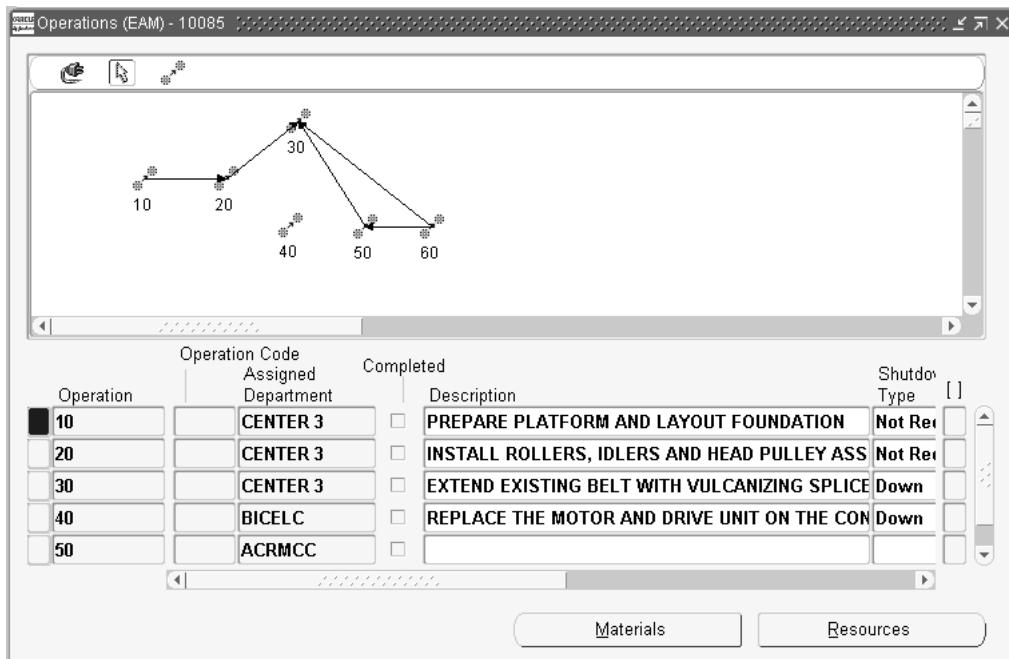
Preparing Work Order Operations

Operations (also known as tasks) are the instructions to perform a repair. Each operation is assigned to a department (See: [Defining Departments and Resources](#) on page 2-13), associated with assigned resources (trades people, outside service providers, and equipment). When you create a work order for an asset, you can attach the asset's associated asset activity (See: [Asset/Asset Activity Association](#) on page 2-56) to that work order, bringing its related maintenance route (See: [Defining Maintenance Routes](#) on page 2-64) and BOM. The maintenance route is comprised of operations necessary in completing the activity. You can view and update these operations right from the work order.

To prepare operations:

1. Navigate to the [Select Work Order](#) window.
2. Choose a work order from the list of values.
3. Choose Continue.

Operations can be scheduled to run in parallel, sequence, or through dependent steps. In the screen shot below, for example, Operation 20 is dependent on Operation 10, since there is a line connecting the operations; Operation 20 cannot be performed until Operation 10 is complete. Operations 30 and 40 run in parallel to each other. Operation 40 is independent; it can be performed at any time.

Figure 3–7 Operations Window

4. Choose the Operation icon, then click in the header. This displays the New Operation window.
5. Optionally, enter or update an Operation sequence, or let the system automatically generate it for you, according to your profile setup (See: [Item and Operation Sequence](#), *Oracle Bills of Material User's Guide*). Operations are generally assigned in increments of ten. This enables you to later insert additional steps, when necessary.
6. Optionally, enter a Description for this operation.
7. Optionally, to copy or reference standard operations into a routing, use the Operation Code list of values. If you use a standard operation code, the operation information for that code will be copied into the current operation. You can then update that information as desired (See: [Creating a Standard Operation](#), *Oracle Bills of Material User's Guide*).
8. Select an Assigned Department from the list of values. The assigned department identifies the role responsible for performing the task.

9. Select a scheduled Start Date for this operation to be based on a forward schedule. The Enterprise Asset Management scheduling process uses the scheduled start date as a starting point to calculate the duration of the operation, based on the resources and materials. If the materials and resources are not available by this date, the scheduling process will move the start date of the work order forward. The planning process uses the scheduled start date to recommend creation of purchase orders for the materials (See: [Overview of Planning and Scheduling](#) on page 5-2).
10. Select a scheduled Completion date for this operation to be based on a backward schedule. The Enterprise Asset Management scheduling process uses the scheduled end date as a starting point to calculate the duration of the operation, based on the resources and materials. If the materials and resources are not available by this date, the scheduling process will move the completion date of the work order backward. The planning process uses the scheduled completion date to recommend creation of purchase orders for the materials (See: [Overview of Planning and Scheduling](#) on page 5-2).

Note: Actual dates will be entered at operation and work order completion. Scheduled dates are calculated by the Enterprise Asset Management scheduler if you have Oracle Manufacturing Scheduling enabled (See: [Overview of Setting Up, Oracle Manufacturing Scheduling User's Guide](#)). Otherwise, the WIP scheduler will calculate the dates.

11. Optionally, select a Shutdown Type from the list of values. This helps the planner group work orders that may require shutdowns, so that they can be planned together.
12. Choose OK to bring the Operations window back.

Notice that the operations entered in the previous window display at the bottom of this window. Scroll over to the far right field. The Duration identifies the duration of the operation, and is measured in hours. You can manually enter this, or let it calculate as the difference between the estimated Start Date and estimated End Date.

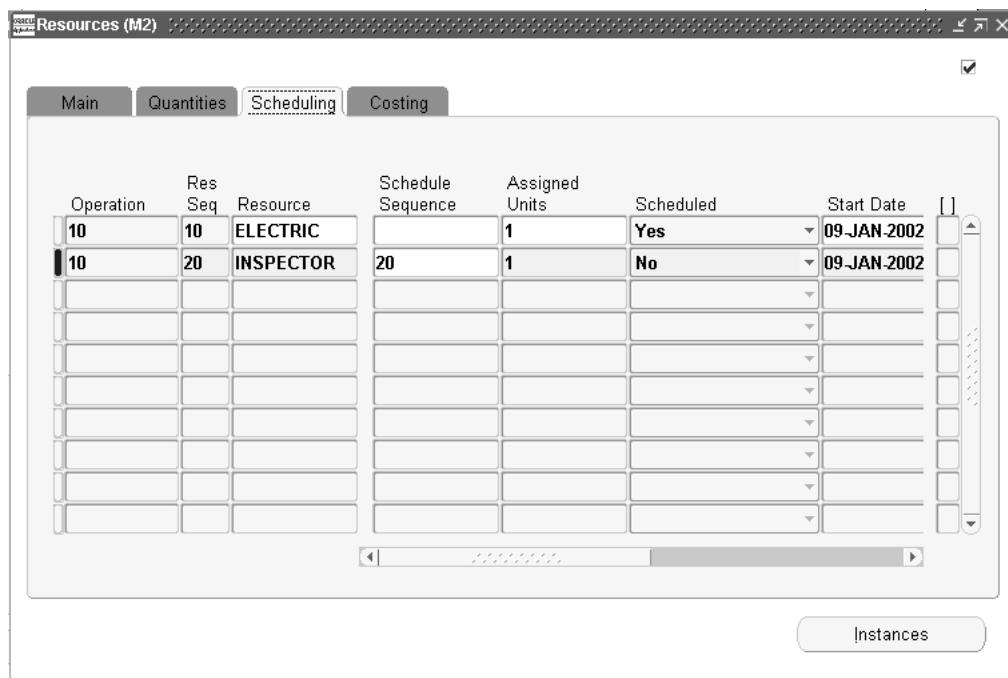
13. After all necessary operations are entered, you can create dependencies as necessary.

Optionally, choose the Connect icon to connect dependent operations. Once chosen, you can draw a line between dependent operations.

You may need to move operations around. Optionally, choose the Drag icon to move an operation.

14. Optionally, choose Materials to view or update the associated items list for the current operation (See: [Setting Up Maintenance Bills of Material](#) on page 2-68 and [Defining Material Requirements](#) on page 3-27).
15. Optionally, choose Resources to view or update the resources assigned to the current operation.

Figure 3–8 Resources Window



If you select the Scheduling tabbed region, for each resource operation, you can choose whether it will be included in scheduling. The example above illustrates that you can schedule to the resource level within an operation. See: [Enabling eAM Scheduling](#) on page 5-14 and [Defining Resource Requirements](#) on page 3-32.

- Select Yes, No, Prior, or Next from the Scheduled list of values.

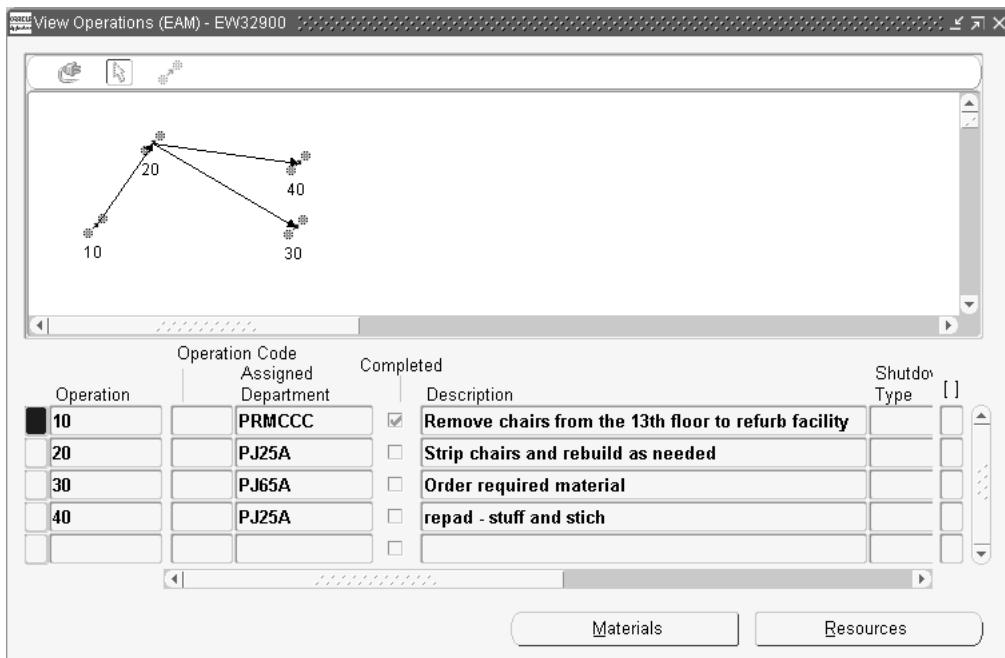
Note: You can view work order operations in a view-only mode.
See: [Viewing Work Order Operations](#) on page 3-26.

Viewing Work Order Operations

You can view the operations required to perform a repair. These operations are assigned resources (trades people, outside service providers, and equipment), as well as materials. The View Operations window does not enable you to update the operations. For instructions on updating operations, See: [Preparing Work Order Operations](#) on page 3-22.

To view operations:

1. Navigate to the [View Operations](#) window.
 - a. From the Select Work Order window, select a Work Order from the list of values.
 - b. Choose Continue.

Figure 3–9 View Operations Window

2. Choose Materials to view material requirements. See: [Defining Material Requirements](#) on page 3-27.
3. Choose Resources to view resource assignment. See: [Defining Resource Requirements](#) on page 3-32.

See Also:

[Preparing Work Order Operations](#) on page 3-22

Defining Material Requirements

When you enter a work order for an asset, the asset's associated activity will attach the required material (See: [Setting Up Maintenance Bills of Material](#) on page 2-68) and resources to complete its operations. However, you can update, add, view, and delete material requirements as necessary for a specific work order.

To define work order material requirements:

1. Navigate to the [Select Work Order](#) window.
2. Choose a work order from the list of values.
3. Choose Continue.

Figure 3–10 Material Requirements Window

The screenshot shows the Material Requirements (EAM) window. At the top, there's a toolbar with icons for New, Open, Save, Print, and Exit. Below the toolbar, the title bar reads "Material Requirements (EAM) - EAM11732".

The main area is divided into two sections: "Inventory Items" and "Direct Items".

Inventory Items: This section has tabs for Main, Quantities, Supply, and Comment. The Main tab is selected. It contains a table with columns: Material, Op, Department, Date Required, and Material Description. There are five rows of data:

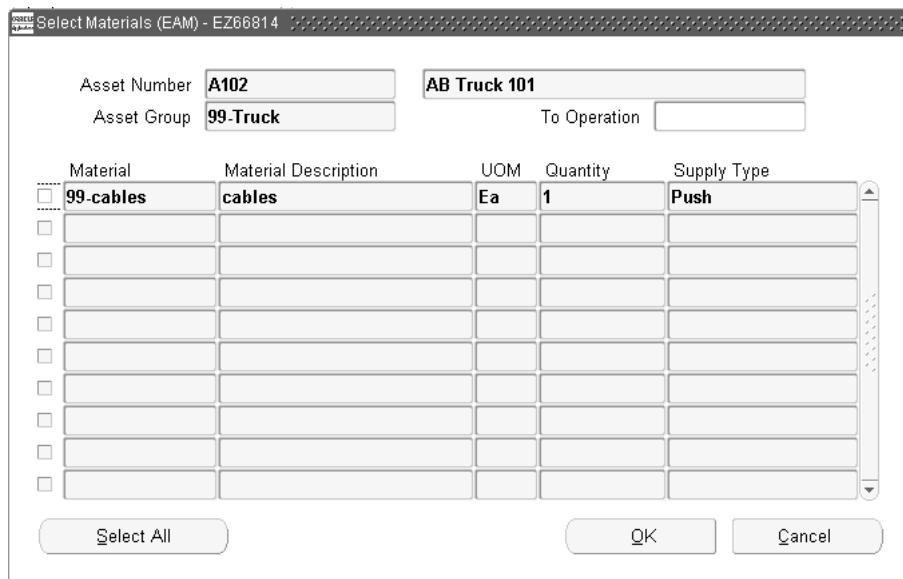
Material	Op	Department	Date Required	Material Description
79982	10	CENTER 1	27-SEP-2001	ADAPTER SLEEVE,T/BRG,EKF 131
79982	20	CENTER 2	27-SEP-2001	ADAPTER SLEEVE,T/BRG,EKF 131
847560	20	CENTER 2	27-SEP-2001	SEAL, W/R LABRYINTH,WARMAN

Below the table are three buttons: "Select Materials", "Direct Item", and "Copy To Asset".

Direct Items: This section has a table with columns: Operation, Requisition Number, PO Number, Item Description, UOM, and Quantity Ordered. There are three rows of data:

Operation	Requisition Number	PO Number	Item Description	UOM	Quantity Ordered

4. Optionally, in the Inventory Items region, you can view or update the current work order's associated asset's items list (See: [Setting Up Asset Bills of Material](#) on page 2-60) by placing your cursor in the Material field, or by choosing Select Materials. When you choose Select Materials, the current's asset's associated asset bill of material items will become available to add to the required materials for the current work order.

Figure 3–11 Select Materials Window

5. Optionally, select the Main tabbed region to change operation sequence and the Date Required. Add note:

Note: If you access the Select Materials window via the Operations window, then you cannot change operation information. If you access the Select Materials window via the Work Order window, you can change operation information.

6. Optionally, select the Quantities tabbed region to update the quantity Required.
7. Optionally, select the Supply tabbed region, to select a supply Type and Subinventory from the lists of values.
8. Optionally, choose Direct Item to create requisitions for direct items, and add them to your items list. Oracle Self Service Purchasing defaults the Work Order Number and Operation Number, as well as the class code information for correct expensing. Direct Items are one time, non-inventoried items that are purchased directly from the supplier. Once you choose Direct Item, the current work order and operation reference values will be passed to the requisition

created. If the work order is project related, then the project and task information is captured in the purchase requisition (See: [Overview of Direct Item Procurement for eAM Work Orders](#) on page 7-2). You can exit Self Service Purchasing and return to the Material Requirements window by choosing Return To Portal.

- Upon re-inquiry of this work order, the Direct Items region will reflect any requisition and purchase order details.
-

Note: You must have Oracle Self Service Purchasing installed for this functionality. You can purchase direct items from a Requisition or Purchase Order window if you have Oracle Purchasing installed (See: [Entering Purchase Orders for Direct Items](#) on page 7-18).

Note: You can only procure direct items to a work order that is at a status of Released.

9. Choose Copy to Asset to dynamically update the BOM associated to the Asset Group with any items list changes (See: [Setting Up Asset Bills of Material](#) on page 2-60).
10. Save your work.

Note: You can view work order material requirements in a view-only mode. See: [Viewing Material Requirements](#) on page 3-30.

Viewing Material Requirements

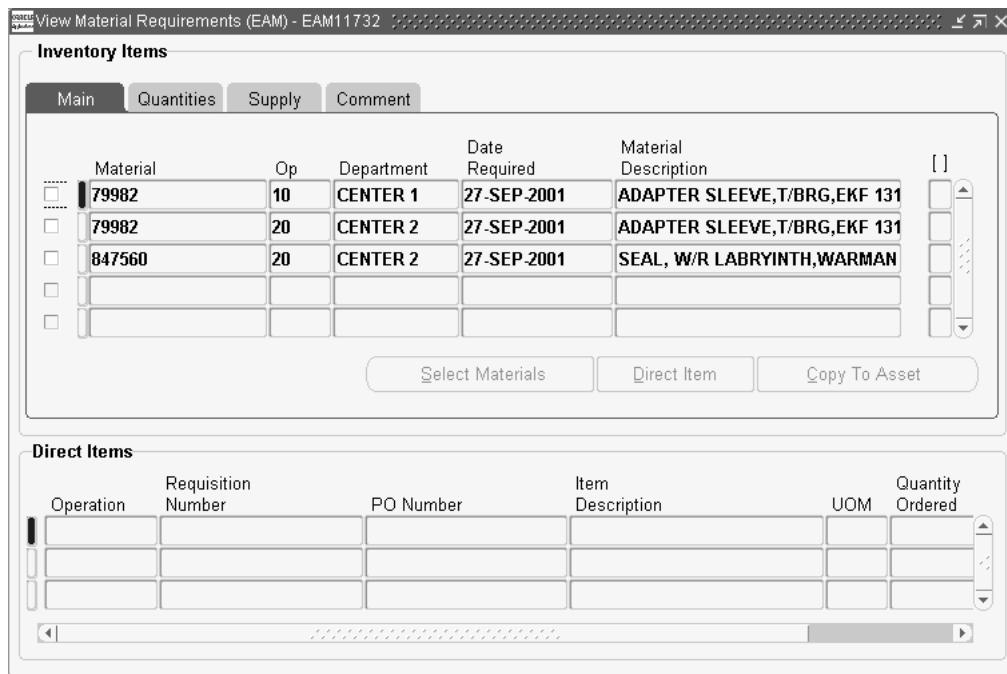
When you enter a work order for an asset, the work order's associated activity will attach the required material (See: [Setting Up Maintenance Bills of Material](#) on page 2-68) and resources to complete its operations. You can view material requirements for a specific work order.

To view work order material requirements:

1. Navigate to the [View Material Requirements](#) window.
 - a. From the Select Work Order window, select a Work Order from the list of values.

- b. Choose Continue.

Figure 3–12 View Material Requirements Window



2. In the Inventory Items region, you can view Inventoried items on this work orders's required items. You can view them by warehouse, and at the subinventory level.
 - a. In the Main tabbed region, you can view operation sequence and the Date Required.
 - b. In the Quantities tabbed region, you can view the quantities Required.
 - c. In the Supply tabbed region, you can view supply Type and Subinventory information for the inventoried items.

See Also:

[Defining Material Requirements](#) on page 3-27

[Defining Subinventories](#), *Oracle Inventory User's Guide*

Defining Resource Requirements

You can view, update, add, or delete resource requirements for a work order. Resources are used to perform a task for a maintenance operation. A resource is an employee, piece of equipment, or contractor service, used to perform an operation. A resource and usage rate for all scheduled activities is required in a routing.

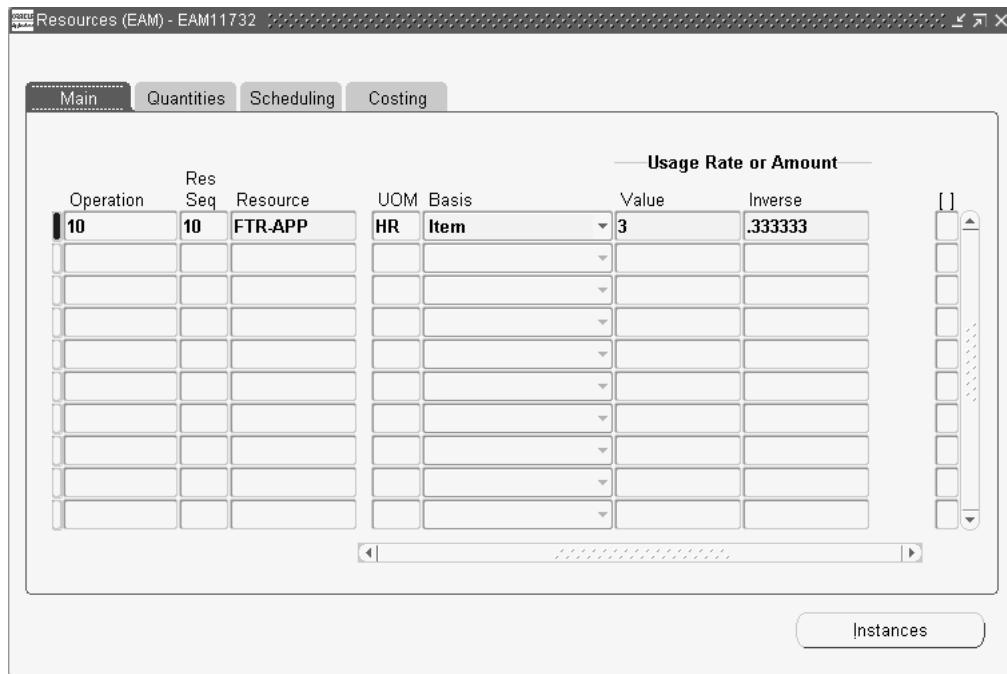
Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work based on an agreed upon contract or agreement. For example, within maintenance work environments, it is often important to include landscaping services within a work order. It is also important to relate the purchasing transactions, such as the requisition and purchase order, to the work order. In order for this to be executed, the appropriate steps must be completed in Purchasing and Enterprise Asset Management.

When you define your departments, you assign the resources available in each department and the shifts that each resource is available. For each operation you define, you specify a department and list of resources and usages. An operation can use any resource that is available in the department, but you do not need to use all resources assigned to the department. An operation can also use resources that are owned or borrowed from other departments. (See: [Defining Departments and Resources](#) on page 2-13)

To define resource requirements:

1. Navigate to the [Select Work Order](#) window.
2. Choose a work order from the list of values.
3. Choose Continue.

The resources that display on the following Resources window were assigned to the department, and assigned to the current operation of the routing. See: [Defining Departments and Resources](#) on page 2-13.

Figure 3–13 Resources Window

4. Select an Operation from the list of values. Only valid operations associated with the routing will display in the list of values. See: [Preparing Work Order Operations](#) on page 3-22.

Note: If you access the Resources window via the Operations window, then you cannot change resource information. If you access the Resources window via the Work Order window, you can change resource information.

5. Enter a Resource Sequence. You can have multiple resources for an operation.
6. Choose a Resource from the list of values.
7. In the Main tabbed region, the UOM will default based on the Resource definition. See: [Defining Departments and Resources](#) on page 2-13. You can only update this if the BOM: Update Resource UOM profile option is set to Yes.

The UOM needs to be time-based for this work order to be scheduled. It needs to be the same as the site level profile option, BOM: Hour UOM. See: [Bills of Material Profile Options](#), *Oracle Bills of Material User's Guide*.

8. Select a Basis by which to charge and schedule the resource. This will default based on the Resource definition. See: [Defining a Resource](#), *Oracle Bills of Material User's Guide*.

Item: Charge and schedule the resource where the resource usage quantity is the amount required per assembly unit you make.

Lot: Charge and schedule the resource where the resource usage quantity is the amount required per job or schedule.

9. Enter the Usage Rate or Amount Value for the resource. You can post usage time for employees, equipment, and miscellaneous materials.
10. Select the Quantities tabbed region. You can view the Required quantity of this resource to be used. This information defaults from the Usage Rate/Amount information. You can also view the Applied amount or rate of the resource already used. The Open amount or rate identifies the amount of the resource left to use (the difference between the Required and Applied).
11. Select the Scheduling tabbed region. This information defaults from the current operation's setup. See: [Preparing Work Order Operations](#) on page 3-22.
Select Yes in the Scheduled field to indicate that this resource can be scheduled.
12. Select the Costing tabbed region. You can view and update this resource's costing information. Optionally, select the Standard Rate check box to indicate that the cost applied to this resource does not change.
13. Select a Charge Type from the list of values.

Manual: You can manually enter the cost.

PO receipt: The cost will default as the cost on the purchase order receipt.

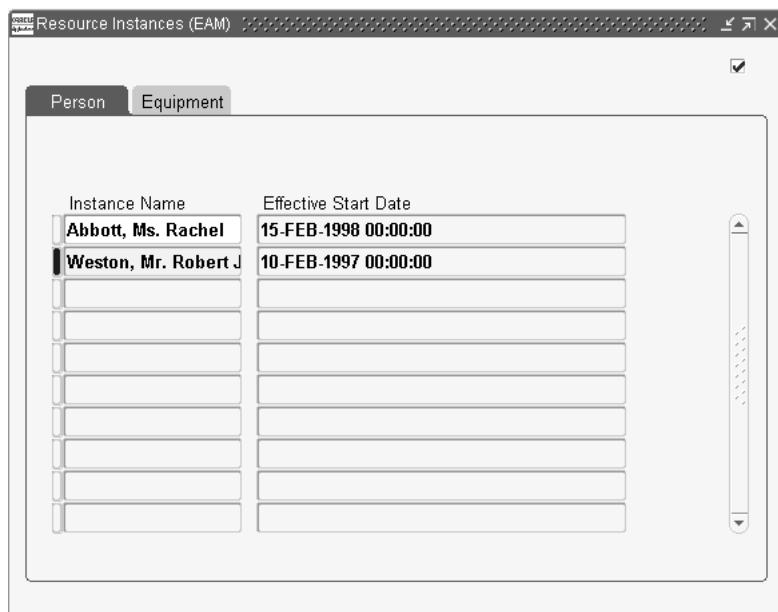
14. The Department will default as the area the current resource is assigned to. See: [Defining Departments and Resources](#) on page 2-13.
15. Optionally, select Instances to view or update a list of specific people or equipment assigned to this resource. The Person tabbed region displays persons grouped in specific roles. The Equipment tabbed region displays similar types of equipment grouped by resource. You can define specific machines to any of your machine type resources and you can define specific employees to any of your labor type resources. When a resource has instances defined, the

scheduling process can schedule at that level, and then later view the results in the Scheduler Workbench (See: [Using the Scheduler Workbench](#) on page 5-17).

For example, you can define all machines belonging to the resource GRINDERS. An individual grinder machine can then be a specific resource requirement and scheduled, and can have its own unique capacity definition.

This information defaults from your current resource definition. You can only add people and equipment that have been associated with the current resource. See: [Defining a Resource](#), *Oracle Bills of Material User's Guide*.

Figure 3–14 Resource Instances Window



16. Save your work.

See Also:

For information on all remaining fields, See: [Defining a Resource](#), *Oracle Bills of Material User's Guide*

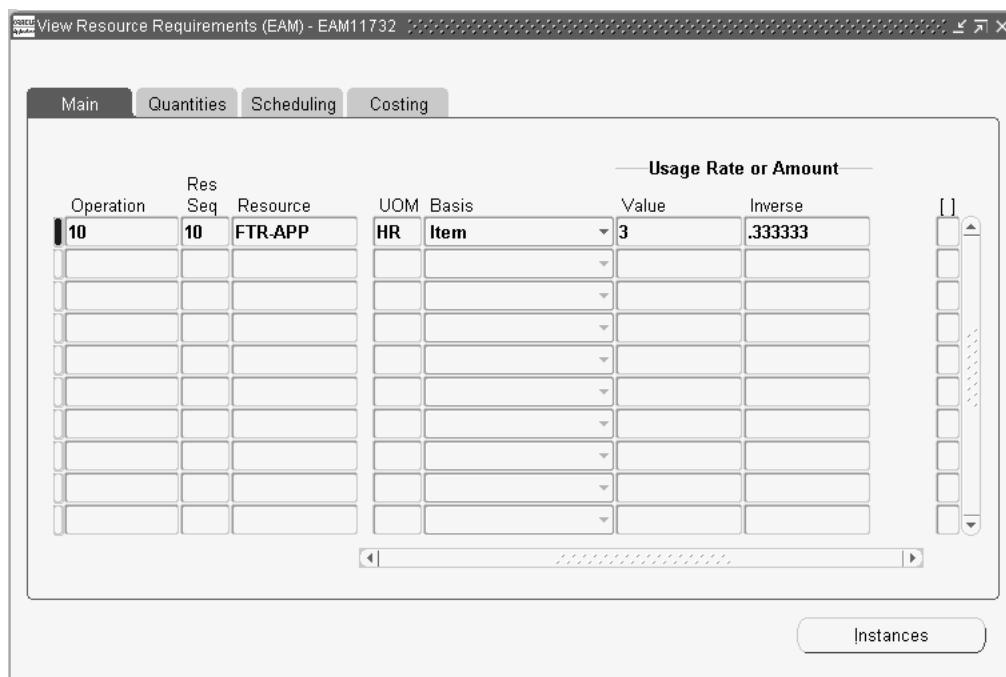
Viewing Resource Requirements

You can view resource requirements for a work order. Resources define the time an assembly spends at an operation and the cost you incur for the operation. A resource is an employee, piece of equipment, or contractor service, used to perform an operation. A resource and usage rate for all scheduled activities is required in a routing.

To view resource requirements:

1. Navigate to the [View Resource Requirements](#) window.
 - a. From the Select Work Order window, select a Work Order from the list of values.
 - b. Choose Continue.

Figure 3–15 View Resource Requirements Window



2. View the list of operations and their resources associated to the current work order.

See Also:

[Defining a Resource](#), *Oracle Bills of Material User's Guide*

[Preparing Work Order Operations](#) on page 3-22

[Defining Departments and Resources](#) on page 2-13

[Defining Resource Requirements](#) on page 3-32

eAM Work Order Transactions

There are two types of Enterprise Asset Management work order transactions: material and resource. A material transaction is utilized when you need to issue material from inventory to a work order. A resource transaction is utilized when you need to charge resources (for example labor, or equipment) to a work order.

This section includes the following topics:

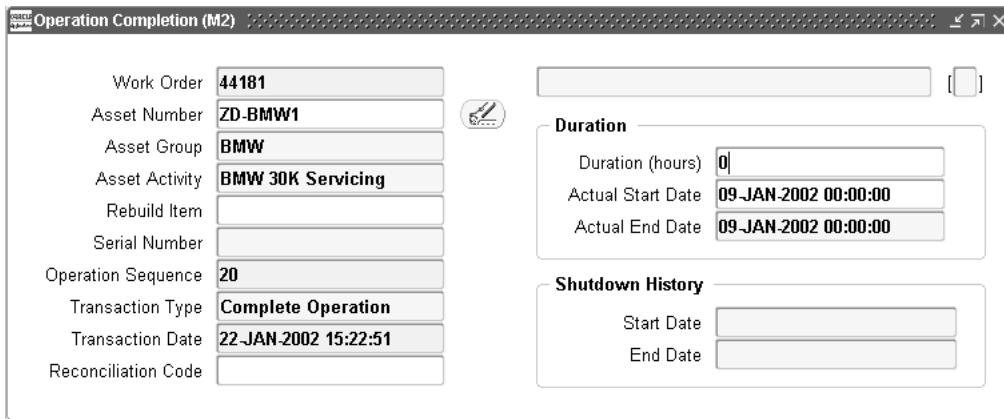
- [Operation Completion](#) on page 3-38
- [Work Order Completion](#) on page 3-41
- [Rebuild Work Order Completion](#) on page 3-44
- [Transacting Material](#) on page 3-47
- [Transacting Resources](#) on page 3-50
- [Viewing Resource Transactions](#) on page 3-52
- [Closing Work Orders](#) on page 3-54

Operation Completion

Operations are the instructions or tasks to perform a repair. Every operation is assigned to a department (See: [Defining Departments and Resources](#) on page 2-13), associated with assigned resources (trades people, contractor services, and equipment). When you enter a work order for an asset, the asset's associated asset activity (See: [Asset/Asset Activity Association](#) on page 2-56) will attach to the work order, bringing its related maintenance route (See: [Defining Maintenance Routes](#) on page 2-64) and BOM. The maintenance route is comprised of operations necessary in completing the activity. You can Complete and Uncomplete operations. Once an operation is complete, you can perform an Operation Uncompletion. However, if an operation is dependent upon another operation, you cannot uncomplete that operation's dependency if the current operation is complete. For example, operation 20 is dependent on operation 10 completing. You cannot uncomplete operation 10 once operation 20 has been completed.

To complete an operation:

1. Navigate to the [Operation Completion](#) window.

Figure 3–16 Operation Completion Window

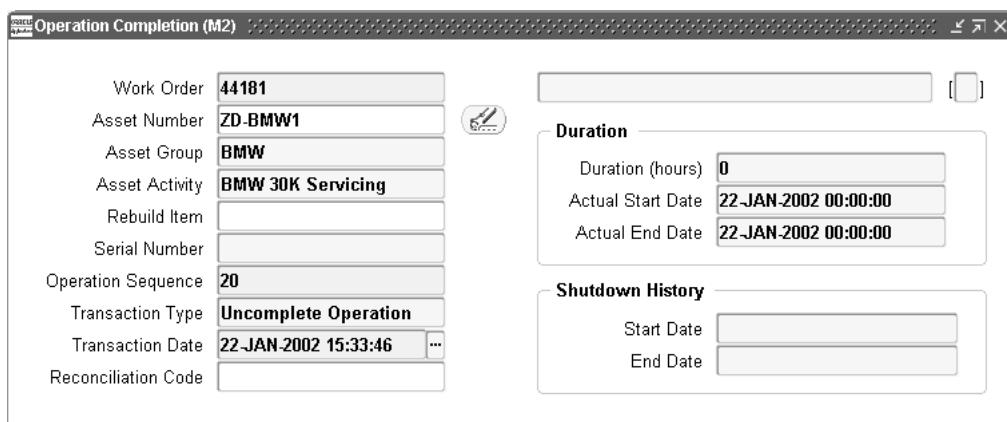
2. Select a Work Order from the list of values.
3. Select an Operation Sequence from the list of values (See: [Defining Maintenance Routes](#) on page 2-64 and [Preparing Work Order Operations](#) on page 3-22). This is the operation you wish to complete.
4. The Transaction Date will default as the system date, but you can optionally change this.
5. Optionally, enter a Reconciliation Code. This is a simple description of why you are completing this operation. For example, Operation Completed or Operation Partially Completed.
6. Enter Duration region information. You must enter two values within this region: Duration, Actual Start Date, or Actual End Date. The value that you do not enter will be automatically calculated.

Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date of the operation.

7. Optionally, enter a date range if the operation was shutdown during the operation.
8. Save your work.

To uncomplete an operation:

1. Navigate to the [Operation Completion](#) window.

Figure 3-17 Operation Completion Window

2. Select a Work Order from the list of values.
3. Select a completed Operation Sequence from the list of values (See: [Defining Maintenance Routes](#) on page 2-64 and [Preparing Work Order Operations](#) on page 3-22). This is the operation you wish to uncomplete.
4. The Transaction Date will default as the system date, but you can optionally change this.
5. Optionally, enter a Reconciliation Code. This is a simple description of why you are uncompleting this operation.
6. Enter Duration region information. You must enter two values within this region: Duration, Actual Start Date, or Actual End Date. The value that you do not enter will be automatically calculated.

Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date of the operation.

7. Optionally, enter a date range if the operation was shutdown during the operation.
8. Save your work.

See Also:

[Preparing Work Order Operations](#) on page 3-22

[Defining Maintenance Routes](#) on page 2-64

[Operation Completion Moves, Oracle Work In Process User's Guide](#)

Work Order Completion

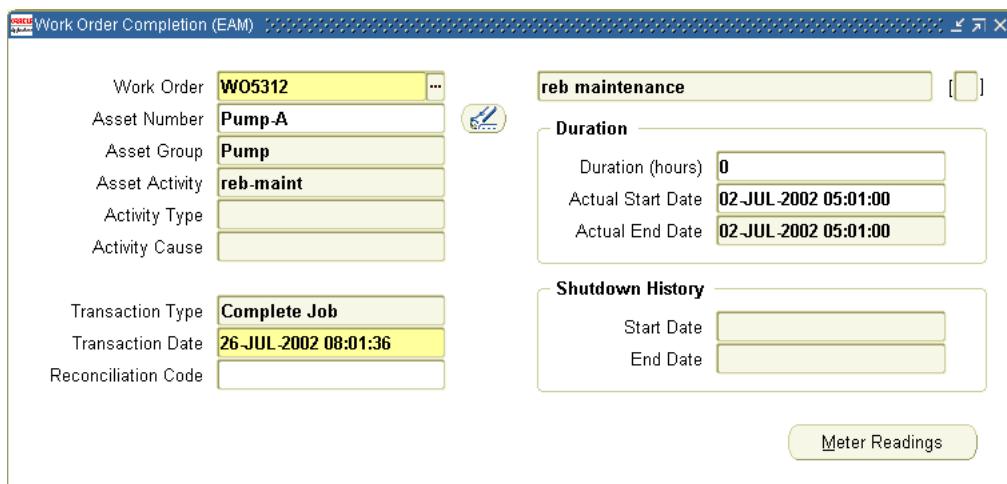
Enterprise Asset Management Work Orders are created against assets. They can be defined manually, or generated automatically based on a scheduled activity. If you attach a manually created work order to an asset activity (normally the role of a Planner), the work Order will inherit the asset activity's attributes, such as the asset BOM, asset Route (operations), attachments, quality plans, cost information, and scheduling rules.

The operations within a work order do not need to be complete in order to complete a work order. However, the date you complete a work order needs to be greater than (later) or equal to the end date of the operation that has the latest end date. Likewise, the date you start a work order needs to be earlier than or equal to the start date of the operation with the earliest start date. You can uncomplete a work order once it's completed, bringing it back to a Released status (See: [eAM Work Order Statuses](#) on page 3-18).

Planners or Crew Supervisors can complete or uncomplete work orders using the Maintenance workbench (See: [Maintenance Workbench](#)), from the Work Plans tab in Enterprise Asset Management Self Service (See: [Work Plans](#) on page 13-26), or by accessing the Work Order Completion menu option.

To complete a work order:

1. Navigate to the [Work Order Completion](#) window.

Figure 3–18 Work Order Completion Window

2. Select a Work Order from the list of values.
3. The Transaction Date defaults as the system date, but you can optionally update this.
4. Optionally, enter a Reconciliation Code. This is a simple description of why you are completing this work order. For example, Work Order Completed or Work Order Partially Completed.
5. Optionally, enter Duration region information. You must enter two values within this region: Duration, Actual Start Date, or Actual End Date. The value that you do not enter will be automatically calculated.

Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date.

6. Choose Meter Readings to enter readings for meters associated with this asset. Readings for meters defined as mandatory must be entered. You can optionally enter non-mandatory readings.

At work order completion, meter readings are mandatory for work orders generated by the Preventive Maintenance scheduling engine. Once a work order is completed, meter readings are required for all runtime interval meters associated with the asset in the Preventive Maintenance scheduling definition.

See: [Entering Preventive Maintenance Scheduling Definitions](#) on page 4-11. If there is a meter associated with this asset, you will be prompted to enter a Current Reading or a Reading Change. If you enter a Current Reading, the Reading Change will default. If you enter a Reading Change, the Current Reading will default. See: [Entering Meter Readings](#) on page 4-7.

- Indicate whether you would like to Reset the Current Reading to zero by selecting the Reset check box.
7. Oracle Quality collection plans associated with the current work order's asset and requiring completion may display. When the collection plan was created, it was specified whether the collection plan required completion. Also, during the Enterprise Asset Management collection plan creation process, triggers may have been specified to make only certain assets eligible for the collection plan. See: [Quality Setup](#) on page 12-2.
- Required fields are dependent on the Collection Plan's collection element specifications. See: [Quality Setup](#) on page 12-2.
8. Save your work.

To uncomplete a work order:

1. Navigate to the Work Order Completion window.
2. Select a completed Work Order from the list of values.
3. The Transaction Date defaults as the system date, but you can optionally update this.
4. Optionally, enter a Reconciliation Code. This is a simple description of why you are uncompleting this work order.
5. Optionally, in the Duration region, enter an actual Duration, Actual Start Date, and Actual End Date. Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date. Changing the times and duration affects resource usage for employees and equipment.
6. Save your work.

See Also:

[Entering Meter Readings](#) on page 4-7

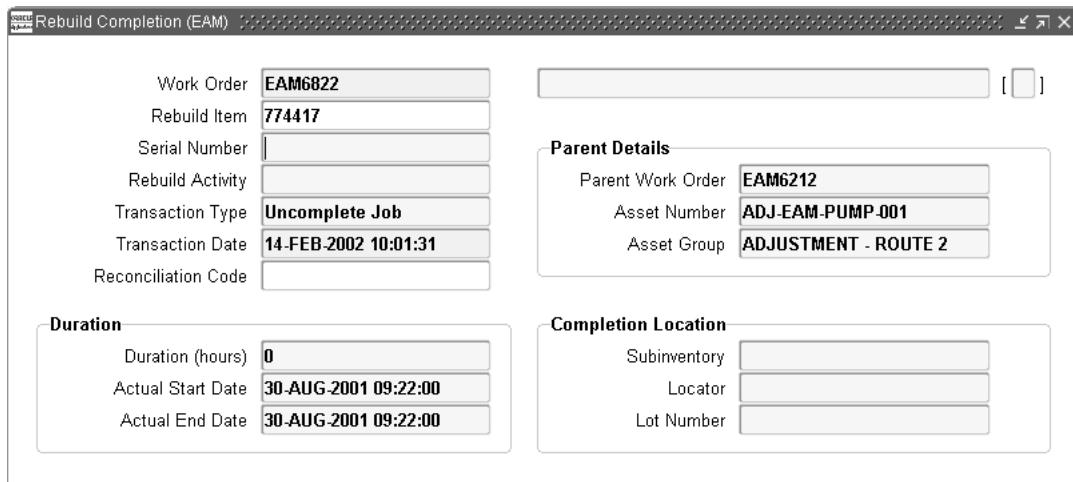
Rebuild Work Order Completion

There are two ways of creating rebuild work orders. In the scenario that a new rebuildable spare is issued from inventory to be placed into the asset, a rebuild work order is automatically created for the rebuildable spare that was taken out with a need for repair, given the required information was entered into the material transaction (See: [Transacting Material](#) on page 3-47). This child work order of the parent work order can be completed independent of the parent work order. However, if the rebuildable spare needing repair is removed from the asset, repaired, then reinstalled, that manually created, child, rebuild work order must first be completed before the parent work order can be completed. In this scenario, you must first complete all rebuild/children work orders (See: [Rebuild Work Orders](#) on page 3-12) before you can complete a parent work order (See: [Work Order Completion](#) on page 3-41). The operations within a work order do not need to be complete in order to complete a work order. However, the date you complete a work order needs to be greater than (later) or equal to the end date of the operation that has the latest end date. Likewise, the date you start a work order needs to be earlier than or equal to the start date of the operation with the earliest start date. You can uncomplete a work order once it is completed, bringing it back to a Released status (See: [eAM Work Order Statuses](#) on page 3-18).

Planners or Crew Supervisors can complete or uncomplete work orders using the Maintenance workbench (See: [Using the Maintenance Workbench](#) on page 3-59), from the Work Plans tab in Enterprise Asset Management Self Service (See: [Work Plans](#) on page 13-26), or by accessing the Work Order Completion menu option.

To complete a rebuild work order:

1. Navigate to the [Rebuild Completion](#) window.

Figure 3–19 Rebuild Completion Window

2. Select a rebuild Work Order from the list of values. Only rebuild work orders are available for selection.
3. The Transaction Date defaults as the system date, but you can optionally update this.
4. Optionally, enter a Reconciliation Code. This is a simple description of why you are completing this work order. For example, Work Order Completed or Work Order Partially Completed.
5. Optionally, in the Duration region, enter an actual Duration, Actual Start Date, and Actual End Date. Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date. Changing the times and duration affects resource usage for employees and equipment.
6. Enter the Completion Location region information.
 - a. Enter the completion Subinventory. For Rebuild Work Orders that were created from a material transaction, this must be an expense subinventory.
 - b. If the rebuildable spare is locator controlled, enter a Locator. See: [Inventory Attribute Group, Oracle Inventory User's Guide](#).
 - c. If the rebuildable spare is lot controlled, enter a Lot Number. See: [Inventory Attribute Group, Oracle Inventory User's Guide](#).

7. Save your work.

To uncomplete a rebuild work order:

1. Navigate to the [Rebuild Work Order Completion](#) window.
2. Select a completed rebuild Work Order from the list of values.
3. The Transaction Date defaults as the system date, but you can optionally update this.
4. Optionally, enter a Reconciliation Code. This is a simple description of why you are uncompleting this work order.
5. Optionally, in the Duration region, enter an actual Duration, Actual Start Date, and Actual End Date. Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date. Changing the times and duration affects resource usage for employees and equipment.
6. Save your work.

See Also:

[Defining Subinventories](#), *Oracle Inventory User's Guide*

Transacting Material

You may need to issue a rebuildable spare or item from inventory to a maintenance work order. For example, a work order was issued for the inspection of a pump. During the pump inspection, you found that the motor, one of the components of the pump, is problematic. You can replace the rebuildable spare by issuing a new motor rebuildable spare from inventory. If you choose to perform a material issue from inventory, the new motor rebuildable spare will attach to the work order, automatically creating the child, rebuild work order number associated to the parent work order. In this case, the asset genealogy would automatically update to identify this new item number. See: [Overview of Inventory Transactions, Oracle Inventory User's Guide](#).

To create a material transaction:

1. Navigate to the [Material Transactions](#) window.
2. Select a valid Work Order from the list of values.
3. In the Transaction region, indicate whether this transaction is for a Specific Component (rebuildable spare) (See: [Rebuild Work Orders](#) on page 3-12) or for All Material (inventory items that are not of Rebuild Item Type).

Figure 3–20 Material Transactions Window

The screenshot shows the Material Transactions window (EM1) with the following details:

Work Order	W081192	Rebuild Engine
Asset Number	ENG1000	
Asset Group	Engines	Engines
Rebuild Item	ENGINE	Engine of a Car
Serial Number	ENG000061	

Transaction

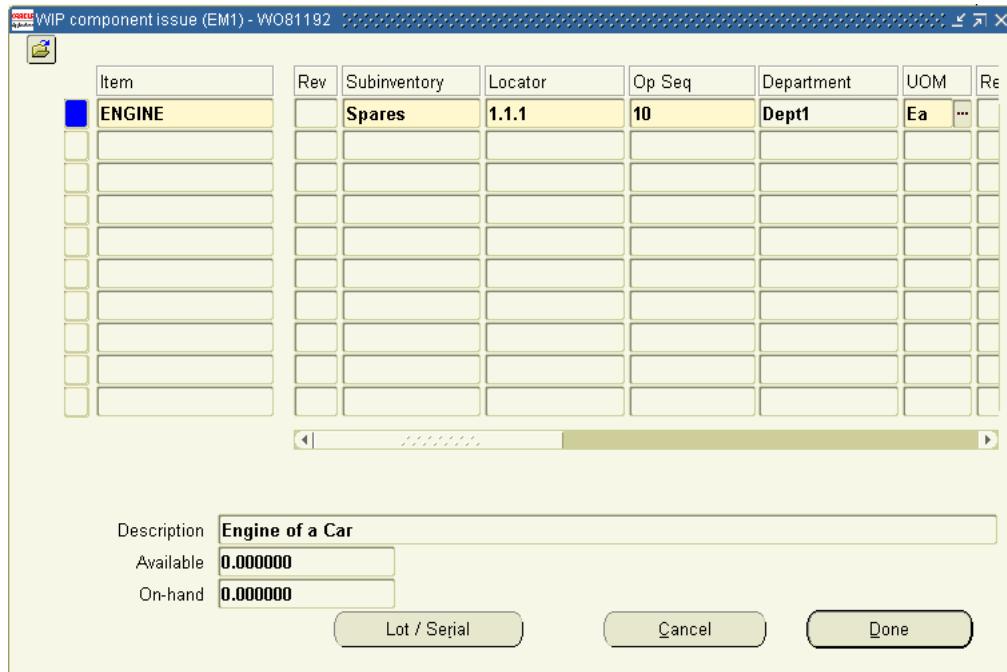
Type	WIP component issue
Date	26-JUL-2002 12:46:02
Subinventory	
Locator	
Include	<input type="radio"/> All Material <input checked="" type="radio"/> Specific Component

Criteria

Start Date	
Operation Sequence	
Department	

Continue

4. Choose Continue.

Figure 3–21 WIP component issue Window

5. Select the Item from the list of values that you are taking from inventory and issuing to the current work order. You will receive a warning if the item you choose is not included in the work order BOM (See: [Setting Up Asset Bills of Material](#) on page 2-60).
6. Select the Subinventory from the list of values from where this Item resides.
7. Select the Operation Sequence of the current work order routing to associate this material.
8. Choose Done.
9. Save your work.

See Also:

For information on all remaining fields, See: [Issuing and Returning Specific Components](#), *Oracle Work In Process User's Guide*

Transacting Resources

Resource transactions define the time an assembly spends at an operation and the cost you incur for an operation. There are two types of resources: person and machine. You can transact both person and machine resources. A resource is an employee, piece of equipment, or contractor service, used to perform an operation. You can charge resources to a specific work order.

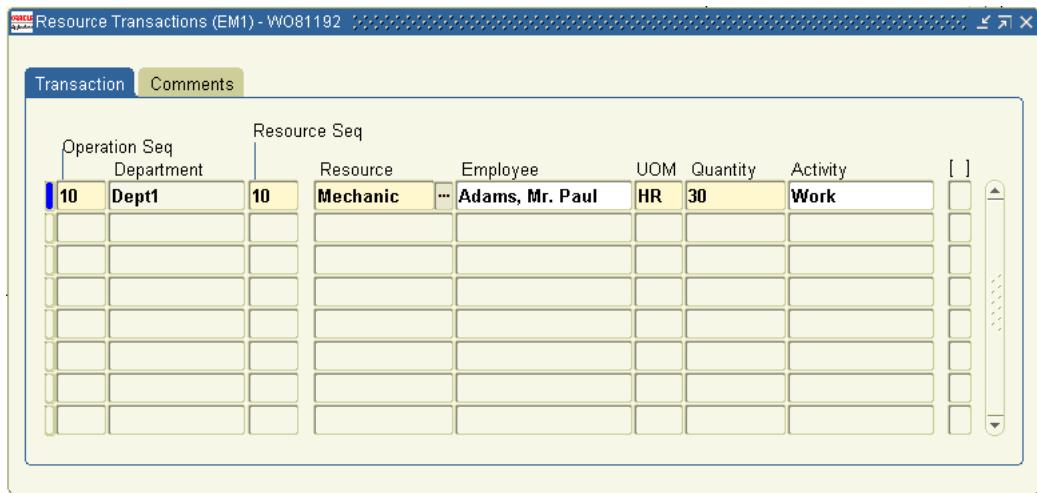
To create a resource transaction:

1. Navigate to the [Resource Transactions](#) window.

Figure 3–22 Resource Transactions Window

The screenshot shows a software window titled "Resource Transactions (EM1)". It contains several input fields and dropdown menus. The fields are arranged in pairs: Work Order (W081192), Asset Number (ENG1000), Asset Group (Engines), Rebuild Item (ENGINE), Serial Number (ENG000061), and Date (26-JUL-2002 13:15:12). To the right of each field is a dropdown menu icon (three dots). Below the fields is a "Continue" button.

2. Select a valid work order from the list of values.
3. Choose Continue.

Figure 3–23 Resource Transactions Window

4. Enter the Operation Sequence of the current work order's routing to charge (See: [Preparing Work Order Operations](#) on page 3-22).
5. Enter the Resource Sequence to charge (See: [Defining Resource Requirements](#) on page 3-32).
6. Select a UOM from the list of values to measure quantity charged. This will default from the current resource's department setup (See: [Defining Departments and Resources](#) on page 2-13).
7. Enter the Quantity to be charged.
8. Save your work.

See Also:

For information on all remaining fields, See: [Resource Transactions, Oracle Work In Process User's Guide](#)

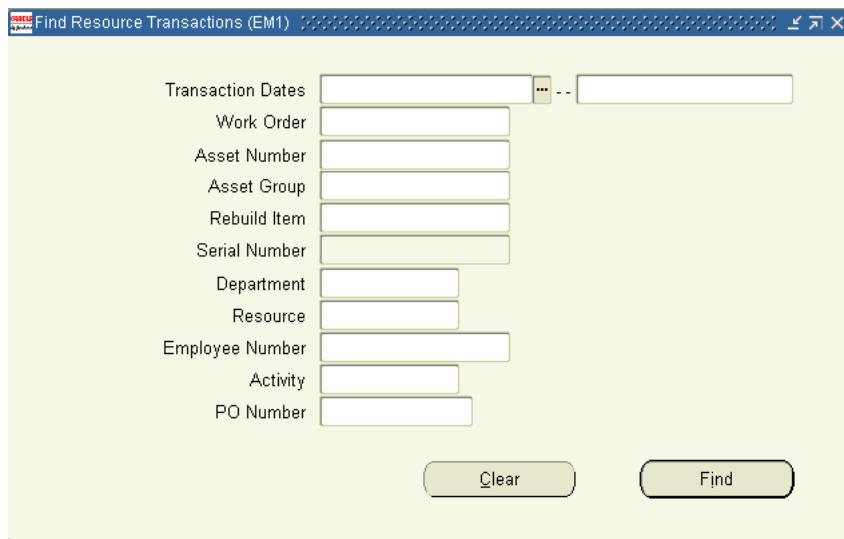
Viewing Resources Transactions

Resource transactions define the time an assembly spends at an operation and the cost you incur for an operation. There are two types of resources: person and machine. You can transact both person and machine resources. A resource is an employee, piece of equipment, or contractor service, used to perform an operation. You can charge resources to a specific work order. You can view all transactions that have been charged against a specific resource.

To view a completed resource transaction:

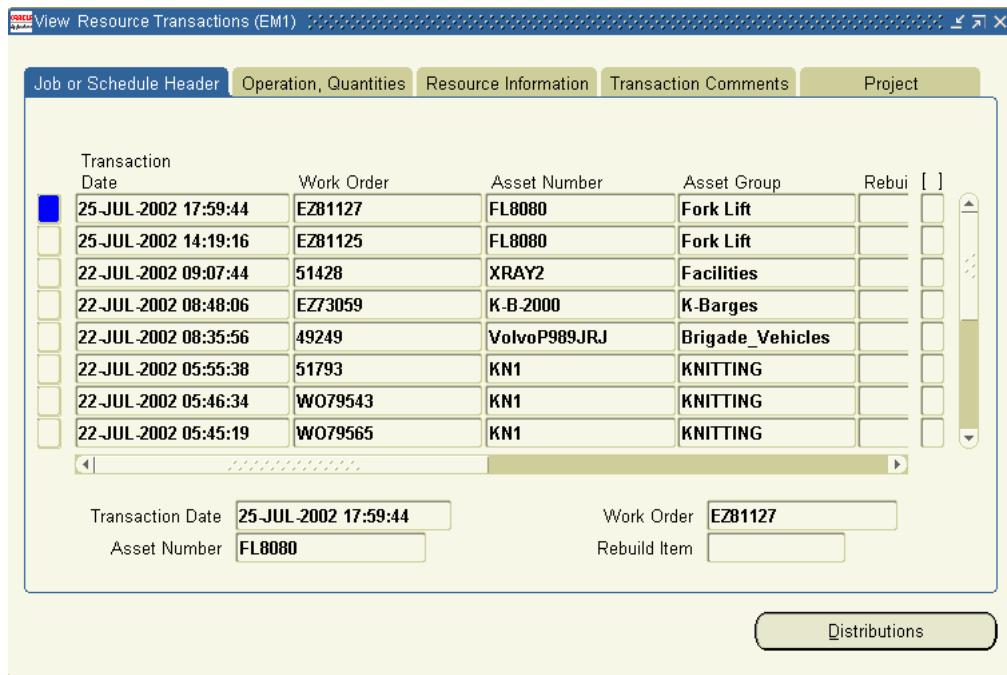
1. Navigate to the [Find Resource Transactions](#) window.

Figure 3-24 Find Resource Transactions Window



You can narrow your selection of transactions by any field within this window. For example, you can view all resource transaction information charged during a specific period, or view all transaction information transpired for a specific work order number.

2. Choose Find.

Figure 3–25 View Resource Transactions Window

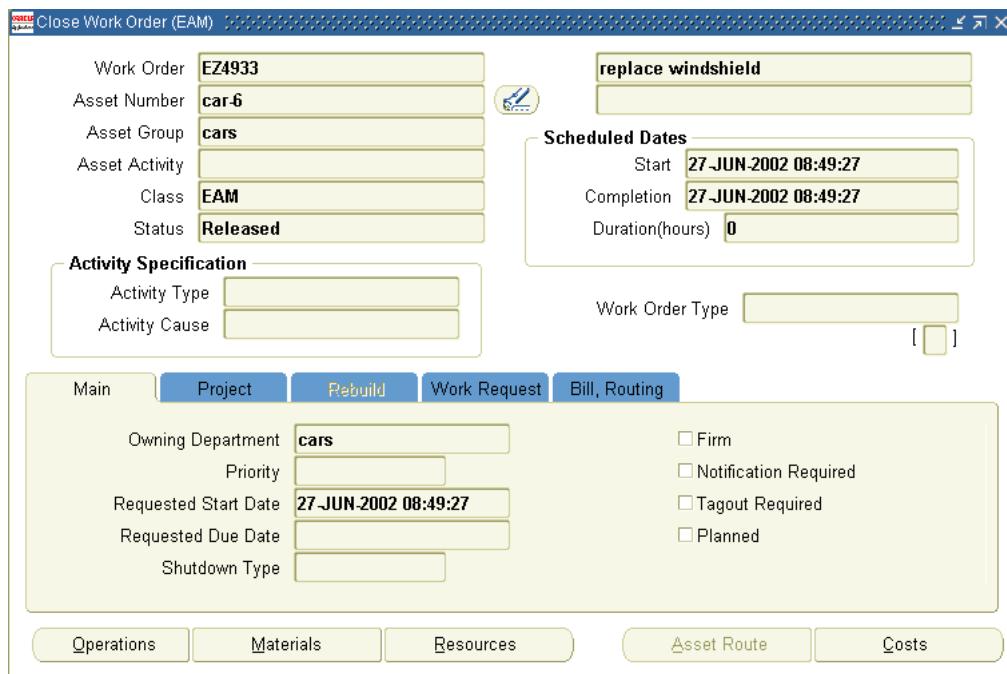
3. View resource transaction information specific to a work order by selecting the Job or Schedule Header tabbed region.
4. View resource transaction information specific to a work order operation by selecting the Operation, Quantities tabbed region.
5. View resource transaction information specific to a resource by selecting the Resource Information tabbed region.

Closing Work Orders

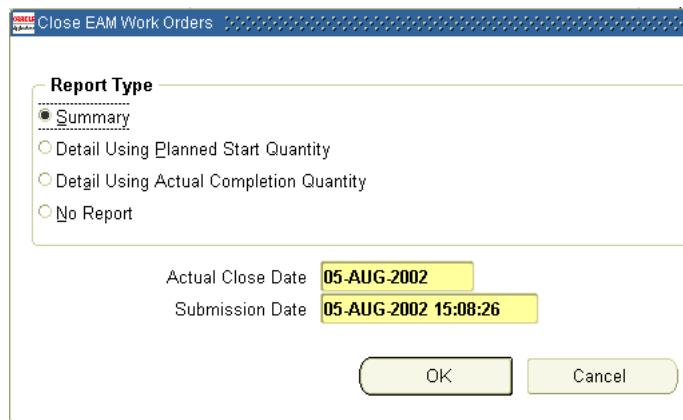
You can close a maintenance work order at any status within its lifecycle (See: [eAM Work Order Statuses](#) on page 3-18). You can close one or many work orders at once. You cannot charge any accounts once a maintenance work order is closed. If a work order was at a Released status at the time of closing it, you can unclose the work order to bring it back to a Released status. If a work order was at a Complete status at the time of closing it, you can unclose the work order to bring it back to a Complete status. For all other statuses during the closing of a work order, unclosing the work order will bring it to an Unreleased status.

To close a work order:

1. Navigate to the Find Work Order window.
2. Select a Work Order from the list of values. You can optionally enter other data selection information.
3. Choose Find. The [Close Work Order](#) window displays.

Figure 3–26 Close Work Order Window

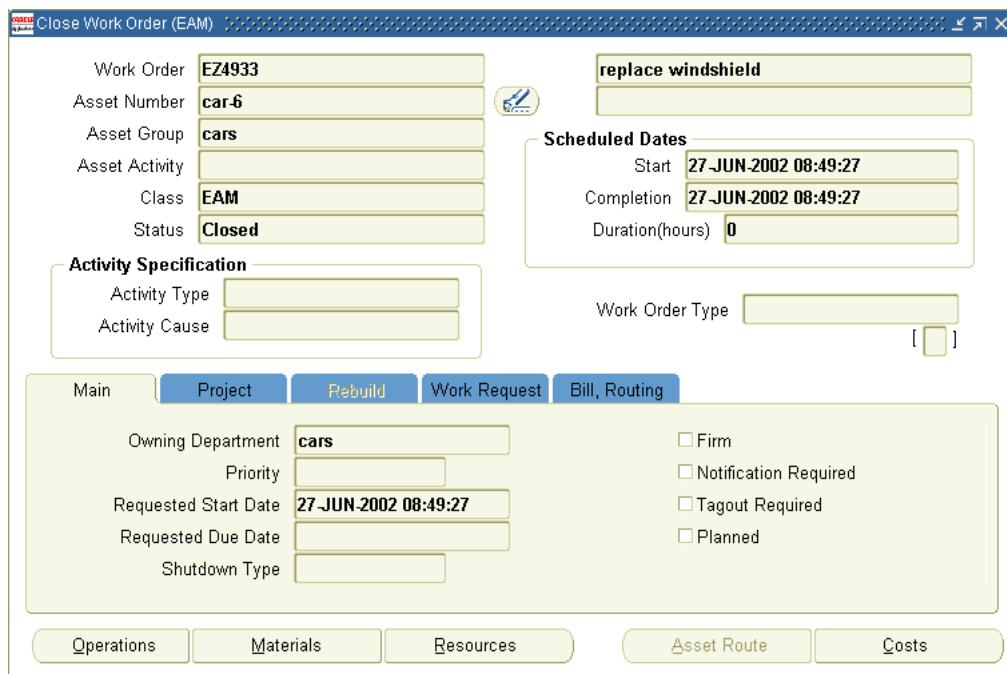
4. From the Tools menu, select Close Work Orders. The Close EAM Work Orders window displays.

Figure 3–27 Close EAM Work Orders Window

5. In the Report Type region, select a report type. Your selection determines the type of information presented on the report that is produced by the concurrent process (Close Discrete Jobs) closing the work order. The report presents project information, the work orders closed, status information, as well as quantity information.
6. Select an Actual Close Date. This date must be greater than or equal to the system date.
7. Select a Submission Date. This date must be greater than or equal to the system date.
8. Choose OK.

To unclose a work order:

1. Navigate to the [Find Work Orders](#) window.
2. Select a closed Work Order from the list of values. You can optionally enter other data selection information.
3. Choose Find. The [Close Work Order](#) window displays.

Figure 3–28 Close Work Order Window

4. From the Tools menu, select Unclose Work Orders.
5. Save your work.

To close a rebuild work order:

1. Navigate to the [Find Rebuild Work Orders](#) window.
2. Select a Work Order from the list of values. Only rebuild work orders are available in the list of values.
3. Choose Find. The [Close Rebuild Work Order](#) window displays.
4. From the Tools menu, select Close Rebuild Work Orders. The Close EAM Work Orders window displays.
5. In the Report Type region, select a report type. Your selection determines the type of information presented on the report that is produced by the concurrent process (Close Discrete Jobs) closing the work order. The report presents project

information, the work orders closed, status information, as well as quantity information.

6. Select an Actual Close Date. This date must be greater than or equal to the system date.
7. Select a Submission Date. This date must be greater than or equal to the system date.
8. Choose OK.

To unclose a rebuild work order:

1. Navigate to the [Find Work Orders](#) window.
2. Select a closed rebuild Work Order from the list of values.
3. Choose Find. The [Close Rebuild Work Order](#) window displays.
4. From the Tools menu, select Unclose Rebuild Jobs.
5. Save your work.

See Also:

[Closing Discrete Jobs Using Submit Requests](#), *Oracle Work In Process User's Guide*

eAM Work Order Planning

A planner performs several functions, including purchasing required materials for work orders, approving work requests, creating work orders, releasing work orders, and completing work orders. This section includes the following topics:

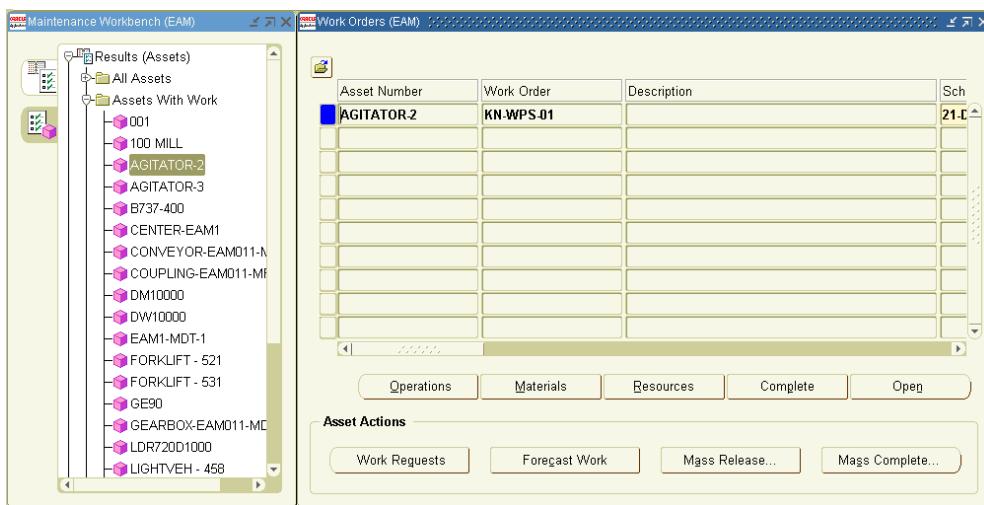
- [Using the Maintenance Workbench](#) on page 3-59

Using the Maintenance Workbench

Using the Maintenance Workbench, a Planner can mass release and mass complete work orders. However, you cannot complete mass work orders that have mandatory meter readings and mandatory quality plans associated with a work order (See: [Work Order Completion](#) on page 3-41). A planner can also procure direct items (See: [Overview of Direct Item Procurement for eAM Work Orders](#) on page 7-2) for work orders without having to leave the Maintenance Workbench. You can generate work orders from suggested work orders, manage work order required material, resources, and update work order operations as necessary.

To use the maintenance workbench:

1. Navigate to the [Maintenance Workbench](#) window.
2. You can narrow your data selection using any of the fields available. For example, select an asset, to view all work orders related to that asset.
3. Choose Launch.

Figure 3–29 Maintenance Workbench Window

4. Optionally, in the Maintenance Workbench pane, select the Results (Assets) tab or the Results (Rebuildable) tab.

Selecting the Results (Assets) tab displays asset information (See: [Defining Asset Numbers](#) on page 2-46) in a tree structure format. If you expand the Results (Assets) branch, the tree details asset information into three lower branches, including All Assets, Assets With Work, and Routes With Work.

- All Assets: All assets, associated with the data selection entered in step 2, will display under the expanded All Assets branch.
- Assets With Work: All assets with work orders (See: [eAM Work Orders](#) on page 3-5), associated with the data selection entered in step 2, will display under the expanded Assets With Work branch.
- Routes: All assets with an associated asset route (See: [Defining Asset Routes](#) on page 2-58), associated with the data selection entered in step 2, will display under the expanded Routes With Work branch.

Selecting the Results (Rebuildable) tab displays rebuildable spare information (See: [Defining Rebuildable Spares](#) on page 2-72) in a tree structure format. If you expand the Results (Rebuildable) branch, the tree details rebuildable spare information into two lower branches, including All Assets, and Assets With Work.

- All Assets: All assets, associated with a rebuild work order, will display.

- Assets With Work: All rebuildable spares with work orders (See: [eAM Work Orders](#) on page 3-5), associated with the data selection entered in step 2, will display under the expanded Assets With Work branch.
5. Optionally, choose Operations to view the tasks associated with a specific work order (See: [eAM Operations and Tasks](#) on page 3-22). You can view and update the materials and resources associated with a specific operation.
 6. Optionally, choose Materials to view and update the material requirements associated with a selected work order (See: [Defining Material Requirements](#) on page 3-27).
 - a. Optionally, you can view or update the current work order's associated asset's items list by choosing Select Materials. The current's asset's associated asset bill of material items will become available to add to the required materials. See: [Setting Up Asset Bills of Material](#) on page 2-60.
 - b. Optionally, choose Direct Item to select direct items from supplier catalogs, create requisitions, and add them to your items list. Direct Items are one time, non-inventoried items that are purchased directly from the supplier. Oracle Self Service Purchasing defaults the Work Order Number and Operation Number, as well as the class code information for correct expensing. Once you choose Direct Item, the current work order and operation reference values will be passed to the requisition created using Self Service Purchasing. If the work order is project related, then the project and task information is captured in the purchase requisition (See: [Overview of Direct Item Procurement for eAM Work Orders](#) on page 7-2). You can exit Self Service Purchasing and return to the Maintenance Workbench by selecting Return To Portal.
 - Upon re-inquiry of this work order, the Direct Items region will reflect any Requisition and Purchase Order details.

Note: You must have Oracle Self Service Purchasing installed for this functionality. You can purchase direct items from a Requisition or Purchase Order window if you have Oracle Purchasing installed (See: [Entering Purchase Orders for Direct Items](#) on page 7-18).

- c. Choose Copy to Asset to dynamically update the BOM associated to the Asset Group with any items list changes (See: [Setting Up Asset Bills of Material](#) on page 2-60).

7. Optionally, choose Resources to view, update, add, or delete resource requirements for a selected work order (See: [Defining Resource Requirements](#) on page 3-32).
 - Optionally, choose Instances to view or update a list of specific people or equipment assigned to this resource. The Person tabbed region displays persons grouped in specific roles. The Equipment tabbed region displays similar types of equipment grouped by resource. You can define specific machines to any of your machine type resources and you can define specific employees to any of your labor type resources. When a resource has instances defined, the scheduling process can schedule at that level, and then later view the results in the Scheduling Workbench (See: [Using the Scheduler Workbench](#) on page 5-17).

For example, you can define all machines belonging to the resource GRINDERS. An individual grinder machine can then be a specific resource requirement and scheduled, and can have its own unique capacity definition.

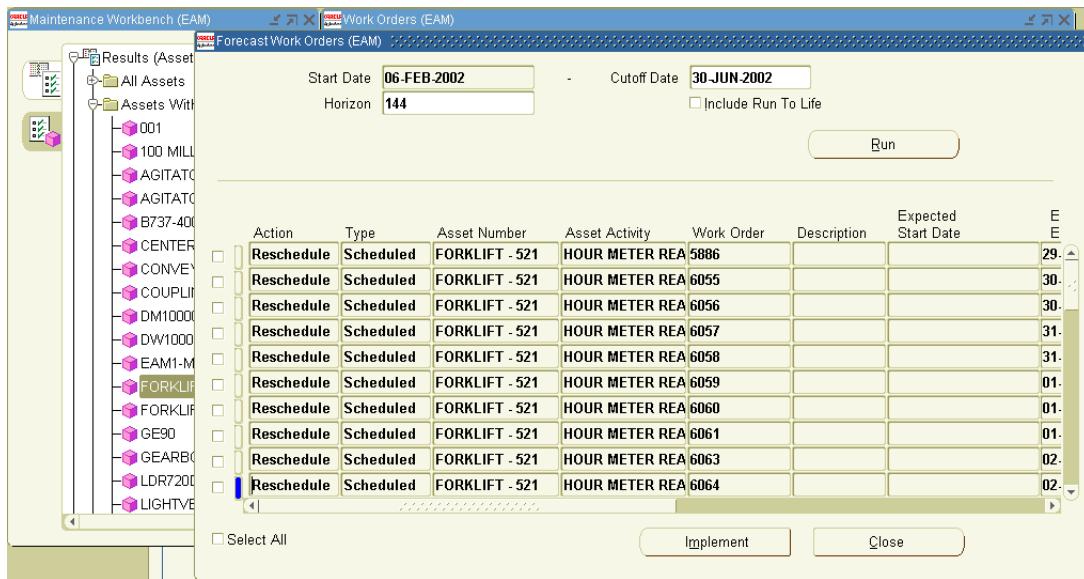
This information defaults in from your current resource definition. You can only add persons and equipment that have been associated to the current resource.

See: [Defining a Resource](#), *Oracle Bills of Material User's Guide*

8. Optionally, choose Complete to complete a selected work order (See: [Work Order Completion](#) on page 3-41).
9. Optionally, choose Open to open the work order details of a specified work order See: [eAM Work Orders](#) on page 3-5).
10. Optionally, choose Work Requests (See: [Work Requests](#) on page 13-18) to view all open work requests for the current asset.

Note: You can view work requests for assets, but not rebuildable spares. The Results (Assets) tab must be selected to view work requests.

11. Optionally, choose Forecast Work to view all suggested and scheduled asset work orders, and their suggested start and end dates.

Figure 3–30 Forecasted Work Orders

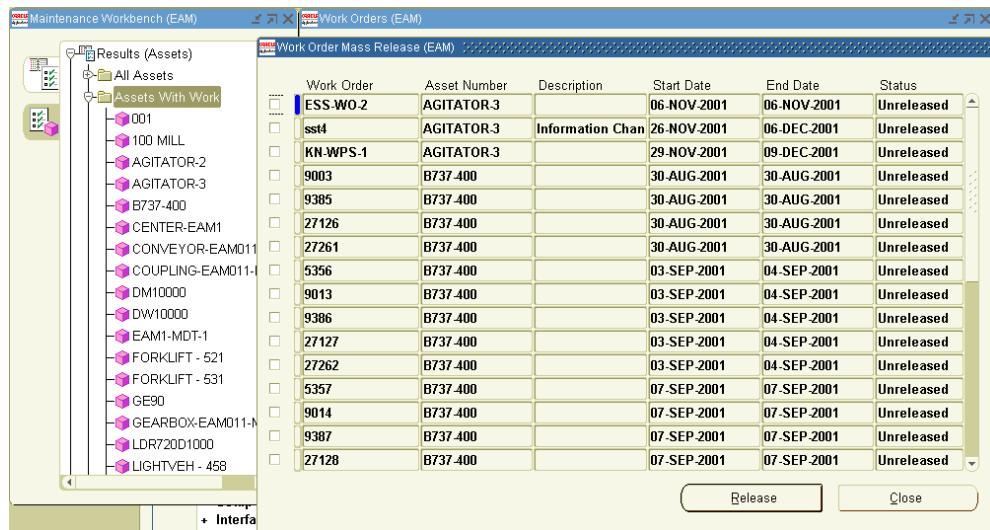
- Enter a Cutoff Date to decipher how far out you would like the work orders to create from the suggested dates. The Horizon will default as the difference between the Start Date and Cutoff Date.
- Optionally, select the Include Run To Life check box to indicate that the scheduling process should include suggested work orders for Run To Life asset/asset activity associations. If this check box is not selected, manual work orders can still be created. Run To Life items are typically items that cost more to maintain than the item itself. For more information on Run To Life items, See: [Entering Preventive Maintenance Scheduling Definitions](#) on page 4-11.
- Choose Run to generate work order suggestions for the specified date period. The Expected Start Date will be calculated if you are using backward scheduling, and the Expected End Date will be calculated if you are using forward scheduling (See: Information on the Rescheduling Point region in [Entering Preventive Maintenance Scheduling Definitions](#) on page 4-11).
- Optionally, choose Implement to release the selected (indicated by the check box on the left side of the window) forecasted work orders. The work

orders will be created at an Unreleased status (See: [eAM Work Order Statuses](#) on page 3-18).

Note: You can Forecast Work for assets, but not rebuildable spares. The Results (Assets) tab must be selected to forecast work orders.

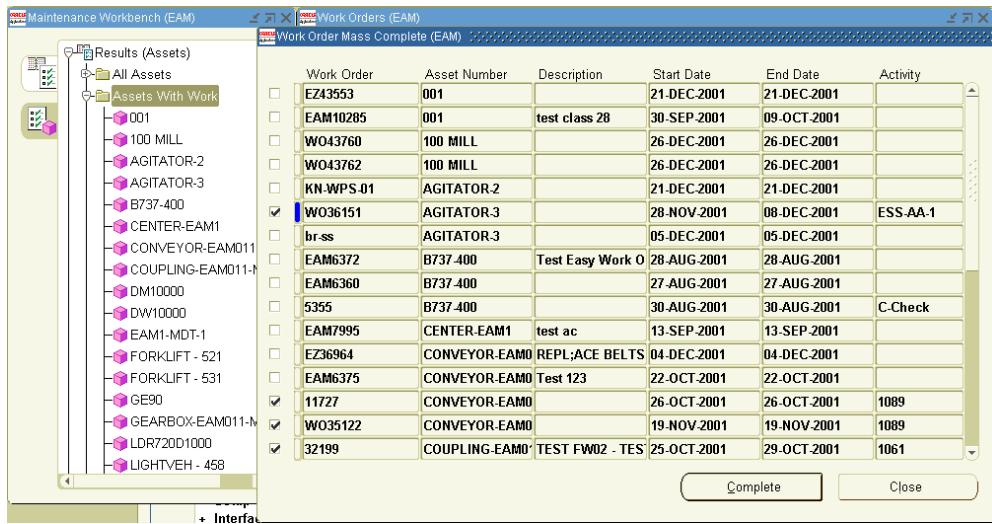
- e. Choose Close to return to the Work Orders window.
- 12. Optionally, choose Mass Release to release multiple work orders at once. Work orders at an Unreleased status will display.

Figure 3–31 Mass Release Window



Select the check boxes next to the work orders to release, then choose Release. Because you cannot complete mass work orders that have mandatory meter readings and mandatory quality plans associated, the system will not enable you to release the work order if these conditions exist.

- 13. Optionally, choose Mass Complete to complete multiple work orders at once (See: [Work Order Completion](#) on page 3-41 and [eAM Work Order Statuses](#) on page 3-18). Choose Complete to complete all work orders selected.

Figure 3–32 Mass Complete Window

14. Save your work.

Preventive Maintenance

This chapter discusses how work orders can be created automatically using preventive maintenance schedules. The following topics are necessary when setting up preventive maintenance:

- Overview of Preventive Maintenance on page 4-2
- Defining Meters on page 4-3
- Associating Meters with Assets on page 4-5
- Entering Meter Readings on page 4-7
- Entering Preventive Maintenance Scheduling Definitions on page 4-11
- Suppression Activities on page 4-16
- Generating Work Orders on page 4-20

Overview of Preventive Maintenance

Preventive Maintenance (PM) activities reduce the probability of failure or degradation your company's assets' physical condition. Preventive Maintenance activities are carried out periodically, by usage, or based on the condition of the asset.

This chapter covers the following topics:

- [Overview of Preventive Maintenance](#)
- [Meters](#)
 - Defining Meters
 - Associating Meters with Assets
 - Entering Meter Readings
- [Preventive Maintenance Scheduling](#)
 - Entering Preventive Maintenance Scheduling Definitions
 - Preventive Maintenance Schedule Definition on assets
 - Preventive Maintenance Schedule Definition on asset routes
 - Suppression Activities
 - Generating Work Orders

Meters

Meters are defined and associated with assets to be measured and periodically serviced. For example, a pipe may start out at 12 millimeters, but when it wears to only four millimeters, it needs to be replaced. Another example is a forklift hour meter. You may need to service the forklift after a certain number of running hours or a specific number of days.

This section includes the following topics:

- [Defining Meters](#) on page 4-3
- [Associating Meters with Assets](#) on page 4-5
- [Entering Meter Readings](#) on page 4-7

Defining Meters

eAM enables you to generate work orders automatically using a preventive maintenance schedule, based on runtime and day interval rules. For example, a forklift may need servicing after 100 motor running hours, or 90 days, whichever comes first. Meters are used to keep track of asset usage.

To define a meter:

1. Navigate to the [Meters](#) window.

Figure 4–1 Meters Window

The screenshot shows a software application window titled "Meters". The window contains a table with four columns: "Name", "Description", "UOM", and "Value Change". The "Name" column lists various meter names, some of which are highlighted in yellow. The "Description" column provides a brief description for each meter. The "UOM" column shows the unit of measure, and the "Value Change" column indicates whether the meter readings are Ascending, Descending, or Fluctuating. A toolbar with various icons is visible at the top of the window.

Name	Description	UOM	Value Change	[]
METER1		M	Ascending	↑
Meter-A	Meter-A	L	Ascending	▼
Meter-B	Meter-B	L	Ascending	▼
Meter-J	Meter J	L	Ascending	▼
Meter-JN		L	Ascending	▼
Meter-JN1	Meter JN1	L	Ascending	▼
Meter-S	Meter S	L	Ascending	▼
Meter-SUB		L	Ascending	▼
Meter-pm	PM Meter	L	Ascending	▼
Meter10	Meter	HR	Ascending	▼
Odometer	Odometer	MI	Ascending	▼
meter-cap2	Meter	HR	Ascending	▼

2. Enter a unique Meter name.
3. Enter a Description for this meter.
4. Select a unit of measure (UOM), associated with this meter, from the list of values. Once the meter is created, this field cannot be updated.
5. Select whether the meter readings will be Ascending, Descending, or Fluctuating. If you choose blank from the drop down list, the meter reading can fluctuate. A fluctuating meter reading is one that can go up and down, for example, a temperature gauge. As production units pass through meters, meter readings increment. Another example of an ascending meter is a car odometer. Some liquid dispensers start full and record decreasing readings as material is used.

Note: If the meter is fluctuating, then it cannot be used in Preventive Maintenance scheduling.

Once the meter is created, you cannot update this field.

6. If you select the Used in Scheduling check box, the meter will be used in Preventive Maintenance Scheduling. If there are any scheduling rules associated with this meter, this check box cannot be deselected. If this is a fluctuating meter, this check box is disabled. If the Used in Scheduling check box is selected, the Usage Rate (per day) and Use Past Reading fields become mandatory.
7. Enter a usage Rate (per day). This field works in conjunction with the Use Past Readings field to support historical readings prior to eAM implementation. It supplies the system benchmark data that can be used to set the occurrence of scheduled PMs. Rate per day is referred to in the absence of a sufficient value in the Use Past Reading field.

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

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

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

Note: If you enter a value of 1, the system will perpetually calculate at the usage Rate per day.

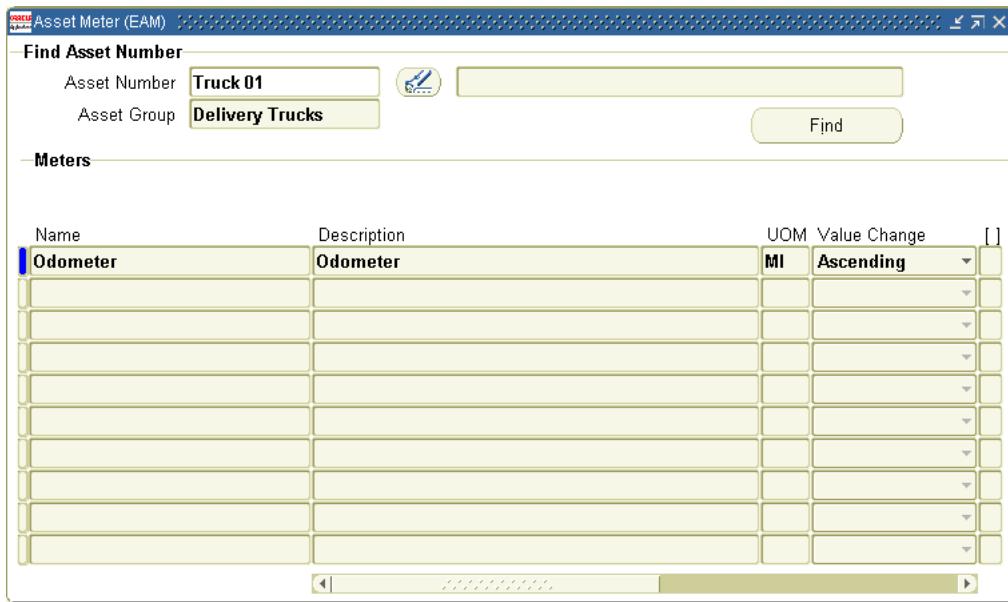
9. Select the meter effectiveness dates. If left blank, the meter is effective all of the time. You can disable a meter effective on a specific date by selecting a To date.
10. Save your work.

Associating Meters with Assets

Asset Meter Association creates the relationship between the meter definition and the asset.

To associate meters with assets:

1. Navigate to the [Asset Meter](#) window.

Figure 4–2 Asset Meter Window

2. For optimal performance, select an Asset Group from the list of values before selecting an Asset Number. Only assets associated with the selected asset group will be available in the list of values.

You can optionally select an Asset Number from the list of values first. This triggers the Asset Group to default.

3. Choose Find to view all Meters associated with the current Asset.
4. In the Meters region, you can either associate existing, defined meters with the current asset, or create new meters dynamically while associating them with the current asset.
 - a. To associate existing meters with the current asset, select a meter Name from the list of values. All remaining fields in the Meters region are view-only.
 - b. To create new meters while associating them with the current asset, enter a meter Name. Refer to the [Defining Meters](#) on page 4-3 section for instructions on populating the remaining fields.

-
5. Save your work.

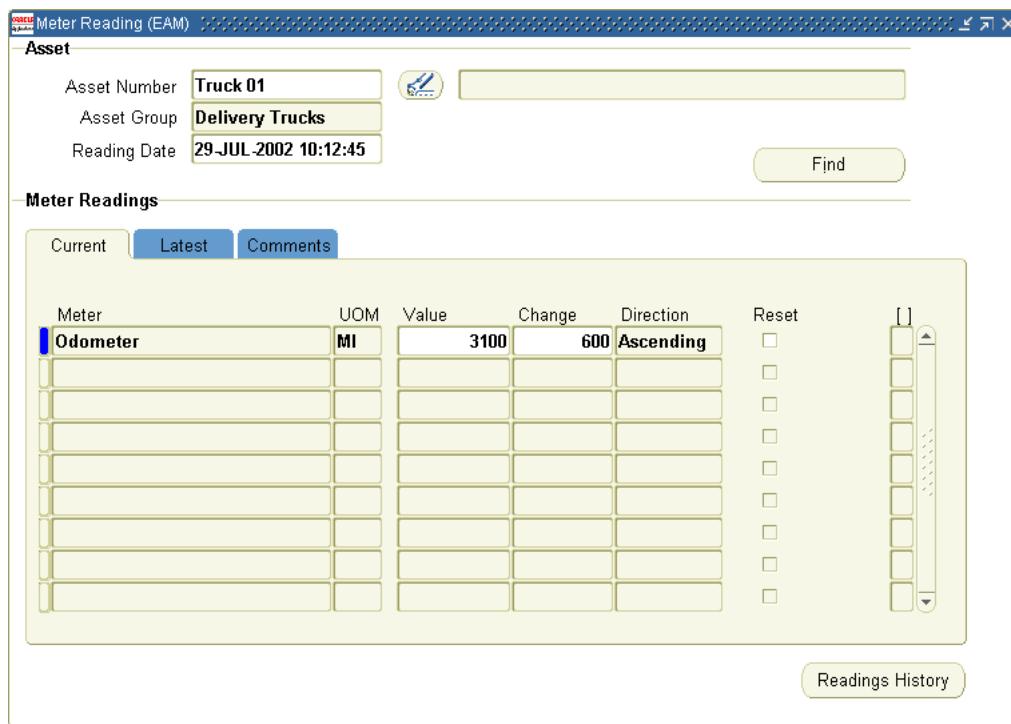
Entering Meter Readings

Once a work order is completed, meter readings are required for all meters associated with the work order's current asset that appear in the Runtime Interval rules in the Preventive Maintenance Scheduling Definition window (See: [Entering Preventive Maintenance Scheduling Definitions](#) on page 4-11 and [Work Order Completion](#) on page 3-41). However, you can enter stand-alone meter readings at any time.

Note: To enable the Preventive Maintenance Scheduler process, an initial meter reading needs to have already been entered.

To enter a stand-alone meter reading:

1. Navigate to the [Meter Reading](#) window.

Figure 4–3 Meter Readings Window

2. For optimal performance, select an Asset Group from the list of values before selecting an Asset Number. Only assets associated with the selected Asset Group will be available in the list of values.
You can optionally select an Asset Number from the list of values first. This triggers the Asset Group to default.
3. The Reading Date will default as the system date. You can optionally select a past date to view past meter readings. You cannot enter a future date.
4. Choose Find to display meter reading data for this asset. Meter readings with a Reading Date falling within the meter effective dates will display in the Meter Readings region.
5. Within the Meter Readings region, select the Current tab to update or add meter reading data.

-
6. You can enter a Value for new meter readings. This field will default if you populated the Change field for a newly entered meter reading. The Change field indicates the difference between the last reading and the current reading. It will default if the Value field is updated. The Change value is used to calculate the Life To Date Reading, within the Latest tabbed region.
 7. You can update a meter reading in the past. In order to do this, enter the exact time stamp of the existing meter reading's reading date, in the Reading Date field. At that point, you can enter the updated value for that meter reading in the Value field. If you do not enter the same time stamp, the data in the Value field will be treated as a new meter reading entry.
 8. The Change field indicates the difference between the last reading and the current reading. When adding new meter readings, you can either update this field or the Value field, enabling the other to default. If updating a past meter reading, this field is disabled.

The Change value is used to calculate the Life To Date reading, within the Latest tabbed region.

9. The Direction field is not updateable. The information defaults from the meter definition.
10. If you select the Reset check box, you are resetting the Current meter value to any value that you enter in the Value field. For example, if a motor needs to be replaced, you can reset the meter reading value of the pump, associated with the motor. The Value field is mandatory, and the Change field is disabled.

Note: You cannot reset past meter readings if a meter reading has been entered after the reading date.

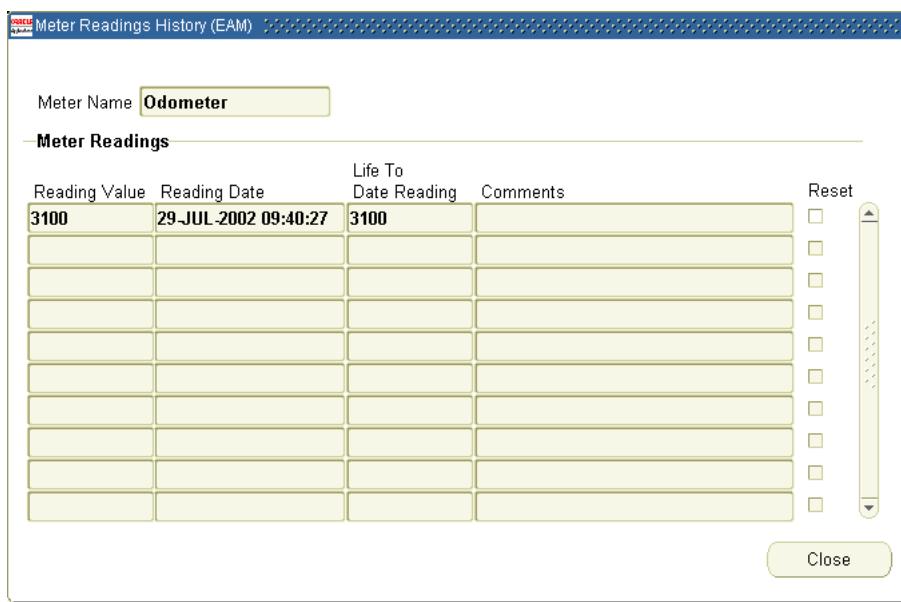
11. Select the Latest tab. The Life To Date field will display the accumulated meter reading, which is usually the same as the current meter reading. The Current meter reading and Life To Date meter reading will only be different if you have previously reset the Value, within the Current tabbed region.

For example, before the reset, both the Current meter reading and the Life To Date meter reading were 17,000. The user then reset the Current meter reading to 3,000. The Life To Date meter reading will continue to increase from 17,000, while the Current meter reading will increase from 3,000.

The system uses the Life To Date meter reading to calculate the Usage Rate.

12. Select the Comments tab to enter any necessary comments.
13. Optionally, choose Readings History to view all meter readings for the selected meter and current asset. This can help you to make logical decisions when entering and updating meter readings. For example, you can view the last meter reading, enabling you to make a logical choice when entering the next meter reading. You can also decide which meters you want to update. You cannot update meter readings in the Meter Readings History window.

Figure 4-4 Meter Readings History



14. Choose Close to return to the Meter Reading window.
15. Save your work.

Preventive Maintenance Scheduling

An asset activity and asset combination can be associated with runtime interval and daytime interval rules defining when an asset activity should be scheduled for an asset. The Preventive Maintenance Scheduler process creates suggested work order dates based on these rules. A planner can then view these forecasted work orders, and generate them as necessary.

This section includes the following topics:

- [Entering Preventive Maintenance Schedule Definitions](#) on page 4-11
- [Suppression Activities](#) on page 4-16
- [Generating Work Orders](#) on page 4-20

Entering Preventive Maintenance Schedule Definitions

Schedule definitions are implemented to create scheduled work orders, based on day interval rules, and/or runtime interval rules. You can create a Preventive Maintenance Schedule Definition on an Asset/Asset Activity combination, or an Asset Route/Asset Activity combination.

Before a Preventive Maintenance Schedule can be created, the following prerequisites need to already exist:

- Meter Definition (See: [Defining Meters](#) on page 4-3)
- Asset Activity (See: [Defining Asset Activities](#) on page 2-54)
- Meter/Asset Association (See: [Associating Meters with Assets](#) on page 4-5)
- Meter Reading Entry (See: [Entering Meter Readings](#) on page 4-7)
- Asset/Asset Activity Association (See: [Asset/Asset Activity Association](#) on page 2-56)

To define a Preventive Maintenance Schedule on an asset:

1. Navigate to the [Preventive Maintenance Schedules](#) window.

Figure 4–5 Preventive Maintenance Schedules Window

Meter Name	Interval	UOM	Usage Rate	Last Service Reading	Next Due	Meter Description
Odometer	3000	MI	3	3000	6000	Odometer

2. Select an Asset Number from the list of values. Only assets that are maintainable and associated with asset activities are available.
3. Choose an Asset Activity from the list of values. Only activities associated with assets are eligible for scheduling.
4. Optionally, enter a Lead Time.

Lead time in a Preventive Maintenance Schedule is different than lead time associated with work order creation. Lead time within a Preventive Maintenance Schedule covers the time between the end date of the first run of the Preventive Maintenance Schedule process and the start date (system date) of the second run of the Preventive Maintenance Schedule process. For example, a department will run the Preventive Maintenance Scheduler process every two months; the end date of each Preventive Maintenance Scheduler process will be the end of every other month. However, due to circumstance, the meter data will not be ready until the middle of the month. Therefore, the Preventive Maintenance Scheduler run will start in the middle of the month,

instead of at the beginning, creating a lapse between the first and second Preventive Maintenance Scheduler runs. Lead time is used to cover this lapse.

5. The effective dates will default from the current asset activity if they exist. Optionally, select or update the Effective From and Effective To dates.
6. In the Rescheduling Point region, indicate whether the rescheduling point is the Scheduled Start Date or Completion Date. If you select Scheduled Start Date, work orders are generated for the scheduled start date, and manually created work orders are not considered by the Preventive Maintenance Scheduler process. If you select Completion Date, work orders are generated for the scheduled completion date, and manually created work orders are considered in Preventive Maintenance scheduling.
7. If the Run To Life check box is selected, the Preventive Maintenance Scheduler will not automatically schedule this asset and asset activity association, however manual work orders can still be created. This is relevant for items that cost more to maintain than the item itself. You might also check this box for forecasting and budgeting reasons. For example, your asset is a conveyor belt. It is common in maintenance environments to let this asset wear out completely before replacing it. You estimated that the life of this asset is 18 months, and have set up a schedule for a replacement work order every 18 months. In reality, you found that the belts have ended up wearing out every 12 months, affecting your cost budget.

You can select this check box and unselect it later. For example, you might associate a non-maintainable asset to an activity, but maybe you cannot currently maintain or schedule this asset. You may have future plans to maintain this asset.

If this check box is selected, you will not see work orders for this asset in the Maintenance Workbench (See: [Using the Maintenance Workbench](#) on page 3-59).

8. Within the Day Interval region, indicate whether Preventive Maintenance scheduling is based on a day interval.
9. If you selected the Day Interval check box, select a Base Date. This date is used by the Preventive Maintenance Scheduler as a starting point for calculating the next due date for a suggested work order. Once the Preventive Maintenance scheduler suggests a work order, and that work order is completed, this date will reset to the completion date.

10. If you selected the Day Interval check box, enter an Interval. For example, if you enter the number three, a work order suggestion will be created every three days.
11. Optionally, in the Run Time Interval region, select a Meter Name to indicate that Preventive Maintenance scheduling is based on a run time interval. If you have previously set up a day interval, you can base the scheduling on a run time interval, as well. Only meters associated with this asset (See: [Associating Meters with Assets](#) on page 4-5), and with the Used in Scheduling check box selected in the meter definition, will be available in the list of values.

Using the screen shot information above, the Truck 01 is scheduled for an oil change every 30 days, or every 1000 miles.

Table 4–1 Day Interval Rule

Field	Value
Base Date	December 26, 2001
Interval	30

Table 4–2 Runtime Interval Rule

Field	Value
Last Service Reading	3000
Interval	1000
Last Service Reading Date	January 1, 2002 (this can be found via meter reading history)
Usage Rate	25 miles per day (calculated as the total of the meter readings value changes, divided by the total of the meter reading date intervals)

If only the runtime interval rule is taken into account, the next due date will be February 10, 2002 (January 1 2002 + 40 days), and every 40 days after that. This is calculated as the interval (1000 miles) divided by the usage rate (25 miles per day).

The PM scheduler process compares the above suggested dates from the runtime interval rule, to those of the day interval rule: Base Date of December 26, 2001 + every 30 days.

The work orders ultimately created by the PM Scheduler process are those of the shortest interval and earliest dates: December 26, 2002 + every 30 days.

12. The Interval and UOM fields work together. The example below illustrates how, for every 2000 miles, this asset needs an oil change.

The UOM will default from the meter definition of the current meter.

13. Enter a Last Service Reading if this is the first time you are defining this Preventive Maintenance schedule. Subsequently, this field will automatically be updated with the meter reading information recorded at work order completion (See: [Work Order Completion](#) on page 3-41). The last service reading cannot be greater than the last meter (if the meter is ascending), or less than the last meter reading (if meter is descending).

The Next Due field will then default in as the Last Service Reading plus the Interval.

Note: The Preventive Maintenance Scheduler (See: [Generating Work Orders](#) on page 4-20) will automatically calculate the meter usage rate, based on historical data, which is then used to predict the next meter due date. Refer to the example below.

14. Save your work.

Example 4-1 Example Meter Usage Rate Calculation

An oil change for a car is performed every 3,000 miles. The last oil change was performed on November 1, 2000, at a 15,000 mile odometer reading value. Then next service is due at 18,000 miles. The table below contains historical meter reading data. The meter usage rate is calculated according to the historical meter readings below:

Table 4-3 Example Meter Usage Rate Calculation

Meter	Meter Reading Value	Meter UOM	Meter Reading Date
Odometer	16,000	Mile	December 1, 2000
Odometer	16,175	Mile	December 6, 2000
Odometer	16,400	Mile	December 11, 2000

First, the usage rate per day is calculated as the total of the meter reading value changes divided by the total of the meter reading date intervals:

$$(175 + 225) / (5 + 5) = 40 \text{ miles per day}$$

Next, the next service date is calculated as the next service value (18,000) minus the last meter reading value (16,400), divided by the usage rate per day (40). This amount of days will be added to the last meter reading date (December 11, 2000), to ultimately provide the Next Due date:

$$(18,000 - 16,400) / 40 = 40$$

December 11, 2000 + 40 days = a Next Due date of January 20, 2001

To define a Preventive Maintenance schedule on an asset route:

Preventive Maintenance Schedules can be defined based on Asset Routes. See: Setting Up Asset Routes.

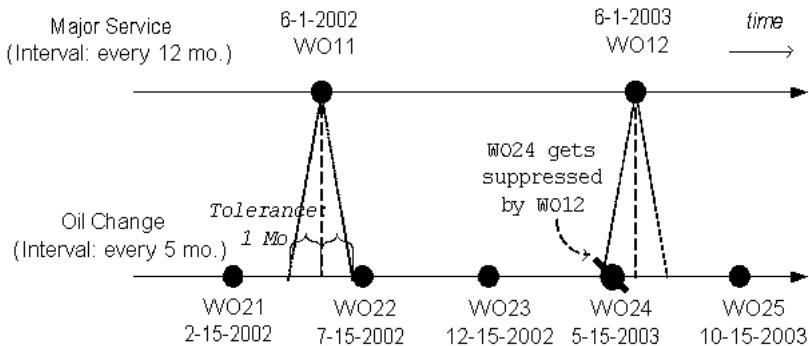
1. Navigate to the [Preventive Maintenance Schedules](#) window.
2. Select an Asset Route from the Asset Number list of values.
3. Refer to the [Define Preventive Maintenance Schedules on Assets](#) on page 4-11 section, for instructions on the remaining fields.

Note: You can only define a Day Interval for Asset Routes. You cannot define Runtime Intervals.

Suppression Activities

You can suppress other Asset Activities with the Asset Activity in the scheduling definition.

In the following example, there are two activities associated with a Truck 01 asset: Oil Change (to be performed every five months), and Major Service (to be performed every 12 months). A major service on a Truck 01 includes an Oil Change. Therefore, a suppression definition needs to be defined; the asset activity of Major Service suppresses the child activity, Oil Change.

Example 4-2 Suppression Example

Following this suppression mechanism, the preventive maintenance scheduler process would calculate all the due dates for the two asset activities independently, without suppression first (assuming cutoff date is December 13, 2003):

Table 4-4 Calculated Due Dates for Major Service

Activity	Due Date
Major Service	June 1, 2002
Major Service	June 1, 2003

Table 4-5 Calculated Due Dates for Oil Change

Activity	Due Date
Oil Change	February 15, 2002
Oil Change	July 15, 2002
Oil Change	December 15, 2002
Oil Change	May 15, 2003
Oil Change	October 15, 2003

For every due date of the parent activity (Major Service), the process checks for child asset activity (Oil Change) due dates that fall under the suppression umbrella of the parent activity. As a result of the suppression rule defined (in the above

example), notice that Oil Change's work order, WO24, occurs less than one month (the tolerance) away from Major Service's work order, WO12. Therefore, WO24 is suppressed and erased from the suggestion list. The final work order suggestions in chronological order are the following:

Table 4–6 Suggested Due Dates, Tolerance in Day Terms

Activity	Due Date
Oil Change	February 15, 2002
Major Service	June 1, 2002
Oil Change	December 15, 2002
Major Service	June 1, 2003
Oil Change	October 15, 2002

You could optionally define the suppression tolerance in terms of runtime percentage, rather than days. For example, the runtime percentage is defined as 25 percent. This tolerance percentage is applied to the parent activity's interval (25 percent multiplied by 12 months = three months). In other words, the parent activity (Major Service) suppresses the child activity (Oil Change) with a tolerance of three months. Instead of the two month tolerance umbrella in the first example, the tolerance umbrella in this example is calculated as six months (three months multiplies by two). The suppression logic remains the same, and the final suggested due dates would be as follows:

Table 4–7 Suggested Due Dates, Tolerance in Runtime Percentage Terms

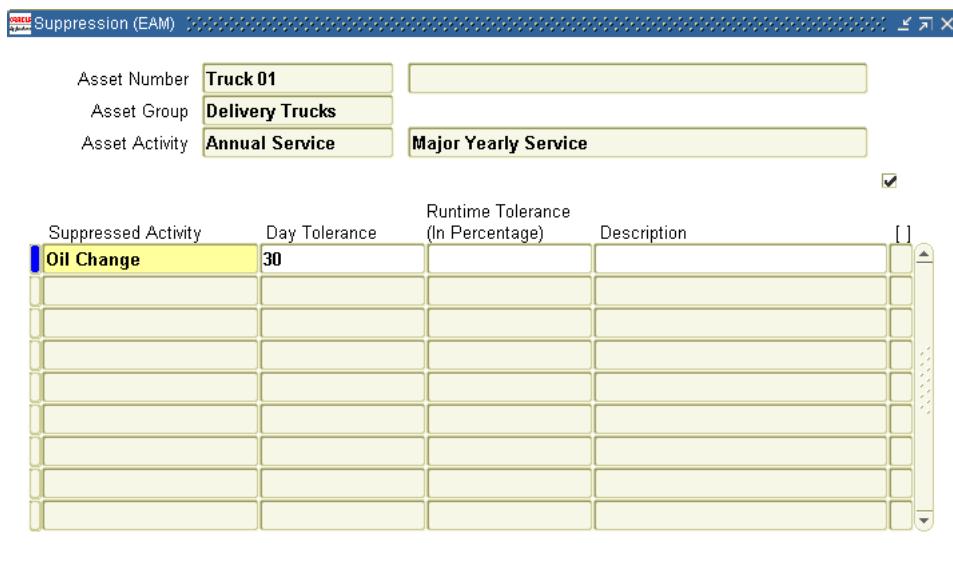
Activity	Due Date
Major Service	June 1, 2002
Oil Change	July 15, 2002
Oil Change	December 15, 2002
Major Service	June 1, 2003
Oil Change	October 15, 2002

Note: Oracle recommends that you define tolerance in terms of days.

To create a suppression activity:

- From the [Preventive Maintenance Schedules](#) window, choose Suppression.

Figure 4–6 Suppression Window



- Choose a Suppressed Activity from the list of values. Only activities associated with the asset are available.

Note: One Preventive Maintenance schedule can suppress multiple Preventive Maintenance Schedules. One Preventive Maintenance Schedule can be suppressed by only one Preventive Maintenance Schedule. The rescheduling point (start versus end date) of the suppressed Preventive Maintenance schedules must be the same.

- Optionally, enter a Day Tolerance. This is the number of days on either side of the scheduled date. For example, if you enter two, the suppression tolerance will create a five day window in which the Preventive Maintenance can be suppressed (the scheduled date, plus the two days before and after).

4. Optionally, enter a percentage Runtime Tolerance. This is the percentage of the Runtime Interval.
5. Optionally, enter a description of this suppression.
6. Save your work.

Generating Work Orders

Once you have Preventive Maintenance Scheduling definitions established, you can generate work orders. There are two ways of generating work orders. You can execute the Generate Preventive Maintenance Work Orders process, or you can implement forecasted work orders from the Maintenance Workbench.

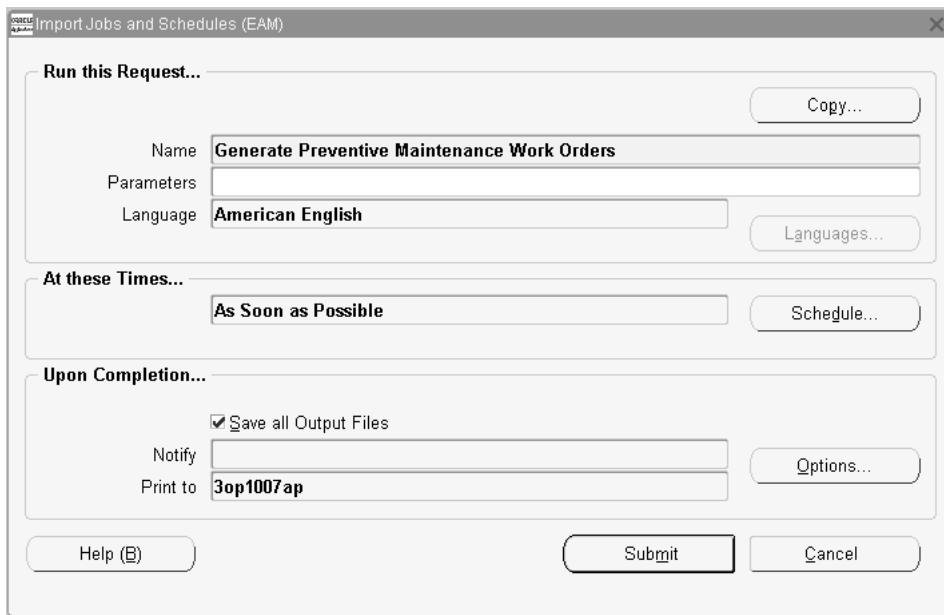
When executing the Generate Preventive Maintenance Work Orders process, the program creates suggested work orders based on the day interval or runtime interval rules, associated with the scheduling definitions you defined. See: [Entering Preventive Maintenance Scheduling Definitions](#) on page 4-11. However, if the rescheduling point is Completion Date, defined in the Preventive Maintenance Schedules definition, and there is an existing work order at a status of Unreleased, this process will not suggest another work order. This program should be scheduled to periodically run automatically. You can run this program manually at any time by accessing the menu option.

If you want to review and optionally select work orders that will be created using this process, you can access the Maintenance Workbench. This enables you to view the work orders before actually creating them. You can launch the Preventive Maintenance Scheduler to implement forecasted work orders. See: [Using the Maintenance Workbench](#) on page 3-59.

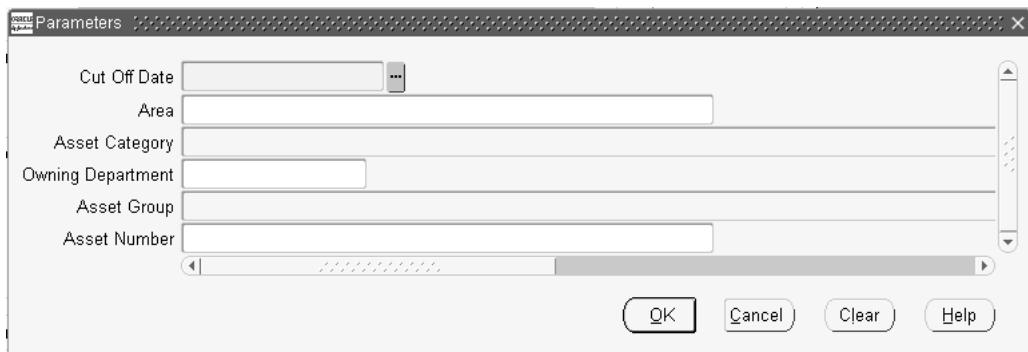
The following are instructions to invoke the process from the menu:

To generate work orders:

1. Navigate to the [Generate Preventive Maintenance Work Orders](#) window.

Figure 4–7 Import Jobs and Schedules

2. In the Parameters window, select a Cut Off Date.

Figure 4–8 Parameters Window

To further narrow down the data selection, you can enter any of the following parameters:

3. Optionally, select an Area from the list of values. Areas are where your assets reside.
4. Optionally, select an Asset Category from the list of values. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR.
5. Optionally, select an Owning Department from the list of values.
6. Optionally, select an Asset from the list of values.
7. Choose OK.
8. On the Generate Preventive Maintenance window, choose Submit.

See Also:

[Submitting a Request, Oracle Applications User's Guide](#)

5

eAM Planning and Scheduling

Oracle Enterprise Asset Management utilizes Oracle Manufacturing Scheduling and Oracle Material Requirements Planning to ensure cost savings and work management efficiencies by generating predictive work activities. These work activities use a planning process to balance the work load for resource management. This chapter contains the following topics:

- Overview of eAM Planning and Scheduling on page 5-2
- eAM Planning on page 5-3
- Defining a Master Demand Schedule Name on page 5-4
- Defining a Material Requirements Plan Name on page 5-5
- Defining Plan Options on page 5-6
- Launching the Planning Process on page 5-10
- Viewing Suggested Demand on page 5-11
- eAM Scheduling on page 5-14
- Enabling eAM Scheduling on page 5-14
- Using the Scheduler Workbench on page 5-17

Overview of eAM Planning and Scheduling

Oracle Enterprise Asset Management utilizes work orders to create demand for asset maintenance. Operations within work orders are completed using work orders' associated material and resource requirements (See: [Overview eAM Work Management](#)). Cost savings and work management efficiencies can be achieved by generating predictive work activities, and then using a planning process to balance the work load for resource management.

The process is as follows:

First, a Master Demand Schedule is created. This Master Demand Schedule is then attached to MRP options. MRP is launched, creating planned work order suggestions. You can use the Planner Workbench to implement the suggestions into purchase requisitions or discrete work orders. Using the Purchasing AutoCreate feature, purchase orders are created from the requisitions. Once the purchase orders are received into inventory, you can issue material into a maintenance work order.

This chapter includes the following topics:

- [eAM Planning](#)
 - Defining a Master Demand Schedule Name
 - Defining a Material Requirements Plan Name
 - Defining Plan Options
 - Launching the Planning Process
 - Viewing Suggested Demand
- [eAM Scheduling](#)
 - Enabling eAM Scheduling
 - Using the Scheduler Workbench

eAM Planning

Oracle eAM utilizes Material Requirements Planning (MRP) to calculate net material requirements from gross material requirements, by evaluating:

- the master schedule
- bills of material
- scheduled receipts
- on-hand inventory balances
- lead times
- order modifiers

Material Requirements Planning then plans material replenishments by creating a set of recommendations to release or reschedule orders for material, based on net material requirements. MRP assumes infinite capacity is available to meet the material requirements plan.

The following illustration depicts how eAM uses Material Requirements Planning. First, an Master Demand Schedule (MDS) is created. This schedule is then attached to MRP Plan Options. Next, the MRP is launched, creating suggestions for purchasing requisitions. Finally, these suggestions are implemented. They are purchased, and then received into inventory. Once the material is in inventory, it can be issued to a maintenance work order.

Figure 5–1 eAM Material Requirements Planning



This section includes the following topics:

- [Defining a Master Demand Schedule Name](#) on page 5-4
- [Defining a Material Requirements Plan Name](#) on page 5-5
- [Defining Plan Options](#) on page 5-6
- [Launching the Planning Process](#) on page 5-10

- Viewing Suggested Demand on page 5-11

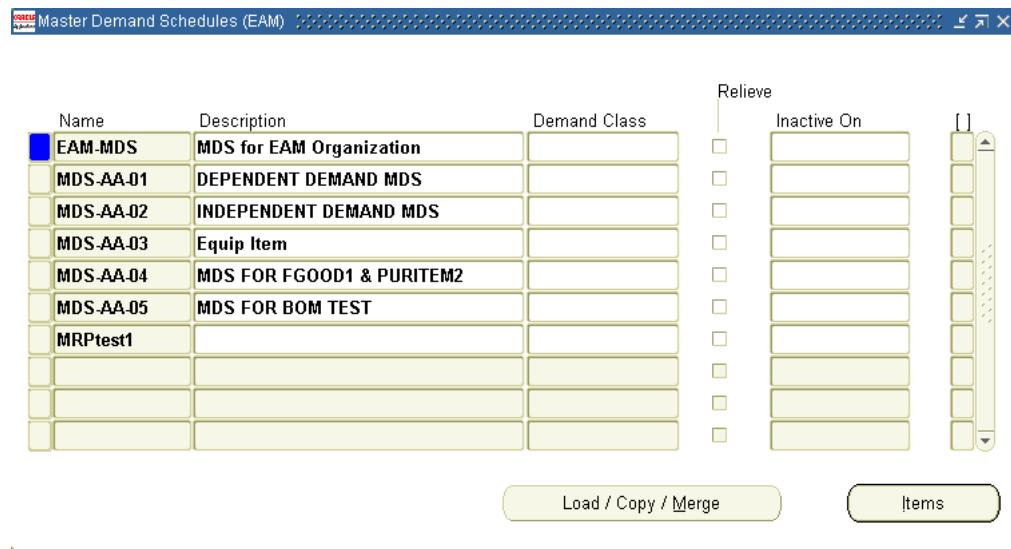
Defining a Master Demand Schedule Name

Before you define a master schedule manually or load a schedule from another source, you must first define a master demand schedule name. You can also set several options for each name.

To define a Master Demand Schedule name:

1. Navigate to the [MDS Names](#) window.

Figure 5–2 Master Demand Schedules Window



2. Enter a Name and Description for the schedule.
3. Save your work.

See Also:

[Defining a Schedule Name](#), *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.

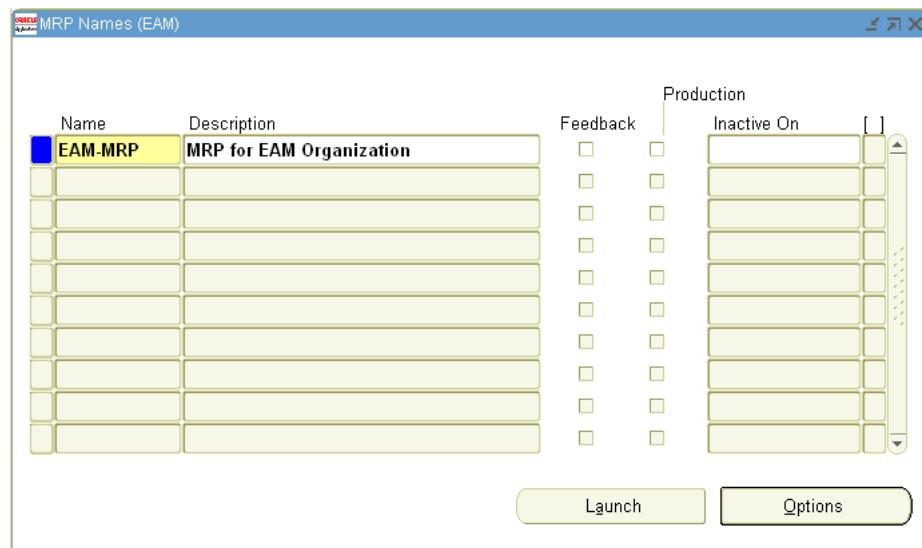
Defining a Material Requirements Plan Name

Master Demand Schedule names trigger the material requirements planning process. A master demand schedule name must be created to perform material requirement planning for maintenance work orders.

To define a MRP name:

1. Navigate to the [MRP Names](#) window.

Figure 5–3 MRP Names Window



2. Enter an alphanumeric Name to identify a unique material requirements.
3. Optionally, enter a Description of the MDS name.
4. Optionally, select the Feedback check box to monitor the quantity of the planned order that has been implemented as maintenance work orders, purchase orders, or purchase requisitions. This provides the planner visibility of the status of the plan at any point in time.
5. Optionally, select the Production check box to enable a plan to automatically release planned orders. See: [Auto-release Planned Orders](#), *Oracle Master Demand Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.

6. Optionally, enter an Inactive On date on which to disable the plan.

As of this date, you can no longer update the plan, nor use the plan name in the planning process. You can still view information and run reports for disabled names.
7. Save your work.

See Also:

- [Overview of Planning Logic](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*
- [Defining MRP Names](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

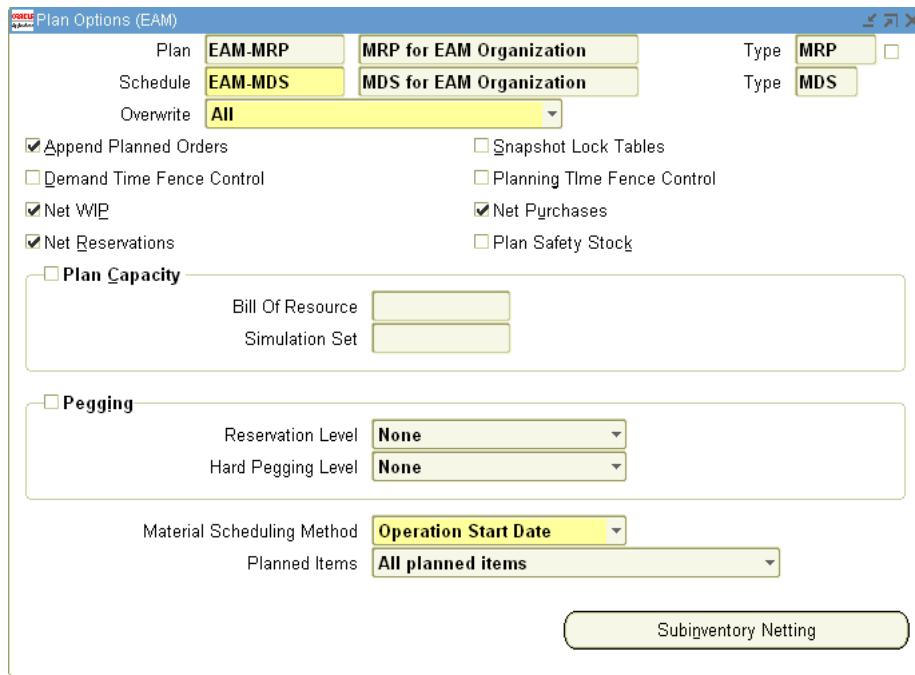
Defining Plan Options

You can enter plan options for any plan. If you are launching the planning process for this plan name for the first time, the plan options you defined in the setup parameters are displayed. Otherwise, the plan options you chose for the last launch of the planning process are displayed.

Supply Chain Planning users can also launch a DRP and supply chain MRP and master production schedule (MPS) plan (See also: [Reviewing or Adding Plan Options](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.).

To enter plan options:

1. Navigate to the [Plan Options](#) window.

Figure 5–4 Plan Options Window

2. Select a material requirements plan from the Plan list of values.
3. Select a master demand schedule name from the Schedule list of values.
4. Select MRP from the Type list of values.
5. Select an Overwrite option:

All: For a master production schedule (MPS) plan, overwrite all entries and regenerate new MPS entries based on the source master demand schedule. For an MRP, overwrite all MRP firm planned orders for MRP items. This option is displayed when you generate a plan for the first time.

Outside planning time fence: For a master production schedule (MPS) plan, overwrite all MPS entries outside the planning time fence. For an MRP, overwrite all planned orders and firm planned orders outside the planning time fence.

Note: Do not overwrite any firm planned order for MPS or MRP plans and net change replan.

6. Select the Append Planned Orders check box to append new planned orders. See: [Reviewing or Adding Plan Options](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide* for information regarding situations causing new planned orders to be appended.
7. Select the Net WIP check box to indicate that the planning process considers standard discrete jobs, non-standard discrete jobs, or repetitive schedules when planning items during the last plan execution.
8. Select Net Reservations to indicate that the planning process considers stock designated for a specific work order when planning the items during the last execution of the plan.
9. Select Net Purchases to indicate that the planning process considers approved purchase requisitions when planning the items during the last execution of the plan.
10. Select Plan Capacity to indicate whether the planning process calculates safety stock for each item during the last plan execution.
 - Specify the Bill of Resource (for MPS plans only) and, optionally, a Simulation Set. See: [Capacity Modifications and Simulation](#), *Oracle Capacity User's Guide* and [Overview of Bills of Resources](#), *Oracle Capacity User's Guide*.
11. Select Pegging to calculate graphical pegging information. See also: [Overview of Graphical Pegging](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*. The planning process then traces supply information for an item to its corresponding end demand details, which you then can view in a graphical display.
 - If you are working in a project environment, set a Reservation Level and, optionally, a Hard Pegging Level. See also: [Reviewing or Adding Project MRP Plan Options](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.
12. Select a Material Scheduling Method from the list of values.

Operation Start Date: Schedule material to arrive in Inventory for availability on the start date of a specific operation.

Order Start Date: Schedule material to arrive in Inventory for availability on maintenance work order start date.

13. Specify which Planned Items you want included.

All planned items: Include all planned items in the planning process. You would choose this option to be certain that all items are planned, including those you add to a work order or schedule, that are not components on any bill of material. Use this option to avoid missing items you want to plan. For items you do not want to plan, define them with an MRP planning method of Not Planned when defining an item in Inventory.

Demand schedule items only

Supply schedule items only

Demand and supply schedule items

14. Save your work.**See Also:**

[Reviewing or Adding Supply Chain Plan Options](#), Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide

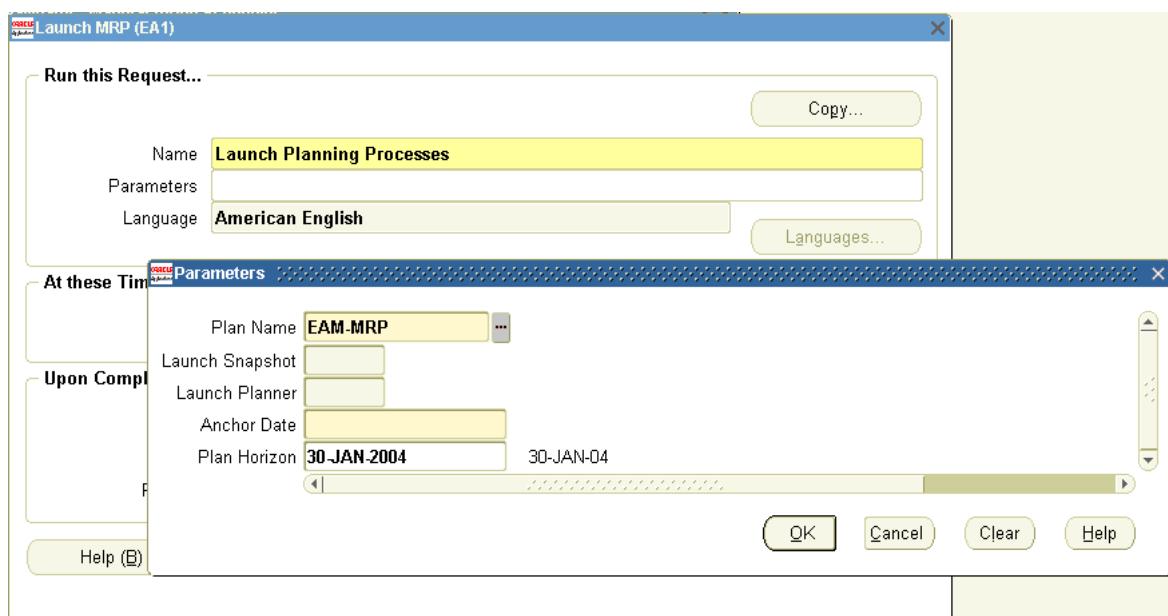
Launching the Planning Process

You can launch the planning process for a material requirements plan (MRP) from a master demand schedule. This generates planning recommendations for all planned items. You can launch the planning process for a material requirements plan (MRP) or a master production schedule (MPS). The planning process involves three phases for defining the MRP or MPS. The process uses the input from a master demand schedule or master production schedule to determine the quantities and timing of the items to be purchased.

To launch the planning process:

1. Navigate to the [Launch MRP](#) window.

Figure 5–5 Launch MRP Window



2. Enter the following parameters:

Plan Name: Select the MRP plan to launch.

Launch Snapshot: Valid values are Yes, No, or blank. Select Yes to launch the Snapshot.

Launch Planner: You must launch the planner if you selected Yes to launch the Snapshot.

Anchor Date: Enter a date, earlier or equal to the current date, that will act as a start date for repetitive planning periods.

Plan Horizon: Enter a date, greater than the current date, up to which the planning process creates an MRP or MPS. The default horizon is the current date plus the number of offset months set in the profile, MRP: Cutoff Date Offset Months (See: [Implementing Profile Option Summary](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

3. Choose OK.
4. Choose Submit.

See Also:

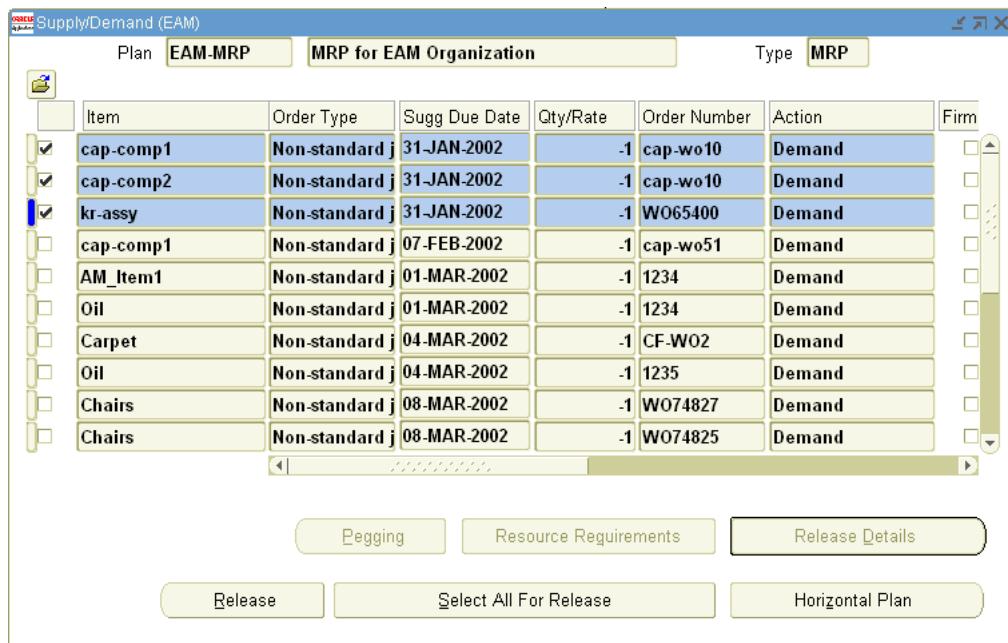
[Submitting a Request](#), *Oracle Applications User's Guide*

Viewing Suggested Demand

Once the MRP is launched, you can view the purchase requisition suggestions created by the launched MRP plan.

To view suggested purchase requisitions:

1. Navigate to the [Supply/Demand](#) window.

Figure 5–6 Supply/Demand Window

2. Review the supply/demand details. See: [Supply and Demand Fields](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*.

See Also:

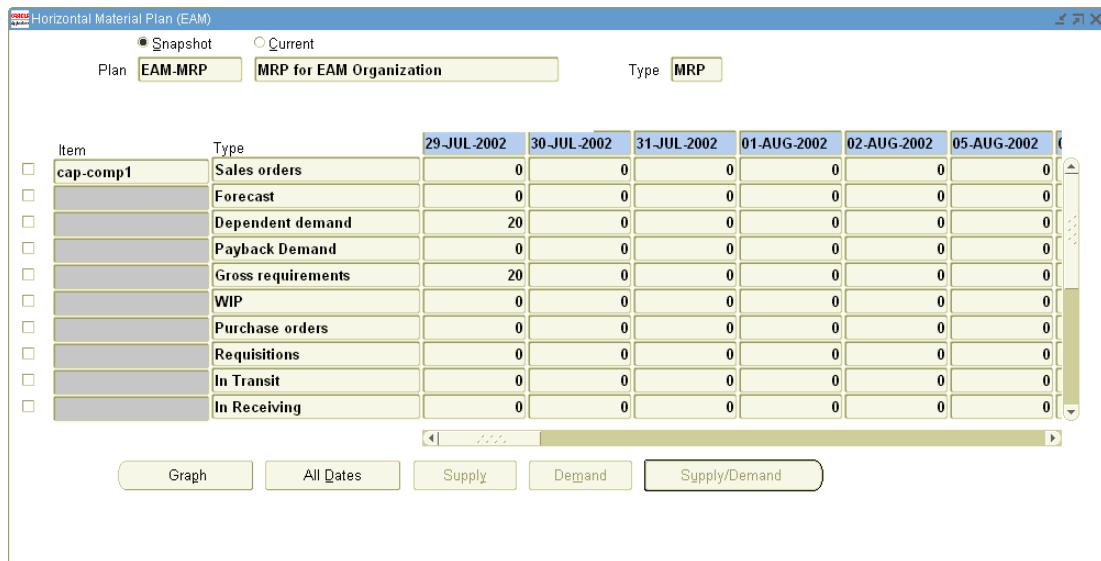
[Reviewing Supply and Demand](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

To view the horizontal plan:

You can view bucketed horizontal planning information, based on your selected display preferences. MRP provides two ways of viewing this information: snapshot and current. Snapshot information is the information produced by your original planning run. Current information includes all modifications since the planning run.

1. Navigate to the [Supply/Demand](#) window.
2. Choose Horizontal Plan.

Figure 5–7 Horizontal Material Plan Window



3. Indicate whether you would like to view Snapshot or Current information.

See Also:

[Reviewing the Horizontal Plan](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*

eAM Scheduling

Oracle Enterprise Asset Management (eAM) utilizes the Oracle Manufacturing Scheduling application to schedule eAM work orders and operations. A constraint-based scheduling engine schedules asset work orders and operations scheduled dates, based on user-predefined objectives, priorities, resources, and material constraints. The scheduling process will calculate work order and operation scheduled duration and dates, based on the forward or backward scheduling goal (See: [Routine Work Orders](#) on page 3-5), and Work in Process parameters (See: [Enabling eAM Scheduling](#) on page 5-14). The concurrent program is triggered once a work order is released (See: [eAM Work Order Statuses](#) on page 3-18). The work order is automatically moved to a Pending Scheduling status, until the concurrent program finishes scheduling. At that time, the work order is moved back to a Released status.

The Scheduler Workbench enables a planner to graphically view and reschedule single work orders and operations based on constraints, such as resource. It provides you with a visual display of eAM work orders. You can interactively reschedule work orders, operations, and resources. You can manually control the rescheduling, or let the system automatically optimize the schedule, based on resource and material constraints.

This section includes the following topics:

- [Enabling eAM Scheduling](#) on page 5-14
- [Using the Scheduler Workbench](#) on page 5-17

See Also:

[Constraint Based Scheduling, Oracle Manufacturing Scheduling User's Guide](#)

Enabling eAM Scheduling

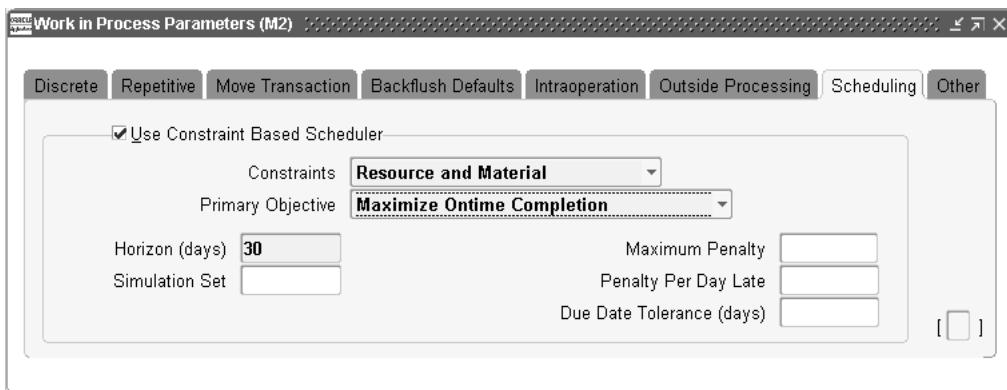
Work In Process (WIP) parameters for scheduling need to be enabled for constraint based scheduling. The user interface does not acknowledge material requirements. The scheduling process acknowledges material requirements if you have specified Resource and Material in the WIP parameters. If the material does not exist, you will get an exception message. See: [Reviewing Exception Messages, Oracle Manufacturing Scheduling User's Guide](#).

To enable eAM scheduling:

1. Navigate to the [Work In Process Parameters](#) window.

2. Select the Scheduling tabbed region.

Figure 5–8 Work In Process



3. Select the Use Constraint Based Scheduler check box to enable Oracle Manufacturing Scheduling for the current eAM organization. When a work order needs to be re-scheduled, the Scheduler process looks at resource or resource and material constraints to come up with start and end dates for work orders, operations, and resources.
4. Select a Constraints value from the drop down list. Valid values are Resource Only and Resource and Material. If you select Resource and Material, you are enabling scheduling to take place for both resources and materials; all materials associated with a work order will be considered. The choice of resource and material enables the system to look at on-hand and expected receipts. You can specify which resources you wish to schedule at the operation level of a work order (See: [Preparing Work Order Operations](#) on page 3-22).
5. Select a Primary Objective from the drop down list. Valid values are Maximize Overtime Completion, Minimize Setup, and Minimize Operation Slack. This choice determines which unique set of scheduling logic is used for maintenance work orders.
6. Enter a Horizon in days. This is the range in days that the scheduling process will use when scheduling planned orders, if adequate material is not available. When a work order is released, the scheduling process schedules operation dates based on resource and material availability. If material is not available within the horizon, the scheduler will push the operation date to the system

date plus the number of days entered in the Horizon field (See: [eAM Work Order Statuses](#) on page 3-18 and [Preparing Work Order Operations](#) on page 3-22).

Note: Horizon applies to resources, as well as material.

For example, there are five operations on a work order; four of them are eligible for scheduling (See: [Preparing Work Order Operations](#) on page 3-22). When the work order is released, the WPS Schedule Engine will schedule all eligible operations within the work order, with insufficient material, after the specified Horizon.

Note: For information on all remaining fields on the Work in Process Parameters window, See: [Defining Work in Process Parameters](#), *Oracle Manufacturing Scheduling User's Guide*.

Example 5-1 WPS Schedule Engine logic:

A maintenance work order has two operations. Operation 10 requires 1000 of Part A and 100 of Part B. Operation 20 requires 100 of Part B. The work order was released for an asset on January 1, 2002. A Horizon of 30 days, and a Resource and Material Constraint was specified in the Work in Process parameters (See: [Enabling eAM Scheduling](#) on page 5-14). Planning and scheduling determines that there is an insufficient number of Part A on hand, and there are 200 of Part B on hand. The following figure illustrates that, because Part A was not available, the scheduled start date for operation 10 is pushed out to January 31, 2002, while operation 20 is scheduled to start immediately.

Figure 5–9 Work Order Example

Work Order for Asset		
	Material Requirements	Scheduled Start Date
Operation 10	Part A: 1000 Part B: 100	January 31, 2002
Operation 20	Part B: 100	January 1, 2002

The scheduling process will also schedule dates based on resource requirements because the Resource and Material Constraint was specified in the Work in Process parameters (See: [Enabling eAM Scheduling](#) on page 5-14). For information on how to enable resource specific scheduling, See: [Preparing Work Order Operations](#) on page 3-22.

See Also:

[Overview of Manufacturing Scheduling](#), *Oracle Manufacturing Scheduling User's Guide*

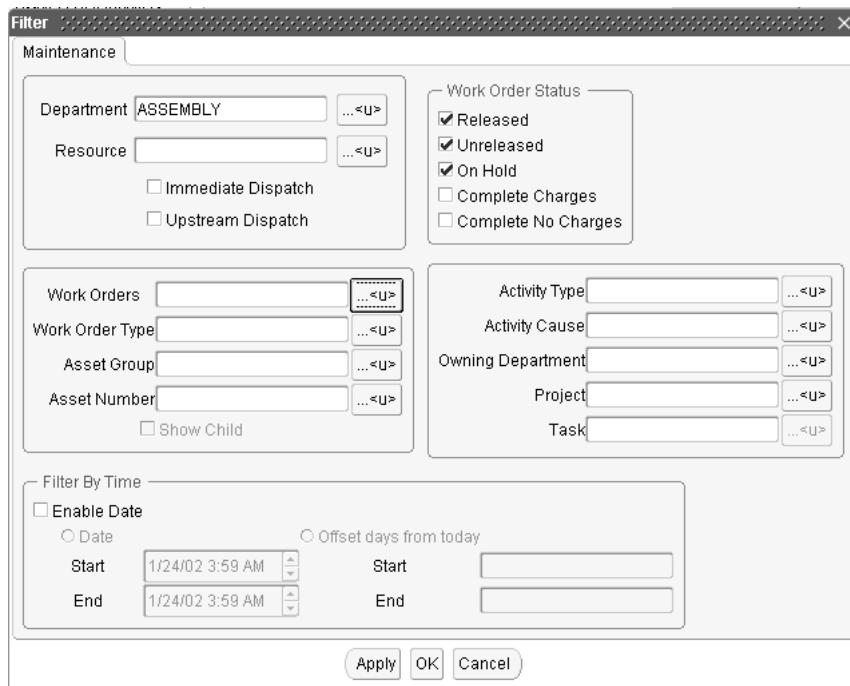
Using the Scheduler Workbench

You can use the Scheduler Workbench to select specific work orders, expand, and collapse work orders and operations using a tree hierarchy structure. A Gantt Chart graphically displays both firmed and unfirmed work orders (See: [Routine Work Orders](#) on page 3-5). You can view and update start and end dates for each resource. In manual mode, the only constraints are operations, and they do not surpass work order dates. In automatic mode, the Scheduler process creates start and end times for operations and resources. By default, you are in manual mode.

To use the scheduler workbench:

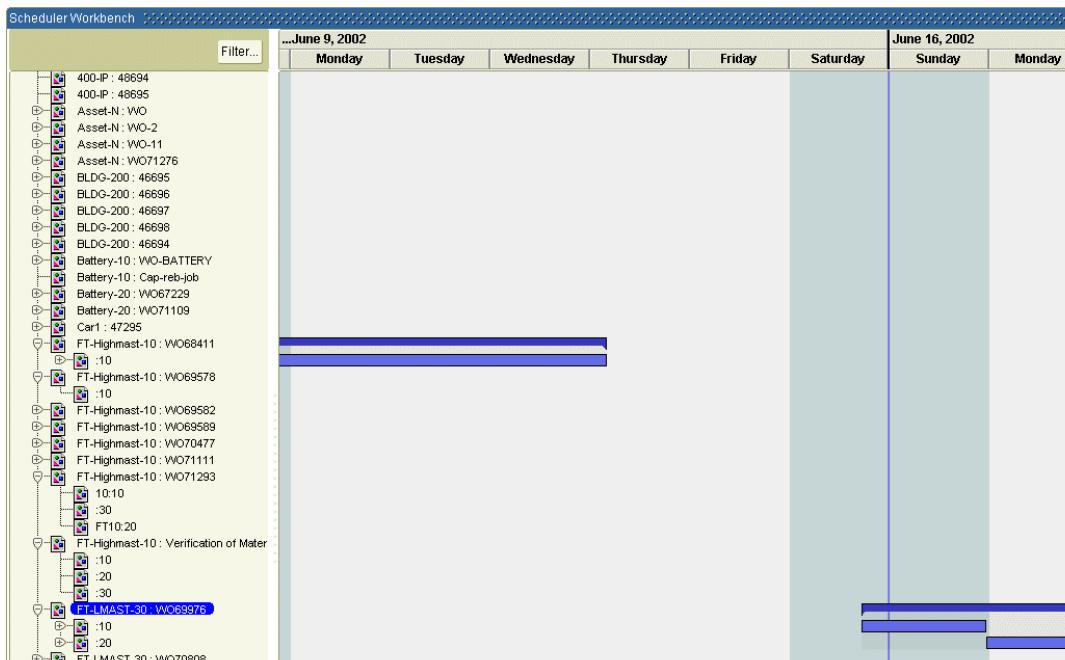
1. Navigate to the [Scheduler Workbench](#).
2. Select Filter to narrow down the information displayed. You can display information by Department, Resource, Asset Information, Work Order Status, filter by time, or a combination of this information.

Figure 5–10 Filter Window



3. Select Apply, and then OK to filter information entered (See: [Filtering Jobs, Oracle Manufacturing Scheduling User's Guide](#)).

Work Orders will be displayed on the left side of the window, with their associated operations' resources in a tree hierarchy format. On the right, bars spanning between calendar days represent associated schedules for the current operation resources. If dependent operations exist, you will see dependency links; the Scheduler process considers these dependencies. You can drag and drop the bars between different calendar days to dynamically adjust schedules.

Figure 5–11 Scheduler Workbench Window

4. Optionally, you can firm and unfirm work orders by selecting Create/Modify Work Orders from the Tools menu. The Find Work Orders window displays (See: [Routine Work Orders](#) on page 3-5).
 - You can view instance specific, resource load versus capacity from the Scheduler Workbench. For information on viewing work order properties, operation properties, and resource properties, See: [Viewing a Property Window](#), *Oracle Manufacturing Scheduling User's Guide*.
 - For information on displaying resources and resource load versus capacity, See: [Showing Select Resources and Resource Load Versus Capacity Panes](#), *Oracle Manufacturing Scheduling User's Guide*.
 - Normally, rescheduling of work orders takes place within the work order window, but you can also reschedule work orders from within the Gantt Chart. For information on how to reschedule work orders, operations, and resources within the Gantt Chart, See: [Rescheduling Jobs, Operations, and Resources in the Gantt Chart](#), *Oracle Manufacturing Scheduling User's Guide*.

See Also:

[Overview of Workbench](#), *Oracle Manufacturing Scheduling User's Guide*

[Launching the Workbench](#), *Oracle Manufacturing Scheduling User's Guide*

[Filtering Jobs](#), *Oracle Manufacturing Scheduling User's Guide*

6

eAM Cost Management

Costs are generated as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies defined within eAM. This chapter contains the following topics:

- Overview of eAM Cost Management on page 6-2
- eAM Costing Methods and Mappings on page 6-2
- Setting Up eAM Cost Management on page 6-5
- eAM Cost Estimation on page 6-8
- Viewing Cost Information on page 6-11
- Viewing Simulated Transfer Details on page 6-20
- Transferring Invoice Variances on page 6-21

Overview of eAM Cost Management

Costs are generated as maintenance work is executed and completed. These costs roll up through the Parent/Child hierarchies defined within eAM, and can roll up to any level within an asset hierarchy. Labor, Materials, and Equipment charges can be further classified into maintenance cost categories: Maintenance, Contract, and/or Operations.

All work is captured and retained by eAM. You can reference work that has been completed to review operations, resources, and costs. This information can help you understand the scope of work and the process by which it is completed.

This chapter covers the following topics:

- [Overview of eAM Cost Management](#) on page 6-2
 - [eAM Costing Methods and Mappings](#) on page 6-2
 - [Setting Up eAM Cost Management](#) on page 6-5
 - [eAM Cost Estimation](#) on page 6-8
 - [Viewing Cost Information](#) on page 6-11
- [Transferring Invoice Variances to Maintenance Work Orders](#) on page 6-20
 - Viewing Simulated Transfer Details
 - Transferring Invoice Variances

eAM Costing Methods and Mappings

eAM supports four perpetual costing methods, standard, average, fifo, and lifo. As a foundation, eAM uses the following five basic cost elements provided by Cost Management (See: [Cost Elements](#), *Oracle Cost Management User's Guide*):

- Material
- Material Overhead
- Resource
- Resource Overhead
- Outside Processing

Asset management requires different cost classifications. eAM provides these cost classifications, while maintaining the integrity of the basic costing rules. The five

cost elements above are translated into nine cost classifications that are familiar to maintenance managers.

Material, Labor, and Equipment are the cost elements. Contract, Operations, and Maintenance are the organization types that perform work on maintenance work orders. The following three cost categories are supported by eAM. They represent the department that executes the work on maintenance work orders.

Maintenance - The maintenance is performed by a maintenance department.

Operations - The maintenance is performed by an internal operation department.

Contract - The maintenance is performed by an outside contractor.

Each of the above cost categories are further classified as the following three cost elements, described below:

Material - Material transaction costs.

Labor - Labor resource transaction costs.

Equipment - Equipment resource transaction costs.

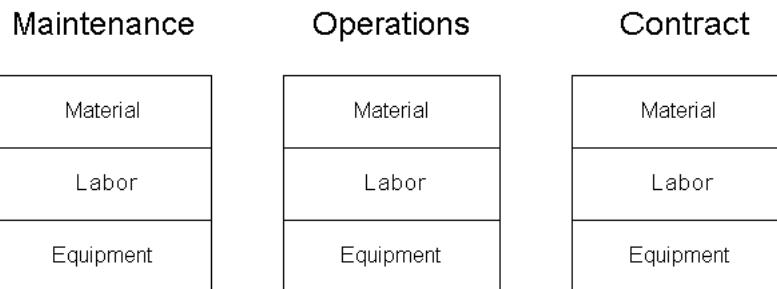
All material charges classify as Material cost elements. A resource charge of type person classifies as a Labor cost element. A resource charge of type machine is classified as an Equipment cost element. All other resource types are classified by the default cost element in the eAM Parameters (See: [Defining eAM Parameters](#) on page 2-9).

For each department, a maintenance cost classification is identified to reflect the above breakdown. For the Material cost element, it is the cost category (Maintenance, Operations, or Contract) of the department assigned to the routing of the operation. For the Labor cost element, it is the cost category of the resource's owning department. For the Equipment cost element, it is the cost category of the asset's owning department.

The following diagram depicts the nine eAM specific cost classifications:

Figure 6–1 Maintenance Cost Classifications

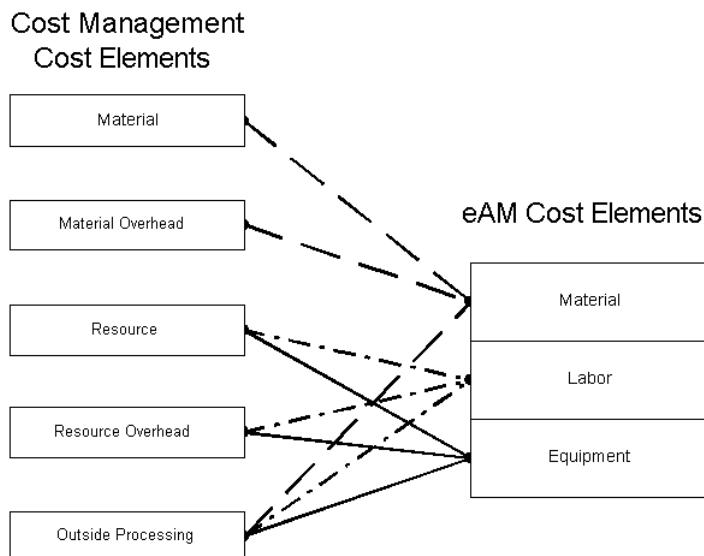
Nine Maintenance Cost Classifications



eAM Mappings

The above nine maintenance specific cost classifications are mapped to the five basic cost elements (Material, Material Overhead, Resource, Resource Overhead, and Outside Processing) provided by Cost Management. As maintenance work orders are transacted, the costs are collected and charged to the general ledger, based on the illustrated mappings below.

The following diagram illustrates that eAM Material cost classifications are mapped to Material, Material Overhead, and Outside Processing. Labor and Equipment cost classifications are mapped to Resource, Resource Overhead, and Outside Processing.

Figure 6–2 Cost Element Mappings

Setting Up eAM Cost Management

You can reference work that has been completed to review operations, resources, and costs. This information can help you understand the scope of work and the process by which it is completed. In order to capture the costs for all work within eAM, some key setups need to be in place:

- Determine a default cost element.
- Determine, by department, a cost category.

First, determine a default cost element (Material, Labor, or Equipment) when setting up the eAM Parameters. See: [Defining eAM Parameters](#) on page 2-9. This will be used when there is not a pre-defined mapping from the perpetual cost element in eAM. For example, department overheads are not linked to a particular eAM cost element for cost analysis. Therefore, the default cost element determines which element carries the cost in analysis. Additionally, an outside processing type of Currency, Amount, and Miscellaneous are not linked to a particular eAM cost element. When one of those types is used in outside processing, the costs will be

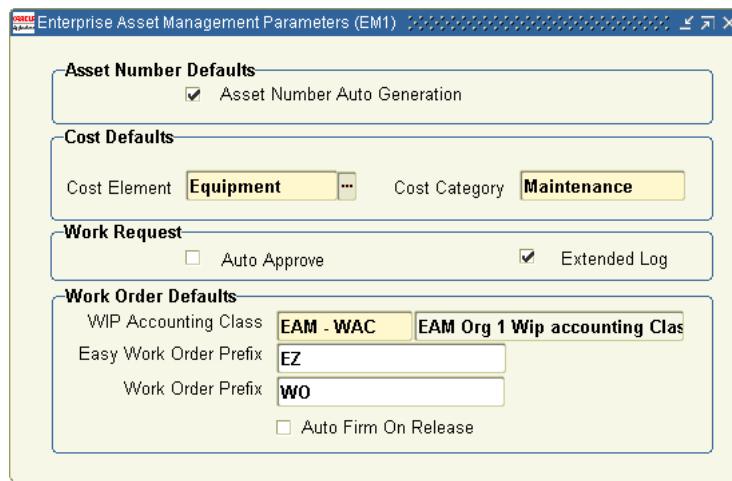
allocated to the default cost element at the organization level (See: [eAM Costing Methods and Mappings](#) on page 6-2). The pre-determined mappings are as follows: (See: [eAM Costing Methods and Mappings](#) on page 6-2)

Finally, determine by department which cost category (Maintenance, Operations, or Contract) you will use to map to the eAM cost elements.

To determine a default cost element and cost category:

1. Navigate to the [Enterprise Asset Management Parameters](#) window.

Figure 6–3 Enterprise Asset Management Parameters Window



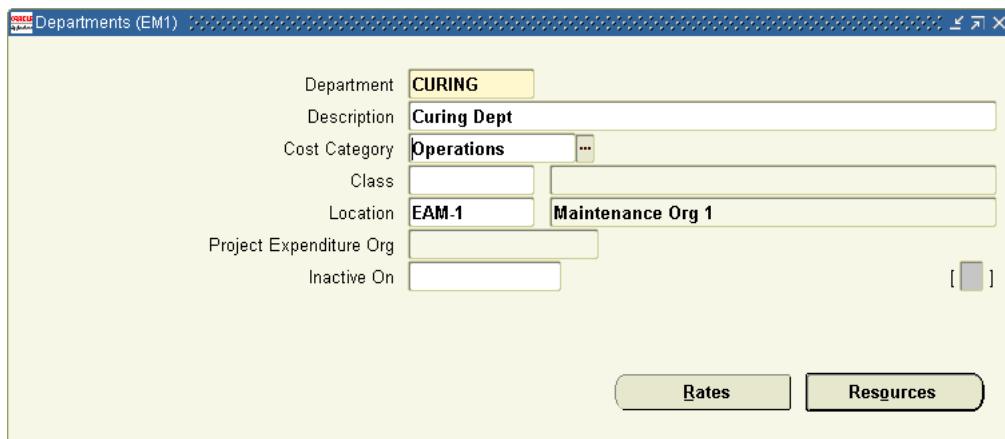
2. In the Cost Defaults region, select an eAM Cost Element to indicate how to capture cost overheads, and any miscellaneous resource costs. Valid values are Equipment, Labor, and Material.
3. Select a Cost Category to be used as the default for departments that do not have a cost category defined. Department costs are then posted to the appropriate cost classification. Valid values are Maintenance, Operations, and Contract.

See Also:

For information on all remaining fields, See: [Defining eAM Parameters](#) on page 2-9

To determine a cost category by department:

1. Navigate to the [Departments](#) window.

Figure 6–4 Departments Window

2. Select a Cost Category from the list of values. Valid values are Maintenance, Operations, and Contract.

Note: It is not required to provide a cost category for a department (crew). However, if you do not provide a cost category for a department (crew), costs for that crew will be allocated to the cost category specified in the eAM parameters (See: [Defining eAM Parameters](#) on page 2-9). Each time costs for that element are charged to a work order, the default cost category specified in the eAM parameters will be used for reporting and analysis.

See Also:

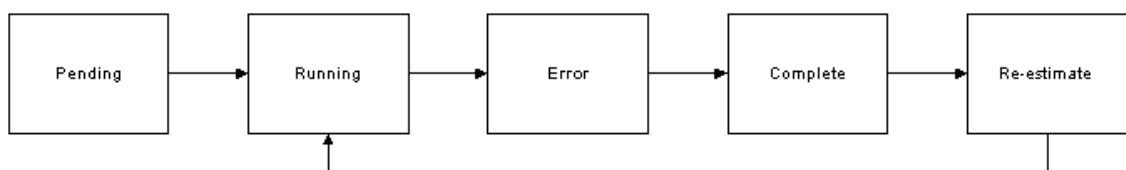
For information on all remaining fields, See: [Defining Departments and Resources](#) on page 2-13

eAM Cost Estimation

Estimating costs of maintenance work orders is often necessary for planning and budgeting purposes. The Work Order Cost Estimation process estimates the costs of all materials and resources exploded or entered on a maintenance work order, giving you the ability to plan and budget your costs. Estimated and actual costs for a work order may differ because all materials or resources associated with a work order may not actually be used when the work order is executed. For example, an operation may end up being handed over to another crew (See: [Managing Operations](#) on page 13-29).

You can initiate this cost estimation process based on the maintenance work order material and resource requirements. From the work order window, you can view the status of the cost estimation process.

Figure 6–5 Cost Estimation Lifecycle



The cost estimation process is run via a concurrent request, and can be run at any time:

- *Pending* - The work order is waiting to be picked up by the Work Order Cost Estimation process.
- *Running* - The cost estimator process is running.
- *Error* - The cost estimator has run, but there was an error.
- *Complete* - The Work Order Cost Estimation process has completed successfully. The cost estimation process cannot run.
- *Re-estimate* - You have selected the Reestimate check box within the [Maintenance Work Order Value Summary](#) window, initiating the Work Order Cost Estimation process to re-estimate the costs for the work order. In this case, the work order has been estimated once or multiple times.

Note: The cost re-estimation process can only run after the Work Order Cost Estimation process has run at least once.

To view the status of the Work Order Cost Estimation process:

1. Navigate to the [Maintenance Work Order Value Summary](#) window.

Figure 6–6 Maintenance Work Order Value Summary Window

The screenshot shows the 'Maintenance Work Order Value Summary' window for work order WO77323. The window includes fields for Asset Group (Building), Asset Number (Room200), Asset Activity (Clean Air Conditioning), Rebuild Asset Group, Rebuild Asset Number, Owning Department (Dept1), Completion Date (30-MAY-2002), Work Order Status (Released), Parent Work Order, Estimation Status (Complete), Last Estimate Id (1538483), Last Estimate Date (31-MAY-2002), and a checkbox for Reestimate. Below this, there are tabs for Actual Costs, Estimates (selected), and Variances. The Estimates section displays a table of costs by category: Maintenance (Material: 1,934.31, Labor: 430.00, Equipment: 0.00), with a Job Total of 1,934.31. A 'Details' button is at the bottom right.

Cost Category	Material	Labor	Equipment
Maintenance	1,934.31	430.00	0.00
Job Total	1,934.31	430.00	0.00

- a. The Estimation Status field displays the status of the Work Order Cost Estimation process for the current work order.
- b. If you select the Reestimate check box, you are initiating the Work Order Cost Estimation process to re-estimate the costs for the work order. You can only re-estimate costs for work orders that have been estimated at least once. Once the Work Order Cost Estimation process runs, prior estimates are not saved.

Note: Once the Work Order Cost Estimation process has run, the Reestimate check box needs to be selected in order for the process to run, again.

See Also:

For cost information on remaining fields within the Maintenance Work Order Value Summary window, See: [Viewing Cost Information](#) on page 6-11

Viewing Cost Information

You can view the costs of Material, Labor, and Equipment for maintenance work orders associated with a work order's asset. You can view different types of transactional cost information, including actual, estimated, variance, and summary. eAM maintains the integrity of the asset hierarchy. For example, when viewing the parent asset, you can view just the parent asset's costs, or the costs of the parent including all child costs rolled up to the parent level.

You can view cost information from within the forms or self service maintenance applications. You can view asset costs, along with its childrens' costs rolled up, within the self service maintenance application.

To view cost information within the forms application:

1. Navigate to the [Work Order](#) window. Find a work order that you want to view costs for.

Figure 6–7 Work Order Window

The screenshot shows the 'Work Order (EM1)' window with the following details:

- Work Order:** WO77323
- Asset Number:** Room200
- Asset Group:** Building
- Asset Activity:** Clean Air Conditioning
- Class:** EAM - WAC
- Status:** Released
- Activity Specification:**
 - Activity Type:** Maintenance
 - Activity Cause:** Normal Wear
- Scheduled Dates:**
 - Start: 30-MAY-2002 09:55:00
 - Completion: 30-MAY-2002 16:55:00
 - Duration(hours): 7
- Work Order Type:** []
- Main Tab:** Selected tab.
- Project, Schedule Group:** Unselected tab.
- Rebuild:** Unselected tab.
- Work Request:** Unselected tab.
- Bill, Routing:** Unselected tab.
- Owning Department:** Dept1
- Priority:** Medium
- Requested Start Date:** 30-MAY-2002 09:55:50
- Requested Due Date:** []
- Shutdown Type:** Required
- Checkboxes (on the right):**
 - Firm
 - Notification Required
 - Tagout Required
 - Planned
- Buttons at the bottom:** Operations, Materials, Resources, Asset Route, Costs.

2. Choose Costs.

Figure 6–8 Maintenance Work Orders Window

The screenshot shows the Maintenance Work Orders (EM1) window. At the top, there is a toolbar with icons for search, refresh, and close. Below the toolbar is a header row with columns: Work Order, Asset Activity, Asset Group, Asset Number, Rebuild Asset Group, and Rebuild Asset Number. The first row contains data: WO77323, Clean Air Conditi, Building, Room200, (empty), and (empty). Below this is a large grid of rows, each with a blue square icon in the first column. To the right of the grid are vertical scroll bars. Below the grid are several search and filter fields: Description (text box), Class (button with value EAM - WAC), Department (button with value Dept1), Status (button with value Released), and Accounting Information by Period (From Period: 01-MAY-2002, To Period: 31-JUL-2002, Value Summary button).

3. In the Accounting Information By Period region, choose the dates that identify the accounting period you want to view.
4. Choose Value Summary.

Figure 6–9 Maintenance Work Order Value Summary Window

The screenshot shows the 'Maintenance Work Order Value Summary' window for work order WO77323. The window has a toolbar at the top with 'Period From' set to '01-MAY-2002', 'Period To' set to '31-JUL-2002', and a 'Refresh' button. Below the toolbar are several input fields: Asset Group ('Building'), Asset Number ('Room200'), Asset Activity ('Clean Air Conditioning'), Rebuild Asset Group (empty), Rebuild Asset Number (empty), Owning Department ('Dept1'), Completion Date ('30-MAY-2002'), Work Order Status ('Released'), Parent Work Order (empty), Estimation Status ('Complete'), Last Estimate Id ('1538483'), and Last Estimate Date ('31-MAY-2002'). There is also a checkbox for 'Reestimate'. A vertical scroll bar is visible on the right side of the main area.

Cost Category	Material	Labor	Equipment
Maintenance	1,934.31	1,504.31	430.00
			0.00
Job Total	1,934.31	1,504.31	430.00
			0.00

Below the table are tabs for 'Actual Costs' (selected), 'Estimates', and 'Variances'. At the bottom right is a 'Details' button.

5. You can view total Material, Labor, and Equipment costs for the cost categories (Maintenance, Operations, or Contract) associated with the current work order. You can view totals for actual, estimated, or variance costs, depending on the tabbed region you select.

Actual Costs: If you select the Actual Costs tabbed region, the accumulation of all cost for material and resource transactions for the current maintenance work order displays, based on a specified period, or any specified selection criteria you entered.

Note: The Cost Manager process runs in the background to provide updated, actual cost information at user defined, periodic intervals, and/or when it is launched from the menu.

Estimated Costs: If you select the Estimates region, you can initiate the cost estimation process based on the maintenance work order material and resource requirements. The estimated costs of all materials and resources associated with the current maintenance work order display, enabling you to budget costs.

Note: The Work Order Cost Estimation process runs in the background to provide updated, estimated cost information at user defined, periodic intervals, and/or when it is launched from the menu.

Variance Costs: When you select the Variances tabbed region, the difference between the actual costs recorded and estimated costs display.

6. Choose Details to view the Material, Labor, and Equipment costs for each individual operation on the current work order's routing. You can view totals for actual, estimated, or variance costs, depending on the tabbed region you select.

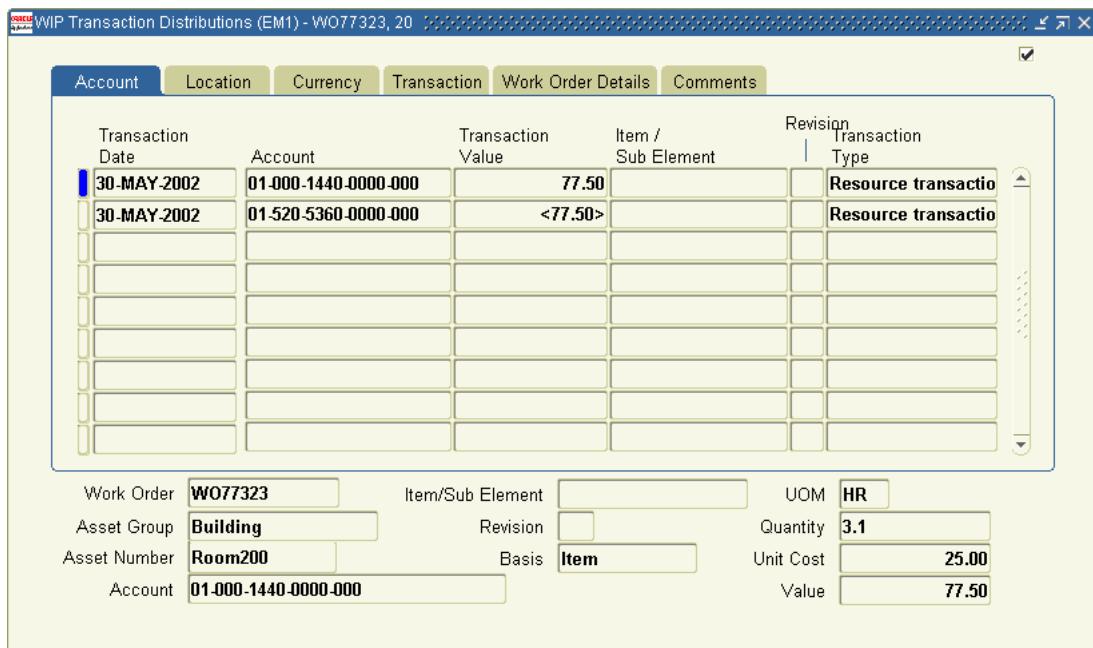
Note: Costs cannot be updated within this window.

Figure 6–10 Costs Details by Operation Window

Asset Group		Building	Estimation Status		Complete
Asset Number		Room200	Completion Date		30-MAY-2002
Asset Activity		Clean Air Conditioning	Owning Department		Dept1
Rebuild Asset Group			Work Order Status		Released
Rebuild Asset Number			Parent Work Order		
Period From		01-MAY-2002	Period To		31-JUL-2002
Actual Costs		Estimates	Variances		
Department Code		Operation Sequence Number	Total	Material	Labor
ELEC 1	10		1,516.81	1,504.31	12.50
ELEC 1	20		18.75	0.00	18.75
ELEC 1	30		62.50	0.00	62.50
ELEC 1	40		31.25	0.00	31.25
ELEC 1	50		31.25	0.00	31.25
ELEC 1	60		12.50	0.00	12.50
ELEC 1	70		6.25	0.00	6.25
		Total	1,679.31	1,504.31	175.00
Distributions					

7. Choose Distributions to view the specific accounts charged for an individual operation.

Figure 6–11 WIP Accounting Distributions Window



To view cost information within the self service maintenance application:

1. Navigate to the Assets page, and query an asset. See: [Obtaining Asset Information](#) on page 13-5.
2. Select the asset, then select Costs.

Figure 6–12 Costs Page

The screenshot shows the Oracle Asset Management Costs page. At the top, there's a banner with the Oracle logo and the text "Asset Management". Below the banner, the navigation bar includes "Home", "Assets" (which is the active tab), "Work Requests", "Work Orders", and "Work Plan". On the right side of the header are links for "Return to Portal", "Logout", and "Preferences". The main content area has a breadcrumb trail "Assets > Costs" and the title "Asset Costs(EAM)". Below this, asset details are listed: Asset Group "BUILDING", Asset Number "BUILDING300", Area "SFO", Owning Department "EAM-DEP01", and Asset Description "300 - 300 Oracle Parkway". A "Cost View Options" section contains dropdowns for "View" (set to "Actual Costs") and "View Cost By" (set to "Cost Category"), and date pickers for "Period From" and "Period To". A checked checkbox "Include Child Assets" has a "Go" button next to it. The next section, "Actual Costs including Child Assets", shows a table with data for three categories: Contract, Maintenance, and Operations. The table includes columns for "Cost Category", "Material (USD)", "Labor (USD)", "Equipment (USD)", and "Total (USD)". The total for all categories is \$350.00. Below the table is a "Cost Summary" section with the following values: Total Material Cost (USD) \$0.00, Total Labor Cost (USD) \$350.00, Total Equipment Cost (USD) \$0.00, and Total Cost (USD) \$350.00. At the bottom of the page are buttons for "Return to Asset Search", "Asset Details", "Hierarchy", "Configuration History", "Work Requests", and "Quality".

3. In the Cost View Options region, you can narrow your selection criteria.

- a. From the View drop down list, select the type of cost information to view. Valid values are Actual Costs, Estimated Costs, Variance Costs, and Cost Summary.

Actual Costs: This is the accumulation of all cost for material and resource transactions for associated maintenance work orders, based on a specified period, or any specified selection criteria you entered in the Cost View Options region. When you select the Actual Costs type from the list of values, the actual cost information for your specified criteria is provided.

Note: The Cost Manager process runs in the background to provide updated, actual cost information at user defined, periodic intervals, and/or when it is launched from the menu.

Estimated Costs: You can initiate the cost estimation process based on the maintenance work order material and resource requirements. When you select Estimated Costs type from the list of values, the estimated costs of all materials and resources associated with a maintenance work order display, enabling you to budget costs.

Note: The Work Order Cost Estimation process runs in the background to provide updated, estimated cost information at user defined, periodic intervals, and/or when it is launched from the menu.

Variance Costs: When you select Variance Cost type from the list of values, the difference between the actual costs recorded and estimated costs.

Cost Summary: When you select Cost Summary type from the list of values, the cost information from all work orders associated with the current asset will display.

- b. From the View Cost By drop down list, select how you would like to view your cost information. Valid values are Period and Cost Category.
 - If you selected Cost Category, you can view cost information by defined categories, such as Materials, Labor, and Equipment.

Material: All material and material overhead transaction costs will display.

Labor: All employee resource and resource overhead transaction costs will display.

Equipment: All material resource and resource overhead transaction costs will display.

- If you selected Period, optionally enter the Period From and Period To. Accounting Periods are defined within Oracle Inventory (See: [Maintaining Accounting Periods](#), *Oracle Inventory User's Guide*).

4. Select the Include Child Assets check box to roll up all costs for the current asset and its children. See: [Defining Asset Numbers](#) on page 2-46 to review how asset hierarchies are created.
5. Select Go to view cost element information. The information is broken down into nine eAM specific cost classifications. You will also see summary totals

(summarizing Contract, Maintenance, and Equipment) of all material, labor, and equipment costs.

6. Optionally, you can save or export your cost information to a spreadsheet by selecting Export.

See Also:

[Overview of Cost Management](#), *Oracle Cost Management User's Guide*

[Submitting a Request](#), *Oracle Applications User's Guide*

Transferring Invoice Variances to Maintenance Work Orders

You can transfer variances between purchase order price and invoice price, back to a maintenance work order, from your user-defined, adjustment account. This process (Transfer Shop Floor Invoice Variance) is available for both direct items and outside services. This enables you to value your maintenance costs at the actual costs.

Transferring invoice variance tasks include the following:

- [Viewing Simulated Transfer Details](#) on page 6-20
- [Transferring Invoice Variances](#) on page 6-21

See Also:

[Overview of Direct Item Procurement for eAM Work Orders](#) on page 7-2

[Overview of eAM Contractor Services](#) on page 8-2

For information on how to set up your variance accounts, see: [Defining WIP Accounting Classes](#), *Oracle Work In Process User's Guide*

Viewing Simulated Transfer Details

You can generate the Simulate Transfer Shop Floor Invoice Variance report to display the details of each invoice variance and a summary total of the variance amount that may transfer. The report format is similar to the Shop Floor Invoice Variance Report. You can view this report to determine whether or not you will go ahead with the variance transfer. You should complete this task before you run the Shop Floor Invoice Variance Report.

See Also:

For details on how to run this report, see: [Simulate Transfer Shop Floor Invoice Variance](#) on page 14-5.

Transferring Invoice Variances

The Transfer Shop Floor Invoice Variance process transfers the invoice variance from your specific adjustment account (See: [Defining WIP Accounting Classes, Oracle Work In Process User's Guide](#)) to the maintenance work orders. Account distribution entries are generated by this process to add the invoice variance amount back to the maintenance work order WIP accounts. This transfer can be run for one organization, and one adjustment account at a time. For each run, the process will create a unique batch number.

When the process has completed successfully, you can generate the Shop Floor Invoice Variance Report to view your transfer details (See: [Shop Floor Invoice Variance Report](#) on page 14-7). Each run completed by the transfer process is identified by a batch id number, generated by the process itself.

The accounting distribution created by the process is as follows:

Table 6-1 Account Distributions Generated

Account	Debit	Credit
WIP accounting class valuation accounts	XXX	-
Invoice variance adjustment account	-	XXX

To run the Transfer Shop Floor Invoice Variance process:

1. Navigate to the [Shop Floor Invoice Variance](#) window.
2. Select Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters

Transfer Description

Optionally, enter a description for the invoice transfer.

Specific Work Order

You can view the variance transfer details for a specific work order by selecting a work order from the list of values. Maintenance work orders with statuses of Cancelled, Closed, and Complete - No Charges will not be available within the list of available values.

IPV Item Type

You can transfer invoice variances for:

Direct Shop Floor Delivery items only

Outside Processing and Direct Shop Floor Delivery items

Outside Processing items only

Item Range

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify an item range for your transfer.

Specific Item

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify an item for your transfer.

Category Set

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify a Category Set for your transfer.

Specific Category

If you chose Outside Processing items only as the value for the IPV Item Type parameter and a value in the Category Set parameter, you can specify a specific category from the previously chosen category set.

Specific Project

You can choose to transfer invoice variances only for items associated to a specific project.

Adjustment Account

You can enter an adjustment account from which the invoice variance is transferred.

Invoice Cutoff Date

Enter a date. Approved and posted invoices through this date will be included in your transfer.

3. Choose OK.

4. Choose Submit.

See Also:

[Submitting a Request, Oracle Applications User's Guide](#)

Direct Item Procurement for eAM Work Orders

eAM Direct Item Procurement enables you to order items directly to your maintenance organization. This chapter contains the following topics:

- Overview of Direct Item Procurement for eAM Work Orders on page 7-2
- Enabling Direct Item Procurement on page 7-4
- Entering Requisitions for Direct Items on page 7-5
- Creating Purchase Orders from Requisitions on page 7-11
- Entering Purchase Orders for Direct Items on page 7-18
- eAM Direct Procurement Accounting on page 7-22

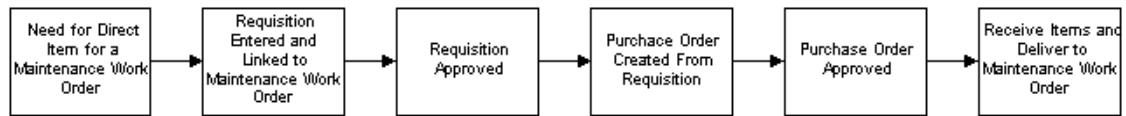
Overview of Direct Item Procurement for eAM Work Orders

One of the most important features included in eAM is Work Management (See: [Overview of eAM Work Management](#) on page 3-3). It enables you to service requests when an asset is problematic. Once the work request is approved, a work request can be linked to a work order. A work order includes a listing of all maintenance activities that must be performed on an asset. Material requirements for a work order (See: [Defining Material Requirements](#) on page 3-27) may include both stocked, non-stocked, and direct items. Stocked items are those that are either used frequently, or the criticality of short lead time to obtain replacement parts mandates that they be stocked in inventory. Non-stock items are included in the internal catalog, but the decision has been made to not maintain an inventory balance. These items are not transactable, but they can be procured. Direct items are those that are either used on an infrequent basis, or lead time to obtain replacement parts is not critical. These items do not need to be stocked in inventory, although they can be stocked in inventory with the Stockable check box (item attribute) left un-selected (See: [Inventory Attribute Group](#), *Oracle Inventory User's Guide*). These items are not included on the maintenance bill of material. If you have Oracle iProcurement installed, all item types may be included in your internal catalog.

A planner can procure direct items from the Maintenance Workbench (See: [Using the Maintenance Workbench](#) on page 3-59) to perform direct item delivery from the supplier. Purchase requisitions and purchase orders of such items capture the work order for which they are required. The work order must be at a status of Released. If the work order is project related, then the project and task information is captured in the purchase requisition.

The following diagram illustrates the integration between Enterprise Asset Management and Procurement. First, a maintenance work order is created in a status of Released. There is a need for a direct item. A requisition is created either manually, or via iProcurement, linked to the work order, and then approved. A purchase order is created from the requisition, and then approved. A purchase order can also be created manually, without first creating a requisition. In both cases, the purchase order needs to be approved. The items are received using a standard receipt routing, and delivered to the maintenance work order. The cost on the work order is recorded at the actual purchase order price.

Figure 7-1 Direct Item Procurement for eAM Work Orders Process



This section includes the following topics:

- [Enabling Direct Item Procurement](#) on page 7-4
- [Entering Requisitions for Direct Items](#) on page 7-5
- [Creating Purchase Orders from Requisitions](#) on page 7-11
- [Entering Purchase Orders for Direct Items](#) on page 7-18
- [eAM Direct Procurement Accounting](#) on page 7-22

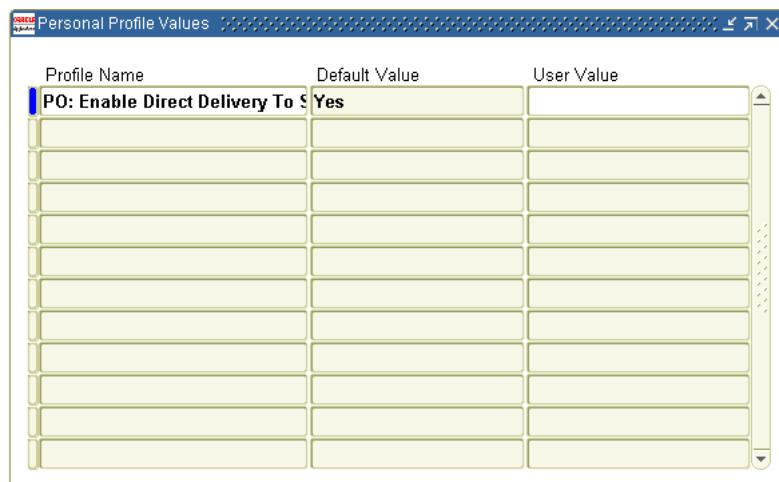
Enabling Direct Item Procurement

To enable direct item (both supplier catalog and non-catalog items) procurement for eAM work orders directly from an eAM work order, Oracle iProcurement must be installed. You must set the PO: Enable Direct Delivery To Shop Floor profile option to Yes. When this value is set to Yes, you can create an eAM-related requisition or purchase order. You can enter eAM specific information, such as work order and operation reference numbers, as well as identify a requisition line as having a destination of Shop Floor.

To enable direct item procurement:

1. Navigate to the [Personal Profile Values](#) window.

Figure 7–2 Personal Profile Values Window



2. Select PO: Enable Direct Delivery To Shop Floor from the Profile Name list of values.
3. Select Yes from the User Value list of values.
4. Save your work.

See Also:

[Purchasing Profile Options, Oracle Purchasing User's Guide](#)

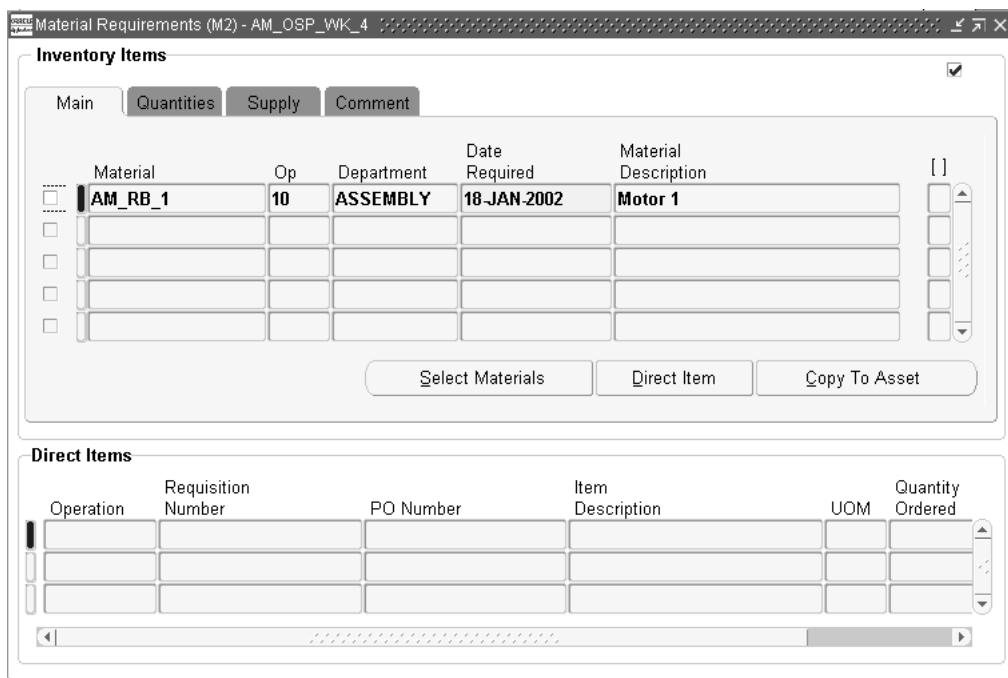
Entering Requisitions for Direct Items

Requisitions for direct items can be created within iProcurement or Purchasing. If you have Oracle iProcurement installed, you can access supplier catalog items directly from an eAM work order. If you create a requisition within iProcurement, the work order and operation information is created as you proceed to checkout. You can access a link to direct items using the Maintenance Workbench (See: [Using the Maintenance Workbench](#) on page 3-59), or within the Work Order window. The work order must be at a status of Released.

To enter requisitions for direct items using Oracle iProcurement:

1. Navigate to the [Work Orders](#) window.
2. Select a valid, released work order number (See: [eAM Work Order Statuses](#) on page 3-18) from the Work Order list of values.
3. Choose Find.
4. Choose Materials to view or update the material requirements for this purchase order (See: [Defining Material Requirements](#) on page 3-27). Once purchase orders or requisitions related to direct items have been created for this work order, they will be referenced in the Direct Items region of this window.

Figure 7–3 Material Requirements Window



5. Choose Direct Item to purchase items directly from supplier and non-supplier catalogs, using Oracle iProcurement. The related requisition or purchase order number will display in the Direct Items region.

Figure 7–4 iProcurement

The screenshot shows the Oracle iProcurement homepage. At the top, there's a navigation bar with links for Home, Shop, Requisition Status, and My Profile. Below the navigation is a breadcrumb trail: Catalogs > Shopping Lists > Non-Catalog Request. The main content area has two sections: 'Search' and 'Browse'. The 'Search' section contains a search input field, a language dropdown set to American English, a 'Go' button, and a 'Search Tips' link. To the right of the search section is a 'Time Saving Tip' box with text about shopping lists and a link to 'Shopping Lists'. The 'Browse' section has a link to 'Shop Supplier Sites' with text about buying from supplier stores.

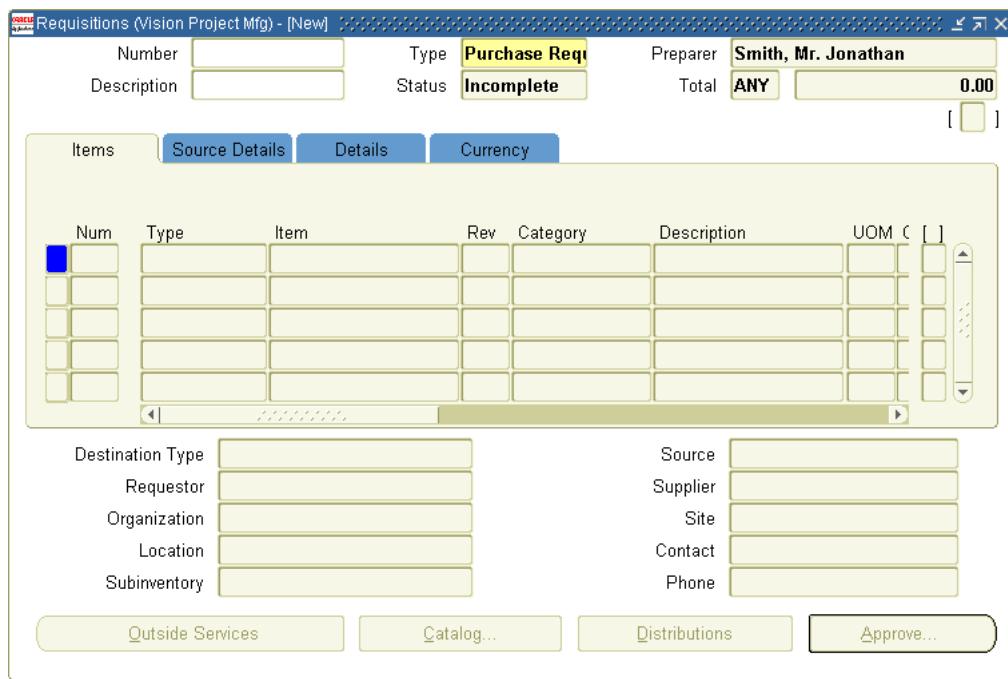
6. Save your work.

To enter requisitions for direct items via Oracle Purchasing:

If you do not have iProcurement installed, you can access direct item procurement functionality using Purchasing. This functionality is only available if you have Enterprise Asset Management installed.

You can enter a requisition within both the forms and self service applications. When entering a requisition within the forms application, this is done directly from the Requisitions window, and not from the eAM work order, as in Self Service Maintenance. See: [Work Orders](#), on page 13-22

1. Navigate to the [Requisitions](#) window.

Figure 7–5 Requisitions Window

2. Optionally, enter a requisition Description.
3. Select the Items tabbed region.
4. Select Goods from the item Type list of values.
5. Optionally, select an Item to purchase from the list of values. Items that are defined in Inventory, with the Stockable check box un-selected, are available for selection. See: [Inventory Attribute Group](#), *Oracle Inventory User's Guide*
6. Select the purchasing Category of the item you want to purchase. See: [Defining Categories](#), *Oracle Inventory User's Guide*.
7. Enter the Description of the item. This description should be meaningful, as it is used to procure the item. If this item is not inventoried, this is the only way an internal person will understand what item you are attempting to procure.
8. Select a UOM from the list of values. The unit of measure qualifies the quantity you enter on the purchase order line. When you choose a line type, its default

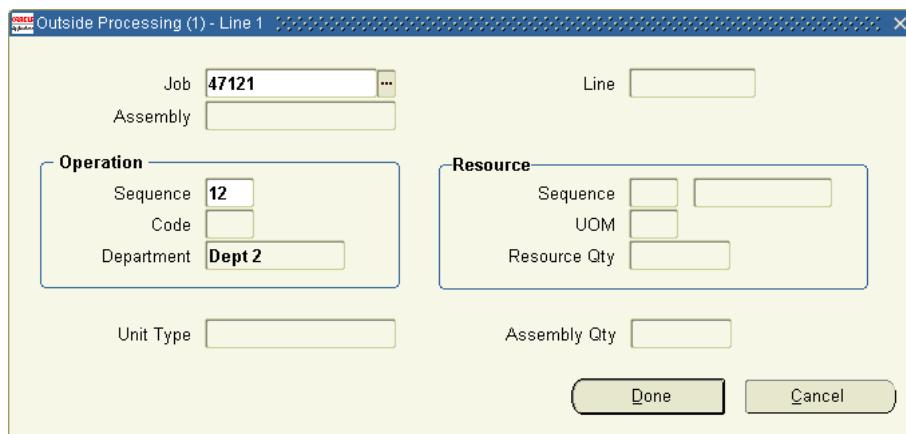
unto of measure populates this field. If you had chosen an item, its default unit of measure would have overridden the line type default. You can change the UOM until the item is received, bill, or encumbered.

9. Enter a Quantity to purchase.
10. Select a Need-By date.
11. Select Shop Floor from the Destination Type list of values for all direct item and non-stock item, eAM related requisitions. You can select a destination type of Shop Floor for all purchasable items that are not selected as Stockable in the item master (See: [Defining Items, Oracle Inventory User's Guide](#)).
When you select a destination type of Shop Floor, eAM recognizes this as a requirement to deliver the direct item to the maintenance work order.
12. The Destination Organization list of values will only display those organizations where the item is non-stockable, if the Destination Type is Shop Floor.

Note: For information on all remaining fields on this window, See: [Entering Requisition Lines, Oracle Procurement User's Guide](#).

13. Choose Outside Services. You can access this window from the Requisition, Purchase Order, and Release windows. This is only enabled if the Destination Type previously specified is Shop Floor.

Figure 7–6 Outside Services Window



14. Select a work order from the Job list of values. Only Released maintenance work orders are available for selection. Once a work order is selected, any eAM project and task information associated with the work order is copied to the corresponding Project and Task fields within the Project tabbed region in requisitions or purchase order Distributions window.
15. Select an Operation Sequence from the list of values. The purchased material will be associated with this operation on the current work order. Purchasing displays the operation Code and the Department.
16. Choose Done.

Note: For information on all remaining fields on the Outside Processing window, See: [Entering Outside Processing Information, Oracle Purchasing User's Guide](#).

17. Save your work.
18. The requisition needs to be approved (See: [Creating Process Definitions in Oracle Workflow Builder, Oracle Workflow Guide](#)). Once the requisition is approved, it will appear on the eAM work order, and can be viewed in Purchasing.

See Also:

[Entering Requisition Headers, Oracle Purchasing User's Guide](#)

For information on remaining fields in the Requisitions window, See: [Entering Requisition Lines, Oracle Purchasing User's Guide](#)

[Entering Requisition Distributions, Oracle Purchasing User's Guide](#)

Creating Purchase Orders from Requisitions

Once a requisition has been created and approved, you can run an AutoCreate process to create purchase orders.

To create purchase orders:

1. Navigate to the [Find Requisition Lines](#) window.

Figure 7–7 Find Requisition Lines Window

The screenshot shows the 'Find Requisition Lines' window for 'Vision Project Mfg'. The window has a title bar 'Find Requisition Lines (Vision Project Mfg)' and a toolbar with standard icons. The main area contains several search criteria fields:

- Approved: Yes (dropdown menu)
- Requisition: 4159 (text input field)
- Emergency PO Number: (text input field)
- Supplier Sourcing: (dropdown menu)
- Supplier: (text input field)
- Document Type: (text input field)
- Requestor: (text input field)
- Preparer: (text input field)
- Buyer: (text input field)
- Supplier Site: (text input field)
- Document: (text input field)
- Supplier List: (text input field)
- Show External Locations: (checkbox)
- Ship-To: (text input field)
- Minimum Amount: (text input field)
- Currency: (text input field)
- Rate Type: (text input field)

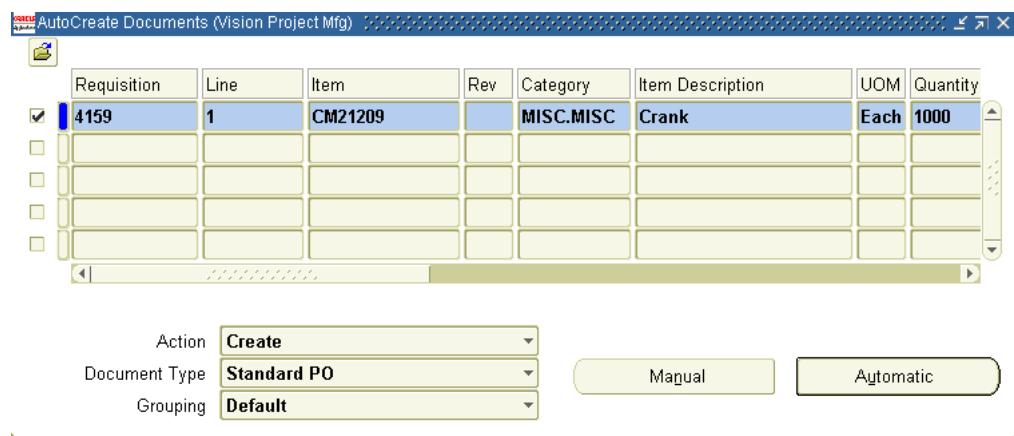
At the bottom left, there are two tabs: 'Item' (selected) and 'Status'. Below the tabs is a large search panel with fields for:

- Item, Rev: (text input field)
- Category: (text input field)
- Description: (text input field)
- Line Type: (text input field)

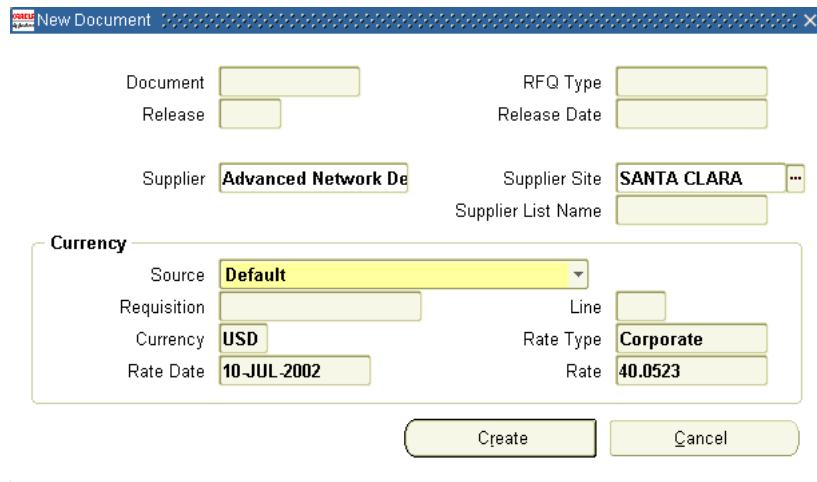
At the bottom right are two buttons: 'Clear' and 'Find'.

2. Choose Clear.
3. Enter the Requisition number. This requisition will be created into a purchase order.
4. Choose Find.

Figure 7–8 AutoCreate Documents Window

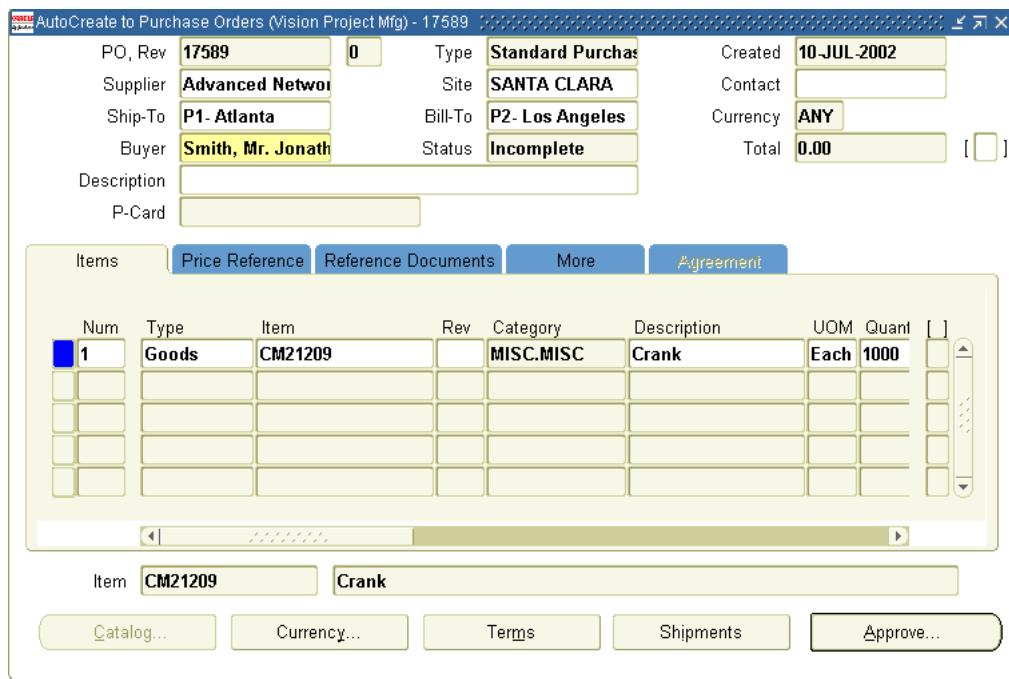


5. Select the requisition, then choose Automatic.

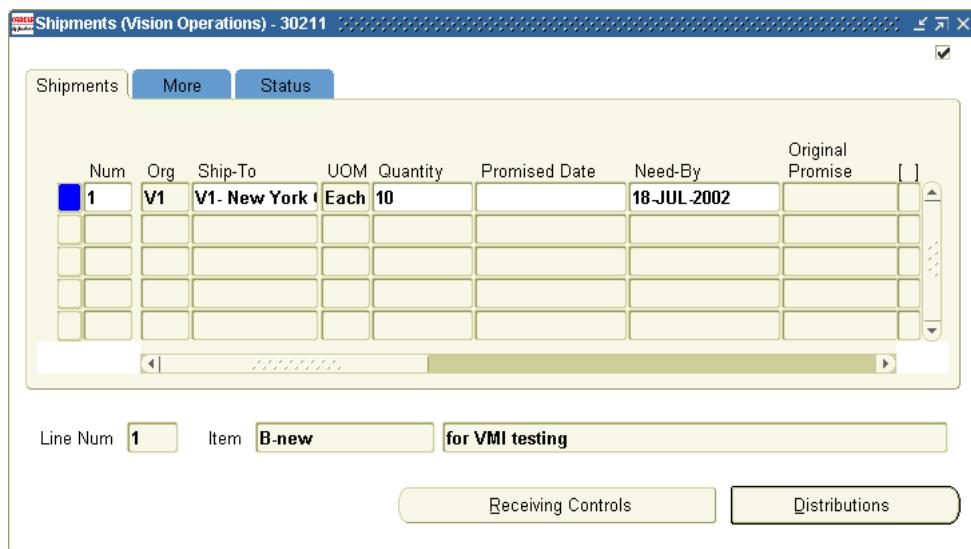
Figure 7–9 New Document Window

6. Select a Supplier from the list of values.
7. Choose Create, then make a note of the purchase order number created.
8. Choose OK. Verify that the item is of Type Goods.

Figure 7–10 AutoCreate To Purchase Orders Window

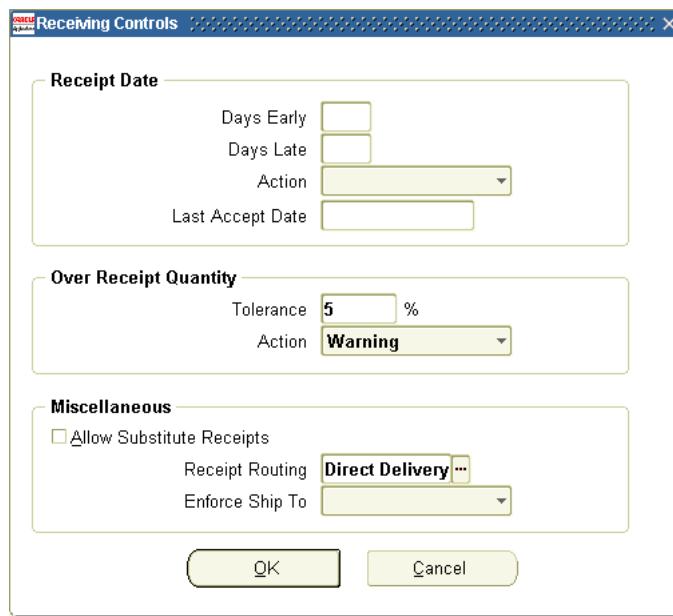


9. Choose Shipments.

Figure 7–11 Shipments Window

10. Choose Receiving Controls.

Figure 7–12 Receiving Controls Window



11. Select a value from the Receipt Routing list of values. This is the receipt routing to which you are assigning the procured items: Direct Delivery, Standard Receipt, or Inspection Required. See: [Receiving Controls, Options, and Profiles, Oracle Purchasing User's Guide](#).
12. Choose OK.
13. From the Shipments window, choose Distributions. Verify that the destination Type field is populated with Shop Floor, and the Subinventory is blank.

Figure 7–13 Distributions Window

The screenshot shows the 'WIP Transaction Distributions (EM1) - WO77323, 20' window. At the top, there are tabs: Account (highlighted in yellow), Location, Currency, Transaction, Work Order Details, and Comments. Below the tabs is a table with columns: Transaction Date, Account, Transaction Value, Item / Sub Element, Revision, and Transaction Type. Two rows of data are visible:

Transaction Date	Account	Transaction Value	Item / Sub Element	Revision	Transaction Type
30-MAY-2002	01-000-1440-0000-000	77.50			Resource transaction
30-MAY-2002	01-520-5360-0000-000	<77.50>			Resource transaction

Below the table, there are several input fields:

Work Order	WO77323	Item/Sub Element		UOM	HR
Asset Group	Building	Revision		Quantity	3.1
Asset Number	Room200	Basis	Item	Unit Cost	25.00
Account	01-000-1440-0000-000			Value	77.50

14. Choose Outside Services. Within the Outside Services window, verify the Job and Operation Sequence.

Note: For information on all remaining fields within the Outside Processing window, See: Entering Outside Processing Information, See: [Entering Outside Processing Information, Oracle Purchasing User's Guide](#).

15. Choose Done.
16. Save your work.
17. Choose Approve.
18. Within the Approve Document window, choose OK. Once the purchase order is approved, the purchase order can be received within Purchasing.

See Also:

[Entering Purchase Order Distributions, Oracle Procurement User's Guide.](#)

Entering Purchase Orders for Direct Items

Purchase Orders for direct items can be created within Purchasing. The work order must be at a status of Released.

To enter purchase orders for direct items via Oracle Purchasing:

1. Navigate to the [Purchase Orders](#) window.

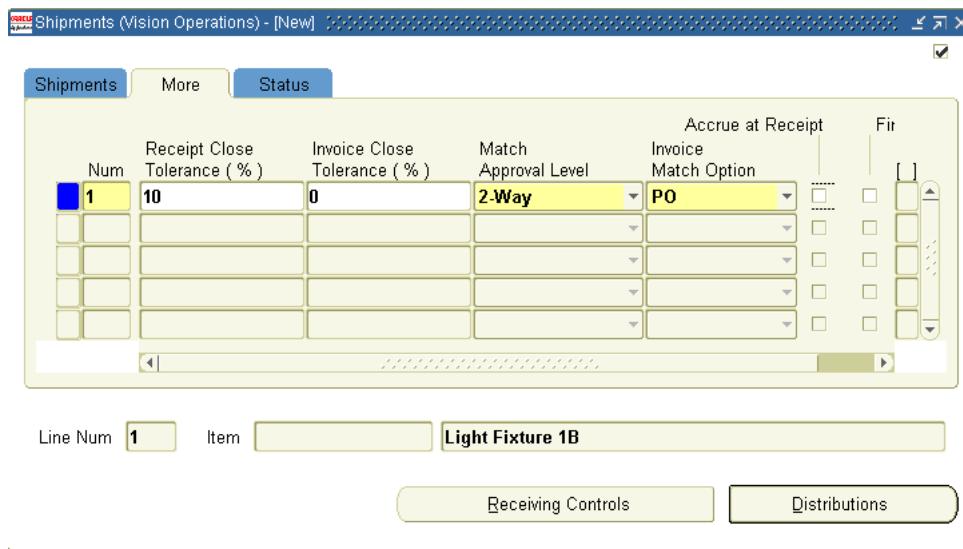
Figure 7–14 Purchase Orders Window

The screenshot shows the Oracle Purchase Orders (Vision Operations) - [New] window. At the top, there are several input fields: PO, Rev (0), Type (Standard Purchas), Created (13-AUG-2002), Supplier (Consolidated Sup), Site (DALLAS), Contact (Fitzpatrick, Eva), Ship-To (M1- Seattle), Bill-To (V1- New York City), Currency (USD), Buyer (Smith, Mr. Jonath), Status (Incomplete), Total (62.50), and Description (lighting fixtures for offices). Below this is a tabbed region with tabs: Items, Price Reference, Reference Documents, More, and Agreement. The Items tab is selected, displaying a grid of purchase order lines. The first line has Num (1), Type (Goods), Item (empty), Rev (empty), Category (CAPITAL.FURN&), Description (Light Fixture 1B), UOM (Each), and Quant (5). Below the grid is a search bar labeled 'Item' containing 'Light Fixture 1B'. At the bottom are buttons for Catalog..., Currency..., Terms, Shipments, and Approve... .

2. If you did not choose automatic purchase order generation in the purchasing options (Numbering tabbed region), enter a unique PO (purchase order) number. Otherwise, the number is generated when you save your work. See: [Defining Purchasing Options, Oracle Purchasing User's Guide](#). The Rev (revision) is displayed to the right of the number.

3. Select Standard Purchase Order from the Type list of values. The names of the document types can be modified in the Document Types window (See: [Defining Document Types, Oracle Purchasing User's Guide](#)).
4. Optionally, select a Supplier from the list of values. A supplier must be provided in order for the purchase order to be approved.
5. Select the supplier Site from the list of values. A site must be provided in order for the purchase order to be approved. Once the purchase order is approved, you can change the supplier site if the PO: Change Supplier Site profile option is set to Yes (See: [Purchasing Profile Options, Oracle Purchasing User's Guide](#)).
6. Optionally, select the Contact name from the list of values. This is the name of the contact at the supplier site.
7. Optionally, enter the Ship-To and Bill-To locations for the purchase order. If you entered a supplier site, the location values you assigned to the supplier or supplier site default into these fields. See: [Purchase Order Defaulting Rules, Oracle Purchasing User's Guide](#).
8. If the Enforce Buyer Name option in the Purchasing Options is set to yes, your name is displayed as the Buyer. Otherwise, you can enter the name of any buyer. See: [Defining Control Options, Oracle Purchasing User's Guide](#).
9. Enter a Description for the purchase order. This description does not print on the purchase order, and is for internal use only. If you want to add unlimited notes, use the attachments feature (See: [Attaching Notes to Purchasing Documents, Oracle Purchasing User's Guide](#)).
10. Select the Items tabbed region. For new purchase order lines, Purchasing displays the next sequential line Num (number) available. You can accept this number or enter any line number that does not already exist. This number is used for all tabbed regions in this window.
11. Select the Goods line Type from the list of values. Purchasing automatically copies the corresponding defaults based on the selected line type. See: [Defining Line Types, Oracle Purchasing User's Guide](#).
12. Optionally, select an Item to purchase from the list of values. Items that are defined in Inventory, with the Stockable check box un-selected, are available for selection. See: [Inventory Attribute Group, Oracle Inventory User's Guide](#).
13. Select the purchasing Category of the item you want to purchase. See: [Defining Categories, Oracle Inventory User's Guide](#).

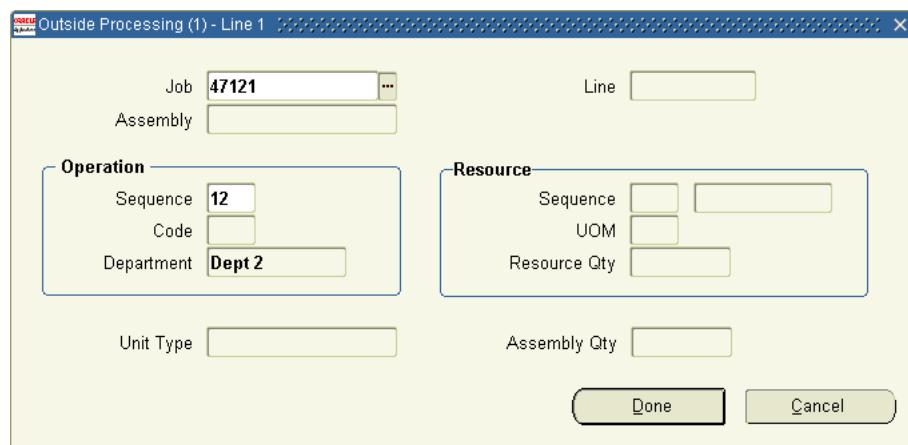
14. Enter the Description of the item. This description should be meaningful, as it is used to procure the item. If this item is not inventoried, this is the only way an internal person will understand what item you are attempting to procure.
15. Enter the Quantity you are purchasing.
16. Select a UOM from the list of values. The unit of measure qualifies the quantity you enter on the purchase order line. When you choose a line type, its default unit of measure populates this field. If you had chosen an item, its default unit of measure would have overridden the line type default. You can change the UOM until the item is received, bill, or encumbered.
17. Enter the unit Price for the item.
18. Choose Shipments to enter multiple shipments for standard and planned purchase order lines and to edit shipments Purchasing automatically created for you (See: [Entering Purchase Order Shipments, Oracle Purchasing User's Guide](#)).
 - a. Select the More tabbed region.

Figure 7–15 Shipments Window

- b. Select the Accrue at Receipt check box. This indicates that the items on this purchase order line will accrue at receipt.

19. Choose Distributions to enter distribution information for purchase order shipments or to view distributions that Purchasing automatically created for you. You can enter multiple distributions per shipment line, and enter information regarding paper requisitions (See: [Entering Purchase Order Distributions, Oracle Procurement User's Guide](#)).
20. Choose Outside Services to associate this purchase order with a maintenance work order.

Figure 7–16 Outside Services Window



21. Select a maintenance work order from the Job list of values. Only released maintenance work orders are available for selection. Once a work order is selected, any eAM project and task information associated with the work order is copied to the corresponding Project and Task fields within the Project tabbed region in requisitions or purchase order Distributions window.
22. Select an Operation Sequence from the list of values. The purchased material will be associated with this operation on the current work order. Purchasing displays the operation Code and the Department.
23. Choose Done.
24. Save your work.
25. The purchase order needs to be approved (See: [Creating Process Definitions in Oracle Workflow Builder, Oracle Workflow Guide](#)). Once the purchase order is

approved, it will appear on the eAM work order, and can be viewed in Purchasing.

See Also:

For information on all remaining fields within the Outside Processing window, [Entering Outside Processing Information](#), *Oracle Purchasing User's Guide*

[Entering Purchase Order Headers](#), *Oracle Purchasing User's Guide*

For information on all remaining fields within the Purchase Orders window, See: [Entering Purchase Order Lines](#), *Oracle Purchasing User's Guide*

eAM Direct Procurement Accounting

For all requisition or purchase order distribution lines with a destination type of Shop Floor (not related to outside processing), the amount (quantity * purchase price * exchange rate) is charged to the eAM Work Order Material account. The receiving process will create the following accounting entries:

Table 7–1 Receiving Process Entries

Account	Debit	Credit
Receiving Inspection	XXX	-
Accounts Payable Accrual	-	XXX

The material delivery process will create the following entries:

Table 7–2 Delivery Process Entries

Account	Debit	Credit
Work Order Material	XXX	-
Receiving Inspection	-	XXX

8

Contractor Services

eAM integrates with Outside Service Processing, enabling your maintenance environment to track outside service purchasing transaction and costing information for maintenance work orders. This chapter contains the following topics:

- Overview of eAM Contractor Services on page 8-2
- Setting Up Outside Service Processing on page 8-2

Overview of eAM Contractor Services

Contractor services are defined as work services provided by an organization or person who is not an employee of your company. Contractors are paid for their work based on an agreed upon contract or agreement. For example, a contractor service may be a painting service. It is also important to associate the purchasing transactions, such as the requisition and purchase order, to the work order. In order for this to be executed, the appropriate steps must be completed in Purchasing and eAM.

Outside Service Processing provides the functionality to create items that are contractor services, such as landscaping, include these items on a work order, and execute the related purchasing transactions as the work order is released. By creating a contract service as an Outside Service Processing item, the purchasing requisition is created when the work order is Released. The additional purchasing transaction, including the creation of the purchase order, the approval, and invoicing process, are then managed by Purchasing. This optional process ensures that the actual charges are applied to the work order.

The other option is to enable Standard Rate. This applies pre-determined standard rates, for contractor services, to the work order, without invoking the purchasing transaction.

This section includes the following topics:

- [Setting Up Outside Service Processing](#) on page 8-2

Setting Up Outside Service Processing

Purchasing recognizes items, while eAM recognizes resources. As a result, the contractor service item must be linked to a resource for the purchase order to be tied to the work order. This is associated via the Resources window. Additionally, the resource must be associated with a department. The department must specify the location where the services are to be delivered. This must be a valid location for the organization.

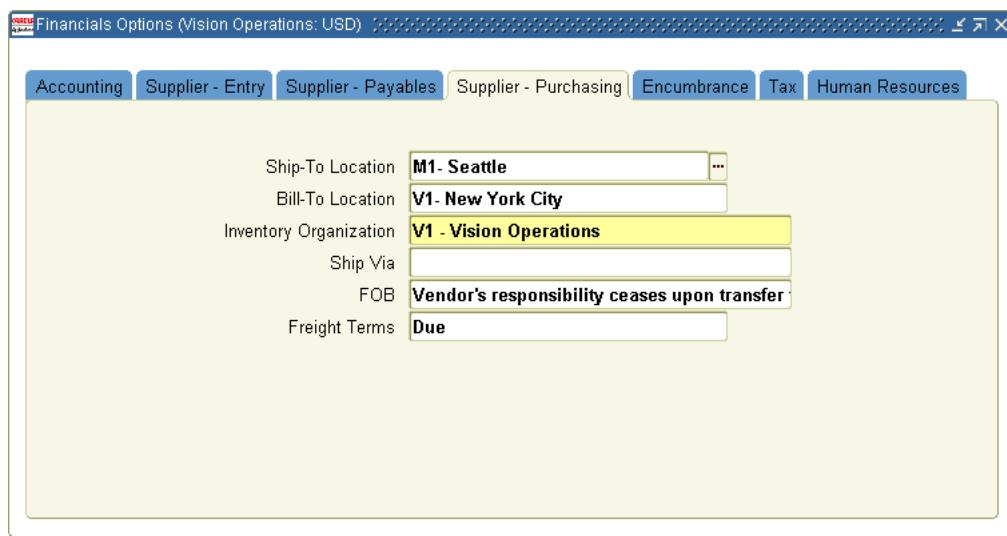
For each contractor service resource, you can determine whether the rate charged to the work order will be a standard rate or the actual amount, based on the purchase order confirmed price. This is set up within the Resources window, and may vary for each resource.

To set up purchasing information:

1. Navigate to the [Financials Options](#) window.

2. Select the Supplier-Purchasing tabbed region.

Figure 8–1 Financials Options Window



The options you define in this region, except for Inventory organization, are used as default values for the Purchasing region of the Suppliers window (See: [Suppliers, Oracle Payables User's Guide](#)). The supplier values default to new supplier sites for the supplier, which default to new purchasing documents for the supplier site.

3. Select Ship-To and Bill-To Locations from the lists of values. These are the names of the ship-to/bill-to location for the system default values. If the name you want does not appear in the list of values, use the Location window to select a new location (See: [Setting Up Locations, Using Oracle HRMS - The Fundamentals](#)).
4. Select an Inventory Organization from the list of values. You can associate each of your purchasing operating units with one inventory item master organization. When you associate your purchasing operating unit with an inventory organization, items you define in this organization become available in Purchasing. You can only choose an inventory organization that uses the same set of books as your Purchasing operating unit. Do not change the inventory organization after you have already assigned on to Purchasing.

5. Optionally, select a Ship Via code from the list of values. This is the freight carrier you use with suppliers. If the type of freight carrier you want does not appear in the list of values, use the Freight Carriers window to define a new shipping method. The value you enter here is the value in the Description field of the Freight Carriers window in Purchasing.
6. Select an FOB from the list of values. If the type of FOB you want is not in the list of values, use the Oracle Purchasing Lookups window to define a new FOB.
7. Select a Freight Terms code from the list of values. The freight terms for a supplier identify whether you or your supplier pays for freight charges on goods you receive. You can define new freight terms in the Oracle Purchasing Lookups window.
8. Save your work.

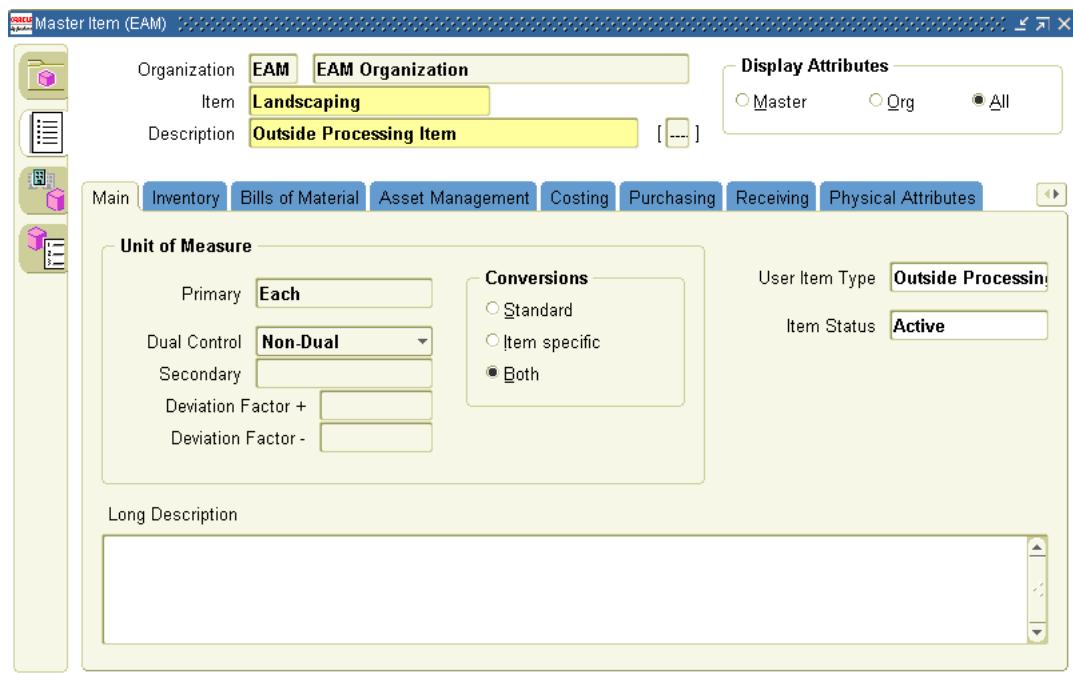
See Also:

[Supplier - Purchasing Financials Options, Oracle Payables User's Guide](#)

To set up outside services as items:

Create an item for each outside service, such as landscaping services.

9. Navigate to the [Master Item](#) window.

Figure 8–2 Master Item Window

10. Enter the item Name for the contractor service. For example, Landscape Service.
11. Select Copy From within the Tools menu.
12. Select @Outside Processing Item from the Template list of values.
13. Choose Apply.
14. Choose Done.
15. Within the Purchasing tabbed region, select the Unit Type.
Assembly: Costs reflect the list price set up in the Master Item.
Resource: Costs are based on the resource standard rate.
16. Enter a list price for this contractor service.
17. Select Each for the Unit of Issue. This is the unit of measure you use to issue the item from inventory.

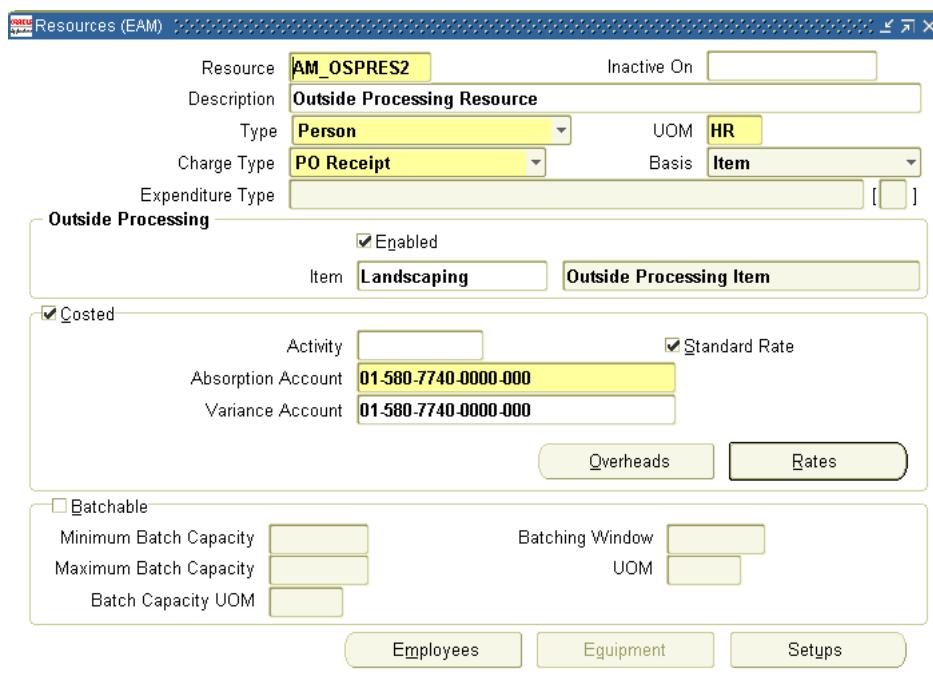
18. You use units of issue to round order quantities, minimizing shipping, warehousing, and handling costs. The unit of issue must be the same for all units of measure belonging to the same unit of measure class as the primary unit of measure. See: [Defining Unit of Measure Classes, Oracle Inventory User's Guide](#).
19. Save your work.

To link outside service items to resources:

You must define outside resources and link them to outside processing items in order to automatically generate purchase requisitions for outside processing. When you assign outside resources to a department, you also specify a usage rate or amount that determines the quantity you are requisitioning and/or charging to eAM work orders.

20. Navigate to the [Resources](#) window.

Figure 8–3 Resources Window



21. Select Miscellaneous from the Type list of values.
22. Select the PO Receipt Charge Type.
23. Select the Enabled check box to enable this resource for outside processing.
24. Select the outside services Item to associate with this resource.
25. Select the Costed check box to include this outside resource in your cost rollup. When you define a resource with a charge type of PO Receipt, Cost Management automatically defaults Outside Processing as the cost element.
26. Enter an Absorption Account. You must define an absorption account for each outside resource. The absorption account defaults from the organization's receiving account, which is debited when an outside processing item is received and which is subsequently credited when the item is delivered to eAM. The debit goes to the outside processing account associated with the accounting class of the work order when the item is delivered to eAM.
27. Optionally, enter a Variance Account. You must define a purchase price variance account for each outside resource you define. This account defaults from the organization's purchase price variance account.
28. Select the Standard Rate check box to charge the standard, non-purchase order amount to the work order. Choose Standard Rate Clear to charge the work order the actual purchase order amount.
29. Save your work.

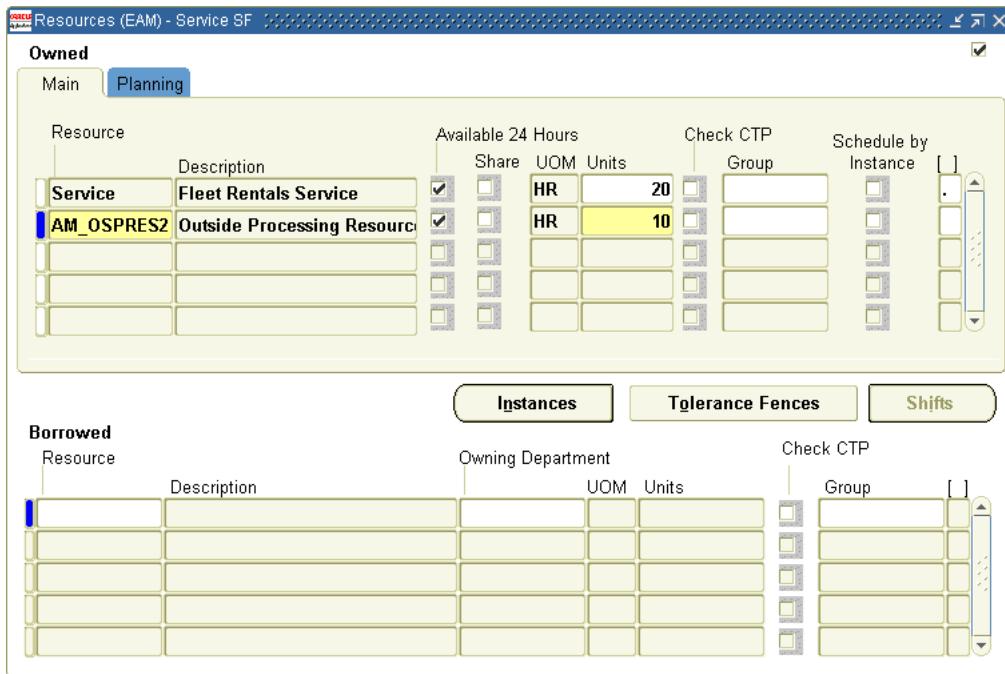
To link the outside service resource to a department:

30. Navigate to the [Departments](#) window.

Figure 8–4 Departments Window



31. Select the Department to associate with the outside service resource from the list of values.
32. Select a valid Location from the list of values.
33. Choose Resources.

Figure 8–5 Resources Window

34. Select the outside service resource from the Service list of values.
35. Optionally, indicate whether this resource is Available 24 Hours a day. You cannot assign shifts to a resource that is available 24 hours a day.
36. Optionally, indicate whether this department can share this resource and capacity with other departments.
37. Enter the number of capacity Units (resource units) available for this department.
38. Save your work.

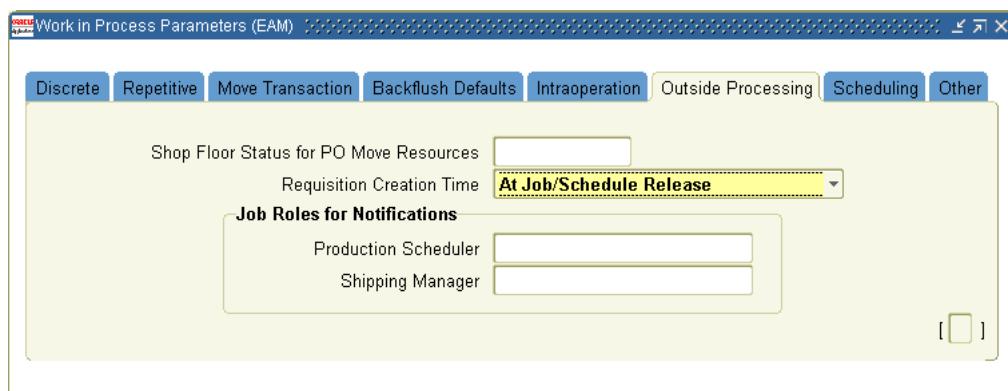
See Also:

For information on all remaining fields, See: [Defining a Resource, Oracle Bills of Material User's Guide](#).

To define WIP parameters:

39. Navigate to the [Work in Process Parameters](#) window.

Figure 8–6 Work in Process Parameters Window



40. Select a value for Requisition Creation Time.

At Job/Schedule Release - This enables automatic creation of a purchase order requisition, for contractor services, when the work order is Released.

Manual - Choose Manual to manually create requisitions.

At Operation - Within eAM, At Operation is equivalent to At Job/Schedule Release.

41. Save your work.

9

eAM Property Manager

The eAM and Property Manager integration enables properties defined in Property Manager as the creation of eAM assets. This chapter contains the following topics:

- Overview of eAM Property Manager on page 9-2
- Setting Up eAM Prerequisites on page 9-2
- Running the Export Process on page 9-2
- Property Manager Integration on page 9-5

Overview of eAM Property Manager

The eAM and Property Manager integration enables eAM assets to correspond with locations defined in Property Manager. The information transferred from Property Manager are the three-level land or building hierarchies, and the associated Location Codes within Property Manager. eAM also provides user-defined Area codes, enabling you to logically sort assets by where they are physically located. However, Area codes in eAM do not equal locations in Property Manager. See: [Setting Up Asset Areas](#) on page 2-12.

A concurrent request process transfers locations defined in Property Manager into eAM assets, associating eAM assets with locations. During this process, the Organization ID, Asset Group, and the Owning Department parameters are specified. These entities need to be set up before the process can be executed.

This seamless, one-way integration from Property Manager into eAM is invoked within the Property Manager concurrent process. This section includes the following topics:

- [Setting Up eAM Prerequisites](#) on page 9-2
- [Running the Export Process](#) on page 9-2
- [Property Manager Integration](#) on page 9-5

Setting Up eAM Prerequisites

The following need to be defined within eAM before the Export Locations to Enterprise Asset Management concurrent request process can export locations into eAM:

- asset group (See: [Defining Asset Groups](#) on page 2-39)
- organization (See: [Organization Setup](#) on page 2-5)
- owning department (See: [Defining Departments and Resources](#) on page 2-13)

Running the Export Process

Locations from Property Manager will always be exported in the form of a hierarchy. The first time running the process, the starting node of the hierarchy must be specified as the top level of building or land hierarchies. Thereafter, any level within the building or land hierarchy can be specified. However, child locations can only be exported if the parent location already exists.

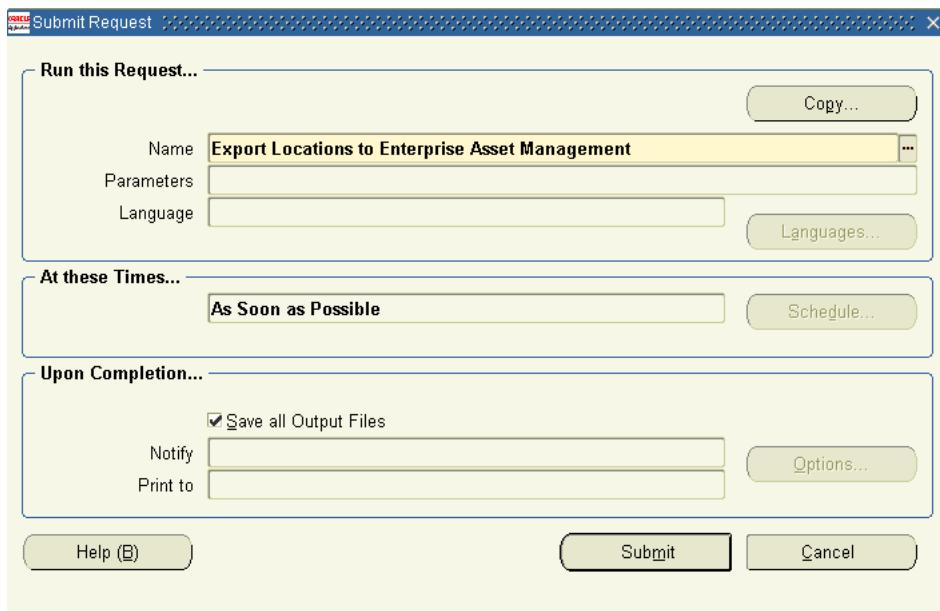
Once the process has run, any changes within Property Manager's building or land hierarchies will automatically change within eAM's corresponding asset hierarchies.

The Export Locations to Enterprise Asset Management process can be invoked from the Property Manager responsibility. This process can run in both create and update modes.

To run the Export Locations to Enterprise Asset Management process:

1. Navigate to the [Submit Request](#) window.

Figure 9–1 Submit Request Window



2. Select Export Locations to Enterprise Asset Management from the list of values.
3. Enter the following parameters:
 - Batch ID:** This is a user-defined parameter that is used to identify each export process by a unique identifier.

Location Code From: Enter the Location Code From. This code, defined in Property Manager, is the starting node of the building or land hierarchies. This code will reflect as the Enterprise Asset Management Asset, and is entered into only one Enterprise Asset Management Asset Group per transfer.

Location Code To: Enter the Location Code To. This code, defined in Property Manager, is the ending node of the building or land hierarchies. This code will reflect as the Enterprise Asset Management Asset, and is entered into only one eAM Asset Group per transfer.

Organization Code: Select the eAM enabled organization code from the list of values. This code is defined within eAM. See: [Organization Setup](#) on page 2-5.

Inventory Item ID: Select the asset group (defined within eAM) from the list of values. The eAM assets will be created in this asset group. See: [Defining Asset Groups](#) on page 2-39.

Owning Department ID: Select the Owning Department ID from the list of values. This will be the designated maintenance department to associate with the exported asset/location, within eAM.

4. Choose OK.
5. Choose Submit.

See Also:

[Submitting a Request, Oracle Applications User's Guide](#)

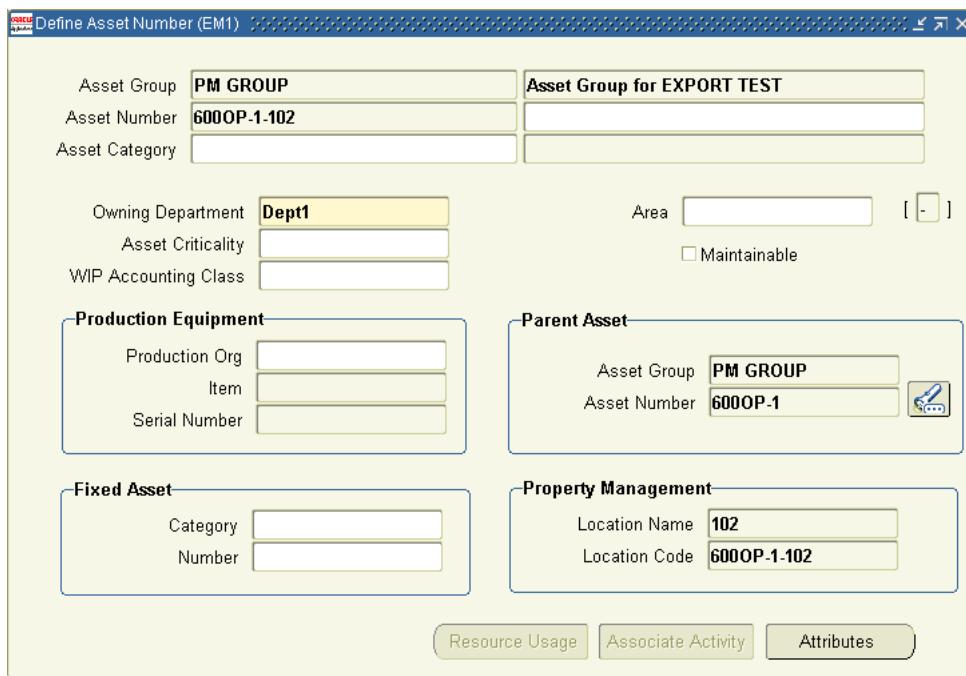
Property Manager Integration

Property Manager has the capability to store three-level land or building hierarchies, providing a parent/child location hierarchy. eAM provides a parent/child asset hierarchy. The integration enables locations defined in Property Manager to import into eAM as non-maintainable assets. The process also imports the land or building hierarchy, while respecting its current structure.

You can view this integration when viewing assets. Location information imports into fields within the Define Asset Number window.

To view and update assets:

1. Navigate to the [Find Asset Number](#) window.
2. Optionally, associate this asset to an Asset Category. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: [Setting Up Category Codes and Sets](#) on page 2-36.
3. Optionally, select an Asset Criticality code from the list of values, indicating the importance of the asset to the organization. This field is for information only.
4. Optionally, select a WIP Accounting Class from the list of values. This will identify the Expense cost elements associated with the work performed, such as materials, labor, and resources.
5. Optionally, enter the area where this asset resides. This is a user defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1 (See: [Setting Up Asset Areas](#) on page 2-12).
6. Select a Location Code from the list of values. This location code was exported from Property Manager into eAM.
7. Choose Find. The Define Asset Number window displays. Notice that the asset is the same as the location code.

Figure 9–2 Define Asset Number Window

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

Note: Locations import into eAM as non-maintainable assets; this check box is not selected. You will need to select this check box if you want the asset location to be maintainable.

9. Optionally, enter the Fixed Asset region information if Oracle Fixed Assets is installed. This is eAM's integration with Fixed Assets.

To associate the asset/location with a fixed asset, select a Category, which is a grouping of fixed assets, defined within Oracle Fixed Assets. This category is tied to a set of books, and must be the same set of books that is assigned to the current eAM organization. See: [Setting Up Asset Categories](#), *Oracle Assets User's Guide*.

10. Optionally, enter the Number if Oracle Fixed Assets is installed. This represents a fixed asset number that belongs to a fixed asset category, associated with the asset.
11. The Property Management fields, Location Name, and Location Code, will default from a Property Manager export process (Export Locations to Enterprise Asset Management) if Oracle Property Management is installed. These fields are not updateable. The Location Code and Asset Number fields reflect as the same number, and cannot be changed.

Note: Before the above information can be passed from Property Manager into eAM, Asset Groups need to first be established. See: [Defining Asset Groups](#) on page 2-39, and [Setting Up eAM Prerequisites](#) on page 9-2.

12. You can select Resource Usage only if the fields in the Production Equipment region are populated. This enables you to view production work orders and resources associated with this equipment.
13. Optionally, select Attributes to directly apply an asset attribute group template to this asset. See: [Setting Up Asset Attributes](#) on page 2-42.
Only existing, enabled asset attribute groups will display (See: [Setting Up Asset Attributes](#) on page 2-42). These asset attribute templates are optional; you do not need to enter values for all existing asset attribute groups. From this window, you cannot generate attribute groups.
14. Optionally, select Associate Activity to directly associate this Asset with an Asset Activity. See: [Asset/Asset Activity Association](#) on page 2-56.
15. Optionally, create file, URL, or text attachments to this asset by selection the paperclip Attachments icon.
16. Save your work.

Note: If a location is de-activated within Property Manager, provided there are no open work orders for the asset, the eAM asset associated with the location will also automatically de-activate.

See Also:

For information on all remaining fields, See: [Defining Asset Numbers](#) on page 2-46

[Properties Overview](#), *Oracle Property Manager User's Guide*

[Setting Up Oracle Property Manager](#), *Oracle Property Manager User's Guide*

eAM Process and Discrete Manufacturing

eAM integrates with process and discrete manufacturing, enabling your maintenance environment to identify eAM asset relationships with production equipment. This chapter contains the following topics:

- Overview of eAM Process and Discrete Manufacturing on page 10-2
- Organization Setups on page 10-2
- Associating Assets with Production Equipment on page 10-4
- Viewing Resource Usage on page 10-6

Overview of eAM Process and Discrete Manufacturing

eAM integrates with Process and Discrete Manufacturing, enabling your maintenance environment to identify eAM asset relationships with production equipment. This feature associates an asset or many assets to the production equipment located in an Outside Processing or Discrete organization. Once established, you can view the resource usage (discrete work orders, batches, or FPOs) emanating from production, associated with a maintainable asset.

This section includes the following topics:

- [Organization Setups](#) on page 10-2
- [Associating Assets with Production Equipment](#) on page 10-4
- [Viewing Resource Usage](#) on page 10-6

Organization Setups

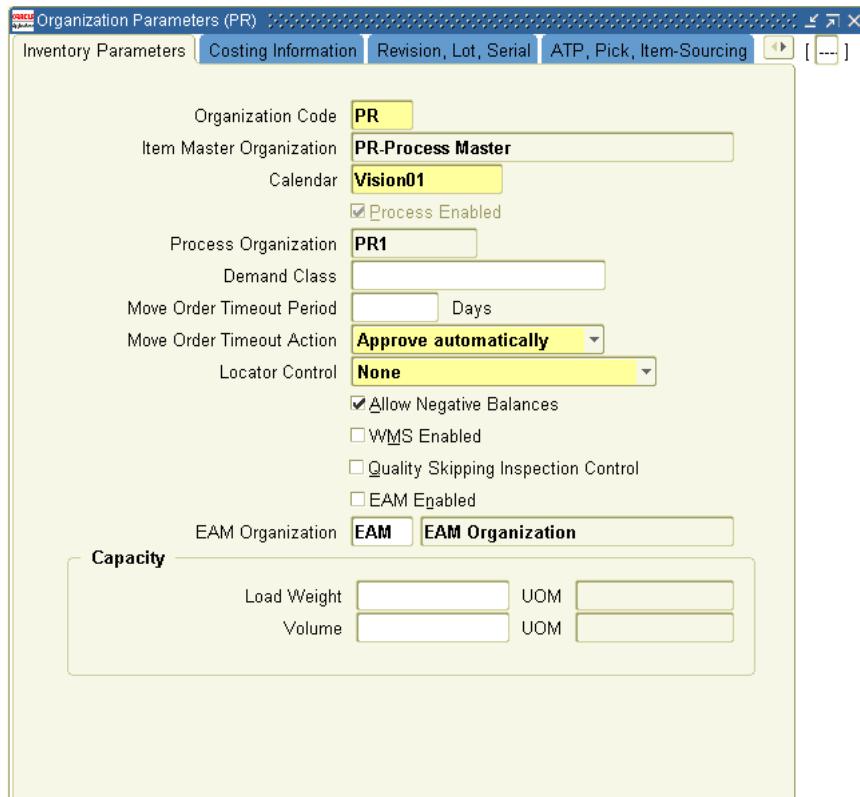
In order for eAM to integrate with process or discrete manufacturing, you need to determine which process or discrete manufacturing organization is associated with your eAM organization, respectively.

Process Manufacturing organizations are never the same as eAM organizations; they are mutually exclusive. Although it is possible, Oracle does not recommend commingling eAM and discrete manufacturing organizations. They should have separate organization codes.

To associate a process or discrete manufacturing organization with an eAM organization:

1. Navigate to the [Organization Parameters](#) window, and select a valid process enabled or discrete manufacturing organization from the Organization Code list of values.

Figure 10–1 Organization Parameters Window



2. Enter an EAM Organization to associate with the current Organization Code. This eAM organization is now linked to the organization code you selected above.

See Also:

[Creating an Organization](#), *Oracle Human Resources User's Guide*
[Organization Setup](#) on page 2-5

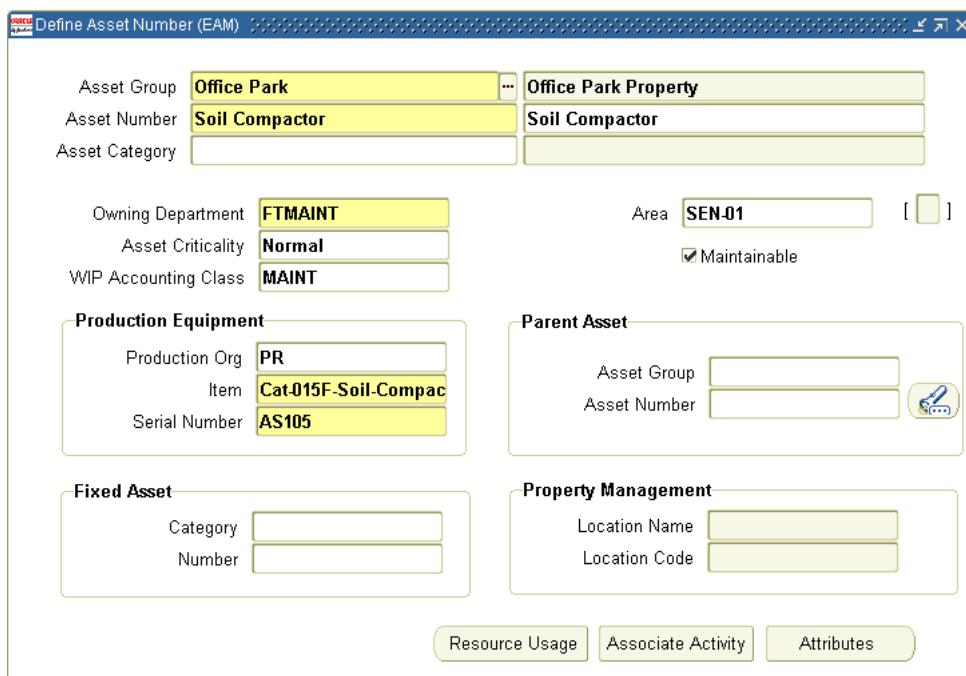
Associating Assets with Production Equipment

You can link an asset to production equipment defined within a process or discrete organization, as well as asset equipment defined within an eAM organization. This relationship is defined while defining or updating assets within eAM.

To associate an asset with production equipment:

1. Navigate to the [Define Asset Number](#) window.

Figure 10–2 Define Asset Number Window



2. Select an Asset Number from the list of values that you would like to link to production equipment.
3. In the Production Equipment region, select a valid Production Org from the list of values.

The list of values will display only those process and discrete organizations that have the current eAM organization selected as their maintenance organization (See: [Organization Setups](#) on page 10-2).

4. Select an Item from the list of values. This is mandatory if you populated the Production Organization field. Only items that were defined with an equipment template (See: [Item Templates](#), *Oracle Inventory User's Guide*), or with the Equipment item attribute enabled (See: [Physical Attributes](#), *Oracle Inventory User's Guide*), will be available.
5. This is the equipment type associated with the equipment that corresponds to the asset. If the asset group associated with the current asset is of type Equipment (See: [Defining Asset Groups](#) on page 2-39), then the fields in the Production Equipment region will default, and will not be updateable; the Item will default as the current asset group.
6. Enter a Serial Number. This is mandatory if you populated the Production Organization field. This is the specific name of the component within the Equipment Type, defined above.

See Also:

For information on all remaining fields, See: [Defining Asset Numbers](#) on page 2-46

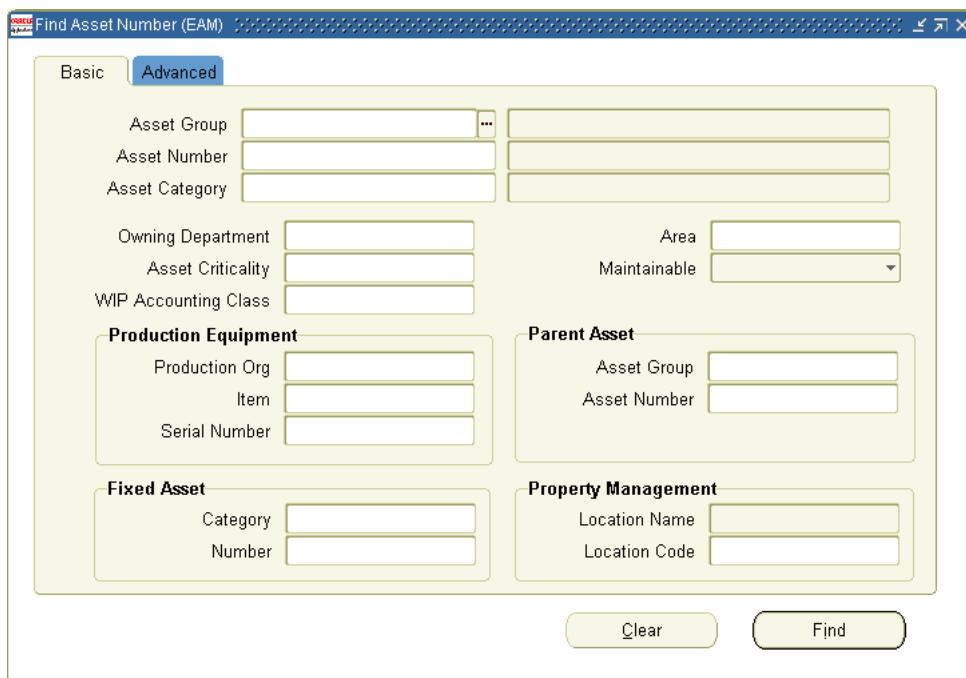
Viewing Resource Usage

You can view the resource usage, associated with a specific asset, created by discrete work orders, batches, or FPOs. You can view resource usage in both forms and self service maintenance applications.

To view resource usage from the forms application:

1. Navigate to the [Define Asset Number](#) window.
2. Choose the flashlight icon (Find) to display the Find Asset Number window.

Figure 10–3 Find Asset Number Window



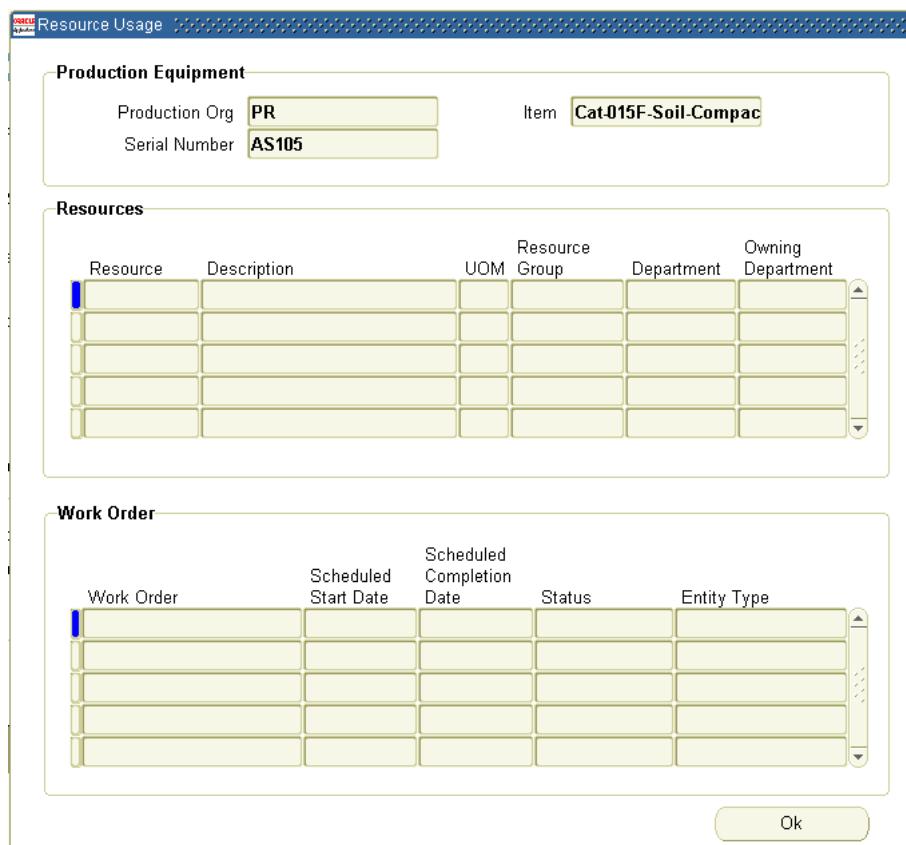
3. Find an Asset Number to view that has associated production equipment.
4. Choose Find to display the Define Asset Number window.

Figure 10–4 Define Asset Number Window

The screenshot shows the 'Define Asset Number (EAM)' window with the following data:

Asset Group	Office Park	...	Office Park Property
Asset Number	Soil Compactor		Soil Compactor
Asset Category			
Owning Department	FTMAINT	Area	SEN-01 []
Asset Criticality	Normal	<input checked="" type="checkbox"/> Maintainable	
WIP Accounting Class	MAINT		
Production Equipment			
Production Org	PR		
Item	Cat-015F-Soil-Compac		
Serial Number	AS105		
Parent Asset			
Asset Group			
Asset Number	<input type="text"/>		
Fixed Asset			
Category			
Number			
Property Management			
Location Name			
Location Code			

5. Choose Resource Usage.

Figure 10–5 Resource Usage Window

This window enables you to view resource demand (discrete work orders, batches, or FPOs) associated with the current asset. All work orders created against the current asset display.

6. Choose OK to return to the Define Asset Number window.

To view resource usage from the Assets page:

You can view resource demand within the self service maintenance application.

1. Navigate to the Assets page, and query an asset. See: [Obtaining Asset Information](#) on page 13-5.

2. Select the asset to view.
3. Choose Asset Details in the Asset Results region to view associated Asset Details, Asset Attributes, and Asset Activities.

Figure 10–6 Assets Page

The screenshot shows the Oracle Asset Management interface in Microsoft Internet Explorer. The title bar reads "Asset cap-70 - Microsoft Internet Explorer". The address bar shows the URL: "sp?akRegionCode=EAM_AD_ADVSEARCH_PAGE&akRegionApplicationId=426&retainAM=Y&addBreadCrumb=Y&transactionId=D01C873AC0531E4C". The main content area displays the following information:

- Asset Information:**
 - Asset Number: cap-70
 - Asset Description: BUILDING
 - Asset Group Description: TYPICAL COMMERCIAL BUILDING
 - Parent Asset Number: (empty)
 - Parent Asset Group: (empty)
 - Asset Category: FTMAINT
 - Owning Department: FTMAINT
 - Area: (empty)
 - Accounting Class: (empty)
 - Asset Criticality: Yes
 - Maintainable: Yes
 - Asset Route: No
 - Equipment Serial Number: 200 [View Equipment Details](#)
- Asset Attributes:**
 - Attribute Group Description: No data exists.
- Asset Activities:**
 - No data exists.

At the bottom, there are navigation links: "Return to Asset Search", "Hierarchy", "Configuration History", "Costs", "Work Requests", and "Quality". The taskbar at the bottom shows various open applications including Microsoft Word, Tarantella, Live365, CDE Load Bal, Asset cap-70, Oracle Application, SQL Navigator, and Yahoo!.

4. Optionally, select View Equipment Details if the current asset has associated equipment details. This link is next to the Equipment Serial Number field, and is only available if there are associated equipment details. You can view all equipment details in the production organization to which this asset is linked. You can also view resource demand (work orders) associated with the asset. This information is the integration with Process and Discrete Manufacturing.

Example 10–1 Equipment Details

The screenshot shows a Microsoft Internet Explorer window displaying the Oracle Equipment 200 (EAM) application. The URL in the address bar is: `http://126.96.36.199:8080/equip/200/add?addBreadCrumb=Y&equipOrg=1381&equipItemId=7972&equipSerial=200&objectId=210745&retainAM=Y&transactionId=D01C873AC0531E4C`.

The page title is "Equipment 200 - Microsoft Internet Explorer". The main navigation menu includes Home, Assets (selected), Work Requests, Work Orders, and Work Plan.

The breadcrumb navigation shows: Assets > Asset cap-70 > Equipment 200.

Equipment 200 (EAM)

Asset Group	BUILDING	Asset Category
Asset Number	cap-70	Area
Owning Department	FTMAINT	Asset Description

Equipment Details

Production Org	PR1
Item	PBlender
Item Description	blender in process mfg
Serial Number	200
Description	

Production Resources

Resource Name: C-MIXER, Description: connies Mixer, UOM: Wee, Department Code: PR1, Owning Department: PR1, Resource Group: 1-LABOUR, View Resource Usage: 60.

Navigation links at the bottom include: Home, Assets, Work Requests, Work Orders, Work Plan, Return to Portal, Logout, Preferences.

Copyright 2001 Oracle Corporation. All rights reserved.

The taskbar at the bottom of the browser window shows various open applications: Start, Inbox - Micro..., Tarantella - ..., Live365 - Pla..., CDE Load Bal..., Equipment 20..., Oracle Applic..., SQL Navigato..., and Yahoo! - ...

5. Optionally, select the View Resource Usage glasses icon to view all work orders created against the current asset for the current equipment resource. This enables you to view resource demand (discrete work orders, batches, or FPOs) associated with the asset. This information is eAM's integration with Process and Discrete Manufacturing.

Figure 10–7 Resource Usage

The screenshot shows a Microsoft Internet Explorer window displaying the Oracle Asset Management Work Orders page. The URL in the address bar is: 4428resCode=C-MIXER&deptId=8deptCode=PR1&resDesc=connies+Mixer& uom=Wee&resGroup=1-LABOUR&transactionId=D01C873AC0531E4C. The page title is "Work Orders - Microsoft Internet Explorer". The Oracle Asset Management logo is at the top left. Navigation links include Home, Assets, Work Requests, Work Orders (which is selected), and Work Plan. On the right, there are icons for Return to Portal, Logout, and Preferences. The main content area shows a "Work Orders" section with the following details:

Resource	C-MIXER	Description	connies Mixer
Department	PR1	UOM	Wee
Resource Group	1-LABOUR		

Below this, a table header for "Work Orders" is shown with columns: Work Order, Description, Scheduled Start Date, Scheduled Completion Date, Status, Entity Type, and Class. A message "No data exists." is displayed below the table. At the bottom of the page, there are links to Home, Assets, Work Requests, Work Orders, Work Plan, Return to Portal, Logout, and Preferences. A copyright notice "Copyright 2001 Oracle Corporation. All rights reserved." is also present.

See Also:

[Viewing Resource Usage](#), *Oracle Bills of Material User's Guide*

eAM Project Manufacturing

Enterprise Asset Management integrates with Project Manufacturing, enabling a seamless, integrated business solution for program management, configuration management, financial project management and reporting, project supply chain management and execution, and business intelligence. This chapter contains the following topics:

- Overview of eAM Project Manufacturing on page 11-2
- Project Definition on page 11-3
- Associating a Work Order with a Project on page 11-7
- Creating Requisitions or Purchase Orders on page 11-8
- Viewing the Requisition within the Maintenance Work Order on page 11-15
- Updating the Commitments for a Project on page 11-16
- Viewing Commitments on page 11-18

Overview of eAM Project Manufacturing

Enterprise Asset Management supports a variety of ways to define work breakdown structures, as commonly needed for program management, using third party project management systems (with on-line integration), project templates, Seiban number wizard, copy, and manual entry. To support financial project management and reporting, the combination of Oracle Projects and Oracle Project Manufacturing enables budgeting, project costing and tracking, project billing, project revenue recognition, project cash forecasting, and project cost collection, including multi-currency and tax regulations.

To support project supply chain management and execution, Project Manufacturing provides functionality for project sales management, project advanced supply chain planning, project procurement, project execution, and project quality management.

The following diagram illustrates the eAM Project Manufacturing process. First, a maintenance work order is linked to a project or task. If a requisition or purchase order is created for that work order, the commitments for the work order's associated project or task will be updated. The Project Cost Collector process (See: [Project Cost Collector, Oracle Cost Management User's Guide](#)) then passes the costs to the work order's associated project WIP accounting class accounts, rather than the WIP accounting class associated with the eAM asset or eAM organization.

Figure 11–1 eAM Project Manufacturing



This section includes the following topics:

- [Project Definition](#) on page 11-3
- [Associating a Work Order with a Project](#) on page 11-7
- [Creating Requisitions or Purchase Orders](#) on page 11-8
- [Viewing the Requisition within the Maintenance Work Order](#) on page 11-15
- [Updating the Commitments for a Project](#) on page 11-16
- [Viewing Commitments](#) on page 11-18

Project Definition

You can inquire on an existing, or copy a new project from a template or existing project. To create a new project, See: [Project Definition \(Assigning Project Parameters\)](#), *Oracle Project Manufacturing User's Guide*. You need to associate this project number with a planning group, a cost group, and a default WIP accounting class.

To inquire on an existing project:

1. Navigate to the [Find Projects](#) window.

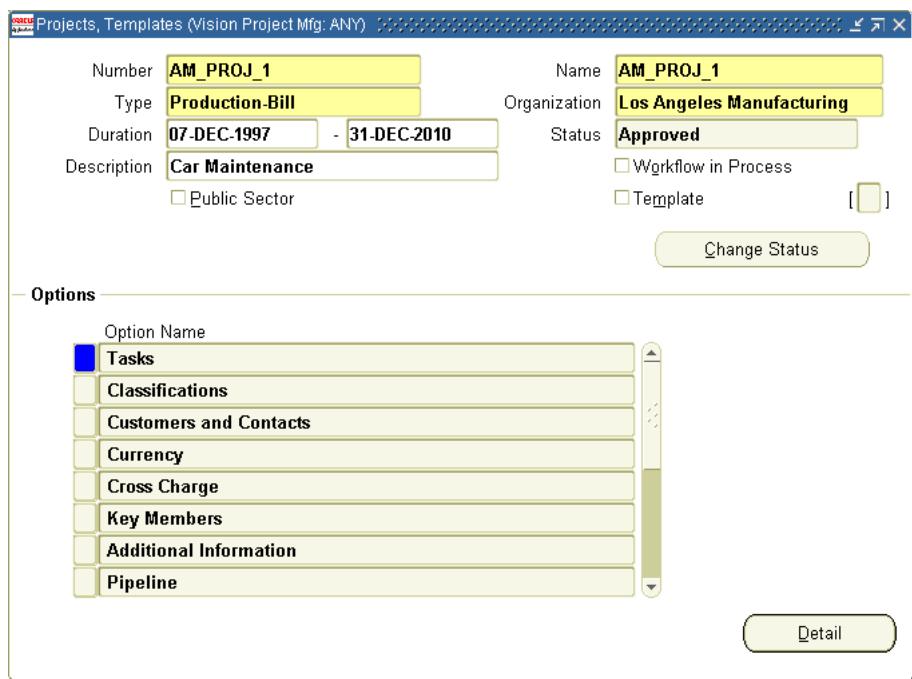
Figure 11–2 Find Projects Window

The screenshot shows the 'Find Projects' window with the title bar 'Find Projects (Vision Project Mfg: ANY)'. The window is divided into several sections:

- Project** section: Contains fields for 'Search For' (set to 'Projects, Templates'), 'Number' (containing 'AM_PROJ_1'), 'Name' (containing 'AM_PROJ_1'), 'Type', 'Organization', 'Status', 'Product Source', and 'Source Reference'.
- Classification** section: Contains fields for 'Category' and 'Class Code'.
- Key Member** section: Contains fields for 'Name', 'Number', and 'Role'.
- Customer** section: Contains fields for 'Name', 'Number', and 'Relationship'.
- Buttons at the bottom: 'Clear' and 'Find'.

2. Select a project from the Number list of values.
3. Choose Find.
4. Choose Open.

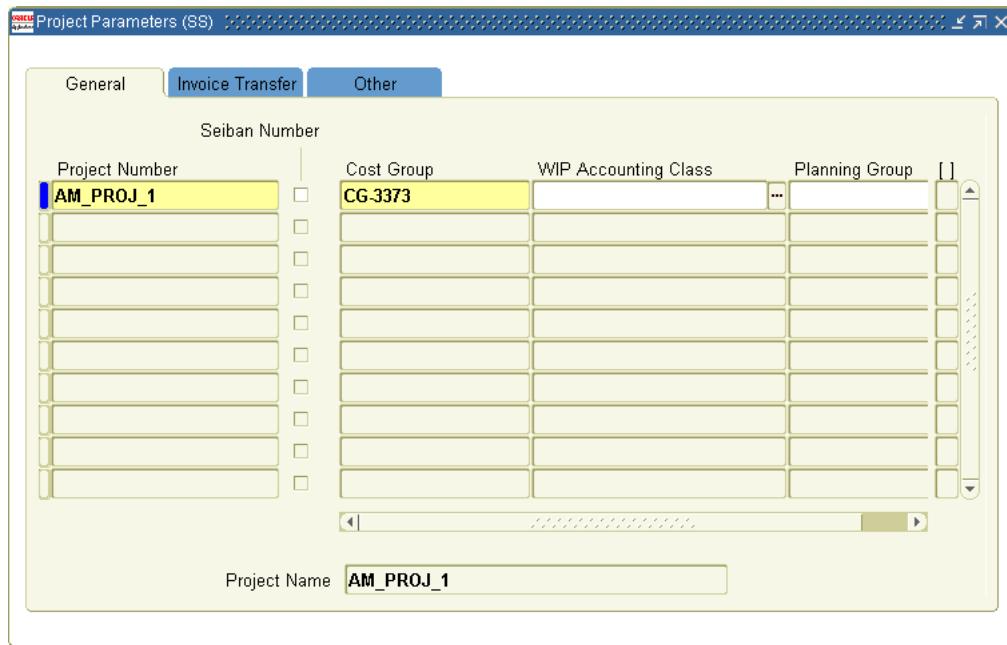
Figure 11–3 Projects, Templates Window



5. Optionally, you can view detailed task information by choosing Detail (See: [Viewing Project Details](#), *Oracle Project Manufacturing User's Guide*).

To assign project parameters:

1. Navigate to the [Project Parameters](#) window.

Figure 11–4 Project Parameters Window

2. Select a valid Project Number from the list of values.
3. Select a Cost Group from the list of values.

If the current organization has selected Average as its primary costing method in the Organization Parameters window, the Cost Group field is required. The list of values includes the Common Cost Group and the user defined cost groups. The list of user defined cost groups includes only those cost groups with valid accounts and with Project selected in the Cost Group window (See: [Project Cost Groups](#), *Oracle Cost Management User's Guide*). You must assign the project to its own Cost Group to keep weighted average costing at the project level.

If the current organization has selected Standard as its primary costing method in the Organization Parameters window, the Cost Group field is disabled.

4. Optionally, enter a WIP Accounting Class.

If the current organization is a Standard costing organization, you can choose any discrete WIP accounting class from the list of values.

If the current organization is an Average costing organization, you can choose any WIP accounting class that has been associated with the selected cost group in the WIP Accounting Classes for Cost Groups window within Cost Management (See: [Defining Project Cost Groups](#), *Oracle Cost Management User's Guide*).

When you create maintenance work orders for a project, this WIP accounting class is defaulted. It can be overridden, but only with another accounting class that is assigned to the cost group.

5. Optionally, select the name of the Planning Group with which you want to associate your project.

If you plan material requirements by a group of projects, rather than by each individual project, you need to define a planning group and to assign all the projects to this planning group. If you plan material requirements only by a single project, you do not need to associate the project with any planning group (See: [Defining Planning Group Lookups](#), *Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide*).

6. Select the Other tabbed region.
7. Select maintenance from the Direct Item Expenditure Type list of values. This expenditure type enables the Cost Collector process to pass costs for direct items to project maintenance work orders.
8. Save your work.

See Also:

- [Project Definition](#), *Oracle Project Manufacturing User's Guide*
- [Assigning Project Parameters](#), *Oracle Project Manufacturing User's Guide*
- [Project Cost Groups](#), *Oracle Cost Management User's Guide*
- [Defining Project Cost Groups](#), *Oracle Cost Management User's Guide*
- [WIP Accounting Classes](#), *Oracle Work In Process User's Guide*
- [Project Manufacturing Parameters](#), *Oracle Project Manufacturing User's Guide*

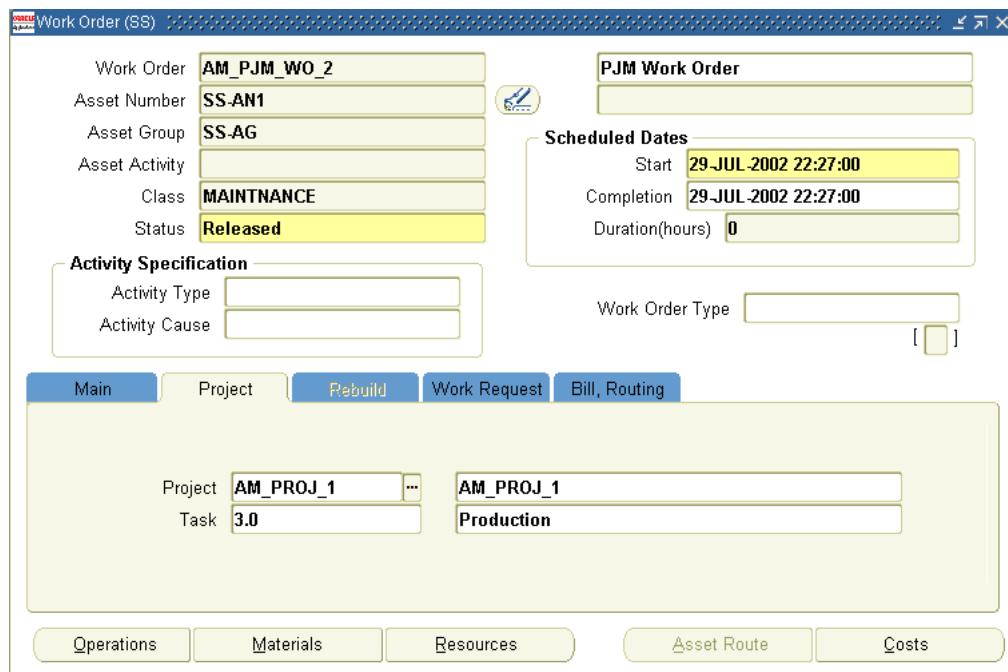
Associating a Work Order with a Project

You can create a maintenance work order for a project. The project number enables the correct cost group and default WIP accounting class to associate with the work order.

Creating a project maintenance work order:

1. Navigate to the [Work Order](#) window.

Figure 11–5 Work Order Window



2. Enter necessary work order information. See: [eAM Work Orders](#) on page 3-5.
3. Select the Project tabbed region.
4. Select a Project from the list of values. You can associate a work order to a project at any status of the work order (See: [eAM Work Order Statuses](#) on page 3-18).

5. Optionally, select a specific Task from the list of values.
6. Save your work.

Creating Requisitions or Purchase Orders

A requisition or purchase order can be created for a project, maintenance work order. The commitments for the work order's associated project or task can then be updated. You can create requisitions and purchase orders using either Oracle iProcurement, if you have it installed, or Oracle Purchasing.

To create a requisition using Oracle Purchasing:

1. Navigate to the [Requisitions](#) window.

Figure 11–6 Requisitions Window

The screenshot shows the Oracle Requisitions window for a new requisition. The top header bar displays the title "Requisitions (Vision Project Mfg) - [New]". The main form contains the following data:

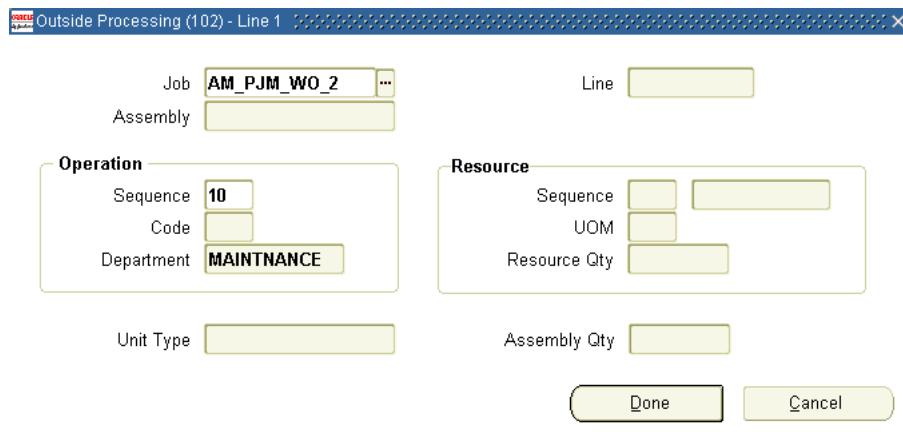
Number	[]	Type	Purchase Reqi	Preparer	Kingston, Mr. Max		
Description	Crane	Status	Incomplete	Total	ANY 1,500.00000		
<input type="checkbox"/>							
Items	Source Details	Details	Currency				
Num	Type	Item	Rev	Category	Description	UOM	C []
1	Goods	[]	[]	MISC.MISC	Crane	EA	1
[]	[]	[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]	[]	[]
[]	[]	[]	[]	[]	[]	[]	[]
Destination Type	Shop Floor	Source	Supplier	[...]			
Requestor	Kingston, Mr. Max	Supplier	[]	[]			
Organization	SS	Site	[]	[]			
Location	SS ORG LOCATION	Contact	[]	[]			
Subinventory	[]	Phone	[]	[]			
Outside Services		Catalog...	Distributions	Approve...			

2. If automatic requisition number generation is active, you will not need to enter a requisition Number. See: [Defining Numbering Options](#), *Oracle Purchasing User's Guide*. Otherwise, enter a unique requisition Number.
3. The Type will default as Purchase Requisition. The requisition lines are usually satisfied from an outside supplier by means of a purchase order.
4. Select the Items tabbed region.
5. Select the line Type of Goods for the requisition line. Line types help you to define how you want to categorize your items. The default for this field is the Line Type from the Purchasing Options window (See: [Defining Default Options](#), *Oracle Purchasing User's Guide*). If you change this field, defaults from the Line Types window appear in the Category, UOM, and Price fields (See also: [Defining Line Types](#), *Oracle Purchasing User's Guide*).
6. Select the purchasing Category from the list of values.
7. Enter the item Description. This description should be detailed because this is how someone in your organization will know what is being requested.
8. Enter the Quantity you want to request for the item. You can enter decimal quantities, but you must enter a value greater than zero.
9. Enter the UOM you want to use for your requisition line. If you change this value, the quantity is rounded again if appropriate, and the price is recalculated. If you enter a line type that is amount based, Purchasing uses the unit of measure that you assign to that line type in the Line Types window (See also: [Defining Line Types](#), *Oracle Purchasing User's Guide*).
10. Enter the unit Price for the item. You can enter the price in decimal format. You must enter a value greater than or equal to zero. Unit prices are in functional currency.
11. Enter the Need By date for the requested item. this is required only for planned items. You must enter a date greater than or equal to the requisition creation date.
12. The Charge Account is rolled up from a single distribution after the distribution is created. If more than one distribution is created for the line, Multiple is displayed.
13. Select Shop Floor from the Destination Type list of values for all direct item and non-stock item, eAM related requisitions. You can select a destination type of Shop Floor for all purchasable items that are not selected as Stockable in the item master (See also: [Defining Items](#), *Oracle Inventory User's Guide*).

When you select a destination type of Shop Floor, eAM recognizes this as a requirement to deliver the direct item to the maintenance work order.

14. Enter the name Requestor (employee) who is requesting the item. You must provide a Requestor before the requisition can be approved. The default is the requisition creator.
15. Enter the Organization.
16. Enter the delivery Location for the requested items. Purchasing defaults the deliver-to location that you assign to the employee.
17. Enter the Source type. The source type determines the source of the requisitioned items. The choices you have for this field is dependent on the PO: Legal Requisition Type profile option (See: [Purchasing Profile Options, Oracle Purchasing User's Guide](#)).
 - For the Supplier source type, enter the suggested Supplier, Supplier Site, Contact, and Phone.
18. Choose Outside Services to select the work order you previously created.

Figure 11–7 Outside Processing Window



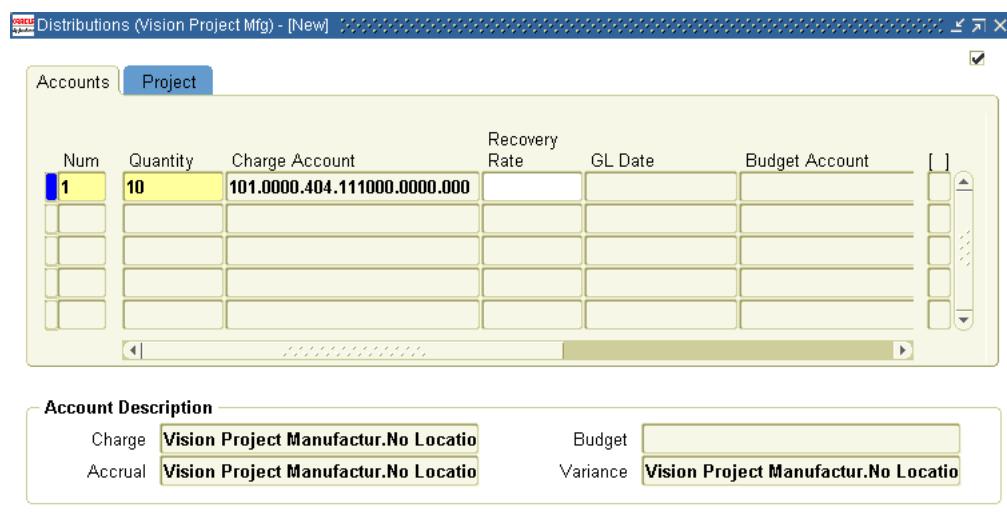
- a. Select the maintenance project work order, you previously created, from the Job list of values.
- b. Select a specific Operation Sequence from the Sequence list of values. This enables you to procure directly to the operation on the maintenance work

order. The Department will default from the department associated with the work order selected.

c. Choose Done.

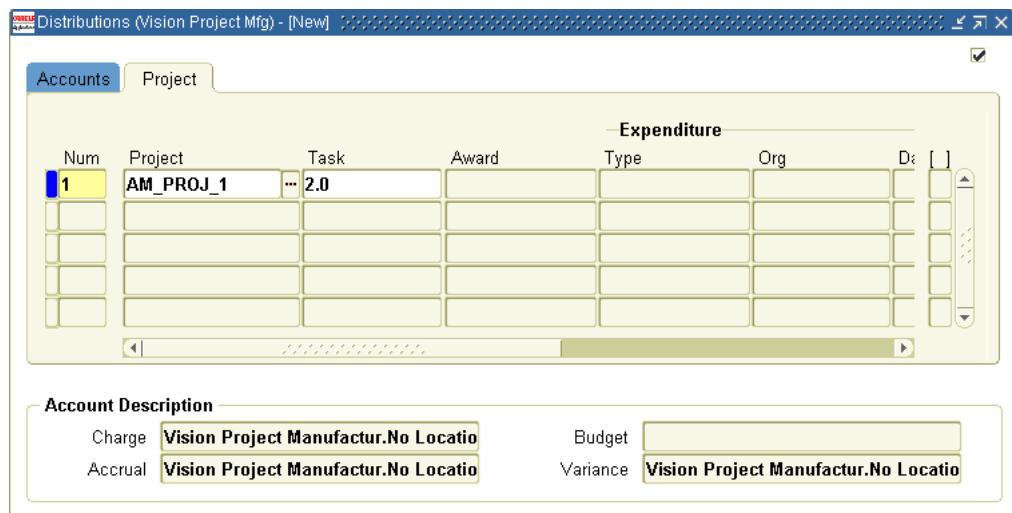
19. Select a requisition line number, then choose Distributions to associate project and task information with that requisition line. You can charge the cost of this requisition line to multiple Accounting Flexfields or update the default values you provided in the Requisition Preferences window (See also: [Entering Requisition Preferences](#) and [Entering Requisition Distributions, Oracle Purchasing User's Guide](#)).
- a. Select the Accounts tabbed region.

Figure 11–8 Distributions (Accounts tabbed region) Window



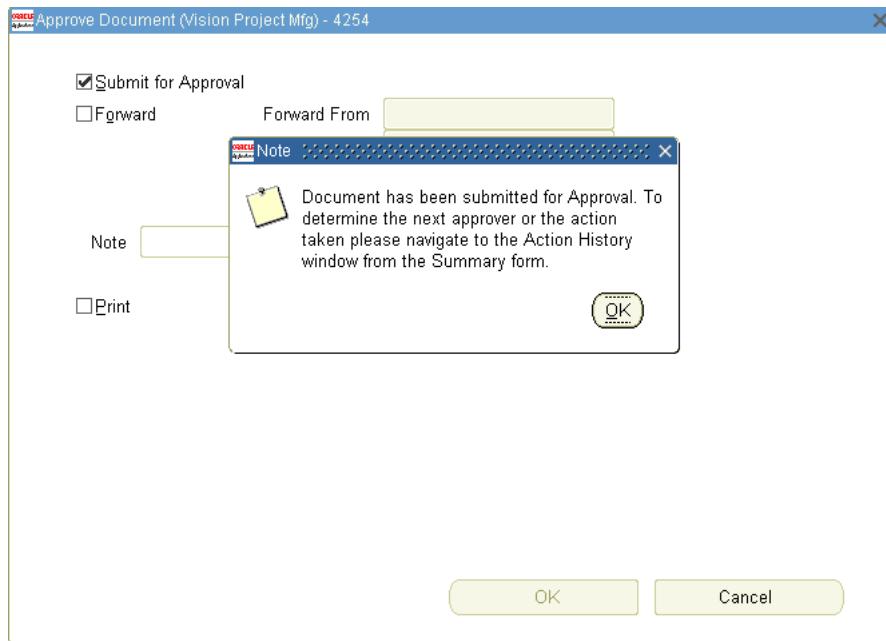
- Enter the Quantity you want to distribute. Purchasing displays the quantity you have not yet assigned to an Accounting Flexfield. Multiple distribution quantities must total to the requisition line quantity.
- The Charge Account will default from the WIP accounting class of the cost group, associated with the project. Purchasing uses the Account Generator to create the following accounts for each distribution:
- *Accrual:* AP accrual account

- *Variance:* invoice price variance account
 - If you are using encumbrance control (See: [Financials Options, Oracle Payables User's Guide](#)), Purchasing also creates the following account for each distribution:
 - *Budget:* encumbrance budget account
 - Change or accept the default Recovery Rate for taxable items. The recovery rate is the percentage of tax your organization can reclaim for credit. This rate defaults in based on the Tax Code on the line in the Requisitions window and the setup in the Financial Options window (See also: [Recoverable Tax, Oracle Payables User's Guide](#)).
 - If you are using encumbrance control for requisitions (See: [Financials Options, Oracle Payables User's Guide](#)), enter the GL Date that you want to use to reserve funds.
 - Save your work.
- b.** Select the Project tabbed region. Oracle Project Manufacturing must be installed with the Enable Project References check box selected in the Project Manufacturing Parameters window (See also: [Project Manufacturing Parameters, Oracle Project Manufacturing User's Guide](#)).

Figure 11-9 Distributions (Project tabbed region) Window

- c. Select the Project from the list of values.
 - d. Select a Task from the list of values.
20. Save your work.
21. Choose Approve to submit the requisition for approval.

Figure 11–10 Approve Document Window



22. Choose OK.

23. Choose OK.

See Also:

- [Entering Requisition Headers, Oracle Purchasing User's Guide](#)
- [Entering Requisition Lines, Oracle Purchasing User's Guide](#)
- [Requisitions, Oracle iProcurement Implementation Guide](#)
- [Setting Up Project Manufacturing Costing, Oracle Cost Management User's Guide](#)

- Project Budgeting, *Oracle Project Manufacturing User's Guide*

Viewing the Requisition within the Maintenance Work Order

Once the purchase requisition has been created and associated with a maintenance work order, the requisition will display on the maintenance work order.

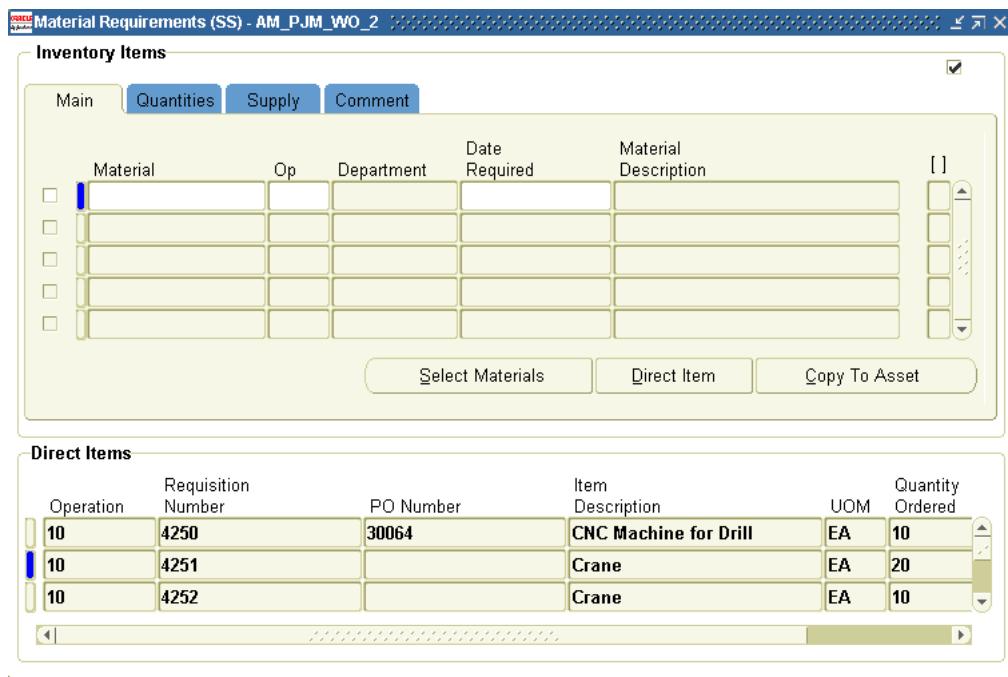
To view purchase requisition information on a maintenance work order:

1. Navigate to the [Find Work Orders](#) window, and select the project, maintenance Work Order number, you previously created, from the list of values.
2. Choose Find.

Figure 11–11 Work Orders Window

The screenshot shows the 'Work Order (SS)' window. At the top, there are several input fields: 'Work Order' (AM_PJM_WO_2), 'Asset Number' (SS-AN1), 'Asset Group' (SS-AG), 'Asset Activity' (MAINTNANCE), and 'Status' (Released). To the right of these is a 'PJM Work Order' panel containing a pencil icon and a 'Scheduled Dates' section with 'Start' (29-JUL-2002 22:27:00) and 'Completion' (29-JUL-2002 22:27:00), along with a 'Duration(hours)' field (0). Below this is a 'Work Order Type' field with a dropdown arrow. In the center, there's an 'Activity Specification' section with 'Activity Type' and 'Activity Cause' fields. At the bottom, there are tabs for 'Main' (selected), 'Project', 'Rebuild', 'Work Request', and 'Bill, Routing'. A large panel below these tabs displays 'Project' (AM_PROJ_1) and 'Task' (3.0) details, with 'AM_PROJ_1' and 'Production' repeated in a list. At the very bottom, there are tabs for 'Operations', 'Materials', 'Resources', 'Asset Route', and 'Costs'.

3. Choose Materials to display the requisition created in the Material Requirements window.

Figure 11–12 Material Requirements Window

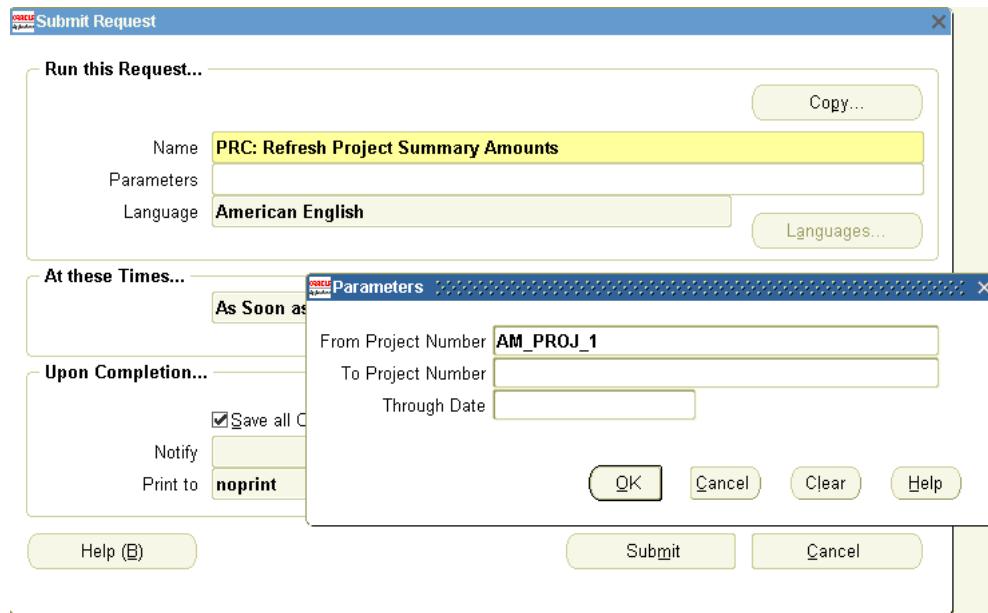
The requisition number displays in the Direct Items region. Once a purchase order is created from this requisition, the PO Number field will populate with that related purchase order number.

Updating the Commitments for a Project

Once the requisition is created and approved, the project's accounting commitments can be updated. This is done by running the Refresh Project Summary Amounts concurrent process. This process is normally set to automatically run periodically.

To update project commitments:

1. Navigate to the [Find Requests](#) window using the Project Manufacturing responsibility. Choose Submit a New Request.
2. Choose OK to run a Single Request.

Figure 11–13 Submit Request Window

3. Select PRC: Refresh Project Summary Amounts from the Name list of values.
4. Enter the following parameters:
 - a. Optionally, enter a From and To Project Number to only run the process over a range of projects.
 - b. Optionally, enter a Through Date to narrow the data selection based on a specific end date.
5. Choose OK.
6. Choose Submit.

See Also:

[Submitting a Request, Oracle Applications User's Guide](#)

Viewing Commitments

You can view commitments for specific projects. Once the Refresh Project Summary Amounts process has run (See: [Updating the Commitments for a Project](#) on page 11-16), the commitment amounts for your project will have increased.

To view commitments for a project:

1. Navigate to the [Find Project Status](#) window.

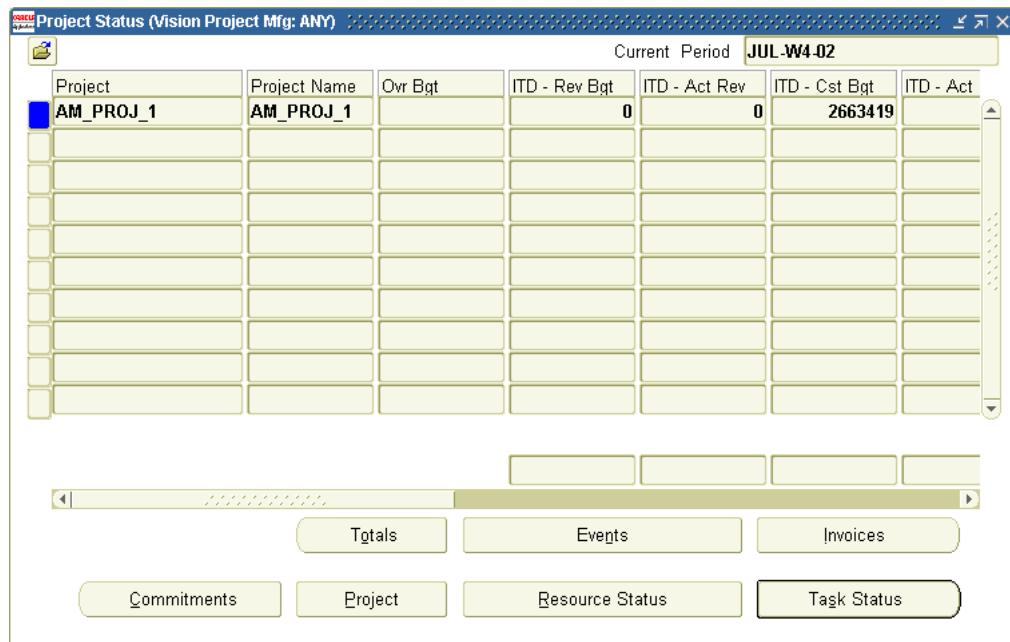
Figure 11-14 Find Project Status Window

The screenshot shows the 'Find Project Status' window with the title 'Find Project Status (Vision Project Mfg: ANY)'. The window is divided into several sections:

- Project:** Contains fields for Number (set to 'AM_PROJ_1'), Name (set to 'AM_PROJ_1'), Type, Organization, Status, Product Source, and Source Reference.
- Classification:** Contains fields for Category and Class Code.
- Key Member:** Contains fields for Name, Number, and Role.
- Customer:** Contains fields for Name, Number, and Relationship.

At the bottom right are 'Clear' and 'Find' buttons.

2. Select your project Number from the list of values.
3. Choose Find.

Figure 11–15 Project Status Window

This window shows the commitments by a specific project number. The Commit Amt (commitment amount) field has increased in value in comparison to before you entered the requisition.

4. Optionally, choose Totals to add up commitment totals for multiple projects.
5. Choose Commitments, and then choose Find to view commitment details for the current project. All requisitions and purchase orders associated with the current project will display.

Figure 11–16 Commitment Details Window

The screenshot shows a software application window titled "Commitment Details (Vision Project Mfg: ANY) - AM_PROJ_1". The window contains a grid of data with the following columns: Supplier Name, Commitment Date, Commitment Type, Commitment Number, Quantity, and UOM. There are approximately 15 rows of data, with the first three rows being clearly visible. The data includes entries for Advanced Netw., 30-JUL-2002, Requisition, 4251, 20, EA; Advanced Netw., 30-JUL-2002, Requisition, 4252, 10, EA; and Advanced Netw., 29-JUL-2002, Purchase Orders, 30065, 10, EA.

Supplier Name	Commitment Date	Commitment Type	Commitment Number	Quantity	UOM
Advanced Netw.	30-JUL-2002	Requisition	4251	20	EA
Advanced Netw.	30-JUL-2002	Requisition	4252	10	EA
	29-JUL-2002	Purchase Orders	30065	10	EA

- The Commitment Number is the requisition or purchase order number. Once a purchase order has been created from a requisition, the Commitment Number field value will change from the requisition number to the purchase order number.
 - The Project Raw Cost is the cost of the individual requisition or purchase order. The Project Raw Costs are added together to obtain the total commitment amount for the project.
6. Close this window, and then choose Task Status to display commitment information at the task level. All tasks associated with the current project display.

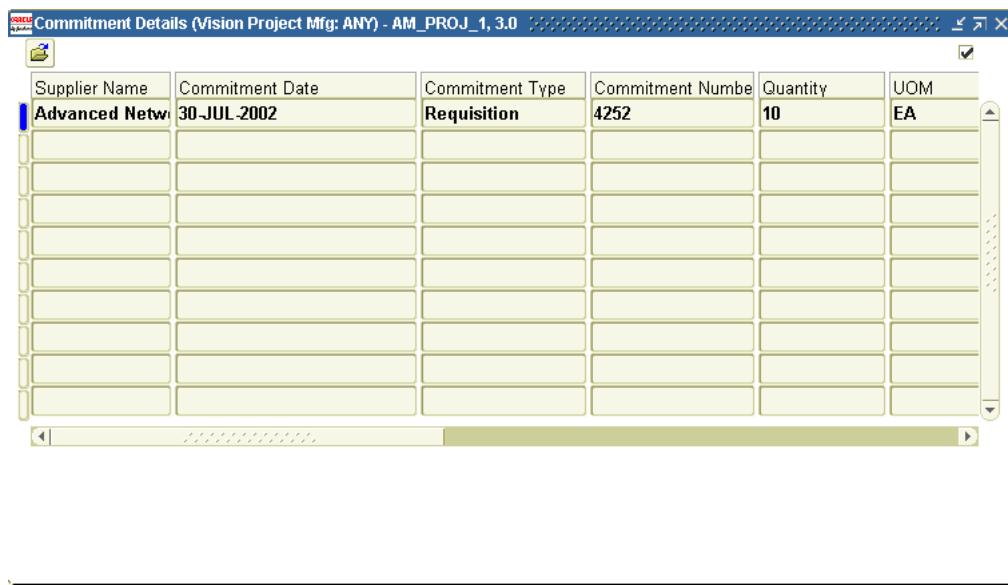
Figure 11–17 Task Status Window

The screenshot shows a software interface titled "Task Status (Vision Project Mfg: ANY) - AM_PROJ_1". The main area is a grid table with columns: Task, Task Name, Ovr Bgt, ITD - Rev Bgt, ITD - Act Rev, ITD - Cst Bgt, and a small icon column. The rows represent tasks numbered 1.0 through 5.0. Task 3.0 is highlighted with a blue square icon. Task 3.0 has a value of 2663419 in the ITD - Cst Bgt column. Below the grid is a horizontal toolbar with five buttons: Events, Commitments, Actuals, Task, and Resource Status. The "Task" button is currently selected.

Task	Task Name	Ovr Bgt	ITD - Rev Bgt	ITD - Act Rev	ITD - Cst Bgt	
1.0	Engineering D		0	0	0	
2.0	Prototype	*	0	0	0	
3.0	Production		0	0	2663419	
4.0	Shipping	*	0	0	0	
5.0	Installation		0	0	0	

7. Select a Task, then choose Commitments, and then Find to view the commitment details for the specific task.

Figure 11–18 Commitment Details Window



See Also:

- [Viewing Project Details](#), *Oracle Project Manufacturing User's Guide*
- [Setting Up Project Manufacturing Costing](#), *Oracle Cost Management User's Guide*
- [Project Cost Collector](#), *Oracle Cost Management User's Guide*

12

eAM Quality

eAM integrates with Quality, enabling you to collect quality results on your assets. If an asset is not up to the required standards, a work request can automatically be created. This chapter contains the following topics:

- Quality Setup on page 12-2
- Creating Collection Elements on page 12-2
- Creating eAM Quality Collection Plans on page 12-8
- Adding Collection Plan Attachments on page 12-13
- Triggering a Work Request on page 12-15

Quality Setup

An eAM work order goes through various steps in its lifecycle (See: [eAM Work Order Statuses](#) on page 3-18). One of the steps in the lifecycle is Completion. When completing an eAM work order, if the asset has associated, mandatory quality collection plans, you will need to enter quality results for the work order's asset. A list of quality collection plans associated with the asset and requiring completion will display during the completion process.

While creating a collection plan, you have the option of adding collection triggers to the plan. Triggers are restrictions that you define for a collection plan. For example, only work orders for assets that belong to the TRUCK asset group will require the entry of quality results for the collection plan. Data collection is initiated only if all collection trigger conditions are satisfied.

Quality Setup tasks for eAM include the following:

- [Creating Collection Elements](#) on page 12-2
- [Creating eAM Quality Collection Plans](#) on page 12-8
- [Adding Collection Plan Attachments](#) on page 12-13
- [Triggering a Work Request](#) on page 12-15

Creating Collection Elements

Collection elements are the basic building blocks of collection plans, the data structures that you use to collect Quality results. Before you can collect quality data with Quality, you must first create a collection plan. You begin by creating collection elements, which define the characteristics of the product or process that you want to monitor, record, and analyze. See: [Overview of Collection Elements, Oracle Quality User's Guide](#).

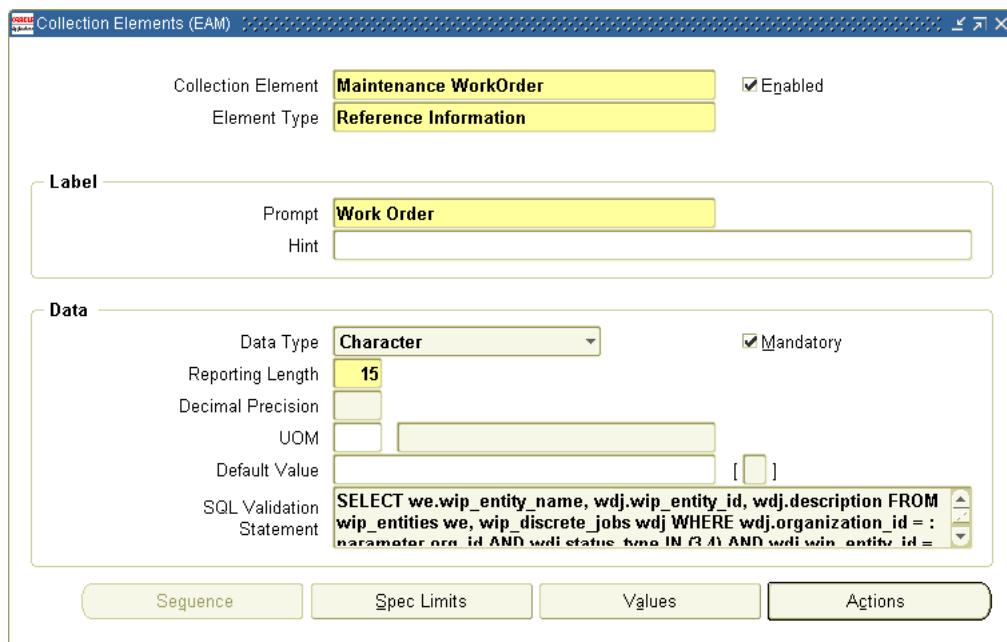
When you define collection elements, you are creating data fields that you can use in collection plans to collect quality results. Once you create a collection element, it becomes available as a selection on a list of values that you can choose from when you set up collection plans. You can create an unlimited number of user-defined collection elements, or you can use any of Quality's predefined collection elements (See: [Predefined Collection Elements, Oracle Quality User's Guide](#)) in your collection plans; for example, Asset, Asset Group, Asset Activity, and Work Order. You can also create collection elements by copying them from one collection plan into another.

Refer to the Setting Up chapter for details regarding Creating Collection Elements

To define collection elements:

1. Navigate to the [Collection Elements](#) window.

Figure 12–1 Collection Elements Window



Note: The steps listed below describe how to define collection elements one-at-a-time in the Collection Elements window. You can also define several collection elements simultaneously using the Collection Elements Summary window. See: [Combination Blocks](#), [Oracle Applications User's Guide](#).

2. Select the Collection Element name from the list of values.

The collection element can contain alphanumeric characters, spaces, underscores, and single quotation marks. You cannot use words that are reserved for column names, such as NAME, OCCURRENCE, and ORGANIZATION_ID. See: [Reserved Words](#), [Oracle Quality User's Guide](#).

3. Select the Enabled check box to enable the collection element. You can only add enabled collection elements to collection plans.
4. Select its collection Element Type. See: [Collection Element Types](#), *Oracle Quality User's Guide*.
5. Enter text for the data entry Prompt.

The prompt is the label for the collection element field displayed in the Results region of the Enter Quality Results window. Prompts also become the column headings on reports and online inquiries. The default prompt is the name of the collection element, but you can overwrite it.

6. Optionally, enter a Hint.

Hints are additional text that appears in the message line, as you enter quality results, to guide you during data entry. See: [Message Line](#), *Oracle Applications User's Guide*.

7. Select the collection element's Data Type.

You can select any data type, however, you cannot change it once you define the collection element. The available data types are Character, Number, Date, Comment, and Sequence.

8. Optionally, select the Mandatory check box to indicate that a value must always be entered for this collection element, when entering quality results. A mandatory collection element can be redefined as non-mandatory when added to a collection plan.

9. Enter the Reporting Length.

The reporting length specifies how much space is allocated for this collection element's quality results values on reports, inquiries, and in the Enter Quality Results window.

Note: The reporting length does not determine the amount of space used to store quality results values in the quality data repository. Results values can be up to 150 characters in length.

10. If the Data Type is Number, enter the Decimal Precision.

If you define specification limits for this collection element, entering the decimal precision (refers to the number of places after the decimal point) here

controls the decimal precision of the specification limit values that you can define.

11. Optionally, select a UOM from the list of values. See: [Overview of Units of Measure](#), *Oracle Inventory User's Guide*. Units of measure can be entered for any collection element, regardless of data type.
12. Optionally, enter a Default Value for the collection element.

When you set a default value for the collection element (generally, the most commonly used value for the collection element), it is automatically entered when you enter quality results. You can overwrite this value. See: [Default Value Assignment Rules](#), *Oracle Quality User's Guide*.

13. Optionally, enter the SQL Validation Statement.

This statement is used for validation when you enter quality data. You can base a collection element's data validation on any table in the Oracle database. To do this, you can define a SQL validation statement that Quality uses for validation when you collect quality data. This SQL statement must be a SELECT statement in which you select two columns. For example, if you have entered machine numbers in the database table, you can cross-validate machine numbers entered as you collect quality results against the numbers. See: *SQL*Plus User's Guide and Reference*.

For example, to validate machine numbers from a table called 'machine_numbers' stored in the database, enter the following SQL validation statement:

```
SELECT machine_number, machine_description
FROM machine_numbers
WHERE NVL(disable_date, SYSDATE+1) > SYSDATE
AND organization_id=:parameter.org_id
ORDER BY custom_machine_number
```

Note: To constrain the SQL Statement to the current organization, you can use the variable, ':parameter.org_id' for the current organization id. To constrain the SQL Statement to the current user's id, you can use the variable, ':parameter.user_id' for the current user's id.

If you define both a SQL validation statement and a list of collection element values, only the list of values is used for validation; the SQL validation statement is ignored.

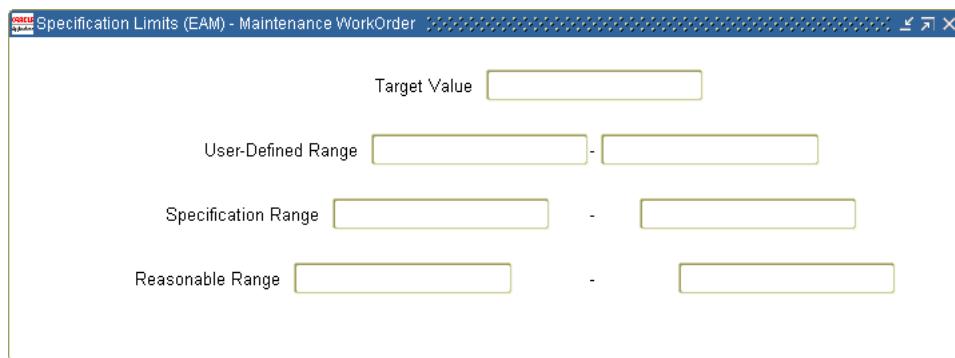
To enter specification limits:

Specification limits establish the acceptable values and tolerances for collection elements. You can set specification limits for collection elements of any collection element or datatype; however, they normally are associated with variable collection elements that represent numeric measurements such as length, weight and temperature. Specification limits include a target value (the preferred value) and three sets of upper and lower range limits, which can be changed without restriction.

You create specification elements by adding collection elements to your specifications. Collection element specification limits are defaulted to these specification elements. See: [Defining Collection Element Specification Limits, Oracle Quality User's Guide](#).

14. Optionally, choose Spec Limits to enter collection element specification limits.

Figure 12–2 Specification Limits Window



- a. Enter the Target Value. This represents the preferred value.
- b. Enter the lower and upper User-Defined Range limits.

The lower and upper user-defined range limits can be used to represent a process control limit. Your user-defined limits can be inside of, outside of, or overlapping your specification range limits. The upper limits must exceed the lower limits.

- c. Enter the upper and lower Specification Range limits.
- The lower and upper specification range limits can represent engineering tolerances. The upper limits must exceed the lower limits.

- d. Enter the upper and lower Reasonable Range limits.

The lower and upper reasonable range limit ensures that you collect values that make sense. The upper limits must exceed the lower limits.

- e. Save your work.

- 15. Save your work.

See Also:

[Overview of Collection Elements](#), *Oracle Quality User's Guide*

[Collection Element Types](#), *Oracle Quality User's Guide*

[Predefined Collection Elements](#), *Oracle Quality User's Guide*

[Defining Collection Element Specification Limits](#), *Oracle Quality User's Guide*

[Collection Element Values](#), *Oracle Quality User's Guide*

[Defining Collection Element Actions](#), *Oracle Quality User's Guide*

[Defining Collection Element Alert Actions](#), *Oracle Quality User's Guide*

[Viewing Collection Elements](#), *Oracle Quality User's Guide*

Creating eAM Quality Collection Plans

You create collection plans to determine the data that you want to collect, and what actions you want to take based on the quality results that you collect. You can use collection plans to model your test or inspection plans, and you can create an unlimited number of plans to support your enterprise-wide quality data collection and analysis needs. Collection plans can be invoked manually for direct results entry, or automatically as you complete a work order. You can also import data through Quality's Collection Import feature, as well as through Oracle Applications Open Interface. See: [Collection Import](#), *Oracle Applications Open Interface Manual*.

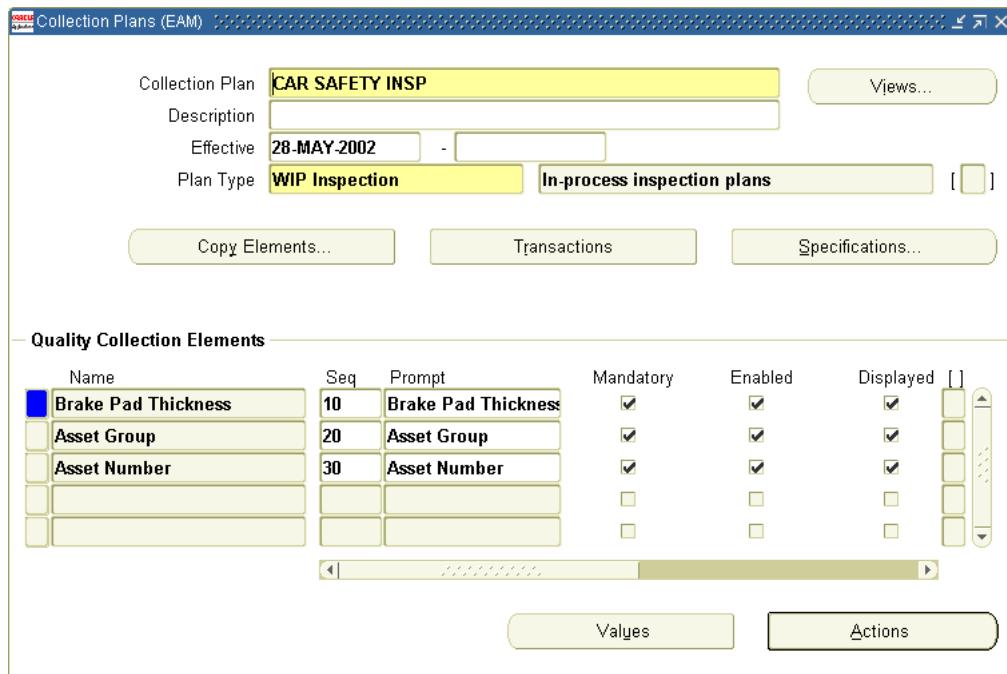
You can create collection plans for assets, asset groups, asset activities, work orders, or for specific purposes, such as collection plans that enable you to record the following information: equipment breakdowns, root causes and resolutions for discrepant material, and repair codes and quantities for rework.

In order to collect quality data, you must set up a data collection structure called a collection plan. Collection plans are composed of collection elements, their values and specifications, and any actions that you want to initiate in response to quality results. There are some considerations that you must make before you set up collection plans. You first must create collection element types, then the individual collection elements that comprise the plan.

You can attach illustrative or explanatory files to collection plans, in the form of text, images, word processing documents, spreadsheets, or video. Attachments can be used to document instructions and corrective action procedures. They can be viewed by operations personnel during quality data collection. See: [Attachments for Collection Plans, Specifications, and Result Lines](#), *Oracle Quality User's Guide*, and [Viewing Attachments Associated with Quality Results](#), *Oracle Quality User's Guide*.

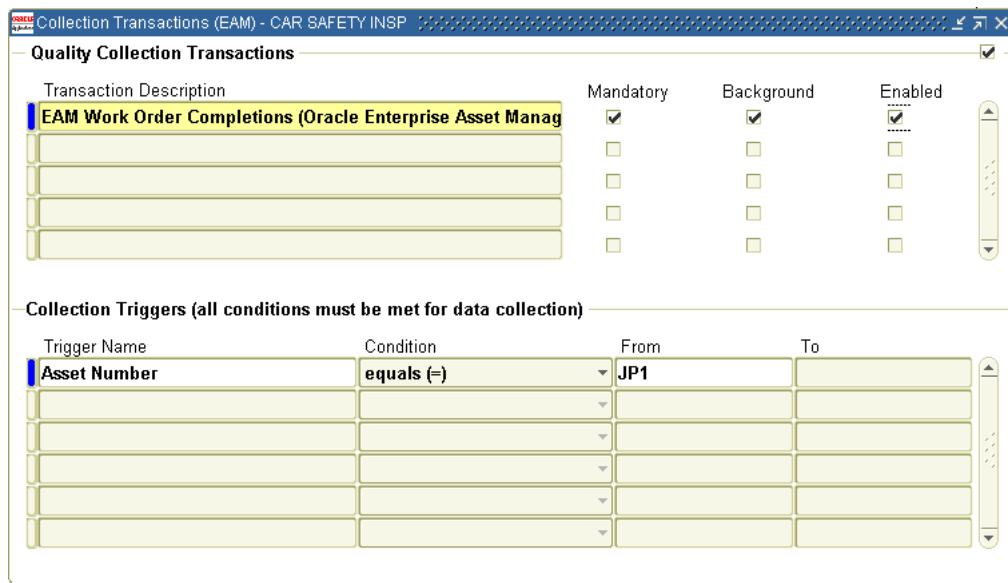
To review a collection plan:

1. Navigate to the [Collection Plans](#) window.

Figure 12–3 Collection Plans Window

Note: To assist you as you create collection plans, you can select the Summary/Detail option from the View Menu, and run a query to view existing collection plans in summary format. See:
[Combination Blocks, Oracle Applications User's Guide](#).

2. Select a valid Collection Plan from the list of values. To create a new collection plan, See: [Creating Collection Plans, Oracle Quality User's Guide](#).
3. Choose Transactions. You can create collection plans that are specifically used to collect quality data during transactions performed in other applications (See: [Collection Plans for Transactions, Oracle Quality User's Guide](#)).

Figure 12–4 Collection Transactions Window

4. Select EAM Work Order Completion from the Transaction Description list of values.
5. Optionally, indicate whether this collection plan will require the entry of quality results at work order completion. If you select the Mandatory check box, you must save at least one quality data record before saving the work order completion transaction.
6. Optionally, select the Background check box.

If you select this check box, you can collect quality results for context reference elements (See: [Reference Information Collection Element Type, Oracle Quality User's Guide](#)).

without invoking the Enter Quality Results window. Background data collection is initiated when you save the work order completion transaction. The system then finds, selects, and initiates the appropriate collection plan or plans.

If collection triggers are defined for background data collection, data collection is initiated only if all collection trigger conditions are satisfied (you define triggers for transactional data collection in the Collection Transactions window).

Several collection plans can collect data in the background during the same transaction. When this is the case, the results for context elements on all of these collection plans are automatically saved when the parent transaction is saved.

7. Select the Enabled check box.
8. Optionally, select a Trigger Name from the list of values. Valid trigger values are Asset Activity, Asset Group, Asset, and Work Order. Triggers are restrictions that you define for this collection plan. In the above example, only work orders for the JP1 asset will require the entry of quality results for the collection plan.

Note: If a trigger is not defined, every work order requires quality collection results; the collection plan is applicable to all assets.

9. If you selected a Trigger Name, select a Condition from the list of values.
10. Select a From value from the list of values. For example, if you selected Asset Group as the Trigger Name, only asset groups will be available in the list of values. Optionally, you can enter a To value to create a range condition. For example, if the trigger is Work Order, you could enter a range of work order numbers.
11. Save your work.

See Also:

For information on all remaining fields, See: [Collection Plans for Transactions, Oracle Quality User's Guide](#)

[Overview of Collection Plans, Oracle Quality User's Guide](#)

[Overview of Quality Self-Service, Oracle Quality User's Guide](#)

[Collection Plan Types, Oracle Quality User's Guide](#)

[Collection Plan and Import Results Database Views, Oracle Quality User's Guide](#)

[Collection Elements in Collection Plans, Oracle Quality User's Guide](#)

[Defining Collection Plan Element Values, Oracle Quality User's Guide](#)

[Associating Specification Types with Collection Plans, Oracle Quality User's Guide](#)

[Defining Collection Plan Element Actions, Oracle Quality User's Guide](#)

[Updating and Deleting Collection Plans, Oracle Quality User's Guide](#)

[Viewing Collection Plans](#), *Oracle Quality User's Guide*

Adding Collection Plan Attachments

You can attach illustrative or explanatory files in the form of text, images, word processing documents, spreadsheets, video, graphics, OLE objects, and so on, to collection plans and specifications. You can also attach files to quality results as you enter them.

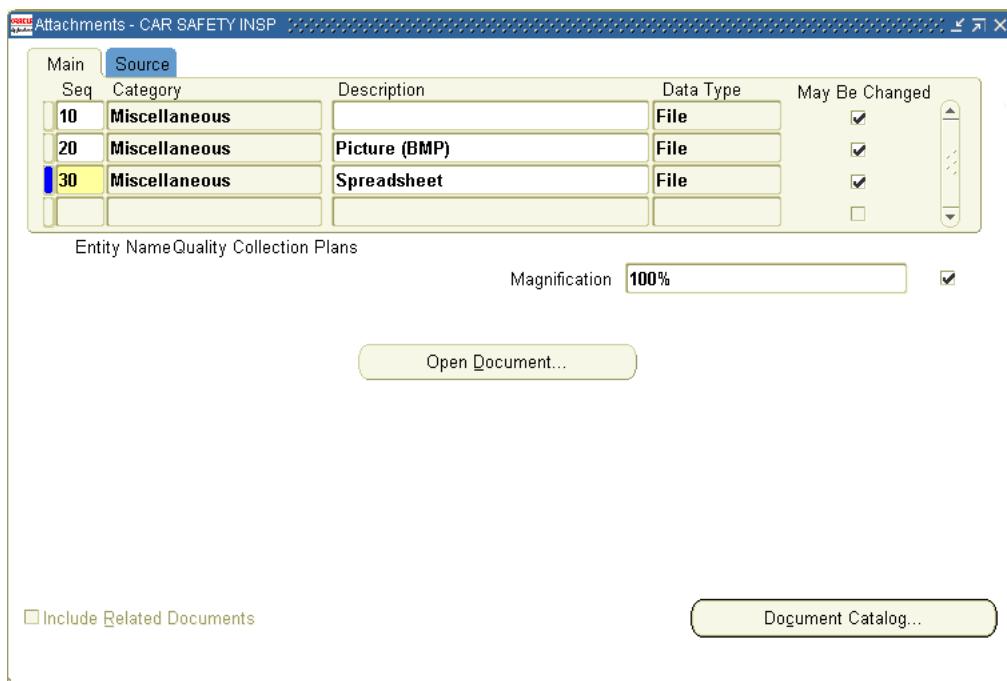
You can view collection plan attachments as you enter, view, and update quality results. You can only view specification attachments as you enter quality results. You can view quality results line attachments as you update and view quality results. See [Viewing Attachments Associated with Quality Results, Oracle Quality User's Guide](#).

To add collection plan attachments:

1. Navigate to the Collection Plans or Specifications (See: [Overview of Specifications, Oracle Quality User's Guide](#)) window. See: [Creating eAM Quality Collection Plans](#) on page 12-8 and [Defining Specifications, Oracle Quality User's Guide](#).

Note: You must save the collection plan or specification before you can add an attachment to it.

2. Choose the Attachments icon or choose attachments from the Edit menu. The Attachments window appears.

Figure 12–5 Attachments Window**To add attachments to quality results lines:**

1. Navigate to the [Enter Quality Results](#) window. See: [Entering Quality Results Directly, Oracle Quality User's Guide](#).
2. Select a quality results line.
3. Choose the Attachments icon or choose attachments from the Edit menu. The Attachments window appears.

See Also:

[Attachments for Collection Plans, Specifications, and Results Lines, Oracle Quality User's Guide](#)

[Working With Attachments, Oracle Applications User's Guide](#)

Triggering a Work Request

For each collection element, you can specify that Quality initiates an action based on the quality data that you collect. The condition that you specify and the resulting action comprise what is called an Action Rule. Action rules are evaluated and executed during the quality data collection process. For example, eAM enables you to specify that a work request is created automatically, based on certain conditions of the asset, determined by the quality data collected. The action rule is defined within the collection plan definition.

A work request is used to request work on an asset. A work request is not a work order, but is referenced by the work order ultimately created because of the work request.

To set up work request triggers:

1. Navigate to the [Collection Plans](#) window.

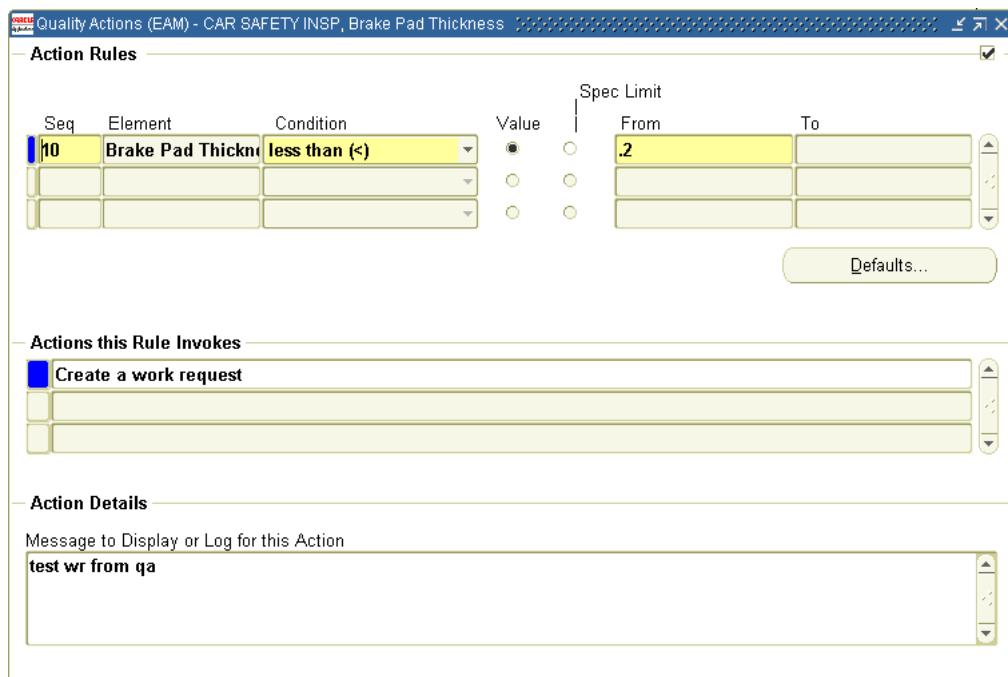
Figure 12–6 Collection Plans Window

The screenshot shows the 'Collection Plans (EAM)' window. At the top, there are fields for 'Collection Plan' (set to 'CAR SAFETY INSPI'), 'Description', 'Effective' date ('28-MAY-2002'), and 'Plan Type' ('WIP Inspection' under 'In-process inspection plans'). Below these are buttons for 'Copy Elements...', 'Transactions', and 'Specifications...'. The main area is titled 'Quality Collection Elements' and contains a table with columns: Name, Seq, Prompt, Mandatory, Enabled, and Displayed. The table rows show 'Brake Pad Thickness' (Seq 10, Prompt 'Brake Pad Thickness', checked for both Mandatory and Enabled), 'Asset Group' (Seq 20, Prompt 'Asset Group', checked for both), and 'Asset Number' (Seq 30, Prompt 'Asset Number', checked for both). There are also several empty rows. At the bottom of the table are navigation arrows and buttons for 'Values' and 'Actions'.

Name	Seq	Prompt	Mandatory	Enabled	Displayed
Brake Pad Thickness	10	Brake Pad Thickness	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Asset Group	20	Asset Group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Asset Number	30	Asset Number	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

2. Select a valid Collection Plan from the list of values. To create a new collection plan, See: [Creating Collection Plans, Oracle Quality User's Guide](#).
3. In the Quality Collection Elements region, select the collection element to create an action rule for. Choose Actions.

Figure 12-7 Quality Actions Window



4. In the Action Rules region, enter the Sequence number for the action rule. See: [Action Rule Sequencing, Oracle Quality User's Guide](#).

The sequence number establishes the order in which action rules are evaluated as data is collected. The sequence number can be from 0 to 99999.

5. Select the Condition that must be met to invoke the action. For example, when the brake pad thickness wears to less than .2, a work request is automatically created. See: [Query Operators, Oracle Quality User's Guide](#).
6. Choose either Value or Spec Limit to specify the evaluation method.

Value: If you choose Value, as quality data is collected the action rule is evaluated using the results value and the value entered here. If you have defined a list of values for the collection element, you must choose a value from this list. If you have not defined a list of values for the collection element, you can enter any value.

Spec Limit: If you choose Spec Limit, as quality data is collected the action rule is evaluated using the quality results value and either the specification limit (See: [Entering Specification Limits](#) on page 12-6)target value (collection element level), the upper or lower user-defined range limits, or the upper or lower specification range limits. Specification limits are defined at the collection element level.

Spec Limits can be used to define action rules that evaluate numeric results.

7. If the selected Condition requires a range of values, enter both the From and To value. If the selected Condition requires only a single value, enter only the From value.

Note: Some conditions (for example, is entered and is empty) do not require values.

If you have chosen the Values, and a list of values has been defined for the collection element, you can only select values from this list. If you have not defined a list of collection element values, you can enter any value. See: [Defining Collection Element Values, Oracle Quality User's Guide](#).

8. In the Actions this Rule Invokes region, select Create a work request from the list of values.
9. In the Action Details region, enter a Message to Display or Log for this Action. See: [Message Actions, Oracle Quality User's Guide](#).
If the selected action requires a status code, enter the status code in the Action Details region. See: [Application Specific Actions, Oracle Quality User's Guide](#).
10. Save your work.

See Also:

[Quality Actions, Oracle Quality User's Guide](#)

[Defining Collection Element Actions, Oracle Quality User's Guide](#)

[Defining Collection Plan Element Alert Actions, Oracle Quality User's Guide](#)

[Defining a Launch a Workflow Action, Oracle Quality User's Guide](#)

[Associating Output Variables with Actions, Oracle Quality User's Guide](#)

13

eAM Self Service Maintenance

This chapter discusses eAM's Self Service Maintenance, and its web based user-interface. The following topics are discussed in this chapter:

- Overview of eAM Self Service Maintenance on page 13-2
- Home Page on page 13-3
- Assets on page 13-5
- Work Requests on page 13-18
- Work Orders on page 13-22
- Work Plans on page 13-26

Overview of eAM Self Service Maintenance

eAM Self Service Maintenance is an internet based user-interface for both maintenance and operations personnel. It introduces you to an easier approach of entering and searching for information from any browser. Its step by step process requires minimal training and is intuitive enough for you to find and update information.

Self Service Maintenance is designed for the casual maintenance user (for example, trades people, such as fitters, mechanics, and electricians), in a plant or facility. Responsibilities can be assigned by employee or by role. This determines what information you can view and update.

This chapter covers the following topics:

- [Home Page](#) on page 13-3
- [Assets](#) on page 13-5
 - Obtaining Asset Information
 - Viewing Asset Details
 - Displaying the Asset Hierarchy
 - Viewing and Updating the Configuration History
 - Viewing Cost Information
 - Viewing Associated Work Requests
 - Viewing Quality Information
- [Work Requests](#) on page 13-18
 - Work Request Statuses
 - Obtaining Work Request Information
 - Creating and Updating Work Requests
- [Work Orders](#) on page 13-22
 - Viewing Work Orders
 - Creating Easy Work Orders
- [Work Plans](#) on page 13-26
 - Viewing Asset and Rebuildable Work Orders
 - Managing Operations

Home Page

The Home Page of Self Service Maintenance (SSM) enables you to change organizations, as well as the ability to view and transact purchase order and work request notifications.

You can indicate whether work order requests are automatically approved upon creation. Within the eAM Parameters, If the Auto Approve check box is selected, work requests are created with a status of Awaiting Work Order (approved) (See: [Defining eAM Parameters](#) on page 2-9). Otherwise, if the check box is not selected, work requests are created with a status of Open. If an organization has selected Work Request Approval through Oracle Workflow Management, the system will notify all users that belong to that approval group to take action on the work request created (See: [Defining Department Approvers](#) on page 2-17). Once an individual has taken action, the notification will be removed from the notification list of other approvers belonging to that same approval group.

From the Home Page tab of Oracle eAM SSM, an approver can select a work request and view its details. You can see any notification routed for your responsibility (See: [Defining Department Approvers](#) on page 2-17).

To select an organization to view notifications:

1. Navigate to the Home tab.

Figure 13–1 Home Page

Enterprise Asset Management (EAM)

Welcome to Enterprise Asset Manager

Notifications

Type	From	Subject	Sent
PO Approval	Dey, Anirban	Standard Purchase Order 3123 has been approved	16-Jan-2002
PO Requisition Approval	Dey, Anirban	Requisition 1264 has been approved.	16-Jan-2002
PO Approval	Dey, Anirban	Standard Purchase Order 3124 has been approved	16-Jan-2002
PO Requisition Approval	Dey, Anirban	Requisition 1265 has been approved.	16-Jan-2002
PO Requisition Approval	Dey, Mr. Anirban	Requisition 1279 has been approved.	22-Jan-2002
PO Approval	Dey, Mr. Anirban	Standard Purchase Order 3129 has been approved	22-Jan-2002
PO Requisition Approval	Dey, Mr. Anirban	Requisition 1283 has been approved.	23-Jan-2002
PO Approval	Dey, Mr. Anirban	Standard Purchase Order 3134 has been approved	24-Jan-2002
PO Requisition Approval	Dey, Mr. Anirban	Requisition 1286 has been approved.	23-Jan-2002
PO Approval	Dey, Mr. Anirban	Standard Purchase Order 3133 has been approved	23-Jan-2002

Choose Organization

A maintenance organization must be selected to use this application. Choose an org using the flashlight in the Organization field and press the GO button to select it.

Selected Organization **EAM**
Organization **EAM**

TIP: Redirect or auto-respond to notifications using [routing rules](#)

[Home](#) | [Assets](#) | [Work Requests](#) | [Work Orders](#) | [Work Plan](#) | [Diagnostics](#) | [Return to Portal](#) | [Logout](#) | [Preferences](#)

Copyright 2001 Oracle Corporation. All rights reserved.

2. Under the Subject column, select the work request or purchase order to open and view its details.
3. You can approve, request additional information from the originator, or reject the work request. You can approve it by choosing Update Work Order.
4. Choose Reassign to reassign the work request approval to another approval group.
5. Close the Work Request by choosing Close.

Note: You must first choose an eAM organization before you can select additional tabs. See: [Organization Setup](#) on page 2-5.

Assets

The Assets tab provides information that enables you to identify assets through an Asset Navigator that displays appropriate asset details. By drilling down through an asset the user can either view details or launch pages to view current/historical configurations of the asset. As rebuildable spares are installed and removed from a particular asset, the genealogy will be updated automatically. This section's tasks include:

- [Obtaining Asset Information](#) on page 13-5
- [Viewing Asset Details](#) on page 13-7
- [Displaying the Asset Hierarchy](#) on page 13-8
- [Viewing and Updating the Configuration History](#) on page 13-9
- [Viewing Cost Information](#) on page 13-10
- [Viewing Associated Work Requests](#) on page 13-13
- [Viewing Quality Information](#) on page 13-14

Obtaining Asset Information

You can query on assets that you would like to view associated details, hierachal information, cost information, associated work requests, and quality information. You can use a Simple or Advanced Search to obtain your desired assets.

To obtain Asset Information:

1. Navigate to the Assets tab.

Figure 13–2 Assets Page

The screenshot shows the Oracle Asset Management interface. At the top, there's a banner with the Oracle logo and the text "Asset Management". Below the banner, a navigation bar has tabs for Home, Assets (which is selected), Work Requests, Work Orders, and Work Plan. On the right side of the header are icons for "Return to Portal", "Logout", and "Preferences".

The main content area is titled "Assets (EAM)". It features a "Simple Search" section with fields for Asset Number (containing "Building10%"), Asset Category (empty), and Route Asset (set to "No"). There are "Go" and "Clear" buttons. To the right of the search is an "Advanced Search" link.

Below the search is a table titled "Asset Results". The table has columns: Select Asset Number, Asset Description, Asset Group, Asset Category, Area, Owning Department, and Asset Criticality. The table contains four rows of data:

Select Asset Number	Asset Description	Asset Group	Asset Category	Area	Owning Department	Asset Criticality
BUILDING100	10p - 100 Oracle Parkway	BUILDING			EAM-DEP01	High
BUILDING107	NORTHOATE	BUILDING			BLDG LOC	
BUILDING108		BUILDING		RS-LO	EAM-DEP01	
BUILDING109	Holly Sugar Building	BUILDING			HQ OFF CAM	Normal

At the bottom of the page, there's a footer with links: Home, Assets, Work Requests, Work Orders, Work Plan, Return to Portal, Logout, and Preferences. A copyright notice from Oracle Corporation is also present.

2. Enter an Asset to search for assets by name.
Optionally, enter a portion of an asset name, appending a % (wildcard), as illustrated above, to display multiple assets with similar names.
3. Optionally, enter an Asset Category from the list of values to narrow your selection criteria.
4. Optionally, to further narrow your selection criteria, select whether to display Assets with associated Asset Routes (tasks). Valid values are Yes and No. See: Asset Routes.
5. Optionally, choose Advanced Search to further narrow your selection criteria.

Note: For details on how the following information is associated with an Asset, See: [Defining Asset Numbers](#) on page 2-46.

- a. Optionally, select an Asset Group from the list of values, representing the classification of an asset.
 - b. Optionally, select an Area from the list of values. An area is where an asset resides. This is a user defined listing of logical areas of work. For example, North Plant, East Wing, or Area 1.
 - c. Optionally, select an Owning Department from the list of values. An owning department represents the department (crew) responsible for maintaining an asset.
 - d. Optionally, select a Fixed Asset Number from the list of values. The fixed asset number belongs to a fixed asset category, defined on an eAM asset.
 - e. Optionally, select an Accounting Class from the list of values, indicating the WIP accounting class. This identifies the expense accounts associated with the work performed, such as materials, labor, and resources.
 - f. Optionally, select an Asset Criticality from the list of values. This code indicates the importance of the asset to the organization.
 - g. Optionally, select whether to narrow your search to only Maintainable assets. Valid values are Null, Yes, and No.
6. Choose Go.

Viewing Asset Details

You can display specific details about an asset, such as the associated asset group, parent asset, parent asset group, asset category, owning department, area, accounting class, asset criticality, maintainability, the associated equipment serial number, attachments, associated asset activities, and asset attributes.

To display asset details:

1. Navigate to the Assets page, and query an asset. See: [Obtaining Asset Information](#) on page 13-5.
2. Select the asset to view.
3. Choose Asset Details in the Asset Results region to view associated Asset Details, Asset Attributes, and Asset Activities.
4. Optionally, choose View Equipment Details if the current asset has associated equipment details. This link is next to the Equipment Serial Number field, and is only available if there are associated equipment details. You can view all equipment details in the production organization.

- Optionally choose the View Resource Usage glasses icon to view all work orders created against the asset for the current equipment resource. This enables you to view resource demand (work orders) associated with the asset. This information is eAM's integration with Process Manufacturing.

See Also:

For more information on resource usage, See: [Viewing Resource Usage](#) on page 10-6.

Displaying the Asset Hierarchy

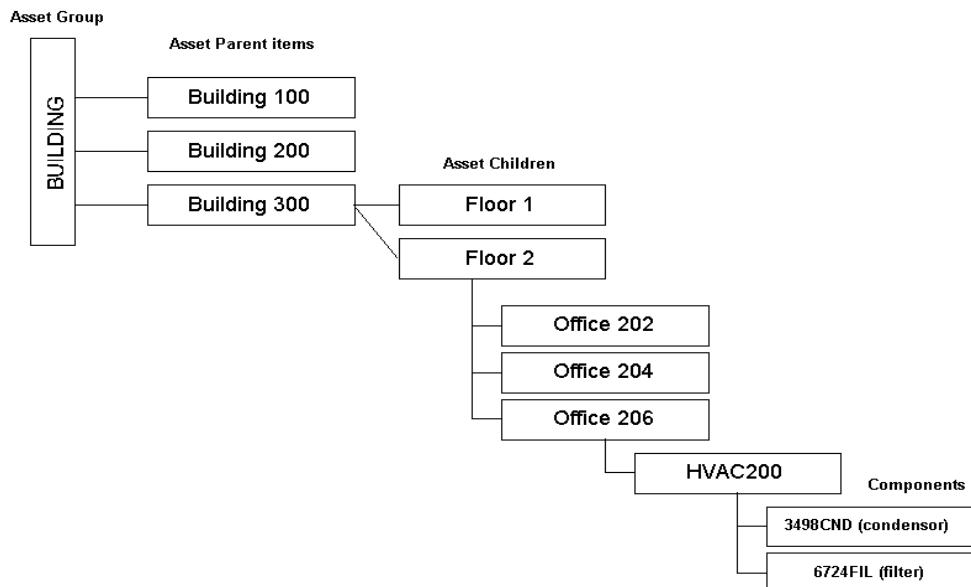
You can view asset hierarchy information, enabling you to identify assets using an Asset Navigator and the asset details of each asset belonging to the hierarchy.

As rebuildable spares are added and removed from a particular asset hierarchy, the asset genealogy is dynamically updated.

To display the asset hierarchy:

1. Navigate to the Assets page, and query an asset. See: [Obtaining Asset Information](#) on page 13-5.
2. Select the asset, then choose Hierarchy. The associated hierarchy for the current asset is displayed in the shaded region.

Figure 13–3 Asset Hierarchy Example



Optionally, click any asset in the hierarchy to view its details in the Asset Hierarchy region.

3. Optionally, click the Parent Asset Number to view the complete asset hierarchy from the parent level.

See Also:

[Defining Asset Numbers](#) on page 2-46 to review how asset hierarchies are created.

Viewing and Updating the Configuration History

You can view specified parent and child information in a tabular format, as well as dynamically add parents and children to the hierarchy.

To display or update the configuration history:

1. Navigate to the Assets page, and query an asset. See: [Obtaining Asset Information](#) on page 13-5.

2. Select the asset, then choose Configuration History.
3. In the Configuration History View Options, select whether to show the current asset's Parents or Children information.
4. Optionally, you can narrow your selection criteria by selecting a date range.
5. Optionally, choose Associate Child or Associate Parent (depending on whether you are showing Parent or Children information) to dynamically add a Child or Parent to the current asset's hierarchy.
 - a. Enter an Asset Number.
 - b. Enter a Start Date that this new asset configuration will be effective. The system date will default.
 - c. Optionally, enter an End Date.
 - d. Choose Apply to save your work.
 - e. Choose Cancel to return to the Configuration History window.
6. Optionally, you can save or export your configuration results to a spreadsheet by selecting Export Configuration Results.

Viewing Cost Information

eAM integrates with Oracle Cost Management, honoring all costing rules set at the organization level, for example, the costing method used. You can view the costs of Material, Labor, and Equipment for maintenance work orders associated with the current asset. You can view different types of transactional cost information, including actual, estimated, variance, and summary. eAM maintains the integrity of the asset hierarchy. For example, when viewing the parent asset, you can view just the parent asset's costs, or the costs of the parent including all child costs rolled up to the parent level.

To view asset costs:

1. Navigate to the Assets page, and query an asset. See: [Obtaining Asset Information](#) on page 13-5.
2. Select the asset, then choose Costs.

Figure 13–4 Costs Page

Asset Costs(EAM)

Asset Group: **BUILDING** Asset Category: **SFO**
 Asset Number: **BUILDING300** Area: **SFO**
 Owning Department: **EAM-DEP01** Asset Description: **3op - 300 Oracle Parkway**

Cost View Options

View: Actual Costs	View Cost By: Cost Category
Period From: <input type="text"/>	Period To: <input type="text"/>
<input checked="" type="checkbox"/> Include Child Assets	
Go	

Actual Costs including Child Assets

Cost Category	Material (USD)	Labor (USD)	Equipment (USD)	Total (USD)
Contract	0.00	0.00	0.00	0.00
Maintenance	0.00	250.00	0.00	250.00
Operations	0.00	100.00	0.00	100.00

Cost Summary

Total Material Cost (USD)	0.00
Total Labor Cost (USD)	350.00
Total Equipment Cost (USD)	0.00
Total Cost (USD)	350.00

Navigation: Return to Asset Search | Asset Details | Hierarchy | Configuration History | Work Requests | Quality

3. In the Cost View Options region, you can narrow your selection criteria.

- a. From the View drop down list, select the type of cost information to view. Valid values are Actual Costs, Estimated Costs, Variance Costs, and Cost Summary.

Actual Costs: This is the accumulation of all cost for material and resource transactions for associated maintenance work orders, based on a specified period, or any specified selection criteria you entered in the Cost View Options region. When you select the Actual Costs type from the list of values, the actual cost information for your specified criteria is provided. The Cost Manager process runs in the background to provide updated, actual cost information at user defined, periodic intervals, and/or when it is launched from the menu.

Estimated Costs: A BOM (material parts list) and routing (resources) can be associated with a work order. When you select Estimated Costs type from the list of values, the estimated costs of all materials and resources associated with a work order display, enabling you to budget costs. The Work Order Cost process runs in

the background to provide updated, estimated cost information at user defined, periodic intervals, and/or when it is launched from the menu. Estimated and actual costs may differ because all materials or resources associated with a work order may not actually be used when the work order is executed.

Variance Costs: When you select Variance Cost type from the list of values, the difference between the actual costs recorded and estimated costs.

Cost Summary: When you select Cost Summary type from the list of values, the cost information from all work orders associated with the current asset will display.

- b.** From the View Cost By drop down list, select how you would like to view your cost information. Valid values are Period and Cost Category.
 - If you selected Cost Category, you can view cost information by defined categories, such as Maintenance, Contract, or Operations.
 - Material: All material and material overhead transaction costs will display.
 - Labor: All employee resource and resource overhead transaction costs will display.
 - Equipment: All material resource and resource overhead transaction costs will display.
 - If you selected Period, optionally enter the Period From and Period To. Accounting Periods are defined within Oracle Inventory (See: [Maintaining Accounting Periods, Oracle Inventory User's Guide](#)).
4. Select the Include Child Assets check box to roll up all costs for the current asset and its children. See: [Defining Asset Numbers](#) on page 2-46 to review how asset hierarchies are created.
5. Choose Go to view cost element information. The information is broken down into nine eAM specific cost classifications. You will also see summary totals (summarizing Contract, Maintenance, and Equipment) of all material, labor, and equipment costs.
6. Optionally, you can save or export your cost information to a spreadsheet by selecting Export.

See Also:

[Overview of Cost Management, Oracle Cost Management User's Guide](#)

[Submitting a Request, Oracle Applications User's Guide](#)

Viewing Associated Work Requests

You can view an asset's associated work requests and create new work requests or update existing work requests for the current asset.

To view or create work requests for the current asset:

1. Navigate to the Assets page, and query an asset. See: [Obtaining Asset Information](#) on page 13-5.
2. Select the asset within the Asset Results region, then choose Work Requests.

Figure 13-5 Work Requests Page

Number	Description	Status	Request By Date	Originator	Update
4518	REPAIR PIPING	Awaiting Work Order	22-Oct-2001	JCLARK	
5226	Testing Work Request	Awaiting Work Order	19-Nov-2001	SYTEST	
4961	CHECK PHONE LINE	Awaiting Work Order	09-Nov-2001	SYTEST	
4962	PAINT DOOR FRAME	Awaiting Work Order	09-Nov-2001	SYTEST	
4963	REWIRE FAN IN CEILING	Awaiting Work Order	09-Nov-2001	SYTEST	
4930	Check Sprinkler Connection	On Work Order	08-Nov-2001	SYTEST	

Number	Description	Start Date	Owning Department	Priority
(No items found)				

3. In the Work Request Results region, optionally select the work request Number to view details of the work request, such as the log explaining the issue being reported, priority code, etc.

4. Optionally, update a work request by selecting Update if you are within the details of the work request, or you can choose the Update pencil icon from the Work Request Results region.
 - a. Update fields as needed.
 - b. Choose Apply to save your work.
 - c. Choose Cancel to return to the Work Requests for Asset page without creating the work request.
5. Optionally, create a new work request by selecting Create Work Request from the Work Request Results region, or Create if viewing request details of an existing request.
 - a. Select a Priority from the list of values, for example High, Medium, or Low.
 - b. Optionally, select a Work Request Type from the list of values.
 - c. Select a Request By Date. The system date will default.
 - d. Enter the detailed information about the work requested in the Request/Approval Log field.
 - e. Choose Apply to save your work.
 - f. Choose Cancel to return to the Work Requests for Asset page without creating the work request.
6. Optionally, you can save or export your work request information to a spreadsheet by selecting Export All Work Requests.
7. In the Work Order Results region, only work orders linked to a work request are displayed. Optionally select the work order Number to view information associated with the work order.

Choose Existing Work Requests to return to the previous page.
8. Optionally, you can save or export your work order information to a spreadsheet by selecting Export All Work Orders.

Viewing Quality Information

You can view a list of Oracle Quality collection plans and enter quality results for the current asset.

To view collection plans:

1. Navigate to the Assets page, and query an asset. See: [Obtaining Asset Information](#) on page 13-5.
2. Select the asset, then choose Quality.

Figure 13–6 Viewing Quality Information

The screenshot shows the Oracle eAM Quality List of Plans page. At the top, there's a navigation bar with links for Home, Assets, Work Requests, Work Orders, and Work Plan. Below the navigation bar, the page title is "Quality List of Plans". It displays asset details: Asset Group (BUILDING), Asset Category (Area), Asset Number (BUILDING300), Area, Owning Department (EAM-DEP01), and Asset Description (30p - 300 Oracle Parkway). Below this, a table titled "List of Collection Plans" shows one entry:

Collection Plan	Description	Type	Enter Quality Results	View Quality Results	Attachment	Visited
ASSET ACT PUMP FAILURE	Asset Activity Pump failure report	Asset Act Def				

At the bottom of the page, there are links for "Return To Asset Page", "Home", "Assets", "Work Requests", "Work Orders", "Work Plan", "Return To Portal", "Log Off", and "Preferences". A copyright notice at the very bottom reads "Copyright 2001 Oracle Corporation. All rights reserved."

A list of collection plans associated with the current asset and requiring completion display (See: [Creating eAM Quality Collection Plans](#) on page 12-8). When the collection plan was created, it was specified whether the collection plan required completion. Also, during the eAM collection plan creation process, triggers can be specified to make only certain assets eligible for the collection plan (See: [Creating eAM Quality Collection Plans](#) on page 12-8). See: [Quality Setup](#) on page 12-2

3. Optionally, enter quality results by selecting the Enter Quality Results pencil icon. You can enter quality results for a collection plan or update a collection plan's quality results multiple times.

- a. Required fields are dependent on the Collection Plan's collection element specifications (See: [Creating eAM Quality Collection Plans](#) on page 12-8).
 - b. Choose Submit to save your work or Cancel to return to the Quality List of Plans page.
4. Choose the View Quality Results glasses icon to view or update any results entered for the current collection plan.
 - a. Optionally, specify parameters and values to filter the data displayed in your results set. The parameters are the collection elements defined for the current collection plan. See: [Creating eAM Quality Collection Plans](#) on page 12-8.
 - b. Choose Go to view the entered parameters' results in the results set table. Optionally, choose Clear to enter new parameters.
 - c. Optionally, select a column from the Add column list of values to add to the results set table, if the column is not currently displayed. Choose Add.
 - d. Optionally, choose the Attachment paperclip icon to view or add file, URL, or text attachments to collection elements, within the results table set.
 - e. Optionally, you can Update the quality results by selecting the pencil icon.
 - Required fields are dependent on the Collection Plan's collection element specifications. See: [Creating eAM Quality Collection Plans](#) on page 12-8.
 - Choose Submit to save your work or Cancel to return to the Quality List of Plans page.
5. Choose Return To List Of Plans Page at the bottom of the page to return to the list of quality collection plans.
6. Choose the Attachments paperclip icon to attach any necessary files, URLs, or text to the chosen collection element (result entry). Each collection element in the collection plan can have its own attachments, and can have an unlimited number of attachments.
7. If you have updated this collection plan, the Visited column will be populated with a check mark.

Note: You will have to enter quality results at work order completion for all required collection plans for an asset.

See Also:

- [Overview of Collection Plans](#), *Oracle Quality User's Guide*
- [Overview of Quality Self-Service](#), *Oracle Quality User's Guide*

Work Requests

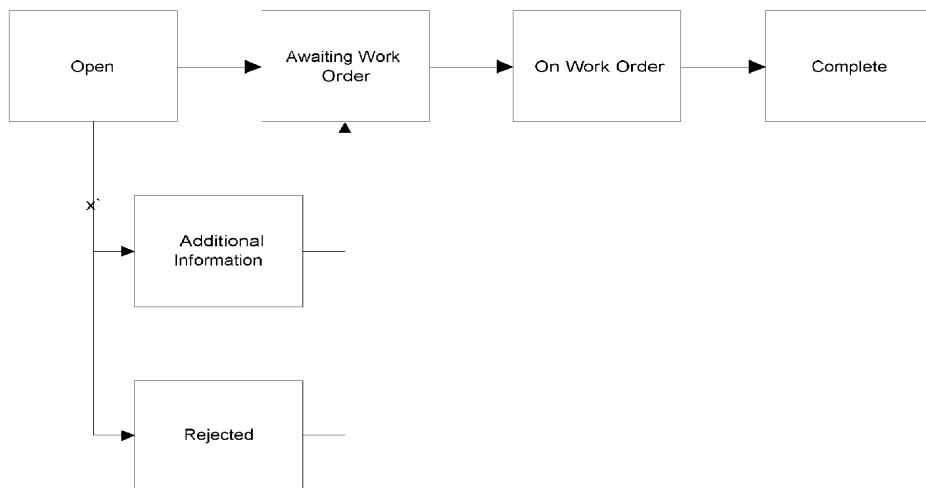
A work request is not a work order. It is a request for maintenance on an asset. eAM enables operations and maintenance staff to report any problems with an asset. A supervisor can approve, place on hold, or reject a work request. A work order requires approval before it can be generated into a work order. The Work Requests tab enables you to query existing, and create new work requests for an asset. This section's tasks include:

- [Work Request Statuses on page 13-18](#)
- [Obtaining Work Request Information on page 13-19](#)
- [Creating and Updating Work Requests on page 13-21](#)

Work Request Statuses

A work request will transition through several statuses during its lifecycle. The work request lifecycle is as follows:

Figure 13–7 Work Request Lifecycle



Open - A work request is created in the status of Open.

Awaiting Work Order - If the Auto-Approve Work Request functionality is enabled for the current organization, the status will change to Awaiting Work Order (See:

[Defining eAM Parameters](#) on page 2-9). If the functionality is not enabled for the current organization, a workflow notification will be sent to the appropriate individual in the approval route. The individual will respond by approving, rejecting, or requesting additional information, and the status will change to one of the following statuses. Once the status becomes Awaiting Work Order, an Easy work order can be created from the work request within Self Service Maintenance. The work request's status then changes to On Work Order.

On Work Order - Once a work request is linked to a work order, the status changes to On Work Order.

Rejected - The individual on the approval route rejected the work request.

Additional Information - If the work request's status becomes Additional Information, the originator needs to add the requested information.

Complete - The work request status transitions to Complete when the work order associated with the request is completed.

Obtaining Work Request Information

Using the simple search mode, you can query on existing requests associated to a specific asset, to view, update, or create new work requests. A simple search enables you to query on work requests associated with a specific asset. Work orders that are associated with a work request, and at a status of Released, Unreleased, or Hold will display, as well. You also have the option of querying on work requests and work orders using an advanced search mode. The advanced search enables you to narrow the query on work requests and orders to more than an asset, for example, you can query on all work requests associated with a specific priority code. Using the advanced search, you can view and update work requests, but cannot create them.

To obtain Work Request Information using the simple search:

1. Navigate to the Work Requests tab. When you first enter the screen, the system is in a simple search mode.
2. Select an Asset from the list of values to search for related work requests and work orders. Work Order Results will display only those work orders linked to a work request with a status of Released, Unreleased, and Hold.

Figure 13–8 Related Work Request Search

The screenshot shows the Oracle Asset Management interface. At the top, there's a banner with the Oracle logo and 'Asset Management'. On the right side of the banner are links for 'Return to Portal', 'Logout', and 'Preferences'. Below the banner, a navigation bar has tabs for 'Home', 'Assets', 'Work Requests' (which is highlighted in blue), 'Work Orders', and 'Work Plan'. Under the 'Work Requests' tab, there are two links: 'Work Request Results' and 'Work Order Results'. The main content area is titled 'Work Requests (EM2)' and contains a 'Simple Search' section where an asset number 'NCBldg100F101' is entered and a 'Go' button is clicked. Below this, the 'Work Request Results' section displays a table with one row:

Number	Description	Status	Request By Date	Originator	Update
3208	Desk is broken	On Work Order	25-Mar-2002	MFG	

Below the table is a 'Work Order Results' section showing a single work order:

Number	Description	Start Date	Owning Department	Priority
EZ72907	Desk is broken	25-MAR-2002	NC_Maint	High

At the bottom of the page are links for 'Home', 'Assets', 'Work Requests', 'Work Orders', 'Work Plan', 'Return to Portal', 'Logout', and 'Preferences'.

3. Choose Go.

To obtain Work Request Information using the advanced search:

1. Navigate to the Work Requests tab. When you first enter the screen, the system is in a simple search mode.
2. Choose Advanced Search to narrow your selection criteria.
 - a. Optionally, select an Asset Group from the list of values. An asset group is a grouping of similar assets.
 - b. Optionally, select an Asset Category from the list of values. This is the Class and Subclass code, such as CRANE.OVERHEAD or BUILDING.FLOOR. See: [Setting Up Category Codes and Sets](#) on page 2-36.
 - c. Optionally, select an Area from the list of values. This is a user defined listing of logical areas of work, and areas are where the assets reside. For

example, North Plant, East Wing, or Area 1. See: [Setting Up Asset Areas](#) on page 2-12.

- d. Optionally, select a Work Order Number to display all work requests associated with that work order number. An unlimited number of work requests can be associated with a work order.
- e. Optionally, select a From Date to narrow your selection of work requests to a specific time period.
- f. Optionally, select a specific Request Number.
- g. Optionally, select a work request Status from the list of values to view all work requests at a specific status.
- h. Optionally, select a Current Owning Department from the list of values to see all work requests associated with a specific owning department.
- i. Optionally, select Originator from the list of values to display all work requests that a specific person created.
- j. Optionally, select a To Date to narrow your selection of work requests to a specific time period.
- k. Optionally, select the Include children from hierarchy checkbox. If Asset Number is populated and this checkbox is selected, then work requests for the asset and all of its children will display. If Asset Number is not populated and this checkbox is selected, all work requests in the system will display. If Asset Number is not populated, this checkbox is selected, and additional criteria are entered, this additional criteria is ignored; all work requests in the system will display.

3. Choose Go.

Creating and Updating Work Requests

Creation of a work request can only be accomplished from the simple search page. See: [Simple Search](#) on page 13-19. The remainder of this page enables you to create and update work requests. For instructions, See steps 4 - 8: [Viewing Associated Work Requests](#) on page 13-13.

Work Orders

The Work Orders tab enables you to query and create work orders for a specified asset. You can view work order details, such as status, activity type, and the activity cause. You can also create an Easy Work Order, enabling a supervisor immediate access to establishing appropriate charge accounts for issuing items, recording time, and creating requisitions. This section's tasks include:

- [Viewing Work Orders](#) on page 13-22
- [Creating Easy Work Orders](#) on page 13-23

Viewing Work Orders

You might need to create an easy (unplanned) work order for an asset. See: Creating Easy Work Orders. To avoid duplication of work orders, you can first view all work orders associated with the asset, before creating a new one.

To obtain a list of Asset Work Orders:

1. Navigate to the Work Orders tab.
2. Enter a valid Asset to search for related work orders. You can either enter a known asset, or select a valid asset from the list of values.
3. Select the Include Rebuild Work Order check box to include child rebuild work order details associated to the parent asset.
4. Choose Go to display all work orders associated with the chosen asset.

Figure 13–9 Work Orders Page

The screenshot shows the Oracle Asset Management Work Orders page. At the top, there's a banner with the Oracle Asset Management logo. Below the banner, a navigation bar includes links for Home, Assets, Work Requests, Work Orders (which is highlighted in yellow), and Work Plan. On the right side of the header are icons for Return to Portal, Logout, and Preferences.

The main content area starts with a section titled "Work Order(EAM)". It contains a message: "To create an easy work order, you need to enter a valid Asset Number, or click on the flashlight to do a search. Press the Go button to continue." Below this is a form with fields for "Asset Number" (containing "BUILDING200") and "Include Rebuild Work Order" (with an unchecked checkbox). A "Go" button is located next to the search field.

Below the search form is a table titled "Asset Work Orders". The table has columns: Asset Number, Work Order, Description, Start Date and Time, Duration (hours), Owning Department, Status, and Complete/Incomplete. One row is visible, showing BUILDING200, EAM4044, REMOVE THERMOSTAT COVER AND CHANGE TEMP 09-Aug-2001 16:02:44, 0 EAM-DEP01, Released, and a edit icon.

At the bottom of the page, there are navigation links: Home, Assets, Work Requests, Work Orders, Work Plan, Return to Portal, Logout, and Preferences. A copyright notice "Copyright 2001 Oracle Corporation. All rights reserved." is also present.

5. Select a Work Order number to view details of a work order listed.

Creating Easy Work Orders

Easy Work Orders are unplanned work orders, and enable you to avoid operation and resource planning. When created, the current asset's associated asset activity (See: [Asset/Asset Activity Association](#) on page 2-56) will not attach or associate to the new work order, as with planned work orders. Once created, the work order is automatically at a Released status, enabling you to execute the work order. For example, request materials, charge labor, etc.

To create an Easy Work Order:

6. Choose Create Easy Work Order to create an easy work order associated with the current asset.
 - Optionally, select a Work Request Number from the list of values to reference a work request generated by another user. All approved work requests for the current asset, that have not already been associated with a

work order, will be available. The work requests available for selection are at an Awaiting Work Order status. The description of the work request will become the description of the work order created.

Note: Routine work orders can be associated to an unlimited number of work requests. However, an easy work order can be associated with only one work request. A work request can be associated with only one work order. You can associate multiple work requests to a work order within the forms application.

- b. Optionally, select a Work Order Type from the list of values.
 - c. Enter a Description. This will default from the first work request number associated to this work order.
 - d. Optionally, select an Activity Type from the list of values to indicate the type of maintenance activity needed for the current asset. It should remain generic, for example, Inspection, Overhaul, Lubrication, Repair, Servicing, or Cleaning.
 - e. Optionally, select an Activity Cause from the list of values to specify the situation causing the needed maintenance. For example, Breakdown, Vandalism, Normal Wear, or Settings.
 - f. Enter a Scheduled Start Date and Time. The system date and time will default.
 - g. Enter a Scheduled Duration in hours to identify the number of hours it would take to finish the work order, once it has been started.
 - h. The Owning Department will default as the owning department of the operation created. Operation 10 is created automatically when creating an easy work order.
 - i. Optionally, select a Priority code. This will default from the work request if you selected a work request number.
7. Choose Apply to save your work, or Cancel to exit the page. Once you choose Apply, the system will return a confirmation notice with the new work order number.

Note: After you choose Apply, you have automatically created an Easy Work Order. A Planner may wish to build additional operations and resources to the work order after the issue has been addressed. Further edits to the newly created work order can be accomplished via the forms application, See: Easy Work Orders, or the Work Plan tab. See: [Work Plans](#) on page 13-26.

See Also:

[eAM Work Orders](#) on page 3-5

Work Plans

The Work Plan tab is designed for users, such as Crew Supervisors, that execute work plans generated by the Planner. The Work Plan tab enables you to manage the operations of a work order. You can skill search across departments, assign employees to a work order, adjust crew schedules, complete operations, hand over work to another department, complete a work order, and enter quality plan information such as inspection data. This section's tasks include:

- [Viewing Asset and Rebuildable Work Orders](#) on page 13-26
- [Managing Operations](#) on page 13-29

Viewing Asset and Rebuildable Work Orders

Using the simple or advanced search modes, a supervisor can query on existing work orders assigned to a department or employee, to view, update, or manage operations. Managing Operations enables you to search on skills, assign employees to work orders, hand over work to other departments, charge resources, and complete or uncomplete an operation.

To view work orders:

1. Navigate to the Work Plan tab.
2. Optionally, narrow your search criteria by entering an Assigned Department from the list of values.
3. Optionally, narrow your search criteria by entering an Employee Number from the list of values.
4. Optionally, narrow your search criteria by selecting a date range.
5. Optionally, further narrow your search criteria by selecting Advanced Search. This search method enables you to enter specific Asset information, Work Order information, and Operation information.
6. Choose Go to display all work orders associated with the chosen data selection.

Figure 13–10 Work Plans Page

The screenshot shows the Oracle Asset Management Work Plan page. At the top, there's a navigation bar with links for Home, Assets, Work Requests, Work Orders, and Work Plan. Below that is a sub-navigation bar with links for Asset Work Orders and Rebuildable Work Orders. The main content area is titled "Work Plan(EAM)". It features a "Simple Search" section with fields for Assigned Department (set to CENTER-2), Employee Number, and Date Range, along with "Go" and "Clear" buttons. To the right of the search is an "Advanced Search" link. Below the search is a table titled "Asset Work Orders" showing four rows of work order details:

Select	Asset Number	Work Order	Description	Start Date and Time	Duration (hours)	Owning Department	Status	Complete/Uncomplete
<input checked="" type="radio"/>	MK01	9533	dcsCSDcsv	09-Mar-2002 00:00:00	0	PJ64A	Released	
<input type="radio"/>	EAM-MAP1	EZ33191	dcsCSDcsv	07-Nov-2001 17:45:14	2	CENTER 1	Released	
<input type="radio"/>	AGITATOR-3	W036151		28-Nov-2001 15:30:00	224.5	CENTER 1	Released	
<input type="radio"/>	TOWER-EAM021-CT001	sst1		30-Nov-2001 00:00:00	0	CENTER 2	Released	

Below this is a section titled "Rebuildable Work Orders" with a table showing one row of data:

Select Asset Number	Work Order	Description	Start Date and Time	Duration (hours)	Owning Department	Status
(No search conducted)						

7. Select a Work Order to view details of a work order listed.
8. To Complete or Uncomplete (re-open) a work order, choose the Complete/Uncomplete pencil icon (See: eAM Work Order Statuses). Planners or Crew Supervisors can complete or uncomplete work orders using the Maintenance workbench (See: [Using the Maintenance Workbench](#) on page 3-59), or via the Work Plan tab. Uncompleting a work order will bring the work order back to a Released status. The operations within a work order do not need to be complete in order to complete a work order. However, the date you complete a work order needs to be greater than (later) or equal to the end date of the operation that has the latest end date. Likewise, the date you start a work order needs to be earlier than or equal to the start date of the operation with the earliest start date.
 - a. Optionally, change the Actual Start Date and Time, Actual Duration, Shutdown Start Date and Time, and Shutdown Duration.

- Actual Duration identifies the total elapsed time of the Work Order. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date.
 - Changing the times and duration affects resource usage for employees and equipment.
- b. Optionally, enter a Reconciliation Code. This is a simple description of why you are completing this work order. For example, Cancelled, or Completed.
- c. At work order completion, meter readings are mandatory for work orders generated by the Preventive Maintenance scheduling engine. Once a work order is completed, meter readings are required for all runtime interval meters associated with the asset in the Preventive Maintenance scheduling definition. See: [Entering Preventive Maintenance Scheduling Definitions](#) on page 4-11 and [Work Order Completion](#) on page 3-41. If there is a meter associated with this asset, you will be prompted to enter a Current Reading or a Reading Change. If you enter a Current Reading, the Reading Change will default. If you enter a Reading Change, the Current Reading will default.
- Indicate whether you would like to Reset the Current Reading to zero by selecting the Reset check box.
- d. Oracle Quality collection plans associated with the current work order's associated asset and requiring completion display. When the collection plan was created, it was specified whether the collection plan required completion. Also, during the eAM collection plan creation process, triggers can be specified to make only certain assets eligible for the collection plan. See: [Creating eAM Quality Collection Plans](#) on page 12-8.
- Required fields are dependent on the Collection Plan's collection element specifications. See: [Creating eAM Quality Collection Plans](#) on page 12-8.
9. Choose Apply to Complete the Work Order, or Cancel to exit.

See Also:

[Defining Meters](#) on page 4-3

[Overview of Collection Plans](#), *Oracle Quality User's Guide*

Managing Operations

Managing Operations enables a supervisor manage all activities related to an operation. The supervisor can search on skills, assign employees to operations and resources, hand over work to other departments, charge resources, and complete or uncomplete an operation.

To manage operations:

1. Navigate to the Work Plan tab.

Figure 13-11 Work Plan Page

The screenshot displays the Oracle Asset Management Work Plan page. At the top, there's a banner with the Oracle logo and the text "Asset Management". Below the banner, a navigation bar includes links for Home, Assets, Work Requests, Work Orders, and Work Plan (which is highlighted). On the right side of the header are icons for "Return to Portal", "Logout", and "Preferences".

The main content area has two tabs at the top: "Asset Work Orders" and "Rebuildable Work Orders".

Asset Work Orders Section:

- Simple Search:** A form with fields for "Assigned Department" (with a dropdown menu), "Employee Number" (with a dropdown menu), and "Date Range" (two date pickers). Below the form are "Go" and "Clear" buttons.
- Search Results:** A table titled "Asset Work Orders" with columns: Select, Asset Number, Work Order Description, Start Date and Time, Duration (hours), Owning Department, Status, and Complete/Uncomplete. A note "(No search conducted)" is shown below the table.
- Navigation:** Buttons for "Previous" and "Next" are located above the results table.
- Links:** "Return to Top" and "Return to EAM" are located at the bottom of this section.

Rebuildable Work Orders Section:

- Search Results:** A table titled "Rebuildable Work Orders" with columns: Select, Asset Number, Work Order Description, Start Date and Time, Duration (hours), Owning Department, and Status. A note "(No search conducted)" is shown below the table.
- Navigation:** Buttons for "Previous" and "Next" are located above the results table.
- Links:** "Return to Top" and "Return to EAM" are located at the bottom of this section.

Page Footer:

- Links: Home, Assets, Work Requests, Work Orders, Work Plan, Return to Portal, Logout, Preferences.
- Text: Copyright 2001 Oracle Corporation. All rights reserved.

2. Search for Work Orders. See: [Viewing Asset and Rebuildable Work Orders](#) on page 13-26.
3. Choose Manage Operations after selecting a work order.

Figure 13–12 Managing Operations

The screenshot shows the Oracle Asset Management Work Plan interface. At the top, there's a banner with the Oracle logo and the text "Asset Management". Below the banner, a navigation bar includes links for Home, Assets, Work Requests, Work Orders, and Work Plan (which is highlighted). On the far right of the navigation bar are icons for "Return to Portal", "Logout", and "Preferences".

The main content area displays the following information:

- Work Plan > Work Order Details > Operations**
- Operations(EAM)**
- Work Order: WO36151**
- Asset Number: AGITATOR-3**
- Asset Group: AGITATOR-CHENERVL-B-152**
- Description: Asset Description**
- Asset Activity: ESS-AA-1**

Asset Work Order Operations

Select	Operation	Assigned Department	Description	Start Date and Time	Duration (hours)	Completed	Attachment
G	10	CENTER 1		08-Dec-2001 00:00:00	0	✓	<input type="button" value=""/>
C	11	CENTER 4	waiting on valve	04-Dec-2001 07:26:32	1	✓	<input type="button" value=""/>
C	20	CENTER-2		28-Nov-2001 15:30:00	0		<input type="button" value=""/>

Links at the bottom:

- [Return to Work Order Details](#)
- [Home](#) | [Assets](#) | [Work Requests](#) | [Work Orders](#) | [Work Plan](#) | [Return to Portal](#) | [Logout](#) | [Preferences](#)

Copyright © 2001 Oracle Corporation. All rights reserved.

To charge resources:

It is important in asset management to capture both estimated and actual time spent on each operation of a work order. When resources are identified on a work order, there is a time estimate of how long it will take to perform the work. In many cases, the extent of the work load is unknown until the work starts. Resource Charging enables you to post actual usage time for employees, equipment, and miscellaneous materials for specific operations on a work order.

- Select an Operation, then choose Charge Resource.

Figure 13–13 Charging Resources

The screenshot shows the Oracle Asset Management Work Plan interface. At the top, there's a banner with the Oracle logo and the text "Asset Management". Below the banner, a navigation bar includes links for Home, Assets, Work Requests, Work Orders, and Work Plan. The "Work Plan" link is highlighted. The main content area shows a breadcrumb trail: Work Plan > Work Order Details > Operations > Resource Charging. The page title is "Resource Charging". It displays details for a work order: Work Order 10085, Asset Number DRIVE-EAM031-MFC100, Asset Group CONVEYOR-DRIVE3, Operation Sequence 40, Work Order Description EXTEND LENGTH OF CONVEYOR, Asset Description #3 Mill Feed Conveyor, Asset Activity, and Assigned Department BICELC. Below this, there's a form with fields for Resource Sequence, Resource, Unit of Measure, Quantity, Employee, Equipment, Charge Department, Reason, and Reference. Each field has a small edit icon next to it. At the bottom right are "Cancel" and "Apply" buttons. The footer contains links for Home, Assets, Work Requests, Work Orders, Work Plan, Return to Portal, Logout, and Preferences, along with a copyright notice: Copyright 2001 Oracle Corporation. All rights reserved.

- b.** Select a Resouce Sequence from the list of values. The Resource, Unit of Measure, and Quantity (reflects the number charged, normally in hours) will default, based on the selected resource sequence, and the resources associated with the work order.
 - For information on Resource Sequence, Resource, and Unit of Measure, See: [Defining Resource Requirements](#) on page 3-32
- c.** Optionally, identity the Employee that performed the work, from the list of values.
- d.** Optionally, identify the Equipment used to perform the work, from the list of values.
- e.** Optionally, select the Charge Department from the list of values to choose the department that the employee or equipment will be charged to.

You can display the list of values if the Employee name or Equipment serial number fields have been entered. The list of values will display all departments that the person or equipment has been assigned to (See: [Defining Departments and Resources](#) on page 2-13).

If you do not select a Charge Department from the list of values, entering a Charge Department manually, the system validates that the department matches the assigned department of the operation. If it does not, you will receive an error.

- f. Optionally, select a Reason code from the list of values. This is an informational field that can be used to indicate the reason a resource was used, or the accounting for time was taken.
- g. Optionally, enter a Reference.
- h. Choose Apply to save your work, or Cancel to return to the Operations page.

To re-assign work to another department:

Often, operations are started and not finished by the assigned crew. A Handover enables a supervisor to re-assign the task to another supervisor for the continuation of work. This transaction adds an additional line of operations to the work order. When the operation is handed over, the current operation is automatically completed, and a new operation is created.

- a. Select an Operation, then choose Handover.

Figure 13–14 Handover Operations

The screenshot shows the Oracle Asset Management Work Plan interface. The top navigation bar includes links for Home, Assets, Work Requests, Work Orders, and Work Plan. The sub-navigation path is Work Plan > Work Order Details > Operations > Operation Details > Handover. The main content area displays the following information:

- Work Order:** WO36161
- Asset Number:** AGITATOR-3
- Asset Group:** AGITATOR-CHENERVL-B-152
- Description:** Asset Description
- Asset Activity:** ESS-AA-1

A message at the top says "Enter new operation data and click apply to handover." Below this, the "Original Operation Information" section shows:

- Operation:** 20
- Description:** Description
- Assigned Department:** CENTER-2
- Status:** Completed

The "New Operation Information" section contains fields for:

- New Operation:** 21
- Description:** (empty text input field)
- Assigned Department:** (dropdown menu)
- Start Date and Time:** 16-Jan-2002 10:45:31
- Duration (hours):** 0
- Shutdown Type:** (dropdown menu)
- Attachments:** View List

The "Resource Information" section includes a table:

Select	Resource Sequence	Resource	Quantity	Open UOM	Start Date and Time	Duration (hours)
<input checked="" type="checkbox"/>	10 ELECT	6 HR	16-Jan-2002 10:45:31		0	

- b. Optionally, enter a Description of this new handover operation.
- c. Enter a newly Assigned Department from the list of values. You cannot select the same department that the current operation exists in. Only those departments, having all the resources used for the current operation, are available from the list of values.
- d. Optionally, update the Start Date and Time for the new operation. The current system date and time will default.
- e. Optionally, enter an estimated duration in hours that the new operation requires.
- f. Optionally, choose a Shutdown Type from the drop down list. This indicates whether a shutdown is necessary to perform this maintenance activity. For example, Required and Not Required.

- g. Optionally, add file, URL, or text attachments as necessary by selecting View List.
 - Choose Add Attachment. For example, you can add notes, such as "This work order could not be completed due to a delay in delivered items".
 - Choose Return to display the Handover page.
- h. Indicate whether to carry over resource usage information by selecting the Select check box for associated resource.
 - Optionally, enter the Duration of resource usage in hours.
- i. Select the resources you want to handover to another department. Select specific resources by selecting the Select check box next to the desired resources, or you can handover all resources by choosing Select All. This selects all Select check boxes for all resources.
- j. Choose Apply to save your work, or cancel to return to the Operations page.

To assign employees to a task:

Work Orders are typically planned and scheduled by a planner. The assignment of work is normally executed by a supervisor. It is common that work is not assigned at the employee level. If the supervisor intends to assign each task to an employee, the system can display whether employees are currently assigned to an operation, and the supervisor can assign additional personnel if needed. If a supervisor is required to find another resource from another crew, he can do that with a skill search, leveraging Oracle Human Resources competencies.

- a. Select an Operation, then choose Assign Employee.
- b. In the Resources region, choose the View Employees icon to view currently assigned employees.
- c. Optionally, choose Search Skills to search for employees by competency classifications.
 - Optionally, select a Competency Type from the list of values.
 - Optionally, select a Competency from the list of values.
 - Choose Go to display a list of competent employees.
 - Choose Assign Employee to return to the Employees page. This populates the Employee Name field.

- d. Select an Employee Name from the list of values, or allow the system to populate this field based on a skill search.
- e. Choose Assign.

Figure 13–15 Employee Assignment

The screenshot shows the Oracle Asset Management Work Plan interface. The top navigation bar includes links for Home, Assets, Work Requests, Work Orders, and Work Plan. The Work Plan link is highlighted. The main content area shows a work order for asset #1 COOLING WATER TOWER, repair apron feeder, assigned to center 1. Below this, a table lists employees assigned to the operation, showing 67 Weston, Mr. Robert J. with start date 10-Feb-1997 and end date 31-Dec-4712. There is also a section for assigning additional employees, a return to resources link, and copyright information at the bottom.

Employee Number	Employee Name	Effective Start Date	Effective End Date	Remove Employee
67	Weston, Mr. Robert J.	10-Feb-1997	31-Dec-4712	

- f. Optionally, choose the Remove Employee icon to un-assign an employee from a task.
- g. Choose Operations.

To complete or uncomplete an operation:

Operations can be at complete or uncomplete statuses. When completing an operation, operation dependencies are considered. For example, if operation 20 is dependent on operation 10's completion, you cannot uncomplete 10 if operation 20 is already completed.

- a. Select an Operation, then choose Complete/Uncomplete Operation.

Figure 13–16 Operation Completion

The screenshot shows the Oracle Asset Management interface. At the top, there's a banner with the Oracle logo and the text "Asset Management". Below the banner, a navigation bar has tabs for Home, Assets, Work Requests, Work Orders, and Work Plan, with "Work Plan" being the active tab. To the right of the navigation bar are three icons: "Return to Portal", "Logout", and "Preferences".

The main content area displays the "Operation Completion/Uncompletion(EAM)" page. The URL in the browser is "Work Plan > Work Order Details > Operations > Operation Completion/Uncompletion". The work order details shown are: Work Order W036151, Asset Number AGITATOR-3, Asset Group AGITATOR-CHENERVL-B-152, Asset Description ESS-AA-1, Asset Activity ESS-AA-1.

A message at the top of the form says, "Enter completion data and click 'Apply' button to complete the operation." Below this, the "Operation Information" section shows an operation with ID 20, description "Completed", assigned to the department "CENTER-2".

The "Operation Completion/Uncompletion Information" section contains fields for "Transaction Type" (set to "Complete Operation"), "Actual Start Date and Time" (set to "28-Nov-2001 15:30:00"), "Actual Duration (hours)" (set to "1171.351"), and a "Reconciliation Code" dropdown menu. There's also a "Attachments" section with a "View List" link.

At the bottom of the page, there are "Cancel" and "Apply" buttons. The footer includes links for Home, Assets, Work Requests, Work Orders, Work Plan, Return to Portal, Logout, and Preferences, along with a copyright notice: "Copyright © 2001 Oracle Corporation. All rights reserved."

- b.** Enter an Actual Start Date and Time that the operation started.
- c.** Enter the Actual Duration in hours that it took to complete the operation. It is automatically calculated as the difference between the Estimated Start Date and Estimated End Date.
- d.** Optionally, select a Reconciliation code from the list of values describing how the operation was completed. For example Completed, Handover, or Partially Completed. These codes enable you to evaluate jobs by percentage completed or delayed. For example, if the operation was delayed, this code can provide the reason. A code such as Handover suggests that an operation was not finished within a shift and was assigned to another crew.
- e.** Optionally, add necessary attachments by selecting View List.
 - Choose Add Attachment to add file, URL, or text attachments.
 - Choose Return to return to the Operation Completion/Uncompletion page.
- f.** Choose Apply to save your work, or Cancel to exit.

Reports and Processes

This chapter describes each Oracle Enterprise Asset Management report, including the following topics:

- Overview of Reports on page 14-2
- Maintenance Work Order Detail Report on page 14-2
- Simulate Transfer Shop Floor Invoice Variance on page 14-5
- Shop Floor Invoice Variance Report on page 14-7

Overview of Reports

Oracle Enterprise Asset Management provides you with reports, intended for different business needs. Detailed information on submitting and analyzing Oracle eAM reports is provided in the following topics:

- [Maintenance Work Order Detail Report](#) on page 14-2
- [Simulate Transfer Shop Floor Invoice Variance](#) on page 14-5
- [Shop Floor Invoice Variance Report](#) on page 14-7

Maintenance Work Order Detail Report

Use the Maintenance Work Order Detail Report to view and analyze all information related to a maintenance work order. You can create a report that displays user-defined values. For example, you can view all unreleased work orders for a specified date range, or see material requirements for work orders in a specified area. You can filter reporting information according to work orders, start and end dates, assigned department, work statuses, asset area, and asset. You can display details on the report, including operations, resources, employees, materials, direct items, work requests, meters, and attachments.

Report Submission

1. In the Submit Requests window, select Maintenance Work Order Detail Report from the Name list of values.

Report Parameters

All report parameters are optional.

Work Order From

Enter the starting work order number to display a range of work orders.

To

Enter the ending work order number to display a range of work orders.

Scheduled Start Dates From

Enter the beginning scheduled date for a data range. This is the starting point to calculate the scheduled end date and duration for allocated resources and materials.

To

Enter the ending date for a date range. This indicates the requested end by date of the work. The scheduling process uses this date as a starting point to calculate the scheduled start date and duration for allocated resources and materials.

Work Order Status

Enter the status of the work order. Only work orders at this status will display on the report.

Assigned Department

Enter the assigned department (crew). This is the department associated with the asset on the work order.

Asset Area from

Enter the beginning asset area for a range of areas.

Asset Area to

Enter the ending asset area for a range of areas.

Asset Number

Enter an asset if you want to view only work order information associated with a specific asset.

Operations to be displayed

No - Operation level information will not display.

Yes - Operation level information will display

Resources to be displayed

No - Resource level information will not display.

Yes - Resource level information will display

Employee to be displayed

No - Employee specific information will not display.

Yes - Employee specific information will display.

Materials to be displayed

No - Material level information will not display.

Yes - Material level information will display.

Direct Items to be displayed

No - Material level information will not display.

Yes - Material level information will display.

Work Request to be displayed

No - Work orders' associated work requests will not display.

Yes - Work orders' associated work requests will display.

Meters to be displayed

No - Assets' associated meters will not display.

Yes - Assets' associated meters will display.

Attachments to be displayed

No - Attachments will not display.

Yes - Attachments will display.

2. Choose OK.

3. Choose Submit.

See Also:

[Submitting a Request, Oracle Applications User's Guide](#)

Simulate Transfer Shop Floor Invoice Variance

You can transfer variances between purchase order price and invoice price, back to a maintenance work order, from your user-defined, adjustment account. This enables you to value your maintenance costs at the actual costs.

You can generate the Simulate Transfer Shop Floor Invoice Variance report to display the details of each invoice variance and a summary total of the variance amount that may transfer. The report format is similar to the Shop Floor Invoice Variance Report. You can view this report to determine whether or not you will go ahead with the variance transfer. You should complete this task before you run the Shop Floor Invoice Variance Report (See: [Shop Floor Invoice Variance Report](#) on page 14-7).

Report Submission

1. Navigate to the [Shop Floor Invoice Variance](#) window.
2. Select Simulate Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters

Transfer Description

Optionally, enter a description for the invoice transfer.

Specific Work Order

You can view the variance transfer details for a specific work order by selecting a work order from the list of values. Maintenance work orders with statuses of Cancelled, Closed, and Complete - No Charges will not be available within the list of available values.

IPV Item Type

You can transfer invoice variances for:

Direct Shop Floor Delivery items only

Outside Processing and Direct Shop Floor Delivery items

Outside Processing items only

Item Range

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify an item range for your transfer.

Specific Item

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify an item for your transfer.

Category Set

If you chose Outside Processing items only as the value for the IPV Item Type parameter, you can specify a Category Set for your transfer.

Specific Category

If you chose Outside Processing items only as the value for the IPV Item Type parameter and a value in the Category Set parameter, you can specify a specific category from the previously chosen category set.

Specific Project

You can choose to transfer invoice variances only for items associated to a specific project.

Adjustment Account

You can enter an adjustment account from which the invoice variance is transferred.

Invoice Cutoff Date

Enter a date. Approved and posted invoices through this date will be included in your transfer.

3. Choose OK.
4. Choose Submit.

See Also:

[Submitting a Request, Oracle Applications User's Guide](#)

[Transferring Invoice Variances to Maintenance Work Orders on page 6-20](#)

Shop Floor Invoice Variance Report

You can transfer invoice variances from your specific adjustment account to maintenance work orders (See: [Transferring Invoice Variances](#) on page 6-21). For each invoice variance transfer processed successfully, you can use the Shop Floor Invoice Variance Report to view the invoice variance transferred into your maintenance work orders. This report displays the adjustment account and the summary total amount transferred. It also displays the detail information for each work order, item, purchase order line, and invoice included in the transfer.

Report Submission

1. Navigate to the [Shop Floor Invoice Variance](#) window.
2. Select Simulate Transfer Shop Floor Invoice Variance from the Name list of values.

Report Parameters

Batch Date

Enter a date to filter out batches that you do not want to select. Only batches processed on or after this date will be included in the Batch Id parameter's list of values.

Batch Id

Enter the identifier for the batch you would like to report on. The list of values displays the parameters entered when you run your transfer process, such as description, work order number, item number, etc.

3. Choose OK.
4. Choose Submit.

See Also:

[Submitting a Request, Oracle Applications User's Guide](#)

[Transferring Invoice Variances to Maintenance Work Orders](#) on page 6-20

A

Windows and Navigation Paths

Windows and Navigation Paths

This appendix provides the default navigator paths for the windows used in the Oracle Enterprise Asset Management. The following table provides the default navigation paths. Brackets [] indicate a button.

Default Navigation Paths for Standard Application Windows

Table 14–1 eAM-Related Windows and Navigation Paths

Window Name	Navigation Path
Activity and Asset Number/Rebuildable Association	Enterprise Asset Manager: Asset Activities > Asset Activity Association
Area	Enterprise Asset Manager: Setup > Area
Asset Genealogy Import	Interfaces > Import Asset Genealogy
Asset Meter	Enterprise Asset Manager: Meters > Asset Meter Association
Asset Number Import	Interfaces > Import Asset Number
Asset Status	Enterprise Asset Manager: Assets > Asset Numbers > Asset Statuses
Bills of Material (Activity BOM)	Enterprise Asset Manager: Asset Activities > Maintenance BOM
Bills of Material (Asset BOM)	Enterprise Asset Manager: Assets > Asset BOM
Categories	Enterprise Asset Manager: Setup > Category > Category Codes
Category Sets	Enterprise Asset Manager: Setup > Category > Category Sets

Table 14–1 eAM-Related Windows and Navigation Paths

Window Name	Navigation Path
Close Rebuild Work Order	Enterprise Asset Manager: Work Orders > Close Rebuild Work Orders
Close Work Order	Enterprise Asset Manager: Work Orders > Close Work Orders
Collection Elements	Quality Manager: Setup > Collection Elements
Collection Plans	Quality Manager: Setup > Collection Plans
Define Asset Number	Enterprise Asset Manager: Assets > Asset Numbers
Define Asset Route	Enterprise Asset Manager: Assets > Asset Route
Departments	Bills of Material Manager: Bills of Materials > Routings > Departments
Department Approvers	Enterprise Asset Manager: Setup > Department Approvers
Descriptive Flexfield Segments	Enterprise Asset Manager: Setup > Flexfields > Descriptive > Segments
EAM Asset Documents	Enterprise Asset Manager: Assets > Asset Numbers > Documents
EAM Work Order Documents	Enterprise Asset Manager: Work Orders > Documents
Enter Quality Results	Quality Manager: Results > Entry > Enter Quality Results
Enterprise Asset Managment Parameters	Enterprise Asset Manager: Setup > Parameters
Financials Options	Purchasing Manager: Setup > Organizations > Financial Options
Find Asset Number	Assets > Asset Numbers > Asset Number field > [Find] icon
Find Meter Readings	Interfaces > Pending Meter Readings
Find Pending Work Orders	Interfaces > Pending Work Orders
Find Projects	Project Manufacturing Manager: Projects > Project Manufacturing > Projects
Find Project Status	Project Manufacturing Manager: Project Status > Project Status Inquiry
Find Rebuild Work Orders	Enterprise Asset Manager: Work Orders > Rebuild Work Orders

Table 14–1 eAM-Related Windows and Navigation Paths

Window Name	Navigation Path
Find Requests (PRC: Refresh Project Summary Amounts)	Project Manufacturing Manager: Other > Requests > Run OR View menu > Requests
Find Work Orders	Enterprise Asset Manager: Work Orders > Work Orders
Generate Preventive Maintenance Work Orders	Enterprise Asset Manager: Preventive Maintenance > Generate Work Orders
Import Items	Interfaces > Import Items
Import Jobs and Schedules	Interfaces > Import Work Orders or Import Meter Readings
Launch MRP	Manufacturing Manager: Material Planning > MRP > Launch
Maintenance Workbench	Enterprise Asset Manager: Work Order Planning > Maintenance Workbench
Maintenance Work Order Value Summary	Enterprise Asset Manager: Work Orders > Work Orders > [Costs] > [Value Summary]
Master Item	Enterprise Asset Manager: Assets > Asset Groups or Asset Activities
Material Transactions	Enterprise Asset Manager: Work Order Transactions > Material Transactions
Meters	Enterprise Asset Manager: Meters > Meter Definition
Meter Reading	Enterprise Asset Manager: Meters > Meter Readings > Asset Meter Reading
Miscellaneous Documents	Enterprise Asset Manager: Setup > Miscellaneous Documents
MRP Names	Material Planner: MDS > Names
Operation Completion	Enterprise Asset Manager: Work Completion > Operation Completion
Organization	Inventory Manager: Setup > Organizations > Organizations > [New]
Organization Parameters	Enterprise Asset Manager: Setup > Parameters
Oracle Manufacturing Lookups	Enterprise Asset Manager: Setup > Lookups
Pending Meter Reading	Enterprise Asset Manager: Meters > Meter Readings > Pending Meter Reading
Personal Profile Values	Enterprise Asset Manager: Setup > Profiles > Personal

Table 14–1 eAM-Related Windows and Navigation Paths

Window Name	Navigation Path
Purchase Orders	Purchasing Manager: Purchase Orders > Purchase Orders
Preventive Maintenance Schedules	Enterprise Asset Manager: Preventive Maintenance > Schedule Definition
Project Parameters	Project Manufacturing Manager: Projects > Project Manufacturing > Project Parameters
Rebuild Completion	Enterprise Asset Manager: Work Completion > Rebuild Work Order Completion
Requisitions	Purchasing: Requisitions > Requisitions
Resource Usage	Enterprise Asset Manager: Assets > Asset Numbers > Asset Numbers
Resource Transactions	Enterprise Asset Manager: Work Order Transactions > Resource Transactions
Routings	Enterprise Asset Manager: Asset Activities > Maintenance Routings
Select Work Order	Enterprise Asset Manager: Work Order Details > Operations, Material Requirements, or Resource Requirements
Scheduler Workbench	Enterprise Asset Manager: Work Order Planning > Scheduler Workbench
Shop Floor Invoice Variance	Enterprise Asset Manager: Cost > Work Order Shop Floor Invoice Variance
Supply/Demand	Enterprise Asset Manager: Manufacturing > Material Planning > MRP > Workbench > [Supply/Demand] > [Find]
View Operations	Enterprise Asset Manager: Work Order Details > View Operations
View Material Requirements	Enterprise Asset Manager: Work Order Details > View Material Requirements
View Resource Requirements	Enterprise Asset Manager: Work Order Details > View Resource Requirements
View Resource Transactions	Enterprise Asset Manager: Work Order Transactions > View Resource Transactions > [Find]
Work In Process Parameters	WIP Manager: Setup > Parameters
Work Order Completion	Enterprise Asset Manager: Work Completion > Work Order Completion

Table 14–1 eAM-Related Windows and Navigation Paths

Window Name	Navigation Path
Work Order	Enterprise Asset Manager: Work Orders > Work Orders

B

eAM Open Interfaces and APIs

This appendix details the integration tools used to integrate eAM with your existing non-Oracle systems. The following topics are covered:

- eAM Interfaces and APIs on page B-2
- eAM Item Open Interface on page B-2
- eAM Asset Number Open Interface on page B-9
- eAM Asset Genealogy Open Interface on page B-16
- eAM Work Order Open Interface on page B-19
- eAM Meter Reading Open Interface on page B-23

eAM Interfaces and APIs

Oracle Enterprise Asset Management provides a number of open interfaces and APIs, enabling you to link with non-Oracle applications, applications you build, and applications on other computers.

This section includes the following topics:

- [eAM Item Open Interface](#) on page B-2
- [eAM Asset Number Open Interface](#) on page B-9
- [eAM Asset Genealogy Open Interface](#) on page B-16
- [eAM Work Order Open Interface](#) on page B-19
- [eAM Meter Reading Open Interface](#) on page B-23

eAM Item Open Interface

The eAM Item Open Interface enables you to import asset groups, asset activities, and rebuildable items into the eAM application in a batch process. You can create them as new items or update existing items (asset groups, asset activities, or rebuildable items). The Item Open Interface validates your data, insuring that your imported items contain the same item detail as items you enter manually in the Master Item window.

You can also import item category assignments. This can be done simultaneously with a process of importing items, or as a separate task of importing item category assignments only.

When importing items through the Item Open Interface, you create new items in your item master organization, update existing items, or assign existing items to additional organizations. You can specify values for all the item attributes, or you can specify just a few attributes and let the remainder default or remain null. The Item Open Interface also enables import revision details, including past and future revisions and effectivity dates. Validation of imported items is done using the same rules as the item definition windows, so you are insured of valid items. See: [Overview of Engineering Prototype Environment](#), *Oracle Engineering User's Guide* and [Defining Items](#), *Oracle Inventory User's Guide*.

The Item Open Interface reads data from three tables for importing items and item details. Use the MTL_SYSTEM_ITEMS_INTERFACE table for new item numbers and all item attributes. This is the main item interface table, and may be the only table you choose to use. When importing revision details for new items, use the MTL_ITEM_REVISIONS_INTERFACE table. This table is used for revision

information, and is not required. When importing item category assignments, use the MTL_ITEM_CATEGORIES_INTERFACE table to store data about item assignments to category sets, and categories to be imported into the Oracle Inventory MTL_ITEM_CATEGORIES table. A fourth table, MTL_INTERFACE_ERRORS, is used for error tracking of all items that the Item Interface fails.

Before using the Item Open Interface, you must write and run a custom program that extracts item information from your source system and inserts the records into the MTL_SYSTEM_ITEMS_INTERFACE table, and (if revision detail is included) the MTL_ITEMS_REVISIONS_INTERFACE table, as well as the MTL_ITEM_CATEGORIES_INTERFACE table. After you load item, revision, and item category assignment records into these interface tables, you run the Item Open Interface to import the data. The Item Open Interface assigns defaults, validates included data, and then imports the new items.

Note: You must import items into a master organization before you import items into additional organizations. You can accomplish this by specifying only your master organization on a first pass run of the Item Open Interface. Once this has completed, you can run the Item Open Interface again, this time specifying an additional or all organizations.

Setting Up the Item Open Interface

1. Create Indexes for Performance. Create the following indexes to improve the Item Open Interface performance.

First, determine which segments are enabled for the System Items flexfield.

Then, for example, if you have a two-segment flexfield, with SEGMENT8 and SEGMENT12 enabled, you would do the following:

```
SQL> create unique index MTL_SYSTEM_ITEMS_B_UC1 on MTL_SYSTEM_ITEMS_B (ORGANIZATION_ID,
SEGMENT8, SEGMENT12);
SQL> create unique index MTL_SYSTEM_ITEMS_INTERFACE_UC1 on mtl_system_items_interface
(organization_id, segment8, segment12);
```

If you plan to populate the ITEM_NUMBER column in mtl_system_items_interface instead of the item segment columns, do not create the MTL_SYSTEM_ITEMS_INTERFACE_UC1 unique index. Instead, create MTL_SYSTEM_ITEMS_INTERFACE_NC1 non-unique index on the same columns.

Create the following indexes for optimum performance:

MTL_SYSTEM_ITEMS_B

- Non-Unique Index on organization_id, segmentn
- You need at least one indexed, mandatory segment.

MTL_SYSTEM_ITEMS_INTERFACE

- Non Unique Index on inventory_item_id, organization_id
- Non Unique Index on Item_number
- Unique Index on Transaction_id

Unique Index on organization_id, segmentn

Note: This Index will have to be recreated as Non Unique if you are populating organization_code, instead of organization_id. It should include the segment(s) having been enabled for the System Item Key Flexfield. You are enabled to use the created default index if you are using segment1.

MTL_ITEM_REVISIONS_INTERFACE

- Non Unique Index on set_process_id
- Non Unique Index on Transaction_id
- Non Unique Index on Organization_id, Inventory_item_id, Revision

MTL_ITEM_CATEGORIES_INTERFACE

- Non Unique Index no inventory_item_id, category_id
- Non Unique Index on set_process_id

Unique Index on transaction_id

Suggestion: Populate _id fields whenever possible. Populating inventory_item_id instead of segment (n) for Update Mode will significantly improve performance. Populating organization_id instead of organization_code for both Create and Update modes, will also reduce processing time.

2. Start the Concurrent Manager.

Because the Item Open Interface process is launched and managed via the concurrent manager, you must ensure that the concurrent manager is running before you can import any items.

3. Set Profile Option Defaults.

Some columns use profile options as default values. You must set these profiles if you want them to default. See: [Inventory Profile Options](#), *Oracle Inventory User's Guide* and [Overview of Inventory Setup](#), *Oracle Inventory User's Guide*.

Execution Steps

1. Populate the interface tables.

The item interface table MTL_SYSTEM_ITEMS_INTERFACE contains *every* column in the Oracle Inventory item master table, MTL_SYSTEM_ITEMS. The columns in the item interface correspond directly to those in the item master table. Except for ITEM_NUMBER or SEGMENT n columns, ORGANIZATION_CODE or ORGANIZATION_ID, DESCRIPTION, PROCESS_FLAG, and TRANSACTION_TYPE, all of these columns are optional, either because they have defaults that can be derived, or because the corresponding attributes are optional and may be left null.

You may put in details about other interface tables not used by the Item Open Interface.

Currently, the interface does not support the MTL_CROSS_REFERENCE_INTERFACE or MTL_SECONDARY_LOCS_INTERFACE.

The MTL_ITEM_CATEGORIES_INTERFACE is used by the Item Open Interface for both internal processing of default category assignments, *and* to retrieve data populated by the user to be imported into the Oracle Inventory MTL_ITEM_CATEGORIES table.

Table 14-2 MTL_SYSTEM_ITEMS_INTERFACE

Column Names (partial list of columns)	Instruction
PROCESS_FLAG	<p>Enter 1 for pending data to be imported.</p> <p>After running the import process, the PROCESS_FLAG of the corresponding rows will be set to different values, indicating the results of the import (1 = Pending, 2 = Assign complete, 3 = Assign/validation failed, 4 = Validation succeeded; import failed, 5 = Import in process, 6 = Import succeeded)</p>

Table 14–2 MTL_SYSTEM_ITEMS_INTERFACE

Column Names (partial list of columns)	Instruction
TRANSACTION_TYPE	Enter CREATE to create a new item, or UPDATE to update existing items.
SET_PROCESS_ID	Enter an arbitrary number. Rows designated with the same value for SET_PROCESS_ID will process together.
ORGANIZATION_CODE	Enter the organization that the new item will import into.
SEGMENT1~20	Corresponds to the item name (for example, the name of the Asset Group, Asset Activity, or Rebuildable Item)
DESCRIPTION	Enter the description of the item.
EAM_ITEM_TYPE	Enter 1 for Asset Group, 2 for Asset Activity, or 3 for Rebuildable Item.
INVENTORY_ITEM_FLAG	Enter Y for eAM items.
MTL_TRANSACTIONS_ENABLED_FLAG	Enter N for eAM items.
EFFECTIVITY_CONTROL	Enter 2 for Unit Effectivity Control for eAM Asset Groups.
SERIAL_NUMBER_CONTROL_CODE	Enter 2 (Predefined) for Asset Groups; this should be NULL for Asset Activities.
AUTO_SERIAL_ALPHA_PREFIX	Serial Number Prefix
START_AUTO_SERIAL_NUMBER	Start Serial Number

Note: For information about columns not discussed, see Table and View Definitions, *Oracle Inventory Technical Reference Manual*.

2. Launch the Item Import process.

a. Navigate to the [Import Items](#) window.

Choose an organization if you have not specified one already. You must import items into the master organization before importing them to additional children organization.

- b. Enter parameters:

Table 14–3 Report Parameters

Parameter	Description
All Organizations	Select Yes to run the interface for all organization codes within the item interface table. Select No to run the interface for only interface rows within the current organization.
Validate Items	Select Yes to validate all items, and their information residing in the interface table, that have not yet been validated. If items are not validated, they will not be imported into eAM. Select No to not validate items within the interface table. Use this option if you have previously run the Item Open interface and responded Yes in the Validate Items parameter, and No in the Process Items parameter, and now need to process your items.
Process Items	Select Yes to import all qualifying items in the interface table into eAM. Select No to not import items into eAM. Use this option, along with Yes in the Delete Processed Rows parameter, to remove successfully processed rows from the interface table, without performing any other processing. You can also use this option, with Yes in the Validate Items parameter, to validate items without any processing.
Delete Processed Rows	Select Yes to delete successfully processed rows from the item interface tables. Select No to leave all rows in the item interface tables.
Process Set	Enter a set id number for the set of rows in the interface table to process. The interface process will process rows having that id in the SET_PROCESS_ID column. If you leave this parameter blank, all rows are picked up for processing, regardless of the SET_PROCESS_ID column value.
Create or Update Items	Select 1 to create new items. Select 2 to update existing items. You can create or update items via separate executions of the Import Items process.

- c. Choose OK.

- d. Choose Submit to launch the Asset Number Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

See Also:

[Oracle Manufacturing APIs and Open Interfaces Manual, Release 11*i*](#)

[Defining Asset Groups](#) on page 2-39

[Defining Asset Activities](#) on page 2-54

[Defining Rebuildable Spares](#) on page 2-72

eAM Asset Number Open Interface

The eAM Asset Number Open Interface enables you to import asset numbers into eAM, using a batch process. You can optionally import asset number attributes. You can create new asset numbers and attributes, or update existing asset numbers and attributes.

Execution Steps

1. Populate the interface tables with the import information.

The two item interface tables to be populated are MTL_EAM_ASSET_NUM_INTERFACE (MEANI), and the MTL_EAM_ATTR_VAL_INTERFACE (MEAVI). The MTL_EAM_ASSET_NUM_INTERFACE table stores relevant asset number information. If the asset's attributes are also imported; that information is stored in the MTL_EAM_ATTR_VAL_INTERFACE.

Table 14-4 MTL_EAM_ASSET_NUM_INTERFACE (MEANI)

Column Name (partial list of columns)	Instruction
BATCH_ID	Enter an arbitrary number. Rows designated with the same BATCH_ID will process together.
PROCESS_FLAG	Enter a P for pending. This value will change to S if the import is successful, or E if the row contains an error.
IMPORT_MODE	Enter 0 to create new rows (asset numbers), or 1 to update existing rows.
IMPORT_SCOPE	Enter 0 to import both Asset Numbers and Attributes, 1 to import Asset Numbers only, or 2 to import Attributes only.
INVENTORY_ITEM_ID	Enter the Asset Group to associate with the imported Asset Number(s).
SERIAL_NUMBER	Enter the name of the Asset Number.
ORGANIZATION_CODE	Enter the current organization.
OWNING_DEPARTMENT_CODE	Enter the Owning Department of the asset number(s).
ERROR_CODE	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

Table 14–4 MTL_EAM_ASSET_NUM_INTERFACE (MEANI)

Column Name (partial list of columns)	Instruction
INTERFACE_HEADER_ID	This is used with the identically named column in the MEAVI table, to relate the Attributes associated with an Asset Number.

Table 14–5 MTL_EAM_ATTR_VAL_INTERFACE (MEAVI)

Column Name (partial list of columns)	Instruction
PROCESS_STATUS	Enter P (Pending). This value will change to S if the import is successful, or E if the row contains an error.
INTERFACE_HEADER_ID	Foreign key of the identically named column in the MEANI table to relate to the Asset Number an Attribute is associated with.
INTERFACE_LINE_ID	A unique key
END_USER_COLUMN_NAME	Corresponds with the Attribute Name
ATTRIBUTE_CATEGORY	Corresponds with the Attribute Group
LINE_TYPE	Enter 1 if the Attribute is of type VARCHAR2, 2 if it is of type NUMBER, or 3 if it is of type DATE.
ATTRIBUTE_VARCHAR2_VALUE	Value of the Attribute; used with LINE_TYPE = 1
ATTRIBUTE_NUMBER_VALUE	Value of the Attribute; used with LINE_TYPE = 2
ATTRIBUTE_DATE_VALUE	Value of the Attribute; used with LINE_TYPE = 3
ERROR_NUMBER	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

Note: For information about columns not discussed, see Table and View Definitions, *Oracle Enterprise Asset Management Technical Reference Manual*.

2. Launch the Asset Number Import process to import interface information into the MTL_SERIAL_NUMBERS production table.

- a. Navigate to the [Asset Number Import](#) window.

Choose an organization if you have not specified one already. You have to import asset numbers into the master organization before importing them into additional children organizations.

- b. Enter parameters:

Table 14–6 Report Parameters

Parameter	Description
Batch ID	This is the same value that is populated in the BATCH_ID column within the MEANI table.
Purge Option	Select Yes to delete rows in the interface tables after they have successfully imported into the production tables. Select No to keep all rows in the interface tables after they have successfully imported into the production tables. Any failed rows with error messages will not delete.

- c. Choose OK.
- d. Choose Submit to launch the Asset Number Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

Create and Update Asset Number API

The MTL_EAM_ASSET_NUMBER_PUB public API is used to create and update asset numbers in the MTL_SERIAL_NUMBERS table, and is called from the Asset Number Open Interface process.

Table 14–7 MTL_EAM_ASSET_NUMBER_PUB

Column Name	Type	Required	Optional	Default
P_API_VERSION	Number	Yes	-	-
P_INIT_MSG_LIST	Varchar2	-	Yes	FND_API.G_ FALSE
P_COMMIT	Varchar2	-	Yes	FND_API.G_ FALSE

Table 14–7 MTL_EAM_ASSET_NUMBER_PUB

Column Name	Type	Required	Optional	Default
P_VALIDATION_LEVEL	Number	-	Yes	FND_API.G_VALID_LEVEL_FULL
P_INVENTORY_ITEM_ID	Number	-	-	-
P_SERIAL_NUMBER	Varchar2(30)	-	-	-
P_INITIALIZATION_DATE	Date	-	-	-
P DESCRIPTIVE_TEXT	Varchar2(240)	-	-	-
P_CURRENT_ORGANIZATION_ID	Number	-	-	-
P_ATTRIBUTE_CATEGORY	Varchar2(30)	-	-	-
P_ATTRIBUTE1~15	Varchar2(150)	-	-	-
P_GEN_OBJECT_ID	Number	-	-	-
P_CATEGORY_ID	Number	-	-	-
P_WIP_ACCOUNTING_CLASS_CODE	Varchar2(10)	-	-	-
P_MAINTAINABLE_FLAG	Varchar2(1)	-	-	-
P_OWNING_DEPARTMENT_ID	Number	-	-	-
P_DEPENDENT_ASSET_FLAG	Varchar2(1)	-	-	-
P_NETWORK_ASSET_FLAG	Varchar2(1)	-	-	-
P_FA_ASSET_ID	Number	-	-	-
P_PN_LOCATION_ID	Number	-	-	-
P_EAM_LOCATION_ID	Number	-	-	-
P_ASSET_STATUS_CODE	Varchar2(30)	-	-	-
P_ASSET_CRITICALITY_CODE	Varchar2(30)	-	-	-
P_LAST_UPDATE_DATE	Date	Yes	-	-
P_LAST_UPDATED_BY	Number	Yes	-	-

Table 14–7 MTL_EAM_ASSET_NUMBER_PUB

Column Name	Type	Required	Optional	Default
P_CREATION_DATE	Date	Yes	-	-
P_CREATED_BY	Number	Yes	-	-
P_LAST_UPDATE_LOGIN	Number	Yes	-	-
P_REQUEST_ID	Number	-	Yes	-
P_PROGRAM_APPLICATION_ID	Number	-	Yes	-
P_PROGRAM_ID	Number	-	Yes	-
P_PROGRAM_UPDATE_DATE	Date	-	Yes	-

Create and Update Extensible Asset Attribute Values API

The MTL_EAM_ASSET_ATTR_VALUES_PUB public API is used to create and update asset extensible attribute values, and is called from the Asset Extensible Attributes Open Interface process. This interface process is used when the IMPORT_SCOPE column is set to 0 or 2 within the MTL_EAM_ASSET_NUM_INTERFACE table.

Table 14–8 MTL_EAM_ASSET_ATTR_VALUES_PUB

Column Name	Type	Required	Optional	Default
P_API_VERSION	Number	Yes	-	-
P_INIT_MSG_LIST	Varchar2	-	Yes	FND_API.G_FALSE
P_COMMIT	Varchar2	-	Yes	FND_API.G_FALSE
P_VALIDATION_LEVEL	Number	-	Yes	FND_API.G_VALID_LEVEL_FULL
P_ATTRIBUTE_CATEGORY	Varchar2(30)	-	-	-
P_C_ATTRIBUTE1~20	Varchar2(150)	-	-	-
P_N_ATTRIBUTE1~10	Number	-	-	-
P_D_ATTRIBUTE1~10	Date	-	-	-
P_LAST_UPDATE_DATE	Date	Yes	-	-

Table 14–8 MTL_EAM_ASSET_ATTR_VALUES_PUB

Column Name	Type	Required	Optional	Default
P_LAST_UPDATED_BY	Number	Yes	-	-
P_CREATION_DATE	Date	Yes	-	-
P_CREATED_BY	Number	Yes	-	-
P_LAST_UPDATE_LOGIN	Number	Yes	-	-
P_REQUEST_ID	Number	-	Yes	-
P_PROGRAM_APPLICATION_ID	Number	-	Yes	-
P_PROGRAM_ID	Number	-	Yes	-
P_PROGRAM_UPDATE_DATE	Date	-	Yes	-

Create and Update Asset Genealogy and Hierarchy API

The INV_SERIAL_NUMBER_PUB public API is used to create and update asset genealogy and hierarchy information in the MTL_OBJECT_GENEALOGY table, and is called from the Asset Number Open Interface process.

Table 14–9 INV_SERIAL_NUMBER_PUB

Column Name	Type	Required	Optional	Default
P_API_VERSION	Number	Yes	-	-
P_INIT_MSG_LIST	Varchar2	-	Yes	FND_API.G_FALSE
P_COMMIT	Varchar2	-	Yes	FND_API.G_FALSE
P_VALIDATION_LEVEL	Number	-	Yes	FND_API.G_VALID_LEVEL_FULL
P_OBJECT_TYPE	Number	-	-	-
P_PARENT_OBJECT_TYPE	Number	-	-	-
P_OBJECT_ID	Number	-	-	-
P_OBJECT_NUMBER	Varchar2	-	-	-
P_INVENTORY_ITEM_ID	Number	Yes	-	-

Table 14–9 INV_SERIAL_NUMBER_PUB

Column Name	Type	Required	Optional	Default
P_ORG_ID	Number	-	-	-
P_PARENT_OBJECT_ID	Number	-	-	-
P_PARENT_OBJECT_NUMBER	Varchar2	-	-	-
P_PARENT_INVENTORY_ITEM_ID	Number	-	-	-
P_PARENT_ORG_ID	Number	-	-	-
P_GENEALOGY_ORIGIN	Number	-	-	-
P_GENEALOGY_TYPE	Number	-	-	-
P_START_DATE_ACTIVE	Date	-	-	-
P_END_DATE_ACTIVE	Date	-	-	-
P_ORIGIN_TXN_ID	Number	-	-	-
P_UPDATE_TXN_ID	Number	-	-	-
P_LAST_UPDATE_DATE	Date	Yes	-	-
P_LAST_UPDATED_BY	Number	Yes	-	-
P_CREATION_DATE	Date	Yes	-	-
P_CREATED_BY	Number	Yes	-	-
P_LAST_UPDATE_LOGIN	Number	Yes	-	-
P_REQUEST_ID	Number	-	Yes	-
P_PROGRAM_APPLICATION_ID	Number	-	Yes	-
P_PROGRAM_ID	Number	-	Yes	-
P_PROGRAM_UPDATE_DATE	Date	-	Yes	-

See Also:

[Defining Asset Numbers](#) on page 2-46

eAM Asset Genealogy Open Interface

The eAM Asset Genealogy Open Interface enables you to import asset genealogy (configuration history) into eAM, using a batch process. You can create new parent/child relationships, or update existing relationships.

Execution Steps

1. Populate the interface tables with the import information.

The Asset Genealogy Import process reads information within the MTL_OBJECT_GENEALOGY_INTERFACE (MOGI) table, then imports that information into the production tables.

Table 14–10 MTL_OBJECT_GENEALOGY_INTERFACE (MOGI)

Column Name (partial list of columns)	Instruction
BATCH_ID	Enter an arbitrary number. Rows designated with the same BATCH_ID will process together.
PROCESS_STATUS	Enter P (Pending). This value will change to S if the import is successful, or E if the row contains an error.
INTERFACE_HEADER_ID	Unique key
IMPORT_MODE	Enter 0 to create new rows (configuration histories), or 1 to update existing rows.
OBJECT_TYPE	Enter 2 for eAM.
PARENT_OBJECT_TYPE	Enter 2 for eAM.
GENEALOGY_ORIGIN	Enter 3 (Manual) for eAM.
GENEALOGY_TYPE	Enter 5 for eAM.
INVENTORY_ITEM_ID	Corresponds to Asset Group
SERIAL_NUMBER	Corresponds to Asset Number
PARENT_INVENTORY_ITEM_ID	Corresponds to Parent Asset Group
PARENT_SERIAL_NUMBER	Corresponds to Parent Asset Number
START_DATE_ACTIVE	Enter the Parent/Child relationship start date.
END_DATE_ACTIVE	Enter the Parent/Child relationship end date.

Table 14–10 MTL_OBJECT_GENEALOGY_INTERFACE (MOGI)

Column Name (partial list of columns)	Instruction
ERROR_CODE	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

Note: For information about columns not discussed, see Table and View Definitions, *Oracle Enterprise Asset Management Technical Reference Manual*.

2. Launch the Asset Genealogy Import process.
 - a. Navigate to the [Asset Genealogy Import](#) window.
Choose an organization if you have not specified one already. You have to import asset genealogies into the master organization before importing them into additional children organizations.
 - b. Enter parameters:

Table 14–11 Report Parameters

Parameter	Description
Batch ID	This is the same value that is populated in the BATCH_ID column within the MOGI table.
Purge Option	Select Yes to delete rows in the interface tables after they have successfully imported into the production tables. Select No to keep all rows in the interface tables after they have successfully imported into the production tables. Any failed rows with error messages will not delete.

- c. Choose OK.
- d. Choose Submit to launch the Asset Genealogy Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

See Also:

- [Viewing and Updating the Configuration History](#) on page 13-9
- [Displaying the Asset Hierarchy](#) on page 13-8

eAM Work Order Open Interface

The eAM Work Order Interface is a process used to import work orders into eAM. This interface is also known as the Wip Mass Load process. This interface will import Routine, Rebuild, and Preventive Maintenance work orders (work orders generated by the PM Scheduling process).

Execution Steps

1. Populate the interface table with the import information.

The Work Order Import process reads information within the WIP_JOB_SCHEDULE_INTERFACE table, then imports that information into the production table, WIP_DISCRETE_JOBS.

Table 14-12 WIP_JOB_SCHEDULE_INTERFACE

Column Name (partial list of columns)	Instruction
LOAD_TYPE	Enter 7 to create new eAM work order(s), or enter 8 to update existing eAM work order(s).
GROUP_ID	Enter an arbitrary number. Rows designated with the same GROUP_ID will process together.
ERROR_CODE	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

Note: For information about columns not discussed, see Table and View Definitions, *Oracle Work In Process Technical Reference Manual*.

2. Launch the Work Order Import process.

- a. Navigate to the [Import Jobs and Schedules](#) window.

Choose an organization if you have not specified one already. You must import work orders into the master organization before importing them into additional children organizations.

- b. Enter parameters:

Table 14–13 Report Parameters

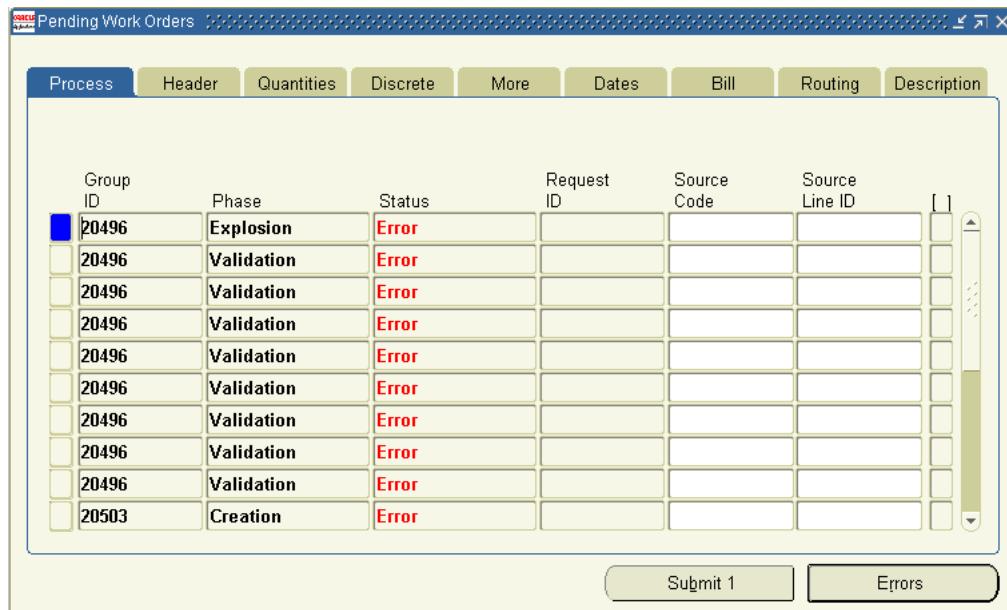
Parameter	Description
Group ID	Corresponds to the GROUP_ID in the WIP_JOB_SCHEDULE_INTERFACE table. The import process will only process those work orders that have a GROUP_ID in the interface table matching the value entered in this parameter.
Print Report	Select Yes to print a report after the process has run. Select No to not generate a report output after executing the process.

- c. Choose OK.
- d. Choose Submit to launch the Work Order Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

To view pending work orders:

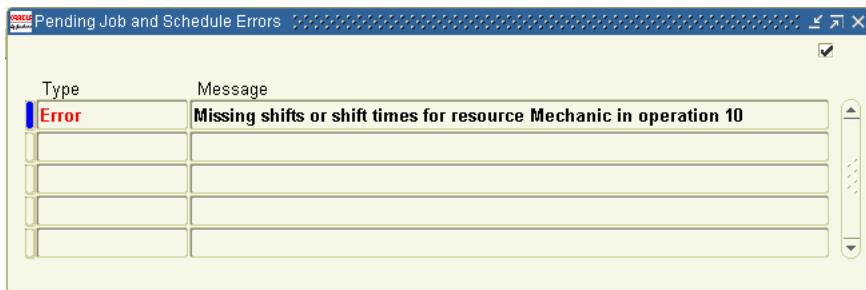
You can display the rows within the interface table that failed to import into eAM.

1. Navigate to the [Find Pending Work Orders](#) window. This window enables you to query rows using search criteria, such as Group ID, Work Order name, or Organization code, to narrow your search.
2. Choose Find. The rows that display failed to import into the WIP_DISCRETE_JOBS table.

Figure 14–1 Pending Work Orders Window

The Process tab displays general information about the work order rows in error. The Header tabbed region displays information regarding the work order and its organization. The Quantities, Bill, Routing, Description, and More tabbed regions display their respective relevant information about the work orders that failed to import into eAM.

3. Optionally, select a specific work order, and then choose Errors. Information regarding the type and cause of failure will display.

Figure 14–2 Pending Job and Schedule Errors Window

4. Optionally, choose Submit1 from the Pending Work Orders window to import work orders, again, after correcting errors.

See Also:

- [Routine Work Orders on page 3-5](#)
- [Rebuild Work Orders on page 3-12](#)
- [Preventive Maintenance Work Orders on page 3-11](#)

eAM Meter Reading Open Interface

Import Meter Reading is an interface process used to import meter readings into eAM.

Execution Steps

1. Populate the interface table with the import information.

The Meter Reading Import process reads information within the EAM_METER_READING_INTERFACE table, then imports that information into the eAM production table.

Table 14–14 EAM_METER_READING_INTERFACE

Column Name (partial list of columns)	Instruction
GROUP_ID	Enter an arbitrary number. Rows designated with the same GROUP_ID will process together.
PROCESS_STATUS	Enter P (Pending). This value will change to S if the import is successful, or E if the row contains an error.
PROCESS_PHASE	Enter 2 for rows to be processed.
METER_ID	Unique key
METER_NAME	Enter the name of the meter to process. This is not mandatory if you entered a METER_ID.
RESET_FLAG	Enter Yes to reset the meter reading. If there is an already existing meter reading for the given meter that occurs after this reset reading, the processor will error. Enter No to not reset the meter reading.
LIFE_TO_DATE	Enter a value for LIFE_TO_DATE or a value in the READING_VALUE column. If both columns are populated, then the READING_VALUE value is used to enter a reading, and the LIFE_TO_DATE_READING value is calculated from this current reading.
ORGANIZATION_ID	If you enter an organization ID, the organization provided must be enabled for eAM.
ORGANIZATION_CODE	If you enter an organization code, the organization provided must be enabled for eAM.
READING_DATE	Date the reading is entered
READING_VALUE	Reading value at the reading date

Table 14–14 EAM_METER_READING_INTERFACE

Column Name (partial list of columns)	Instruction
WIP_ENTITY_ID	Enter the work order id that the reading is associated with. If the column is populated, then the ORGANIZATION_ID or ORGANIZATION_CODE columns are mandatory.
WORK_ORDER_NAME	Enter the work order name that the reading is associated with. If this column is populated, then the ORGANIZATION_ID or ORGANIZATION_CODE columns are mandatory.
DESCRIPTION	Description of meter reading
ERROR_CODE	This column will update by the Import process if an error occurs.
ERROR_MESSAGE	This column will update by the Import process if an error occurs.

Note: For information about columns not discussed, see Table and View Definitions, *Oracle Enterprise Asset Management Technical Reference Manual*.

2. Launch the Meter Reading Import process.
 - a. Navigate to the [Import Jobs and Schedules](#) window. Choose an organization if you have not specified one already. You must import work orders into the master organization before importing them into additional children organizations.
 - b. Enter parameters:

Table 14–15 Report Parameters

Parameter	Description
Group ID	Corresponds to the GROUP_ID in the EAM_METER_READING_INTERFACE table. The import process will only process those meter readings that have a GROUP_ID in the interface table matching the value entered in this parameter.

- c. Choose OK.

- d. Choose Submit to launch the Meter Reading Import process. You can view its progress by choosing View from the tool bar, and then selecting Requests.

To view pending meter readings:

You can display the rows within the interface table that failed to import into eAM.

1. Navigate to the [Find Meter Readings](#) window. This window enables you to query rows using search criteria, such as Group ID, Reading Date, or Organization code, to narrow your search.
2. Choose Find. The rows that display failed to import into eAM.

Figure 14–3

The screenshot shows a software window titled "Pending Meter Reading". At the top, there are three tabs: "Process", "Readings", and "More". The "Readings" tab is selected. Below the tabs is a table with the following columns: Group ID, Phase, Status, Request ID, Source Code, and Source Line ID. The table contains the following data:

Group ID	Phase	Status	Request ID	Source Code	Source Line ID	[]
1	Validation	Error				.
3003601	Validation	Pending				.
3003602	Validation	Pending				.
3003603	Validation	Pending				.
3003604	Validation	Error				.

At the bottom right of the table area are two buttons: "Submit 1" and "Errors".

- 3. Optionally, select the Process tab to display general information about the errored meter readings.
- 4. Optionally, select the Readings tab to display meter reading information, such as meter name, reading date, and reading value.

5. Optionally, select the More tab to display information about the meter reading, such as Organization, Work order, Description, and Created By.
6. Optionally, select Errors to view additional detailed information regarding the type and cause of the failure.
7. Optionally, choose Submit1 to import work orders, again, after correcting errors.

See Also:

[Entering Meter Readings](#) on page 4-7

Glossary

A

area code

User-defined lookup that can be utilized to logically sort assets by where they are physically located.

asset activity

Identifies a maintenance activity for an asset, such as preventive maintenance.

asset attributes

Unique information that describes the characteristics of an asset. Each asset can have unlimited asset attributes with associated attribute groups.

asset bills of material

A "parts list" of items and rebuildable spares that make up a particular asset item, and can be defined for each asset group. The items defined on an asset BOM are standard inventory items (set up in the Master Item window).

asset category

A standard naming convention that defines assets with familiar terms and establishes how to classify assets for reporting and analysis.

asset group

Represent the classification of equipment. Examples include Trucks, Pumps, Towers, Buildings, Storage Tanks, and Turbines. It is used in eAM as a template to identify asset attribute groups.

asset hierarchy

A single structure that depicts assets and their constituent elements in parent/child relationships. It provides information that enables a user to quickly identify plant and facilities through an Asset Navigator that displays appropriate asset details.

asset maintenance bill of material

BOM used to list all items and rebuildable spares needed to perform a particular asset activity, and can be defined for each asset activity. For example, you may have an asset activity titled, Oil Change. The items necessary to perform this activity include a filter, oil, etc. As Maintenance BOMs are created, they are associated to an asset activity.

asset number

A unique number that represents an asset or piece of equipment on which maintenance will be performed. An example of an asset number would be a Pump-101, or Toyota Truck 01.

asset route

A "virtual asset" that enables multiple assets to be associated to a single work order. It eliminates the need for creating multiple work orders for the same activity.

B

breach based maintenance

Work generated by violating established tolerances, based on asset specifications. This can include changes to pressure, flow rates, or temperature. These violated tolerances can automatically generate work requests for further service.

C

CMMS (computerized maintenance management system)

A computerized system to assist with the effective and efficient management of maintenance activities through the application of computer technology. It generally includes elements, such as a computerized Work Order system, as well as facilities for scheduling Routine Maintenance Tasks, recording and storing Work Orders, Bill of Material and Application parts Lists, as well as other numerous features.

craft

Personnel performing maintenance tasks, such as "hands on tools". Personnel may include mechanics, electricians, instrumentation technicians, machinists, utilities and facilities workers, etc. For personnel performing both operation and maintenance functions (for example, roll grinder, boiler room, or air compressors) include in the numbers that percentage of time spent maintaining. Contract employees that are on-site, full time are included.

crew

A group of employees that work together, usually under one supervisor. Sometimes a crew is in charge of a specific area and may have the same craft, such as general mechanics or they may have mixed crafts, such as electricians, and instrumentation technicians.

component (See: rebuildable spare)

A section, piece, or part of an asset that is removable, can be rebuilt or repaired, and interchangeable with other standard components (for example, engine).

condition based maintenance

The result of an assets's meter readings that may reflect the current condition of an asset. The results of such readings will affect the sequence of preventive maintenance work orders.

D

dependent steps

Operations can be dependent upon another operation; you cannot uncomplete the operation's dependency if the current operation is complete. For example, operation 20 is dependent on operation 10 completing. You cannot uncomplete operation 10 once operation 20 has been completed.

direct items

Represent items with infrequent use or criticality; they are not included in the internal catalog as stocked items. These items are contrived as "one off", bought directly from a vendor.

downtime

Specifies the time the asset was unavailable to production due to maintenance.

duration (hours)

Identifies the total elapsed time of the Work Order. It has a unit of measure in hours. It is manually entered, or is calculated as the difference between the Estimated Start Date and Estimated End Date.

E**easy work order**

Referred to as an unplanned work order, it enables quick entry of a work order; it is automatically created at a Released status, enabling you to execute work immediately.

equipment

All items of a durable nature, capable or continuing or repetitive utilization by an individual or organization, defined to the level at which maintenance is to be managed.

F**fixed asset**

Identifies Accounting's Asset ID for reporting.

forecast

Projected work that is or will be required within a user defined period of time.

H**handover**

Enables a supervisor to re-assign an operation to another supervisor, for the continuation of incomplete work.

L**labor**

Assignment of work to repair, inspect, or resolve a problem. It is expressed in hours, and can be divided by crafts or skills.

M

maintenance schedule

A list of planned maintenance tasks to be performed during a given period of time, together with the expected start times and duration of each of these tasks. Schedules can apply to different time periods (for example, Daily Schedule, Weekly Schedule, etc.).

meters

Used to measure any asset that needs to be measured and periodically serviced, based on the measurement. For example, an odometer. Another example is a pipe may start out at 12 millimeters, but when it wears to only four millimeters, it needs to be replaced.

N

non-stock items

These items are included in the internal catalog, but the decision has been made to not maintain them in an inventory balance or ordering policy, other than to purchase or make them as required.

O

operation completion

The completion of tasks/steps within a work order.

organization

A distinct entity in a company. It may include separate manufacturing facilities, warehouse distribution centers, and branch offices. Organizations often define boundaries within information sharing.

owning department

Identifies the role responsible for owning the work outlined within a Work Order.

P

planned worked

Maintenance work for which a detailed work order has been written. All materials have been made available before the work order starts. The equipment to be

maintained has been taken out of service, cleaned, and prepared, before the work starts, if required. Special tools, equipment, resources, and services have been scheduled for this work order. The work order must appear on a plan before the start of the period in which the work is to be carried out.

preventive maintenance

Maintenance carried out periodically, or by usage (throughput), or based on condition, that is intended to reduce the probability of failure or degradation of physical condition of an asset. This can be based on a meter, time, or condition.

preventive maintenance (PM) work order

A work order referencing a maintenance activity, sometimes referred to as a PM work order, and is created by the PM Scheduling process.

R

RCM (reliability centered maintenance)

The predictive approach to maintenance that trends an asset's performance and captures data. This data will help the maintenance organization to better strategize their Preventive Maintenance programs.

rebuildable spares (See: component)

Items that are installed, removed, and refurbished. Examples of rebuildables include, motors, control boxes, and computer boards. These items are not assets, however, they need to be associated with work orders for maintenance purposes. They are inventory items, and can be serialized. They are also referenced as portables or "components".

routine maintenance work order

These are the work orders that result from inspection, requests, etc. There are type types: work orders referencing a maintenance activity but created manually, and work orders created manually and not referencing a maintenance activity.

S

self service maintenance

An internet-based user interface for both maintenance and operations personnel. It provides an easy approach to entering and searching for information from any browser, and designated for the casual user (for example, tradespeople, such as fitters, mechanics, and electricians), in a plant or facility.

scheduled start date

This date is manually entered and is used to communicate to the system the scheduled date for the current work order. If associated with an asset activity, it will inherit the value from the asset activity.

serialized items

Typically tracked, and are often times rebuilt and issued properly. They are tracked with a history of failure and repair data, that is maintained for each serialized instance, regardless of their location.

shutdown type

Indicates if a shutdown is required of the asset when performing the work order. If it is associated with an asset activity, it will inherit the value from the asset activity.

stock items

Items for which either the frequency of use or equipment criticality/lead time to obtain replacement parts, mandates that they be stocked in Inventory. Therefore, they utilize planning parameters to generate replenishment orders.

T**tagout required**

Indicates that the asset needs to be secured before carrying out the work order, usually for safety reasons. Tags are generally printed and placed on an asset, warning workers that the asset is shutdown and should not be started.

W**work in process (WIP) accounting class**

A set of accounts that you use to charge the production of an assembly. You assign accounting classes to discrete jobs, and repetitive schedules. Each accounting class includes distribution accounts and variance accounts, and they are used in cost reporting.

work order

A plan that defines the resources and material equipment needed to conduct work, and then associated start and end dates.

work order closure

A work order that is unavailable for charges or any type of transaction. Closing a work order calculates final costs and variances, creating history for the work order.

work order completion

The completion of the entire work order. The operations within a work order do not need to be complete in order to complete the work order.

work order duration

The duration of the work order. The difference between completion date and start date.

work order operation

Operations (also known as tasks/steps) that prepare the instructions to perform a single activity, within the context of the work order.

work request

A request to have work performed on a maintainable asset.

Index

A

Accounting
 direct item procurement, 7-22

Asset Activities
 association
 asset, 2-56
 rebuildable spare, 2-75
 definition, 2-54

Asset Areas
 setup, 2-12

Asset Attributes
 setup, 2-42

Asset Bill of Material
 setup, 2-60

Asset Groups
 definition, 2-39

Asset Hierarchy, 13-8

Asset Numbers
 associating with meters, 4-5
 associating with production equipment, 10-4
 definition, 2-46
 setup, 2-36

Asset Routes
 definition, 2-58

AT AppendixTitle
 paragraph tags
 AT AppendixTitle, A-1, B-1

C

Category Codes and Sets
 setup, 2-36

Collection Elements, 12-2

Completion
 operation, 3-38
 rebuild work order, 3-44
 work order, 3-41

Contractor Services, 8-2

Cost Estimation, 6-8

Cost Management
 estimation, 6-8
 integration, 6-2
 methods and mappings, 6-2

D

Defining
 asset activities, 2-54
 asset documents, 2-53
 asset groups, 2-39
 asset routes, 2-58
 asset statuses, 2-70
 assets, 2-46
 department approvers, 2-17
 departments, 2-13
 eAM parameters, 2-9
 lookups, 2-20
 maintenance routes, 2-64
 master demand schedule name, 5-4
 material requirements, 3-27
 material requirements plan name, 5-5
 meters, 4-3
 miscellaneous documents, 2-18
 plan options, 5-6
 preventive maintenance schedules, 4-11
 project manufacturing integration, 11-3
 rebuildable spares, 2-72

resource requirements, 3-32
resources, 2-13
Department Approvers
definition, 2-17
Departments
definition, 2-13
Direct Item Procurement, 7-2
enabling, 7-4
Documents
asset, 2-53
miscellaneous, 2-18
work order, 3-20

E

eAM Quality Collection Plans, 12-8
Enabling
eAM for organizations, 2-7

H

Handovers, 13-32

I

Integrations
cost management, 2-79, 6-2
outside processing, 2-78
process and discrete manufacturing, 2-80
project manufacturing, 2-81
property manager, 9-5
quality, 2-77, 12-2

Item Interface
setting up, B-3

L

Lookups
asset activity causes, 2-22
asset activity types, 2-20
asset criticality codes, 2-23
definition, 2-20
work order failure codes, 2-30
work order priority codes, 2-28
work order reconciliation codes, 2-31

work order types, 2-33
work request priority codes, 2-28
work request statuses, 2-25
work request types, 2-27

M

Maintenance Bill of Material
setup, 2-68
Maintenance Routes
definition, 2-64
Material
transactions, 3-47
Material Requirements
definition, 3-27
viewing, 3-30
Material Requirements Planning
launching process, 5-10
Meters
association with assets, 4-5
definition, 4-3
enter readings, 4-7

O

Operations, 3-22
completion, 3-38, 13-35
management, 13-29
preparing, 3-22
uncompletion, 3-40
viewing, 3-26
Organization
enabling for eAM, 2-7
setup, 2-5

P

Planning, 5-2
maintenance workbench, 3-59
work order, 3-59
Preparing Operations, 3-22
Preventive Maintenance, 4-2
meters, 4-3
scheduling, 4-11
suppression activities, 4-16

Process and Discrete Manufacturing
integration, 10-2
organization setup, 10-2

Project Manufacturing
commitments, 11-16
integration, 11-2

Property Manager
prerequisites, 9-2

Property Manger, 9-2

Purchase Orders, 7-11, 11-8

R

Rebuildable Spares

asset activity association, 2-75
definition, 2-72
setup, 2-72

Reports, 14-2

maintenance work order detail, 14-2
shop floor invoice variance report, 14-7
simulate transfer shop floor invoice
variance, 14-5

Requisitions, 7-11, 11-8

Resource Requirements
definition, 3-32
viewing, 3-36

Resources

definition, 2-13
transactions, 3-50
view transactions, 3-52

S

Scheduler Workbench, 5-17

Scheduling, 5-2, 5-14
enabling eAM scheduling, 5-14
preventive maintenance, 4-11

Self Service Maintenance, 13-2

assets, 13-5
home page, 13-3
work orders, 13-22
work plans, 13-26
work requests, 13-18

Setting Up
asset areas, 2-12

asset attributes, 2-42
asset bill of material, 2-60
assets, 2-36
category codes and sets, 2-36
cost management integration, 6-5
general, 2-12
maintenance bill of material, 2-68
organizations, 2-5
outside service processing, 8-2
overview, 2-3
property manager, 9-2
rebuildable spares, 2-72

Statuses

asset, 2-70
work order, 3-18
work request, 13-18

T

Tasks, 3-22

Transactions
material, 3-47
resource, 3-50
viewing resource, 3-52
work order, 3-38

U

Uncompletions

operation, 3-40
rebuild work order, 3-46

V

Viewing

asset and rebuildable work orders, 13-26
asset details, 13-7
associated work requests, 13-13
configuration history, 13-9
cost information, 6-11, 13-10
material requirements, 3-30
operations, 3-26
project manufacturing commitments, 11-18
quality information, 13-14
requisitions, 11-15

resource requirements, 3-36
resource transactions, 3-52
resource usage, 10-6
suggested demand, 5-11
work orders, 13-22

W

Work Orders, 3-5
 associating work orders with a project, 11-7
 closing, 3-54, 3-57
 completion, 3-41
 easy, 3-18, 13-23
 generation, 4-20
 planning, 3-59
 preventive maintenance, 3-11
 rebuild, 3-12
 completion, 3-44
 uncompletion, 3-46
 routine, 3-5
 transactions, 3-38
 unclosing, 3-56, 3-58