QAD Enterprise Applications
Standard Edition

## User Guide

# Release Management

Customer Schedules
Supplier Schedules

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**QAD Inc.**
100 Innovation Place
Santa Barbara, California 93108
Phone (805) 566-6000
http://www.qad.com

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## Chapter 1

# Release Management

Release management includes Customer Schedules and Supplier Schedules. Electronic data interchange (EDI) is closely related to release management. This chapter provides a brief overview of the underlying principles of release management and EDI and how they are implemented.

***Overview of Release Management 2***
Release management is a combination of processes for managing the regular exchange of information among customers and suppliers.

***Customer Schedules 5***
Customer Schedules lets you process sales orders using a set of scheduled shipment dates and quantities rather than individual sales orders.

***Supplier Schedules 6***
Supplier schedules are cumulative, schedule-driven purchase orders with multiple line items from which releases of requirements and due dates are issued.

***Electronic Data Interchange (EDI) 7***
Releases are typically sent and received using EDI, which is an international protocol that defines means and methods for electronic transmission of documents.

# Overview of Release Management

Release management is a combination of processes for managing the regular exchange of information among customers and suppliers. This information is used to coordinate a customer's manufacturing activities and demand for material with a supplier's manufacturing activities and shipments of material.

Information is typically transmitted in the form of schedules using electronic data interchange (EDI) to streamline the process. The way information is processed depends on whether you take the point of view of the customer or the supplier:

- As a customer, you transmit schedules to suppliers, balancing demand against what has already been received.
- As a supplier, you process schedules received from customers, balancing demand against what has already been shipped.

## Origins of Release Management

Release management has its roots in practices developed by the automotive industry to support just-in-time (JIT) manufacturing. Just-in-time methods ensure that the required quantity of material is delivered from suppliers exactly when it is needed. By having a reliable, precisely coordinated flow of goods from suppliers, a customer can maintain an uninterrupted flow of work, while maintaining minimum levels of inventory.

Companies that use release management share a common profile:

- High production volume
- Long-term commitments with customers and/or suppliers
- Frequent shipments to customers and/or frequent deliveries from suppliers
- Use of electronic data interchange (EDI)

### Release Management Today

Although it originated in the automotive industry, principles of release management are being applied by companies in other industries such as electronics and consumer goods. Historically, schedules in the automotive industry have been based on cumulative accounting. A total schedule quantity was determined for a period—often a year. The effect of each shipment to a customer was calculated based on a cumulative total.

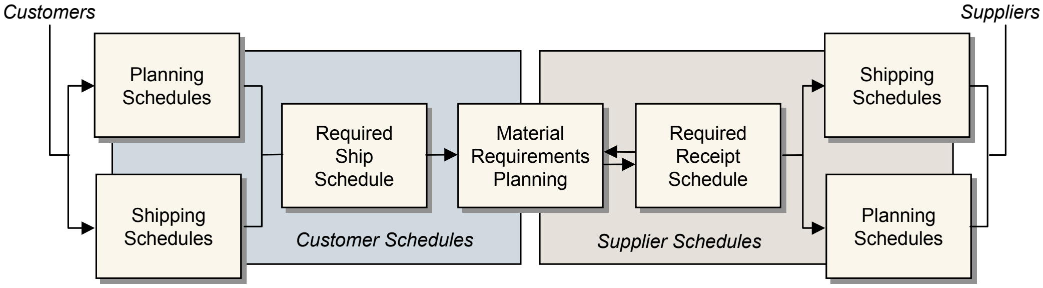
However, today, many business environments use release management to ship against specific requirements. For example, many original equipment manufacturers (OEMs) in the automotive industry use a schedule releasing method that does not rely on cumulative quantities.

The system fully supports noncumulative accounting requirements for customer schedules. Each scheduled order can be marked as cumulative or noncumulative. While shipments can be referenced by cumulative position, discrete pegging of shipping requirements is also supported.

## Release Management Flow

Figure 1.1 illustrates the basic flow of supply and demand between customers and suppliers.

**Fig. 1.1**
Release Management Flow


Customers
Suppliers
Planning Schedules
Shipping Schedules
Required Ship Schedule
Material Requirements Planning
Required Receipt Schedule
Shipping Schedules
Planning Schedules
Customer Schedules
Supplier Schedules

Customers send information about the items they need and when they need them as planning or shipping schedules. Based on this information, a required ship schedule is created.

When material requirements planning (MRP) is run, planned work orders and purchase orders are created to fulfill the required ship schedule. The planned purchase orders can be used to create a schedule for your suppliers, communicating your requirements to them.

## Characteristics of Schedules

Customer schedules and supplier schedules represent two points of view relative to schedules. The schedules, however, have similar elements.

### Shipping Schedules

Shipping schedules are used to coordinate the delivery of materials in the short term, typically one to two weeks. Demand is reported in detail, with quantities specified by date or by date and time. Shipping schedules can be updated frequently to reflect changes in production line schedules.

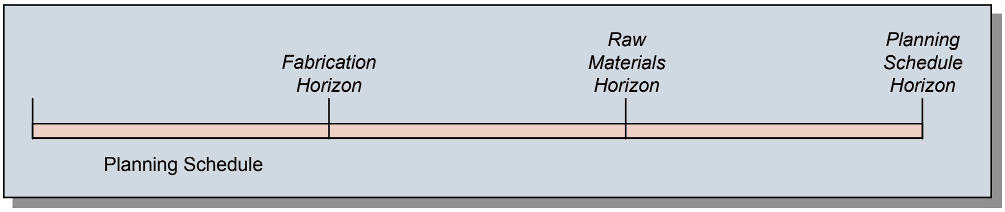
### Planning Schedules

Planning schedules are used for moderate and long-term planning of production, materials, and resources. Demand is summarized and reported in quantities aggregated by day, week, or month. Planning schedules reflect requirements from repetitive schedules, released orders, master schedule orders, and planned orders produced by material requirements planning (MRP).

### Schedule Horizons

The horizon of a planning schedule should be long enough to allow the supplier to plan materials and resources to support it. It should be longer than the cumulative lead time for the item being supplied.

**Fig. 1.2**
Schedule Horizons


Fabrication Horizon
Raw Materials Horizon
Planning Schedule Horizon
Planning Schedule

Within a planning schedule, a customer can also define two other horizons:

- A *fabrication horizon* authorizes the supplier to proceed with the production of quantities, scheduled for delivery up to a specified date. The level of fabrication is usually below that of a finished product.
- A *raw material horizon* authorizes the purchase of raw materials to support the production of quantities that are scheduled for delivery up to a specified date.

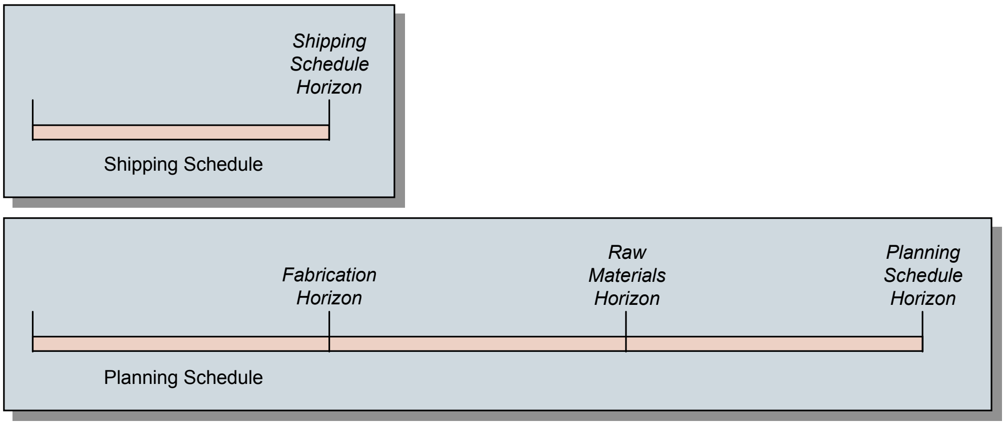
The end of the planning schedule normally extends beyond both of these horizons.

## Schedule Overlap

Shipping and planning schedules overlap for the period covered by the shipping schedule. Within this period, the two schedules may not be exactly the same, since they obtain demand from two different sources:

- The shipping schedule from production line schedules.
- The planning schedule from repetitive schedules, released orders, master schedule orders, and MRP-planned orders.

**Fig. 1.3**
Schedule Overlaps


Shipping Schedule Horizon
Shipping Schedule
Fabrication Horizon
Raw Materials Horizon
Planning Schedule Horizon
Planning Schedule

The system lets you determine which schedule should take precedence when discrepancies occur.

## Updating Schedules

Shipping and planning schedules are only effective when they are accurate and up-to-date. In the automotive industry, new shipping and planning schedules are typically created for each update. Creating separate releases of each schedule ensures that it is easy to distinguish the new from the old. This reduces the potential for confusion and miscommunication.

### Schedule Quantities

There are three types of schedule quantities:

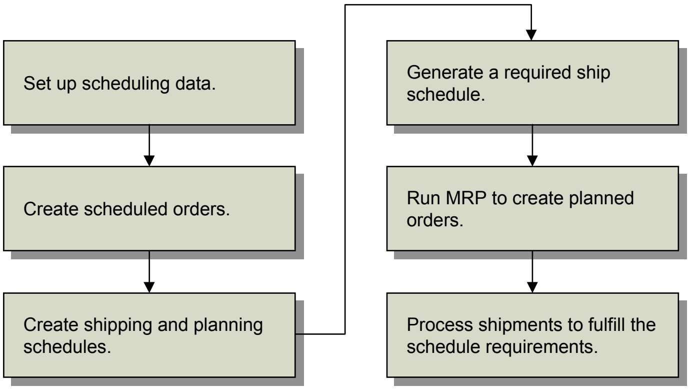
- Discrete quantities are like the order quantities on standard purchase or sales orders.
- Cumulative quantities also reflect order quantities, but are a total of one or more discrete quantities. For example, a sales order has an item with an order quantity of 25 for five consecutive Mondays. The cumulative quantities for those lines would be 25, 50, 75, 100, and 125.
- Net quantities are similar to the quantity open for purchase and sales order lines. However, they are calculated from discrete quantities and adjusted using the cumulative quantity required less the cumulative quantity received or shipped.

## Customer Schedules

Customer Schedules lets you process sales orders using a set of scheduled shipment dates and quantities rather than individual sales orders. Figure 1.4 illustrates the steps required to process customer schedules.

See Chapter 2, “Customer Schedules,” on page 9.

**Fig. 1.4**
Customer Schedule Task Flow


Set up scheduling data.
Create scheduled orders.
Create shipping and planning schedules.
Generate a required ship schedule.
Run MRP to create planned orders.
Process shipments to fulfill the schedule requirements.

Depending on your business requirements, set up the data required to manage schedules. Typically, this includes such things as customer calendars and order periods, dock addresses, and shipping labels.

A master order determines scheduling parameters. In the short term, the customer provides day-to-day shipping requirements. These are firm commitments and override any existing plan for that period. Customers may also provide advance schedules, which are not firm orders. These are used for planning production and scheduling material.

The Customer Sequence Schedules (CSS) module lets you receive and process shorter term, more detailed customer sequence schedules. If you have purchased the optional PRO/PLUS module, Customer Sequence Schedules is available as option 7.5.4.

For details, see *User Guide: PRO/PLUS.*

After releases are entered as customer schedules, a required ship schedule can be calculated and the net demand passed to the Material Requirements Planning (MRP) module (23 menu).

The system calculates due dates based on shipping lead times, calendars, and planned shipping schedules. If noncumulative schedules are being processed, requirement detail can be maintained throughout the process. During shipment, shipper lines that are tied to specific requirements are consumed. This process is known as *pegging*.

The shipper workbench streamlines the shipping process by automatically creating a shipper from a shipping picklist and allowing containerization of the shipment in a single process.

Other optional features support Customer Schedules functions; for example:

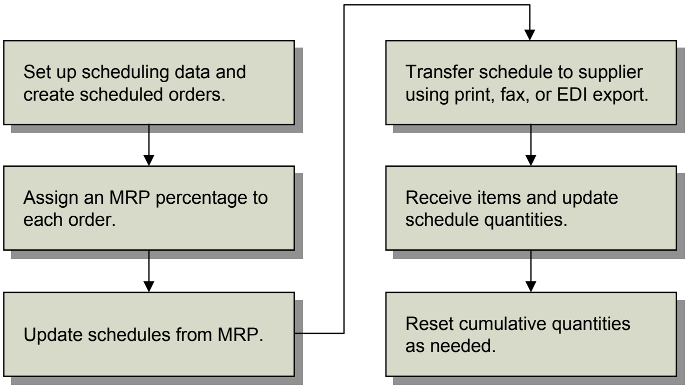
- You can use Customer Consignment Inventory to plan, order, ship, track, and report customer-consigned material while at the same time deferring invoicing and accounts receivable (AR) transactions. You can also have the system automatically replenish consumed amounts on the active schedule. See *User Guide: Consignment Inventory.*
- You can use Logistics Accounting to track third-party transportation costs incurred when a product is shipped to your customer. See *User Guide: Master Data*.

## Supplier Schedules

Supplier schedules are cumulative, schedule-driven purchase orders with multiple line items from which releases of requirements and due dates are issued. Figure 1.5 illustrates the steps required to process supplier schedules.

See Chapter 3, “Supplier Schedules,” on page 45 for more information.

**Fig. 1.5**
Supplier Schedule Task Flow


Set up scheduling data and create scheduled orders.
Assign an MRP percentage to each order.
Update schedules from MRP.
Transfer schedule to supplier using print, fax, or EDI export.
Receive items and update schedule quantities.
Reset cumulative quantities as needed.

Each release has its own ID number. Send each supplier the most recent release, which replaces previous releases and becomes the active one. Net requirements are recalculated with each scheduled release and each shipment receipt.

The PRO/PLUS Supplier Shipping Schedules module lets you generate separate supplier planning and shipping schedules. If you have purchased the optional PRO/PLUS module, these functions are available as menu 5.5.7.

See *User Guide: PRO/PLUS* for details.

MRP-planned purchase orders are managed with supplier schedules, where they can be edited and communicated to the supplier as schedules. You can send these schedules out using EDI eCommerce. The schedules can also be printed or sent to a file that interfaces with fax software.

When you receive items, schedule quantities are updated. These quantities are reset periodically, typically at year end.

Other optional features support Supplier Schedules functions; for example:

- You can use Customer Consignment Inventory to plan, order, receive, stock, track, and report supplier-consigned material while at the same time deferring vouchering and accounts payable (AP) transactions. See *User Guide: Consignment Inventory.*
- You can use Logistics Accounting to track third-party transportation costs incurred when a product is shipped by your supplier. See *User Guide: Master Data*.

## Electronic Data Interchange (EDI)

Releases are typically sent and received using EDI, which is an international protocol that defines means and methods for electronic transmission of documents. EDI can be used to transmit a variety of documents, but most common are purchase orders and supplier schedules, sales orders and customer schedules, invoices, and advance shipping notices (ASNs).

EDI eCommerce is QAD's globally deployable EDI solution, providing EDI functions with reduced installation and support requirements. EDI eCommerce processes international EDI document standards with most major third-party EDI communications or translation software—referred to collectively as EC subsystems—currently on the market.

See *User Guide: EDI eCommerce* for more information on setting up and using that module.

For customer schedules, EDI-enabling software is used to pull the releases from a customer's computer network or an e-mail address the customer has designated. The document is then imported into the system using EDI eCommerce and mapped into a customer schedule maintenance program. Purpose codes within the EDI document determine how it is processed; for example, as an add, append, delete, or test.

For supplier schedules, EDI eCommerce translates the schedule into an EDI format that can be read by the supplier's system, which is then transmitted as a flat file and imported by the supplier.

Many customers require that an advance ship notice (ASN) be communicated when a shipment is made. The system fulfills this requirement by storing the ASN information from the shipment confirm transaction in the database. EDI eCommerce then converts the ASN information to a format acceptable to the customer's EC subsystem for transmission to the customer. Some customers also require that invoices be sent via EDI; other customers do not require an invoice and pay from the ASN.

Similarly, if you require your suppliers to send an ASN, you import that information using EDI eCommerce. When an ASN is received, it creates a purchase order shipper. When the shipment itself arrives, all you need to do is confirm it and adjust quantities if needed.

## Chapter 2

# Customer Schedules

Customer schedules refer to the shipping and planning schedules that your customers send to you as a supplier. These schedules are used to create cumulative, schedule-driven sales orders with multiple line items. Based on scheduled orders, you release shipments using standard sales order shipping functions. Each release has its own ID number and each shipment you send to a customer has its own shipment number.

***Setting Up Customer Schedules 10***
Outlines the customer schedules setup workflow and gives information on setting up schedule data, setting up control program values, setting up categories for requirement detail, and setting up configured messages.

***Creating Scheduled Orders 17***
Describes how use Scheduled Order Maintenance (7.3.13) to create scheduled orders, including details on the header, non-cumulative quantity accounting data, order line item identification, and order line item data frames and includes information on how to view schedule order information.

***Processing Customer Schedules 25***
Includes information on importing schedules with EDI eCommerce, entering or verifying releases, creating required ship schedules, and view schedule information.

***Running MRP 33***
Explains that after setup it is appropriate to run MRP to explode demand and schedule component orders.

***Processing Shipments 33***
Illustrates how to process shipments with a workflow, detailed descriptions of each step, and information printing bills of lading, pegging requirement details, consuming requirements, and cumulative shipped maintenance.

***Resetting Cumulative Quantities 39***
Discussed how to use Cum Shipped Reset (7.5.18).

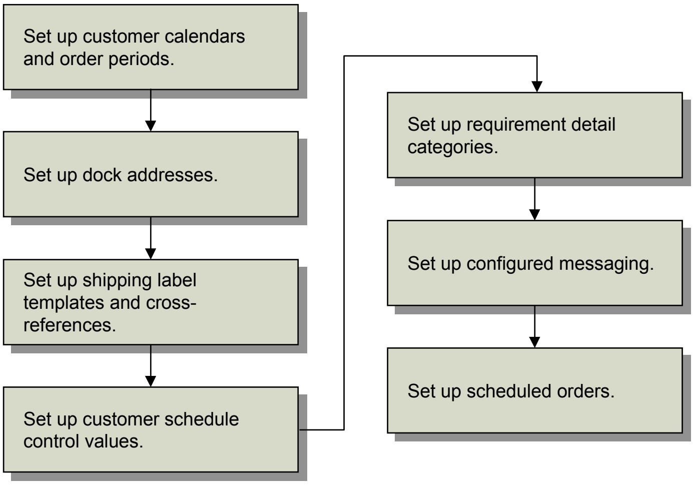
***Adjusting Prices with Retrobills 41***
Discusses the retrobill process, Retrobill Maintenance (7.13.13.1), and Retrobill Report (7.13.13.3).

# Setting Up Customer Schedules

To use customer schedules, you must set up the same baseline data required for sales orders, including items and customer addresses. If you plan to use shipping containers, you must also set up the container items in Item Master Maintenance (1.4.1).

Within customer schedules, there are a number of additional kinds of data that can be set up to streamline order processing. Most setup functions are found on the Customer Schedules Setup Menu (7.3). Figure 2.1 illustrates the flow of setup tasks.

**Fig. 2.1**
Customer Schedules Setup Flow


Set up customer calendars and order periods.
Set up dock addresses.
Set up shipping label templates and cross-references.
Set up customer schedule control values.
Set up requirement detail categories.
Set up configured messaging.
Set up scheduled orders.

Two steps are optional:

- If you use a noncumulative accounting procedure for release management, you also need to set up categories to use for requirement detail pegging. See page 13 for details.
- If you want to add special checks to verify shipper structure or modify how the system verifies authorization numbers, use Configured Message Maintenance (36.4.6) to customize the validation process. See page 16 for details.

## Setting Up Schedule Data

This section covers setting up data used in other customer schedule functions:

- Customer calendars
- Customer order periods
- Customer dock addresses
- Shipping labels

### Customer Calendars

When customers do not work the same days that you do, you should set up customer calendars in Customer Calendar Maintenance (7.3.1). The system checks the customer calendar when required ship schedules (RSSs) are calculated so that releases do not occur on nonworking days. If you do not set up a customer calendar, the system uses your shipment planning calendar.

### Customer Order Periods

Use Customer Order Period Maintenance (7.3.3) to set up customer order periods. You can then match your shipment planning calendar to customer order periods. For example, some trading partners develop, and require you to use, period numbers that correspond to specific dates.

Customer order periods are used in detail screens such as Customer Plan Schedule Maintenance (7.5.1).

### Dock Addresses

Your customers may have multiple docks at a ship-to location and may specify which dock to use for a particular shipment. Define dock addresses with Dock Maintenance (7.3.6).

Before you can define docks, the related ship-to addresses must exist. A dock address supersedes a ship-to address on orders specifying a dock.

You can assign the dock address in Scheduled Order Maintenance (7.3.13) as the default ship-to for the order. The dock should also be entered in Sales Order Shipper Maintenance (7.9.8) during shipment processing. Tax calculations use the ship-to site address.

See "Processing Shipments" on page 33 for details.

### Shipping Labels

Shipping labels are barcode labels that you can define and print for single-item-number containers, mixed-content containers, and master containers (such as pallets) of single-item-number subcontainers. The labels enable shipments to be received with barcode readers. Labels can replace printed shipper documents used as packing lists in some supplier-customer relationships.

To implement shipping labels, you must create a shipping label template file for each type of label required for each customer. These templates control the data format, the bar size, printed boundary lines, and other printed information. Templates are specific to your operation, to barcode reading equipment used by your customers, and to your industry.

***Note*** Three label types are master, mixed, and single.

You can select from a wide array of barcode label design software in creating templates. Each third-party package may have different requirements for creating a template.

In addition to creating template files, you must have a barcode-capable printer. You may need to add printer-control codes in the Bar Code Control frame in Printer Setup Maintenance (36.13.2), depending on the third-party software selected. The printer codes are usually described in the printer hardware manufacturer's documentation. Escape codes for many of the standard printer types should be provided in the documentation of the third-party barcode template design software that you choose.

See *User Guide: Manager Functions* for details.

Enter template values in Shipping Label Definition Maintenance (7.3.11). Each of these template values corresponds to an order field value. At print time, they are converted to barcode symbols. Table 2.1 lists template values and the field data that replaces them.

**Table 2.1**
Template Values

| Template Value | Data Field | Entry Program |
|---|---|---|
| 000001 | Container ID | Container Workbench |
| 000002 | Shipper ID | Sales Order Shipper Maintenance |
| 000003 | Customer Item | Customer Item Maintenance |
| 000004 | Item Number | Item Master Maintenance |
| 000005 | Description | Item Master Maintenance |
| 000006 | Quantity | Container Workbench, SO Shipper Maintenance |
| 000007 | Purchase Order | Scheduled Order Maintenance |
| 000008 | Supplier | Scheduled Order Maintenance |
| 000009 | Ship-From Name | Company Address Maintenance |
| 000010 | Net Weight | Item Master Maintenance |
| 000011 | Gross Weight | Item Master Maintenance |
| 000012 | Number of Sub-containers | Container Workbench |
| 000013 | UM | Item Master Maintenance |
| 000014 | Special 1 barcoded data value | Container Workbench |
| 000015 | Special 2 barcoded data value | Container Workbench |
| 000016 | Special 3 barcoded data value | Container Workbench |
| 000017 | Special 4 barcoded data value | Container Workbench |
| 000018 | Special 1 text data value | Container Workbench |
| 000019 | Special 2 text data value | Container Workbench |
| 000020 | Special 3 text data value | Container Workbench |
| 000021 | Special 4 text data value | Container Workbench |

When the system sends labels to the printer, it checks the entire shipment structure. Label-related information from container and shipper maintenance must be complete and accurate. A label referencing the shipper ID is printed for each container in the shipment. The system prints:

- Master-load labels when multiple single-item-number containers are shipped in another container
- Mixed-load labels when multiple item numbers are shipped in a container
- Single-load labels when a single item number is packed in a container

When you define templates, you specify where template files are located in your file system. You also indicate the label type: mixed, master, or single.

Some customers may use their own identification number for you. If so, you must create a cross-reference between the customer's ID number for you and an internal site so that the customer's ID number prints on the shipping label. Use Site Ship-from ID Maintenance (7.3.10) to create these cross-references. The shipping label supplier ID is printed on the shipping label by the Shipping Label Print function (7.7.7).

## Setting Up Control Program Values

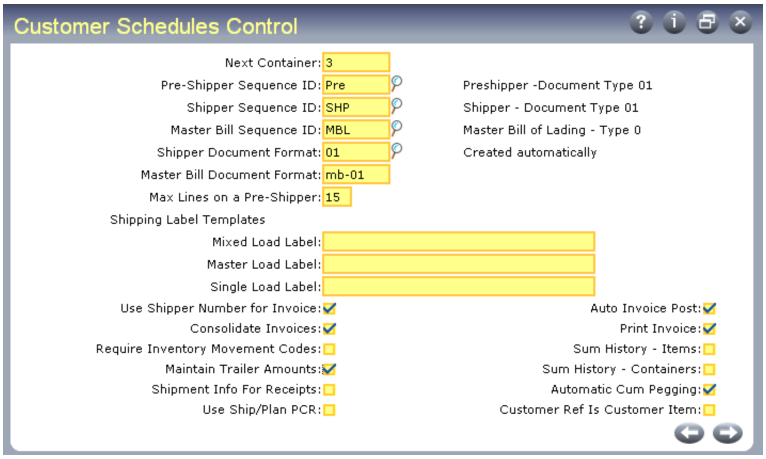
Customer Schedules Control (7.3.24) contains the same fields as Container/Shipper Control (7.9.24). Changing one automatically updates the other.

To ship scheduled orders, you must complete the same setup required for shipping standard sales orders. This includes defining sequence numbers using Number Range Management (NRM) features for pre-shippers, shippers, and bills of lading.

If you are using other shipping features such as shipping groups and inventory movement codes, they must also be defined and the defaults established in the control program.

See *User Guide: Distribution* for details.

**Fig. 2.2**
Customer Schedules Control (7.3.24)



Customer Schedules Control

Next Container: 3
Pre-Shipper Sequence ID: Pre — Preshipper -Document Type 01
Shipper Sequence ID: SHP — Shipper - Document Type 01
Master Bill Sequence ID: MBL — Master Bill of Lading - Type 0
Shipper Document Format: 01 — Created automatically
Master Bill Document Format: mb-01
Max Lines on a Pre-Shipper: 15
Shipping Label Templates
Mixed Load Label:
Master Load Label:
Single Load Label:

| | | | |
|---|---|---|---|
| Use Shipper Number for Invoice: | ☑ | Auto Invoice Post: | ☑ |
| Consolidate Invoices: | ☑ | Print Invoice: | ☑ |
| Require Inventory Movement Codes: | ☐ | Sum History - Items: | ☐ |
| Maintain Trailer Amounts: | ☑ | Sum History - Containers: | ☐ |
| Shipment Info For Receipts: | ☐ | Automatic Cum Pegging: | ☑ |
| Use Ship/Plan PCR: | ☐ | Customer Ref Is Customer Item: | ☐ |

The fields in this control program are described in the discussion of shipping.

See *User Guide: Distribution* for details.

## Setting Up Categories for Requirement Detail

You can maintain special requirements information associated with schedules, such as:

- Special marking required by the customer for the items shipped
- Specific information needed on barcode labels for packaging
- Requirements tied to authorization numbers such as release authorization numbers (RAN)

Multiple sets of requirement detail can be associated with each schedule detail record. This information can be updated in a subframe of Customer Plan Schedule Maint (7.5.1) and Customer Ship Schedule Maint (7.5.2).

See “Requirement Detail Maintenance Frame” on page 29.

When Required Ship Schedule Update (7.5.5) is run, requirement detail is copied to the RSS and can be viewed and maintained in Required Ship Schedule Maintenance (7.5.3). It can be reviewed on various schedule reports including:

- Schedule Inquiry (7.5.8)
- Schedule Report (7.5.10)

Requirement categories are created in Generalized Codes Maintenance (36.2.13) for field rqm_cat. The categories you create should be based on the type of requirement detail you receive.

The category AUTHNBR represents an authorization number. This category is created during document import, if it does not exist. AUTHNBR is the only category that has special meaning to the system. Other categories are for your reference only.

Authorization numbers are tracked from time of receipt through the entire shipment process to final invoicing. During import, if authorization numbers are received, the database is checked to verify that the numbers are unique, based on business rules.

## Setting Up Configured Messages

The requirements of companies involved in long-term, scheduled relationships vary greatly. One trading partner's requirements for how shipments are represented on an ASN may differ from another's. Meeting the trading partner's requirements is an important measure of supplier performance.

The system provides a flexible method of verifying the structure and content of newly created shippers. This optional feature lets you determine the severity of various error conditions. Any shipper can be verified, whether created automatically or manually.

The verification process uses an external execution file defined in Configured Message Maintenance (36.4.6) to confirm that the structure and content of the shipper are valid. It also uses records defined in Configured Message Maintenance to determine the message to display if the shipper fails the verification.

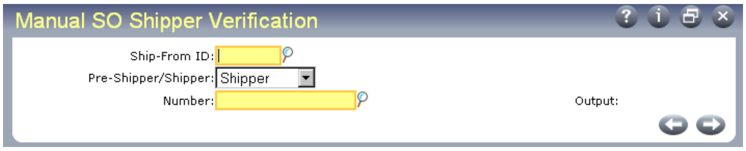
Configured messaging enables you to tailor conditional error processing to meet specific business rules. You determine which conditions do not justify a message, and which require an informational message, a warning message, or an error message. You can also specify the sequence in which the system checks for errors.

Different message conditions can be applied to different sites and addresses, letting you tailor processing based on the trading partner's requirements.

### Shipper Verification

Shipper verification executes automatically at the end of Shipper Gateway (7.9.22) and Picklist/Pre-Shipper–Automatic (7.9.1). Any shipper can also be verified manually using Manual SO Shipper Verification (7.9.10). This program alerts you to potential shipping problems that should be corrected before proceeding through the shipment process.

**Fig. 2.3**
Manual SO Shipper Verification (7.9.10)



Ship-From ID:
Pre-Shipper/Shipper: Shipper
Number:
Output:

Configured messaging is currently only implemented for shippers. Entries are based on the verification calling program, message number, message sequence, execution file, and severity level. You can set up messages based on language code, site, and address. Set up generic entries by leaving Site and Address blank. Define trading-partner-specific entries by entering a site code, customer ID, or ship-to code.

### Sample Configured Message Files

Table 2.2 lists the five sample shipper verification programs supplied with the system, or you can specify your own. There are many other conditions you may need to verify, such as:

- All items in a container are for the same purchase order.
- All items in a container are for the same authorization number.
- All items in a container are for the same lot.
- A returnable container is correctly cross-referenced in Customer Item Maintenance (1.16).

To create your own verifications, determine which are required, write the program, attach it to a configured message entry, and verify the shipper. Multiple verifications can be run on one shipper, provided multiple configured message entries exist.

**Table 2.2**
Sample Configured Message Execution Files

| Msg No. | Message | Calling Program | Execution File | Description |
|---|---|---|---|---|
| 1533 | Container quantity is greater than 1 | rcvrfsh1.p | rcvrfc01.p | Sample container quantity verification program |
| 1535 | A ship item is not containerized | rcvrfsh1.p | rcvrfi01.p | Sample item containerization verification program |
| 1540 | A container is empty | rcvrfsh1.p | rcvrfc02.p | Sample container empty verification program |
| 1541 | Containerization is greater than 2 levels | rcvrfsh1.p | rcvrfc03.p | Sample containerization level verification program |
| 1542 | A container has two different order/line items | rcvrfsh1.p | rcvrfi02.p | Sample container has same order/line verification program |

While shipper verification is optional, its use is recommended, since the process identifies initial problems with shippers. During verification, each program is executed in the order specified by the message sequence value. If any portion of the shipper is found to be invalid according to the execution file, the appropriate message displays. You can analyze and correct the situation and continue with the shipment process.

You can generate a Config Msg Verif Report (36.4.10), which lists the execution programs run, and the sequence in which they are run. The shipper is typically used to create an advance ship notice (ASN). Since transmission of the ASN is often time-critical, being aware of invalid shipper content or structure before shipment is vital.

## Setting Up Configured Messaging

To set up configured messaging, follow these steps:

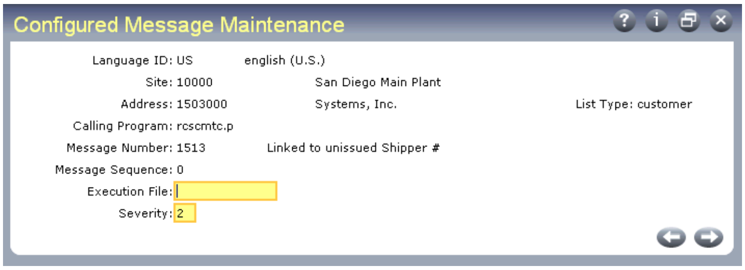
1. Create a user-defined verification execution program, or choose one of the five sample programs provided.
2. Define entries in Configured Message Maintenance. Multiple entries for the same verification program can exist, with different message sequence numbers.
3. Create the shipper manually using Pre-Shipper/Shipper Workbench (7.9.2) or automatically using Picklist/Pre-Shipper–Automatic (7.9.1) or Shipper Gateway (7.9.22).
4. If the shipper is created in Shipper Gateway or Picklist/Pre-Shipper– Automatic, verification is run automatically. Warning or error messages are displayed to the terminal or routed to a destination file name or print device.
5. If changes are made to the shipper or it is created in Pre-Shipper/Shipper Workbench, manually verify it using Manual SO Shipper Verification (7.9.10).
6. Optionally, print the Config Msg Verif Report (36.4.10) for a list of execution programs and the sequence in which they were run.

## Configured Message Maintenance

Use Configured Message Maintenance (36.4.6) to create configured message entries. Make the entries specific by adding a site and address or generic by leaving site and address blank.

If Site and Address fields are blank, the verification program applies to every site and every customer and ship-to. Provide more information to make shipper verification trading-partner specific. More specific entries are used first.

**Fig. 2.4**
Configured Message Maintenance (36.4.6)



Language ID: US english (U.S.)
Site: 10000 San Diego Main Plant
Address: 1503000 Systems, Inc. List Type: customer
Calling Program: rcscmtc.p
Message Number: 1513 Linked to unissued Shipper #
Message Sequence: 0
Execution File:
Severity: 2

*Language ID.* Enter a language code for selecting the appropriate message language.

*Site.* Optionally enter a site to be associated with the messages.

*Address.* Optionally enter a customer or ship-to code defined in Customer Maintenance (2.1.1) or Customer Ship-to Maintenance (2.1.13).

*Calling Program.* Currently, the only valid entry is rcvrfsh1.p, the shipper verification program.

*Message Number.* Enter the appropriate message number identifying specific message text.

If you are writing your own custom Progress programs, you may want to use standard messages for consistency. These are accessed using the include file `mfmsg.i`. Pass the message number and a severity indicator, and the message displays.

Message numbers 9000 through 9900 are reserved for customer use and are not used by QAD.

*Message Sequence.* Enter a number indicating the order in which the execution file should be run.

*Execution File.* Enter the appropriate verification program. This may be one of the five sample programs supplied with the system, or a custom, user-defined program. See Table 2.2 on page 15 for a list of sample programs.

*Severity Level.* Enter a number from 0 to 4 indicating the message severity.

0. No message displays.
1. An informational message displays.
2. A warning message displays.
3. An error message displays along with `Please re-enter`, and processing stops.
4. An error message displays, and processing stops.

***Warning*** When verifying shippers, do not use severity level 3. Verification is a noninteractive process run after the shipper is created, without opportunity to re-enter data. Use severity level 4, which does not include `Please re-enter`.

## Creating Scheduled Orders

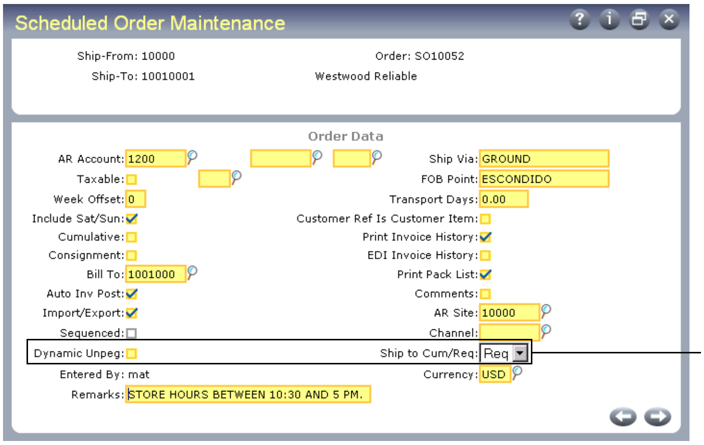
Create scheduled orders in Scheduled Order Maintenance (7.3.13). A scheduled order is a combination of sales order header and trailer fields and line-item planning fields. This combination of fields provides the structure against which item quantities and dates are received.

### Header Frame

Some of the header fields are similar in function to the equivalent fields in Sales Order Maintenance. Fields that are unique to scheduled order processing are discussed here.

See *User Guide: Distribution*.

**Fig. 2.5**
Scheduled Order Maintenance (7.3.13)



Ship-From: 10000
Order: SO10052
Ship-To: 10010001
Westwood Reliable

AR Account: 1200
Taxable: ☐
Week Offset: 0
Include Sat/Sun: ☑
Cumulative: ☐
Consignment: ☐
Bill To: 1001000
Auto Inv Post: ☑
Import/Export: ☑
Sequenced: ☐
Dynamic Unpeg: ☐
Entered By: mat
Remarks: STORE HOURS BETWEEN 10:30 AND 5 PM.

Ship Via: GROUND
FOB Point: ESCONDIDO
Transport Days: 0.00
Customer Ref Is Customer Item: ☐
Print Invoice History: ☑
EDI Invoice History: ☐
Print Pack List: ☑
Comments: ☐
AR Site: 10000
Channel:
Ship to Cum/Req: Req
Currency: USD

Use these two fields to control noncumulative schedules.

*Week Offset.* This field sets the weekly starting day of this scheduled order to match the customer's work week. The default is 0 (zero), which represents Monday. If this customer's business week begins on Tuesday, set this to 1, and so on through 6, which sets Sunday as the starting day. All reports and inquiries with bucketed quantities display the period requirements on this weekday.

*Cumulative.* Determines how requirements are entered on scheduled releases and displayed in reports and inquiries.

No: Net quantities are entered.

Yes: All quantities are entered as cumulative, meaning that the discrete quantity is added to the cumulative quantity of the previous requirement.

*Consignment.* Enter Yes if items on this scheduled order are consigned. This value defaults from Ship-To/Item Controls Maintenance (7.18.1), if used. If not used, the value defaults from Customer Consignment Control (7.18.24).

Enter No if the most items on this order are non-consigned. You can designate individual items as consigned in the Consignment Order Line Item Data frame that displays later during order entry.

See *User Guide: Consignment Inventory* for information on Customer Consignment Inventory.

*Auto Inv Post.* This field sets the default value for the Post Invoice field in Pre-Shipper/Shipper Confirm (7.9.5).

- When Post Invoice is No, invoices are not posted during shipper confirmation. You must post them manually using Invoice Post (7.13.4).
- When Post Invoice is Yes, invoices are automatically posted during shipper confirmation to the general ledger Accounts Receivable (AR) account specified in Customer Maintenance (2.1.1). You can print accumulated invoices using Closed Invoice Reprint (7.13.12).

This value defaults from the Auto Invoice Post field in Customer Schedules Control (7.3.24).

*Sequenced.* This field is available only when using the PRO/PLUS Customer Sequence Schedules module. It indicates whether the scheduled order is a sequenced scheduled order. If Yes, enter sequence information in the Sequence Delivery Data frame.

This value is used by EDI eCommerce, Required Ship Schedule Update (7.5.5), and Picklist/Pre-Shipper–Automatic (7.9.1) to verify whether scheduled orders are sequenced orders. It defaults from the Scheduled Order Default field in Sequence Schedule Control (7.5.4.24).

For details, see *User Guide: PRO/PLUS.*

*Dynamic UnPeg.* Set to Yes to initiate dynamic de-allocation. This affects the open quantity by letting pegged requirement quantities on unconfirmed shippers for the same order line number be included in the calculation. The pegged quantities are unpegged from unconfirmed shippers and pegged to ship lines on newly created shippers.

This activity is optional. It should only be used if unconfirmed shippers are left in the system for extended periods of time.

*Transport Days.* Enter the number of calendar days it takes for a shipment to arrive at the customer site. Specify a value only if your customer gives you a receipt schedule, specifying the date they want the product in-house. If your customer gives you a shipping schedule, they have already factored in the transportation time.

The schedule update functions uses this to set shipment dates.

*Shipment Date = Requirement Date – Transport Days*

*Print Invoice History.* Specify whether an invoice history can be printed for this scheduled order using Closed Invoice Reprint (7.13.12). This lets you print a paper copy of an invoice after an EDI invoice is transmitted electronically or when the advance ship notice (ASN) is used by the customer as the invoice.

*EDI Invoice History.* Specify whether an invoice for this scheduled order can be selected for export to the customer in EDI format using Invoice Export (35.4.3). On new orders, this field defaults from the Send EDI Invoices parameter specified for the customer in Trading Partner Parameter Maintenance (35.13.10). If that parameter is not specified, the default is No.

*AR Site.* Enter the site where the sales order or invoice was recorded. This can be the same as the ship-from site, but does not have to be. You can change this site for each line item.

In multisite transactions where the AR site is different from the ship-from site, you can make shipments and let a separate AR site collect the revenues. Also, the AR site can exist in a different entity or different database, or both.

*Ship to Cum/Req.* Specify Req (required) to indicate a noncumulative schedule. If Req, an additional frame displays. Specify Cum to indicate a cumulative schedule.

Enter Req to peg ship details out of sequence. Pegging occurs automatically during the creation of the shipper in:

- Picklist/Pre-Shipper–Automatic (7.9.1)
- Pre-Shipper/Shipper Workbench (7.9.2)
- Shipper Gateway (7.22)

For a cumulative order, you can disable automatic pegging by setting Automatic Cum Pegging to No in Container/Shipper Control (7.9.24) or Customer Schedules Control (7.3.24).

See “Pegging Requirement Detail” on page 36.

*Customer Ref is Customer Item.* Use this field to indicate whether the value entered in Customer Ref should be a valid customer item. It defaults from Customer Schedules Control.

You use Customer Item Maintenance (1.16) to cross-reference customer item numbers to your internal item numbers. Some customers may use more than one of their own identification numbers for your item.

If you have an internal item that correspond to more than one customer item, you can use this field, in conjunction with the Item and Customer Ref fields, to indicate which of the various customer items to use. This lets you set up more than one order line for the same combination of internal item, PO number, and ship-to address.

The effect of setting this field to Yes varies depending on what you enter in the Item field:

- When you specify a customer item number defined in Customer Item Maintenance (1.16) in the Item field, that customer item number defaults to the Customer Ref and Customer Item field (in the Order Line Item Data frame). The system replaces the value you enter in the Item field with the corresponding internal item number and displays a message to inform you of the change.
- When you enter an item defined in Item Master Maintenance (1.4.1) in the Item field and that internal item corresponds to just one customer item, the corresponding customer item number defaults to Customer Ref and Customer Item.
- When you enter a valid internal item number in the Item field that does not have a corresponding customer item number an error displays. You must change the item or set up a customer item cross-reference in Customer Item Maintenance.
- When you enter a valid internal item number in the Item field that has more than one customer item number, no default displays in the Customer Ref field. You must specify a valid customer item in Customer Ref to continue.
- When you leave the Item field blank and enter a valid customer item in the Customer Ref field, the system enters the corresponding internal item number in the Item field and defaults the value in Customer Ref to the Customer Item field.

Any values entered in Customer Ref are validated against existing customer item numbers.

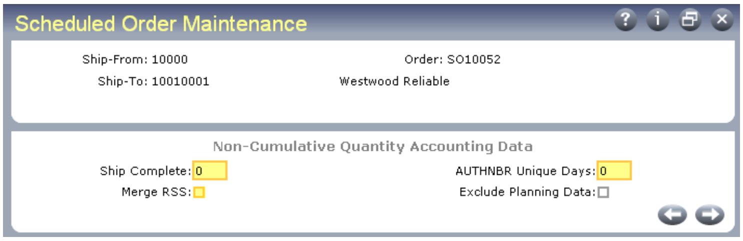
Setting this field to No has the following effects:

- When you enter a valid customer item in the Item field, that customer item number defaults to the Customer Item field. The system replaces the value you enter in the Item field with the corresponding internal item number and displays a message to inform you of the change. The customer item number displays next to the Customer Ref field, but the Customer Ref field is not updated.
- When you enter a valid internal item number that corresponds to just one customer item in the Item field, the corresponding customer item displays next to the Customer Ref field and defaults to the Customer Item field; Customer Ref is not updated.
- When you enter an item number that either does not have a corresponding customer item number or has more than one customer item number, then both Customer Item and Customer Ref are left blank. Values entered in Customer Ref are not validated.

## Non-Cumulative Quantity Accounting Data Frame

This frame displays when Ship to Cum/Req is set to Req.

**Fig. 2.6**
Scheduled Order Maintenance, Non-Cumulative Quantity Accounting Data Frame



Ship-From: 10000
Order: SO10052
Ship-To: 10010001
Westwood Reliable

Non-Cumulative Quantity Accounting Data

Ship Complete: 0
AUTHNBR Unique Days: 0
Merge RSS: ☐
Exclude Planning Data: ☐

*Ship Complete.* Ship Complete is used to specify what percentage of a requirement quantity must be shipped to be considered complete. If you consider a requirement satisfied when 100 percent of the requirement quantity has been shipped, set Ship Complete to 100.

To verify that a requirement with only one authorization number is shipped properly, set Ship Complete to 1. This prevents any other occurrence of an authorization number from being shipped. When the first occurrence is pegged, it satisfies the ship complete percentage, and sets open quantity to zero. If you attempt to peg the requirement quantity for a second occurrence, an error displays.

During the generation of a required ship schedule, this field determines which RSS requirements are open and should be carried to the new active schedule. If a percentage shipped is less than the Ship Complete percentage, the requirement is included in the new active RSS.

During shipment, this field determines which requirements are available for pegging in various shipper programs.

***Example*** Set Dynamic Unpeg to No and Ship Complete to 100. Create a shipper with an item, in a box, on a pallet, with a ship quantity of 500. With an RSS requirement of 500, when you peg 500 in the Consume Required Ship Schedule Requirements frame, the open quantity is reduced to zero. This shipment is now considered complete.

*AUTHNBR Unique Days.* If not zero, the system verifies that duplicate authorization numbers are not reused within the time period specified.

*Merge RSS.* This field determines whether open requirements from existing required ship schedules (RSS) are copied to newly generated schedules. A requirement is considered open if it has not been fully shipped. During the merge, the value of Ship Complete determines which requirements are open.

No: Required Ship Schedule Update and Selective Required Ship Schedule Update do not copy requirements from existing active schedules to new schedules.

Yes: Required Ship Schedule Update (7.5.5) and Selective Required Ship Schedule Update (7.5.6) copy open requirements from existing active schedules to new schedules. If Yes, enter yes or No in the Exclude Planning Data field to indicate whether to merge planning data.

Set to Yes if your trading partner does not retransmit requirements that have not yet been shipped.

See “Merging Imported Schedules” on page 31.

***Note*** Open requirements that are already allocated are always copied regardless of this setting.

*EDI Update RSS.* When both this field and Merge RSS are Yes, the system updates the required ship schedule after importing a ship schedule in Document Import (35.1).

The default is No. You can update it only when Merge RSS is Yes.

You can update the RSS using Required Ship Schedule Update (7.5.5) or Selective Req Ship Sched Update (7.5.6). However, depending on how frequently you run the import process, it is possible to miss some requirements when you do the update manually. Updating the RSS at the same time the schedule is imported and merged avoids this problem.

*Exclude Planning Data.* You can update this field only when Merge RSS is Yes. When open requirements are being merged, this field determines how the system manages planning data.

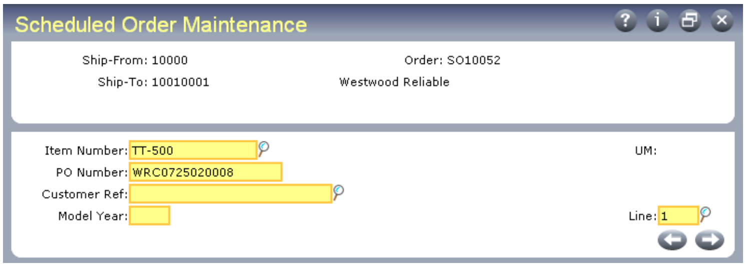
No: Planning data from the active required ship schedule is merged into the newly generated schedule.

Yes: Planning data from the active required ship schedule is not merged into the newly generated schedule.

## Order Line Item Identification Frame

Use the following frame to identify items in the scheduled order:

**Fig. 2.7**
Scheduled Order Maintenance, Order Line Item Identification Frame



Scheduled Order Maintenance

Ship-From: 10000
Order: SO10052
Ship-To: 10010001
Westwood Reliable

Item Number: TT-500
UM:
PO Number: WRC0725020008
Customer Ref:
Model Year:
Line: 1

The following four fields uniquely identify a scheduled order detail record:

*Item.* Enter the item code for this order line. Inventory item codes must be defined previously in Item Master Maintenance (1.4.1). If you specify a customer item, the system accesses the corresponding internal item number and displays it in the Item field.

***Note*** The system only supports kits in discrete sales orders—not customer scheduled orders.

*PO Number.* Enter the customer purchase order for this line item record. You can leave this field blank.

***Note*** You cannot specify the same item and PO number on a scheduled order for the same ship-from site and ship-to customer.

*Customer Ref.* The value you enter in this field depends on the value of Customer Ref is Customer Item in the scheduled order header.

If Customer Ref is Customer Item is Yes, you must provide a valid customer item number. When a customer item defaults, it corresponds to the internal item number entered in Item. Alternatively, if you enter a customer item in Item, then that customer item defaults here. Any value you enter here is validated against existing customer item numbers.

If Customer Ref is Customer Item is No, optionally enter any customer reference. This value is not validated.

See “Customer Ref is Customer Item” on page 19.

*Model Year.* Optionally enter a model year for the scheduled order line item.

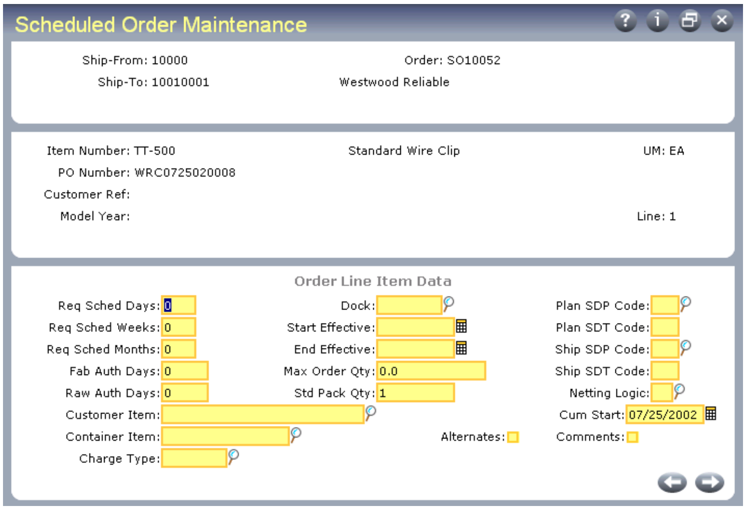
*UM.* Enter the unit of measure for the item. For inventory items, this defaults from the item master record.

*Line.* Enter the line number that uniquely identifies a scheduled sales order line item. The system assigns line item numbers automatically when you add new line items. Use this number to access and modify an existing line item.

## Order Line Item Data Frame

The following frame always displays.

**Fig. 2.8**
Scheduled Order Maintenance, Order Line Item Data Frame



Scheduled Order Maintenance

Ship-From: 10000
Order: SO10052
Ship-To: 10010001
Westwood Reliable

Item Number: TT-500
Standard Wire Clip
UM: EA
PO Number: WRC0725020008
Customer Ref:
Model Year:
Line: 1

Order Line Item Data

Req Sched Days: 0
Req Sched Weeks: 0
Req Sched Months: 0
Fab Auth Days: 0
Raw Auth Days: 0
Customer Item:
Container Item:
Charge Type:

Dock:
Start Effective:
End Effective:
Max Order Qty: 0.0
Std Pack Qty: 1
Alternates: ☐

Plan SDP Code:
Plan SDT Code:
Ship SDP Code:
Ship SDT Code:
Netting Logic:
Cum Start: 07/25/2002
Comments: ☐

*Req Sched Days, Req Sched Weeks, Req Sched Months.* These fields rebucket customer requirements into a sequential horizon of days, then weeks, then months.

Entering values in these fields has an impact on MRP. The weekly and monthly quantities are seen by MRP as requirements on the first day of the period, and MRP plans accordingly. This can result in excessive and unnecessary action messages.

Set these fields to zero to maintain the customer’s date and quantity requirements. Also leave these fields set to zero if you are using noncumulative accounting procedures and pegging requirements through authorization numbers.

*Fab Auth Days, Raw Auth Days.* Raw and fabrication authorization commitments are made to give suppliers some protection against sudden and unforeseen reductions in demand.

- Raw quantity is the quantity of product the customer commits to covering component costs.
- Fab quantity is the quantity of product the customer commits to covering manufacturing costs.

These fields are used by Customer Plan Schedule Maint (7.5.1) to calculate the authorization quantities, in the event customer authorizations are for a number of days into the future.

The Schedule Report (7.5.10) shows all authorizations by release, then prints the highest of each type authorization, referencing the release ID of each. The highest of each type is determined by the highest quantity or the latest end date.

*Customer Item.* Enter the item number used by the customer. This number appears on ASNs and invoices in place of your internal item number. The value that displays in this field defaults from the Item field or Customer Ref field. See “Customer Ref is Customer Item” on page 19.

*Container Item.* Optional container item number, used for shipping the scheduled order item. The Required Ship Schedule Detail Report (7.5.14) display this number, if defined.

*Dock.* Optionally, enter a valid dock address for this customer ship-to address. Items are delivered to this dock.

*Start and End Effective.* Optional dates controlling the introduction and duration of this line item on the order. Warning messages display for orders released before or after the effective dates.

*Max Order Qty.* Enter the maximum, cumulative quantity for the life of this order. When this quantity has been exceeded, the system displays warning messages at order updates, maintenance functions, inquiries, and reports.

*Std Pack Qty.* Enter the value used for shipping orders for this item. This field is similar to Order Multiple in the item master, but appears here because the standard shipment multiple may be different for different customers. The schedule update rounds order quantities up to this multiple. In order to preserve the scheduled order packing multiple, you must remove any order multiple specified in Item Master Maintenance (1.4.1).

*Plan SDP, Ship SDP.* Enter a code specifying the default ship/delivery pattern. These codes indicate the days of the week or month that shipments or deliveries are required.

The schedule update functions use this code to determine due dates for shipping the order. SDP codes can differ for shipping and planning schedules. For instance, if planning schedules are not used, leave these fields blank to avoid any rescheduling of the planning dates, while the ship schedule is rescheduled based on your shipping days.

SDP codes support both the ODETTE and Automotive Industry Action Group (AIAG) ship/delivery patterns. They are translated to the appropriate industry-standard code during EDI conversion and transmission.

*Netting Logic.* Determines which schedule types the system uses to create the required shipping schedule.

1: Use the ship schedule only.

2: Use the plan schedule only.

3: Combine the planning and shipping schedules, with the shipping schedule taking precedence where the schedules overlap. This is known as replace logic.

4: Combine planning and shipping schedule with the greater of the shipping or planning schedule taking precedence when the schedules overlap. This is known as consume logic.

## Viewing Schedule Order Information

The system supplies two ways to view schedule order information:

- Schedule Order Inquiry (7.3.14)
- Schedule Order Report (7.3.15)

To display scheduled order information, you can specify the site from which all items for the scheduled order will be shipped, customer address, item, customer reference for the item, model year, PO number, or order. Additionally, Scheduled Order Report provides a sort option for scheduled order information that displays.

## Processing Customer Schedules

Once scheduled orders are set up in your system, you can receive printed or electronic schedule releases from your customers. The most recently received release normally supersedes all previous releases. An exception is raw and fabrication authorizations. The longest authorizations, calculated by end date, are the valid ones.

How a schedule is loaded also depends on the EDI purpose code specified in the header of the imported file. Based on the purpose code, schedules can be added, deleted, or simply loaded as a test without making any updates.

Two types of schedules are received: planning and shipping. The two schedule types may or may not match in quantity or due dates for any date or period. The ship schedule is usually more accurate, but this depends on your customer. The selection of which schedule takes precedence in the short term is managed through the Netting Logic setting on the order header.

There are four basic steps to processing a schedule:

1. Receive the schedule, usually using EDI eCommerce.
2. Enter the release into the system or verify the schedule received through EDI eCommerce.
3. Run the schedule update to create the required ship schedule.
4. Run MRP to explode demand and schedule component orders.

### Importing Schedules with EDI eCommerce

All EDI documents are imported using the same EDI eCommerce Document Import (35.1) function. Based on control data in the EDI file, the system determines the type of document being imported, maps the data to match the appropriate database tables and fields, and calls the appropriate gateway program to load the document into the system.

When adding a schedule, the system:

- Verifies that the trading partner exists in the system.
- Verifies that your site code matches that on the release.
- Cross-references item numbers to your internal item numbers.
- Checks and opens the order record and line number.
- Determines if quantities are discrete or cumulative based on information in the imported EDI file.
- Checks that cumulative quantities appear in ascending order.
- Deletes this specific release if it already exists in the system.

- Sets the effective end date of the prior release.
- Adds any comments and the detail schedule data.
- Creates requirement detail records if they are received. If authorization numbers are received, verifies that they are unique based on the AUTHNBR Unique Days setting in the schedule.
- Updates the cumulative requirements.
- Updates last receipt information from attached ASNs.
- Updates the fabrication and raw material authorizations.
- Creates a new schedule release, incrementing the release ID.

If the schedule import would override a required ship schedule with unshipped requirements, the transaction is not completed and an error displays.

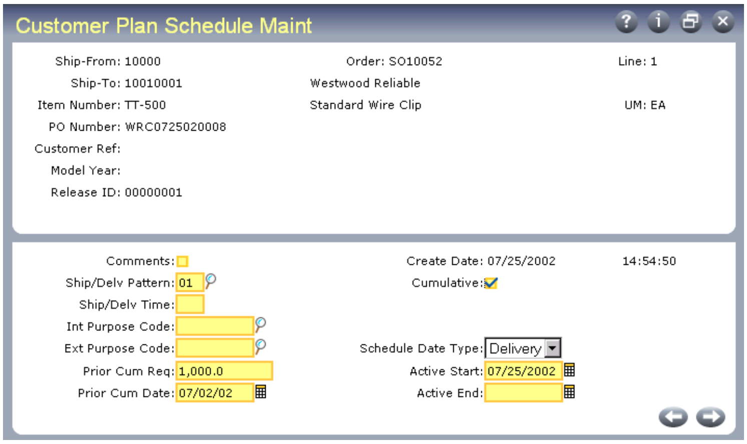
See *User Guide: EDI eCommerce* for information on importing documents into your system.

## Entering or Verifying the Release

If you do not import schedules using EDI eCommerce, enter the release into the system using Customer Plan Schedule Maintenance (7.5.1) or Customer Ship Schedule Maintenance (7.5.2). In an EDI eCommerce environment, use these programs to verify that release receipt was successful and that past customer receipts match your shipment records. The following is a brief discussion of some significant fields.

The following discussion focuses on Customer Plan Schedule Maintenance. Customer Ship Schedule Maintenance is almost the same. Any differences are noted.

**Fig. 2.9**
Customer Plan Schedule Maintenance (7.5.1)



Ship-From: 10000
Order: SO10052
Line: 1
Ship-To: 10010001
Westwood Reliable
Item Number: TT-500
Standard Wire Clip
UM: EA
PO Number: WRC0725020008
Customer Ref:
Model Year:
Release ID: 00000001

Comments: ☐
Create Date: 07/25/2002
14:54:50
Ship/Delv Pattern: 01
Cumulative: ☑
Ship/Delv Time:
Int Purpose Code:
Ext Purpose Code:
Schedule Date Type: Delivery
Prior Cum Req: 1,000.0
Active Start: 07/25/2002
Prior Cum Date: 07/02/02
Active End:

*Customer Ref.* The value you enter in this field depends on the value in Customer Ref is Customer Item in Customer Schedules Control (7.3.24).

If Customer Ref is Customer Item is Yes, you must provide a valid customer item number. When a customer item defaults, it corresponds to the internal item number entered in Item. Alternatively, if you enter a customer item in Item, then that customer item defaults here. Any value you enter here is validated against existing customer item numbers.

If Customer Ref is Customer Item is No, optionally enter any customer reference. This value is not validated.

See "Customer Ref is Customer Item" on page 19.

*Model Year.* Enter the model year of the scheduled order line item.

*Release ID.* Enter a sequential number identifying this release. Planning, ship, and required schedules for the same customer schedule line item can share release IDs. Pressing Go in this field selects the active release. You can enter and make active any other release.

*Ship/Delv Pattern.* Enter the ship/delivery pattern that the customer used in creating this release. Your order header takes precedence over the customer's SDP code.

*Ship/Delv Time.* Specify the code indicating the time of day when shipments or deliveries are accepted.

*Int and Ext Purpose Code.* These fields are not currently used. Their values have no effect on processing.

*Prior Cum Req.* The total customer receipts on this scheduled order up to the Prior Cum Date. This is automatically incremented by new releases from the customer based on the customer's record of received quantities. A record of the last three or more customer receipts is often sent with each scheduled release to help identify any quantity discrepancies.

*Prior Cum Date.* The day before this scheduled release became active. This date is used to determine cumulative quantities. All customer receipts up to and including the prior cum date are added to the order's cumulative total and display in the Prior Cum Req field.

*Cumulative.* Defaults from the scheduled order header.

*Schedule Date Type.* This field determines how requirement dates are calculated by Required Ship Schedule Update. Valid entries are:

Ship: Schedule dates are shipment based and requirement dates are not adjusted.

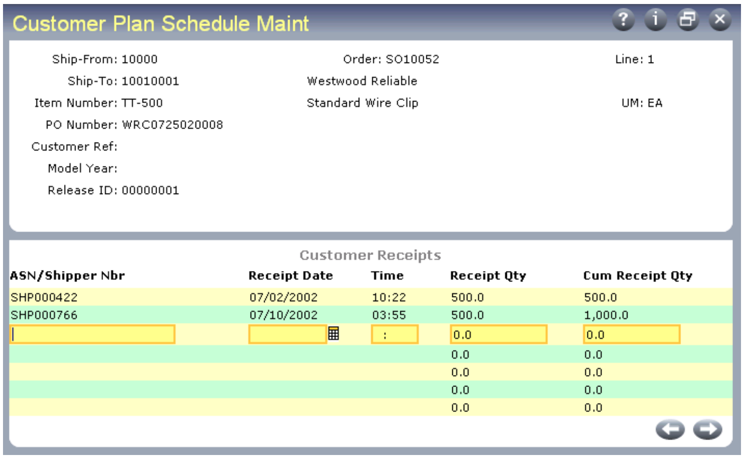
Delivery: Schedule dates are delivery based. Requirement dates are adjusted by the number of days specified for Transport Days in Scheduled Order Maintenance.

The value of this field is read from the schedule when it is loaded using EDI eCommerce.

## Customer Receipts

The next frame displays up to the last 10 ASNs that you sent to the customer and shows that they have been appended to the release to help maintain accurate cumulative totals.

**Fig. 2.10**
Customer Receipts Frame



Ship-From: 10000
Ship-To: 10010001
Item Number: TT-500
PO Number: WRC0725020008
Customer Ref:
Model Year:
Release ID: 00000001

Order: SO10052
Westwood Reliable
Standard Wire Clip

Line: 1
UM: EA

Customer Receipts

| ASN/Shipper Nbr | Receipt Date | Time | Receipt Qty | Cum Receipt Qty |
|---|---|---|---|---|
| SHP000422 | 07/02/2002 | 10:22 | 500.0 | 500.0 |
| SHP000766 | 07/10/2002 | 03:55 | 500.0 | 1,000.0 |
|  |  | : | 0.0 | 0.0 |
|  |  |  | 0.0 | 0.0 |
|  |  |  | 0.0 | 0.0 |
|  |  |  | 0.0 | 0.0 |
|  |  |  | 0.0 | 0.0 |

*ASN/Shipper Nbr.* The last three ASNs, or receipt documents, are typically sent by the customer with each schedule release. Each is identified with a shipper or ASN number. The ASNs were originally sent by your company to notify the customer of a shipment, and are used by the customer to verify quantities and delivery times.

If there are discrepancies between the ASN you sent and the received items, the customer changes the quantities and times accordingly, and attaches the ASN to the next schedule release for your verification.

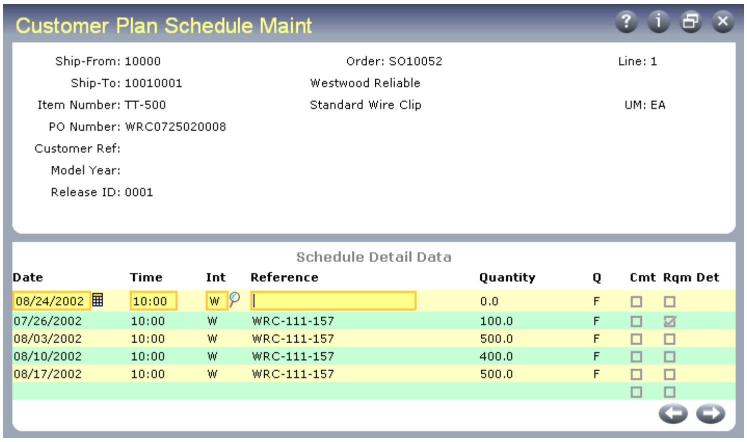
*Receipt Qty.* The discrete quantity the customer received in the specified shipment.

*Cum Receipt Qty.* The cumulative quantity for this item, including this ASN/shipper receipt.

## Schedule Detail Data Frame

In the Schedule Detail Data frame, you can view and edit the requirements sent by the customer on this release.

**Fig. 2.11**
Schedule Detail Data Frame



Ship-From: 10000
Ship-To: 10010001
Item Number: TT-500
PO Number: WRC0725020008
Customer Ref:
Model Year:
Release ID: 0001

Order: SO10052
Westwood Reliable
Standard Wire Clip

Line: 1
UM: EA

Schedule Detail Data

| Date | Time | Int | Reference | Quantity | Q | Cmt | Rqm Det |
|---|---|---|---|---|---|---|---|
| 08/24/2002 | 10:00 | W |  | 0.0 | F | ☐ | ☐ |
| 07/26/2002 | 10:00 | W | WRC-111-157 | 100.0 | F | ☐ | ☒ |
| 08/03/2002 | 10:00 | W | WRC-111-157 | 500.0 | F | ☐ | ☐ |
| 08/10/2002 | 10:00 | W | WRC-111-157 | 400.0 | F | ☐ | ☐ |
| 08/17/2002 | 10:00 | W | WRC-111-157 | 500.0 | F | ☐ | ☐ |
|  |  |  |  |  |  | ☐ | ☐ |

*Interval.* Indicate the interval this quantity requirement covers. Values are D (daily), W (weekly), M (monthly), Q (quarterly), H (half-yearly), Y (yearly).

Weekly intervals bucket requirements into the first day of the week, Monthly intervals bucket all requirements for the next month into the first Monday of the month.

*Reference.* The reference number is used by the customer to identify a specific shipment or delivery quantity. If this trading partner uses RAN numbers, they display in this field.

*Q.* A one-character forecast qualifier, communicated by the customer in plan and ship schedules.

This value normally defines whether the requirement quantity is firm or still in the planning stages. It can also be used for any special purpose specified by the customer communicating the schedule.

Since all quantities in a required ship schedule are firm, Required Ship Schedule Update sets this field to indicate the source of the requirement:

1: The requirement originated from a planning schedule.

2: The requirement originated from a shipping schedule.

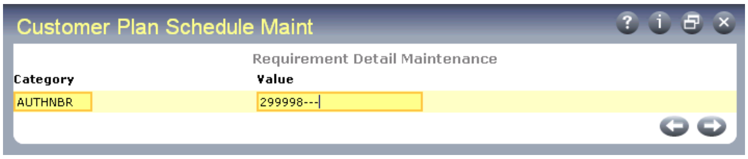
However, if the scheduled order defines bucketing quantities and the schedule does not have any detailed requirements, the Q column still displays F after bucketing processing.

*Rqm Det.* Enter Yes to display an additional frame for adding or modifying requirement detail. Requirement detail is typically updated only if you are using noncumulative accounting procedures.

### Requirement Detail Maintenance Frame

Figure 2.12 illustrates the Requirement Detail Maintenance frame. This frame displays when Rqm Det is Yes in the Schedule Detail Data frame.

**Fig. 2.12**
Requirement Detail Maintenance Frame



Requirement Detail Maintenance

| Category | Value |
|---|---|
| AUTHNBR | 299998--- |

Specify a valid category previously defined in Generalized Codes Maintenance (36.2.13) and enter the requirement detail in Value.

If an authorization number is specified, the system verifies that it is unique, based on the setting of AUTHNBR Unique Days in the schedule.

If a requirement exists on a confirmed or unconfirmed shipper, avoid modifying the record. Doing so could result in one of the following messages:

- `LINKED TO UNCONFIRMED SHIPPER`
- `LINKED TO CONFIRMED SHIPPER`

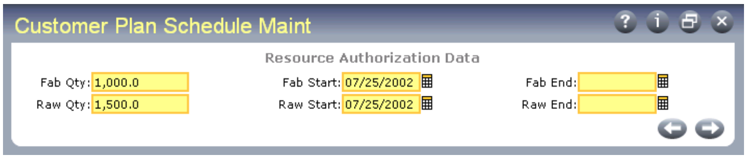
The messages display if an entry is defined in Configured Message Maintenance with a severity level of 1 or higher.

In Required Ship Schedule Maintenance (7.5.3), the value of Reference is linked to the value for AUTHNBR. If you modify the Reference value, a new schedule detail record is created. Only one authorization number can exist for each entry in Required Ship Schedule Maint. If you attempt to add a second, an error displays.

### Resource Authorization Data Frame

The Resource Authorization Data frame only displays in Customer Plan Schedule Maintenance. These fields are not updated for ship schedules.

**Fig. 2.13**
Resource Authorization Data Frame



Customer Plan Schedule Maint

Resource Authorization Data

Fab Qty: 1,000.0
Raw Qty: 1,500.0
Fab Start: 07/25/2002
Raw Start: 07/25/2002
Fab End:
Raw End:

*Fab Qty, Raw Qty.* The quantity of this item, in end-item terms, that the customer authorizes you to fabricate (Fab Qty) or purchase materials for (Raw Qty), as of this scheduled release. The quantity and dates are used by the Schedule Authorization Report (7.5.12), which calculates the largest fab and raw authorizations by item and order.

*Fab Start/End, Raw Start/End.* Start and end date for these authorizations. Some customers send dates, others quantities.

## Creating a Required Ship Schedule

At any point during schedule processing, you can use Required Ship Schedule Maintenance (7.5.3) to edit the active or any other required ship schedule release. To call up the active schedule release, select the correct order and press Go. In the Release ID field, press Go again to open the active release.

To run the schedule update, use either Required Ship Schedule Update (7.5.5) or Selective Req Ship Sched Update (7.5.6). The update creates a required ship schedule from either or both the planning and ship schedules. Which schedule is used depends on the Netting Logic setting in the order header. The system records the source of the requirement—either a shipping or planning schedule. This information displays in the output of the update functions.

If the order is using netting logic 3, the value of Use Ship/Plan PCR in Customer Schedules Control affects the schedule calculation.

- If No, the beginning of the planning schedule is replaced by the shipping schedule and no prior cumulative quantities are considered.
- If Yes, the beginning of the planning schedule is replaced by the shipping schedule and remaining planning schedule quantities are adjusted by prior cumulative quantities.

See “Netting Logic” on page 24.

### RSS Calculations

The update first selects the most recent release for each schedule type. It then uses the order header data (Week Offset, Cumulative, Transport Days, Req Sched Days, Weeks and Months, Standard Pack, Netting Logic, and SDP Codes), your calendar, and your customer's calendar to adjust, if necessary, any dates or quantities. Adjustments are required when a customer does not schedule their requirements with reference to your open days, ship schedule, or shipment multiples. All date adjustments are back-scheduled.

The program performs the following calculations:

1. Back-schedules for ship/delivery pattern.
2. Combines schedules using netting logic.
3. Back-schedules for customer calendar from ship/delivery schedule.
4. Back-schedules for transport lead time from calendar-adjusted schedule.
5. Revises quantities to standard pack quantity multiple.
6. Rebuckets quantities from month and week quantities into dates and quantities.
7. Creates a new active required ship schedule, assigning a Release ID and displaying quantities and dates.

### Managing Requirement Detail

If you are using noncumulative accounting procedures, the system manages requirement detail based on the settings you define in the Non-Cumulative Quantity Accounting Data frame of Scheduled Order Maintenance.

If requirement detail exists, the system verifies that authorization numbers are unique, based on the AUTHNBR Unique Days setting for the scheduled order. Then requirement detail is copied to the RSS and a schedule detail record is created for each requirement detail record. In addition, open requirements from the previous active RSS can be carried to the new RSS if Merge RSS is Yes.

Planning data is excluded from the merge based on the setting of Exclude Planning Data. In some environment, authorization numbers are only supplied with scheduled requirements, not planned ones.

See "Non-Cumulative Quantity Accounting Data Frame" on page 20 for details.

### Merging Imported Schedules

When you import a schedule using EDI eCommerce, the system uses information from the customer's EDI file to determine whether the incoming schedule should be merged with an existing one or replace it.

While updating the RSS also performs this function when Merge RSS is Yes in Scheduled Order Maintenance (7.3.13), it is sometimes impractical to merge the schedules manually if changes are being imported several times a day.

See "Merge RSS" on page 21.

The value of the `schedule_merge` variable in the implementation definition associated with the imported document controls whether the schedule is merged with the previous one.

- When the variable is No, the system replaces the current schedule with the corresponding new schedule from the EDI file.
- When it is Yes, requirements from the new schedule are added to those in the existing schedule.

See *User Guide: EDI eCommerce* for information on setting up implementation definitions.

***Example*** A schedule arrives at 10:00 a.m. with October 2 forecast for a quantity of 10. At 11:00 a.m., another schedule arrives with a new release ID for an October 3 forecast for a quantity of 2. The `schedule_merge` variable file is Yes. The system makes the second schedule the active schedule, then copies the requirements from the first schedule into it. The resulting schedule includes the requirements for both October 2 and October 3. If the second schedule had the `schedule_merge` variable set to No, the second schedule would replace the first—leaving only one requirement for a quantity of 2 on October 3.

Another variable, `detail_purpose`, can be used to provide more control over how imported forecasts are used when `schedule_merge` is Yes. Table 2.3 shows the effects of each value of the `detail_purpose` variable.

**Table 2.3**
Effects of detail_purpose Variable

| Value of detail_purpose | Effect |
|---|---|
| A | For forecasts matching type, order number, line, release, date, time, firm/plan setting, and reference, the incoming amount is added to the current value. |
| R | The matching forecast replaces the current value. |
| D | The current value is set to 0 (zero). |
| Other value or blank | The matching forecast replaces the current value. |

### Report Output

When Report Detail/Summary is set to Detail in Required Ship Schedule Update, the entire calculation prints an audit trail. The update function can be run in preview mode first by setting Update to No.

When Update is Yes, a required ship schedule is created and the release ID incremented. You can rerun a schedule update by specifying the release ID of the order.

## Viewing Schedule Information

The system supplies a number of reports for viewing schedule information. Each displays the source of the requirement—ship or plan schedule—received through loading EDI schedules.

- Schedule Inquiry (7.5.8)
- Schedule History Inquiry (7.5.9)
- Schedule Report (7.5.10)

# Running MRP

You are now ready to run MRP to explode demand and schedule component orders.

See *User Guide: Manufacturing*.

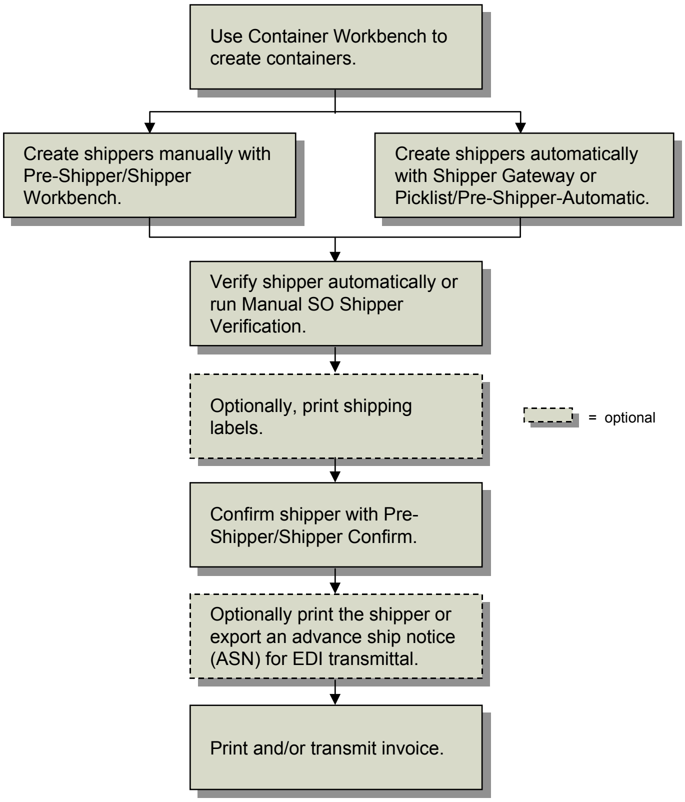
# Processing Shipments

Use Sales Order Shipper Maintenance (7.9.8) to specify what is going to be shipped. However, since some time may elapse between the actual shipment and the creation of the shipper, use Pre-Shipper/Shipper Confirm (7.9.5) to execute shipment.

A shipment consists of multiple items, which can be end items or containers holding other containers and/or end items. Each shipper has a unique ID, which can also be the ASN number and invoice number.

Shipment maintenance relies on a structural relationship between items and containers. Containers are similar to parents and can include any number of items or other containers. A shipper is defined for the entire shipment, which contains all containers as well as any items that are not in containers.

**Fig. 2.14**
Scheduled Order Shipping Flow


Use Container Workbench to create containers.
Create shippers manually with Pre-Shipper/Shipper Workbench.
Create shippers automatically with Shipper Gateway or Picklist/Pre-Shipper-Automatic.
Verify shipper automatically or run Manual SO Shipper Verification.
Optionally, print shipping labels.
= optional
Confirm shipper with Pre-Shipper/Shipper Confirm.
Optionally print the shipper or export an advance ship notice (ASN) for EDI transmittal.
Print and/or transmit invoice.

Each shipment is processed in a similar manner using the following steps. Not all steps are required.

1. Containerize the shipment using Container Workbench (7.7.1), or use Pre-Shipper/Shipper Workbench (7.9.2) to add items and containers to shippers directly.

   See *User Guide: Distribution* for details.

   You can also define the shipper using Sales Order Shipper Maintenance (7.9.8).

   ***Note*** Once a container is attached to a shipper or to a parent container, it cannot be deleted.

   This step can be done without defined containers by simply assigning end items to the shipper itself. However, if you use shipping labels, items must normally be in a container.

   Assign containers and items, the quantities for each, then add any lot or serial detail information. You are also prompted for carrier details such as Ship Via and FOB Point. Volume and weight are not referenced.

   All container and shipper data can be edited before shipper confirmation with the exception of the container ID. You can also modify shippers that have already been confirmed. However, modified shippers cannot be reconfirmed.

   If you change the Ship Via or FOB Point fields on the shipper, the system does not automatically update the fields on the original scheduled order. To have the fields updated on the original scheduled order, the Post Invoice field in Pre-Shipper/Shipper Confirm (7.9.5) must be Yes.

   For noncumulative schedules, requirement detail pegging takes place during this step.

   See “Pegging Requirement Detail” on page 36.

   If you are in multi-entry mode, you can also reedit line detail allocations for previously unconfirmed detail allocations when using multiple databases and allocating the line from a remote database.

2. Shipment verification is executed automatically at the completion of step 1. However, if you make additional modifications, you may want to execute Manual SO Shipper Verification (7.9.10) to reverify the structure of the shipper. See “Setting Up Configured Messages” on page 14 for details.

3. Print shipping labels using Shipping Label Print (7.7.7) or SO Shipping Label Print (7.9.14).

   Print the labels by container. If you have referenced multiple containers under one container ID, multiple labels print. If no other containers are referenced, one label prints. Select the printer for which you have added barcode escape codes and developed template files.

4. Confirm the shipper using Pre-Shipper/Shipper Confirm (7.9.5).

   This program confirms individual shipments by shipper ID. For noncumulative schedules, requirement detail consumption takes place during this step.

   See “Consuming Requirements” on page 39.

   Confirmation decrements finished goods inventory, updates GL accounts, and increases the cumulative shipped quantity. Depending on how the Post Invoice field is set, it may also post an invoice.

   The value of Post Invoice initially defaults from the Auto Inv Post field in the scheduled order header.

- When Post Invoice is No, the standard procedure for processing an invoice applies. You can print the invoice during shipper confirmation or later using Invoice Print (7.13.3), then post it using Invoice Post (7.13.4).
- When Post Invoice is Yes, Pre-Shipper/Shipper Confirm automatically posts the invoice to the customer's AR account. When Use Shipper Nbr for Inv Nbr is also Yes, the shipper ID/ASN number is used as the invoice number. You can print the invoice during shipper confirmation or later using Closed Invoice Reprint (7.13.12).

When Post Invoice is No, you can still print an invoice during shipper confirmation or later using Invoice Print (7.13.3). However, if you record additional shipments against the same customer scheduled order without first posting this invoice, posting information will be consolidated and therefore not match the original invoice.

You can print formal registered fiscal shipping documents, such as a Nota Fiscal, by specifying the appropriate form code.

See *User Guide: Distribution* for details.

The effective date in Pre-Shipper/Shipper Confirm can be used to record the shipment in a specific open GL accounting period. For example, this could be used after period end when shipments for that period have not all been fully processed.

5 Optionally, print the shipper using Pre-Shipper/Shipper Print (7.9.4) or Sales Order Shipper Print (7.9.9).

The shipper print program creates a shipper record or packing list. This function also updates the item quantity picked. At this point, the shipment is ready to leave your shipping dock.

***Note*** Use Pre-Shipper/Shipper Print to include authorization numbers on the printed shipper.

6 Optionally, transmit the ASN using Shipment ASN Export (35.4.1).

In many scheduled order relationships, a customer does not process a shipment receipt until an ASN has been received. The ASN provides the customer with all the detail relevant to the shipment including:

- Purchase order and order line number
- Supplier and customer item numbers
- Authorization numbers, if available
- Item shipped
- Quantities
- Cumulative quantities
- Arrival time

In a trusted supplier relationship, the customer plans the shipment quantities directly into their production line, based on the electronically transmitted ASN with no receipt processing and no inspection. Often, the dock address where deliveries are made is the point on the production line where the items are going to be used, and their arrival time is coincident with the time the first item is needed for production.

Whether ASNs are sent for this particular customer is controlled by the Send EDI ASNs field in Trading Partner Parameter Maintenance (35.13.10).

7 Print and/or transmit the invoice using either Closed Invoice Reprint (7.13.12), Invoice Print (7.13.3), and/or Invoice Export (35.4.3).

***Note*** Authorization numbers are included on the printed invoice.

The Print Invoice History field determines whether the invoice can be selected for printing. The EDI Invoice History field, which defaults from the customer's record in Trading Partner Parameter Maintenance (35.13.10), determines whether invoices are transmitted using EDI. When invoices are neither printed nor transmitted, the customer makes payments against ASNs.

When printed invoices are permitted and the scheduled order is marked for auto-invoicing, confirming the shipper generates an invoice and then closes it. This is equivalent to the standard printing and posting steps. This enables you to make several daily or weekly shipments without requiring any specific invoicing tasks. You can print the closed invoices at the end of the day, week, or month using Closed Invoice Reprint (7.13.12).

## Printing Bills of Lading

You can use Bill of Lading Print (7.9.12.1) to print a separate bill of lading for a shipment. The bill of lading is identified by the ship-from site and a code identifying the shipper record (for example, Shipper ID). Remarks entered in the Comments field of Sales Order Shipper Maintenance (7.9.8) also appear on the bill of lading.

A bill of lading shows a detailed breakdown of a shipper's content. This breakdown shows the products shipped, the total weight, and the containers used.

## Pegging Requirement Detail

When noncumulative and cumulative schedules are being processed, requirement detail can be maintained throughout the process. During shipment, shipper lines that are tied to specific requirements are consumed. This process is known as *pegging*.

Pegging occurs automatically in:

- Picklist/Pre-Shipper–Automatic (7.9.1)
- Pre-Shipper/Shipper Workbench (7.9.2)
- Shipper Gateway (7.9.22)

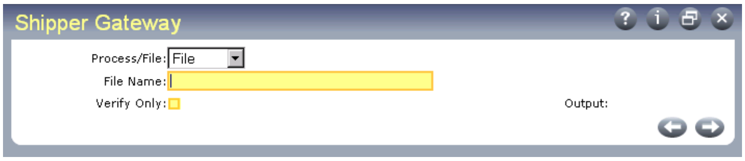
For a cumulative schedule, you can disable automatic pegging in these three shipper programs by setting Automatic Cum Pegging to No in Container/Shipper Control (7.9.24) or Customer Schedules Control (7.3.24).

When you set Automatic Cum Pegging to No, the Consume Req field defaults to No in Pre-Shipper/Shipper Workbench (7.9.2).

### Shipper Gateway

Pegging occurs during execution of Shipper Gateway, which uses an external ASCII file in the designated format to create shippers.

**Fig. 2.15**
Shipper Gateway (7.9.22)



The relationship between required ship schedule lines and individual shipper lines is maintained by Shipper Gateway. As shipper lines are created and pegged, the requirement is consumed.

You can disable automatic pegging for a cumulative schedule if pegging detail is not needed.

See “Pegging Requirement Detail” on page 36.

Shipper Gateway generates a report that displays information related to pegged requirements, including requirement detail authorization numbers (Kanban).

### Picklist/Pre-Shipper–Automatic

Use Picklist/Pre-Shipper–Automatic (7.9.1) to create and peg shipper lines based on the active RSS for the appropriate requirement. This program creates the shipper, adds items to it, and pegs shipper lines.

The relationship between required ship schedule (RSS) lines and individual ship lines is maintained during the shipment staging list process. As shipper lines are created and pegged, the requirement is consumed.

You can disable automatic pegging for a cumulative schedule.

See “Pegging Requirement Detail” on page 36.

The report generated at completion displays information regarding the pegged requirement, including requirement detail authorization numbers. The pegged shipper lines can be viewed and maintained in Pre-Shipper/Shipper Workbench.

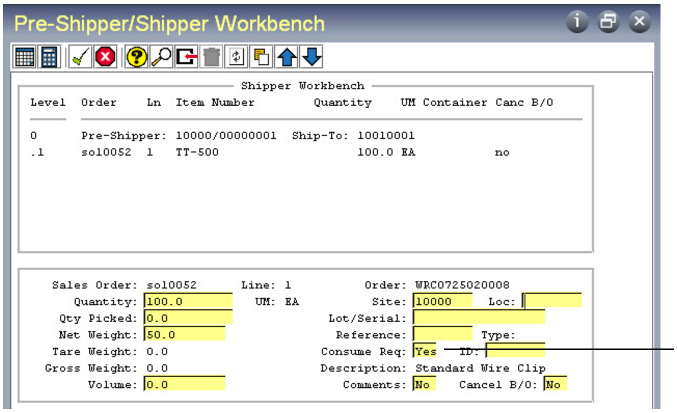
When a shipper with authorization numbers is created and pegged using Picklist/Pre-Shipper–Automatic, the authorization numbers are assigned to shipper lines based on a FIFO method. You cannot designate which authorization numbers are assigned to individual shipper lines.

### Pre-Shipper/Shipper Workbench

You can manually maintain the relationship between required ship schedule (RSS) requirements and individual shipper lines in Pre-Shipper/Shipper Workbench (7.9.2).

To maintain pegged shipper lines in Pre-Shipper/Shipper Workbench, set Consume Req to Yes to display the Consume Required Ship Schedule Requirements frame.

**Fig. 2.16**
Pre-Shipper/ Shipper Workbench (7.9.2), Consume Req Field



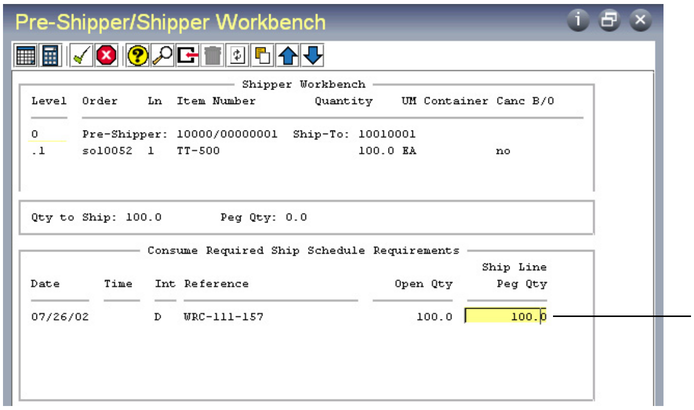
```
                      Shipper Workbench
Level  Order    Ln  Item Number        Quantity   UM Container Canc B/O

0      Pre-Shipper: 10000/00000001  Ship-To: 10010001
.1     so10052  1   TT-500                  100.0 EA           no

     Sales Order: so10052       Line: 1          Order: WRC0725020008
        Quantity: 100.0           UM: EA          Site: 10000     Loc:
      Qty Picked: 0.0                       Lot/Serial:
      Net Weight: 50.0                       Reference:          Type:
     Tare Weight: 0.0                      Consume Req: Yes    ID:
    Gross Weight: 0.0                      Description: Standard Wire Clip
          Volume: 0.0                         Comments: No    Cancel B/O: No
```

Yes displays Consume Required Ship Schedule Requirements frame.

The Consume Required Ship Schedule Requirements frame displays, showing the RSS requirements for the scheduled order line number.

For a cumulative schedule, you can disable automatic pegging by setting Automatic Cum Pegging to No in Container/Shipper Control (7.9.24) or Customer Schedules Control (7.3.24). When you set Automatic Cum Pegging to No, Consume Req defaults to No.

**Fig. 2.17**
Consume Required Ship Schedule Requirements Frame



```
                      Shipper Workbench
Level  Order    Ln  Item Number        Quantity   UM Container Canc B/O

0      Pre-Shipper: 10000/00000001  Ship-To: 10010001
.1     so10052  1   TT-500                  100.0 EA           no

Qty to Ship: 100.0        Peg Qty: 0.0

          Consume Required Ship Schedule Requirements
                                                       Ship Line
Date       Time    Int Reference             Open Qty    Peg Qty

07/26/02           D   WRC-111-157              100.0      100.0
```

Specify the amount of the requirement pegged to this authorization number.

You can modify the Ship Line Peg Qty as needed. The system adjusts the Open Qty based on the pegged quantity you enter.

Open quantity for the requirement is calculated based on:

1. The Ship Complete percentage in the Scheduled Order Maintenance. See “Ship Complete” on page 21.
2. The RSS requirement quantity tied to this shipper line.
3. The amount pegged (the quantity placed in Ship Line Peg Qty).
4. Dynamic Unpeg in Scheduled Order Maintenance. See “Dynamic UnPeg” on page 19.

### Consuming Requirements

Requirement quantities are considered open until the shipper is confirmed in Pre-Shipper/Shipper Confirm (7.9.5). At this point, pegged quantities are transferred to shipped quantities.

During confirmation, the requirement quantity is used to increase the cumulative shipped quantity and decrease the net requirement for the order line item. Inventory is also decreased by this quantity. When Post Invoice is Yes, the invoice is automatically posted.

The confirm process also transfers pegged quantities to shipped quantities. The shipped quantities are incremented by the ship line quantity and pegged quantities are decremented by the ship line quantity.

### Cumulative Shipped Maintenance

Use Cumulative Shipped Maintenance (7.9.16) to correct cumulative shipped quantities or reset the quantities on the order line item to zero, as might be done for an accounting close. This program is typically not used often, and should be restricted with menu security.

Enter the customer, PO, line item, and line number. Choose Adjust to correct a quantity problem. Choose Reset to set both cum quantities to zero.

Adjustments are typically made when an ASN is returned showing a quantity different than you shipped. If the ASN reflects the most recent shipment, adjust the Cum Shipped quantity. If another shipment has since gone out, adjust the Prior Day Cum Shipped quantity.

Adjusting quantities creates a CUM-SADJ transaction in transaction history.

## Resetting Cumulative Quantities

Use Cum Shipped Reset (7.5.18) to reset the cumulative totals for scheduled orders and to generate a summary or detail report showing the updated order. You can reset one or a range of scheduled orders based on the selection criteria. This action cannot be undone.

You can run the cumulative reset function without actually resetting a scheduled order’s cumulative totals. This gives you an opportunity to review the scheduled orders being reset before actually changing the database. Do this by setting Update to No. When Update is Yes, the cumulative totals are reset.

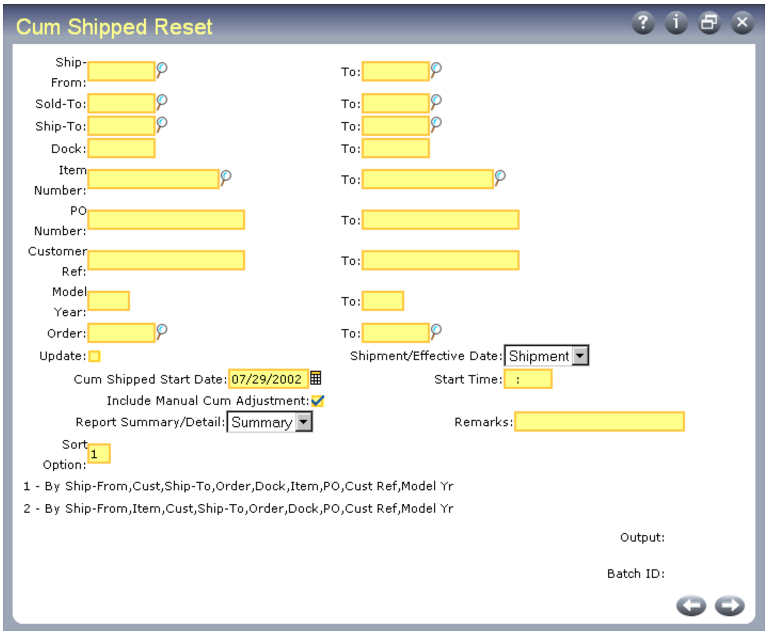
Include manual adjustments made in Cumulative Shipped Maintenance (7.5.16) by setting the Include Manual Cum Adjustments field to Yes. Setting this field to No ignores all manual adjustments when resetting the cumulative shipped quantity.

At the time you reset a scheduled order’s cumulative totals, you can also enter a new cum shipped start date and time. This new date and time replaces the scheduled order’s current cumulative start date and time. The time must be in 24-hour format.

When the cumulative totals are reset to zero for a date in the past, all shipments made between the specified time in the past and the current system date are totaled. This total is set as the new cumulative shipped quantity for the scheduled sales order lines.

***Note*** Only shipments for scheduled sales order lines are included.

**Fig. 2.18**
Cum Shipped Reset (7.5.18)



Update: ☐

Shipment/Effective Date: Shipment

Cum Shipped Start Date: 07/29/2002

Start Time: :

Include Manual Cum Adjustment: ☑

Report Summary/Detail: Summary

Remarks:

Sort Option: 1

1 - By Ship-From,Cust,Ship-To,Order,Dock,Item,PO,Cust Ref,Model Yr

2 - By Ship-From,Item,Cust,Ship-To,Order,Dock,PO,Cust Ref,Model Yr

The first half of the Cum Shipped Reset screen consists of selection criteria ranges such as ship-from, sold-to, ship-to, dock address, item number, PO number, customer ref, model year, and order. Use these values to identify the cumulative shipped quantities to reset.

> *Update.* Enter Yes to reset the cumulative totals. Enter No to print the report without resetting cumulative totals.
>
> *Shipment/Effective Date.* Enter the type of date specified in Cum Shipped Start Date.
>
> Shipment: The value in Cum Shipped Start Date is the date when the shipment was initially entered into the system.
>
> Effective: The value in Cum Shipped Start Date is the date when the shipment was effective for accounting purposes.
>
> *Cum Shipped Start Date.* Enter the new date to start accumulating cumulative quantities for the scheduled orders.
>
> *Start Time.* Enter the time when cumulative shipped reset is to occur on the specified date. The time must be entered in 24-hour format.
>
> *Include Manual Cum Adjustment.* Enter Yes to include all manual adjustments in the Cum Shipped total. Enter No to ignore all manual adjustments made in Cumulative Shipped Maintenance (7.5.16).
>
> *Report Summary/Detail.* Enter the format to use for this report.
>
> *Remarks.* Enter any general comments.
>
> *Sort Option.* Enter the sort option that determines the order the information prints on the report.

# Adjusting Prices with Retrobills

Retrobilling is the term used for a price changing practice common among automotive suppliers. This practice also applies to many commodity-driven markets where the cost of raw materials, not the process cost, causes prices to fluctuate.

The price change and effective date are agreed upon between you and your customer. When the effective date is in the past, an invoice detailing all shipments since the effective date through the end date must be created for the incremental price difference.

Retrobilling provides greater control and flexibility in changing the price of items already shipped to customers. Retrobill Maintenance (7.13.13.1) enables you to make price changes by individual line item in a scheduled order instead of by invoice. You can:

- Specify a scheduled order.
- Change prices for one or more line items on a scheduled order.
- Create a separate debit/credit invoice for each line item or create a single invoice for all line items within the same purchase order.
- Specify if the retrobill change is a price change or a new price.

The line items being changed can be from the same purchase order or from multiple purchase orders. If they are from multiple purchase orders, they all must be on the same scheduled order.

Use Retrobill Inquiry (7.13.13.2) to view the retrobill information entered in Retrobill Maintenance. If a debit/credit invoice has been created, the invoice number displays.

Use Retrobill Report (7.13.13.3) to create a debit/credit invoice for the net amount of the price adjustment calculated for each scheduled order line item. You can specify an account number to be used by the system for posting the amount of the price adjustment.

## Retrobill Process

Use the following steps to set up a retrobill for a scheduled order line item:

1. Create retrobills in Retrobill Maintenance (7.13.13.1). Set up the retrobill identifier and specify the scheduled order affected and the terms of the retrobill.
2. View retrobill information in Retrobill Inquiry (7.13.13.2).
3. Create a debit/credit memo with Retrobill Report (7.13.13.3)
4. Use Invoice Print (7.13.3) to print the debit/credit invoice.
5. Use Invoice Post (7.13.4) to post the invoice.
6. Use DR/CR Memo Inquiry (27.2) to view the invoice.

## Retrobill Maintenance

In the first frame, enter a sold-to code and amendment number. These form the unique retrobill ID used by the system. The amendment number authorizes the retrobill and is typically provided by the customer. The as-of date is used when more than one retrobill is applied to the same scheduled order line items. It determines the sequence for applying the retrobills.

Memo Per Item determines how many debit/credit invoices are to be created.

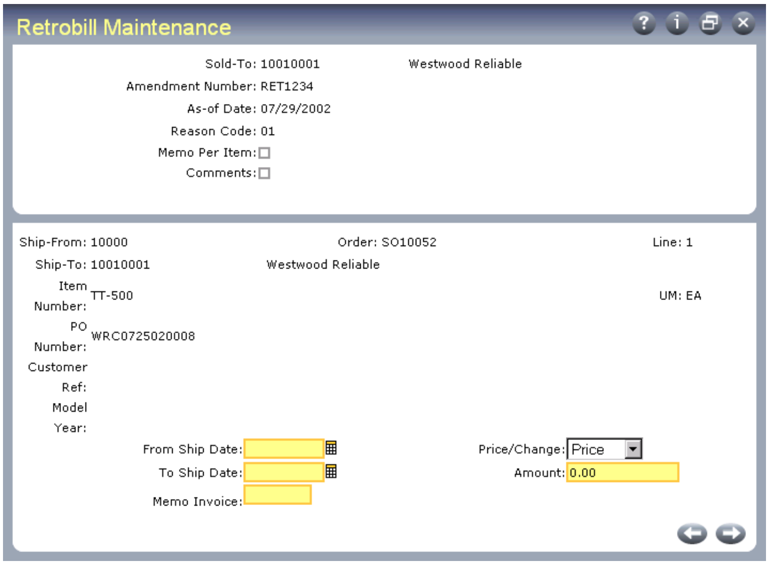
- Set it to Yes if you want a separate debit/credit invoice created for each line item.
- Leave the field set to No (the default) if you want one debit/credit invoice created for all line items in a purchase order, or if no debit/credit invoice should be created.

Memo Per Item works in conjunction with Create Memos in the Retrobill Report (7.13.13.3). Both Memo Per Item and Create Memos must be set to Yes to print invoices.

The Reason Code and Comments fields are optional.

Press Go to move to the second frame.

**Fig. 2.19**
Retrobill Maintenance (7.13.13.1)



Sold-To: 10010001 Westwood Reliable
Amendment Number: RET1234
As-of Date: 07/29/2002
Reason Code: 01
Memo Per Item: ☐
Comments: ☐

Ship-From: 10000 Order: SO10052 Line: 1
Ship-To: 10010001 Westwood Reliable
Item Number: TT-500 UM: EA
PO Number: WRC0725020008
Customer Ref:
Model Year:
From Ship Date: Price/Change: Price
To Ship Date: Amount: 0.00
Memo Invoice:

The second frame consists of two sections. In the first section, identify the scheduled order and line item being changed. In the second, define the terms of the retrobill.

The ship-from, ship-to, item, PO number, scheduled order number, line item number, customer reference, and model year are used to select the scheduled order and line item being changed by the retrobill.

Press Go to advance to the lower section of the frame.

In this section, you define the terms of the retrobill by specifying:

> *From Ship Date/To Ship Date.* These set the date range used for selecting invoices during retrobill processing. Invoices falling outside this date range are not included.
>
> *Price/Change.* Indicates whether the Amount field contains a new price (Price) or a price change (Change).
>
> Price: The value entered in the Amount field replaces the current price.
>
> Change: The amount is applied to the current price. To reduce an existing price, enter a negative amount.
>
> *Amount.* Specify the currency amount to be applied based on the Price/Change field.

*Memo Invoice.* Displays the debit/credit invoice number set by the Retrobill Report (7.13.13.3) when Create Memo is Yes. You can also use this field to manually enter a debit/credit invoice number.

## Retrobill Report

Use Retrobill Report (7.13.13.3) to run the retrobill process. The retrobill is identified by the sold-to and amendment number.

If you want to create a debit/credit invoice, set Create Memos to Yes. To prevent invoices from being created, set the field to No. The Retrobill Acct field lets you specify an account number to be used for posting the calculated debit/credit amount.

***Note*** In Retrobill Maintenance (7.13.13.1), Memo Per Item determines if a debit/credit invoice is created per line item or per purchase order. In the Retrobill Report (7.13.13.3), Create Memos determines if a debit/ credit invoice is created at all. If this field is set to No, a debit/credit invoice is *not* created regardless of how Memo Per Item is set.

Invoices meeting the selection criteria defined in Retrobill Maintenance are selected for processing. During processing, the price change amount is used to calculate the net amount of the price adjustment for each line item being changed.

## Chapter 3

# Supplier Schedules

Supplier schedules supports generation of supplier releases, incorporating a set of scheduled receipt dates and quantities.

***Introduction 46***

Explains how supplier schedules work.

***Setting Up Supplier Schedules 47***

Discusses how to manage supplier calendars, Scheduled Order Maintenance (5.5.1.13), allocating percentages for MRP, and defining release ID format.

***Processing Supplier Schedules 52***

Outlines and describes how to process schedules by creating releases, optionally modifying that release, and transmitting it to the supplier by print, EDI eCommerce, or fax.

***Receiving Scheduled Orders 56***

Discusses different methods of supporting receiving relationships between manufacturers and suppliers, with details on PO Shipper Maintenance (5.5.5.5), PO Shipper Receipt (5.5.5.11), Purchase Order Receipts (5.13.1), PO Container Maintenance (5.13.13), Cumulative Received Maintenance (5.5.5.13), and resetting cumulative quantities.

***Deleting Supplier Scheduled Orders 59***

Explains how to use Closed PO Delete/Archive (5.23).

# Introduction

Supplier schedules are cumulative, schedule-driven purchase orders with multiple line items from which releases of requirements and due dates are issued. They are typically used by companies with long-term supplier contracts that require regular weekly or daily deliveries. The schedules specify, for the near term, dates and even hours of deliveries. But they also inform MRP and the supplier about long-term plans.

The header and trailer of a supplier schedule resemble those of a normal purchase order for a single line item with multiple delivery dates. However, the line-item section of a supplier schedule combines information for:

- Short-term shipping schedule with exact quantities and delivery instructions
- Long-term planning schedule that shows upcoming orders and authorizes the supplier to buy raw materials or make subassemblies

***Note*** If you have the PRO/PLUS Supplier Shipping Schedules module you can generate separate supplier planning and shipping schedules, rather than one schedule that combines both. For details, see *User Guide: PRO/PLUS.*

As with a regular purchase order, the items listed in a supplier schedule are seen by the system as supply. You can also receive items against a supplier schedule.

Supplier schedules are used for multiple deliveries from a supplier who needs to adjust production to accommodate your orders.

***Example*** A manufacturer of circuit boards needs blank boards supplied each week. The manufacturer knows exact needs for the next few weeks and approximate needs for the next 12 months. The supplier of these circuit board blanks needs this information in order to place its orders for raw materials and plan production. It can use supplier schedules to set up its delivery and planning schedule.

The Supplier Schedules Menu (5.5) is located as a submodule of Purchasing. It has three selection menus:

- Supplier Schedule Setup (5.5.1)
- Supplier Schedule Processing (5.5.3)
- Supplier Receipts Processing (5.5.5)

See *User Guide: Distribution* for a discussion of Purchasing.

Table 3.1 contrasts the characteristics of scheduled orders with other kinds of purchase orders.

**Table 3.1**
Summary of Purchase Order Characteristics

| | **Supplier Schedules** | **Purchase Orders** | **Blanket Orders** |
|---|---|---|---|
| Delivery Dates | Multiple | Single for order/item | Multiple |
| Seen by MRP | Yes | Yes | No |
| Receipts | Yes | Yes | No |

| | **Supplier Schedules** | **Purchase Orders** | **Blanket Orders** |
|---|---|---|---|
| Duration | Medium/long-term | One time | Short/medium |
| Elements | Header<br>Planning schedule<br>Shipping schedule<br>Trailer | Header<br>Line Items<br>Trailer | Header<br>Line Items<br>Trailer<br>POs |

# Setting Up Supplier Schedules

To use supplier schedules, you must set up the same baseline data required for purchase orders, including purchased items and supplier addresses. MRP uses item parameters specified in Item Master Maintenance (1.4.1) to create planned purchase orders for scheduled items. These orders contain due dates, release dates, and order quantities.

## Supplier Calendars

If your supplier works different days than you do, set up a supplier-specific calendar for them in Supplier Calendar Maintenance (5.5.1.1). Schedule Update from MRP considers these calendars when generating schedule releases. For suppliers that do not have supplier-specific calendars, the system uses the applicable shop calendar defined in Calendar Maintenance (36.2.5).

## Scheduled Order Maintenance

Set up supplier schedules in Scheduled Order Maintenance (5.5.1.13). You must define several parameters that the system uses to calculate receipt, planning, and shipping schedules for individual items that have been entered on separate purchase order lines. This order provides the framework for a contract, but has no delivery dates.

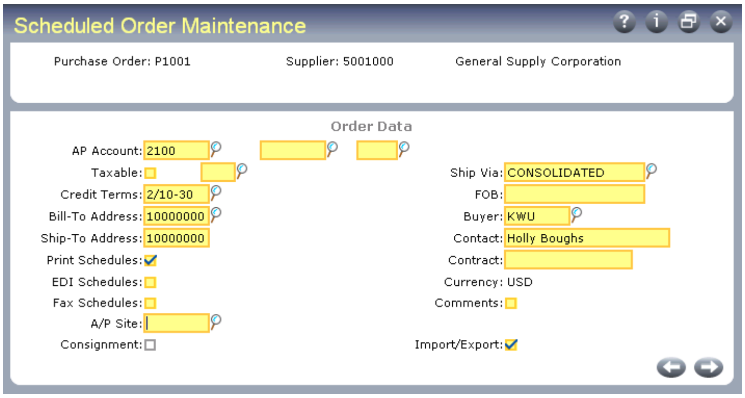
After you enter an order ID and supplier code, additional detail frames display. The first contains shipping and credit information for the whole order. The next contain line-item information such as item numbers, ship-to data, line-item details, schedule details, and optional comments.

### Header

Several values in the header frame indicate how schedules based on this order are delivered to suppliers. Schedules can be printed, transmitted using EDI eCommerce, or sent by FAX, depending on the values you specify.

See “Transmitting Supplier Schedules” on page 54.

**Fig. 3.1**
Scheduled Order Maintenance (5.5.1.13), Header Frame



Purchase Order: P1001
Supplier: 5001000
General Supply Corporation

AP Account: 2100
Taxable: ☐
Credit Terms: 2/10-30
Bill-To Address: 10000000
Ship-To Address: 10000000
Print Schedules: ☑
EDI Schedules: ☐
Fax Schedules: ☐
A/P Site:
Consignment: ☐

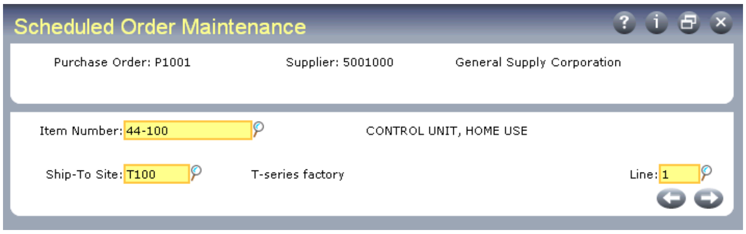
Ship Via: CONSOLIDATED
FOB:
Buyer: KWU
Contact: Holly Boughs
Contract:
Currency: USD
Comments: ☐
Import/Export: ☑

When you are finished entering values in the header frame, press Go to display the line-item frame.

## Line Items

Use fields in the first line-item frame to specify an item to be ordered from the supplier and the site to receive that item. Unique line numbers enable you to enter more than one schedule line for the same item, if needed, as long as each line has a different ship-to site.

**Fig. 3.2**
Scheduled Order Maintenance, Item and Ship-To Site



Purchase Order: P1001
Supplier: 5001000
General Supply Corporation

Item Number: 44-100
CONTROL UNIT, HOME USE
Ship-To Site: T100
T-series factory
Line: 1

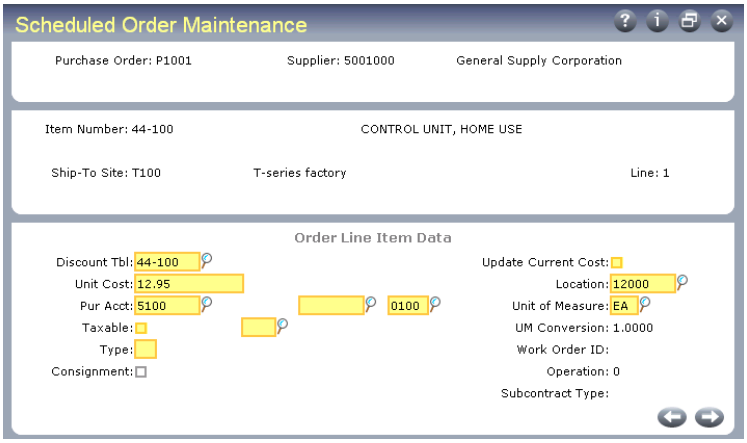
### First Order Line item Data Frame

Use fields in the first Order Line Item Data frame to specify pricing and inventory data for the item referenced in the previous frame.

Use the list/discount table pricing functions in the PO/Sched/RMA Rcpt Price Menu (1.10.2) to set up price lists for scheduled orders. The price from the applicable list displays in the Unit Cost field. Effective prices can be updated in Purchase Order Receipts (5.13.1) and PO Shipper Receipt (5.5.5.11). Set Update Current Cost to Yes to update current costs for inventory items during receipt.

See *User Guide: Master Data* for details on price lists.

**Fig. 3.3**
Order Line Item Data, First Frame



Purchase Order: P1001
Supplier: 5001000
General Supply Corporation

Item Number: 44-100
CONTROL UNIT, HOME USE
Ship-To Site: T100
T-series factory
Line: 1

Order Line Item Data

Discount Tbl: 44-100
Unit Cost: 12.95
Pur Acct: 5100 0100
Taxable: ☐
Type:
Consignment: ☐
Update Current Cost: ☐
Location: 12000
Unit of Measure: EA
UM Conversion: 1.0000
Work Order ID:
Operation: 0
Subcontract Type:

*Type.* This value determines whether the associated line item is received into inventory and considered by planning.

- When Type is blank, the associated line item is received into inventory. When the receipt is processed, inventory balances are increased and a GL transaction debits the Inventory account.
- A Type of S indicates a subcontract operation. A work order number and operation are specified on the order and on the receipt. Rather than updating inventory, the receipt updates the work order operation status and creates a GL transaction debiting the WIP account from the work order.

*Item Revision.* Enter the code representing the revision level of the item. This field is validated against predefined values entered in Generalized Codes Maintenance (36.2.13) for field pod_rev. This field defaults from the Revision field in Item-Site Planning Maintenance (1.4.17). If no revision exists there, it defaults from the Revision field in Item Master Maintenance (1.4.1).

Do not confuse the header order revision with the line item revision. Order revision indicates whether changes have been made to the scheduled order; it has no default. Item revision indicates changes have been made to the engineering version of the item; the level defaults from either Item-Site Planning Maintenance (1.4.17) or Item Master Maintenance (1.4.1).

When you copy a schedule line from another schedule line, the new schedule line inherits the source item revision level and date.

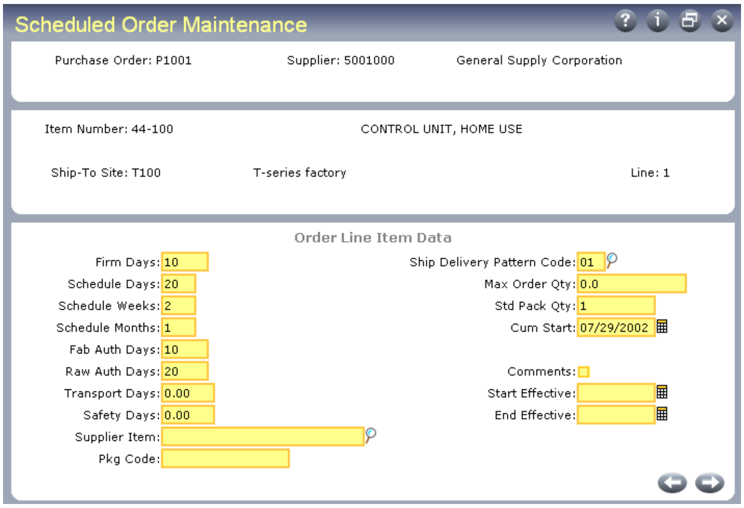
When you export schedule information using the following programs, the item revision level and item revision date from the schedule are included in the information:

- Supplier Shipping Schedule (35.4.8)
- 850 Purchase Order Export (35.4.9)

### Second Order Line Item Data Frame

Use fields in the second Order Line Item Data frame to record data that impact the requirements and schedules generated for the associated line item.

**Fig. 3.4**
Order Line Item Data, Second Frame



Purchase Order: P1001
Supplier: 5001000
General Supply Corporation

Item Number: 44-100
CONTROL UNIT, HOME USE
Ship-To Site: T100
T-series factory
Line: 1

Order Line Item Data

Firm Days: 10
Schedule Days: 20
Schedule Weeks: 2
Schedule Months: 1
Fab Auth Days: 10
Raw Auth Days: 20
Transport Days: 0.00
Safety Days: 0.00
Supplier Item:
Pkg Code:

Ship Delivery Pattern Code: 01
Max Order Qty: 0.0
Std Pack Qty: 1
Cum Start: 07/29/2002
Comments:
Start Effective:
End Effective:

*Firm Days.* Specify the number of days inside the schedule update time fence for scheduled release calculations. These days should not exceed the number specified in Schedule Days.

Quantities and dates within this period are not changed by Schedule Update from MRP (5.5.3.1). Set Firm Days to zero to eliminate the update time fence. Do this when all requirements are released as planned so that the schedule update replans all dates and quantities.

See "Effect of Firm Days" on page 53 for more details.

***Note*** This value does not affect how MRP uses the Time Fence value defined for the item. Firm Days controls order releases by date and quantity. The item master Time Fence field controls planned orders by date and quantity.

*Schedule Days.* Specify the number of days of discrete dates and quantities to appear on printed or transmitted releases and on reports and inquiries, including intraday quantities and times. See "Schedule Bucketing" on page 55 for details.

*Schedule Weeks.* Specify the number of weekly bucketed quantities to appear on printed or transmitted releases and on reports and inquiries following any Schedule Days dates and quantities. Each quantity represents the total requirement for the Monday through Sunday week. Bucketing is for print and reporting purposes only. Internally, the system stores all requirements by discrete dates and quantities.

*Schedule Months.* Specify the number of monthly bucketed quantities to appear on printed or transmitted releases and on reports and inquiries following weekly buckets and discrete dates and quantities. Each quantity represents the entire month's requirements from the first Monday up to the first Monday of the following month.

*Fab Auth Days, Raw Auth Days.* Raw and fabrication authorization commitments are made to give suppliers some protection against sudden and unforeseen reductions in demand.

- Raw quantity is the quantity of product you commit to covering the component costs.
- Fab quantity is the quantity of product you commit to covering manufacturing costs.

***Note*** Schedule Update from MRP uses these values only if scheduled requirements extend beyond the number of days in the authorization horizon. Otherwise, the authorization horizon equals the schedule days.

*Transport Days.* This field is normally blank. Specify a value for suppliers who do not ship or take responsibility for shipping, but from whom you pick up or schedule the pickup of orders. Entering a value in Transport Days converts all order dates from receipt dates to shipment dates.

Schedule Update from MRP uses this value to set shipment dates based on delivery dates (delivery date – transport days). It then checks the supplier's calendar, if one exists, to verify that the shipment date is a workday for the supplier. If not, the update back-schedules to the next supplier workday.

All reports and inquiries check this field to verify whether to print or display delivery dates or shipment dates. When this value is positive, the system uses shipment dates.

*Std Pack Qty.* Enter the multiple in which orders for this item are shipped. This is similar to Order Multiple in the item master. It displays here because the standard shipment multiple for an item can vary among suppliers. Schedule Update from MRP rounds order quantities up to this multiple.

Order Multiple should generally be blank in the item master for items that are referenced on scheduled orders, since both values are applied to orders during different planning functions (MRP and Schedule Update from MRP).

*Cum Start.* Enter the date on which this order began to accumulate quantities. This may or may not be the date on which the order was created in your database.

When a line item is first scheduled, the cumulative receipt quantity is zero and the cumulative start date is set to the active start date of the schedule. As receipts are processed, the system updates the cumulative receipt quantity.

Sometimes cumulative receipt quantities must be adjusted manually, usually as dictated by policy. For example, you may reset them to zero at the start of your new fiscal year using Cum Received Reset to Zero (5.5.5.14). The affected cumulative start dates are then changed to that date.

See "Resetting Cumulative Quantities" on page 58 for details.

You can also adjust cumulative receipts manually to reflect returned or defective items or losses due to theft using Cumulative Received Maintenance (5.5.5.13). For example, when defective items are returned to the supplier, you may want to process a return and credit without decreasing cumulative quantity.

See "Cumulative Received Maintenance" on page 58 for details.

## Allocating Percentages for MRP

After you have set up all suppliers and schedules for each item, you must allocate order percentages among suppliers using Scheduled Order MRP % Maintenance (5.5.1.17). This step is required. Percentages must equal 100% for each item.

Schedule Update from MRP uses these percentages to allocate MRP planned orders for the item among suppliers. To phase in new percentages, enter the same ship-to site and item number with different effective dates.

## Defining Release ID Format

The format of the release ID generated by Schedule Update from MRP (5.5.3.1) is affected by the value of Generate Date Based Release ID in Purchasing Control (5.24).

When this is Yes, eleven digit date-based release IDs are generated using the following components:

- The four digit year
- The two digit month
- The two digit day
- A three digit release number

For example, the first schedule release created on October 19, 2002, would have the release ID 20021019-001.

If you want to track release IDs using this formula, make sure you set up Purchasing Control appropriately.

***Note*** Date-based numbers are not supplied by the system when you create a release manually in Schedule Maintenance (5.5.3.3).

# Processing Supplier Schedules

Processing schedules involves three major steps:

1. Creating a release of the schedule.
2. Optionally, modifying it.
3. Transmitting it to the supplier by print, EDI eCommerce, or fax.

## Creating a Schedule Release

Use Schedule Update from MRP (5.5.3.1) to create releases of supplier schedules. A release is a set of item quantities and requirement dates identified by a release ID number, which is then sent to your supplier.

Schedule Update from MRP generates releases based on the following:

- Planned purchase orders generated by MRP based on item requirements and due dates
- Item planning data, such as safety days
- Scheduled order percentages defined for items and ship-to sites in Scheduled Order MRP % Maint (5.5.1.17)
- Scheduled order data from Scheduled Order Maintenance (5.5.1.13)
- Supplier calendars, defined in Supplier Calendar Maintenance (5.5.1.1)

***Note*** MRP planned orders for a co-product/by-product or a base process item cannot be used to update supplier schedules.

You can run Schedule Update from MRP for combinations of items, suppliers, scheduled orders, receiving sites, or buyers.

Because you are sending order quantities and planning data to your supplier, you define requirements as either firm or planned quantities. You can send all firm, all planned, or some of both. The Firm Days field on the scheduled order line item determines the order status.

You can also export the firm or planned portions of schedules (or both parts) to an external application using Schedule Update from MRP. Or you can use Export MRP Demand (5.5.3.2) to export planned and firm schedules directly from Schedule Update from MRP.

***Note*** This export is not the same as the export done using functions on the EDI eCommerce menu. Export MRP Demand creates business object documents (BODs).

### Effect of Firm Days

The schedule update process automatically applies firm status to any requirements within the time fence set by the Firm Days field. All planned orders outside this period are approved, but maintained as planned requirements. This means that they are not seen by MRP as sources of supply and can be replanned.

Any unreceived firm requirements from one release are automatically carried forward to the next release during schedule update. These quantities are maintained as a prior cumulative requirement.

When you run MRP again, it plans or replans orders for scheduled requirements that are now within its planning horizon. Executing Schedule Update from MRP adds the planned orders, firming any that now fall within the Firm Days period.

If requirements change, you may need to manually adjust the firm quantities in Schedule Maintenance (5.5.3.3).

- If increased demands create additional requirements within the Firm Days period, MRP creates planned orders in that period. When you regenerate the schedule, the system does not select any planned orders falling within the firm period covered by a schedule. The warning message `Order not selected` displays.
- If requirements decrease due to decreased demands, MRP sees the supply as excessive and produces action messages.

You can avoid rescheduling problems due to fluctuations in short-term MRP data by setting Firm Days to zero on scheduled order lines. When Firm Days is zero:

- Firm requirements are not generated or carried forward from one release to the next.
- The system sets Prior Cum Req equal to Prior Cum Received.
- Each schedule release is based on the most recent MRP planned-order data available.

Use a positive number in the field if you have an agreement with this supplier that requirements will not change within a specified time period.

***Important*** To avoid schedule discrepancies between printed bucketed schedules and the actual required schedule, firm days should never exceed the number of days specified in the Schedule Days field.

### Schedule Adjustment for Work Days

On receipt of your scheduled release, the supplier is responsible for recalculating its own plans. If, as a customer, you do not set up a supplier calendar, or if you use a ship/delivery pattern that permits shipments on any day of the week, your schedule update process may create requirements on days when you or the supplier are closed.

The supplier would then reschedule the quantity requirement to the next earlier date when the supplier is open and you are open to receive it.

### Quantity and Date Calculations

Schedule Update from MRP performs the following calculations:

1. Back-schedule for safety days from planned order due dates.
2. Back-schedule for Ship/Delivery Pattern from safety day schedule.
3. Back-schedule for Supplier Calendar from ship/delivery schedule.
4. Allocate planned order quantities by percentage to this supplier (from Scheduled Order MRP% Maintenance) to create new quantities by planned order.
5. Revise quantities to Standard Pack Quantity multiple.
6. Display any unfulfilled prior cumulative requirements.
7. Create release, assigning a Release ID, and determine whether quantities are firm (within the Firm Days time fence) or planned. See "Defining Release ID Format" on page 52.
8. Display fabrication and raw authorization quantities and start and end dates.

With the Report Detail/Summary field set to Detail, an audit report of the entire calculation is printed. Execute the function with Update set to No to preview the results.

When Update is Yes, selected planned orders are automatically approved and a release is created. This can then be edited in Schedule Maintenance or sent to your supplier.

## Modifying Supplier Schedules

Modify a scheduled release using Schedule Maintenance (5.5.3.3).

You can change schedule detail data such as requirement dates, quantities, and firm or planned status, and fab and raw authorization quantities and dates.

## Transmitting Supplier Schedules

Transmit the scheduled release using:

- Schedule Print (5.5.3.8), which lets you print a hard copy of the schedule to send to your supplier. For a schedule to be selected for printing, Print Schedules must be Yes in Scheduled Order Maintenance (5.5.1.13). This field defaults to Yes on new orders.

Schedule Print creates the printed supplier schedule. In the header of this document, the supplier and ship-to information, the release ID, purchase order number, item number, receipt quantity, and cumulative receipts appear. The ship/delivery pattern displays, then the order detail. The detail shows any prior open quantities, including quantities in transit, and then each scheduled requirement.

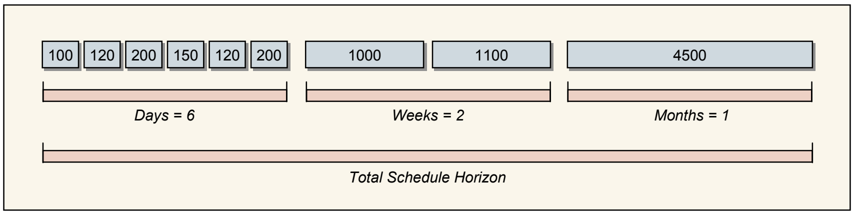
- Schedule Print in Fax Format (5.5.3.9), which formats the schedule for facsimile transmission. For a schedule to be selected by this program, Fax Schedules must be Yes in Scheduled Order Maintenance. This field defaults to No on new orders.

  When you transmit the scheduled release by fax, the orders are sorted by supplier rather than by site/supplier. At the top of the first schedule for each supplier, a pound sign (#) prints, followed by the supplier's fax number. The remainder of the information is the same as Schedule Print.
- Supplier Shipping Schedule (35.4.8), which exports the schedule in an EDI format that can be imported into the supplier's system. You can export a schedule only when EDI Schedules is Yes in Scheduled Order Maintenance. Define defaults for each supplier in Trading Partner Parameter Maintenance (35.13.10). See "Defining Trading Partner Parameters" on page 105.

### Schedule Bucketing

Scheduled requirements are maintained as discrete dates and quantities in the database. When you print or transmit a scheduled release, the system uses the Schedule Days, Schedule Weeks, and Schedule Months field values to bucket requirements for the supplier.

**Fig. 3.5**
Schedule Bucketing



In Figure 3.5, all requirements within the next six days are labeled Daily and displayed in discrete quantities on discrete dates including any intraday requirements and times.

Requirements in the two weeks following daily requirements are labeled Weekly. All requirements for the week are bucketed into one quantity with a delivery date of the Monday of that week. Ship dates, if you use Transport Days, are back-scheduled from that Monday. Monthly requirements beyond the weekly period are bucketed in the first Monday of the month.

On the printed schedule:

- Req Qty is the discrete or bucketed quantity for that schedule line.
- Cum Req Qty is the total cumulative requirement, including that line quantity, for the entire life of the order.
- Net Req Qty is the total open quantity including that line quantity.

# Receiving Scheduled Orders

Receipts against a scheduled order have several possible stages. How a relationship is arranged is a matter of policy between trading partners. The system offers the tools and capabilities to support any receiving relationship between you and your supplier. The primary tools are the various shipment documents.

There are four documents. Each one can be treated as a separate document, or in some cases, one document can serve the function of all four.

*Advance Ship Notice (ASN).* The ASN is transmitted when a shipment leaves the supplier's shipping dock to provide advance notice of items to be received. This document can represent multiple items over multiple orders.

*Receiving Document.* This printed packing list accompanies the shipment, recording quantities and items, identified by a shipper ID.

*Shipment Labels.* Barcode labels can be affixed to each shipment container and container group. All items, including container items, explode into inventory during barcode reader receiving.

See "PO Container Maintenance" on page 57.

*Invoices.* The invoice lists quantity and item detail by order, with extended pricing.

In some relationships, the ASN is the only document transmitted. It is treated as the receiving document and the invoice. The ASN number becomes the shipper number and the invoice number, referenced on payments.

Once you have determined how shipments from your suppliers are to be documented, you can process receipts. Recording a receipt updates three history records:

- Purchase receipts
- Inventory transactions
- Inventory GL costs

These records are used for accounts payable, variance reporting, and supplier performance reports. If you receive deliveries from more than one supplier on the same day for the same order, you should enter separate receipts to simplify vouchering in accounts payable.

Depending on the documents involved, you use different programs.

- If you need to manually enter receipts or confirm them, use PO Shipper Maintenance (5.5.5.5) first. You can also receive scheduled orders with Purchase Order Receipts (5.13.1).
- If you typically accept the ASN or receiving document without verification, simply confirm the receipt with PO Shipper Receipt (5.5.5.11).
- If you need to modify container quantities, use PO Container Maintenance (5.5.5.4).
- If you need to modify item quantities on a confirmed shipper, use Cumulative Received Maintenance (5.5.5.13).

## PO Shipper Maintenance

Enter the shipment ID using PO Shipper Maintenance (5.5.5.5). The shipment ID can be an ASN number already in the system, a number obtained through a barcode reading of a shipping label, or a number entered manually from the receiving document.

You can enter each container in the shipment, or press End to skip the Container entry screen. Enter shipped quantities by item number, purchase order, purchase order line number, and quantity in the next frame. Use PO Container Maintenance to modify container item quantities if necessary.

Press Go to accept the first item and quantity, and continue entering items for the shipment.

***Note*** You can modify shippers that have already been confirmed. However, you cannot reconfirm modified shippers.

## PO Shipper Receipt

Confirm the shipment using PO Shipper Receipt (5.5.5.11). If the tolerance for a discrete order receipt is exceeded, the system displays a warning. Confirmation increases inventory, increases the cumulative received quantities, decreases net cumulative requirements, and updates AP and GL accounts.

When you confirm the shipper, the cumulative totals and net requirements are properly updated and automatically transmitted to the supplier on the next scheduled release.

## Purchase Order Receipts

If you are not receiving ASNs or reading barcode labels and exploding containerized shipments, you can also enter receipts against supplier schedules in Purchase Order Receipts (5.13.1).

More than one line item can be processed in a single transaction. You can correct errors made in receiving by entering negative quantities. However, you may have to reopen a purchase order line to do this. Several settings in Purchasing Control (5.24) determine how receiving documents are entered and printed.

If the cumulative quantity received for a scheduled order line exceeds the maximum order quantity for that line, the system displays a warning message.

## PO Container Maintenance

A container is a subset of a shipper, holding any number of different items or other containers. You can receive container information electronically as a part of an ASN or the information may arrive with the shipment and be entered manually. Container information may also explode into the system from barcode readings of shipping labels.

Containers conveniently group items, but are not a required part of a shipper. You can also receive items individually, or the shipper as a whole.

Containers are not often a concern with supplier schedules. However, you can track them for lot/serial control. If the actual shipment does not match the shipper, fix the quantities in PO Shipper Maintenance or PO Container Maintenance (5.13.13) before confirming the shipper.

***Note*** To return containers that have been explicitly received on a shipper, use Issues–Unplanned (3.7).

## Cumulative Received Maintenance

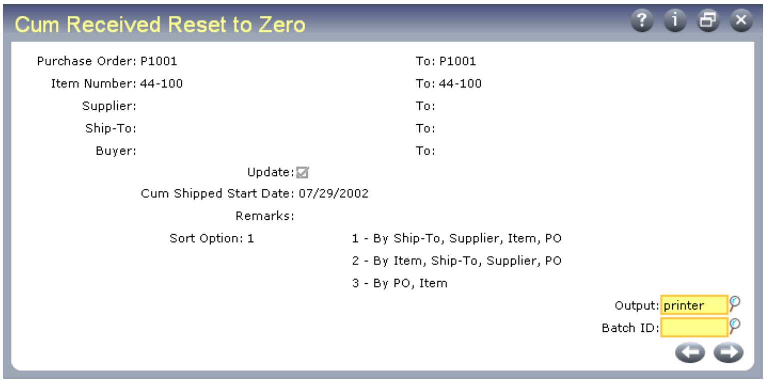
You may need to increase or decrease item quantities on a confirmed shipper. Do this with Cumulative Received Maintenance (5.5.5.13), using the Adjust option. The new cumulative quantity is then transmitted on the next scheduled release. You can also reset the entire scheduled order back to a zero quantity with a new Cum Start Date.

This program is typically not used often and should be restricted with menu security. If a discrepancy between cumulative customer receipts and your cumulative shipped quantities occurs, this is accommodated in the process of making a scheduled release active. However, the Adjust option can be useful for a discrepancy adjustment that occurs solely on your end of the trading relationship, such as the addition or removal of items after shipper confirmation and before ASN export.

## Resetting Cumulative Quantities

Use Cum Received Reset to Zero (5.5.5.14) to reset the cumulative totals for scheduled orders and generate a report showing which orders were reset. You can reset one or a range of scheduled orders. Select scheduled orders for reset using order number, item number, supplier, ship-to, or buyer.

**Fig. 3.6**
Cum Received Reset to Zero (5.5.5.14)



Cum Received Reset to Zero

Purchase Order: P1001 To: P1001
Item Number: 44-100 To: 44-100
Supplier: To:
Ship-To: To:
Buyer: To:
Update: ☑
Cum Shipped Start Date: 07/29/2002
Remarks:
Sort Option: 1
1 - By Ship-To, Supplier, Item, PO
2 - By Item, Ship-To, Supplier, PO
3 - By PO, Item
Output: printer
Batch ID:

You can run the cumulative reset function without actually resetting a scheduled order's cumulative totals. This gives you an opportunity to review the scheduled orders being reset before actually changing the database. Do this by setting Update to No. When Update is Yes, the cumulative totals are reset. This action cannot be undone.

When you reset the totals, you can also enter a new cum shipped start date. This new date replaces the order's current cum start date specified in Scheduled Order Maintenance (5.5.1.13).

Typically, you reset cumulative orders to zero when the contract related to the order is renegotiated. Scheduled order pricing is usually based on an agreed-upon total cumulative order quantity. When you renegotiate the price, you normally renegotiate a new total for the cumulative order quantity.

## Deleting Supplier Scheduled Orders

You can use Closed PO Delete/Archive (5.23) to delete and archive scheduled orders that do not have an associated active or inactive schedule. This program works like other delete/archive programs in the system.

However, to ensure that all records associated with the scheduled order are also deleted, you must follow these steps:

1. Delete all releases for the supplier schedule in Schedule Maintenance (5.5.3.3).
2. Delete the MRP percentage in Scheduled Order MRP % Maint (5.5.1.17).
3. Delete the supplier scheduled order with Closed PO Delete/Archive (5.23).

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