Oracle® Manufacturing: Chargeable Subcontracting for Japan, Korea, and Taiwan

User's Guide

Release 12

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Oracle Manufacturing: Chargeable Subcontracting for Japan, Korea, and Taiwan User's Guide, Release 12

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Primary Author: Kevin Brown

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Preface

Intended Audience

Welcome to Release 12 of the *Oracle Manufacturing: Chargeable Subcontracting for Japan, Korea, and Taiwan User's Guide.*

This guide contains the information needed to implement and use Oracle Receivables: Chargeable Subcontracting.

See Related Information Sources on page x for more Oracle Applications product information.

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Structure

Related 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 Receivables: Chargeable Subcontracting.

If this guide refers you to other Oracle Applications documentation, use only the Release 12 versions of those guides.

Online Documentation

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

- Online Help - Online help patches (HTML) are available on Oracle*MetaLink*

- About Documents - Refer to the About Document for the mini-pack or family pack that you have installed to learn about new documentation or documentation patches that you can download. About Documents are available on Oracle*MetaLink*

Guides Related to All Products

Financials Glossary: The glossary includes definitions of common terms that are shared by all Oracle Financials products. In some cases, there may be different definitions of the same term for different Financials products. If you are unsure of the meaning of a term you see in an Oracle Financials guide, please refer to the glossary for clarification. You can find the glossary in the online help or in the *Oracle General Ledger User's Guide*.

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 Receivables (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

Receivables shares data and setup information with other Oracle Applications products. Even if you have not installed them as separate products, your Receivables application includes some forms and functionality from other Oracle Applications. Therefore, you may want to refer to other user guides when you set up and use Receivables.

Oracle Public Sector Financials Documentation

Information regarding public sector functionality in Receivables is documented in this guide. For information regarding public sector functionality in other Public Sector Financial's products, refer to the following documentation:

- Oracle General Ledger User Guide
- Oracle Purchasing User's Guide
- Oracle Payables User Guide

Oracle Projects Documentation Set

- **Oracle Projects Implementation Guide:** Use this manual as a guide for implementing Oracle Projects. This manual also includes appendixes covering function security, menus and responsibilities, and profile options.
- **Oracle Projects Fundamentals User Guide:** This guide provides the common foundation shared across the Oracle Projects products. Use this guide to learn fundamental information about the Oracle Projects solution. This guide includes a Navigation Paths appendix. Use this appendix to find out how to access each window in the Oracle Projects solution.
- **Oracle Project Costing User Guide:** Use this guide to learn detailed information about Oracle Project Costing. Oracle Project Costing provides the tools for processing project expenditures, including calculating their cost to each project and determining the General Ledger accounts to which the costs are posted.

- **Oracle Project Billing User Guide:** Use this guide to learn how to use Oracle Project Billing to process client invoicing and measure the profitability of your contract projects.

- **Oracle Project Management User Guide:** This guide shows you how to use Oracle Project Management to manage projects through their lifecycles - from planning, through execution, to completion.

- **Oracle Project Resource Management User Guide:** This guide provides you with information on how to use Oracle Project Resource Management. It includes information about staffing, scheduling, and reporting on project resources.

- **Oracle Projects API's, Client Extensions, and Open Interfaces Reference:** This manual gives detailed information about all public application programming interfaces (API's) that you can use to extend Oracle Projects functionality.

Oracle General Ledger User Guide

Use this manual when you plan and define your chart of accounts, accounting period types and accounting calendar, functional currency, and set of books. It also describes how to define journal entry sources and categories so you can create journal entries for your general ledger. If you use multiple currencies, use this manual when you define additional rate types, and enter daily rates. This manual also includes complete information on implementing Budgetary Control.

Oracle Receivables Tax Manual

This manual provides everything you need to know about calculating tax within Oracle Receivables, Oracle Order Management, Oracle Sales, and Oracle Web Customers. It includes information about implementation procedures, setup forms and windows, the Oracle Receivables Tax calculation process, tax reports and listings, and open interfaces.

Oracle Cash Management User Guide

This guide provides information about using Oracle Cash Management to clear your receipts, as well as reconciling bank statements with your outstanding balances, transactions, and receipts.

Oracle HRMS Documentation Set

This set of guides explains how to define your employees, so you can give them operating unit and job assignments. It also explains how to set up an organization (operating unit). Even if you do not install Oracle HRMS, you can set up employees and organizations using Oracle HRMS windows. Specifically, the following manuals will help you set up employees and operating units:

- **Using Oracle HRMS - The Fundamentals:** This user guide explains how to set up and use enterprise modeling, organization management, and cost analysis.

- **Managing People Using Oracle HRMS:** Use this guide to find out about entering employees.

Oracle Payables User Guide

Refer to this manual to learn how to use Invoice Import to create invoices in Oracle Payables. This manual also explains how to define suppliers, and how to specify supplier and employee numbering schemes for invoices. The guide also describes how accounts payable transactions are posted to General Ledger from the payables subledger.

Oracle Inventory User Guide

If you install Oracle Inventory, refer to this manual to learn how to define your items, units of measure classes, units of measure, and unit of measure conversions for use in measuring amounts for your units of production items, as well as other information about setting up and using Oracle Inventory.

Oracle Business Intelligence System Implementation Guide

This guide provides information about implementing Oracle Business Intelligence (BIS) in your environment.

BIS Release 12 User's Guide Online Help

This guide is provided as online help only from the BIS application and includes information about intelligence reports, Discoverer workbooks, and the Performance Management Framework.

Country-Specific Manuals

Use these manuals to meet statutory requirements and common business practices in your country or region. They also describe additional features added to Receivables to meet those requirements. Look for a user guide appropriate to your country; for example, see the Oracle Financial's for the Czech Republic User's Guide for more information about using this software in the Czech Republic.

Oracle Applications Character Mode to GUI Menu Path Changes

This is a quick reference guide for experienced Oracle Applications end users migrating from character mode to a graphical user interface (GUI). This guide lists each character mode form and describes which GUI windows or functions replace it.

Oracle Financial's Open Interfaces Guide

This guide contains a brief summary of each Oracle Financial Applications open interface. You can also read about the Receivables open interface tables in the appropriate sections of the *Oracle Receivables User's Guide*.

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 12. It provides a useful first book to read before installing Oracle Applications.

Installing Oracle Applications

This guide provides instructions for managing the installation of Oracle Applications products. In Release 12, much of the installation process is handled using Oracle Rapid Install, which minimizes the time to install Oracle Applications and the 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 to Release 12. This guide describes the upgrade process and lists database and product-specific upgrade tasks.

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 forms so that they integrate with Oracle Applications.

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 12. 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 you implement Oracle Receivables. This manual

details additional steps and setup considerations for implementing Oracle Receivables with Multiple Reporting Currencies.

Multiple Organizations in Oracle Applications

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

Oracle Workflow Administrator's Guide

This guide explains how to complete the setup steps necessary for any Oracle Applications product that includes workflow-enabled processes, as well as how to monitor the progress of runtime workflow processes.

Oracle Workflow Developer's Guide

This guide explains how to define new workflow business processes and customize existing Oracle Applications-embedded workflow processes. It also describes how to define and customize business events and event subscriptions.

Oracle Workflow User's Guide

This guide describes how Oracle Applications users can view and respond to workflow notifications and monitor the progress of their workflow processes.

Oracle Workflow API Reference

This guide describes the API's provided for developers and administrators to access Oracle Workflow.

Oracle Applications Flexfields Guide

This guide provides flexfield planning, setup and reference information for the Oracle Receivables 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 and integrate Oracle Applications data with non-Oracle applications, and write custom reports for Oracle Applications products. Oracle eTRM is available on Oracle*MetaLink*.

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 tells you how to apply this UI to the design of an application built by using Oracle Forms.

Oracle Manufacturing API's 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 API's 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 12.

Integration Repository

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

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

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 an Oracle Applications form 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.

1

Overview

This chapter covers the following topics:

- Overview of Oracle Manufacturing: Chargeable Subcontracting

Overview of Oracle Manufacturing: Chargeable Subcontracting

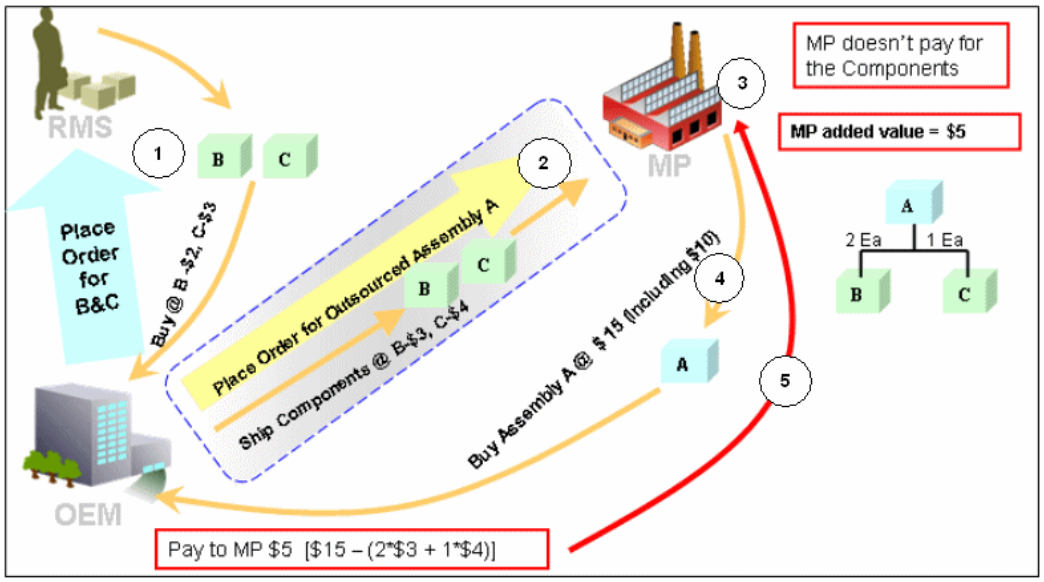
Chargeable Subcontracting is a common business practice that supports outsourced manufacturing practices in Japan, Korea and Taiwan.

Chargeable Subcontracting business practices typically involves three parties:

- Original Equipment Manufacturer (OEM) - manufactures the final assembly
- Manufacturing Partner (MP) - an outsourcing partner of the OEM to manufacture subassemblies and final assemblies
- Raw Material Supplier (RMS) - supplies components to the OEM

The OEM ships components to the MP, and then receives completed assemblies from the MP in return. The MP never pays the OEM for the components, and the OEM pays the added value to the MP. This practice is referred to as Shikyu in Japan and Korea. The MP is paid only for the added value.

The following illustrates a simple subcontracting business process.



The illustration above describes Assembly A that is produced from Components B and C. The OEM purchases Components B and C from the RMS, and outsources Assembly A to the MP for production. In addition:

1. OEM places a Purchase order for Components B and C on the RMS and receives the components.

2. OEM places a subcontracting order on the MP for outsourced Assembly A, and ships Components B and C to the MP for production. These components are hard pegged to the subcontracting order for planning and tracking.

3. OEM owns the materials until they are consumed in the manufacturing of Assembly A. (The MP does not pay for the Components)

4. MP produces Assembly A from Components B and C, and ships the assembly back to the OEM. The OEM receives Assembly A, and assumes that Components B and C are returned from the MP in the form of Assemby A.

5. The purchase price of the assembly includes the component's sales price and added value. The OEM nets the payables and receivables, and pays the added value of $5 to the MP.

Define the OEM and the MP as inventory organizations. The MP is a simulation organization, and is used for planning and inventory tracking purposes. In the business process illustrated in the above diagram, the OEM purchases outsourced assemblies from the MP, and ships components to the MP. Therefore, the MP is defined as both a supplier and a customer. The OEM supplies components to the MP, therefore, you define the OEM as a supplier.

The OEM purchases outsourced assemblies from the MP using standard purchase

orders or blanket releases. Purchase orders and blanket releases used for procuring the outsourced assemblies are referred to as Subcontracting Orders in the Chargeable Subcontracting application.

Interlock Manager is a concurrent program that creates replenishment purchase orders and replenishment sales orders for shipping components to the MP, and also hard allocates them to the subcontracting order for manufacturing the assembly. Auto receive components is a concurrent program the receives shipped components into the MP organization, and component inventory increases in the MP organization. Interlock Manager also creates discrete jobs in the MP organization for simulation of component consumption. When the OEM receives outsourced assembly against the subcontracting order, the Receive Transaction concurrent program picks the subcontracting order receipts in the OEM and completes the discrete jobs in the MP. It also backflushes component inventory. Simulation of the MP organization helps in planning and tracking inventory.

In Chargeable Subcontracting, the OEM ships components but retains ownership of the components until they are purchased back as assemblies from the MP. Upon receipt of an assembly from the MP, the OEM nets the receivables amount of sales order shipped and the payables amount of the outsourced assemblies received, and pays the balance (added value) to the MP. The MP never makes payment to the OEM. To support this method, the purchase price of the assembly is set as the sum of the components sales price and added value, and the added value is paid after netting the payables and receivables amounts. In this process, component sales are virtual sales. Therefore, accounting entries such as receivables, COGS, and revenue are tracked in separate accounts. Purchase price of the assembly is not a real price, therefore purchase price variance is also tracked in separate accounts.

Major Features of Chargeable Subcontracting

Chargeable Subcontracting features include:

- The MP is modeled as an inventory organization to simulate production of assemblies. Accounting Transactions in the MP are not posted to the General Ledger (GL), therefore the simulation of the MP organization does not have any financial impact.

- Chargeable Subcontracting supports two different component types: *Pre-positioned* and *Synchronized* based on the component replenishment methods for flexible modeling the subcontracting process.

- Advanced Supply Chain Planning (ASCP) plans the component requirements and supply, both in the OEM and MP organizations.

- Discrete jobs in the MP organization helps in simulating production of assemblies at the MP site.

- Component shipments in the OEM organization are automatically allocated for

better material control.

- Based on the in transit Lead times, components shipped by the OEM organization are automatically received into the MP organization for inventory tracking.
- On receipt of completed assemblies in the OEM organization, a batch process completes assembly and performs backflush components in the MP organization
- AP and AR netting streamlines the payment process.
- The Workbench User Interface (UI) provides pages for tracking component shipments and allocations.
- The Workbench UI also provides views of estimated component consumption for manufacturing a specific discrete job in the MP organization, and lets you change consumptions and allocations based on the actual values at the MP site.
- The OEM can also drop ship components from the RMS to the MP.
- By modeling the MP as an inventory organization and simulating the production of assemblies as discrete jobs, the OEM has better visibility and control on the component inventory at the MP site.
- The reconciliation feature enables the OEM to modify planned component shipments to the MP, and also modify planned discrete jobs in the MP for accurate simulation.
- Non-consumed and obsolete components at the MP site are returned to the OEM as sales order returns, and simulates purchasing components from the MP for making accounting adjustments in the OEM organization.
- Chargeable Subcontracting enables the OEM to outsource assemblies in both discrete and project manufacturing environments.

2

Setting Up Chargeable Subcontracting

This chapter covers the following topics:

- Overview of Setting Up Chargeable Subcontracting
- Setting Profile Options
- Original Equipment Manufacturer (OEM) Organizations
- Setting Up Manufacturing Partner Organizations
- Defining WIP Parameters
- Defining Customers and Suppliers
- Associating Customers and Suppliers
- Setting Up Item Definitions
- Setting Up Bills of Material for Outsourced Assemblies
- Setting Up Chargeable Subcontracting Accounting
- Defining Receivables Transaction Types
- Defining Transaction Sources
- Setting Up Order Management Transaction Types
- Setting Up Standard Costs of Components and Assemblies
- Defining Price Lists for Subcontracting Components
- Setting up Purchase Price of an Outsourced Assembly
- Setting Up a Shipping Network
- Defining Sourcing Rules
- Defining Netting Agreements

Overview of Setting Up Chargeable Subcontracting

The following sections describe setup that is required for implementing Chargeable Subcontracting. In the sample windows provided, the OEM and the MP are set up as Inventory Organizations OE3 and TP1 respectively. Item A is the OSA item that is outsourced to the MP. The OSA item A BOM is exploded to determine the component requirements B and C.

At the OEM Organization, new accounts for chargeable subcontracting variance is set up. You must define the price of the OSA item.

At the Supplier Organization, the item costs are set to zero, and the Transfer to GL flag at the supplier Organization is set to No.

Setup Steps

The key setup steps are:

1. Enable chargeable subcontracting profile options
2. Define Customers and Suppliers
3. Define OEM and MP Organizations, and associate customers and suppliers defined in the previous step
4. Define components and assemblies in both the MP and OEM organizations
5. Define new accounts, AR, and OM transaction types for execution and accounting
6. Define shipping networks between the OEM and MP, and enable chargeable subcontracting relationships

Process Steps

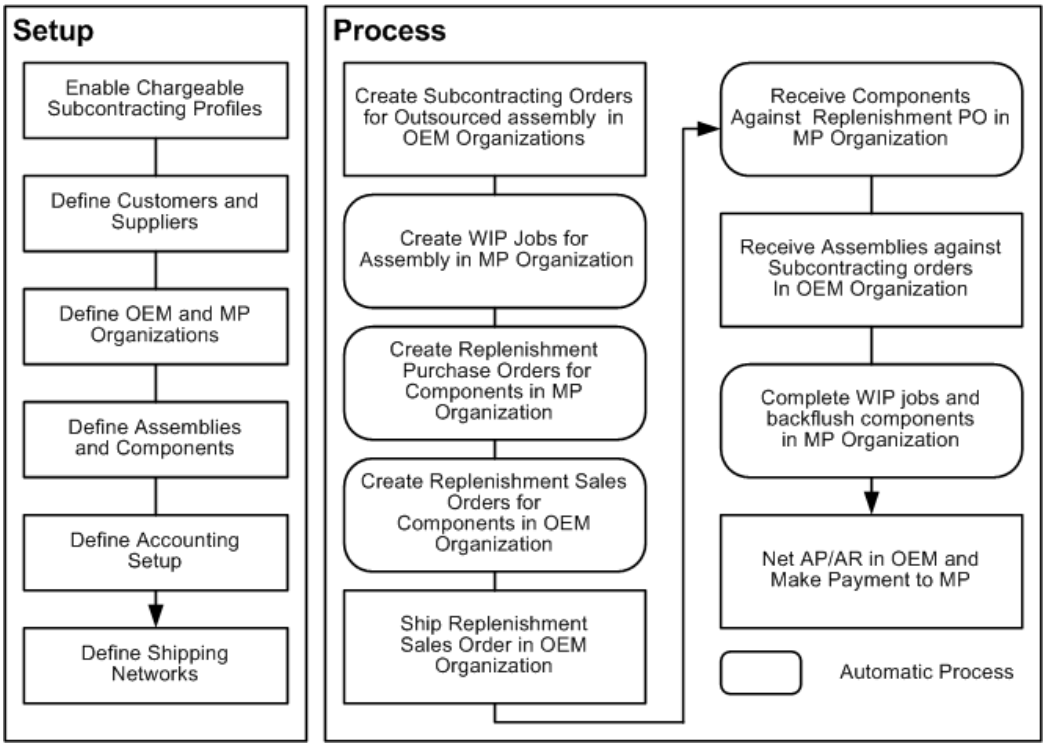
The Chargeable Subcontracting process includes:

1. ASCP Buy planned orders in the OEM organization are transferred to purchasing to create subcontracting orders for outsourced assemblies. You can also create subcontracting orders manually.
2. Running the Interlock Manager concurrent program. This creates:
   - Discrete Jobs for assemblies in the MP organization for simulating the production of outsourced assemblies
   - Replenishment purchase orders in the MP for procuring components from the OEM

- Replenishment sales orders in the OEM for shipping the components to the MP
- Allocate replenishment sales orders in accordance with subcontracting order component requirements

3. Ship-confirm replenishment sales orders in the OEM for shipping subcontracting components to the MP. This also creates receivables invoices after shipping.
4. Running the Auto Receive Components concurrent program to receive the components in the MP.
5. Receiving assemblies in the OEM against subcontracting orders created in Step 1.
6. Running the Process Receiving Transactions concurrent program. This completes the WIP job and backflushes the components.
7. Batch netting nets AP and AR invoices, and pays the MP.

The following diagram illustrates the Chargeable Subcontracting Setup and Process flow.



Setting Profile Options

You must enable the following profile options:

- JMF: Golden Tax Enabled
- JMF: Golden Tax Import Directory

Profile Option	User	Sys Admin User	Sys Admin Resp	Sys Admin App	Sys Admin Site	Required	Default Value
JMF: Golden Tax Enabled	-	-	-	-	Yes	Yes	No
Golden Tax Import Directory	Yes	Yes	Yes	Yes	Yes	No	-

Yes	You can update the profile option
-	You can view the profile option value but you cannot change it.
No	You cannot view or change the profile option value.

JMF: Golden Tax Enabled:

This profile must be set to Yes to use the Golden Tax Adaptor feature. You can update this profile option at the site level only.

Yes: Enables the Golden Tax Adaptor

No: Disables the Golden Tax Adaptor

JMF: Golden Tax Import Directory

Use the Golden Tax Import Directory profile option to define the default path of the VAT invoices data file that is received from the Aisino Golden Tax System. The path you specify here is defaulted when you run the Golden Tax Invoice Import program, and it can be overridden. You can update this profile option at all levels.

Related Topics

See: Setting User Profile Options, *Oracle Applications System Administrator's Guide* and Defining Preferences with User Profile Options, *Oracle Applications System Administrator's Guide*.

Original Equipment Manufacturer (OEM) Organizations

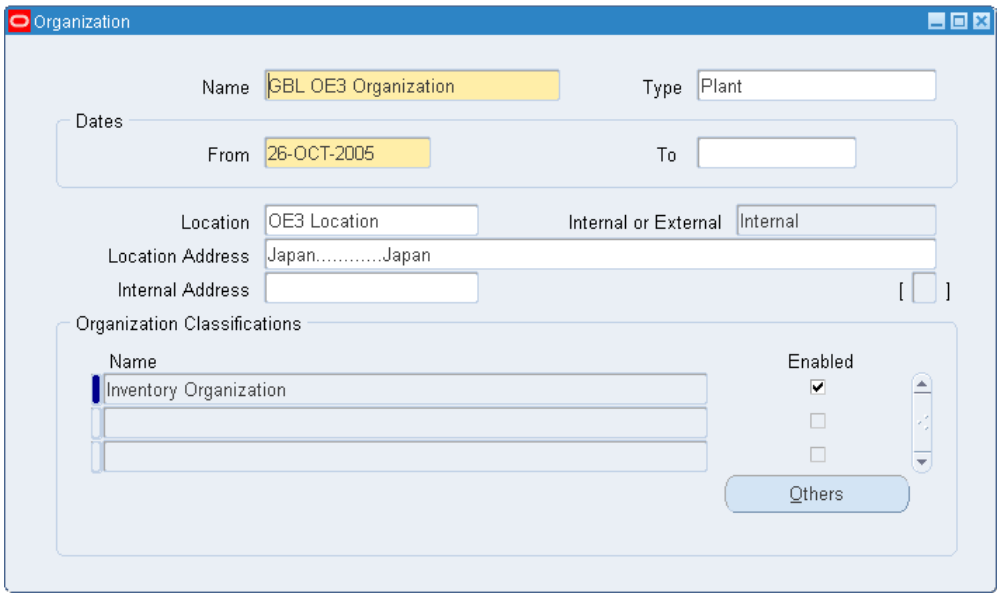
Define the Original Equipment Manufacturer (OEM) and Manufacturing Partner (MP) as inventory organizations with standard costing. Only standard costing is supported in Release 12.

The OEM organization is the organization that buys an outsourced assembly, and ships chargeable subcontracting components to the manufacturing partners.

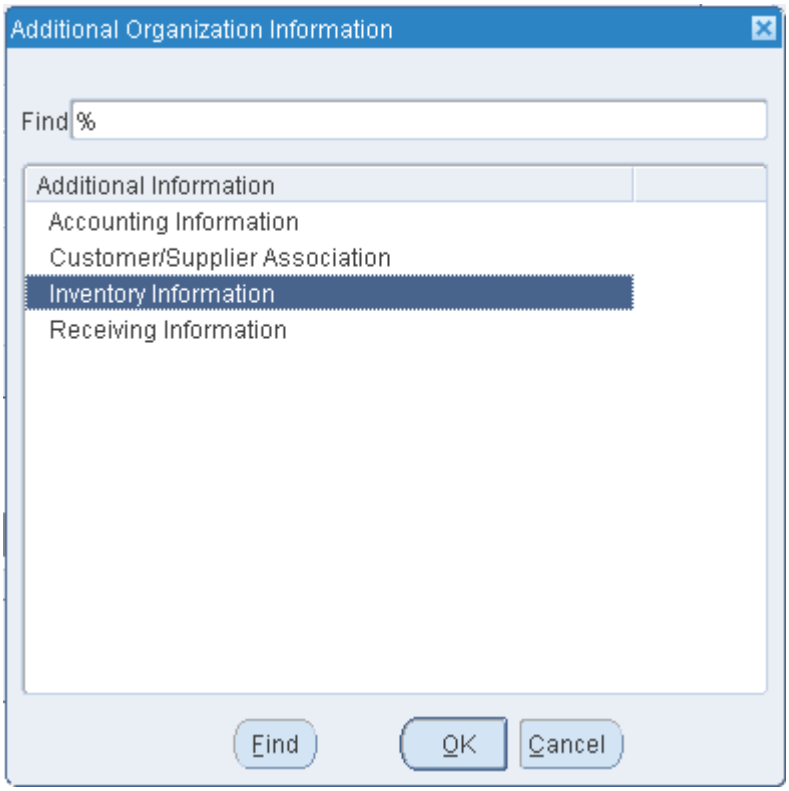
To set up OEM organizations:

1. From the Inventory responsibility, navigate to the Organization window.

2. Define the OEM Organization as an inventory organization with the Location Address as Japan, Korea, or Taiwan.



3. Choose Others. The Additional Organization Information window appears.

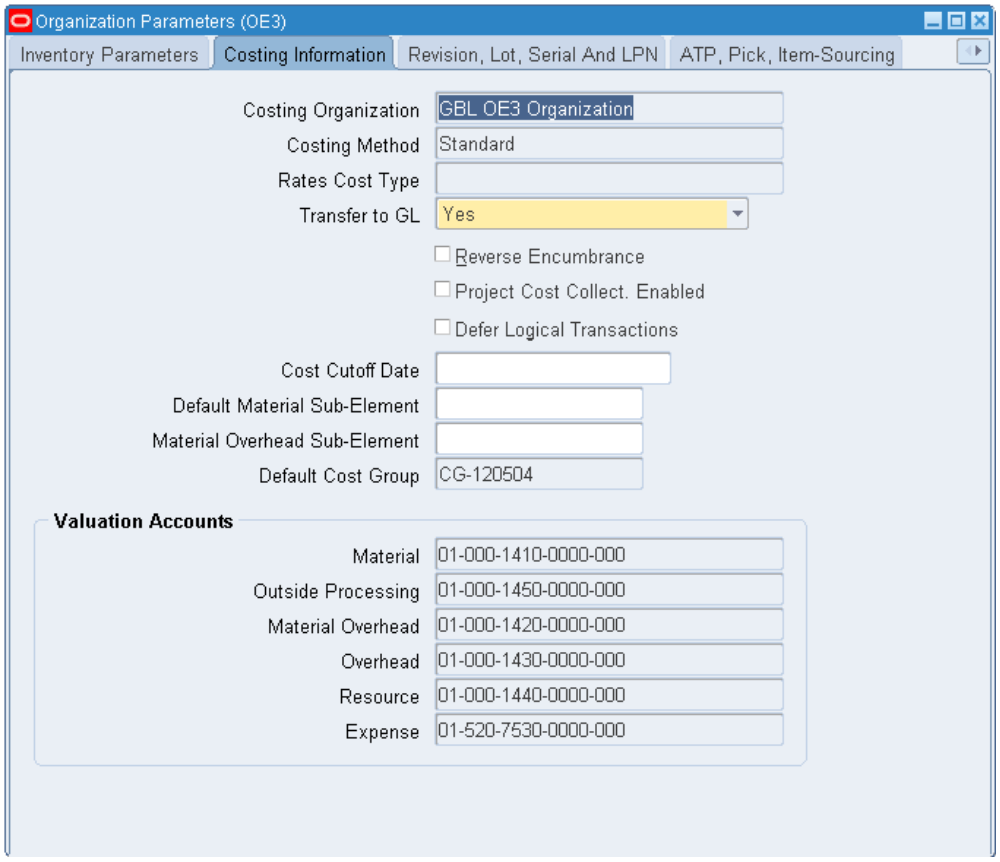


4. Select Inventory Information to view the Organization Parameters window.

5. Choose the Costing Information tab.

6. Verify that the Costing Method is set to Standard costing.

7. Because the OEM is a regular inventory organization, select *Yes* for Transfer to GL to post all accounting transactions to General Ledger.



Note: Warehouse Management (WMS), Process , and EAM enabled organizations are not supported as OEM organizations in Release 12. If an organization is defined as WMS, EAM, Process organizations , then you cannot assign or define outsourced assemblies and subcontracting components this organization.

8. Save your work.

   For additional Organization setup information, see: Defining Inter-Organization Information, *Oracle Inventory User's Guide* and Organization Parameters Window, *Oracle Inventory User's Guide*.

Setting Up Manufacturing Partner Organizations

The OEM purchases outsourced assemblies from the MP, and also sells chargeable subcontracting components to the MP. You must set up the MP organization as both a supplier organization and a customer organization. See: Associating Customers and Suppliers, page 2-15.

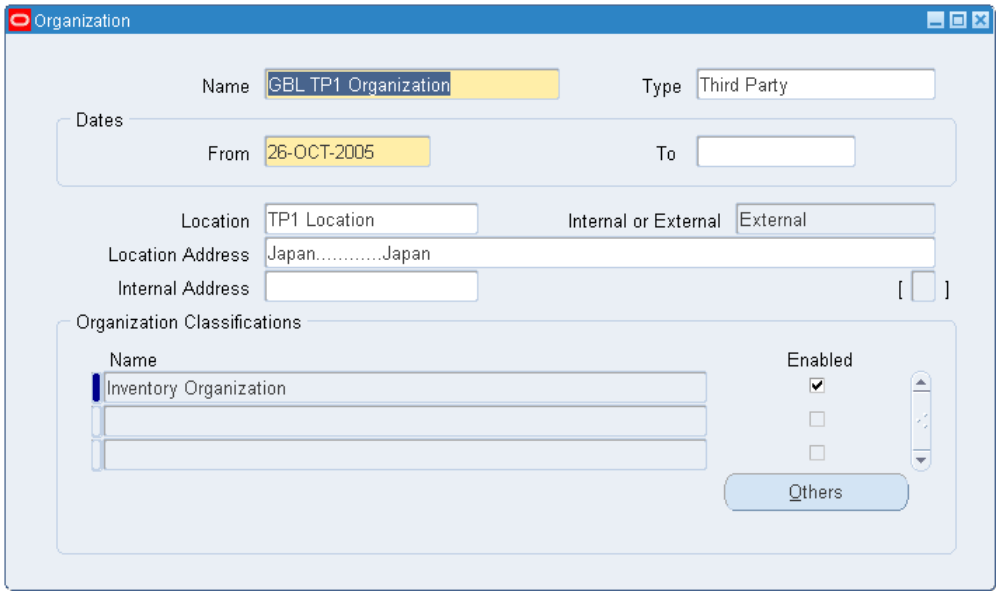
The MP organization is used for simulating the production of assemblies for inventory

planning, tracking, and accounting purposes. The application automatically creates and receives replenishment purchase orders in the MP organization for simulating the procurement of components from the OEM organization. WIP jobs are created and completed automatically to simulate the component consumption in the MP organization. To support this modeling, WIP parameters and receiving parameters must be set up for the MP organization.

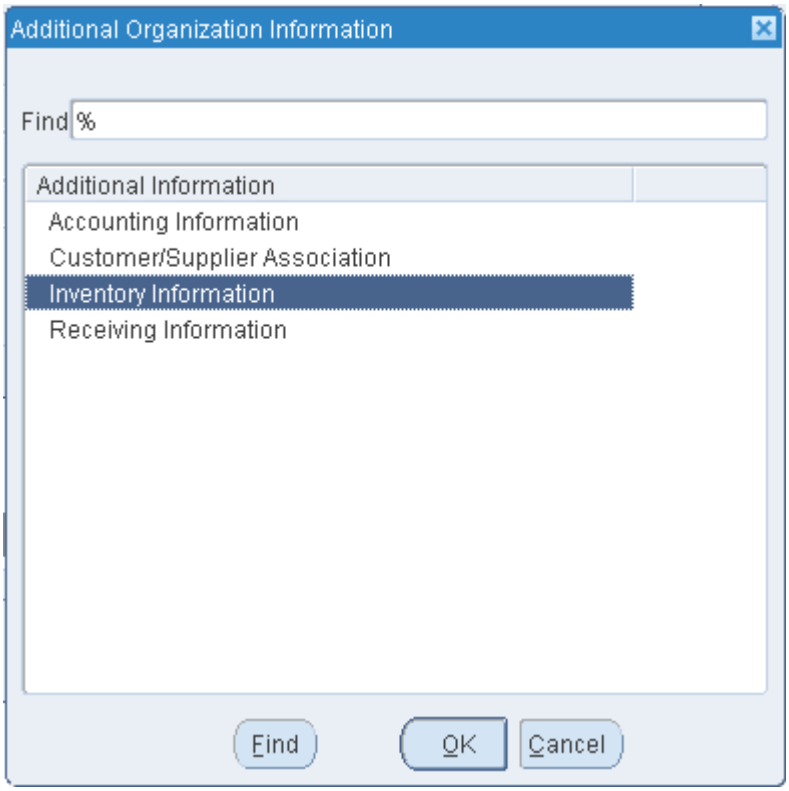
To set up Manufacturing Partner (MP) organizations:

1. Navigate to the Organization window.

2. Define the MP organization as an inventory organization with the Location Address as Japan, Korea, or Taiwan.

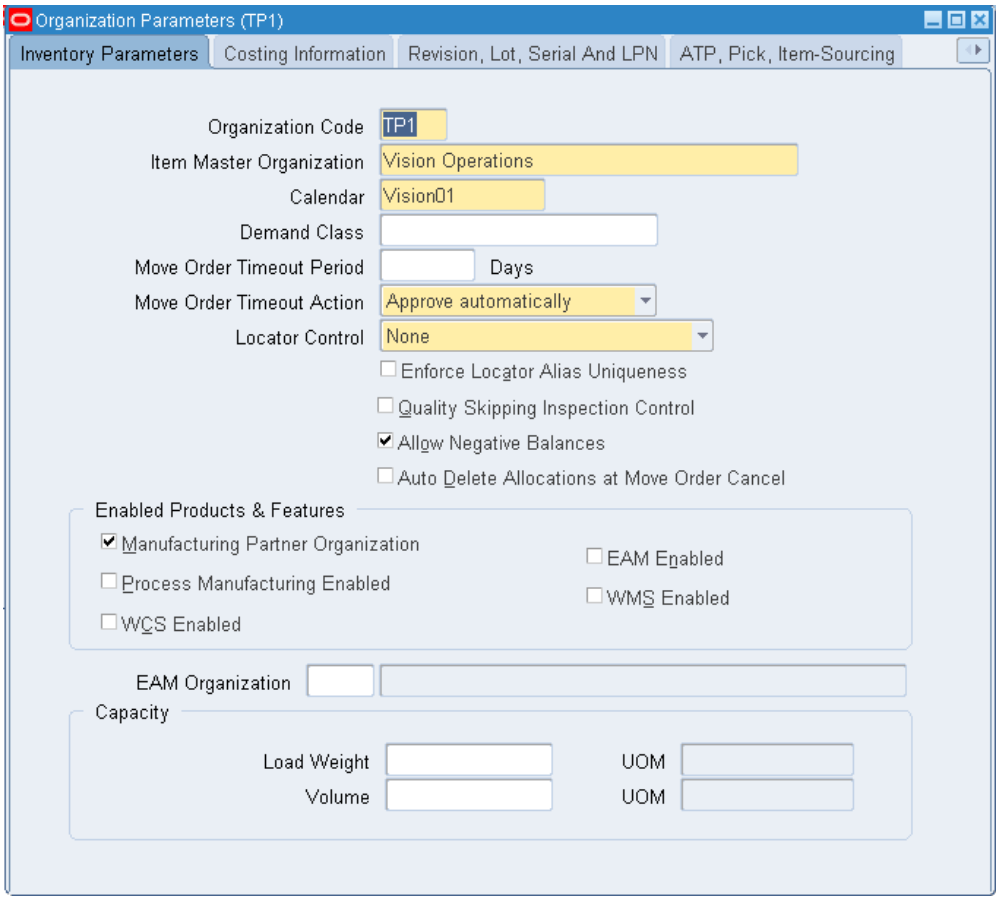


3. Choose Others. The Additional Organization Information window appears.



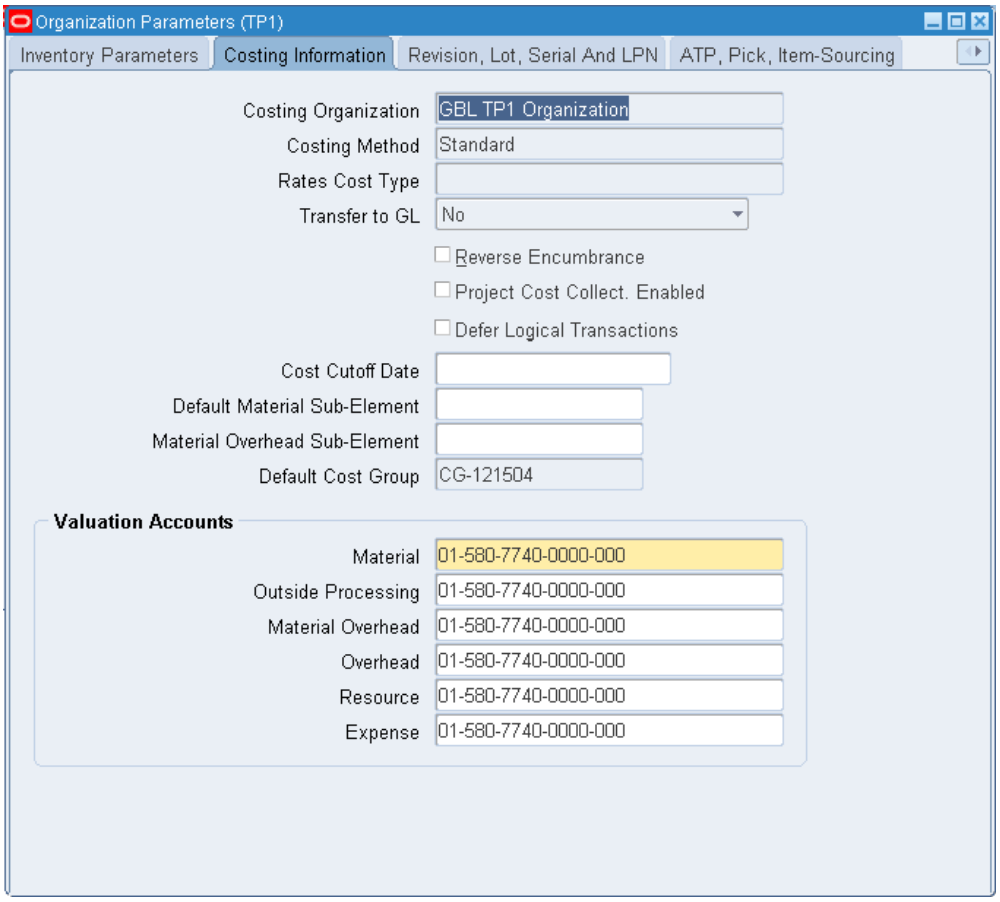
4. Select Inventory Information. The Organization Parameters window appears.

5. In the Organization Parameters window, select the Manufacturing Partner Organization indicator.



6. Select the Costing Information Tab.

7. Select *No* for Transfer to GL. The MP organization is a simulation organization. Therefore, accounting transactions for this organization should not be transferred to General Ledger.



8. Save your work.

   For additional Organization setup information, see: Defining Inter-Organization Information, *Oracle Inventory User's Guide* and Organization Parameters Window, *Oracle Inventory User's Guide*.

To set up receiving options for MP organizations:

1. From the Purchasing responsibility, navigate to the Setup/Organizations/Receiving options Page.

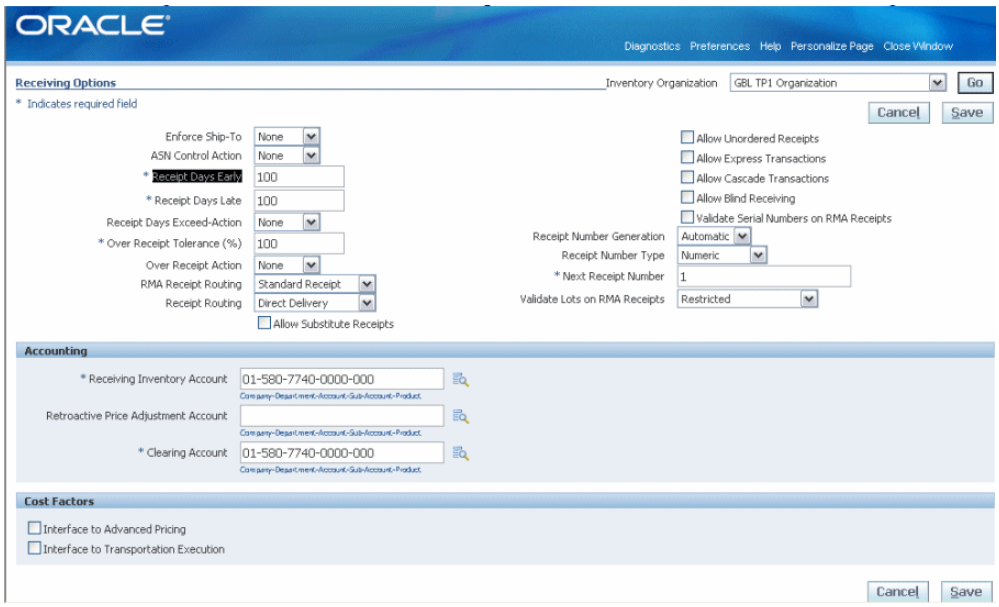
2. Select the MP Organization and click Go. The receiving options page appears.

3. Enter **Receipt Days Early** = 100, **Receipt days Late** = 100, **Receipt Days Exceeded Action** = none.

4. Enter **Over Receipt Tolerance** = 100, **Over Receipt Action** = none

5. Enter **Receipt Routing** = Direct Delivery

6. Set Mandatory Accounts as miscellaneous accounts and leave all others blank. Because the MP is a simulation organization and costs are not posted to GL, accounts are of no significance.



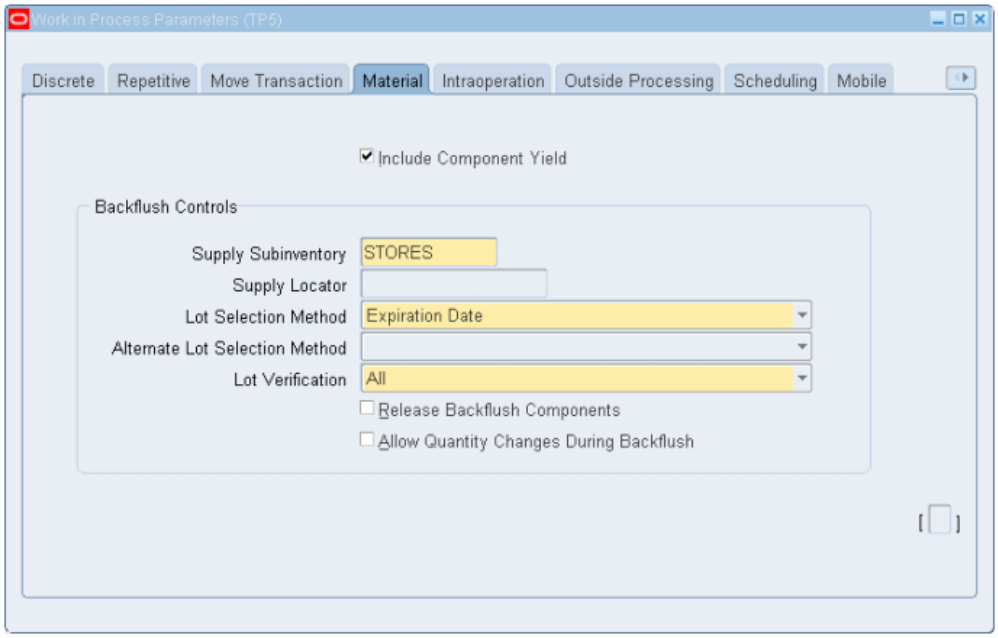
7. Save your work.

Defining WIP Parameters

Define WIP Parameters for the MP organization. See: Defining WIP Parameters, *Oracle Work in Process User's Guide*. Accounts are of no significance, therefore you can set the WIP accounting class with miscellaneous accounts, and then define it in the WIP Parameters window. Supply subinventory defined in the WIP Parameters window is used to receive the components when the replenishment purchase order is received in the MP organization, and to backflush the inventory when the WIP job is completed for simulating the material consumption after the subcontracting purchase order is received in the OEM organization.

To define WIP parameters:

1. From the WIP responsibility, navigate to the Work in Process Parameters window.
2. Select the MP Organization.
3. Enter WIP parameters.



4. Save your work.

Defining Customers and Suppliers

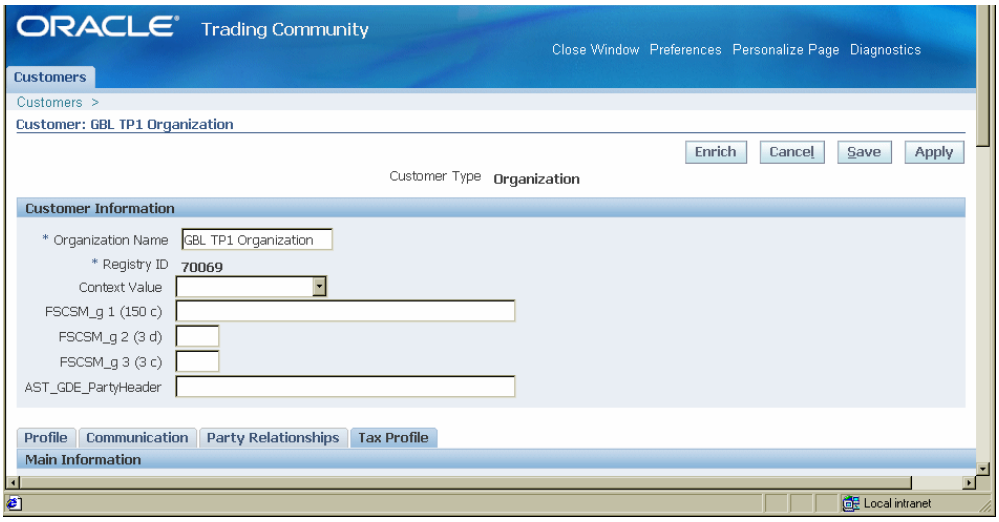
When using Chargeable Subcontracting, the MP acts as both supplier and customer, and the OEM acts as a supplier. Define the OEM as a supplier/site, and the MP as both a customer/site and a supplier, and associate these roles in the OEM and MP Organizations respectively.

For additional customer setup information, see: Adding Customers, *Oracle Order Management User's Guide*.

To define a customer/site:

1. From the Order Management responsibility, navigate to the Customers page.

2. Add your Manufacturing Partner as a customer/site.



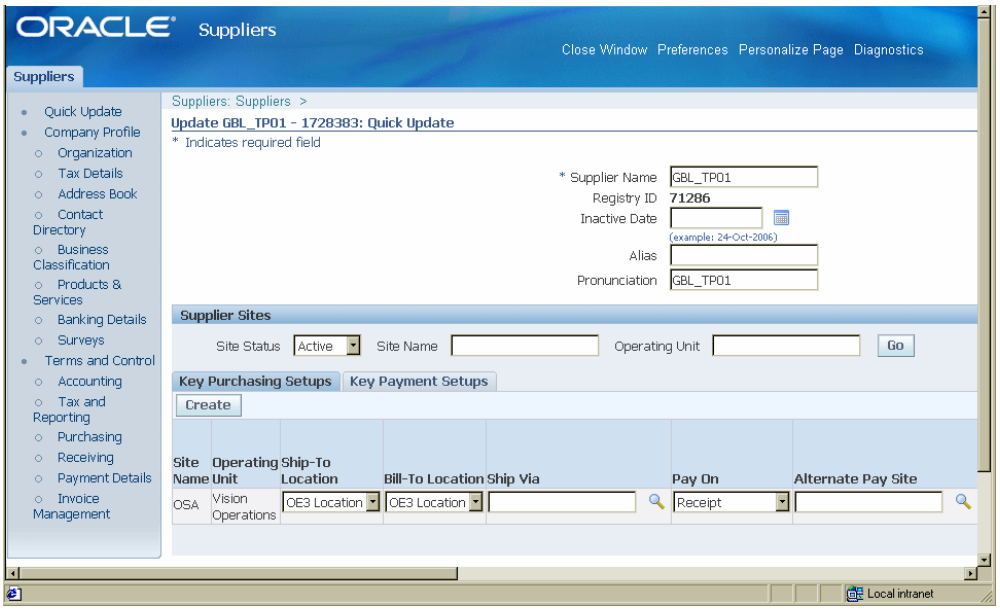
To define a supplier/site:

Set up both the MP and the OEM as suppliers.

For additional supplier setup information, see: Entering RFQ Supplier Information, *Oracle Purchasing User's Guide*.

1. From the Purchasing responsibility, navigate to the Suppliers page.

2. Enter supplier information.



3. Save your work.

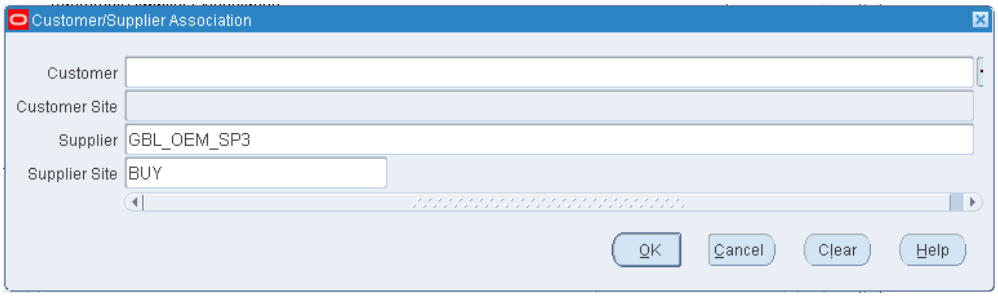
Associating Customers and Suppliers

For the OEM Organization, you must associate the supplier and supplier site. For the MP Organization, you must associate the customer and customer site, as well as the supplier and supplier site. This information is used by Advanced Supply Chain Planning (ASCP) for transferring the net demands of assemblies and components between the OEM and MP organizations.

To associate customers and suppliers:

You must associate the supplier with the OEM. In this example, the OEM supplies components to the MP and maintains the role of a supplier.

1. From the Inventory responsibility, navigate to the Organization window.
2. Select your OEM Organization.
3. Choose others. The Additional Organization Information window appears.
4. Select Customer/Supplier Association and choose OK. The Customer/Supplier Association window appears.
5. Enter the **Supplier** that you are associating with the OEM.
6. Enter the **Supplier Site**.



7. Choose OK.

8. Save your work.

To associate customers and suppliers:

In this example, the MP supplies assemblies, procures components from OEM, and maintains the role as both supplier and customer.

1. From the Inventory responsibility, navigate to the Organization window.

2. Select the MP Organization.

3. Choose Others. The Additional Organization Information window appears.

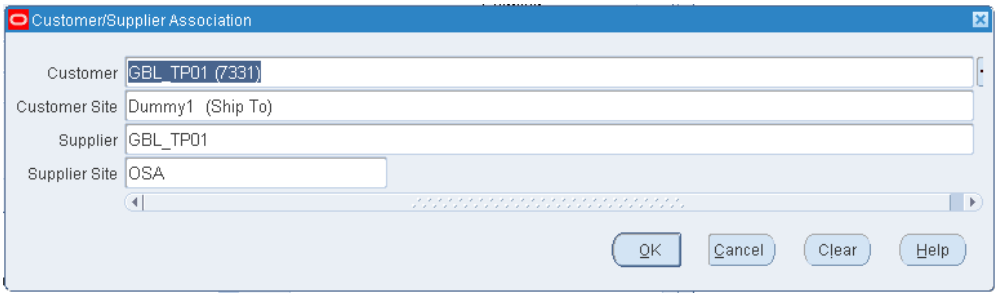
4. Select Customer/Supplier Association and choose OK. The Customer/Supplier Association window appears.

5. Enter **Customer**. This is the MP Organization.

6. Enter the **Customer Site** to ship to.

7. Enter the **Supplier**. This is the MP Organization.

8. Enter the **Supplier Site**.



9. Choose OK.

10. Save your work.

Setting Up Item Definitions

You must define Items and Bills in the OEM and the MP Organizations. Define items as:

- **Outsourced Assemblies** - Assemblies designed by the OEM and manufactured at the MP site using components supplied by the OEM.

- **Subcontracting Components**:

  There are two types of subcontracting components:

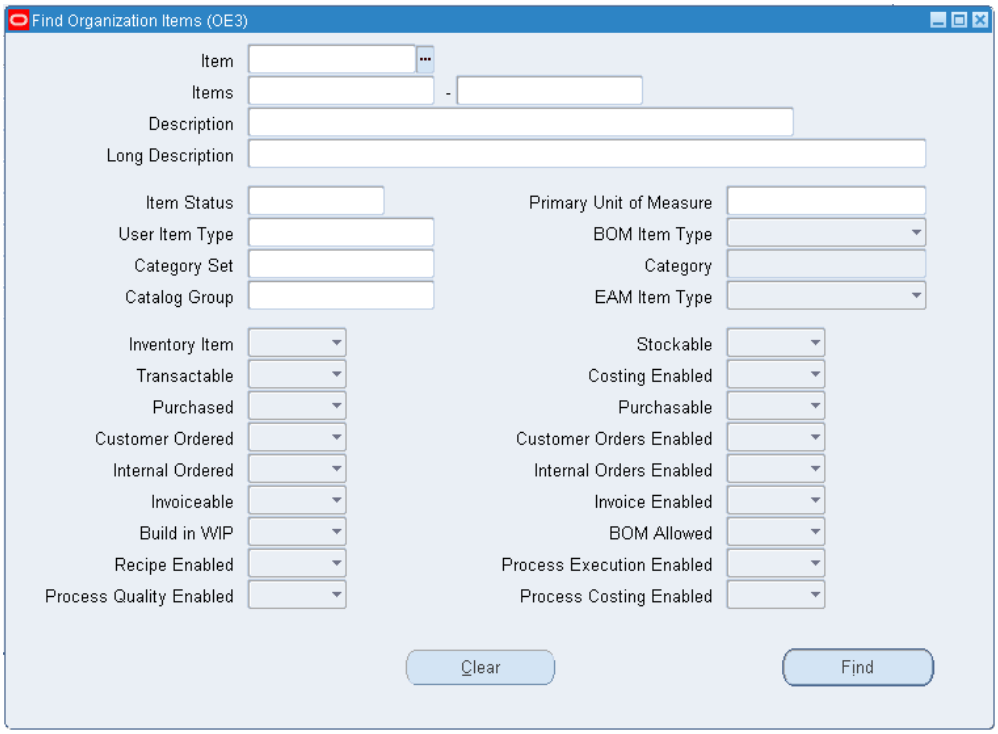
  - Pre-positioned - Components that are shipped to the MP without reference to any subcontracting order ahead of assembly requirements. Pre-positioned components are generally low cost items, and the OEM stores these components in larger quantities at the MP site well ahead of ordering outsourced assemblies. These components are shipped to MP based on ASCP Planning.

  - Synchronized - Components that are shipped to the MP with reference to a specific subcontracting order along with the order. Synchronized components are generally high cost items and are shipped when the order is placed with the MP and in the quantities required to produce the outsourced assembly in the subcontracting order. Interlock Manager, a concurrent program in chargeable subcontracting triggers the sales order for shipment of these components.

To define outsourced assemblies in the OEM Organization:

You can follow the standard item setup steps for defining outsourced assemblies and subcontracting components. The following are key attributes and values introduced in Release 12 for defining an item as an outsourced assembly or a subcontracting component.

1. From the Inventory responsibility, navigate to the Organization Item window. The Find Organization Items window appears.

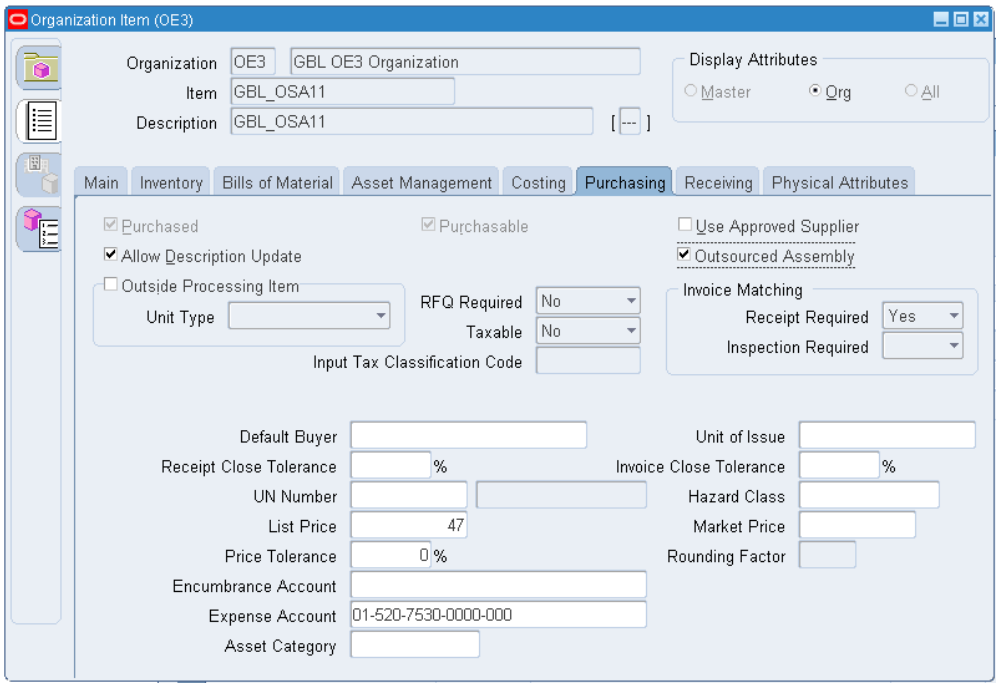


2. Enter Item search criteria for the OEM organization and choose Find. The Organization Item window appears.

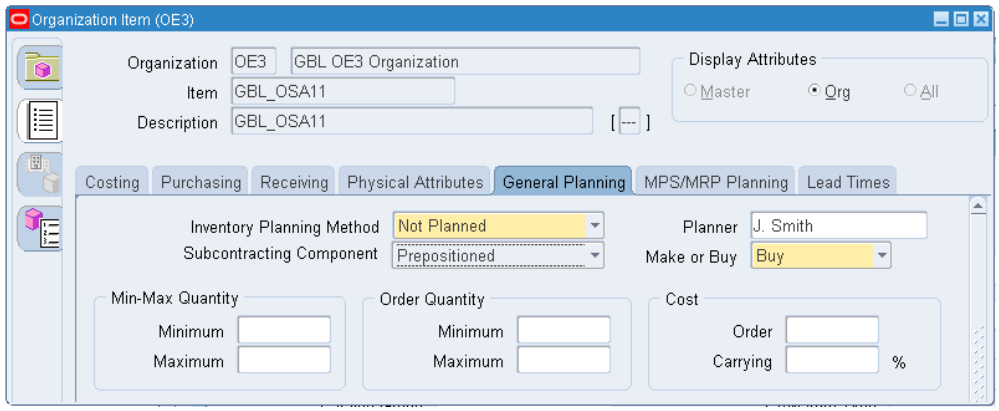
3. Select the Purchasing tab.

4. Define this item as an outsourced assembly by selecting the Outsourced Assembly indicator.

   Note: You must set the profile option JMF:Enable Chargeable Subcontracting to 'Yes' to enable the Outsourced Assembly indicator.

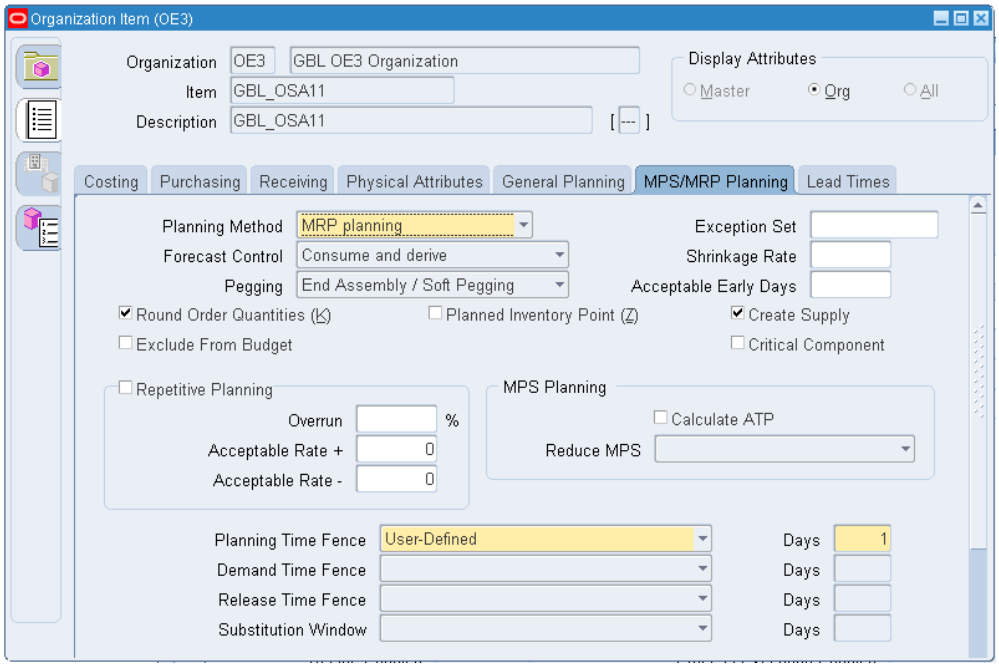


5. Select the General Planning tab and define the outsourced assembly as a Buy item for planning.



6. Select the MPS/MRP Planning tab and verify that **Release Time Fence** is empty (Null). This allows ASCP to release and transfer buy planned orders of assembly to purchasing as purchase orders or releases in the OEM organization.

> **Note:** Outsourced Assemblies can have routings in OEM organizations. The OEM does not have to change the existing routing to outsource the assembly.



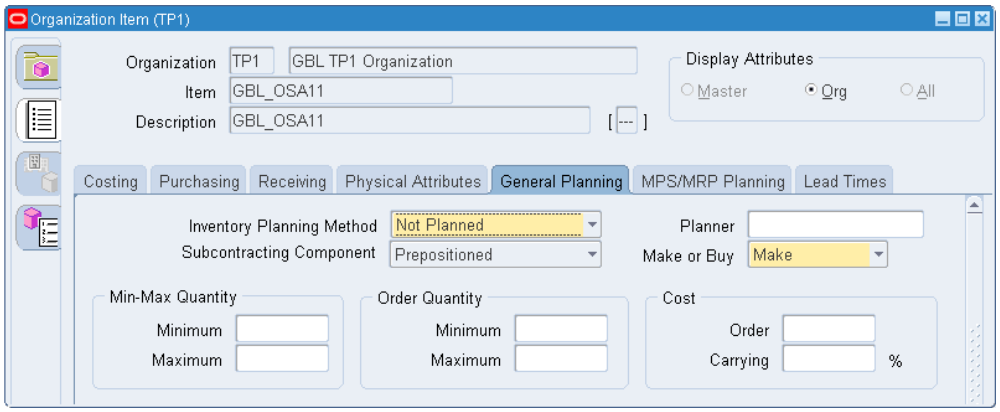
7. Save your work.

To define outsourced assemblies in the MP Organization:

1. From the Inventory responsibility, navigate to the Organization Item window. The Find Organization Items window appears.

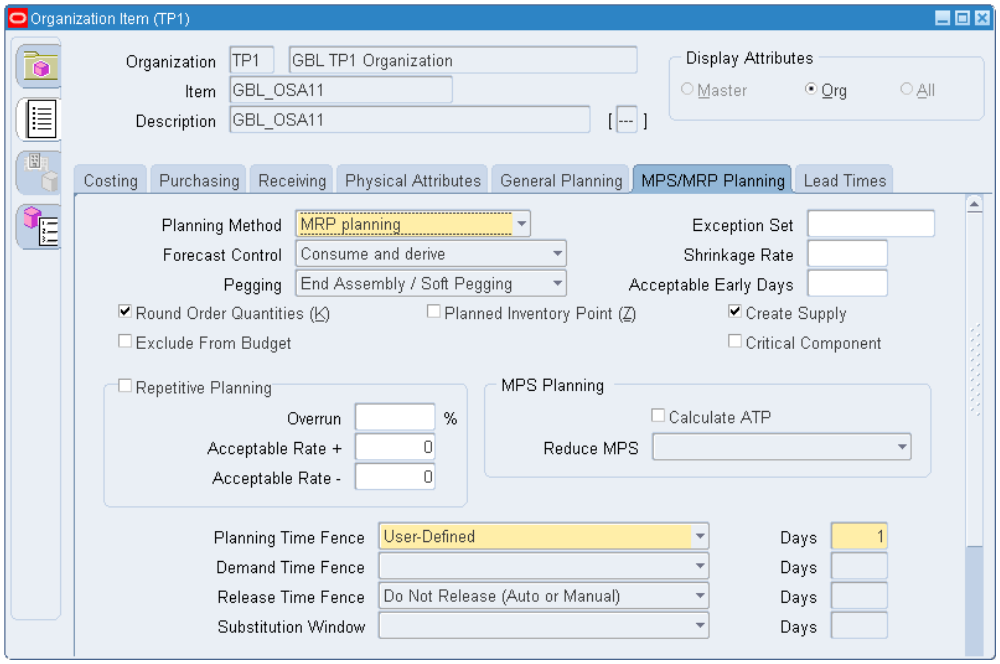
2. Enter Item search criteria for the MP organization and choose Find. The Organization Item window appears.

3. Select the General Planning tab and define the outsourced assembly as a Make item for planning. Production of this assembly is simulated in the MP organization.



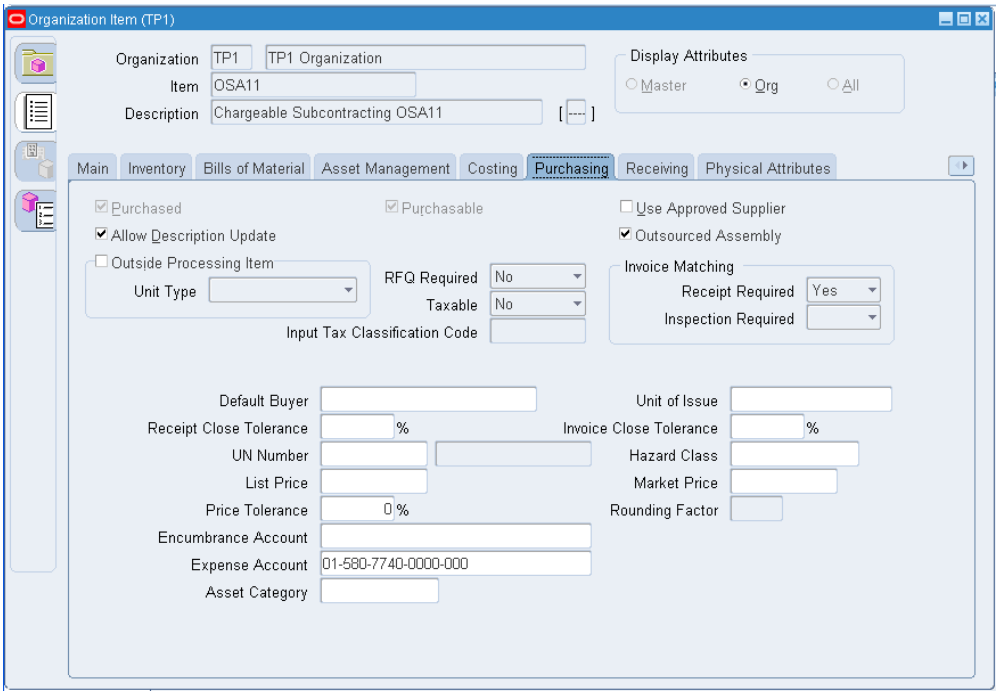
4. Select the MPS/MRP Planning tab and select Do Not Release (Auto or Manual) for **Release Time Fence**. This prevents Make planned orders of assembly from being transferred as discrete jobs in the MP organization.

   Note: Outsourced assemblies cannot have routings in MP organizations.



5. Select the Purchasing tab.

6. Define this item as an outsourced assembly by selecting the Outsourced Assembly indicator.



Note: Outsourced assemblies cannot have routings in MP organizations.

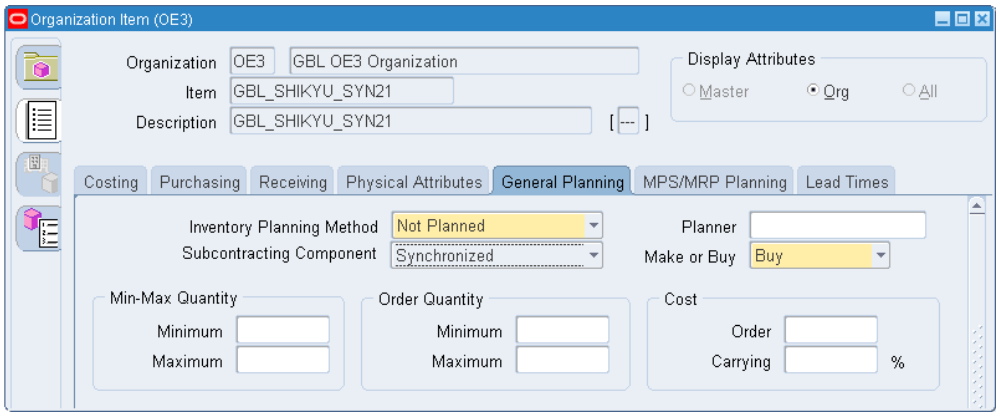
7. Save your work.

To define subcontracting components in the OEM Organization:

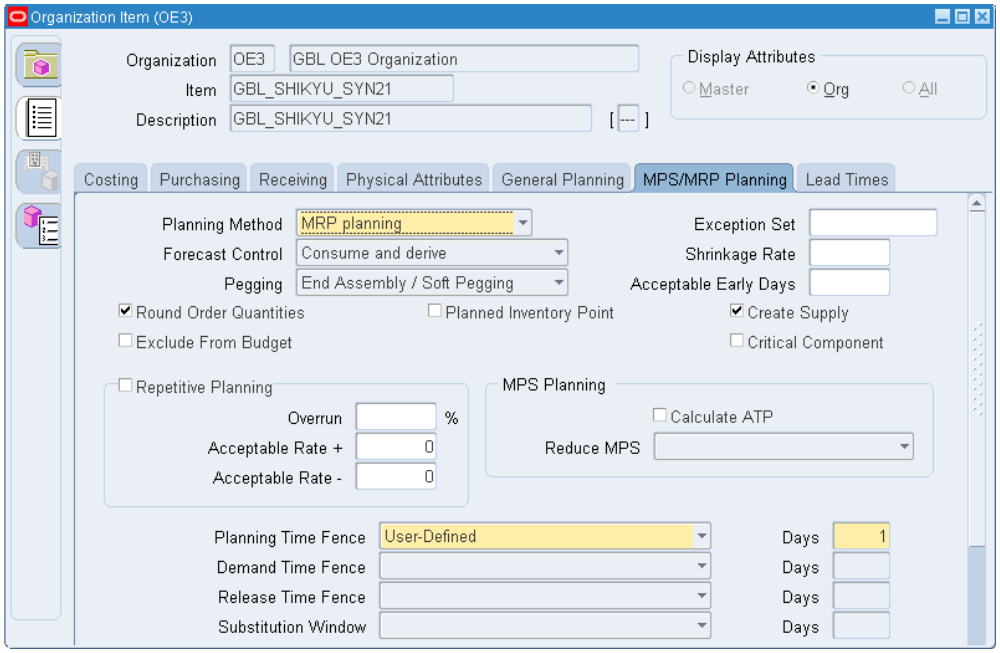
1. From the Inventory responsibility, navigate to the Organization Item window. The Find Organization Items window appears.

2. Enter Item search criteria for the OEM Organization and choose Find. The Organization Item window appears.

3. Select the General Planning tab and enter the **Subcontracting Component**. Valid values are Synchronized or Prepositioned based on the subcontracting process requirement.



4. Select the MPS/MRP Planning tab and verify that **Release Time Fence** is empty (Null). This allows ASCP to release and transfer planned orders of components to purchasing as purchase orders or releases in the OEM organization.



5. Save your work.

To define subcontracting components in the MP Organization:

1. From the Inventory responsibility, navigate to the Organization Item window. The Find Organization Items window appears.

2. Enter Item search criteria for the MP Organization and choose Find. The Organization Item window appears.

3. Select the General Planning tab and enter the **Subcontracting Component**. Valid values are Synchronized or Prepositioned based on the subcontracting process requirement.

4. Select the MPS/MRP Planning tab and enter **Release Time Fence** values:

   Do not Release (Auto or Manual) - use this value when using synchronized components. ASCP should not release planned orders of synchronized components in the MP organization.

   Null - leave this field empty when using pre-positioned components.

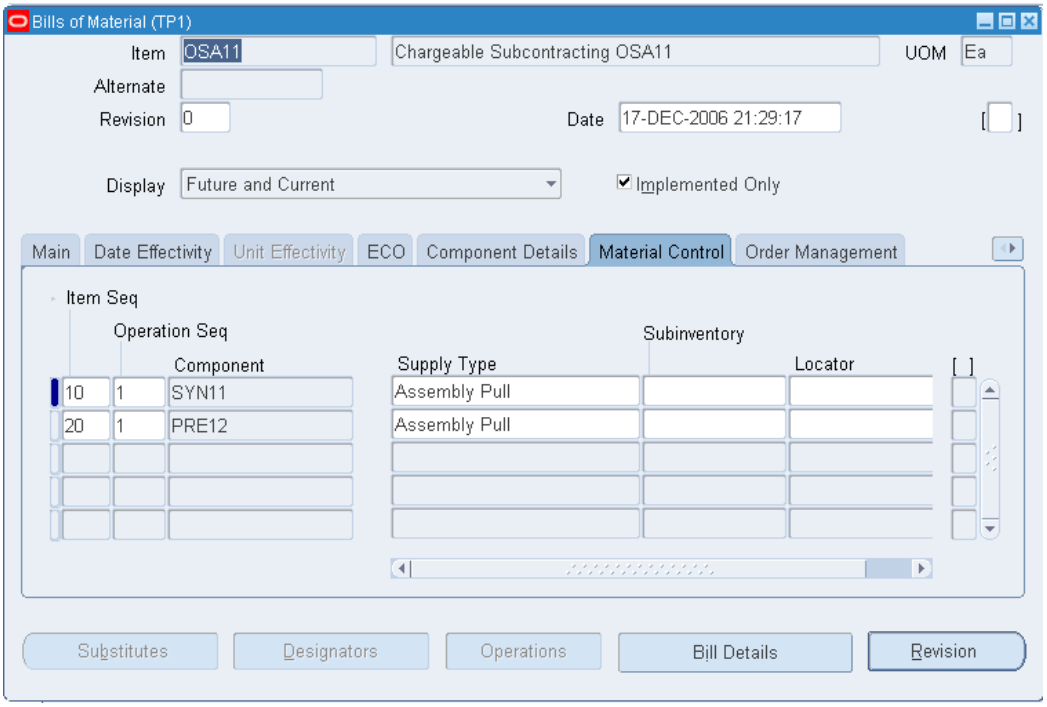
5. Save your work.

Setting Up Bills of Material for Outsourced Assemblies

Bills of Material (BOM) must be set up for outsourced assemblies in both the OEM and MP organizations. These two bills should be the same for proper planning and execution. If the BOM already exists for outsourced assembly in the OEM organization, then set up the same Bills in the MP organizations. The prerequisites for outsourcing the assemblies are:

- You must define all of the components of the outsourced assembly as Subcontracting Components, either pre-positioned or synchronized in both OEM and MP organizations.

- In the MP organization, select the Material Control tab and define BOM Component and Supply Type as Assembly Pull.



Setting Up Chargeable Subcontracting Accounting

Chargeable Subcontracting Accounting Process

The OEM ships components to the MP by a replenishment sales order for the manufacturing of an assembly, but the revenue is not recognized as sales revenue. This revenue is tracked in a separate account for analysis at a later stage.

The MP is not liable for the payment of components, therefore the OEM cannot consider the receivables amount of the replenishment sales orders as actual receivables, and the amount is tracked in a separate receivables account. COGS of Subcontracting Components are also tracked in separate accounts. Purchase price of the assembly is set up to include sales price of the components and the added value, which is always different than the standard cost of the assembly. The Purchase Price Variance (PPV) at the time of receiving the subcontracting order in the OEM organization is not a real purchase price variance, and must be tracked in a separate account. You must set up following accounts to use the chargeable subcontracting process:

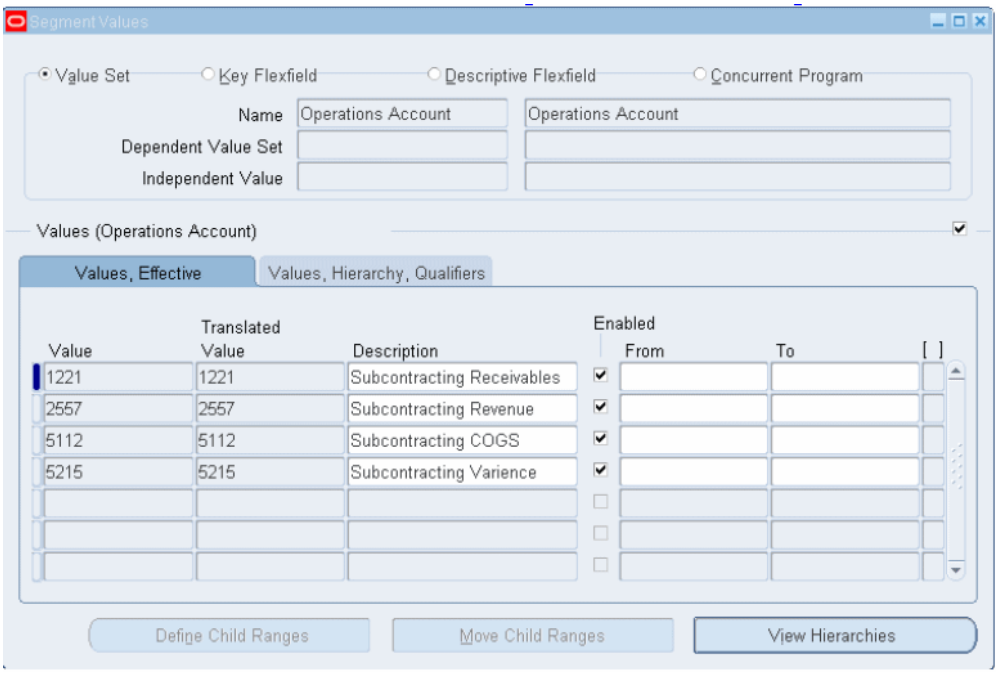
- **Subcontracting Receivables**: Used to track the receivables from the sale of components to the MP.
- **Subcontracting Revenue**: Used to track the revenue from the sale of components to the MP.
- **Subcontracting COGS**: Used to track COGS from the sale of components to the MP.

- **Subcontracting Variance**: Purchase price variance at the time of receiving assembly is posted to this account. This variance arises due to differences between the standard cost and purchase price of the assembly.

  See: Updating Balancing Segment Values, *Oracle General Ledger User's Guide*.

To define chargeable subcontracting accounts:

1. From the General Ledger responsibility, navigate to the Segment Value window. The Find Key Flexfield Segment window appears.
2. Select the Value Set indicator and select the Value Set Name.
3. Choose Find. The Segment Values displays all Values (Value Set).
4. Enter account details for the four Chargeable Subcontracting accounts described above.



5. Save your work.

Related Topics

Transaction Batch Sources, *Oracle Receivables User's Guide*

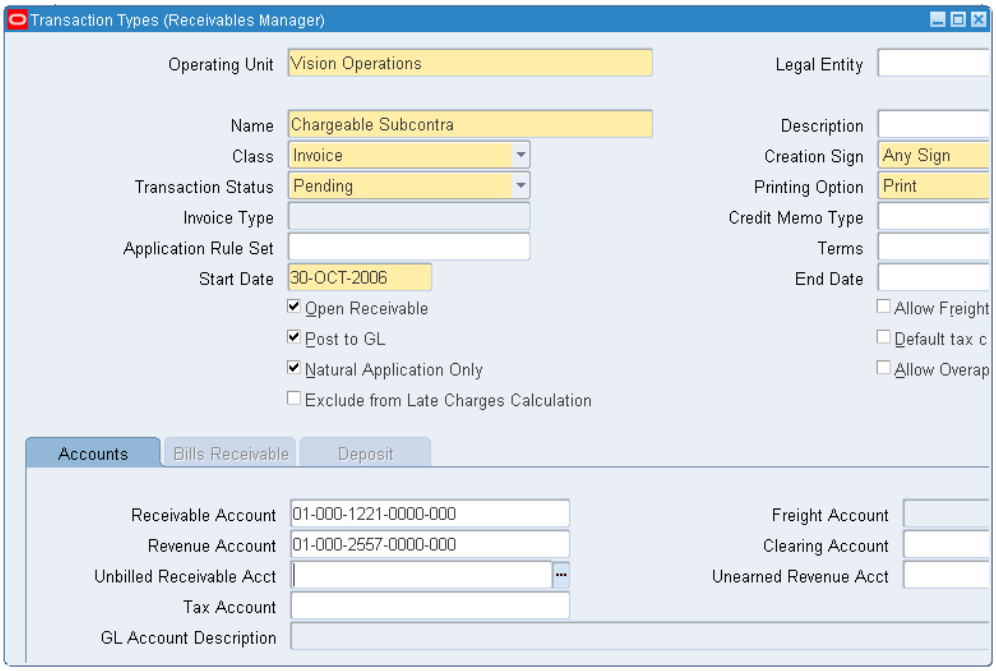
Defining Receivables Transaction Types

Define a separate receivable transaction type and associate:

- Chargeable subcontracting receivables
- Chargeable subcontracting revenue accounts (from the previous step). See: Setting Up Chargeable Subcontracting Accounting, page 2-25.

To define a receivables transaction type and associate it to Chargeable Subcontracting receivables:

1. From the Receivables responsibility, navigate to the Transaction Types window.
2. Enter the receivables transaction type details.



3. In the Name field, enter the transaction type of Chargeable Subcontracting.
4. For the Receivable Account, enter the subcontracting receivables account for tracking the subcontracting component receivable amount.
5. For the Revenue Account, enter the Subcontracting Revenue Account for tracking subcontracting component revenue.
6. Save your work.

Related Topics

Transaction Types, *Oracle Receivables User's Guide*

Defining Transaction Sources

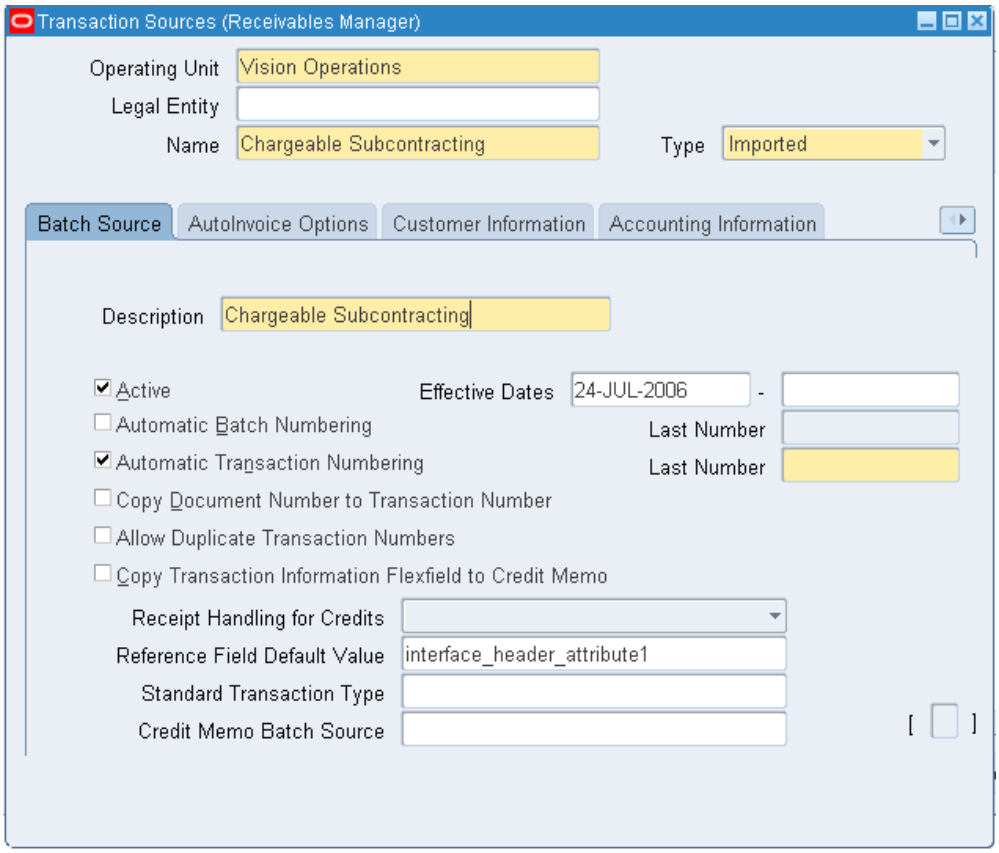
Batch sources control the standard transaction type assigned to a transaction, and determines whether Receivables automatically numbers your transactions and transaction batches.

To associate a chargeable subcontracting receivables transaction type with an order management order type and line type, you must define a receivables transaction source. This is referred to when receivables invoices are imported from order management to accounts receivable.

For transaction batch source setup information, see: Transaction Batch Sources, *Oracle Receivables User's Guide*.

To define a chargeable subcontracting transaction source:

1. From the Receivables responsibility, navigate to the Transaction Sources window.
2. Enter the Transaction Source: Chargeable Subcontracting.



3. Save your work.

Setting Up Order Management Transaction Types

You must set up a separate order type that is used for creating replenishment sales orders for component shipments to the MP.

Receivables Transaction Type, Receivables Transaction Source, and Subcontracting COGS accounts created in the previous steps must be associated with this Transaction Type. When the replenishment sales order of the subcontracting component is shipped and invoiced, COGS, revenue, and receivables are posted to subcontracting COGS, subcontracting revenue, and subcontracting receivables respectively.

See: Accounting Setup.

To define Order Management transaction types:

1. From the Order Management responsibility, navigate to the Transaction Types window.

2. Select an **Operating Unit** (required).

3. Enter a **Description**

4. Select an **Order Category** (required).

5. Select a Fulfillment Flow.

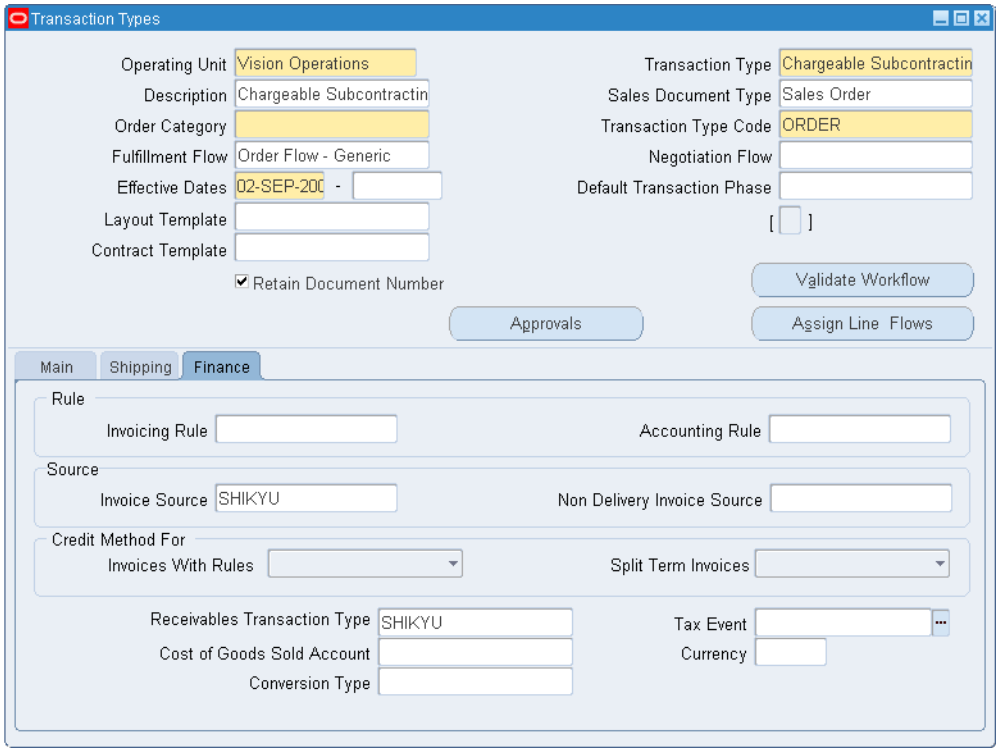
6. Enter **Effective Dates** (required).

7. Enter a **Transaction Type** (required).

8. Select a **Sales Document Type**.

9. Select a **Transaction Type Code** (required).

10. Select the Finance tab and enter an **Invoice Source** and a **Receivables Transaction Type** and COGS account defined in the previous setup for chargeable subcontracting process.



Note: To associate a chargeable subcontracting AR transaction type with an OM order type and line type, you must define a separate invoice source and AR transaction type, and attach them to the OM transaction type. This is referred to when AR invoice is imported from OM to AR. See: Transaction Types, *Oracle Receivables User's*

Guide and Setting Up Chargeable Subcontracting Accounting, page 2-25.

11. Save your work.

Setting Up Standard Costs of Components and Assemblies

Set up the standard costs of subcontracting components and outsourced assembly in the OEM organization. The MP organization is a simulation organization and accounting transactions are not transferred to GL. Therefore, no costing setup is required in the MP organization.

Standard Cost of Subcontracting Components in the OEM Organization

Subcontracting Components can be purchase items or assembly items, and the cost is set up like any standard component.

Standard Cost of Outsourced Assemblies in the OEM Organization

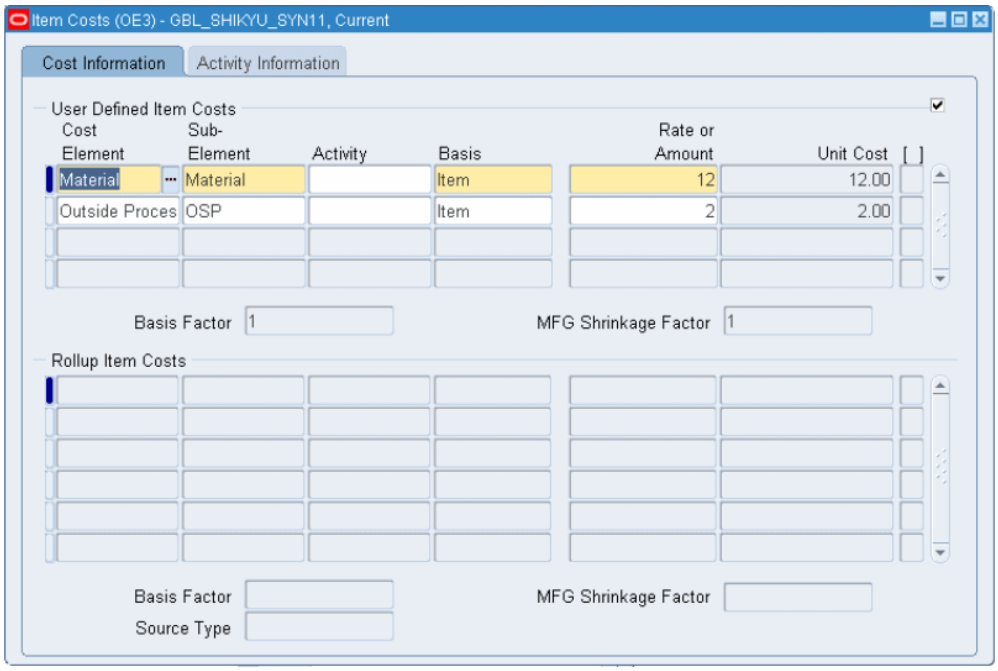
Standard cost of the outsourced assembly must include material cost and the added value. While setting up the cost, include component cost as material cost and added value as OSP (define an OSP resourced in the OEM organization, and define OSP charge as added value) charges and run cost update.

To set up a standard cost of an outsourced assembly:

1. From the Costing responsibility, navigate to the Item Costs window and select an OEM Organization. The Find Item/Cost Type window appears.

2. Click Find to open an existing assembly item and cost type, or click New to create a new item cost. The Item Costs Summary window appears.

3. Fill Component costs as Material cost and Value addition as OSP (define OSP resource before creating the cost).



4. Save your work.

5. Run Standard Cost Update to update the Frozen cost type with Current cost type.

Defining Price Lists for Subcontracting Components

In the Chargeable Subcontracting business process, synchronized components are shipped to the MP using replenishment sales orders that are created automatically based on the subcontracting orders of the outsourced assembly. Pre-positioned components are shipped to the MP using replenishment purchase orders. Sales price of the components are defined in the price lists and are associated with Customer Ship To and Bill To sites of the MP organization (customer sites represents the MP organization).

Sales Price of Pre-positioned Components

These components are shipped to the MP in bulk quantities in advance of the subcontracting order requirements. You can create the replenishment purchase order for these components in the primary UOM, or in a secondary UOM. Replenishment sales orders are created based on its replenishment purchase orders. Therefore, the sales order UOM is always the same as its corresponding replenishment purchase order UOM. You can define price lists in either the primary UOM, or in the secondary UOM, but only one UOM is effective at any point in time.

Sales Price of Synchronized Components

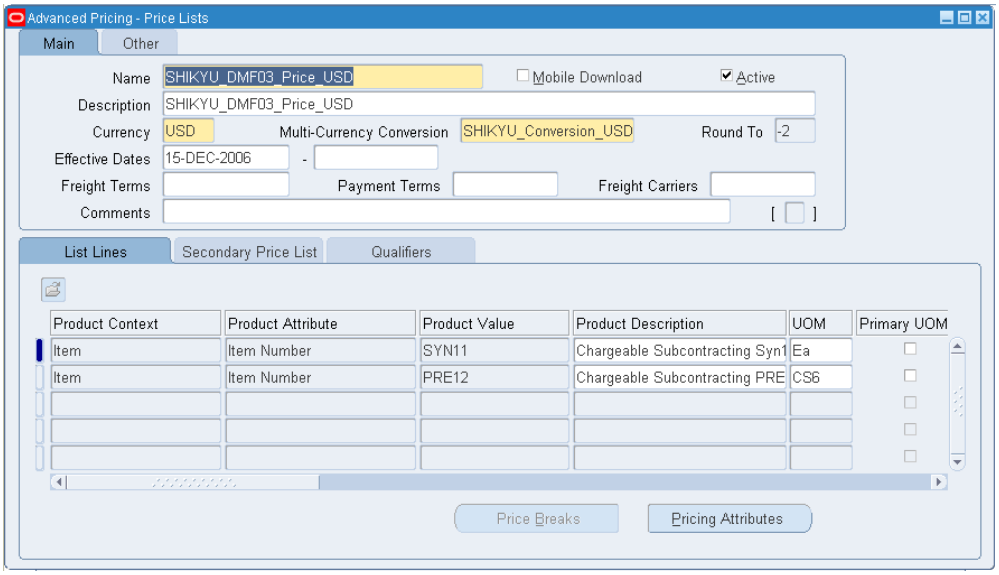
These components are shipped along with the subcontracting order. Replenishment

sales orders of these components are always created by the batch program in the primary UOM of the component based on subcontracting order requirements. Because only shipping of the components are always supported in the primary UOM, price lists are always created in the primary UOM for synchronized components.

To define price lists:

1. From the Order Management responsibility, navigate to the Pricing, Price Lists, Price List Setup, and Open Price List window.

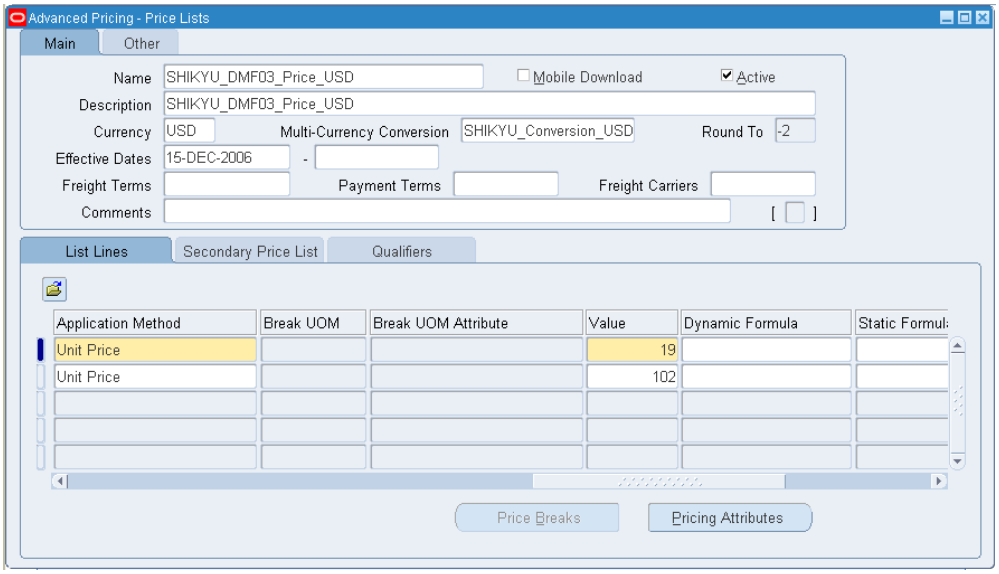
2. Define price lists in the transaction currency of the MP.



3. In the List Lines tab, enter a subcontracting component code for defining the price.

4. UOM should be the primary UOM for synchronized components. UOM for pre-positioned components can be either the primary or secondary UOM, however, only one UOM is effective at any given point in time.

5. Enter Values (prices) in the UOM.

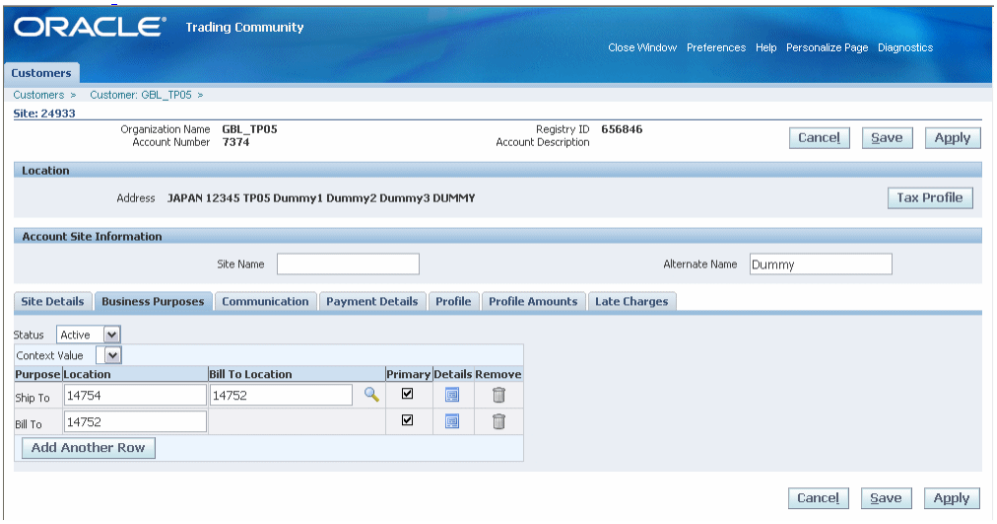


6. Save your work.

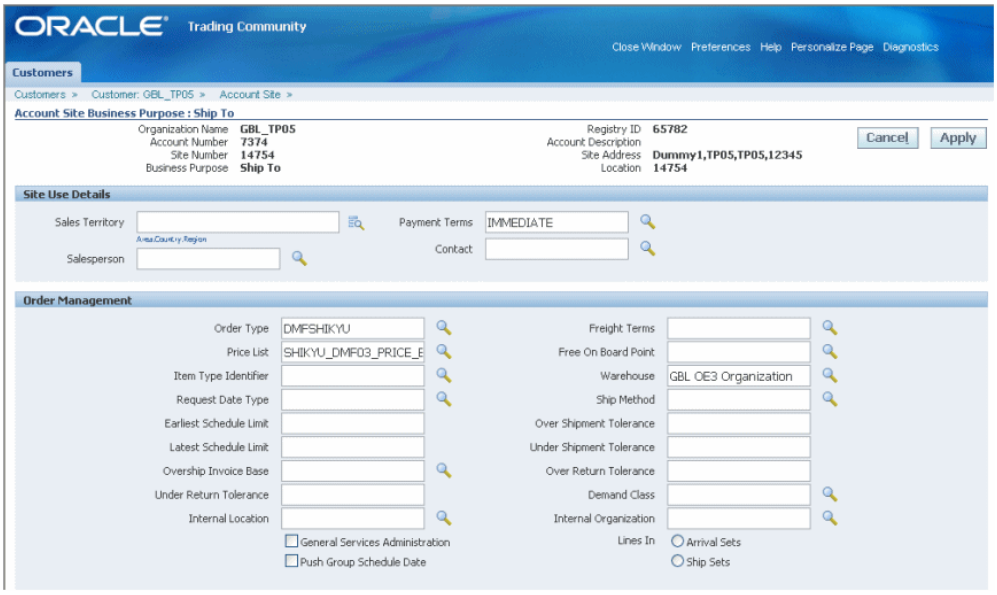
   Important: Do not define modifiers for subcontracting components. The Chargeable Subcontracting process does not work correctly if modifiers are implemented.

To associate price lists with a customer site (MP):

1. From the Order Management responsibility, navigate to the Customers Page.
2. Select the Business Purpose tab.



3. Navigate to the Ship-To Details page and associate the price lists defined in the previous step.



4. Associate the price list to Bill-to details.

5. Save your work.

Setting up Purchase Price of an Outsourced Assembly

In Chargeable Subcontracting, the OEM ships components to the MP, but retains ownership. When the OEM receives the assembly, it's assumed that the components are

returned from the MP, and inventory is adjusted accordingly. The OEM makes payment to the MP for the added value after netting the receivables invoices of the components shipped, and the payables invoices of the outsourced assemblies are received. To support the purchase price of the assembly, chargeable subcontracting includes the components sales price and the added value.

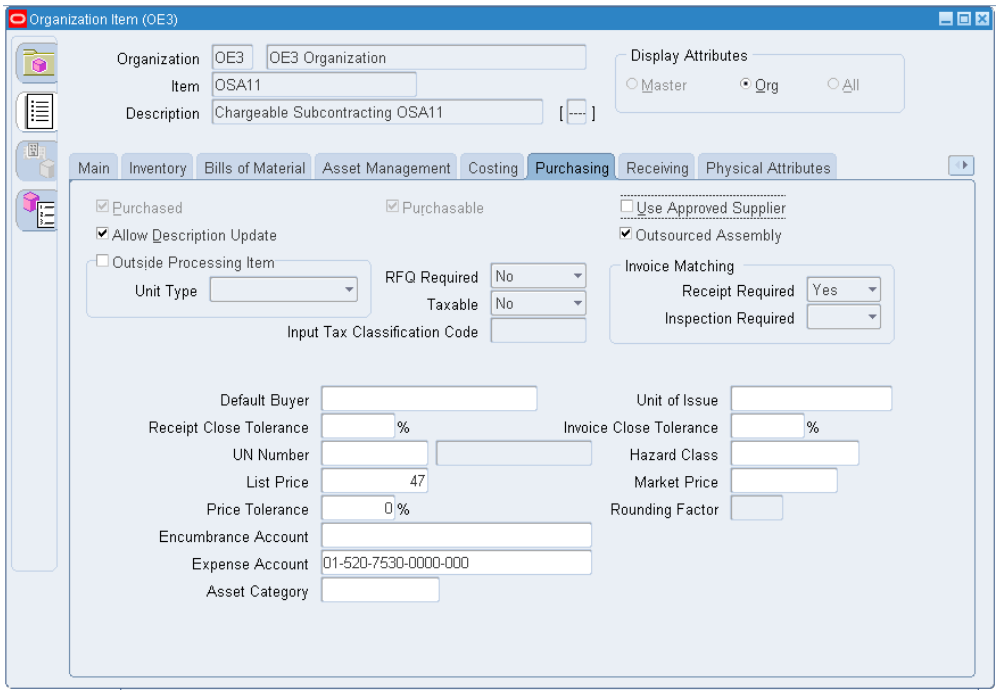
Assembly Purchase Price = Sum of (Component quantity based on the Bills * Component Sales price defined in the Price lists).

Once the purchase price of assembly is calculated based on the bills and price lists, setup should be as follows:

- If the standard purchase order is used for procuring the assembly, then define the calculated assembly price in the Organization Items window.
- If a blanket release is used, then define a blanket agreement with the assembly price calculated as described above.

To set the purchase price of an outsourced assembly:

1. From the Inventory responsibility, navigate to the Organization Item window.
2. Enter an Organization and Item.
3. Select the Purchasing tab.
4. Enter the **List Price**.



5. Save your work.

Setting Up a Shipping Network

In chargeable subcontracting, components move from OEM organizations to MP organizations, and outsourced assemblies move from MP organizations to OEM organizations. Therefore, you must define an Inventory Shipping Network between the OEM and the MP.

For additional information, see: Inter-Organization Shipping Networks, *Oracle Inventory User's Guide*.

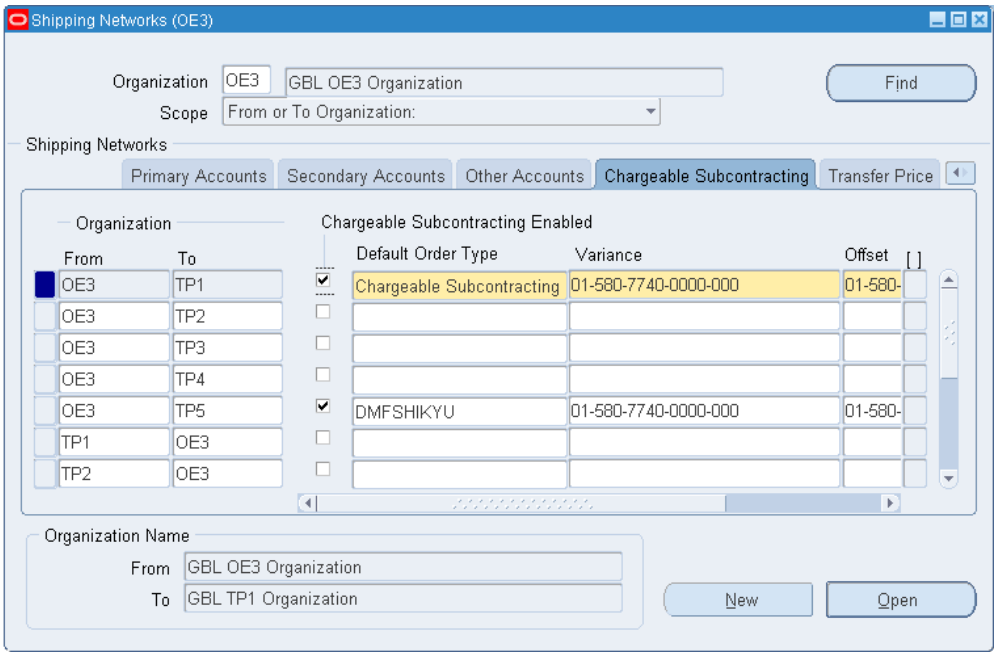
Because chargeable subcontracting components move from an OEM organization to a MP organization, you must select Chargeable Subcontracting Enabled in this direction. Default order type should be the Order Management transaction type defined in the previous steps using Subcontracting specific accounts, and is used when the Interlock Manager concurrent program in chargeable subcontracting creates replenishment sales orders. Variance should be defined as the subcontracting variance account defined in the previous step, and is used for purchase price variance of the outsourced assembly receipts, and is accounted for and tracked separately. The offset account is used for reducing the outsourced assembly on-hand quantity by miscellaneous issues, and is part of simulation. See the Chargeable Subcontracting Process section for additional details.

To set up a chargeable subcontracting shipping network:

1. From the Inventory responsibility, navigate to the Shipping Networks window.

2. Select the OEM Organization, and the Shipping Networks window Appears.

3. Choose Find to open existing networks, or choose New to set up a new shipping network. Select the Chargeable Subcontracting tab.

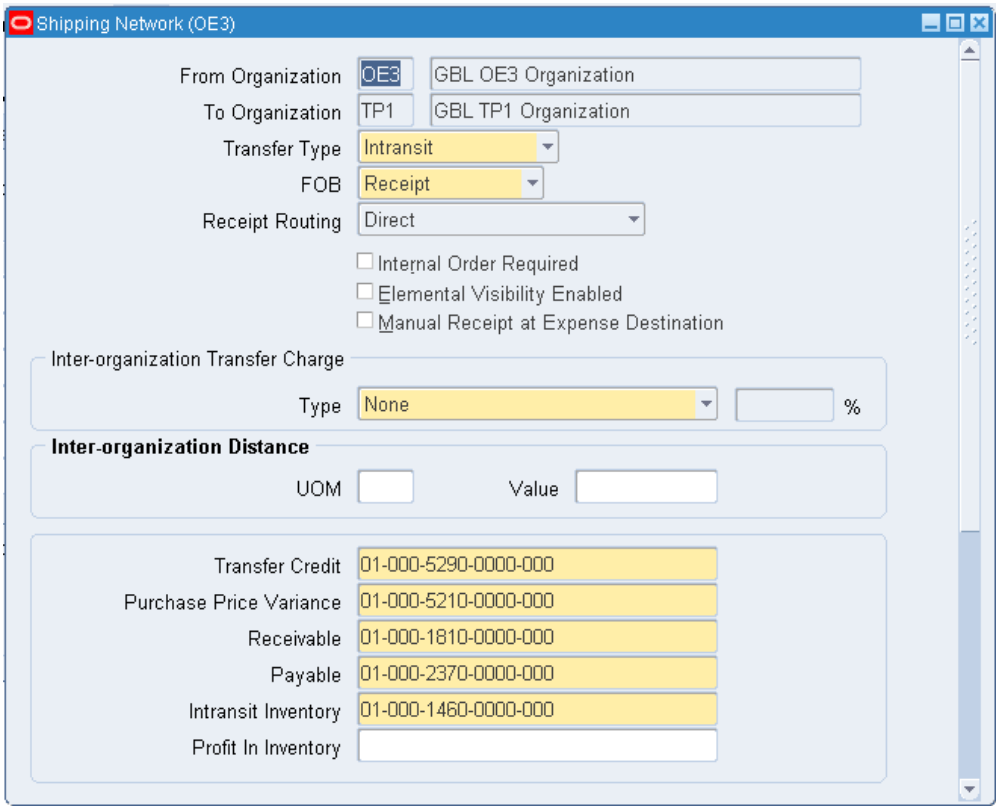


4. Select the **Chargeable Subcontracting Enable** indicator to define the chargeable subcontracting relationship between the OEM and the MP.

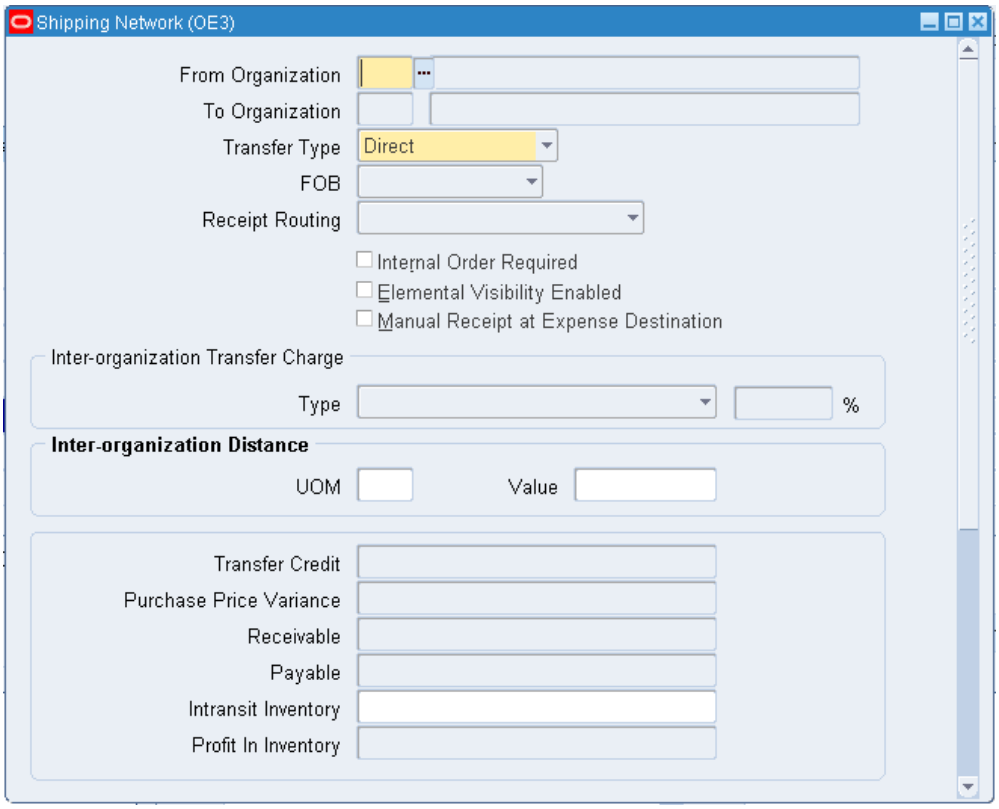
5. Specify the **Default Order Type** to be used for creating replenishment sales orders, and to ship components to the MP.

6. Select a **Variance** account for capturing Purchase Price Variance of outsourced assembly receipts.

7. Choose Open to view details in the Shipping Network window for a selected line.



8. If you choose New, then the Shipping Network window appears and you can enter additional network details.



9. Save your work.

> **Note:** In chargeable subcontracting, the OEM can outsource the same assembly from different MP's (have chargeable subcontracting relationships with multiple MP's), and the MP can supply different assemblies to Multiple OEM's.

Defining Sourcing Rules

Sourcing rules and bills of distribution determine the movement of material between organizations. These organizations include suppliers, manufacturers, and distribution facilities. You must define sourcing rules and assignments for the OEM and the MP organizations for planning purposes:

- In the OEM organization, define the sourcing rules to Buy components from the RMS, and Buy assembly from the MP
- In the MP Organization, define the sourcing rules to Buy components from the OEM, and Make assembly at the MP

Advanced Supply Chain Planning (ASCP) creates Make or Buy planned orders based

on the sourcing rules.

For additional sourcing rules setup information, see: Defining Sourcing Rules, *Oracle Purchasing User's Guide* and the Oracle Master Scheduling/MRP and Oracle Supply Chain Planning User's Guide.

You must define the following Sourcing Rules:

Type	Item	Organization	Type	Supply Source	Organization	Allocation	Rank
Item-Organization	A	OEM1	Buy From	SP1/BUY		100	1
Item-Organization	B	OEM1	Buy From	RMS		100	1
Item-Organization	C	OEM1	Buy From	RMS		100	1
Item-Organization	A	MP1	Make At		MP1	100	1
Item-Organization	B	MP1	Buy From	OEM1/BUY		100	1
Item-Organization	C	MP1	Buy From	OEM1/BUY		100	1

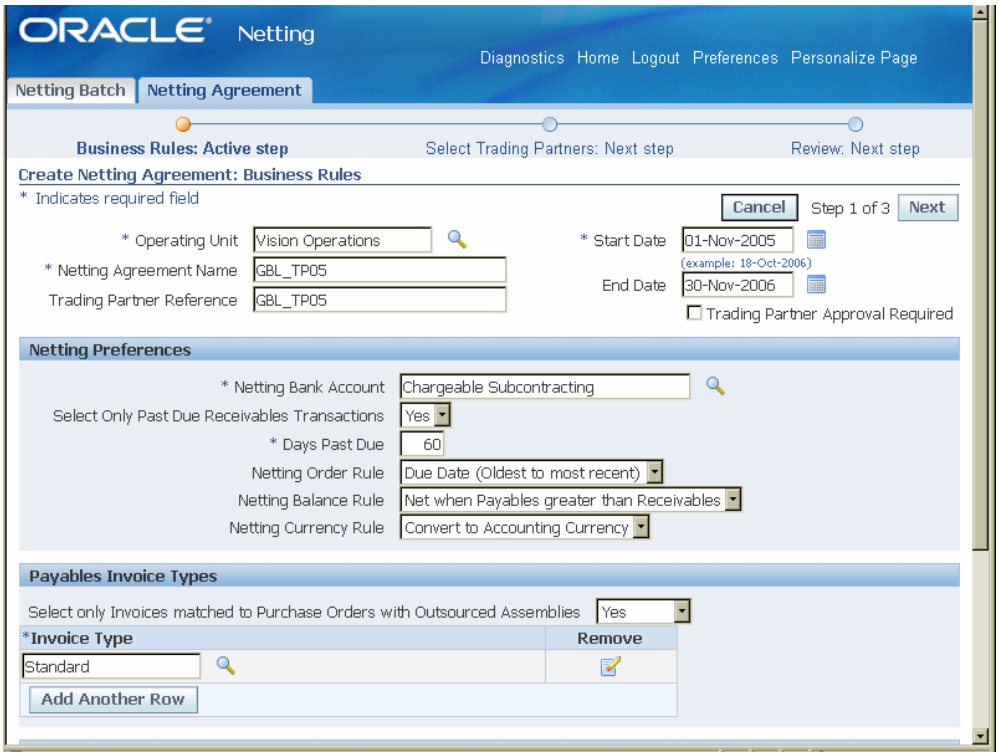
Defining Netting Agreements

Netting agreements control how trading partners net payables and receivables transactions. You must set up netting agreements to enable netting receivables invoices for components, and payables invoices for assemblies.

For additional Chargeable Subcontracting Netting Agreement information, see: Netting Agreement, *Oracle Payables User's Guide*.

To define netting agreements:

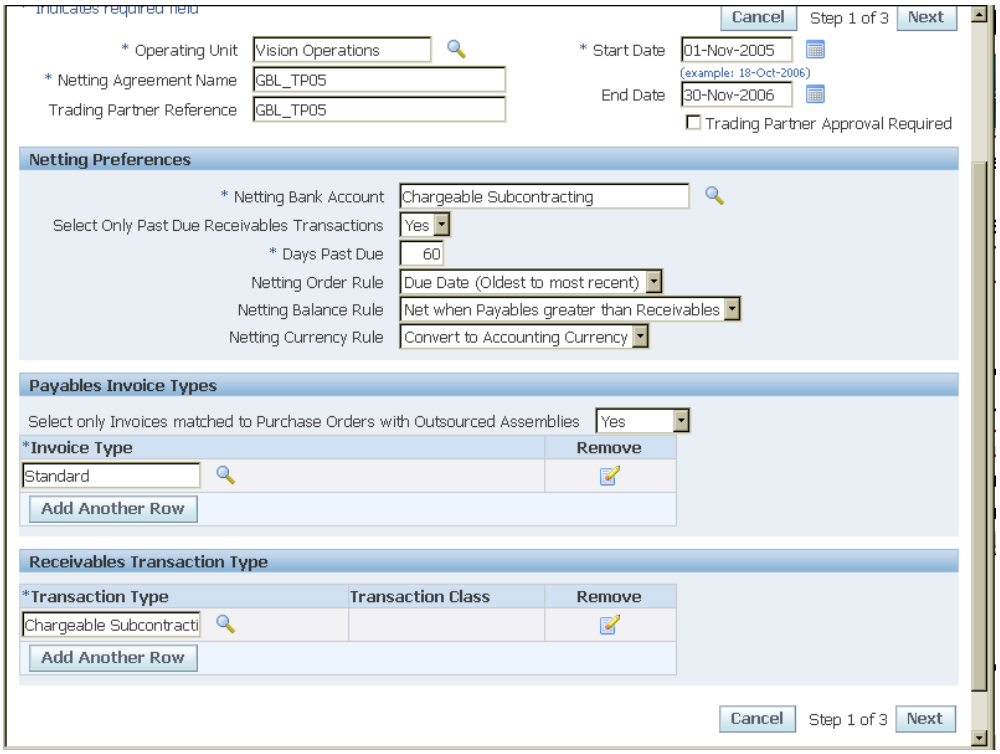
1. From the Payables responsibility, navigate to the Netting page.
2. Define the netting balance rule as Net When Payables Greater than Receivables. This ensures that the OEM always pays the added value to the MP.



3. In the Payable invoice type, set the option Select only Invoices matched to Purchase Orders with Outsourced Assemblies to Yes. This ensures that only payable invoices of outsourced assembles are included in the netting process. This option is available only when the profile Enable Chargeable Subcontracting is set to Yes.

4. Set the Receivables Transaction type to be the same as the invoice source in the Order Management transaction type. Receivable transactions stamped with source are considered for netting.

5. Under Trading partners enter, the MP as both customer and supplier.



6. Save your work.

3

Chargeable Subcontracting Process

This chapter covers the following topics:

- Chargeable Subcontracting Planning
- Chargeable Subcontracting Process Execution
- Chargeable Subcontracting Concurrent Programs
- Interlock Manager
- Reconciliation Manager
- Auto Receive Components
- Process Receiving Transactions
- Processing Logic

Chargeable Subcontracting Planning

The following sections describe the Chargeable Subcontracting planning processes.

Overview

Advanced Supply Chain Planning (ASCP) plans the component requirements in both OEM and MP organizations, and uses organization definitions (customer supplier associations) and sourcing rules defined in the chargeable subcontracting setup. ASCP nets the demand and supply, and creates planned orders for the components and assemblies in both the OEM and MP organizations. The setup for ASCP is the same as for the standard planning setup for items - there is no special setup required for chargeable subcontracting.

This is a summary of the steps required to set up and run ASCP:

1. Add OEM and MP organizations to the planning instance.
2. Run collections and transfer data (items, sourcing rules, demand, supply, and so

on) to the planning instance.

3. Define Organization security to run the plans for the OEM and MP organizations.

4. Define forecast sets for outsourced assembly if the outsourced assembly is an independent demand item. Otherwise, no forecast set definition is required.

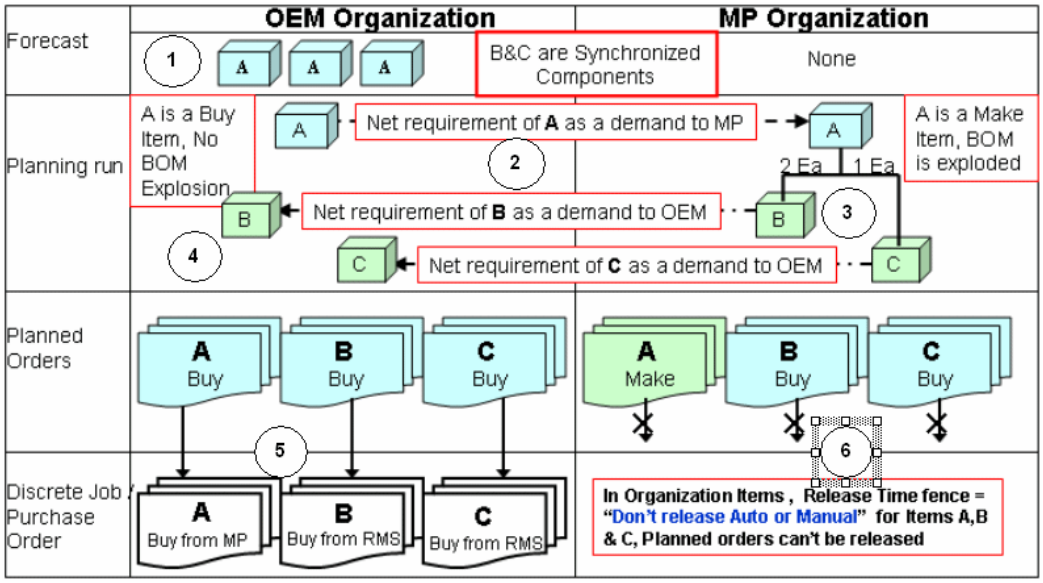
5. Create and run the supply chain plans.

6. View the newly created planned orders by using the Planner Workbench.

For more detailed planning setup, refer to the *Oracle Advanced Supply Chain Planning User's Guide*.

Outsourced Assembly with Synchronized Components

In the following diagram, the outsourced assembly is A and its components, B and C, are synchronized components.



The Planning Process starts when:

1. The forecast is defined for an outsourced assembly in the OEM Organization, if the outsourced assembly A is an independent demand item. If A is a dependent demand item, the demand comes from its parent assembly.

2. The planning run considers the forecast or dependent demand of A, nets the requirements of A in the OEM organization, and creates buy a planned order for assembly A in the OEM organization. A is a **buy** item and is sourced from MP organization, based on the sourcing rule and Organization Supplier customer associations. Therefore, the planned order demand of A in the OEM organization is

transferred to the MP organization as demand of A.

3. In the MP Organization, A is a **make** item, demand is netted, and a make planned order is created for Assembly A. When the BOM is exploded, components B and C requirements are calculated, netted, and buy planned orders are created. Since these components are sourced from the OEM organization (based on the sourcing rules, supplier and site associations of the OEM organization), the buy panned order demand for components B and C is transferred to the OEM organization.

4. In the OEM organization, components B and C requirements are netted because these components are sourced from RMS (based on sourcing rules). Therefore, buy planned orders are created for these components in the OEM organization.

5. In the OEM organization, buy planned orders can be transferred from Planning to Purchasing as purchase requisitions. (The release time fence is set to "Null" for outsourced assembly A, components B and C in Organization Items). Purchase orders and blanket releases are created from these purchase requisitions. Purchase orders and blanket releases created for the outsourced assembly is referred as subcontracting orders.

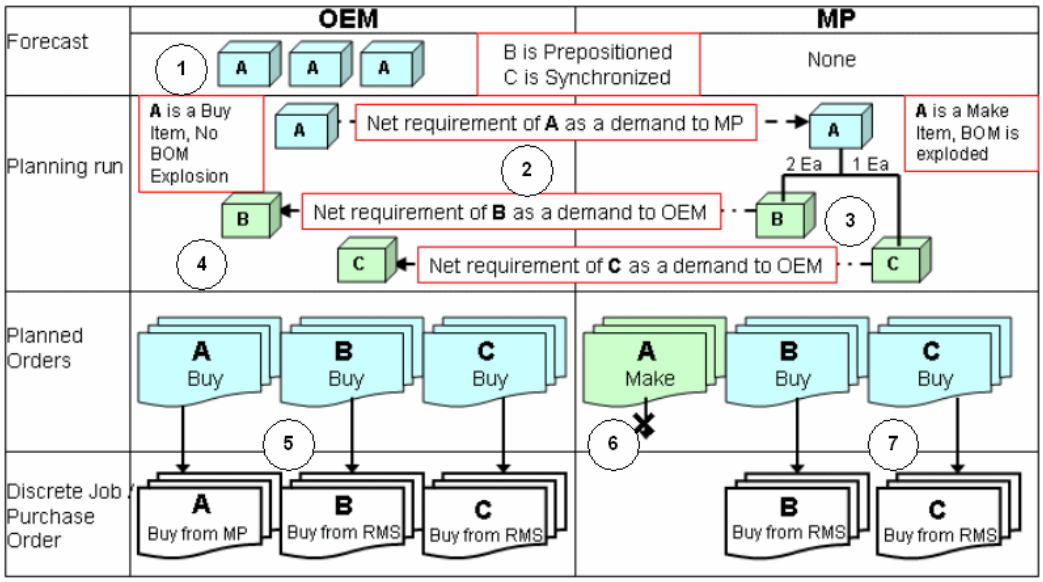
6. In the MP organization, make and buy planned orders of the outsourced assembly A and components B and C cannot be transferred as WIP jobs or purchase requisitions because the Release time fence is set to *Don't Release Auto or Manual* for all of them in MP organization. For these planned orders, the Attribute Action is set to *None*, which prevents releasing these planned orders.

   Note: You can view planned work orders using the Planner Workbench.

The Interlock Manager concurrent request creates WIP jobs for assembly A, and purchase orders for components B and C during the simulation run. More details will be discussed in the execution section. These WIP jobs and purchase orders represents supply and will be considered in the subsequent planning runs.

Outsourced Assembly with Pre-positioned Components

In this figure, the outsourced assembly is A and its components B & C are synchronized components:



The planning process is same as outsourced assembly with synchronized components. The only exception is that planned orders of pre-positioned components B and C can be transferred to Purchasing as purchase requisitions:

1. The forecast is defined for the outsourced assembly in the OEM organization, if the outsourced assembly A is an independent demand item. If A is a dependent demand item, demand comes from its parent assembly.

2. The planning run considers forecast or dependent demand of A, nets the requirements of A in the OEM organization, and creates a buy planned order for assembly A in the OEM organization. Since Assembly A is a buy item and is sourced from the MP organization, the planned order demand of A in the OEM organization is transferred to the MP organization as demand of A.

3. In the MP organization, A is a make item based on the organization, demand is netted, and a make planned order is created for Assembly A. When the BOM is exploded, the requirements for components B and C are calculated, netted, and buy planned orders are created. Since these components are sourced from the OEM organization, buy planned order demand of components B and C is transferred to the OEM organization.

4. In the OEM organization, requirements for components B and C are netted because these components are sourced from RMS (based on sourcing rules). Therefore, buy planned orders are created for these components in OEM organization

5. In the OEM organization, buy planned orders can be transferred from Planning to Purchasing as purchase requisitions. (The release time fence is set to *Null* for outsourced assembly A, components B and C in organization items). Purchase orders and blanket releases are created from these purchase requisitions. Purchase

orders and blanket releases created for the outsourced assembly are referred to as subcontracting orders.

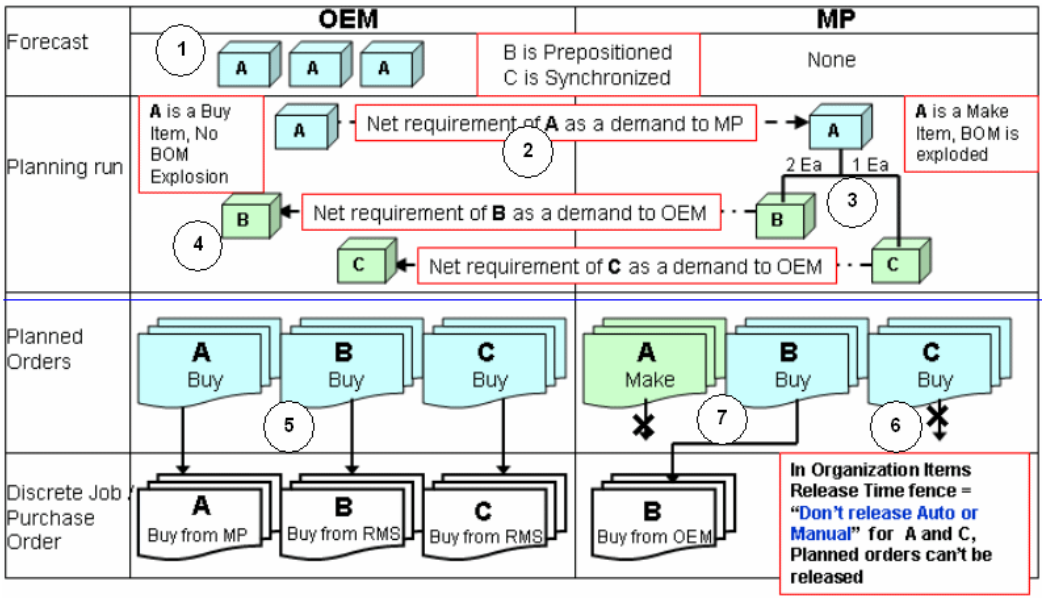
6. In the MP organization, make planned orders of outsourced assembly A can be transferred as WIP jobs as the release time fence is set to *Don't Release Auto or Manual* for the outsourced assembly in MP organization. The Make Planned order Attribute Action is set to *None* (can be viewed on the planning workbench) which prevents releasing these planned orders.

7. Buy Planned orders of components B and C can be transferred to Purchasing as requisitions as the release time fence is set to *Null* for both the components in the MP organization.

The Interlock Manager concurrent request creates WIP jobs for assembly A during the interlock run. These WIP jobs represent supply, and will be considered in the subsequent planning runs.

Outsourced Assembly with Pre-positioned and Synchronized Components

In this scenario, outsourced assembly is A and its components B & C are pre-positioned and synchronized components respectively:



The planning process is a mixture of the outsourced assembly with synchronized components, and outsourced assembly with pre-positioned components:

1. The forecast is defined for the outsourced assembly in the OEM organization, if the outsourced assembly A is an independent demand item. If A is a dependent demand item, then demand comes from its parent assembly.

2. The planning run considers forecast or dependent demand of A, nets the requirements of A in OEM organization, and creates a buy planned order for assembly A in the OEM organization. A is a buy item and is sourced from the MP organization, therefore, the planned order demand of A in OEM organization is transferred to the MP organization as demand of A.

3. In the MP organization, A is a make item, demand is netted, and a make planned order is created for Assembly A. When the BOM is exploded, components B and C requirements are calculated, netted, and buy planned orders are created. Since these components are sourced from the OEM organization, the buy planned order demand of components B and C is transferred to the OEM organization.

4. In the OEM organization, components B and C requirements are netted, these components are sourced from the RMS (based on sourcing rules), and the buy planned orders are created for these components in the OEM organization.

5. In the OEM organization, buy planned orders can be transferred from Planning to Purchasing as purchase requisitions. Purchase orders and blanket releases are created from these purchase requisitions. Purchase orders and blanket releases created for the outsourced assembly are referred to as subcontracting orders.

6. In the MP organization, make planned orders of outsourced assembly A and Buy Planned orders of Component C cannot be transferred as WIP jobs because purchase requisitions as the Release Time Fence is set to *Don't Release Auto or Manual* in the MP organization. The Make Planned Order Attribute Action is set to *None* which prevents releasing these planned orders. You can use the Planner Workbench to view the planned orders.

7. Buy planned orders of components B can be transferred to Purchasing as requisitions as the Release Time Fence is set to *Null* for both the components in MP organization.

The Interlock Manager concurrent request creates WIP jobs for assembly A and replenishment purchase orders for component B during the interlock run. These WIP jobs and replenishment purchase orders represent supply, and will be considered in the subsequent planning runs.

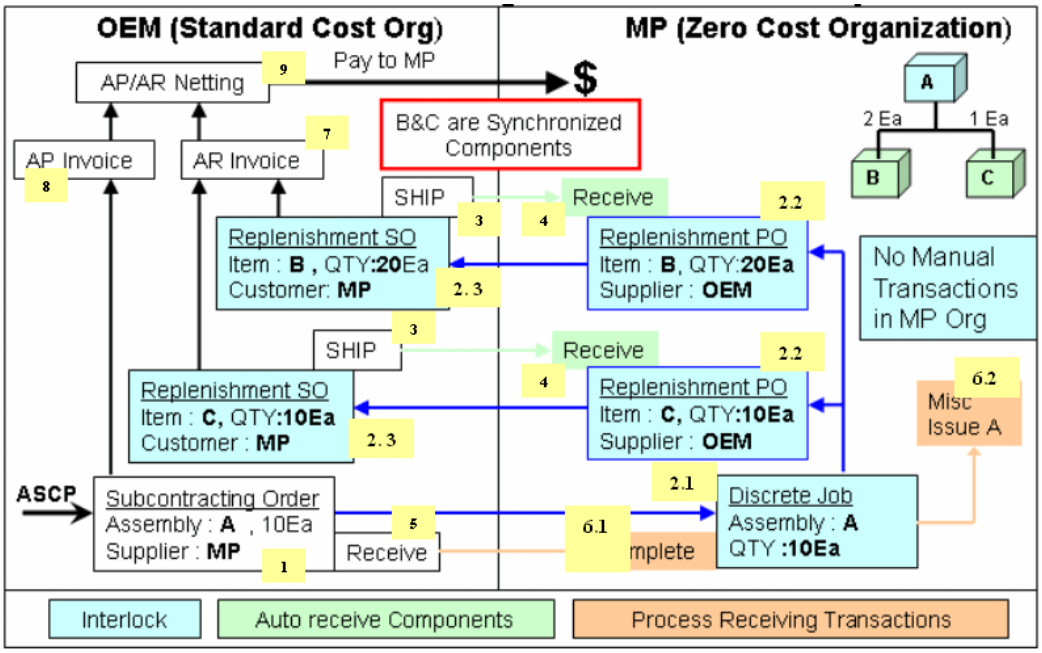
Chargeable Subcontracting Process Execution

The Chargeable Subcontracting Process execution begins with subcontracting orders of the outsourced assemblies, and replenishment purchase orders for the components. The following sections discuss the detailed process steps in all three scenarios.

Outsourced Assembly with Synchronized Components

In this scenario, the execution starts with the subcontracting orders being transferred

from ASCP. You can also create subcontracting orders manually.



1. The execution process starts with the subcontracting order of Assembly A. These subcontracting orders are the standard purchase orders and blanket releases, and in the shipments, the outsourced assembly attribute is set to Yes, indicating that the purchase order is created for the outsourced assembly.

2. Interlock Manager picks up the subcontracting orders which were not processed in the previous run of the subcontracting orders and performs the following:

   - 2.1. Creates a discrete job for the subcontracted order quantity for simulating the manufacturing in the MP organization.

   - 2.2. To manufacturer this assembly, components B and C are needed in the MP organization, and the OEM must supply those materials to the MP organization. Since B and C are synchronized components, (meaning that these components need to be shipped along with the order), the Interlock Manager creates a replenishment purchase order for the components with the supplier associated with the OEM organization. The replenishment purchase order created in the MP organization denotes the supply and is considered by ASCP as supply.

   - 2.3. The Interlock Manager also creates a replenishment sales order for shipping the components in the OEM for the corresponding replenishment purchase order in the MP organization. Replenishment sales orders created in the OEM will always have reference to its corresponding purchase order in the MP organization. Order type is retrieved from shipping networks (From Org: OEM

and To Org: MP). The chargeable subcontracting default order type and the components price are picked from price lists associated with the customer site in the sales order (defined in the price lists setup). Sales orders are always created with a booked status and are ready for shipment. These replenishment sales orders are hard pegged to the subcontracting order requirements (WIP job component requirement) and the hard pegging is called allocations. (The Allocations Table in the Chargeable Subcontracting Data Model holds this information for tracking.)

3. The replenishment sales orders created for the components are shipped on the shipment date like other sales orders.

4. The Auto Receive Components concurrent request picks up these shipments in the OEM organization, and creates receipts in the MP organization against the corresponding purchase order. Sales orders with shipped date and the in-transit lead time (defined in the shipping networks default shipping method) that is less than or equal to the current date, are automatically received to simulate the receipts in the MP organization.

5. The MP manufactures the components and ships the manufactured assemblies to the OEM, and the OEM receives these receipts like other purchase order receipts.

6. The Process Receiving Transactions concurrent request picks up these receipts in the OEM organization and performs the following:

   - 6.1. Completes the WIP job for the assembly. When the WIP job is completed , components are backflushed from the MP, and the inventory is reduced in the MP organization. However, the completed assembly in the MP remains in inventory.

   - 6.2. The subcontracting order of the assembly can only be received in the OEM after the MP manufactures and sends it to the OEM. It is assumed that WIP is already completed in the MP, and the assembly is shipped to the OEM. However, this will increase assembly on hand in the MP organization. The completed inventory of assemblies in the MP organization is reduced by miscellaneous issues, making the inventory figures in the MP organization accurate. The Offset account defined in shipping networks is used for creating miscellaneous issues.

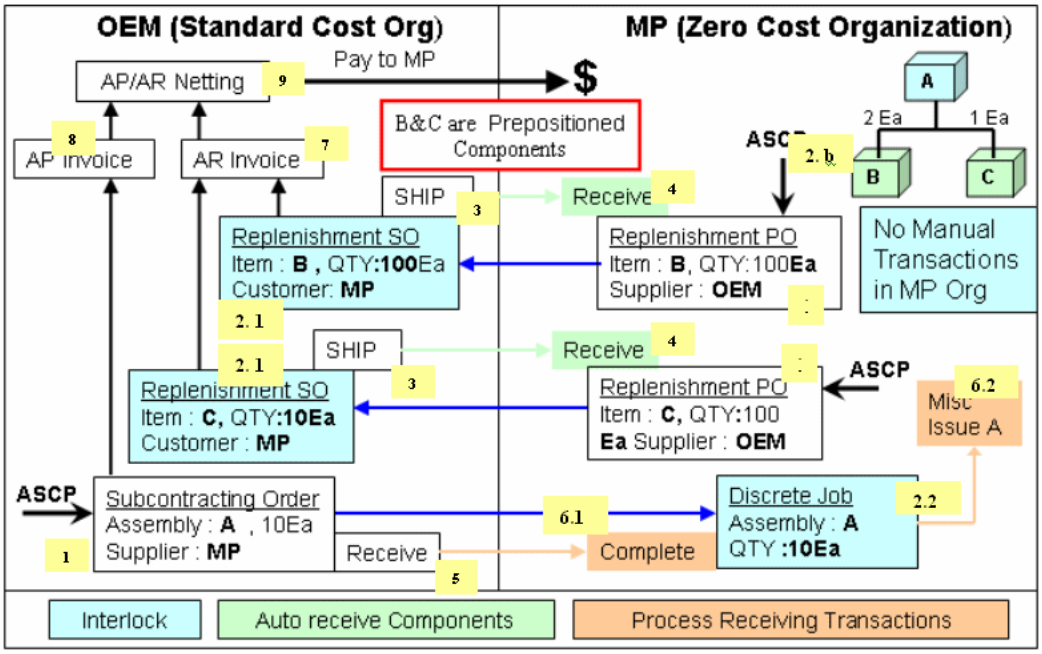
7. AR invoices are created for those components shipped to the MP.

8. AP invoices are created for subcontracting orders received from the MP.

9. In Payables, based on the Netting agreement, AP and AR invoices are netted and payment is made to the MP.

Outsourced Assembly with Pre-Positioned Components

In this scenario, execution starts with subcontracting orders of the outsourced assembly and replenishment purchase orders of the pre-positioned components transferred from ASCP. You can also create subcontracting orders for outsourced assemblies and replenishment purchase orders for the pre-positioned components manually.



1. The Execution Process begins with the subcontracting order of the Assembly A and replenishment purchase orders of the pre-positioned components. Subcontracting orders are the standard purchase orders and blanket releases, and if the shipments for the outsourced assembly is set to Yes, this indicates that the purchase order is created for the outsourced assembly. Replenishment purchase orders are the standard purchase orders or blanket releases created to simulate MP procuring components from the OEM.

2. Interlock Manager concurrent request selects:

    - 2.1. Replenishment purchase orders of the components in the MP, and creates corresponding replenishment sales orders in the OEM for shipment of components to the MP. Replenishment sales orders that are created in the OEM always reference their associated purchase orders in the MP organization. The order type is retrieved from the shipping network's (From Org: OEM and To Org: MP) chargeable subcontracting default order type, and the components price is pulled from the price lists associated with the customer site in the sales order. Sales orders are always created with booked status and are ready for shipment.

- 2.2. Interlock Manager then picks up the subcontracting orders which were not processed in the previous run of the subcontracting orders and creates a discrete job for the subcontracted order quantity for simulating the manufacturing in the MP organization. For manufacturing this assembly, components B and C are required in the MP organization, and the OEM must supply those materials to the MP. Since B and C are pre-positioned components, meaning that components would have been shipped ahead of requirements, interlock manager does not create replenishment purchase orders or sales orders for these components. Instead, it looks for previously created and unallocated sales orders, and then makes allocations to these requirements. If there are not enough unallocated replenishment sales orders available for the subcontracting order requirements, interlock manager only allocates to the available quantity, and leaves the remaining quantity unallocated (this situation ideally should not happen if there are enough replenishments available). Interlock Manager attempts to allocate them in subsequent interlock runs, if there are enough replenishments.

3. Replenishment sales orders created for the components are shipped like standard sales orders.

4. The Auto Receive Components concurrent request picks up these shipments in the OEM organization and creates receipts against the associated purchase orders in the MP organization. Sales orders with shipped date and in-transit lead time (defined in the shipping networks default shipping method) that is less than or equal to the current date will be automatically received to simulate the receipts in the MP organization.

5. The MP manufactures components and ships the manufactured assemblies to the OEM, and the OEM receives these receipts like other purchase order receipts.

6. The Receiving Transactions concurrent request picks up these receipts in the OEM organization and performs the following:

   - 6.1. Completes the WIP job for the assembly. When the WIP job is completed , components are backflushed from the MP, and the inventory is reduced in the MP organization. However, the completed assembly in the MP still remains in inventory.

   - 6.2. The subcontracting order for the assembly can be received in the OEM only after the MP manufactures the assembly and sends it to the OEM. It is assumed that WIP is already completed in the MP, and the assembly has been shipped to the OEM. However, this increases the assembly on-hand in the MP organization. The completed inventory of the assembly in the MP organization is reduced by a miscellaneous issue, making inventory figures in the MP organization accurate. The Offset account defined in shipping networks is used to create miscellaneous issues.

7. Account Receivables invoices are created for the components shipped to the MP.

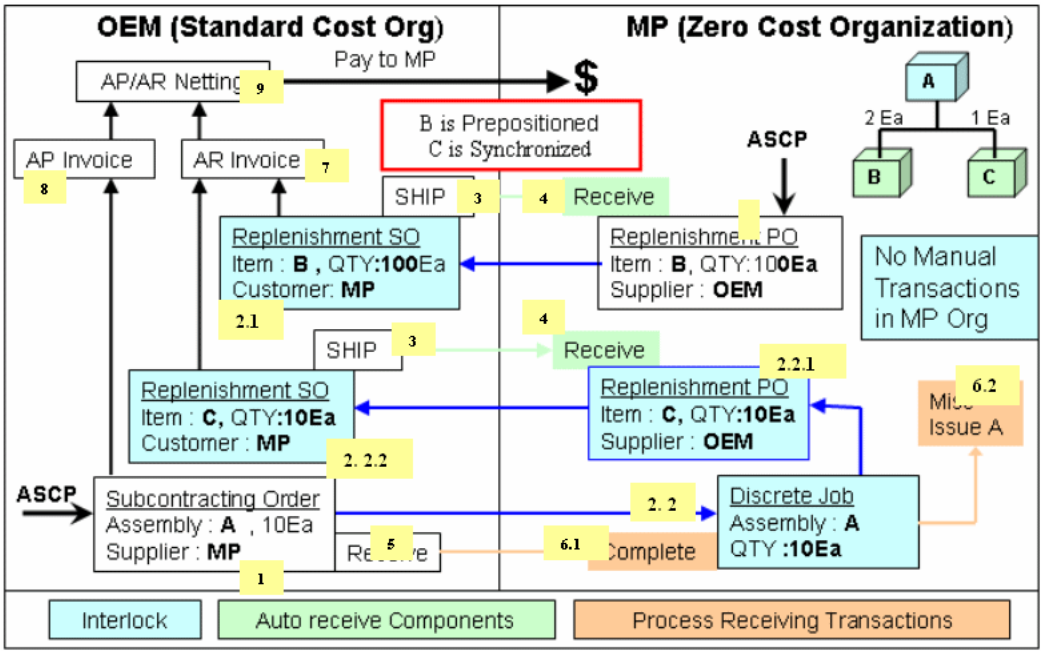
8. Accounts Payables invoices are created for the subcontracting orders received from the MP.

9. Invoices for Accounts Payable and Accounts Receivable are netted and payment is made to the MP.

> **Note:** In Accounts Payables, netting is based on the netting agreement.

Outsourced Assembly with Pre-Positioned and Synchronized Components

In this scenario, execution begins with the subcontracting orders of the outsourced assembly and replenishment purchase orders of the pre-positioned components being transferred from ASCP. You can also manually create subcontracting orders for the outsourced assembly and replenishment purchase orders for the pre-positioned components.



1. The execution process begins with the subcontracting order for assembly A and the replenishment purchase order for the pre-positioned component B.

2. The Interlock Manager concurrent request performs the following:

   - 2.1. Picks up the replenishment purchase for component B in MP and creates associated replenishment sales orders in OEM for shipment to MP.

- 2.2. Interlock Manager then picks up the subcontracting orders that were not processed in the previous run, and creates a discrete job for the subcontracting order quantity. To manufacture this assembly, components B and C are needed in MP, and OEM must supply those materials MP.

  Because Component B is a pre-positioned component, Interlock manager looks for available replenishment sales orders and attempts to allocate them to satisfy the subcontracting order requirement.

- 2.3. Because component C is a synchronized component, Interlock Manager creates replenishment purchase order for this component because it is a synchronized component.

- 2.4. Interlock Manager creates a replenishment sales order for component C with its associated replenishment purchase order in MP, and then allocates the sales order to the subcontracting order requirements.

  Note: Replenishment sales orders created for the components are shipped like other sales orders.

3. The Auto Receive Components concurrent request picks up these shipments in OEM and creates receipts in MP using the associated purchase order. Sales orders whose shipped date and In transit Lead time (defined in the shipping networks default shipping method) are less than or equal to the current date will be automatically received to simulate the receipts in MP organization.

4. MP manufactures the components and ships the manufactured assembly to OEM. OEM receives these receipts like other purchase order receipts.

5. The Process Receiving Transactions concurrent request picks up these receipts in OEM and performs the following:

   - 6.1. Completes the WIP job for the assembly. When the WIP job is completed, components are backflushed from MP and the inventory is reduced in MP organization. However, the completed assembly in MP remains in inventory.

   - 6.2. Sends the subcontracted order for the assembly to OEM because the assembly can only be received in OEM. It is assumed that the WIP has been completed in MP and the assembly has been shipped to OEM. This transaction increases the assembly on hand in MP.

     The completed inventory of the assembly in MP is reduced by miscellaneous issues which causes the inventory figures in the MP organization to be accurate. The Offset account defined in shipping networks is used to create miscellaneous issues.

6. Accounts Receivables invoices are created for components shipped to MP.

7. Accounts Payables invoices are created for subcontracting orders received from MP.

8. Invoices for Accounts Receivables and Accounts Payables are netted and payment is made to the MP organization.

   Note: In Accounts Payables, netting is based on the netting agreement.

Chargeable Subcontracting Concurrent Programs

The following sections describe the Chargeable Subcontracting concurrent programs:

- Interlock Manager
- Reconciliation Manager
- Auto Receive Components
- Process Receiving Transactions

Interlock Manager

Interlock Manager is a concurrent request that should be run immediately after running the ASCP plan and transferring the planned orders for outsourced assemblies and subcontracting components to Purchasing. Interlock Manager picks up the subcontracting orders and replenishment purchase orders and performs the following:

- Creates discrete jobs for assemblies and replenishment purchase orders for synchronized components in the MP organization.
- Creates replenishment sales orders for pre-positioned and synchronized components in the OEM organization.
- Allocates the replenishment sales orders to satisfy subcontracting order requirements.

Attributes of Interlock Manager

Selection of Subcontracting Orders for Processing

Interlock Manager processes the subcontracting orders only if the following conditions are satisfied:

- The MP organization cannot be WMS, Process, or EAM enabled.

- Outsourced assemblies or components cannot be lot and serial controlled in the MP organization.
- Inventory periods are not open in MP organization.
- WIP parameters are not defined in the MP organization.
- **Allocations**

  Allocations are components that have been designated to be shipped to the MP for the manufacture of outsourced assembles. These allocations are required for the proper planning, execution, and simulation of the manufacturing process at an MP site. In the Chargeable Subcontracting process, although the components are shipped, the OEM retains ownership. When the OEM receives assemblies from MP, the components that are brought back from MP are consumed when manufacturing the assemblies. To support this, the purchase price of the assembly includes the sales process of the component. This is necessary in order to track the component consumption at the MP by sales price of the components.

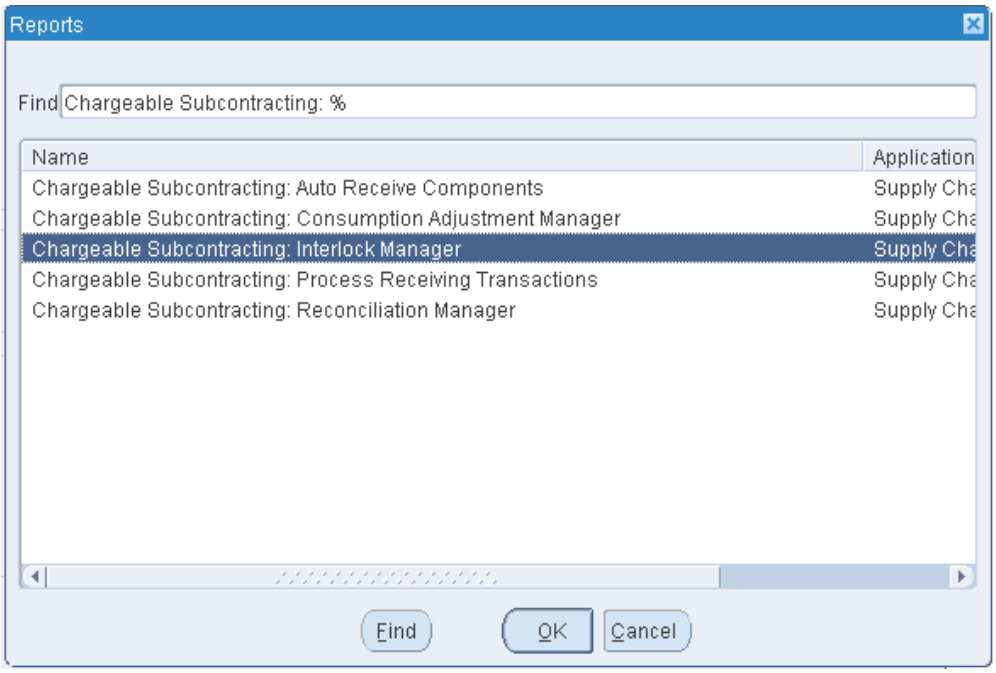
When Interlock Manager makes allocations, it validates based on two conditions:

- Shipped components are available in the MP when the assembly is ready to be manufactured (replenishment sales order shipment date and the in transit lead time from the OEM to the MP is less than the discrete job start date).
- Sales price of the components shipped or to be shipped is the same as the current list price.

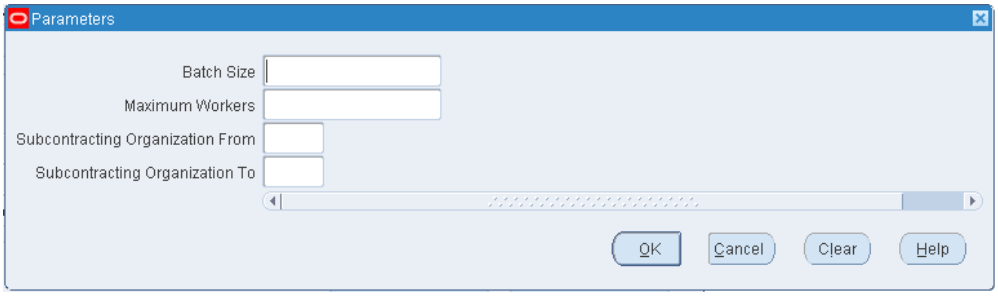
When the above conditions are satisfied, Interlock Manager allocates the replenishment order to the subcontracting order. For synchronized components, replenishment sales orders are created and automatically allocated at the same time. For pre-positioned components, components are shipped in advance of requirements to ensure that the sales price of the components shipped are allocated at the correct price for proper accounting.

To run Chargeable Subcontracting: Interlock Manager

1. From the Chargeable Subcontracting responsibility, navigate to the Requests window.
2. In the Name field, select Chargeable Subcontracting: Interlock Manager.
3. Click OK. The Parameters window appears.

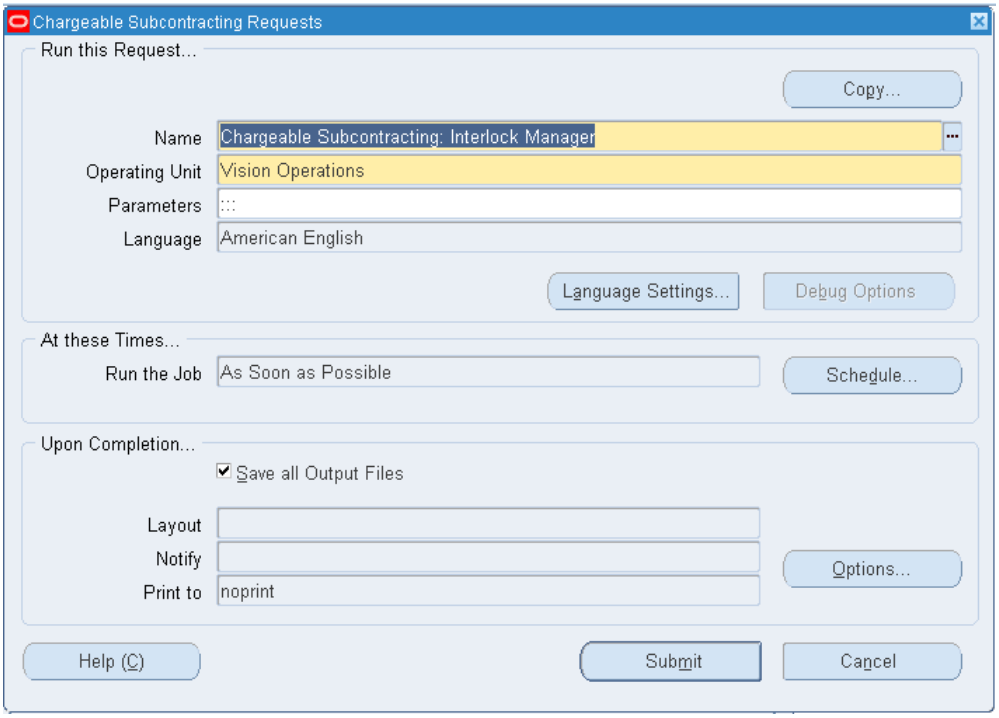


4. Enter the following optional parameters:
   - Batch Size
   - Maximum Workers
   - Subcontracting Organization From
   - Subcontracting Organization To



5. Click OK.

6. Click Submit in the Chargeable Subcontracting Requests window to run Interlock Manager.



Reconciliation Manager

The Reconciliation Manager concurrent request processes the change management of subcontracting orders. It identifies the changes to the subcontracting orders and updates the discrete jobs, replenishment purchase orders, and replenishment sales orders.

The following changes made to the subcontracting orders are considered for reconciliation:

- Change in the subcontracting order quantity
- Changes to the promise or need-by dates
- Simultaneous changes to both quantity and dates
- Changes to the replenishment sales orders
- Cancellation of subcontracting order

Change in the Subcontracting Order Quantity

Reconciliation Manager considers the change in the subcontracting order quantity and any increase or decrease in the quantity of the discrete job associated with subcontracting order in MP organization.

- If the subcontracting order is increased:
    - For synchronized components, new replenishment purchase orders and sales orders are created for any additional quantity for shipment of additional material from OEM to MP, and are then allocated to the subcontracting order.
    - For pre-positioned components, if sufficient unallocated replenishment quantity currently exists, then additional allocations will be made for the increased (additional) subcontracting order requirements. If the unallocated replenishment quantity is not sufficient, then no new replenishments will be created because by definition, these components are stored in advance and shortages do not occur, so reconciliation does not take any action.
- If the subcontracting order quantity is decreased:
    - For synchronized components, allocations will be decreased leaving some unallocated replenishments. These replenishments will be allocated to other requirements. Interlock Manager or Reconciliation Manager considers such unallocated replenishments of synchronized components (similar to pre-positioned components), and then creates new replenishments.
    - For pre-positioned components, allocations are decreased.

Changes to the Promise or Need-by Dates

Reconciliation Manager considers the following changes to the promise or the need-by dates:

- If the date is moved forward:
    - Then the discrete job associated with the subcontracting order is moved forward.
    - Then the subcontracting orders (replenishment purchase orders and replenishment sales orders for the components) and allocations are not changed.
- If the date is moved backwards:
    - Then the discrete job associated with the subcontracting order is moved backwards. If the new date is less than or equal to current date, then current date is set as the new date.
    - For synchronized components, associated replenishment purchase orders and replenishment sales orders are moved backwards. If the new date is less than current date, then the date is moved back to current date. The synchronized components are allocated to the subcontracting orders. Allocations are not changed.

- For pre-positioned components, allocations are removed and then new allocations are made based on the new due date.

Simultaneous Changes to Quantity and Dates

Reconciliation Manager performs the following:

1. Reconciles date changes.
2. Makes changes to the order quantity.

Changes in the Replenishment Sales Orders

Reconciliation Manager considers the following changes made to the replenishment sales orders:

- Short shipments of the replenishment sales orders
- Replenishment sales order returns
- Over shipments
- Backorder sales orders
- Cancellation of replenishment sales orders

In addition, Interlock Manager considers changes to replenishment sales order quantities and dates and:

- Changes the allocations so that new shipment quantity reflect the subcontracting order requirements.
- Creates new replenishment sales orders, when applicable.

Auto Receive Components

The Chargeable Subcontracting: Auto Receive Components concurrent request performs the following:

- Automatically receives subcontracting components into supplier organizations after the predefined in-transit lead time.
- Selects the shipped replenishment sales orders in the OEM organization based on the MP organization specified in the concurrent request parameters window.
- Creates component receipts for the corresponding purchase orders in the MP organization.
- Selects shipped sales orders that are expected to be received in the MP organization

after considering the in-transit lead time defined in the shipping networks.

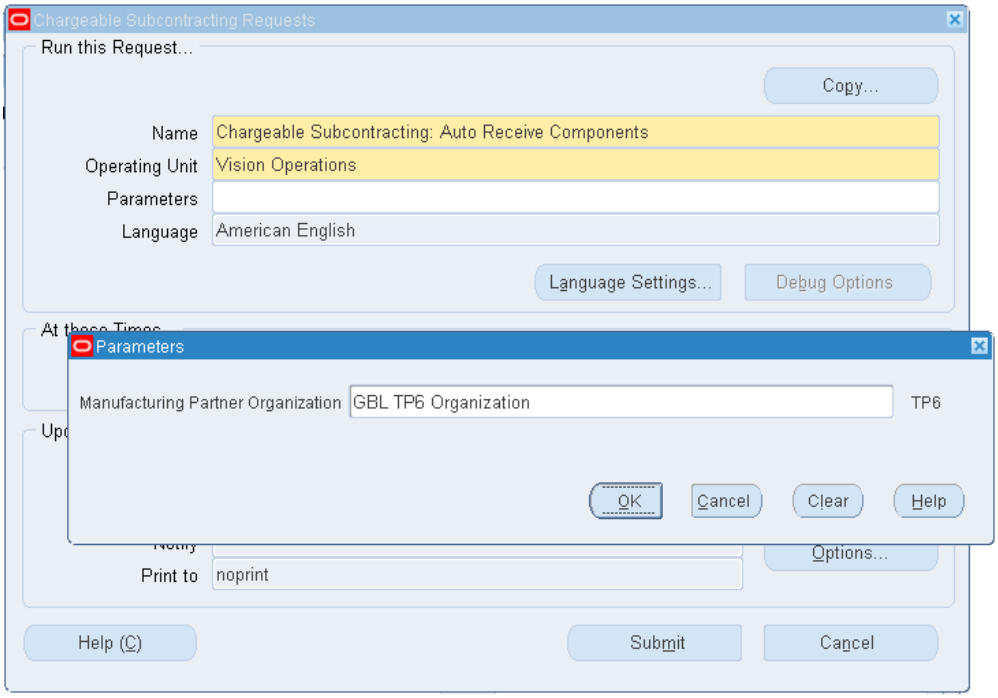
- Selects shipping transactions against chargeable subcontracting replenishment sales orders in the OEM organization after considering in-transit lead time defined in the shipping networks.
- Creates receipts against corresponding replenishment purchase orders in the supplier organizations.

You can run this request daily, weekly, or periodically to create receipts of subcontracting components in the supplier organizations.

> **Note:** You can track the status using the Chargeable Subcontracting Workbench.

To run the Auto Receive Components concurrent request:

1. From the Chargeable Subcontracting responsibility, navigate to the Chargeable Subcontracting Requests window.
2. Select Chargeable Subcontracting: Auto Receive Components in the Name field.
3. Click OK. The Parameters window appears.



4. Enter the Manufacturing Partner Organization and click OK.

5. Click Submit to run the request.

Process Receiving Transactions

The Chargeable Subcontracting: Process Receiving Transactions concurrent request performs the following:

- Selects assembly receipts in the OEM organization and initiates WIP job completions and miscellaneous issues to adjust inventory in the MP organization.

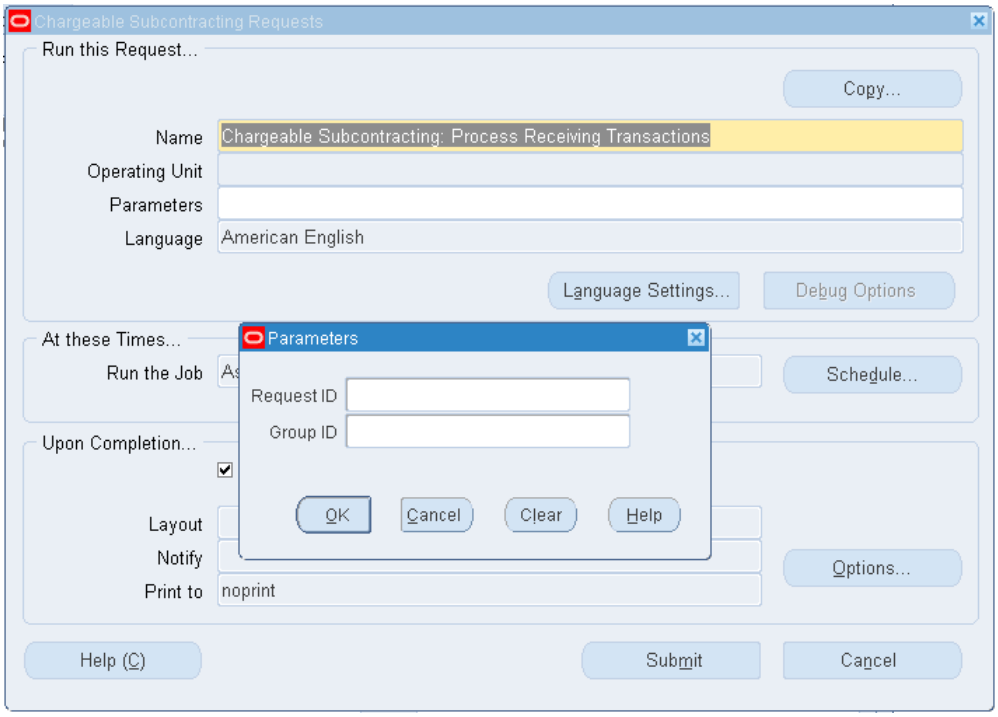
- Processes assembly returns, receipts, return corrections of assemblies, and RMA receipts for components in the OEM organization.

To run the Chargeable Subcontracting: Process Receiving Transactions concurrent request

1. From the Chargeable Subcontracting responsibility, navigate to the Chargeable Subcontracting Requests window.

2. Select Chargeable Subcontracting: Process Receiving Transactions in the Name field.

3. Click OK. The Parameters window appears.



4. Enter an optional Request ID. Valid characters are numerical 0-9.

5. Enter an optional Group ID. Valid characters are numerical 0-9.

6. Click OK.

7. Click Submit to run the request.

Processing Logic

The Process Receiving Transactions manager picks up the subcontracting order receipts and RMA receipts of replenishment sales orders in the OEM and creates corresponding transactions in the MP organization.

Subcontracting Order Receipts

Receipts are processed only if the following conditions are satisfied:

- Subcontracting order is fully allocated
- Subcontracting is not over-received

> **Tip:** The subcontracting order receipt tolerance should be zero so that it will never be over-received.

Once the above conditions are satisfied, Interlock Manager performs the following:

- Completes the WIP job of the associated subcontracting order in the MP organization and:
  - Backflushes the components and reduces the component inventory in the MP organization.
  - Moves the completed assemblies to inventory.
- Reduces the completed WIP job quantity in the previous step by miscellaneous issue for the assembly in the MP organization. The offset account defined in the chargeable subcontracting options in the shipping network is used for this miscellaneous issues.

Subcontracting Order Returns (RTV)

The Pickup RTV program processes the subcontracting order transactions in the OEM organization and creates the following transactions in the MP organization:

- Increases the inventory of outsourced assembly in the MP organization using miscellaneous receipts, which represent the return of assemblies from the OEM.
- Creates assembly returns (WIP returns) in the MP organization for the associated discrete jobs which has the following effect.
  - Reduces the assembly inventory in the MP organization for returns to the shop floor.
  - Reverses backflushed components.

Subcontracting Order Receipt and RTV Corrections

The Process Receiving Transactions concurrent request handles receipt and return corrections for subcontracting orders in the OEM, and processes them as WIP completions or WIP returns in the MP organization

Replenishment Sales Order Returns (RMA Returns)

The Process Receiving Transactions concurrent request executes the following for RMA returns associated with replenishment sales orders:

- Creates RMA's with references to the original replenishment sales order shipped to the MP organization, otherwise the RMA's will not be considered for processing.
- Selects the RMA's linked to the replenishment sales orders and then creates RTV transactions for the corresponding replenishment purchase order in the MP organization

These steps are performed for accurate simulation and inventory at the MP site.

4

Chargeable Subcontracting Workbench

This chapter covers the following topics:

- Overview
- Workbench Subcontracting Orders
- Workbench Replenishment Orders
- Consumption Adjustments
- Processing Consumption Adjustments

Overview

The Chargeable Subcontracting Workbench User Interface (UI) enables you to view subcontracting orders and replenishment orders, and helps in taking appropriate action for better control of the subcontracting process. Capabilities provided through the workbench include:

- Viewing subcontracting orders
- Viewing replenishment information for components
- Capability to perform manual shipment allocations
- Adjustment of subcontracting component consumptions

Workbench Subcontracting Orders

On the Components page of the Workbench, you can search and view Subcontracting Orders by manufacturing partner, or by an assembly. If you are using Project Manufacturing, then you can also search and view the subcontracting orders by project.

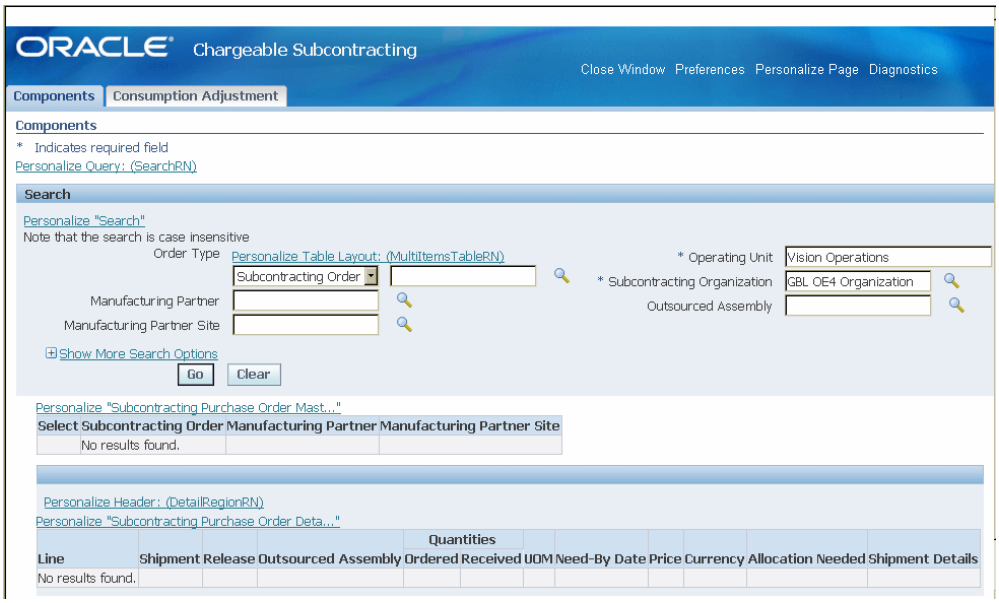
These subcontracting orders are regular purchase order shipments and releases created for outsourced assemblies. You can view header details in the Workbench UI.

Subcontracting order lines contain details of the outsourced assembly ordered through the MP. Discrete jobs created in the MP organization are associated with subcontracting order line shipment.

Details of the components required for manufacturing the discrete jobs can be viewed on the shipment details page.

To view subcontracting orders:

1. Navigate to the Chargeable Subcontracting Workbench User Interface.



2. Select the Components tab.

3. Select the Subcontracting Order type from the list of values.

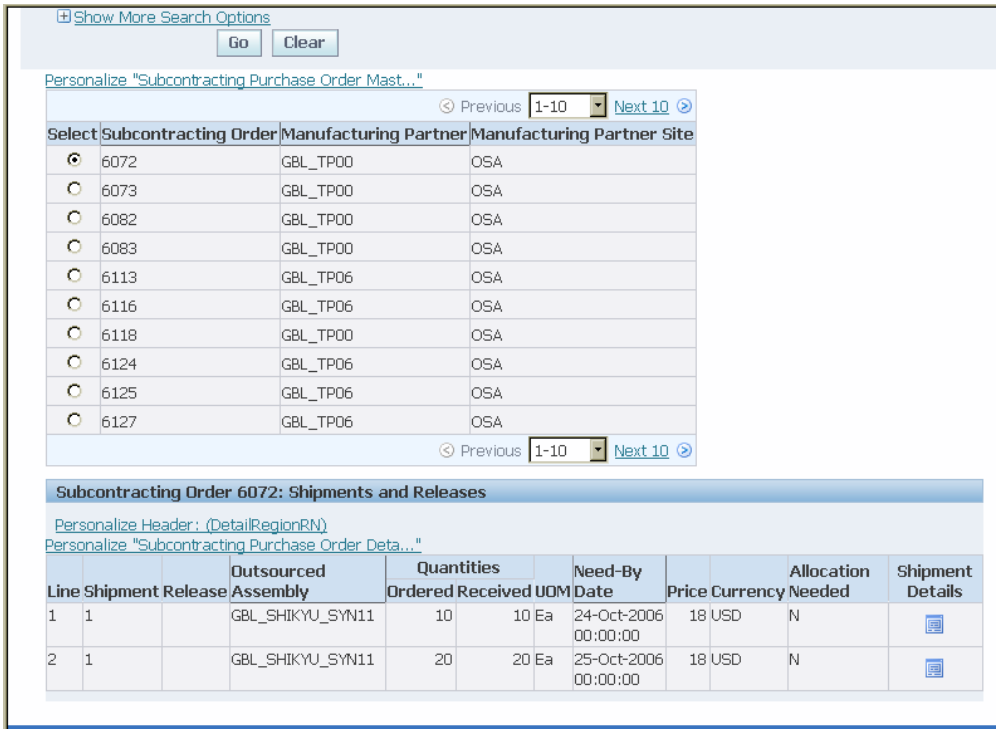
4. Enter an Operating Unit and Subcontracting Organization (required).

5. Enter additional search options as desired, and click Go.

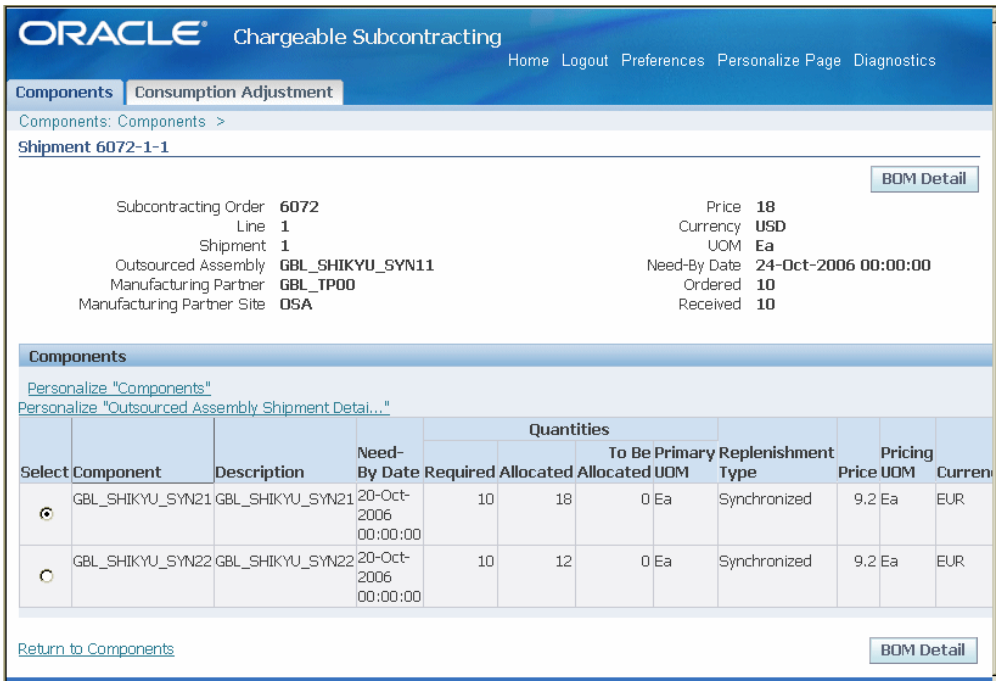
   Search parameters include:

   - Subcontracting Order and Order number, or Replenishment Order and Order number
   - Operating Unit
   - Subcontracting Organization
   - Outsourced Assembly

- Subcontracting Order Date From and To
- Manufacturing Partner
- Manufacturing Partner Site
- Purchase Order Status
- Allocation Needed



6. Click the Shipment Details icon to navigate to the shipment details page. The Shipment Details page displays the components to be shipped by the OEM to the MP for manufacturing the assembly.



This page shows the details of component requirements and allocations for manufacturing the assembly and list price (sales price) of the components at the time of creating the subcontracting order.

7. Click BOM Detail to view the current BOM details of the outsourced assembly. The Bills Of Material window appears and displays component details. This is useful for comparing the components with the current BOM components in case the components are different from the BOM due to revision change introduced after creating the subcontracting order. You must cancel the subcontracting order and then recreate a new subcontracting order and run the Reconciliation Manager and Interlock Manager. The new subcontracting order and components are created with the new BOM.

Workbench Replenishment Orders

On the Components page of the Workbench, you can search and view replenishment orders created in the OEM organization for shipping components to the MP. You can search for replenishment orders by MP, by component, and by project. On the Components page:

- Search results display as replenishment order headers
- When selecting a specific order, you can view the replenishment sales order lines for shipping the components. For synchronized components, the replenishment order is allocated to one discrete job. For pre-positioned components, the

replenishment order is allocated to multiple discrete jobs.

- Click Allocate Components to view and create allocations

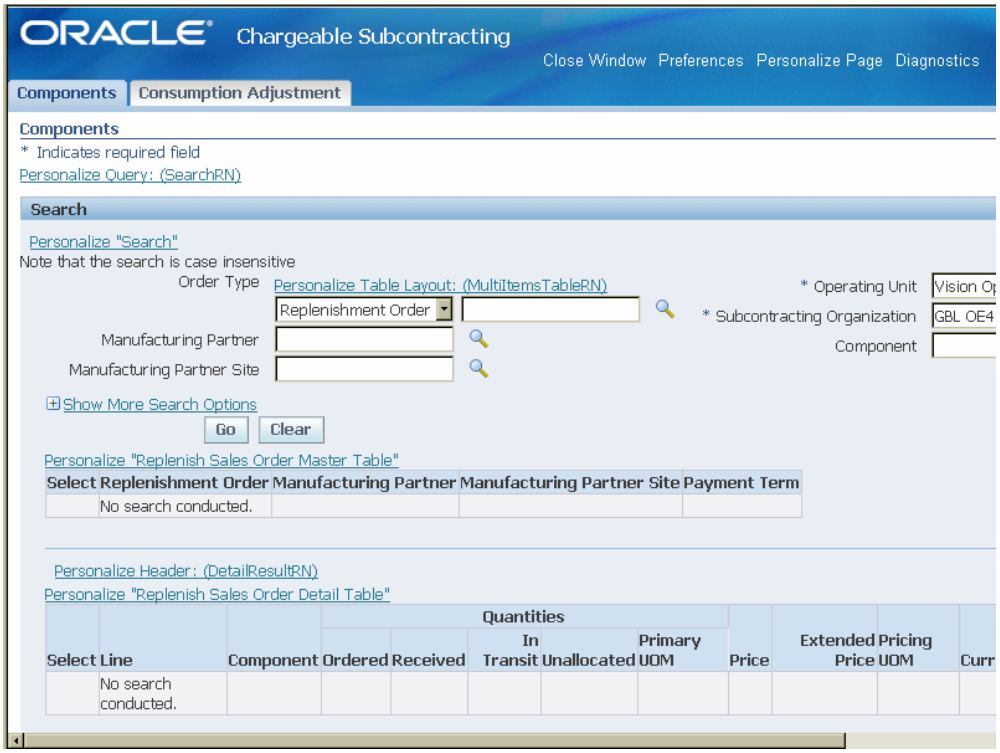
The Chargeable Subcontracting workbench lets you manually allocate shipments if necessary. The Interlock Manager concurrent request automatically allocates shipments. A replenishment sales order can be allocated to a subcontracting component when the recorded chargeable subcontracting price in the subcontracting component record matches the sales price of the replenishment sales order, and the shipment date plus in-transit lead time is less than the subcontracting component need-by date.

To view replenishment orders:

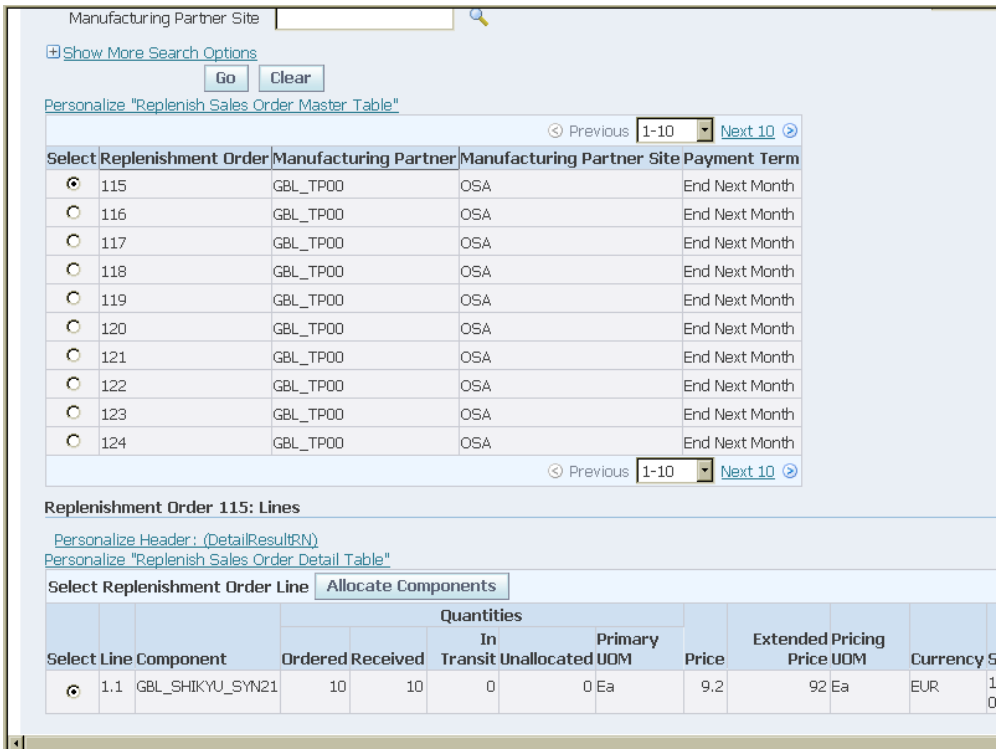
1. Navigate to the Chargeable Subcontracting Workbench User Interface.

2. Select the Replenishment Order type from the list of values.

3. Enter an Operating Unit and Subcontracting Organization (required).



4. Enter additional search options as desired, and click Go. The Components page appears and displays a list of Replenishment Orders. The page also displays order lines for selected orders.

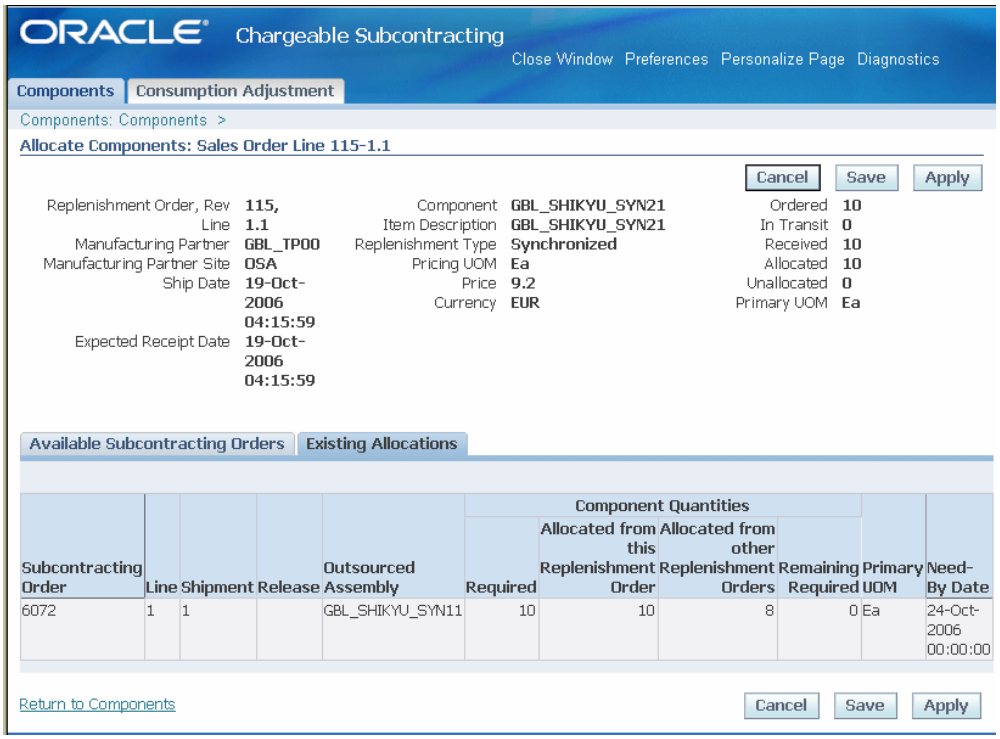


To view and create allocations:

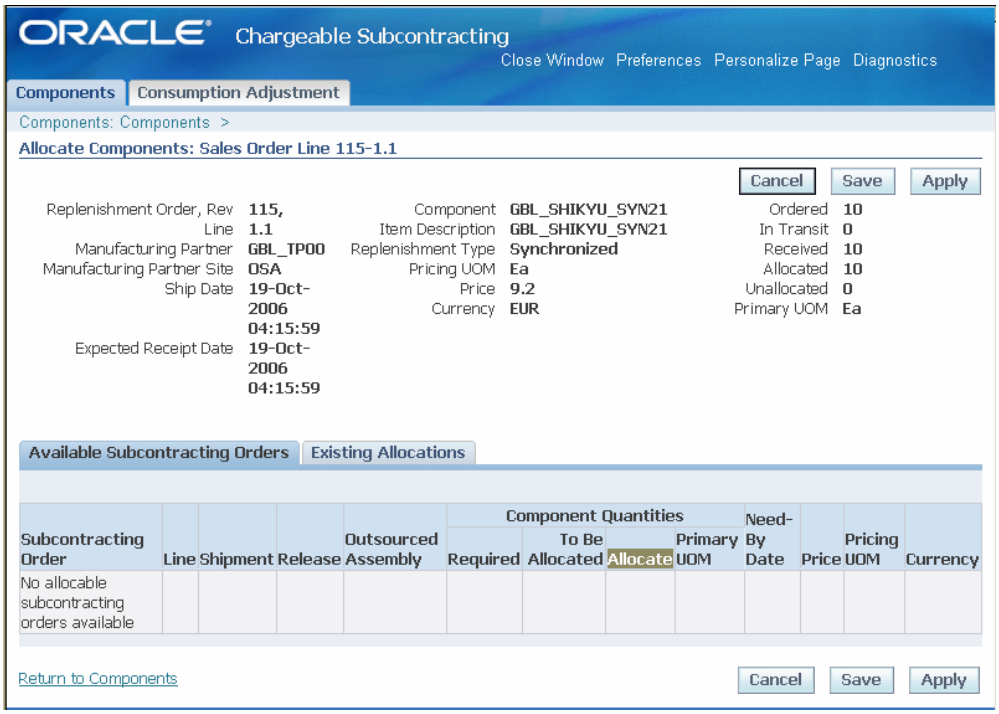
On the allocations page, you can view existing allocations that were created by Interlock Manager, and create allocations manually if required. For synchronized components, replenishment orders are always created for the required quantity of the discrete job associated to a subcontracting order. These replenishment orders are always fully allocated. For pre-positioned components, replenishment orders are created well ahead of requirements, and are allocated periodically. As a result, these orders can have unallocated quantity.

1. From the Components page, click Allocate Components. The Allocations page appears and displays allocation details for the selected order.

2. Select the Existing Allocations tab to view details of the subcontracting orders allocated to the current replenishment order.



3. Select the Available Subcontracting Orders tab to display a list of subcontracting orders that require component allocations. For replenishment sales orders of pre-positioned components, there may be unallocated quantity. If pre-positioned components of the discrete job associated with the subcontracting order are not fully allocated, then you can manually allocated them in this page.



4. Enter the quantity to allocate in the Allocate column and click Apply.

Consumption Adjustments

Subcontracting orders are executed based on the planned component requirement of BOM. It is assumed that the MP consumes the components based on the planned BOM component quantity and Yield, and the simulated inventory records of the MP organizations are processed accordingly. However, the MP might consume more or less components for manufacturing the assembly due to process variations, and the OEM must adjust the simulated records of the MP organization for proper inventory and financial accounting.

The MP sends a report of actual material usage at the period end, and the OEM verifies and adjusts the simulated records.

Use the Consumption Adjustments page to enter adjustments for the chargeable subcontracting component based on reports sent by the MP. You can search subcontracting order components by OEM organization, subcontracting order number, or component. Enter the actual consumption of the subcontracting order component at the manufacturer partner's facility.

The Consumption Adjustment page runs the Chargeable Subcontracting Consumption Adjustment Manager concurrent request and adjusts subcontracting components on-hand quantity in supplier organizations, and adjusts allocations between subcontracting replenishment orders and chargeable subcontracting orders. Search

parameters include:

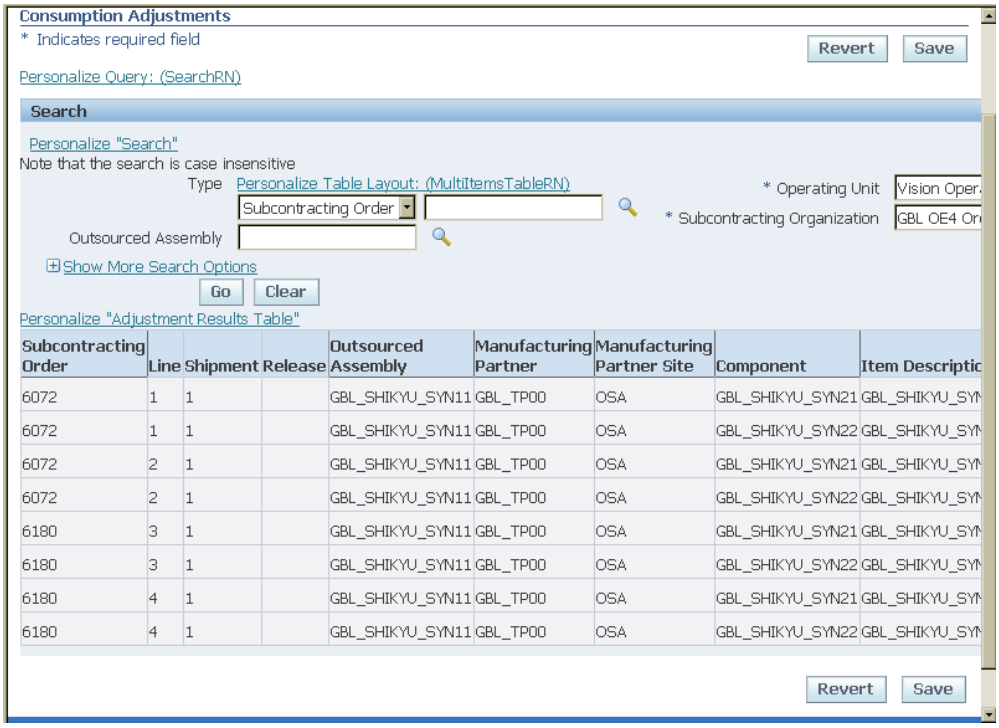
- Subcontracting Order and Order number, or Component and number
- Operating Unit
- Subcontracting Organization
- Outsourced Assembly
- Subcontracting Order Date From and To
- Manufacturing Partner
- Manufacturing Partner Site

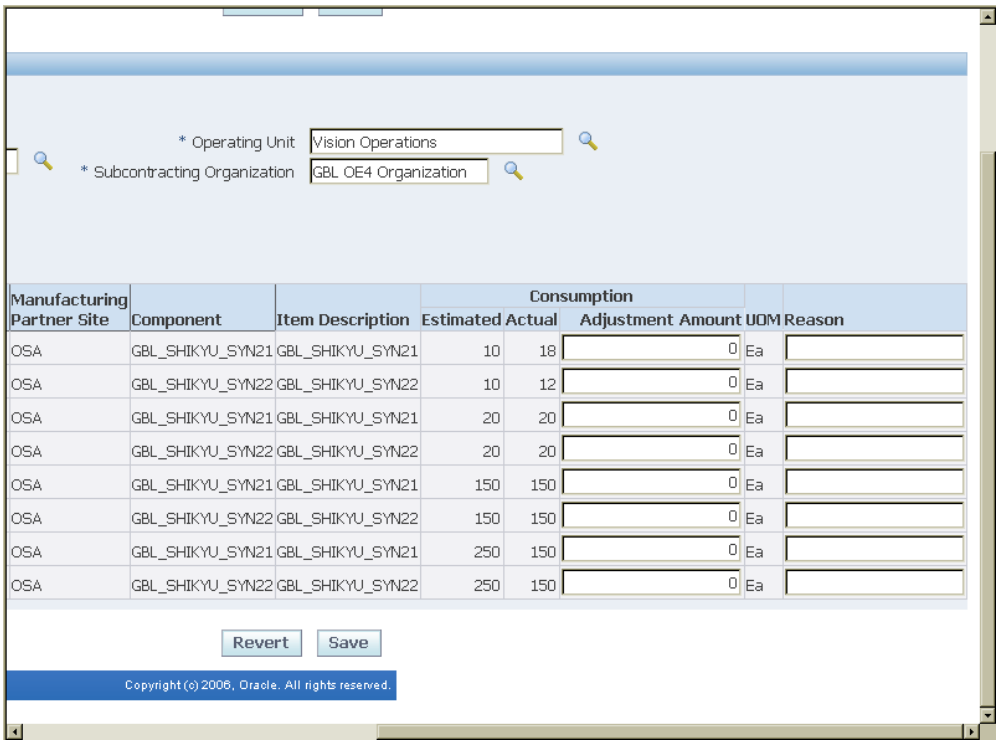
To process consumption adjustments:

1. Navigate to the Chargeable Subcontracting Workbench User Interface.
2. Select Consumption Adjustment.
3. Select Subcontracting Order or Component (required).

   Note: If the adjustment type is by Subcontracting Order, then input into the Purchase Order number is required. If adjustment type is by Component, then input into the Component is required.

4. Enter an Operating Unit and Subcontracting Organization (required).
5. Enter additional search options as desired, and click Go. The Consumption Adjustments page appears and displays subcontracting order line details.


Consumption Adjustments
* Indicates required field
Revert
Save
Personalize Query: (SearchRN)
Search
Personalize "Search"
Note that the search is case insensitive
Type
Personalize Table Layout: (MultiItemsTableRN)
Subcontracting Order
* Operating Unit
Vision Oper
* Subcontracting Organization
GBL OE4 Or
Outsourced Assembly
Show More Search Options
Go
Clear
Personalize "Adjustment Results Table"
Subcontracting Order
Line
Shipment
Release
Outsourced Assembly
Manufacturing Partner
Manufacturing Partner Site
Component
Item Descriptic
6072 1 1 GBL_SHIKYU_SYN11 GBL_TP00 OSA GBL_SHIKYU_SYN21 GBL_SHIKYU_SY
6072 1 1 GBL_SHIKYU_SYN11 GBL_TP00 OSA GBL_SHIKYU_SYN22 GBL_SHIKYU_SY
6072 2 1 GBL_SHIKYU_SYN11 GBL_TP00 OSA GBL_SHIKYU_SYN21 GBL_SHIKYU_SY
6072 2 1 GBL_SHIKYU_SYN11 GBL_TP00 OSA GBL_SHIKYU_SYN22 GBL_SHIKYU_SY
6180 3 1 GBL_SHIKYU_SYN11 GBL_TP00 OSA GBL_SHIKYU_SYN21 GBL_SHIKYU_SY
6180 3 1 GBL_SHIKYU_SYN11 GBL_TP00 OSA GBL_SHIKYU_SYN22 GBL_SHIKYU_SY
6180 4 1 GBL_SHIKYU_SYN11 GBL_TP00 OSA GBL_SHIKYU_SYN21 GBL_SHIKYU_SY
6180 4 1 GBL_SHIKYU_SYN11 GBL_TP00 OSA GBL_SHIKYU_SYN22 GBL_SHIKYU_SY
Revert
Save



6. Enter the Adjustment Amount and a Reason for the adjustment.

7. Click Save.

> **Note:** The application displays required quantity based on the BOM. Actual consumption will be the same as planned consumption. You must enter the variation in the consumption. If the consumption is more, then enter positive quantity in the adjustment amount indicating more consumption than planned quantity. If consumption is less, then enter quantity with a minus (-) sign, indicating that quantity consumed is less than the planned quantity.

Related Topics

Processing Consumption Adjustments, page 4-11

Processing Consumption Adjustments

Adjustments entered on the workbench are processed using the consumption adjustment processor. Allocations are readjusted, and WIP component issues or WIP component returns are made to adjust the actual consumption of the simulated discrete

job in the MP organization.

Processing Logic

This Program picks up the positive and negative adjustments of the components entered on the workbench and process.

For positive component consumption adjustments, the program:

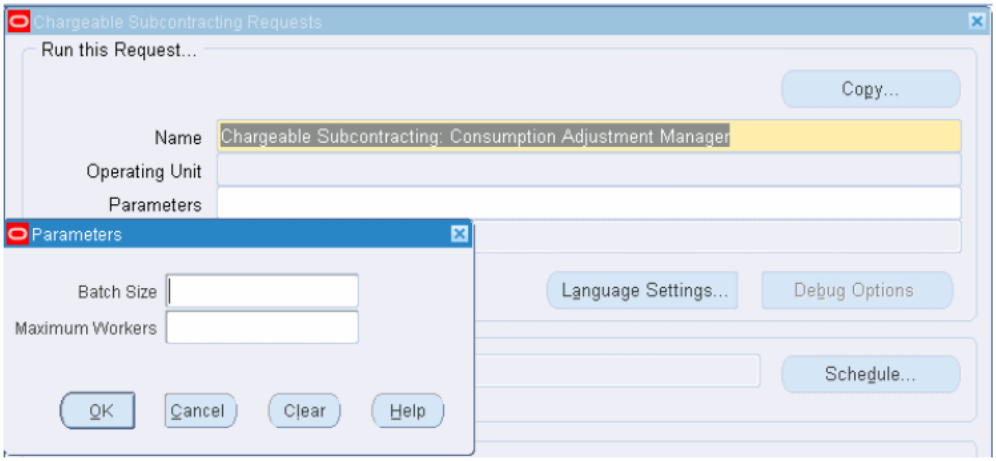
- Creates WIP issues for the discrete job associated with the subcontracting order in the MP organization
- Increases allocations for the subcontracting order
- If there is not enough replenishment available, then the program does not process those adjustments entered on the workbench. This scenario likely does not occur because adjustments are made at the end of the period. The OEM would have sent enough material to the MP for this additional requirement. This scenario could occur if you enter only positive adjustments first. Therefore, it is suggested not to process all the adjustments (positive and negative) at one time.

For negative component consumption adjustments, the program:

- Creates WIP returns for the discrete job associated with the subcontracting order in the MP organization
- Decreases allocations for the subcontracting order

To process consumption adjustments:

1. From the Chargeable Subcontracting responsibility, navigate to the Chargeable Subcontracting Requests window.
2. Select Chargeable Subcontracting: Process Receiving Transactions from the Reports window and click OK. The Parameters window appears.



3. Enter an optional Batch Size. Valid characters are numerical 0-9.

4. Enter an optional Maximum Workers. Valid characters are numerical 0-9.

5. Click OK.

6. Click Submit to run the request.

5

Chargeable Subcontracting Accounting Process

This chapter covers the following topics:

- Overview of the Chargeable Subcontracting Accounting Process
- Costs and Prices
- Replenishment Sales Orders – Accounting Transactions
- Subcontracting Orders – Accounting Transactions

Overview of the Chargeable Subcontracting Accounting Process

The Chargeable Subcontracting Accounting Process takes the following into consideration:

- OEM ships components to the MP to manufacture the outsourced assembly, but retains the ownership of the components.

  Therefore, the MP is not liable for the payment for the components received from the OEM.

- MP manufactures the assemblies (added value) from the OEM supplied components, and ships them to the OEM.

- OEM receives and consumes the assemblies and components, and pays only the added value amount to the MP organization.

  Note: The MP organization is a simulated organization and is used for inventory planning and tracking and has no impact on costing. For this purpose, all accounting transactions in the MP organization are not posted to the general ledger (The Transfer to GL is set to No for the MP organization.)

For more information, see Chargeable Subcontracting Setup.

Sales orders are used for shipping the components to the MP organization, and purchase orders are used to procure the assemblies from the MP. Invoices for Accounts Payables and Accounts Receivables are netted, and the OEM pays the MP organization the added value amount.

Some of the key accounting concepts are:

- OEM ships components and retains the ownership and its virtual sale.

  Accounting transactions associated with shipping subcontracting components should be tracked separately. These transactions are processed by posting to the Subcontracting COGS, Subcontracting Revenue, and Subcontracting Receivables accounts specifically defined for chargeable subcontracting, and are associated with the OM transaction type. This transaction type is defined in shipping networks and when the Interlock Manager creates replenishment sales orders for the components, they are created with the OM transaction type defined in the shipping networks. The respective accounts are posted during the execution of sales orders for subcontracting components.

  See the accounting setup for chargeable subcontracting.

- At period end, the OEM must account for the component inventory in its book of accounts. A report is provided to identify and calculate the component on-hand inventory and the value based on the simulated records.

  Important: You must make a manual entry of the appropriate book of accounts and reverse the same entry at the beginning of the next period.

- The purchase order is used to procure the assembly from the MP, and after receiving the assembly from MP, the OEM nets the Accounts Payables invoices with the Accounts Receivables invoices for the components shipped to manufacture the assembly. OEM makes the payment to the MP for the added value amount. The purchase price of the assembly is calculated based on the BOM requirement quantity and sales of the components.

  See the sales price and purchase price setup of the components and assembly in Chapter 2.

- The purchase price of the assembly is defined to include the sales price of the components and added value amounts to support the payment process. Therefore, any purchase price variances associated to assembly receipts in the OEM should be tracked using a Subcontracting Variance account defined for chargeable subcontracting purposes. This account is associated with shipping networks, and when purchase order receipts are made, the purchase price variance is posted to the Subcontracting Variance account.

- Since the entire process uses the fixed sales price of the components, the standard cost of components and assembly, and the purchase price of the assembly, any variations in the price and cost could affect the accounting process. A set of utilities (reports) are provided to identify such changes and impact.

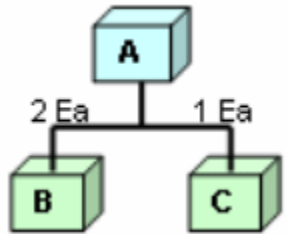
  Important: You must make manual adjustments to the accounting records for consistency.

Costs and Prices

For chargeable subcontracting accounting, the costs and prices of the components and assemblies should be defined so that the net gain arising out the virtual sales transactions will be offset by the virtual gain associated with the purchasing of the assembly.

For details on setting up costs and prices, see Setting Up Chargeable Subcontracting.

The following figure explains the method for setting costs and prices.



Item	Material Cost	OSP (Added Value by MP)	Unit Cost
B	$2	-	$2
C	$3	-	$3
A	$2*2 + $3*1 = $7	$5	$12

Item	Item Cost	Sales Price	Purchase Price	Gain/Loss per 1 Ea of Assembly A
B	$2	$4	N/A	2*($4 - $2) = $4
C	$3	$6	N/A	1*($6 - $3) = $3

Item	Item Cost	Sales Price	Purchase Price	Gain/Loss per 1 Ea of Assembly A
A	$12	N/A	$19	$19 - $12 = $7

Gain or loss by shipping Components B and C to the MP on a replenishment sales order for manufacturing 1 each of Assembly A = $4 + $3 = **$7**

Gain or loss offset by purchasing 1 each of Assembly A from the MP = **$7**

The OEM should set up item prices so that the gain or loss by shipping the components to the MP equals the gain or loss offset by purchasing the assembly from the MP:

- Define material costs for the components. Define material and OSP charges for assembly and update standard costs in the OEM organization. OSP charges are the added value amounts added by the MP organization. The costing in the MP organization is of no significance.

- Define the sales price of the components and purchase price of the assembly so that the gain or loss from the virtual sale of components to MP is offset by the purchase price of the assembly. Gain or loss is the difference between the components sales price and standard cost, and the offset is the difference between the purchase price of the assembly and its standard cost. In addition, the difference between the purchase price of assembly and the sales price of the component is the added value amount. After the OEM receives the assembly, it makes a payment to the MP organization for the added value amount.

- In the previous example, the standard cost of the components B and C is $2 and $3, and its sales price is $4 and $6 respectively. The sale of two units of B and one unit of C to the MP results in a virtual gain of $7, of which $4 is from B and $3 is from C.

  To offset the virtual gain, the purchase price of assembly is set at $19 and its standard cost is $12. The difference in the purchase price and standard cost is $17 which offsets the virtual gain due to the sale of components.

- When netted, the Accounts Receivables invoice is in the amount of $14, of which $8 is for 2 units of B and $6 for one unit of C. This amount is netted against an Accounts Payables invoice in the amount of $19, and the balance of $5, which represents the added value which is paid to the MP organization.

Replenishment Sales Orders – Accounting Transactions

Accounting transactions associated with the virtual sale of components are tracked in separate accounts. See details below.

At Ship Confirm Replenishment Sales Orders

Ship Confirm: Components B and C:

Account	Debit	Credit
For Component B (2 each)		
Deferred COGS (item cost $2)	$4	-
Inventory Valuation (item cost $2)	-	$4
For Component C (1 each)		
Deferred COGS (item cost $2)	$3	-
Inventory Valuation (item cost $2)	-	$3

These are the regular transactions. Although the inventory appears as a credit to the OEM book of accounts, the OEM organization still owns the inventory. At the period end, run a report and calculate the on-hand inventory and value at the MP site, and then adjust the OEM books for proper accounting.

Invoicing Replenishment Sales Orders

AR Invoice: Components B and C

Account	Debit	Credit
For Component B (2 each)		
COGS (deferred amount $4)	$4	-
Deferred COGS (deferred amount $4)	-	$4
Subcontracting AR (sales price $4)	$8	-
Subcontracting Revenue (sales price $4)	-	$8
For Component C (1 EA)		
COGS (deferred amount $3)	$3	-
Deferred COGS (deferred amount $3)	-	$3

Account	Debit	Credit
Subcontracting AR (sales price $6)	$6	-
Subcontracting Revenue (sales price $6)	-	$6

COGS, revenue and receivable transactions associated with invoicing replenishment sales orders for subcontracting components are posted to chargeable subcontracting accounts for tracking.

Subcontracting Orders – Accounting Transactions

Subcontracting orders are the standard purchase orders or releases created to procure the outsourced assemblies from the MP. Purchase orders include two events:

1. Receiving the assembly into the receiving location
2. Delivering the assembly to Inventory

Receiving: Assembly A

Account	Debit	Credit
For Assembly A (1 each)		
Inventory Receiving (PO Price $19)	$19	-
AP Accrual (PO Price $19)	-	$19

These entries are similar to standard items.

Delivery: Assembly A

Account	Debit	Credit
For Assembly A (1 each)		
Inventory Valuation (Item Cost $12)	$12	-
Subcontracting Variance (PO Price - Item Cost)	$7	-

Account	Debit	Credit
Inventory Receiving (PO Price $19)	-	$19

Inventory is debited at $12 dollars which includes the component costs and added value. The purchase price variance is posted to the Subcontracting Variance account for tracking.

AP Invoicing: Assembly A

Account	Debit	Credit
For Assembly A (1 each)		
AP Accrual	$19	-
Accounts Payable (Outsourced Assembly)	-	$19

Accounting entries after the Accounts Payable invoice is created.

Both Accounts Payables and Accounts Receivables invoices are ready to be processed. You must use the Accounts Payable and Accounts Receivables functionality available in Oracle Payables, and make payments to the MP for the added value.

Accounts Payables and Accounts Receivables Netting

Account	Debit	Credit
AP (Outsourced Assembly): $19, Subcontracting AR: $14		
AP (Outsourced Assembly)	$14	-
Subcontracting AR	-	$14

After netting Accounts Receivables, the amount of $14 is adjusted as a partial payment, and the balance of $5 can be paid to the MP.

For more details on AP and AR netting, see *Oracle Payables User's Guide*.

In chargeable subcontracting, accounts are posted correctly if all standard costs, sales price, and purchase price of the components and assemblies are unchanged. These costs and prices could undergo changes due to various business reasons such as an increase in the cost of raw material, changes to added value charges, and so on, that forces the OEM to make changes in the standard cost prices and also the sales and purchase

prices. These changes will result in an unrealized gain or loss and will influence accounting.

The following set of utilities and procedures are provided to help identify the impact of those changes in advance and assist you in managing them for proper accounting:

- Standard cost updates
- Sales price changes
- Consumption adjustments
- Component returns

Standard Cost Updates

You must run the Cost Update Analysis report to find the impact of proposed cost changes. This report gives the cumulative impact of all the components and assemblies by the MP for the proposed cost change. You must make manual adjustments to the general ledger accounts, and then update the standard costs of the components and assemblies as follows:

- Debit the Inventory Valuation account if the value is positive
- Credit the Inventory Valuation account if the value is negative

Sales Price Changes

The sales price of the components will generally be changed at the beginning of the period. Like standard costs, changes in sales price will also impact the gain or loss.

The OEM must follow the following procedure to nullify the impact:

1. Reconcile the inventory in the MP organization by using the confirmation report.
2. Make *logical* returns of the unallocated replenishment sales order quantity by creating sales order returns (RMA). (Logical returns mean that the returns are made in the OEM records, but the components are still physically located in the MP organization.)
3. Change the component sales prices in the price list to the new sales price.
4. Create new replenishment purchase orders for the returned quantity and run the Interlock Manager:
    - Interlock Manager creates replenishment sales orders with the new price.
    - Makes logical shipments; components are still with the MP but shipments are registered with the new price.

After this process, you can continue with the execution process.

Consumption Adjustments

Variances in the consumption of components over the planned consumption based on the BOM are registered and processed using the consumption adjustment processing at the MP organization. This process will adjust the on-hand inventory of simulated records in the MP organization for planning and execution. However, the impact of the variances in OEM organization on payments process must be handled manually.

In the case of over consumptions, the MP consumes more quantity than the planned quantity, and the sales price of this excess consumption is not part of the purchase price of the assembly. Consequently, the Accounts Receivables amount will be more than the Accounts Payables amount and netting will suggest payments to the MP organization. To overcome this situation, the OEM must create a credit note for the excess consumption and then make payments for the value addition.

In the case of less consumption, MP consumes less than the planned quantity, resulting in the Accounts Payable amount being more than the Accounts Receivable amount, and netting will suggest paying more than the value addition. This can be resolved by creating a debit note for the less consumption amount, and then paying only the value addition.

Both the scenarios can be handles by using Proper netting setup or manually outside netting.

See the Accounts Payables and Accounts Receivables feature in the *Oracle Payables User's Guide*

Component Returns

The MP returns components to the OEM for various business reasons such as:

- Defective components
- Excess components due to better yield
- Obsolete components
- Logical returns due to price change

Differences in the standard cost at the time of shipping the components and at the time RMA receipts are created impact the gain or loss.

Use the following procedure to nullify any gain or loss due to returns:

1. Run the Cost Update Analysis report with the Period End option to calculate the gain or loss.
2. Debit the Inventory Valuation account if the value is positive.
3. Credit the Inventory Valuation Account if the value is negative.

6

Reports

This chapter covers the following topics:

- Reports Overview
- Chargeable Subcontracting: Subcontracting Order Report
- Chargeable Subcontracting: Confirmation Report (External Mode)
- Chargeable Subcontracting: Confirmation Report (Internal Mode)
- Chargeable Subcontracting: Cost Update Analysis Report

Reports Overview

Oracle Chargeable Subcontracting provides reports for fiscal and internal control purposes. You can create your own layouts and publish many reports using Oracle XML Publisher.

XML Publisher is a template-based publishing tool that is delivered with the Oracle E-Business suite that enables you to develop and maintain custom report formats. You can design and control how the reports are presented by using report templates. When generating a report, XML Publisher merges report template files with report data to create documents that support numerous formatting options, including colors, images, font styles, and headers and footers.

Chargeable Subcontracting: Subcontracting Order Report

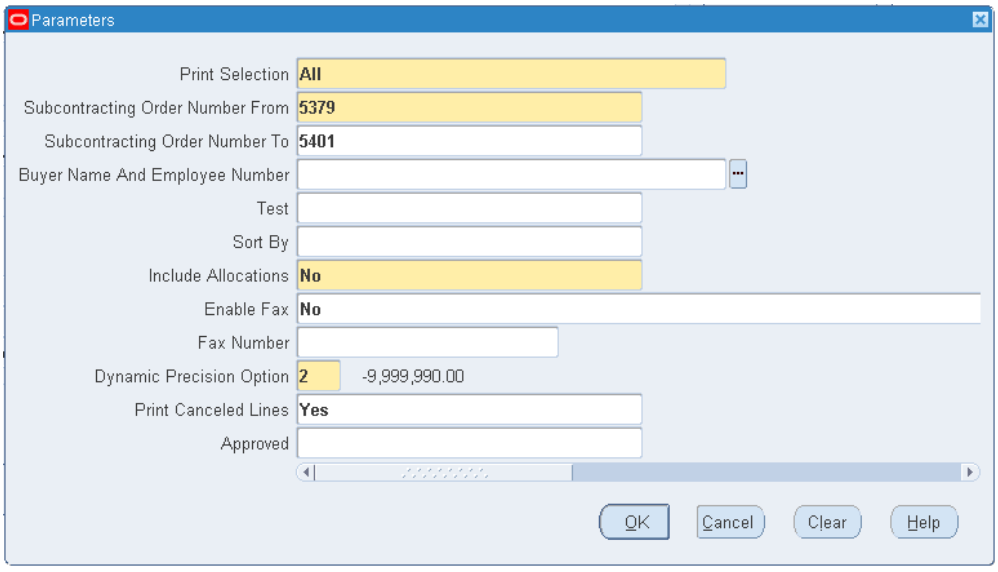
The Chargeable Subcontracting: Subcontracting Order Report prints purchase order information of outsourced assemblies. In addition to existing printed purchase order report information (standard and BPA release), the Subcontracting Order Report prints the information of components required for manufacturing the assembly at the MP site, and the replenishment sales orders created for shipping the components to the MP for manufacturing the assembly by a specific subcontracting order. This information is grouped by subcontracting orders, replenishments, allocations, etc. and are printed by subcontracting order.

Report Parameters

Parameter	Required	Default Value	List of Values
Operating Unit	Yes	Current OU	List of OU for which the user has access to
Print Selection	Yes	-	All, Changed, and New
Subcontracting Order Number From	Yes	-	PO Numbers
Subcontracting Order Number To	No	-	PO Numbers
Buyer Name and Employee Number	No	-	Buyer/Employee Name
Test	No	-	Yes/No
Sort By	No	-	Buyer/PO Number
Include Allocations	Yes	No	Yes/No
Enable Fax	No	-	Yes/No
Fax Number	No	-	-
Dynamic Precision Option	Yes	2	Precision
Print Canceled Lines	No	Yes	Yes/No
Approved	No	-	Yes/No

To run the Chargeable Subcontracting: Subcontracting Order Report

1. From the Chargeable Subcontracting responsibility, navigate to the Chargeable Subcontracting Reports window.
2. In the Name field, select Chargeable Subcontracting: Subcontracting Order Report.
3. Enter an Operating Unit (required). The Parameters window appears.



4. Enter report parameters and click OK. The Chargeable Contracting Reports window appears.

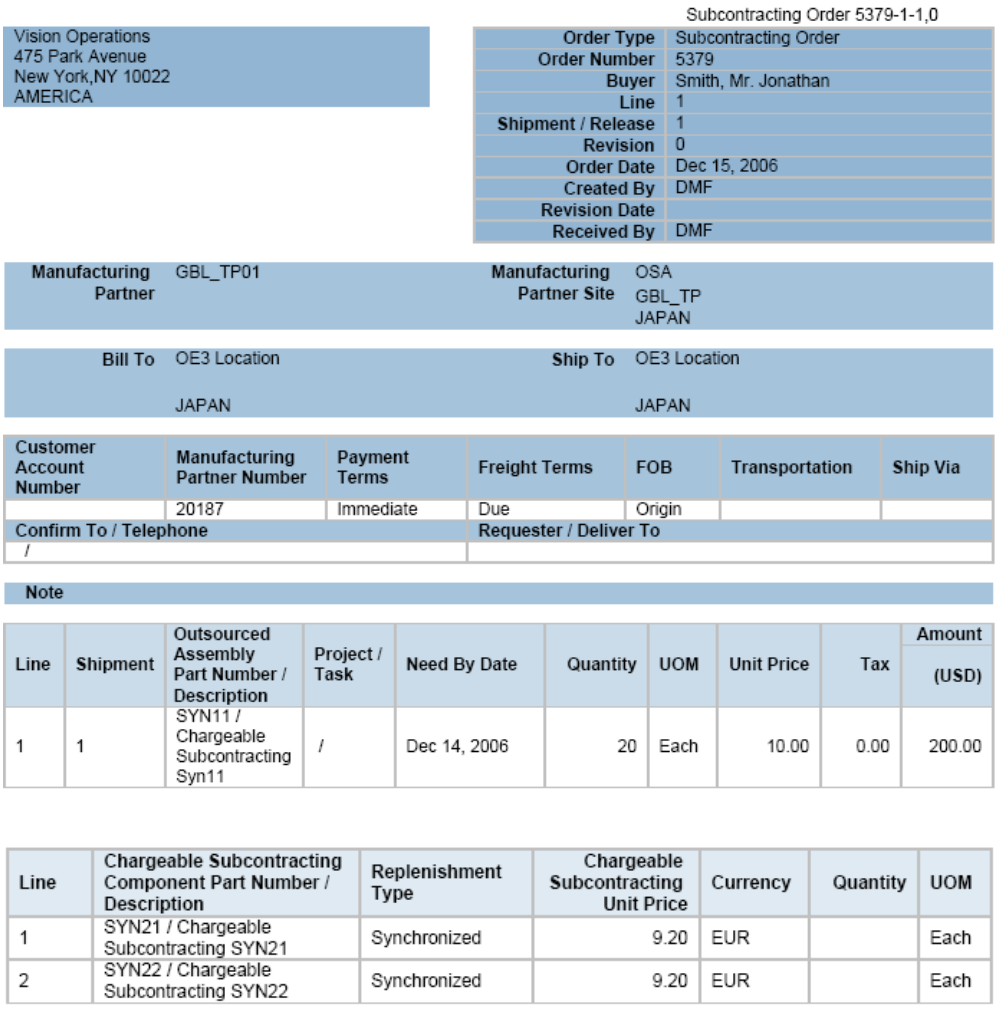
5. Enter report request parameters and choose Submit. You can view the report output after the concurrent request completes.

ORACLE Chargeable Subcontracting

Chargeable Subcontracting Order Report

Report Date Dec 20, 2006

Report Parameters	
Operating Unit Name	Vision Operations
Print Selection	All
Subcontracting Order Numbers From	5379
Subcontracting Order Numbers To	5401
Buyer Name	
Test	
Sort By	
Include Allocations	NO
Dynamic Precision Option	2
Print Cancel Lines	YES
Approved	



Subcontracting Order 5379-1-1,0

Vision Operations
475 Park Avenue
New York,NY 10022
AMERICA

Order Type	Subcontracting Order
Order Number	5379
Buyer	Smith, Mr. Jonathan
Line	1
Shipment / Release	1
Revision	0
Order Date	Dec 15, 2006
Created By	DMF
Revision Date	
Received By	DMF

Manufacturing Partner	GBL_TP01	Manufacturing Partner Site	OSA GBL_TP JAPAN
Bill To	OE3 Location JAPAN	Ship To	OE3 Location JAPAN

Customer Account Number	Manufacturing Partner Number	Payment Terms	Freight Terms	FOB	Transportation	Ship Via
	20187	Immediate	Due	Origin		

Confirm To / Telephone	Requester / Deliver To
/	

Note

Line	Shipment	Outsourced Assembly Part Number / Description	Project / Task	Need By Date	Quantity	UOM	Unit Price	Tax	Amount (USD)
1	1	SYN11 / Chargeable Subcontracting Syn11	/	Dec 14, 2006	20	Each	10.00	0.00	200.00

Line	Chargeable Subcontracting Component Part Number / Description	Replenishment Type	Chargeable Subcontracting Unit Price	Currency	Quantity	UOM
1	SYN21 / Chargeable Subcontracting SYN21	Synchronized	9.20	EUR		Each
2	SYN22 / Chargeable Subcontracting SYN22	Synchronized	9.20	EUR		Each

Chargeable Subcontracting: Confirmation Report (External Mode)

The Confirmation report is used for reconciliation of inventory at the MP site at period end. In the reconciliation process, the OEM prints the confirmation report in external mode to estimate the on-hand quantity and the consumption of components for each subcontracting order based on the simulated MP organization records. This report will be sent to the MP for confirmation. The MP verifies records and returns the report with variations in the consumption. The OEM then adjusts the simulated MP organization inventory by making consumption adjustments and processing those variations. This makes the simulated records accurate and reflects actual inventory at the MP for better planning and execution.

Confirmation Report in External Mode

At period end, the OEM prints the Confirmation Report in External mode and sends to the MP for chargeable subcontracting component physical inventory. When printing in

External mode, sensitive cost information does not print on the report. One report is created for each MP. The MP fills in on-hand quantity and actual consumptions of chargeable subcontracting components against subcontracting orders, along with reasons for any discrepancies, and then returns the report to the OEM for corrections.

The report prints:

- Estimated on-hand quantity by component based on the simulation of the MP site.
- Details of subcontracting orders that consumed components in a given period. Estimated on-hand and consumptions are based on bills-of-material quantities.
- Details of in-transit inventory (components shipped in OEM, but not yet received in the MP organization based on the simulation)
- Details of Sales orders which are not yet shipped
- This report does not print cost information

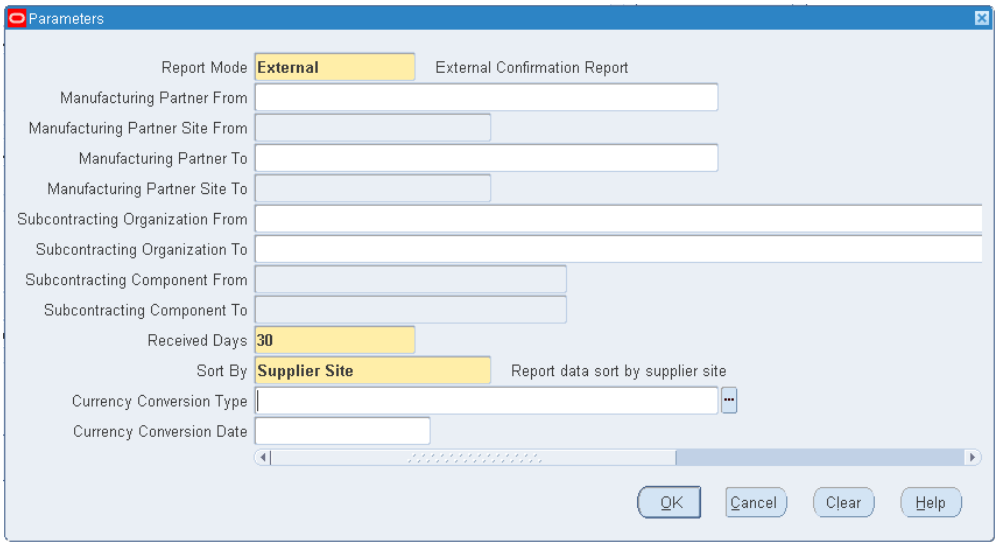
Report Parameters

Parameter	Required	Default Value	List of Values
Report Mode	Yes	-	External or Internal
Manufacturing Partner From	No	-	All manufacturing partners
Manufacturing Partner Site From	No	-	All sites of the MP
Manufacturing Partner To	No	-	All manufacturing partners
Manufacturing Partner Site To	No	-	All sites of the MP
Subcontracting Organization From	No	-	All subcontracting organizations
Subcontracting Organization To	No	-	All subcontracting organizations
Subcontracting Component From	No	-	All subcontracting components

Parameter	Required	Default Value	List of Values
Subcontracting Component To	No	-	All subcontracting components
Received Days	Yes	10	-
Sort By	Yes	Supplier Site	Supplier Site (Item when the mode is set to External) This value is always Supplier Site
Currency Conversion Type	No	-	Defined types
Currency Conversion Date	No	-	Calendar

To run the Chargeable Subcontracting: Confirmation Report in External mode

1. From the Chargeable Subcontracting responsibility, navigate to the Chargeable Subcontracting Reports window.
2. In the Name field, select Chargeable Subcontracting: Confirmation Report.
3. Enter an Operating Unit (required). The Parameters window appears.



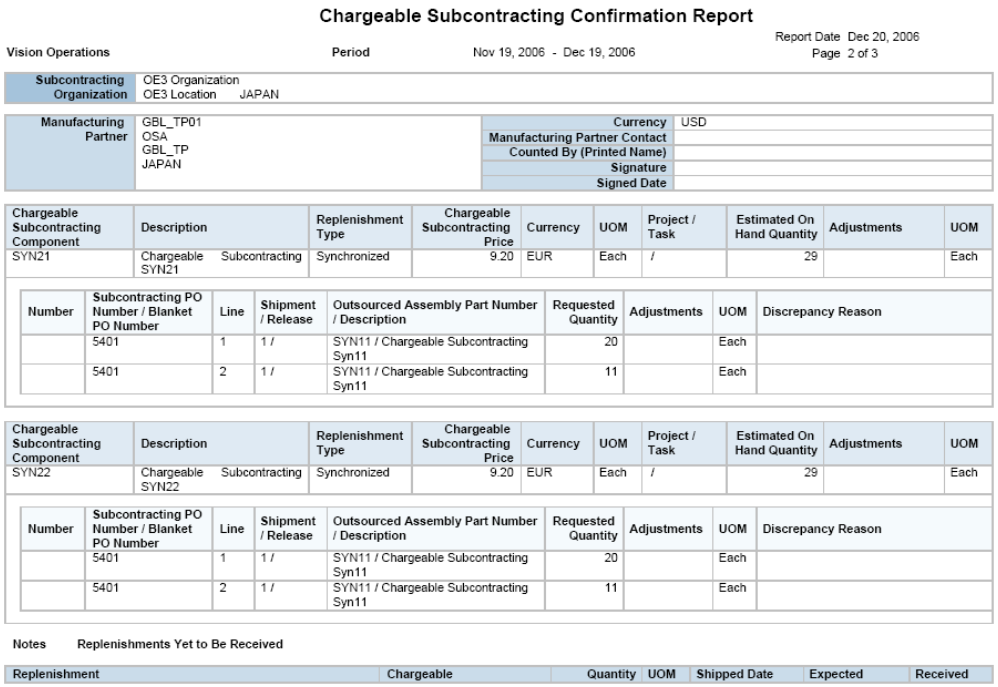
4. Enter report parameters and choose OK. The Chargeable Contracting Reports window appears.

5. Enter report request parameters and choose Submit. You can view the report output after the concurrent request completes.

Chargeable Subcontracting Confirmation Report

Vision Operations | Period Nov 19, 2006 - Dec 19, 2006 | Report Date Dec 20, 2006 | Page 1 of 3

Report Parameters			
Operating Unit Name	Vision Operations 475 Park Avenue...New York.US.10022		
Days Received Replenishments Are Listed	30	Sort By	Supplier Site
From Manufacturing Partner		To Manufacturing Partner	
From Manufacturing Partner Site		To Manufacturing Partner Site	
From Subcontracting Organization		To Subcontracting Organization	
From Subcontracting Component		To Subcontracting Component	



Chargeable Subcontracting Confirmation Report

Vision Operations | Period: Nov 19, 2006 - Dec 19, 2006 | Report Date: Dec 20, 2006 | Page 2 of 3

Subcontracting Organization	OE3 Organization OE3 Location JAPAN
Manufacturing Partner	GBL_TP01 OSA GBL_TP JAPAN
Currency	USD
Manufacturing Partner Contact	
Counted By (Printed Name)	
Signature	
Signed Date	

Chargeable Subcontracting Component	Description	Replenishment Type	Chargeable Subcontracting Price	Currency	UOM	Project / Task	Estimated On Hand Quantity	Adjustments	UOM
SYN21	Chargeable Subcontracting SYN21	Synchronized	9.20	EUR	Each	/	29		Each

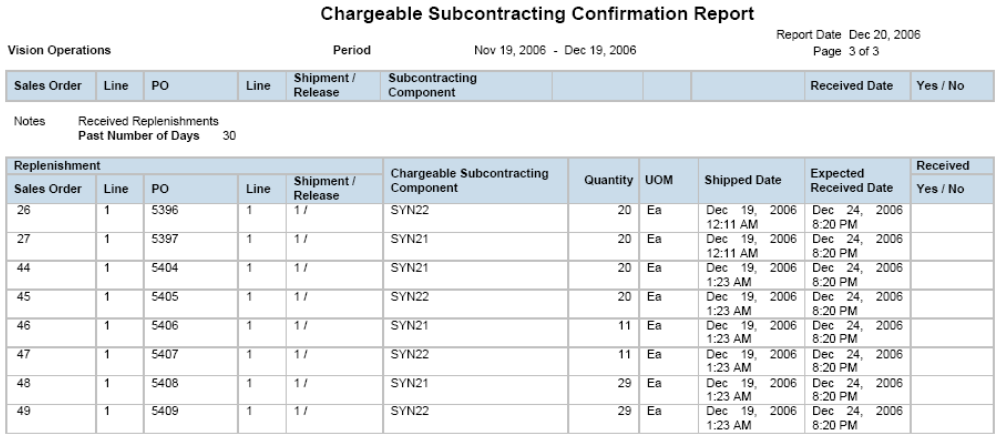
Number	Subcontracting PO Number / Blanket PO Number	Line	Shipment / Release	Outsourced Assembly Part Number / Description	Requested Quantity	Adjustments	UOM	Discrepancy Reason
	5401	1	1 /	SYN11 / Chargeable Subcontracting Syn11	20		Each	
	5401	2	1 /	SYN11 / Chargeable Subcontracting Syn11	11		Each	

Chargeable Subcontracting Component	Description	Replenishment Type	Chargeable Subcontracting Price	Currency	UOM	Project / Task	Estimated On Hand Quantity	Adjustments	UOM
SYN22	Chargeable Subcontracting SYN22	Synchronized	9.20	EUR	Each	/	29		Each

Number	Subcontracting PO Number / Blanket PO Number	Line	Shipment / Release	Outsourced Assembly Part Number / Description	Requested Quantity	Adjustments	UOM	Discrepancy Reason
	5401	1	1 /	SYN11 / Chargeable Subcontracting Syn11	20		Each	
	5401	2	1 /	SYN11 / Chargeable Subcontracting Syn11	11		Each	

Notes Replenishments Yet to Be Received

Replenishment	Chargeable	Quantity	UOM	Shipped Date	Expected	Received



Chargeable Subcontracting Confirmation Report

Vision Operations | Period: Nov 19, 2006 - Dec 19, 2006 | Report Date: Dec 20, 2006 | Page 3 of 3

Sales Order	Line	PO	Line	Shipment / Release	Subcontracting Component				Received Date	Yes / No

Notes Received Replenishments
Past Number of Days 30

Replenishment					Chargeable Subcontracting Component	Quantity	UOM	Shipped Date	Expected Received Date	Received
Sales Order	Line	PO	Line	Shipment / Release						Yes / No
26	1	5396	1	1 /	SYN22	20	Ea	Dec 19, 2006 12:11 AM	Dec 24, 2006 8:20 PM	
27	1	5397	1	1 /	SYN21	20	Ea	Dec 19, 2006 12:11 AM	Dec 24, 2006 8:20 PM	
44	1	5404	1	1 /	SYN21	20	Ea	Dec 19, 2006 1:23 AM	Dec 24, 2006 8:20 PM	
45	1	5405	1	1 /	SYN22	20	Ea	Dec 19, 2006 1:23 AM	Dec 24, 2006 8:20 PM	
46	1	5406	1	1 /	SYN21	11	Ea	Dec 19, 2006 1:23 AM	Dec 24, 2006 8:20 PM	
47	1	5407	1	1 /	SYN22	11	Ea	Dec 19, 2006 1:23 AM	Dec 24, 2006 8:20 PM	
48	1	5408	1	1 /	SYN21	29	Ea	Dec 19, 2006 1:23 AM	Dec 24, 2006 8:20 PM	
49	1	5409	1	1 /	SYN22	29	Ea	Dec 19, 2006 1:23 AM	Dec 24, 2006 8:20 PM	

Adjustment columns in the report (Pages 2 and 3) are left blank. The MP is expected to enter the variations in these columns and return the report to the OEM.

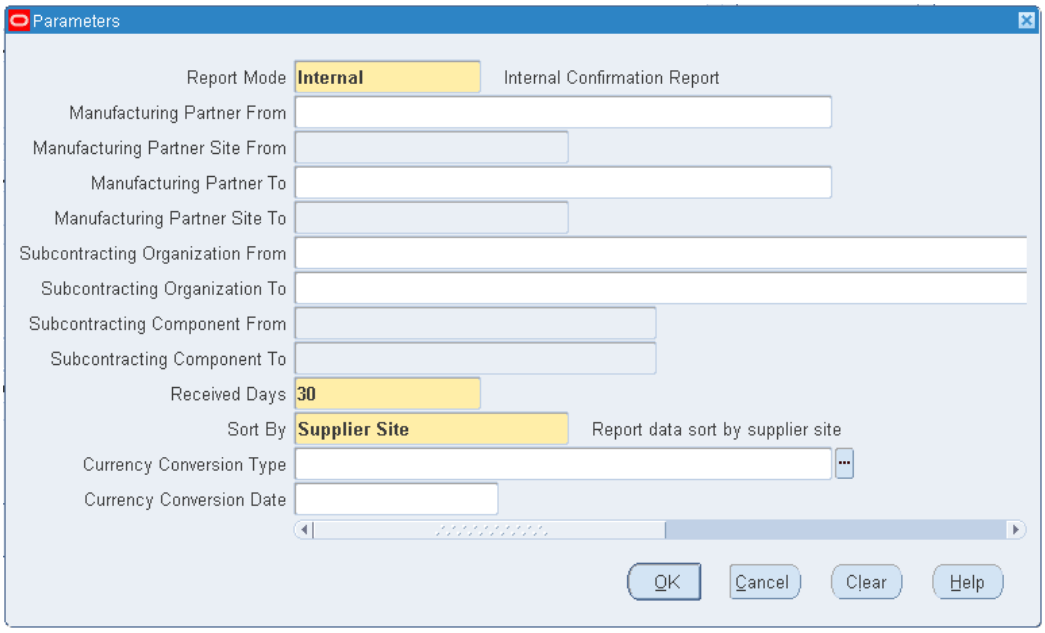
Chargeable Subcontracting: Confirmation Report (Internal Mode)

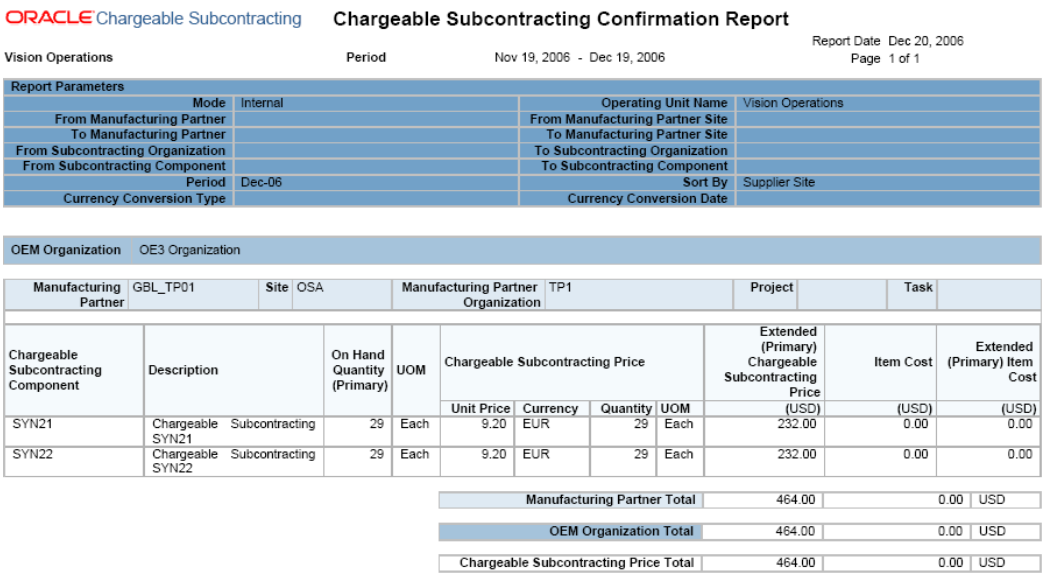
The Confirmation Report run in internal mode calculates on-hand inventory, and its inventory value is based on the standard in the OEM organization. Component

inventory is calculated based on the simulated records of the MP organization, and the on-hand is multiplied with its standard cost in the OEM organization to arrive at the inventory value. The report prints:

- Component on-hand inventory
- Component standard cost
- Inventory value

The Confirmation Report for internal mode is run the same as external mode. The Report Mode parameter must be set to External. All other parameters remain the same.





ORACLE Chargeable Subcontracting **Chargeable Subcontracting Confirmation Report**

Report Date Dec 20, 2006

Vision Operations | Period | Nov 19, 2006 - Dec 19, 2006 | Page 1 of 1

Report Parameters			
Mode	Internal	Operating Unit Name	Vision Operations
From Manufacturing Partner		From Manufacturing Partner Site	
To Manufacturing Partner		To Manufacturing Partner Site	
From Subcontracting Organization		To Subcontracting Organization	
From Subcontracting Component		To Subcontracting Component	
Period	Dec-06	Sort By	Supplier Site
Currency Conversion Type		Currency Conversion Date	

OEM Organization: OE3 Organization

Manufacturing Partner	GBL_TP01	Site	OSA	Manufacturing Partner Organization	TP1	Project		Task	

Chargeable Subcontracting Component	Description	On Hand Quantity (Primary)	UOM	Chargeable Subcontracting Price				Extended (Primary) Chargeable Subcontracting Price	Item Cost	Extended (Primary) Item Cost
				Unit Price	Currency	Quantity	UOM	(USD)	(USD)	(USD)
SYN21	Chargeable Subcontracting SYN21	29	Each	9.20	EUR	29	Each	232.00	0.00	0.00
SYN22	Chargeable Subcontracting SYN22	29	Each	9.20	EUR	29	Each	232.00	0.00	0.00

Manufacturing Partner Total	464.00	0.00	USD
OEM Organization Total	464.00	0.00	USD
Chargeable Subcontracting Price Total	464.00	0.00	USD

The report shows on-hand inventory at the MP site and its value based on the standard cost of the component in the OEM organization.

Chargeable Subcontracting: Cost Update Analysis Report

In chargeable subcontracting, the price of components and outsourced assemblies are defined in such a way that gain or loss due to the sales of components is offset by the Purchase Price Variance (PPV) of assembly receipts. Change in standard cost of either component or assembly creates an imbalance in gain or loss.

When costs of outsourced assemblies or chargeable subcontracting components are updated, you must create adjustment journal entries to eliminate unrealized gain or loss. The Cost Update Analysis Report shows the adjustment amount required for non-received subcontracting items, unshipped subcontracting components, and returned subcontracting components. You are responsible for creating adjustment accounting entries.

The Cost Update Analysis Report provides the OEM with a means to estimate the impact before the cost change. Based on this report, the OEM can adjust the GL accounts manually, and then run standard cost update. You can estimate the impact of the proposed standard cost by running the report with the Run parameter set to Before Cost Update.

Cost update analysis report (before cost update)

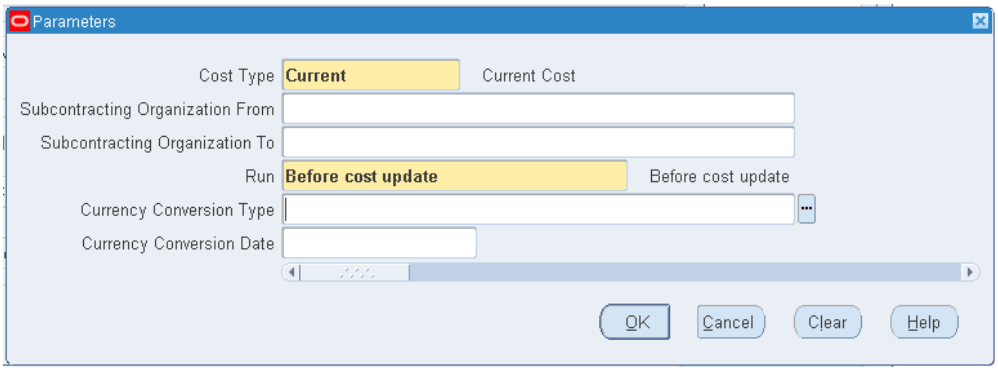
The Cost Update Analysis report with option Before Cost Update prints the estimated impact of standard cost changes for both components and assemblies.

Report Parameters

Parameter	Required	Default Value	List of Values
Cost Type	Yes	-	All cost types
Subcontracting Organization From	No	-	All subcontracting organizations
Subcontracting Organization To	No	-	All subcontracting organizations
Run	Yes	Before Cost Update	Before Cost Update, or At a Period End
Currency Conversion Type	No	-	All defined conversion types
Currency Conversion Date	No	-	Calendar

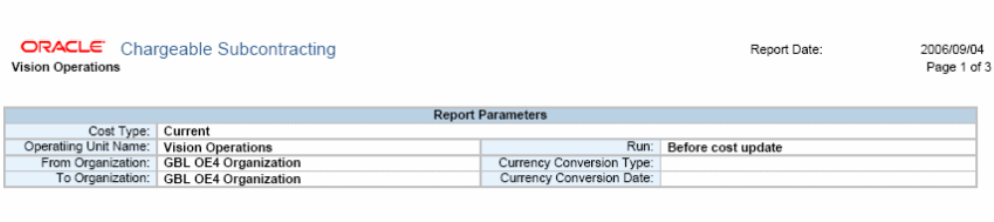
To run the Chargeable Subcontracting: Cost Update Analysis Report before cost update

1. From the Chargeable Subcontracting responsibility, navigate to the Chargeable Subcontracting Reports window.
2. In the Name field, select Chargeable Subcontracting: Cost Update Analysis Report.
3. Enter an Operating Unit (required). The Parameters window appears.



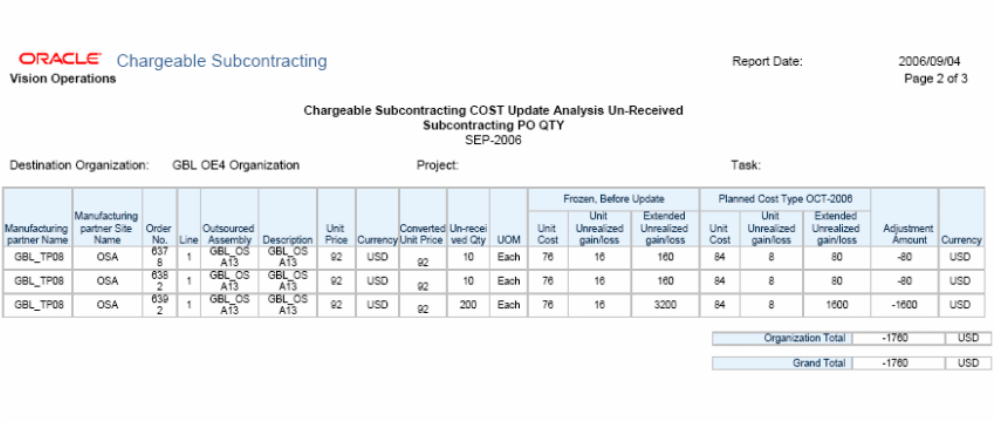
4. Enter report parameters and choose OK. The Chargeable Subcontracting Reports window appears.
5. Enter report request parameters and choose Submit. You can view the report output

after the concurrent request completes.



ORACLE Chargeable Subcontracting — Report Date: 2006/09/04
Vision Operations — Page 1 of 3

Report Parameters			
Cost Type:	Current		
Operating Unit Name:	Vision Operations	Run:	Before cost update
From Organization:	GBL OE4 Organization	Currency Conversion Type:	
To Organization:	GBL OE4 Organization	Currency Conversion Date:	

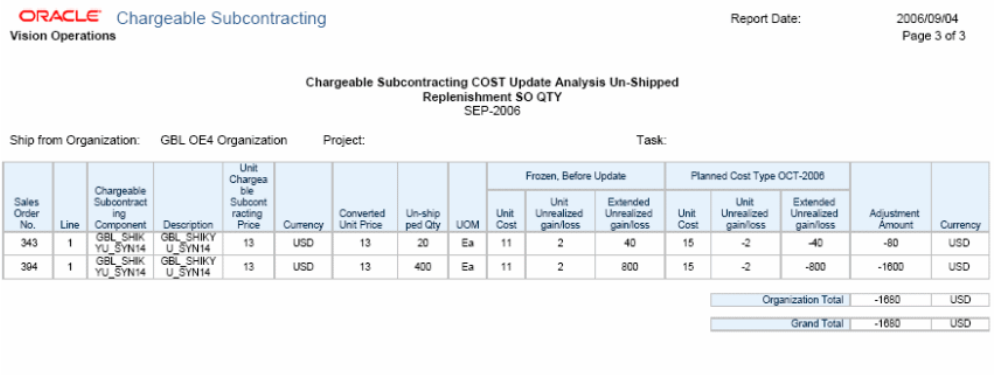


ORACLE Chargeable Subcontracting — Report Date: 2006/09/04
Vision Operations — Page 2 of 3

Chargeable Subcontracting COST Update Analysis Un-Received Subcontracting PO QTY
SEP-2006

Destination Organization: GBL OE4 Organization Project: Task:

Manufacturing partner Name	Manufacturing partner Site Name	Order No.	Line	Outsourced Assembly	Description	Unit Price	Currency	Converted Unit Price	Un-received Qty	UOM	Frozen, Before Update			Planned Cost Type OCT-2006			Adjustment Amount	Currency
											Unit Cost	Unit Unrealized gain/loss	Extended Unrealized gain/loss	Unit Cost	Unit Unrealized gain/loss	Extended Unrealized gain/loss		
GBL_TP08	OSA	6378	1	GBL_OSA13	GBL_OSA13	92	USD	92	10	Each	76	16	160	84	8	80	-80	USD
GBL_TP08	OSA	6382	1	GBL_OSA13	GBL_OSA13	92	USD	92	10	Each	76	16	160	84	8	80	-80	USD
GBL_TP08	OSA	6392	1	GBL_OSA13	GBL_OSA13	92	USD	92	200	Each	76	16	3200	84	8	1600	-1600	USD
																Organization Total	-1760	USD
																Grand Total	-1760	USD



ORACLE Chargeable Subcontracting — Report Date: 2006/09/04
Vision Operations — Page 3 of 3

Chargeable Subcontracting COST Update Analysis Un-Shipped Replenishment SO QTY
SEP-2006

Ship from Organization: GBL OE4 Organization Project: Task:

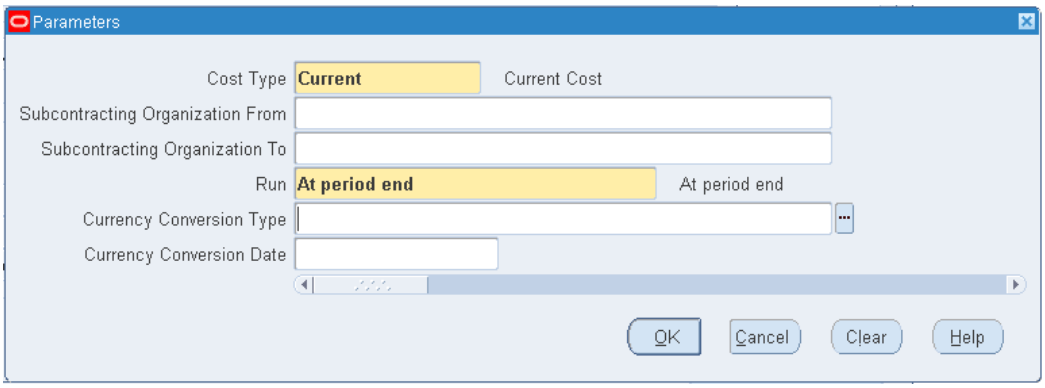
Sales Order No.	Line	Chargeable Subcontracting Component	Description	Unit Chargeable Subcontracting Price	Currency	Converted Unit Price	Un-shipped Qty	UOM	Frozen, Before Update			Planned Cost Type OCT-2006			Adjustment Amount	Currency
									Unit Cost	Unit Unrealized gain/loss	Extended Unrealized gain/loss	Unit Cost	Unit Unrealized gain/loss	Extended Unrealized gain/loss		
343	1	GBL_SHIKYU_SYN14	GBL_SHIKYU_SYN14	13	USD	13	20	Ea	11	2	40	15	-2	-40	-80	USD
394	1	GBL_SHIKYU_SYN14	GBL_SHIKYU_SYN14	13	USD	13	400	Ea	11	2	800	15	-2	-800	-1600	USD
														Organization Total	-1680	USD
														Grand Total	-1680	USD

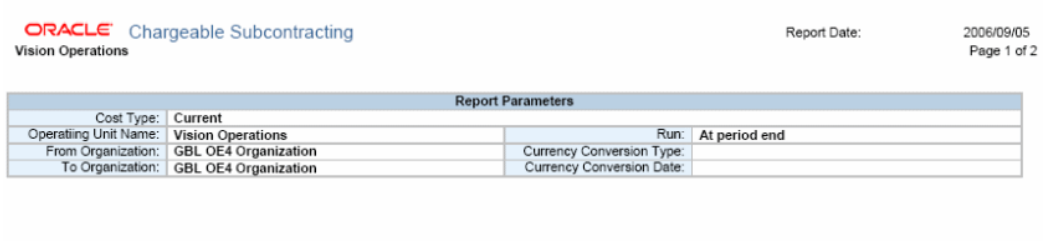
Pages 2 and 3 show the impact of assembly standard cost and page 3 shows the impact of components. You must make GL entries based on the impact value.

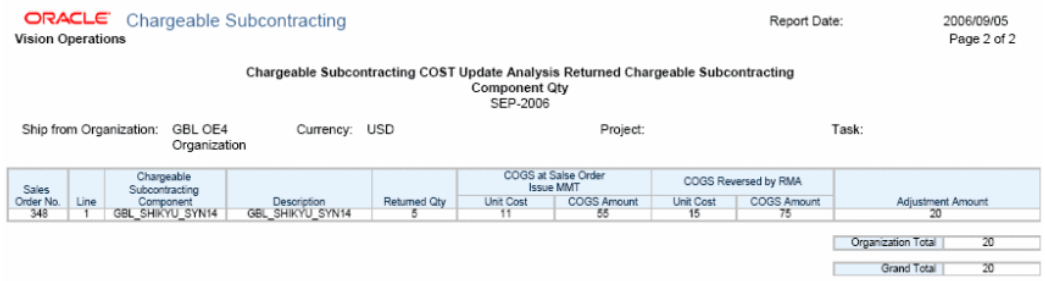
To run the Chargeable Subcontracting: Cost Update Analysis Report at period end

The Cost Update Analysis Report at period end prints the impact of component returns due to the change in cost. Standard cost of the component can be different at the time of shipping the component to the MP, and at the time of realizing returns from the MP. This causes imbalances in unrealized gain and loss, and must be estimated and adjusted at the end of the period.

The Costs Update Analysis Report (period end) is run similar to the Costs Update Analysis Report (before cost update). In the Parameters window, select At Period End in the Run field.







You must make GL entries to offset unrealized gain or loss.

7

Chargeable Subcontracting For Seiban Manufacturing

This chapter covers the following topics:

- Overview of Seiban Manufacturing
- Seiban Manufacturing Setup
- Organization Setup
- Defining Cost Groups for MP Organizations
- Defining Project Definitions
- Organization Items
- Chargeable Subcontracting Planning
- Chargeable Subcontracting Execution

Overview of Seiban Manufacturing

The Chargeable Subcontracting application supports subcontracting in Seiban Manufacturing. In Seiban Manufacturing, outsourced assemblies and components are planned based on Seiban numbers (Project Numbers) using ASCP and hard pegging. The chargeable subcontracting process is also executed using locator controlled OEM and MP organizations, and Seiban numbering.

The Chargeable Subcontracting application functions similarly for both Discrete and Seiban Manufacturing environments. The following sections describe additional setup and execution steps required to use chargeable subcontracting in Seiban Manufacturing.

Seiban Manufacturing Setup

The setup steps described in Chapter 2 apply to Seiban Manufacturing. The following are additional steps for planning the components and executing the subcontracting process using project number.

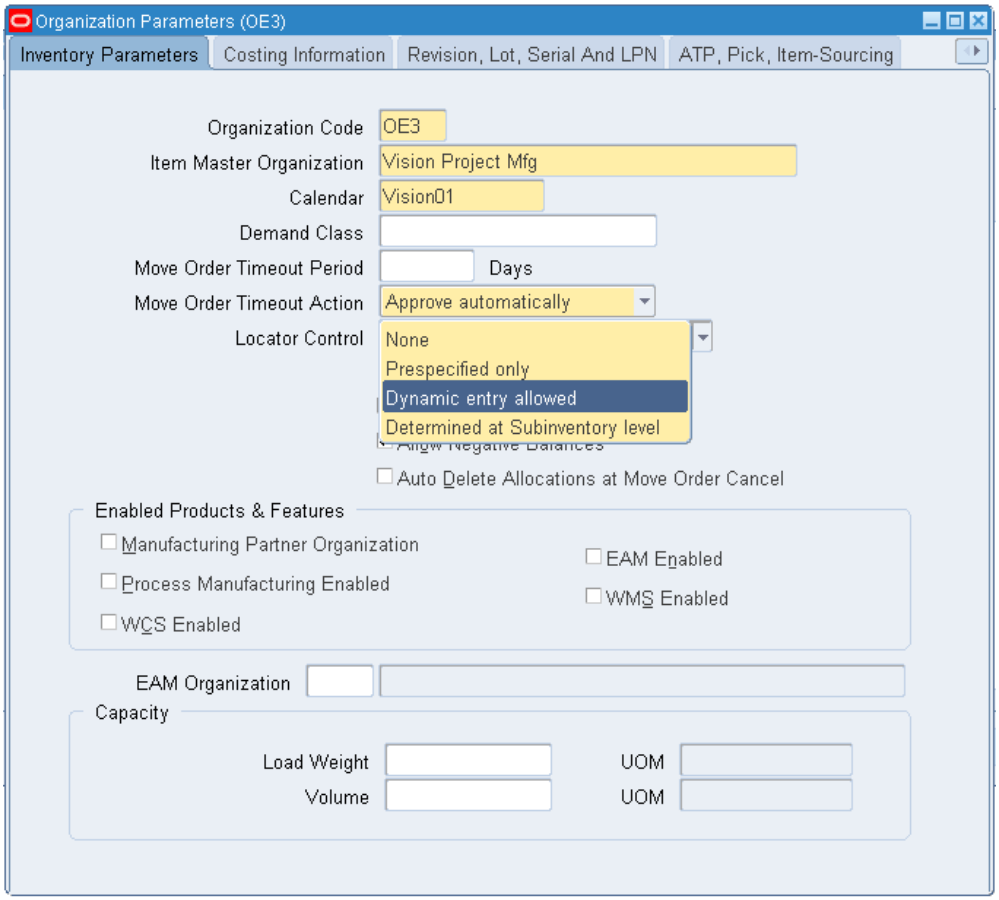
Organization Setup

Inventory Parameters

For Seiban Manufacturing, Locator Control should be defined as dynamic entry allowed in Inventory parameters of both OEM and MP organizations.

To set up Seiban inventory parameters:

1. From the Inventory responsibility, navigate to the Organization Parameters window.



Locator controlled is used for identifying project inventory.

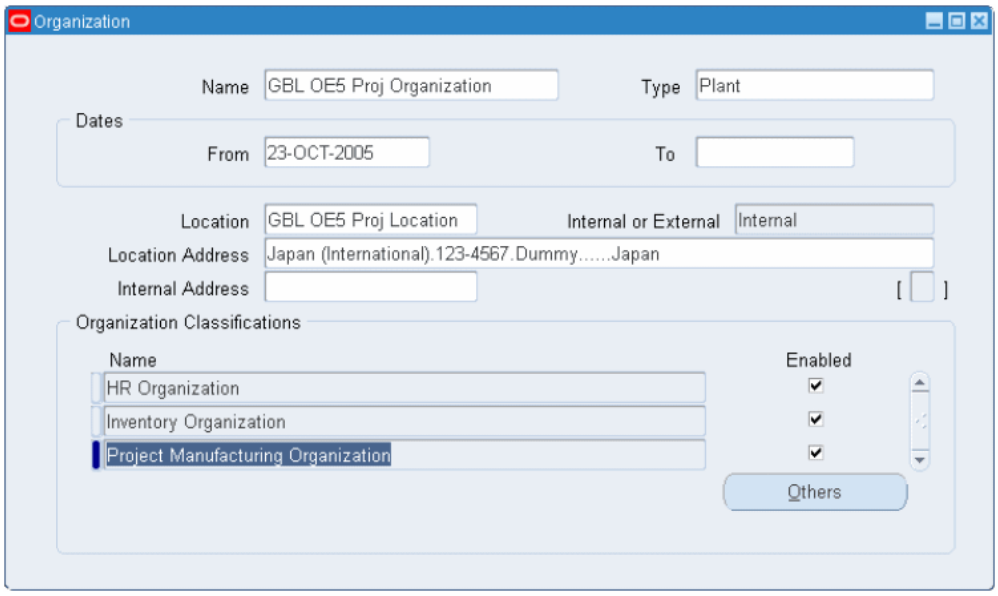
2. Save your work.

Project Manufacturing Parameters:

Define the OEM and the MP as Project Manufacturing Organizations by adding Organization Classification as Project Manufacturing for both OEM and MP

organizations.

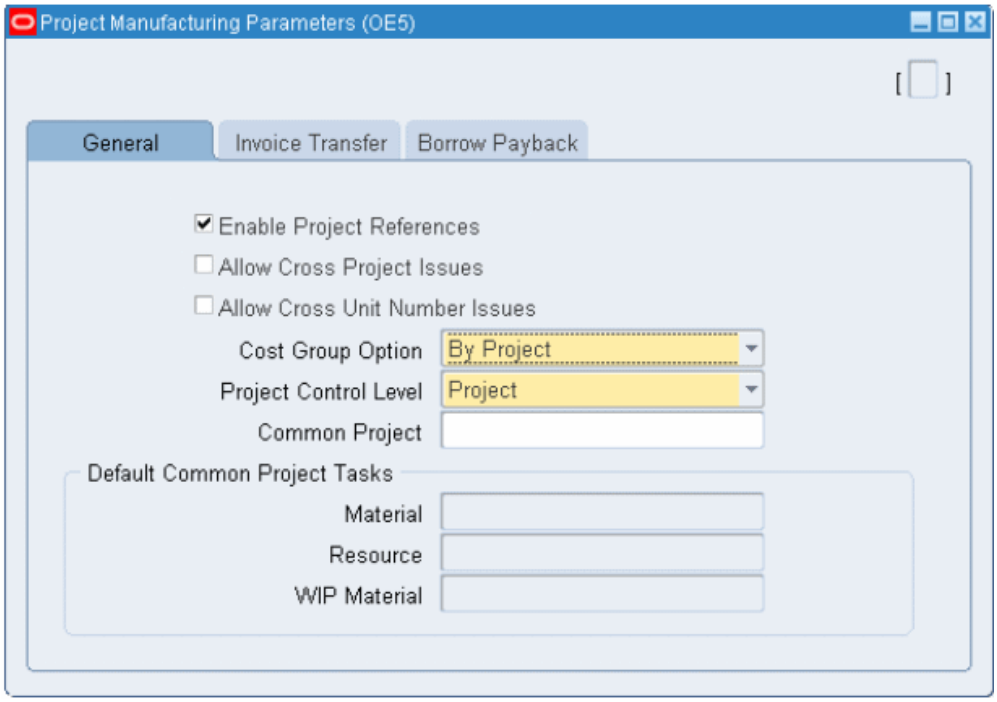
1. From the Inventory responsibility, navigate to the Organization window.



2. Navigate to the Project Manufacturing Parameters window, and select the General tab.

3. Select the Enable Project References indicator.

4. Set Project Control Level to Project.



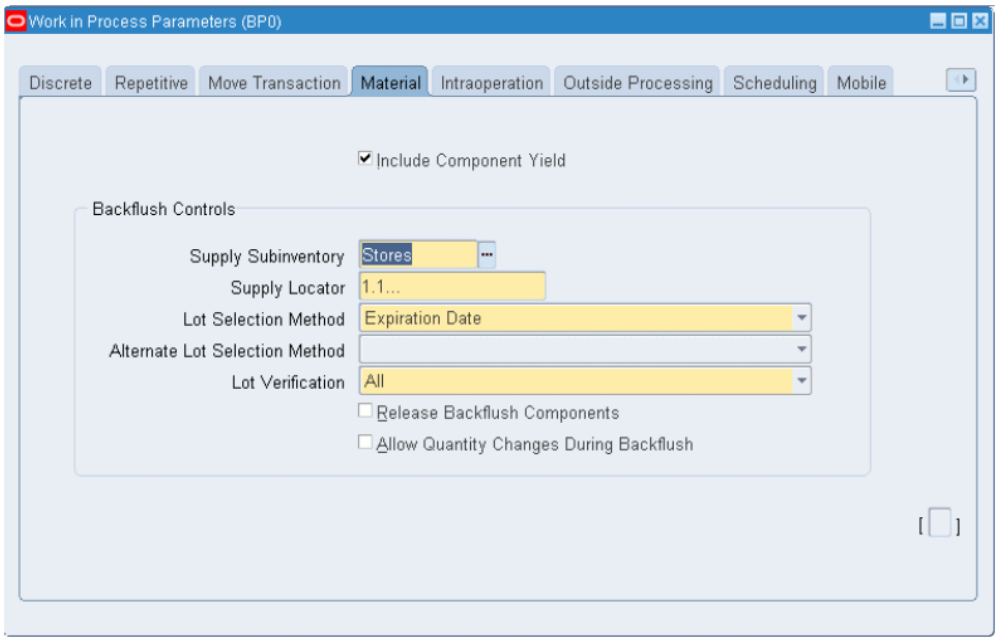
5. Save your work.

To define WIP parameters:

For Seiban Manufacturing, locator controlled subinventories are used for inventory transactions. To support simulation of discrete jobs in the MP organization, supply subinventory should be locator controlled subinventory. Interlock Manager creates WIP jobs with this subinventory as component subinventory for back flushing. The Auto Receive concurrent program also receives components into this subinventory for simulation.

1. Navigate to the Work in Process Parameters window.

2. Select the Material tab and associate Locator Controlled Subinventory as Supply Subinventory. In addition, associate Supply Locator leaving Project/Task as blank. (For more details on Locators in PJM, refer to the PJM User's Guide).



3. Save your work.

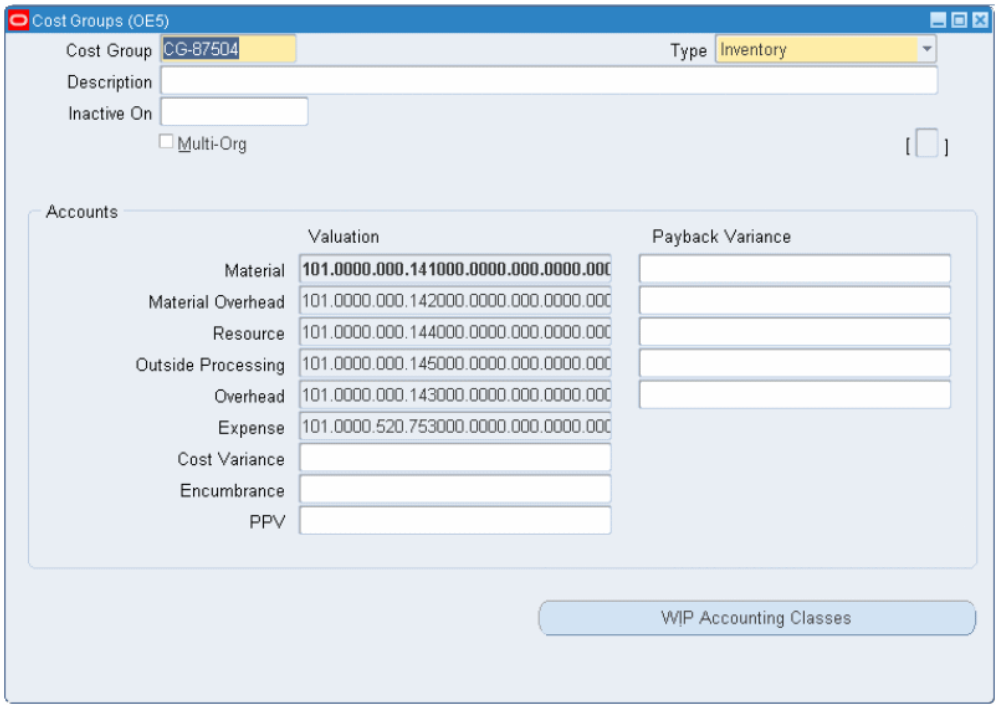
Defining Cost Groups for MP Organizations

Define Cost groups and associate WIP accounting class (defined at the time of creating WIP parameters of MP organizations). This is required for simulation of WIP jobs by project numbers, and is part of the PJM setup (refer PJM User's Guide for more details). The MP organization is a zero cost organization, and transfer to GL is set to No. Cost Group setup is required to facilitate simulation of manufacturing of assemblies in the MP organization using discrete jobs and project numbers, and does not have financial implications.

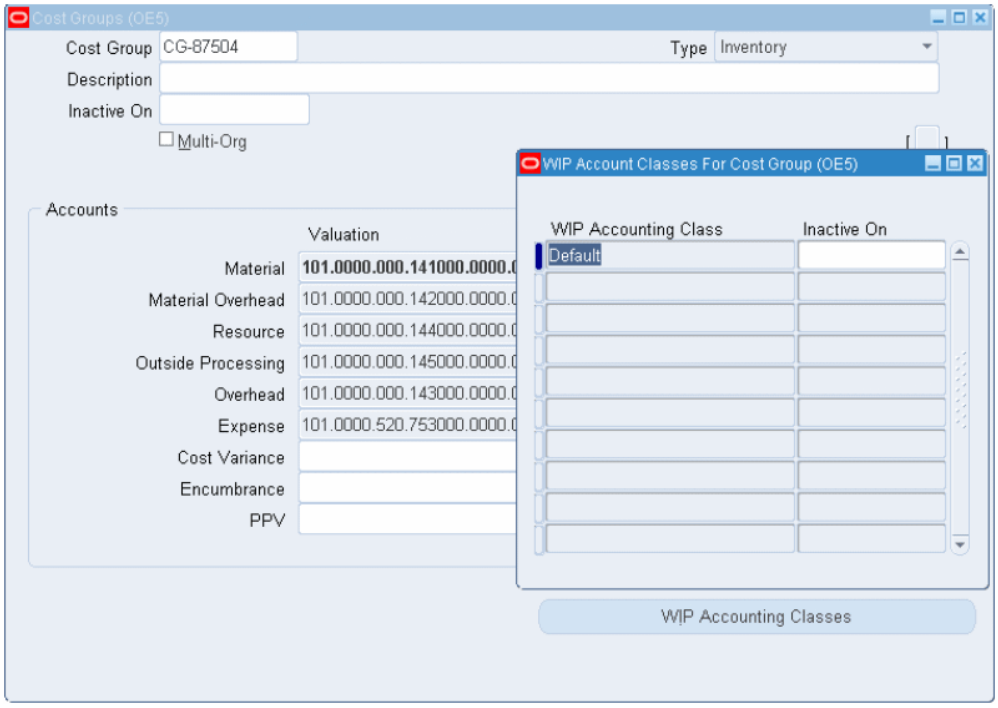
To define cost groups for MP organizations:

1. From the Cost Management responsibility, navigate to the Cost Groups window.

2. Define the cost group with Type set to Inventory. You can use any existing cost group.



3. Click WIP Accounting Classes to define WIP Accounting Classes for this cost group (use the same WIP accounting class defined at the time of defining WIP Parameters of MP Organization). The WIP Account Classes for Cost Group window appears.



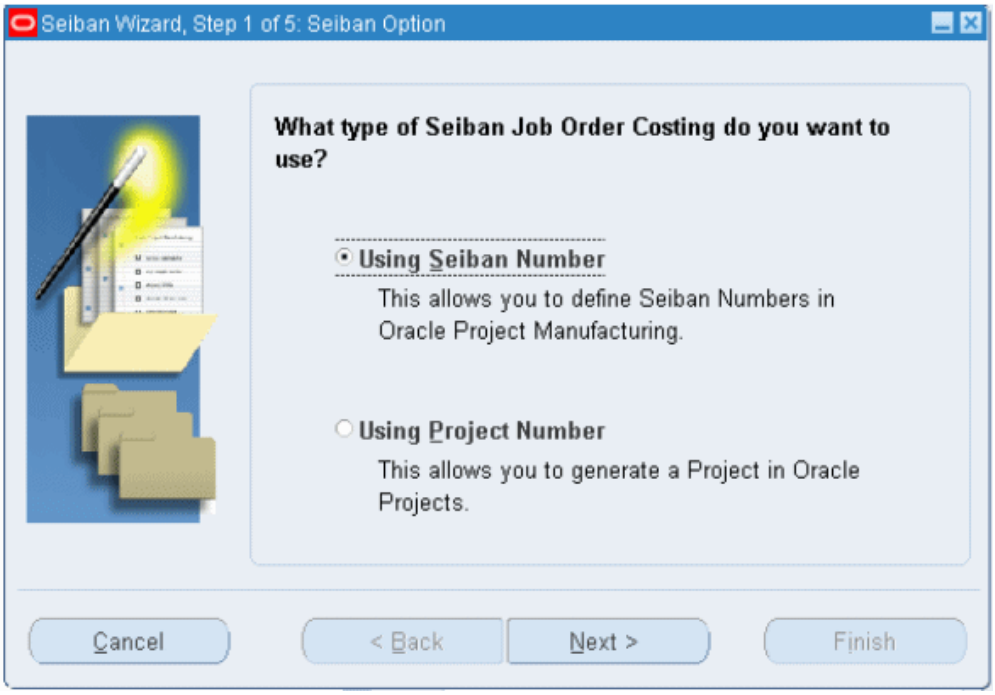
4. Save your work.

Defining Project Definitions

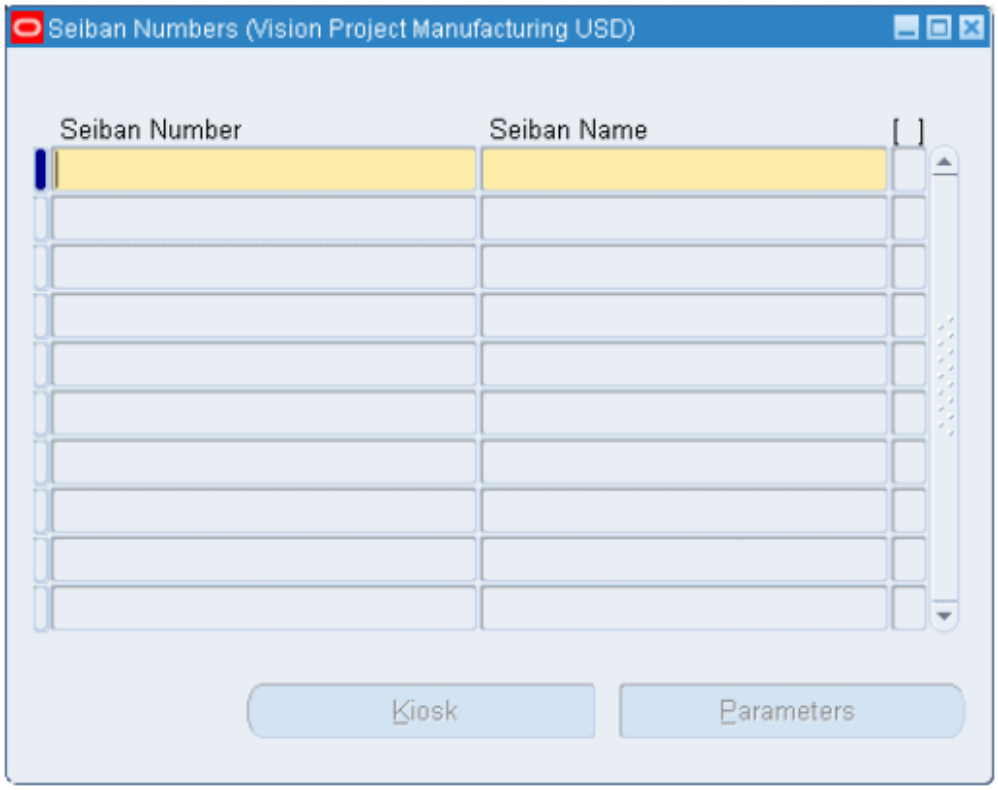
Define project numbers for planning and executing chargeable subcontracting in Seiban manufacturing environments.

To define project definitions:

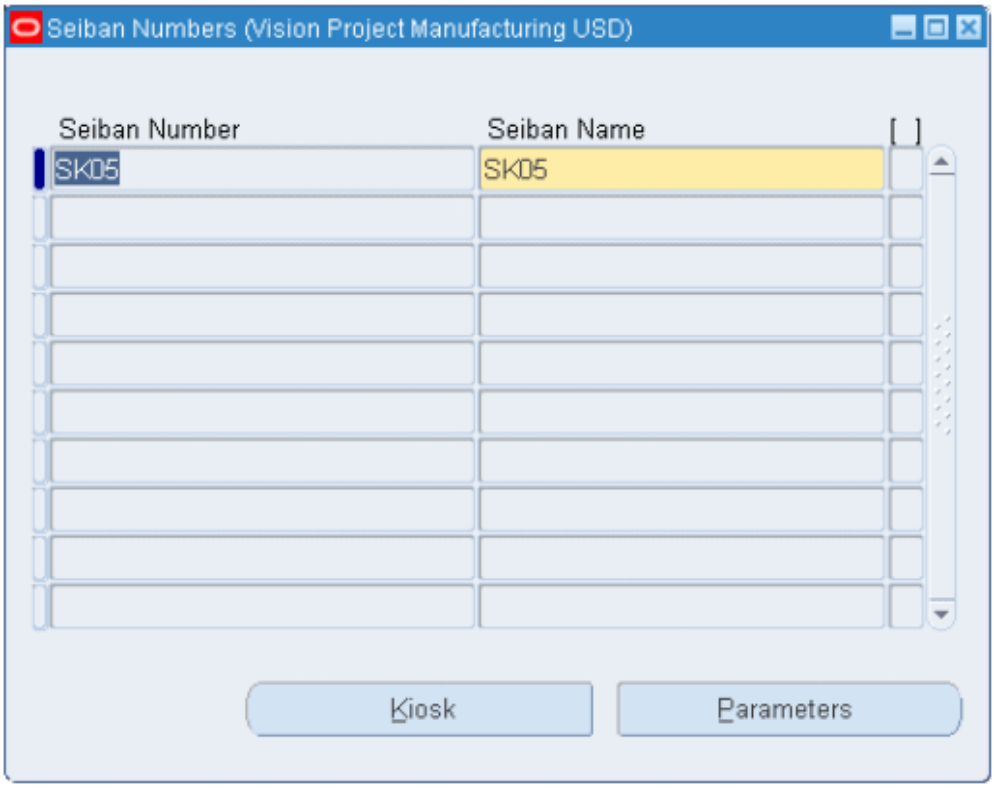
1. From the Project Manufacturing responsibility, navigate to the Seiban Wizard.



2. Select the Using Seiban Number indicator and click Next. The Seiban window appears.

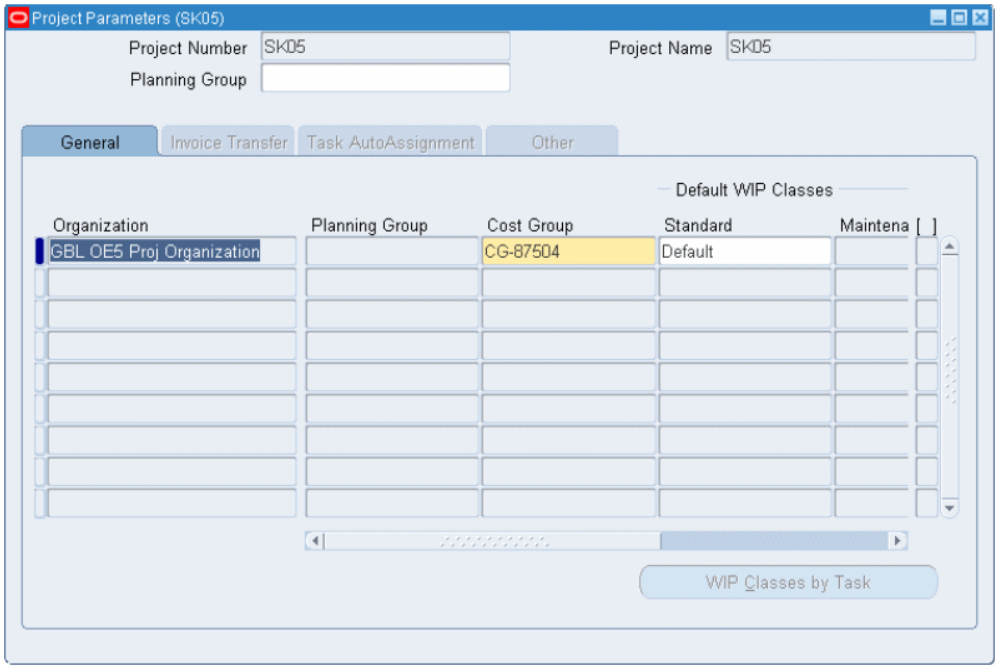


3. Enter Seiban (Project) Numbers.



4. Save your work.

5. Click Parameters to define the parameters for the Seiban Number (Project). The Project Parameters window appears.



6. Select the General tab and enter Inventory Organizations that use the project numbers. In this scenario, the OEM and MP organizations should be included in this window.

7. Associate a cost group defined in the previous procedure.

8. Associate a WIP Accounting Class. This should be same as the WIP accounting class associated with WIP parameters of the MP Organization.

9. Save your work.

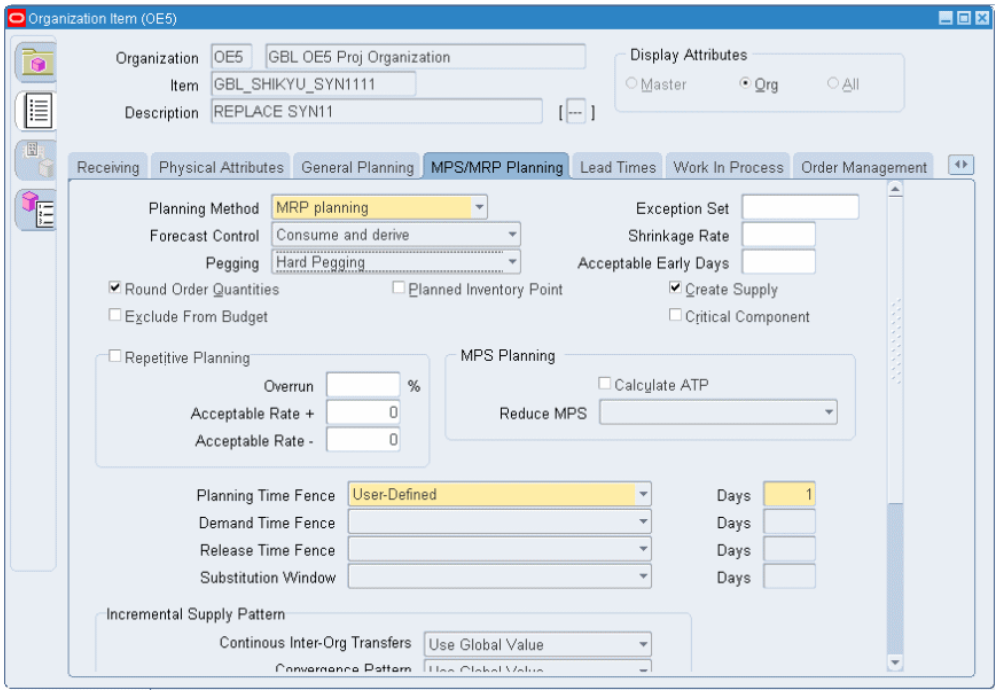
Organization Items

For outsourcing in Seiban Manufacturing, outsourced assemblies and components must be defined as Hard Pegged items for planning and execution using Seiban numbers.

To define items as hard pegged :

1. From the Inventory responsibility, navigate to the Organization Item window.

2. Select the MPS/MRP Planning tab, and set the attribute Pegging to Hard Pegging. This information is used to for planning the demand and supply by project numbers.



3. Save your work.

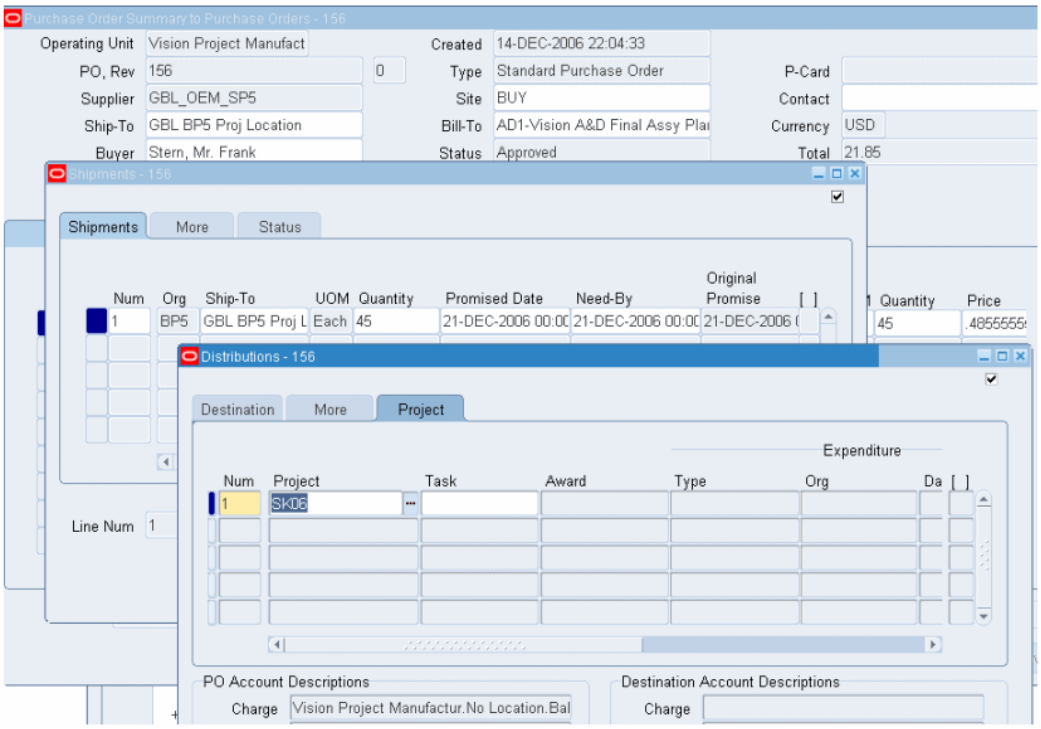
   All outsourced assemblies and subcontracting components should be defined as Hard Pegged in both OEM and MP organizations.

Chargeable Subcontracting Planning

Steps and processes of planning are similar to that of discrete manufacturing.

Differences in Seiban Manufacturing include:

- Forecast must be defined by project
- ASCP plans the components and assemblies by project. Demand and supply are considered and calculated by project.
- Planned orders are created by project
- Planned orders are outsourced as assemblies and pre-positioned components, and are transferred to purchasing as purchase requisitions. The purchase orders are created with project as shipment lines.
- For outsourced assemblies, the purchase order is called as a subcontracting order, and the project number is stamped in the PO line shipment distributions.



Note: Subcontracting Orders and Replenishment Purchase Orders of the pre-positioned components should always have one Shipment and Distribution for every purchase order line. Multiple shipments and distributions are not supported. When you create subcontracting orders and replenishment purchase orders manually, you can create multiple purchase order lines. However, only one shipment and distribution for every purchase order line. Interlock Manager discards purchase order lines if it has more than one shipment or distribution for every PO line, and will not process them.

Chargeable Subcontracting Execution

The Chargeable Subcontracting Execution process in the Seiban Manufacturing environment is the same as in discrete manufacturing.

Interlock Manager

The Interlock Manager concurrent request picks up subcontracting orders and processes them by creating WIP jobs in the MP organization. Interlock Manager also creates replenishment purchase and sales orders, and allocates the replenishment sales orders according to subcontracting order requirements in the same way described in the Chargeable Subcontracting Process chapter.

- WIP jobs are created with project references

- Replenishment purchase orders and replenishment sales orders are created with project references
- Allocations are made with the same conditions of shipment dates and price of replenishment order, and the project number must be the same for subcontracting orders and replenishment orders for allocation in the Seiban environment.

Auto Receive Components

Same as Discrete Manufacturing

Reconciliation Manager

Same as Discrete Manufacturing

Process Receiving Transactions

Same as Discrete Manufacturing

Chargeable Subcontracting Workbench

Workbench functionality is the same as Discrete Manufacturing. All search options can be executed with project number. Project number is available in additional search options, and you can personalize the search and results to view by project number.

Chargeable Subcontracting Accounting

In Seiban Manufacturing, accounting is the same as discrete manufacturing. Concepts and posting of accounts remain the same.

Reports

Project Numbers are printed with all the reports, and the remaining features and functions are the same as Discrete Manufacturing.

8

Chargeable Subcontracting Business Flows

This chapter covers the following topics:

- Drop Ship Components from RMS to MP
- Modeling Components for Drop Ship
- Planning Drop Ship Components
- Process Execution Drop Ship Components
- Multi-Level Outsourcing
- Outsourcing Phantom Assemblies
- Outsourcing Lot and Serial-Controlled Items

Drop Ship Components from RMS to MP

Chargeable Subcontracting provides limited support for drop ship components from the RMS to the MP. It provides complete support for drop ship components from planning to execution under the following conditions:

- All components of the outsourced assembly must be drop shipped from the RMS to the MP. Drop shipping few components of the outsourced assembly and normal shipping of the remainder to the MP is not supported.

- Subcontracting components are drop shipped to all of the Manufacturing Partners if defined. Drop shipping the same component to one MP and normal shipment to another MP is not supported.

- Both pre-positioned and synchronized components can be drop shipped to the MP

Modeling Components for Drop Ship

Item Definition

For drop shipment, replenishment sales orders created for shipping the components from the OEM to the MP must have the source type as *External*. You can do this by two setup methods.

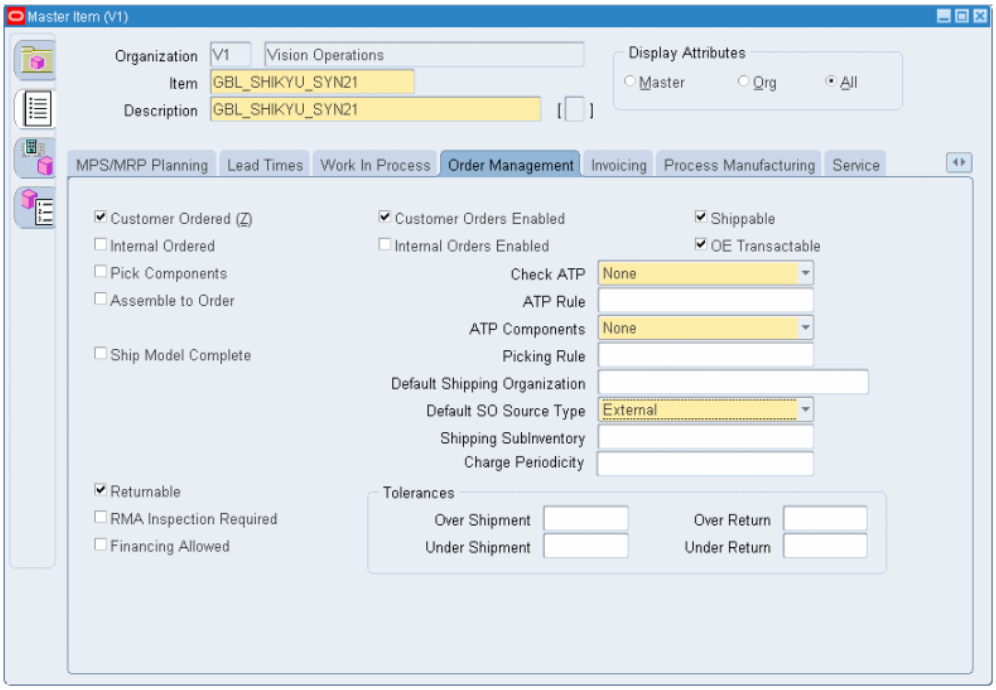
Method 1: Define Item Attribute Default Sales Order source type as *External*, and define Order Management defaults so this attribute is defaulted to Sales Order line source type.

Method 2: Define Source Type as *External* in the Order Management Transaction Type window (this will be used for creating replenishment sales orders), and set Order Management Defaulting Rules to default this source type from Order Management Transaction Type to Sales Order line.

Also define the Organization Item attribute Release Time Fence to *Don't Release Auto or Manual* for subcontracting components in the OEM organizations.

To define attribute Source Type in items:

1. From the Inventory responsibility, navigate to the Master Item window.



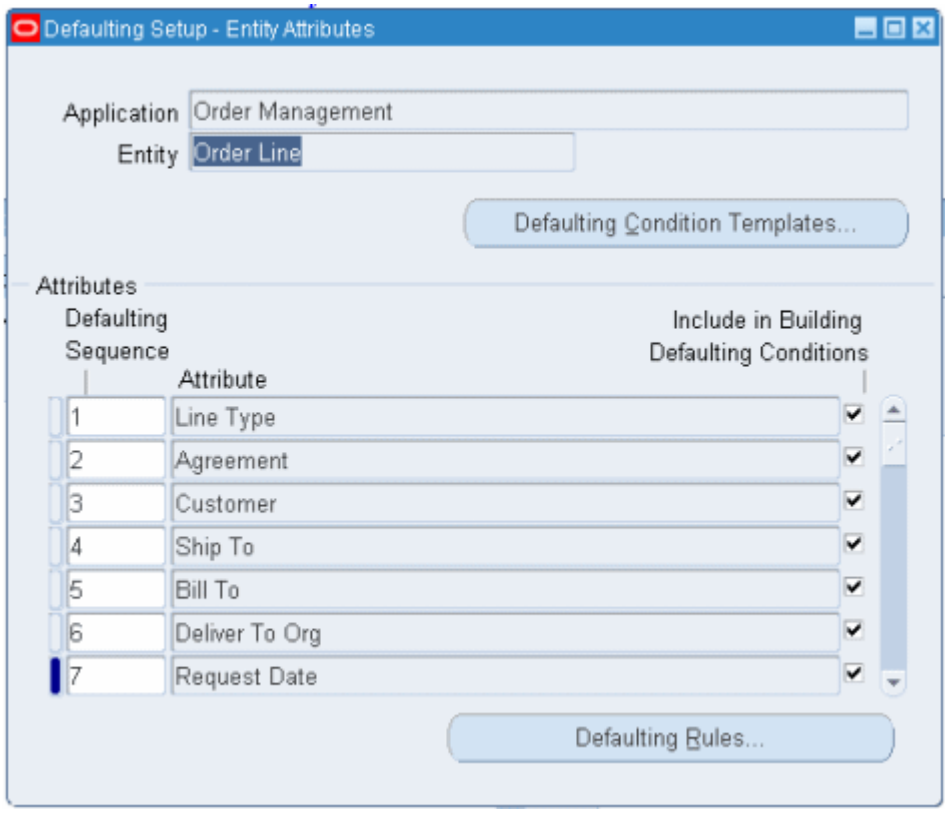
2. Select the Order Management tab and set Default SO Source Type to *External*.

3. Save your work.

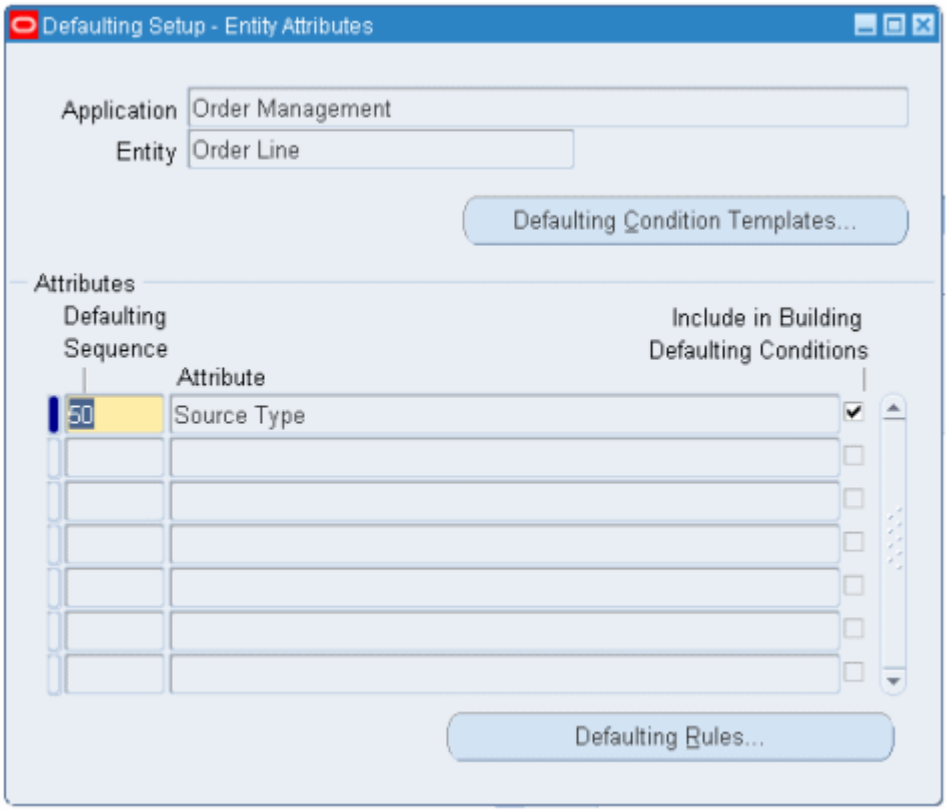
To define OM defaulting rules:

1. From the Order Management responsibility, navigate to the Defaulting Setup window.

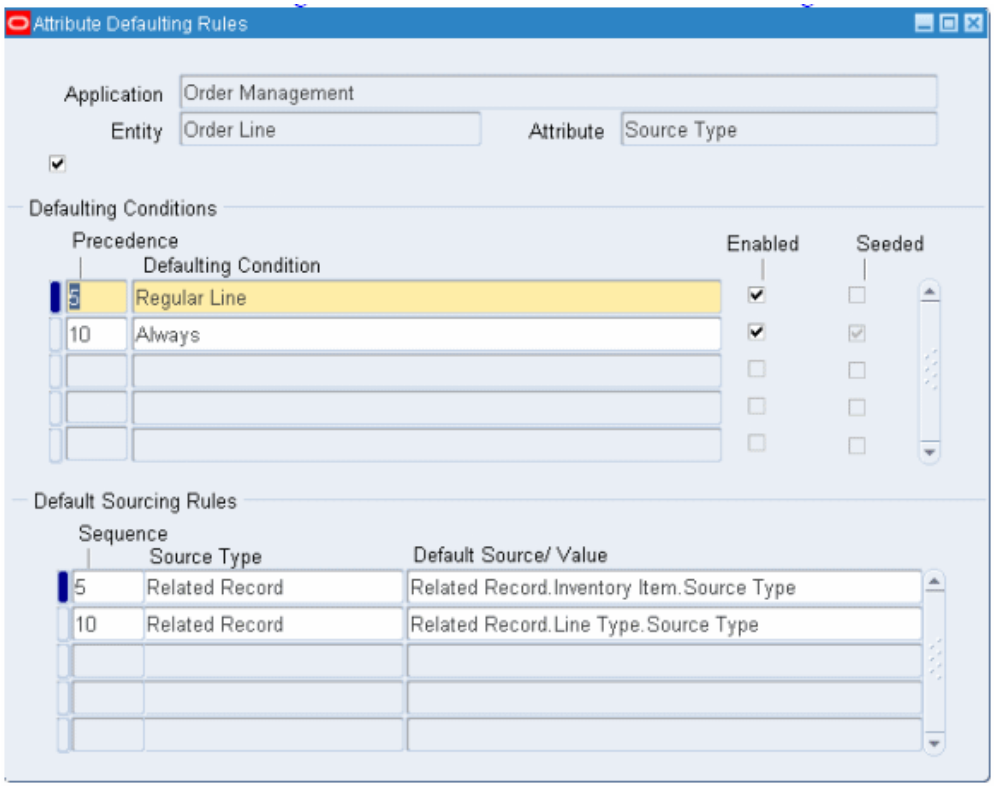
2. Search for default attributes:
   - Application: Order Management
   - Entity: Order Line



3. In the Attribute region, search for Source Type.



4. Click Defaulting Rules. The Attribute Defaulting Rules window appears.



5. Set defaulting conditions and rules for defaulting the Source Type from Items. See: *Oracle Order Management User's Guide* for Order Management defaulting rules.

Shipping Lead Times From the RMS to the MP:

Define the shipping Lead Time from the RMS to the MP in the shipping networks between the OEM and the MP. This lead time is used for simulation of component procurement, and also for auto receiving drop ship components in the MP organization.

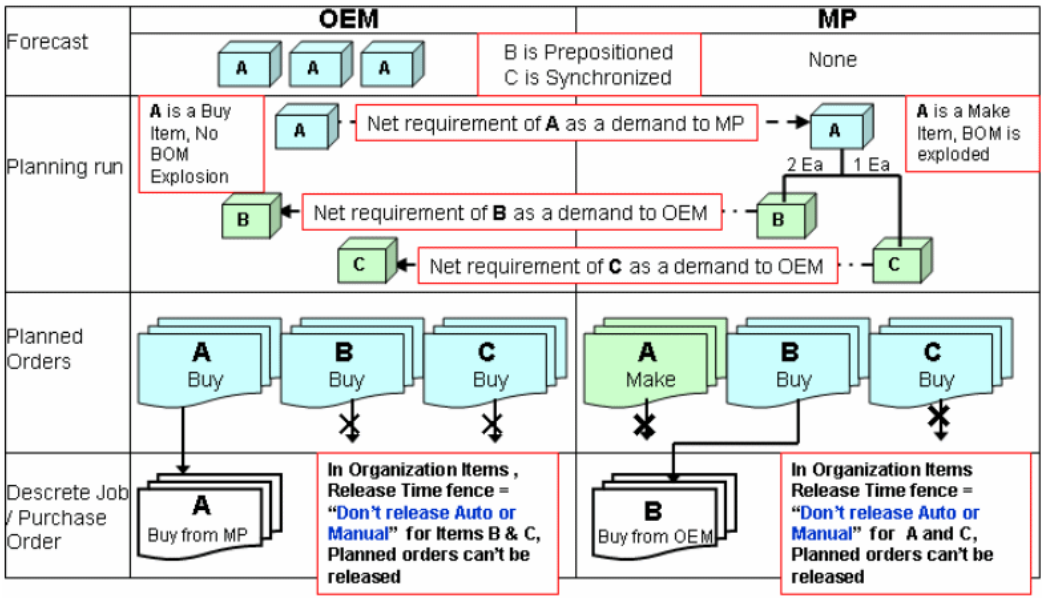
Others:

All other setup steps remain the same.

Planning Drop Ship Components

Planning drop ship component functions are similar to standard items. However, the planned orders of the components in the OEM organization cannot be transferred as purchase orders due to the release time fence setup in the OEM organization. Drop ship purchase orders are created from drop ship replenishment sales orders for the components at a later stage for procuring components from the RMS.

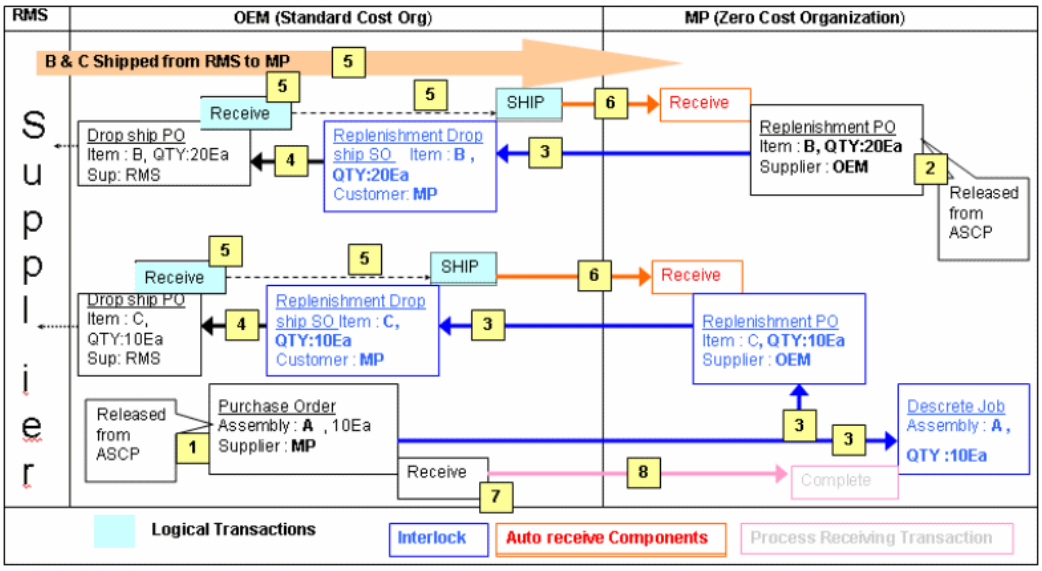
The following illustrates the planning process in a drop-shipment flow:



Process Execution Drop Ship Components

Chargeable Subcontracting process execution is similar to standard items. Key aspects include:

- Interlock Manager creates replenishment drop ship sales orders in the OEM organization for components (based on the item and order management defaulting rules setup)
- From replenishment drop ship sales orders, drop ship purchase orders are created. See: Drop Shipments, *Oracle Order Management User's Guide*
- When the RMS ships the components, notification is sent to the OEM upon shipment, and the OEM reports drop ship purchase order of the components received, and updates the drop ship sales orders to Shipped status
- The Auto Receive Components concurrent request receives the components into the MP organization based on the shipping Lead Time set in shipping networks of the OEM and the MP
- Payment to the RMS and payment to the MP are similar to standard purchasing and chargeable subcontracting respectively



Step details:

1. Planned Order of A in ASCP is released as a purchase order in the OEM

2. Planned Order of B (pre-positioned component) is released as a purchase order in the MP

3. Interlock Manager concurrent request:

   - Picks the replenishment purchase orders of pre-positioned components B in the MP, and creates a drop ship sales order for B in the OEM

   - Picks purchase orders of outsourced Assembly A in the OEM and creates the following:

     - WIP job for A in the MP organization

     - Replenishment purchase order for Synchronized ship component C in the MP, and creates drop ship sales order for C in the OEM

   - Makes allocations for the discrete JOB component requirements

4. Create drop ship purchase orders from the drop ship sales orders

5. The RMS ships components to the MP, and the OEM creates logical drop ship purchase order receipts for components B and C in the OEM organization. This sets the corresponding drop ship sales order line status of B and C to Shipped.

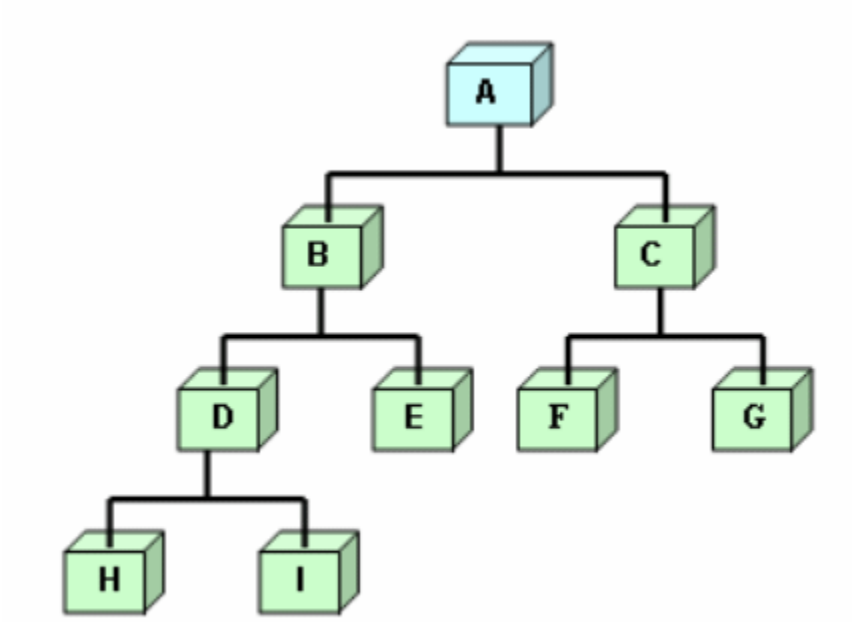
6. The Auto Receive Components concurrent request selects the component shipments in the OEM and creates purchase order receipts in the MP

7. Purchase Orders of outsourced assemblies are received in the OEM Organization

8. Process Receiving Transaction Processor selects assembly receipts in the OEM and completes the discrete job in the MP. This also back flushes components B and C in the MP.

Multi-Level Outsourcing

You can set up to outsource subassemblies at several levels of the final assembly. In the example illustrated below, A is the final assembly containing subassemblies D, B, and C. Using the Chargeable Subcontracting application, you can set up to outsource all subassemblies and the final assembly, or a specified number of them. The only condition is that the outsourced assembly must return to the OEM from the MP before it is sent to the customer, or sent to another MP for further processing.

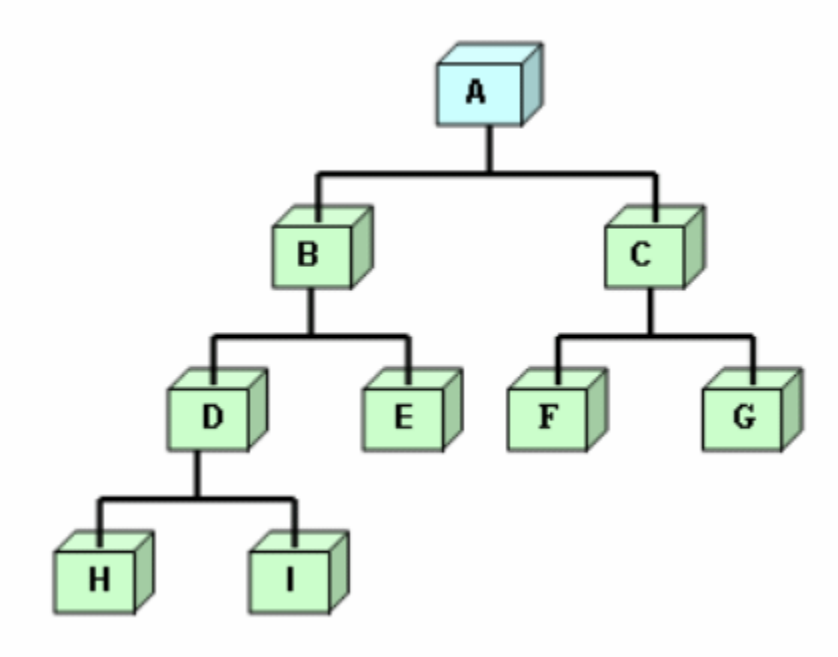


Outsourcing Phantom Assemblies

Chargeable Subcontracting supports outsourcing phantom assemblies. You can define phantom BOM for design control purposes, and use the same BOM structure for outsourcing. Interlock Manager compresses the Phantom BOM to a single level BOM with all the regular components and processes making them similar to standard assemblies.

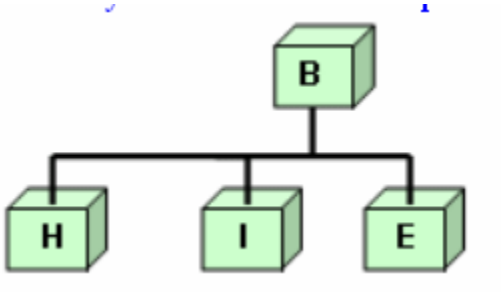
In the following illustration, D is a Phantom Assembly and all others are standard assemblies and components. Assembly B is outsourced. The same Phantom BOM

structure is defined both in the OEM and the MP organizations, and all other setup steps are the same.



When Interlock Manager processes the subcontracting order of outsourced assembly B, it also compresses phantom assemblies, and then processes the assembly as any other assembly.

The following illustrates Assembly B after BOM Compression.



All other execution processes remain the same.

You can also outsource assemblies with multi-level phantoms. Interlock Manager compresses those BOM's, and then processes them as standard BOM's.

Outsourcing Lot and Serial-Controlled Items

You can outsource Lot and Serial-controlled components and assemblies using Chargeable Subcontracting.

- Define items as lot or serial-controlled items in the OEM organization. Define them as standard items in the MP organization.

- Components are shipped in the OEM by lot and serial. Components are received without lot and serials in the MP (since MP is a simulation organization there is no need to simulate with lot and serials).

- Outsourced assembly is received in the OEM, and lot and serial numbers are created for the assemblies.

- Interlock Manager allocates replenishment sales orders (shipped using lot and serials) for the outsourced assemblies (received with lot and serials are created in OEM).

- Workbench displays allocations and replenishment sales order allocated and consumed for the outsourced assembly. However, the workbench does not display the lot and serial numbers of components shipped and assemblies received. You can track those using allocations.

9

Troubleshooting

This chapter covers the following topics:

- Overview
- Interlock Manager
- Auto Receive Components
- Process Receiving Transactions

Overview

Chargeable Subcontracting is modeled using existing Oracle applications functionality, and functions smoothly if you closely follow all of the setup steps explained in Chapter 2. If you set up subcontracting incorrectly, then some of the chargeable subcontracting concurrent programs will not process the data, and the execution process does not function properly. You must correct the data setup and rerun the processes.

This chapter provides checkpoints that you should verify if some of the concurrent programs re not processing the data.

Interlock Manager

You can classify Interlock Manager process steps into three sets:

1. Creating WIP jobs in MP the organization. During this process, you can view subcontracting orders on the workbench. If WIP jobs are not created, then the subcontracting order is not visible on the workbench UI.

2. Create replenishment Sales orders. You can view replenishment orders on the workbench UI.

3. Allocate replenishment orders in accordance with subcontracting order requirements.

The Interlock Manager concurrent request executes all steps at once if the data is correctly set up. If the setup is not complete, then Interlock Manager may execute only a few steps, or may not execute anything. Review the setup and make corrections.

Problem at Step 1: WIP Jobs are Not Created in the MP Organization

Any of the following issues can cause this problem. Verify and correct the setup.

- The profile MO: Default Operating Unit is not set to the operating unit of the OEM organization
- The profile MO: Security is not set
- Inventory Periods are not opened in the MP organization
- WIP Parameters are not defined for the MP organization
- Customer and supplier relationships are not defined in the OEM and MP organizations
- Check the validity of BOM and components in the MP organization
- Check and ensure that routing does not exist in the MP organization
- Ensure that OEM and MP organizations are not Process, WMS, or EAM enabled organizations
- Check that components and assemblies are defined in the OEM and MP organizations as outsourced assemblies and are pre-positioned or synchronized components respectively. If this is the problem, then you must cancel the current PO and create a new PO with the same details.

Problem at Step 2: Interlock is Not Creating Replenishment Orders

- Shipping networks are not defined for the OEM and MP
- No valid price exists for the components
- Document sequence is not defined for the Order Management transaction type associated in the shipping networks of OEM to the MP
- Profile sequential numbering is not set as Partially Used or Always used

Problem at Step 3: Replenishment Sales Orders are Not Allocated

In case of synchronized components if the replenishment sales order is created, it will always be allocated, so this issue might not arise. Incase of pre-positioned components, allocations are made to the existing replenishment sales orders, this would be the common problem

- Sales price of the replenishment sales order is different than the component price of

the subcontracting order (you can see both the prices on the workbench).

- Replenishment sales order shipment date is earlier than the requirement date of the component.

Auto Receive Components

If auto receive is not receiving the components in the MP organization after shipping the components in the OEM organization, then the following could be problems:

- Replenishment sales order ship date plus shipment lead time defined in the shipping networks between OEM to the MP is less than the current date (date at which the Auto Receive Components concurrent request is run).

- Purchasing periods are not open

Process Receiving Transactions

If the Process Receiving Transactions concurrent request does not complete WIP jobs in the MP organization, then subcontracting order components may not be fully allocated.

A

Windows and Navigator Paths

This appendix covers the following topics:

- Windows and Navigator Paths

Windows and Navigator Paths

Although your system administrator may have customized your navigator, typical navigator paths are presented in the following table: Text in brackets ([ ]) indicates a button.

Window Name	Navigation Path
Additional Organization Information	Inventory > Setup > Organizations > Organizations [Others]
Customers	Order Management > Customers > Standard
Customer/Supplier Association	Inventory > Setup > Organizations > Organizations [Others] > Customer/Supplier Association
Find Organization Items	Inventory > Items > Organization Items
Netting	Payables > Payments > Entry > Netting > Netting Agreement
Organization	Inventory > Setup > Organizations > Organizations
Organization Item	Inventory > Items > Organization Items > Find Organization Items [Find]

Window Name	Navigation Path
Organization Parameters	Inventory > Setup > Organizations > Organizations [Others] > Inventory Information
Segment Values	General Ledger > Setup > Financials > Values
Shipping Networks	Inventory > Setup > Organizations > Shipping Networks
Suppliers	Purchasing > Payables > Suppliers > Entry
Transaction Sources	Accounts Receivable > Setup > Transactions > Transaction Sources
Transaction Types	Order Management > Setup > Transaction Types > Define
Transaction Types (Receivables)	Accounts Receivable > Setup > Transactions > Transaction Types
Chargeable Subcontracting Workbench	Chargeable Subcontracting > Workbench

B

Chargeable Subcontracting in Oracle Daily Business Intelligence

Chargeable Subcontracting in Oracle Daily Business Intelligence

If you enable Chargeable Subcontracting and Oracle Daily Business Intelligence (DBI), then some DBI dashboards and reports will be affected. The impact is summarized in the following sections.

See the *Oracle Daily Business Intelligence User Guide* and *Oracle Daily Business Intelligence Implementation Guide* for more information about DBI.

Inventory Management Dashboard and Reports

If Chargeable Subcontracting is enabled, then:

- Inventory turns calculations include cost of goods shipped (COGS) for subcontracting components.
- The Manufacturing Partner (MP) appears in the Organization parameter, but data associated with the MP does not appear.

Manufacturing Management Dashboard and Reports

If Chargeable Subcontracting is enabled, then the MP appears in the Organization parameter, but data associated with the MP does not appear.

Product Cost Management Dashboard and Reports

If Chargeable Subcontracting is enabled, then:

- The MP appears in the Organization parameter, but data associated with the MP does not appear.

- The COGS calculation includes sales orders for subcontracting components. In the dashboard and reports, sales orders for subcontracting components are not distinguished from other sales orders.
- Fulfilled value includes sales order lines of type Subcontracting.
- The product gross margin includes the margin from shipping subcontracting components.
- The product gross margin report includes Return material authorizations (RMA's) from the MP against sales orders for subcontracting components.

Warehouse Management Dashboard and Reports

If Chargeable Subcontracting is enabled, then the MP appears in the Organization parameter, but data associated with the MP does not appear.

Glossary

Original Equipment Manufacturer (OEM)

Equipment manufacturer that outsources the production of assemblies to third parties.

Manufacturing Partner (MP)

Third party that manufactures the assembly using the components supplied by the OEM.

Outsourced Assembly

Assembly item, designed by the OEM and manufactured by the MP at the MP's site using OEM supplied Components.

Subcontracting Components

Components sent by the OEM to the MP for the manufacturing of outsourced assemblies.

Pre-positioned

Components are shipped to the MP without reference to any subcontracting order ahead of assembly requirements. When the subcontracting order is created, these components are hard allocated.

Synchronized

Components are shipped to the MP with references to specific subcontracting orders, along with the order.

Subcontracting Order

Purchase order (Standard or Release) created by the OEM to procure outsourced assemblies from the MP.

Replenishment PO

Purchase Order created for the MP in the Chargeable Subcontracting Process to procure Subcontracting Components from the OEM. This is not visible on the User Interface (UI). PO is also closed for invoicing.

Replenishment SO

Sales Order created in the Chargeable Subcontracting Process to ship subcontracting components to the MP.

Allocations

Hard pegging of replenishment sales orders created in the OEM organizations in accordance with component requirements, for the manufacturing of outsourced assemblies at the MP Site.

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