PeopleSoft®

EnterpriseOne JDE5 Bulk Stock Management PeopleBook

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EnterpriseOne JDE5
Bulk Stock Management PeopleBook
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Open Source Disclosure

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Overview

Overview of Bulk Stock Management

The Bulk Stock Management system controls the storage, measurement, and movement of bulk inventory. You can tailor the system to handle the complexities of constantly changing inventory in your business environment. You can also track bulk inventory so that you always know the location and amount of each product that is available for sale or production.

The Bulk Stock Management system works in conjunction with other J.D. Edwards systems in order to:

- Manage an immense volume of product sales, purchases, movements, and adjustments
- Provide an efficient means for initial system setup and long-term maintenance
- Provide timely information and reports to review inventory status
- Improve communication and quality control

The J.D. Edwards Bulk Stock Management system is designed for energy and chemical bulk products.

Features of Bulk Stock Management

With the Bulk Stock Management system, you can do the following:

- Control the storage and movement of liquids at varying temperatures from one container to another
- Calculate the volume for each transaction (sale, receipt, movement, and so on) for each product and for each container (tank, truck, and so on)
- Perform volume and density conversions to any base temperature using international standard algorithms
- Calculate product gain or loss accurately for each stock movement
- Track inventory balances for each product in various units of measure, and show the details of the transactions that create the balance
- Track commingled or custody stock in a tank and manage the transactions associated with each product by owner

Intra-Depot Stock Movements

Intra-depot stock movements track inventory within a depot. The primary transactions, receiving new product and selling to customers, add or decrease inventory into and out of a depot.

You record an intra-depot stock movement whenever you need to account for stock that can no longer be found in the location or container to which it was previously assigned.

Bulk stock movements include:

- Tank to tank transfers

- Repacking
- Rebrands
- Regrades
- Decanting
- Filling
- Simple blending
- General stock adjustments

Movements can occur at numerous points within a depot. The General Stock Movements programs allow you to record the various types of movements, convert them to standard quantities by using calculation programs, and record any gains or losses that might have occurred.

Bulk Product Receipts

You record the receipt of bulk products requested on a purchase order as they arrive at the depot. You can confirm the receipt of the products requested on the purchase order, record the volumes received, and make adjustments to correct variances. Additionally, you can calculate any gains or losses that might have occurred during transportation.

As product moves between storage locations, gains or losses might occur due to spillage, theft, faulty meters, and so on. Four-Point Analysis Maintenance helps you track these gains or losses. You perform a four-point analysis primarily for long voyages to determine the product lost in transit, but you can record the data for any movement.

Receipts is a standard J.D. Edwards program. However, when you record the receipt of a bulk product, the Bulk Stock Management version of the program displays the Bulk Product Receipts form. This form allows you to record product volumes and temperatures that were recorded when the product was received.

Reconciliations

The reconciliation process attempts to reconcile confirmed sales figures for a given period. During this process, the system should identify discrepancies due to transactions not being entered (lost invoices), theft, leakage, or faulty meters.

Throughput Reconciliations

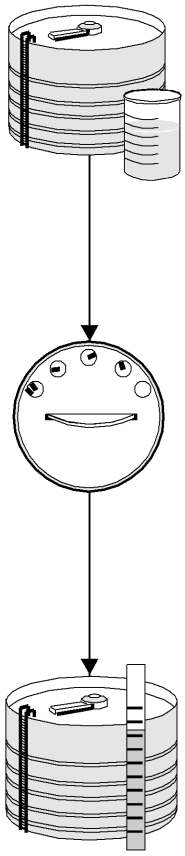
The throughput reconciliation process compares confirmed sales figures and other metered outgoings with the measured throughput based on the meter readings for a given period. The comparison identifies discrepancies due to transactions not being entered, theft, leakage, or faulty meters.

Operational Reconciliations

The operational reconciliation process performs the actual reconciliations. From all inbound and outbound transactions (since the last reconciliation), the Bulk Stock Management system calculates the amount that should be in physical inventory and compares it to the actual amount in the tanks (from the final physical tank dip). In other words, the system measures and compares the physical inventory levels with the book inventory levels, so that differences can be reconciled and operational gains or losses recorded. It then updates the book inventory to reflect the current physical inventory.

Bulk Stock Management Tasks

The following graphic lists the tasks for managing bulk stock:



Setup

S Repots
S Items
S Tanks
S Unit of Measure Conversions

S Intra-Depot Stock Movements

Throughput Reconciliations

S Record Closing Meter Readings
S Compare Metered Throughput with Confirmed Metered Outgoings
S Update Throughput Status

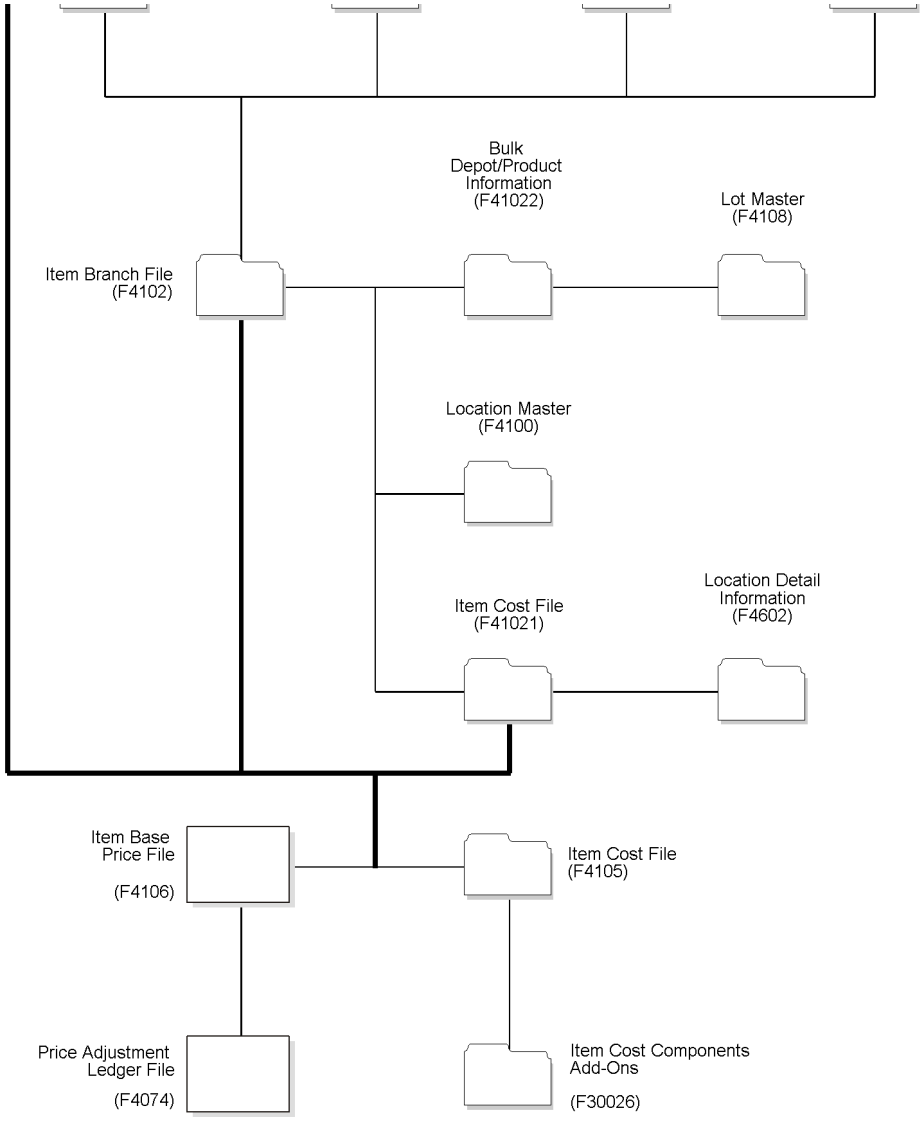
Operational Reconciliations

S Tank Dip Readings
S Compare and Approve Incoming/ Outgoing Transactions
S Update Reconciliation Status

Tables

Information used in the Bulk Stock Management system is stored in either master maintenance or transaction processing tables.

The following graphic provides a high level overview of the tables used by the Bulk Stock Management system.



Master Maintenance Tables

The following master maintenance tables store constants and setup information for the Bulk Stock Management system:

Item Master (F4101)	Stores product information specific to bulk products.
Conversion Table Interface (F41012)	Stores conversion information for bulk products.
Item Branch (F4102)	Stores item information specific to a depot (branch/plant).
Bulk Depot/Product Information (F41022)	Stores information specific to a depot and product for all bulk items.
Item Location (F41021)	Stores information for an item at a specific location. The main purpose of this table is to store inventory balances on an item or location level. The table also stores basic item information that is identical to information found in the Item Master table. This information provides the default values for the Item Location table from the Item Master table. You can override the default values here.
Inventory Constants (F41001)	Stores various branch/plant constants. Each branch/plant represents a depot.
Item Units of Measure Conversion Factors (F41002)	Stores Unit of Measure conversion information about each item of inventory stored in the depot.
Unit of Measure Standard Conversion (F41003)	Stores standard Unit of Measure conversion information.
Location Master (F4100)	Stores basic information about all warehouse and tank locations for each branch/plant.
Tank Master (F41500)	Stores structural information about the physical tank and information required for volume calculations. The system uses this table, in conjunction with the Tank Strapping table and the Default Tank Information table, to validate any products entered for bulk transactions.
Tank Strapping Table Maintenance (F41503)	Stores the gauging increments (physical dimensions) of the tank. This table is used in volume calculations.
Blend Category (F41501)	Stores information on the allowed blend categories for blending tanks.
Default Tank Information (F41508)	Stores the default temperature and density and gravity information used in conversion routines.
Meter Master (F41506)	Stores information concerning the flow meters in a depot. This table is required for processing and reconciliations.
Allowed Products Matrix (F41505)	Identifies the product groups that can be contained in the tanks and the order they can be used.

Item Cost File (F4105)	Stores the cost of products received into and sold out of the system.
Item Cost Components Add-Ons (F30026)	Defines the cost components to be updated when receiving product.
Location Detail Information (F4602)	Defines the locations used in warehousing to store product.
Lot Master (F4108)	Defines the detail lot locations that identify batches of product received.
Four-Point Analysis Maintenance (F41509)	Stores the volumes recorded at different points in the movement of products.
Four-Point Temperature Maintenance (F415091)	Stores the temperatures recorded at different points in the movement of products.

Transaction Processing Tables

The following tables store information from product transactions:

Purchase Order Detail Ledger (F43199)	Stores detail information for each purchase order line (item number, price, quantity ordered, and so forth).
Purchase Order Receiver (F43121)	Stores details about the volume of product received.
Sales Order Header (F4201)	Stores the header information for each sales order (sales order number, customer number, shipment date, default shipping locations, and so forth).
Sales Order Detail (F4211)	Stores detail information for each sales order line (item number, quantity ordered, price, and so forth).
Item Ledger (F4111)	Stores history information for all inventory transactions. Any change to the bulk inventory is recorded in this table. Some examples are purchase order receipt and inventory adjustment.
Bulk Product Transaction (F41511)	Stores supplemental information that pertains to bulk transactions only, such as temperature and density information, ambient and standard volumes, tank dip information, weighbridge information, and so forth.
Gain/Loss Transactions (F41512)	Tracks all gains and losses for analysis and reconciliations. Information used in the four-point analysis is tracked with a separate table.
Multi-Meter Readings (F41515)	Stores information regarding opening and closing meter readings.

Menu Overview

The commonly used menus for the Bulk Stock Management system are listed below.

Menu Overview - Bulk Stock Management (G4150)

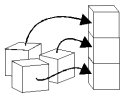
Daily Processing (G4110)

S Bulk Inventory Management (G41501)

S Intra-Depot Stock Movements (G415011)

Periodic Processing (G4120)

S Bulk Stock Reconciliations (G41502)



Inventory Setup (G4141)

S Bulk Stock Management (G415041)

Bulk Stock Management Reports (G415012)

Daily

Intra-Depot Stock Movements

The primary transactions, receiving new product and selling to customers, add or decrease inventory into and out of a depot. Intra-depot stock movements track inventory within a depot.

You record an intra-depot stock movement whenever you need to account for stock that can no longer be found in the location or container to which it was previously assigned.

A single intra-depot movement can be a "from" transaction, a "to" transaction, or both, and can have multiple lines for each entry. "From" transactions reduce inventory in a location. "To" transactions increase inventory in a location.

Before you record volumes, you may need to calculate the volume from a dip reading or weighbridge information. The system performs conversions based on a standard temperature in order to record volumes for bulk stock.

See Also

- *Transferring Inventory* in the *Inventory Management Guide* for information about inventory movements

Understanding Bulk Stock

The volume of a bulk product changes in relation to ambient temperature. Ambient temperature is the temperature of the environment surrounding a product, such as a tank or a compartment of a vehicle. To record volume at a common base for all stock movements, you need to convert the volume that you have calculated at ambient temperatures to volume calculated at a standard temperature. The Bulk Stock Management system uses only standard volumes to make adjustments to bulk inventory.

How Temperature and Density Affect Volume

Temperature has a unique affect on liquids. A liquid product expands when its temperature rises and contracts when its temperature declines. The degree to which a product expands or contracts depends on its relative density. The denser the liquid, the less the liquid expands or contracts.

When you measure liquid products, you need to convert the volume measured at the ambient temperature of the liquid to its volume based on a standard temperature. The system performs this conversion using standard tables or algorithms. You define the standard temperature to which you want to convert for each product at each depot.

How the System Converts Volume

When you record an intra-depot stock movement, a receipt of stock, or other volume entry for bulk stock, you can enter volumes calculated at ambient or standard temperatures. The system uses the temperature and density table indicated on the Bulk Information tab of the Additional System Information form of the Item Master to calculate a Volume Correction

Factor (VCF). It then multiplies the VCF by the ambient quantity to get the standard quantity. If the depot's standard temperature is different from the temperature used in the table, a secondary conversion is made to convert from the base temperature to the standard temperature.

Ambient Volume x VCF = Standard Volume

If no table is indicated, the system uses the co-efficient of expansion to calculate the standard volume.

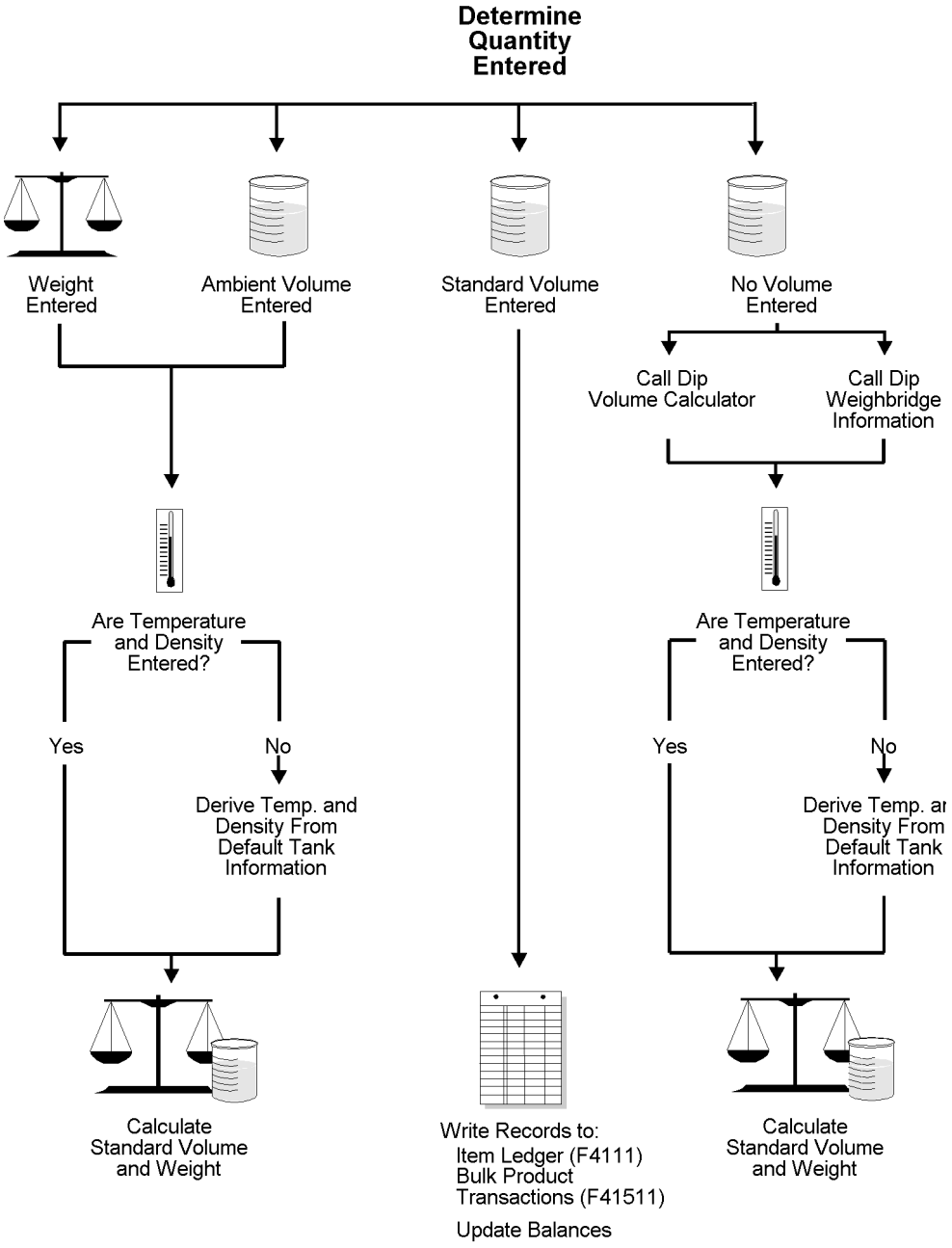
The system also calculates the weight of the product and converts the standard quantity to the Primary Stock Accounting Unit (PSAU) quantity for the product.

To calculate volume for asphalt and bitumen products or other products stored in heated tanks, the system also applies an expansion factor to account for the tank temperature.

The system records the following conversions:

Ambient volume	Ambient volume = Standard volume / VCF
Standard volume	Standard volume = Ambient volume x VCF
Weight	Weight = Standard volume x Corrected density
PSAU quantity	Calculated by either volume or weight

The following graphic illustrates the process that the system uses to calculate volume and weight:

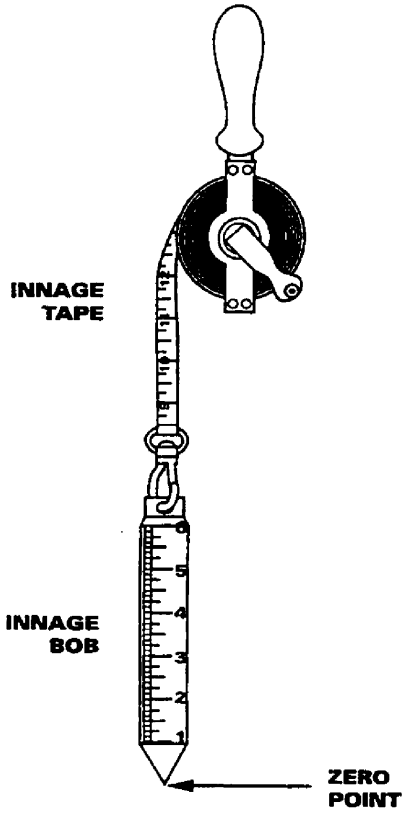


How Volume is Measured

To measure the volume of bulk products, you can perform various types of dips or use a weighbridge to weigh the product. Tank dip readings include the pipeline and discharge volumes, plus the initial dip volume.

Dip Measurement

A wet dip (innage) measures the liquid height in the tank. You measure the liquid height by lowering the innage tape and bob to the gauge striking point of the tank, pulling it out, and noting where the liquid marks the tape.

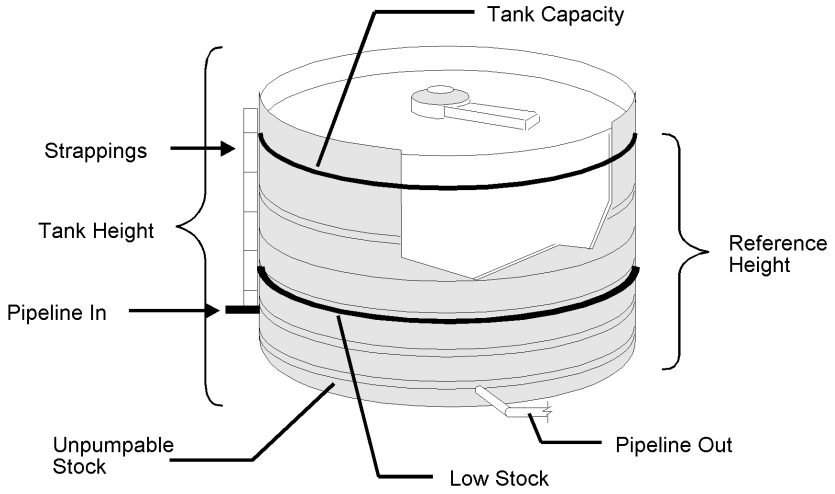


Innage tape and bob

A dry dip (ullage) measures the space between the liquid and a reference point at the top of the tank. You perform this type of dip when the product is too thick to be accurately measured. You measure the space between the top of the liquid and the reference point, and then determine the liquid height by subtracting the dry dip measurement from the reference height.

Tank Gauging and Strapping

After you measure the height of the liquid in the tank, you refer to the strapping table computed specifically for that tank. A strapping table is a record of volume capacity in a tank by height increments. This accounts for imperfections in the shell of the tank. The strapping table converts tank dip readings to gross volumes for a particular tank.



Strapping tables might be set up in the following ways:

Shell Height	Distance between the bottom of the bottom angle of the tank and the top of the top angle of the tank.
Gauging Height or Reference Height	Distance from the striking point on the tank floor (or strike plate) to a designated reference point on the gauge hatch.
Effective Inside Tank Height	Distance from the strike plate to the top angle, or where the product would begin to overflow. This height defines the upper and lower limits of the tank table.

Water and Sediment Height

When determining the gross amount of product in a tank, you must subtract the water and sediment from the total amount of product in the tank. To do this, you cover the innage tape with a water-finding paste, then perform a wet dip. The paste reacts with the sediment, dissolves, and turns the tape red.

Floating Roof Tanks

Floating roof tanks are normally used for aviation fuels or other products where it is critical to minimize the amount of water in the product.

Floating roof tanks have a moveable roof that floats on top of the product in the tank. A tank with a floating roof displaces a certain amount of liquid around its edges and up into the tank hatch. With such tanks, you must make a correction to the product measurement. The amount of displacement depends on the weight of the roof.

Heated Tank

A depot uses heated tanks for bulk products that need to be kept heated, such as asphalt and bitumens. A depot might also use a heated tank for any bulk product that might be abnormally expanded, as would occur in a cold environment.

Weighbridge Measurement

You can use Weighbridge to weigh the product in a tank-for example, a tank on a truck. To do so, you subtract the weight of the vehicle from the total weight. The system uses the weight to calculate volume. Weight is typically standard. It is not subject to volume changes in relation to temperature and density.

How Temperature and Density are Measured

Many types of thermometers are available for measuring the temperature of liquid in a tank. Some thermometers are standard for a particular type of tank. Because the temperature of liquid in a tank might vary throughout its depth, you might need to perform readings at various depths and calculate an average reading.

You use a hydrometer to measure the density of liquids. A hydrometer floats vertically in liquid. The buoyancy of the hydrometer depends on the density of the liquid. You first take a sample of the liquid from the tank and put it in a glass cylinder. Then you lower the hydrometer into the tank and take a reading. You also take a temperature reading using a thermometer. You use the temperature reading to convert from the density at the liquid's ambient temperature to the density at its standard temperature.

See Also

- *Defining Depot Temperature and Density* for information about defining the standard temperature
- *Defining Default Units of Measure for Bulk Items* for information about defining the Primary Stock Accounting Unit (PSAU)
- *Calculating Volume from Dip Readings*
- *Calculating Volume from Weighbridge Information*
- *Setting Up Basic Tank Information* for information about setting up a heated tank

Understanding Commingled Stock

You might hold stock belonging to another company at your depot within the same tank as your own stock. This is known as commingled stock. Trading partners for whom you hold stock typically do not find it feasible to carry all of the products that they want to sell. Or they might have a dry depot, in which they carry no stock at all.

When the company enters a sales order, a driver might be required to pick up the stock at your depot. When the driver picks up the stock, you can enter an inventory transaction to take stock out of the tank, or enter a sales order and create a trip to download to a gantry. If your driver is delivering the stock, you can enter a sales order and create a trip if you want to include the trip in your dispatch planning. If you enter a sales order, you can charge a handling fee as the sales price.

Whenever you make a stock movement, record receipt of a product, load stock, or record a disposition, you must specify the owner of the product if the tank in use is set up for

commingled stock. These transactions should be reflected in inventory, but not in accounts receivable or the general ledger.

Energy and Chemical Solutions accounts for two types of commingled stock:

- Commingled for custody
- Commingled for duty

Commingled for custody refers to stock that is owned by your trading partner, but stored in your tank. The trading partner might not have a depot in your area, but still needs to serve its customers.

Commingled for duty refers to stock in tanks that hold both duty-free and duty-paid stock. For example, you might sell duty-paid stock to domestic customers, and duty-free stock to international customers or the government.

Stock can also be both commingled for custody and for duty. For example, you might hold duty-free stock in your tank for your trading partner.

To correctly account for the two types of commingled stocks, you can set a processing option in the following systems:

Bulk Stock Management System	• Stock Movements • Enter Receipts by Purchase Order
Transportation Management System	• Confirm Bulk Load • Bulk Disposition

See Also

- *Setting Up Depot Locations* for information about setting up item and location combinations for commingled stock
- *Setting Up Additional Tank Information* for information about defining a tank for commingled stock
- *Reviewing Location Segment Inquiry* to review the inventory balances for tanks containing commingled or custody stock

Working with Intra-Depot Stock Movements

To ensure accurate accounting of your inventory, you can record intra-depot stock movements by using various versions of the General Stock Movements program. Choose the appropriate stock movement version based on the type of stock movement that you want to perform. Following each movement version is an explanation of how to record the type of movement, including the "From" (F) or "To" (T) required lines, document type, examples, and whether the movement results in a gain or loss.

See Also

- *Agreement Management Guide* for information about setting a processing option to specify how the system searches for agreements if you are using the Agreement Management system

Example: Bulk Stock Adjustments

Any adjustment to inventory

You can record a "From" or a "To" (not both).

Example:

- F: Spillage line loss
- T: Receipt of product

No gain or loss

Document Type: BJ

Example: Consumed in Operations - Own Use

Used in internal operations

You can record a "From" or a "To" (not both).

On a "From" transaction, you can specify the account to be expensed.

Examples: Cleaning tanks, running vehicles

- F: Tank
- T: Return to tank

No gain or loss

Document Type: BO

Example: Tank to Tank Transfer

Transfer from one tank to another within the same depot

You can record a "From" and a "To."

Examples: Maintenance, replenishing of commingled stock

- F: Tank A
- T: Tank B

Gain or loss

Document Type: BT

Example: Repack

Repack from one package size to another

You can record a "From" and a "To." The program allows multiple "From" and "To" lines.

Example: Drums to other containers, such as cans

- F: 10W40 drums
- T: 10W40 cans

Gain or loss due, for example, to spillage

Document Type: BP

Example: Rebrand

Change to stock item (no physical movement)

You can record a "From" and a "To."

Examples: Change due to confirming supply under incorrect item or renaming an item

- F: Base Oil A
- T: Base Oil B

No gain or loss

Document Type: BR

Example: Regrade

Change to stock item (no physical movement)

You can record a "From" and a "To."

Regrades are normally due to customer demand

Example: Take a higher grade product and sell as lower grade

- F: Premium
- T: Unleaded

No gain or loss

Document Type: BG

Example: Decant

Empty a packaged item

You can record a "From" and a "To." The program allows multiple "From" and "To" lines.

Example: Convert additives from drums to bulk storage

- F: Package product decanted
- T: Bulk product
- T: Empty container

Gain or loss due to loss in process-for example, spillage

Document Type: BD

Example: Fill

Take bulk product in tank and fill drums or canisters

You can record a "From" and a "To." The program allows multiple "From" and "To" lines.

Examples:

- F: Empty containers
- F: Bulk stock
- T: Filled package product

Gain or loss due to loss in process-for example, spillage

Document Type: BL

Example: Simple Blend

Blend multiple products to make another

You can record a "From" and a "To." The program allows multiple "From" and "To" lines.

Simple blends increase the quantity on hand of current product in tank

Examples:

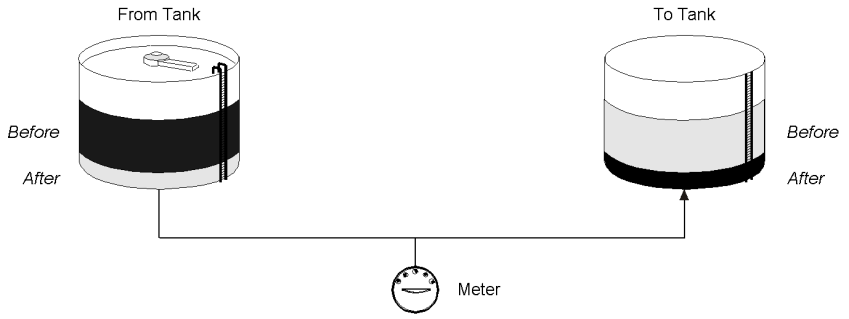
- F: Bulk Product A
- F: Additive 1
- T: Bulk Product C

No gain or loss

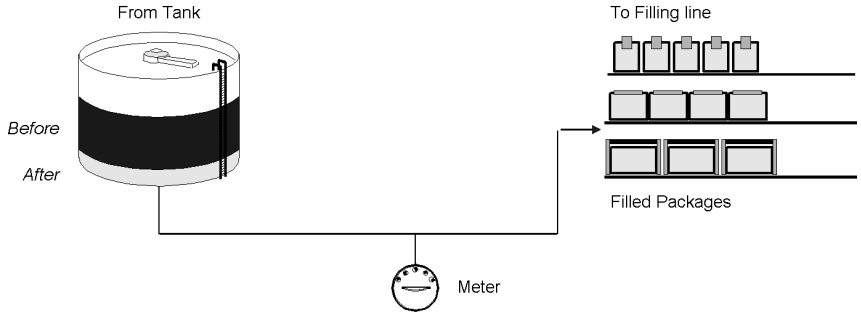
Document Type: BB

The following graphics illustrate the movement of stock in various situations:

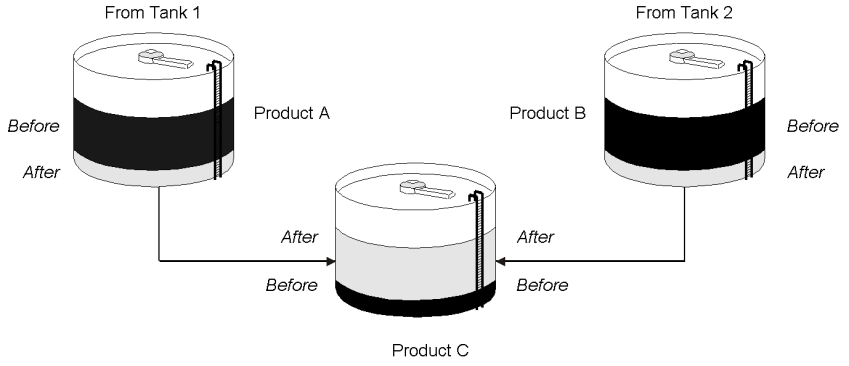
Tank to Tank Transfer



Repack, Decant, or Fill Transaction



Simple Blend



Moving Stock

For a fill, decant, or repack, if you must record a gain or loss, you need to perform a conversion at the item level for the volume of each unit of the packaged product. You also need to set up a conversion factor of .0000001 per one empty package so that the system can convert each subfile line to the unit of measure of the bulk gain or loss item. Set this up at the system level for each empty package unit of measure-for example, .0000001 LT per 1.0 item.

Packaged items contain bulk stock at standard temperature, not ambient temperature, because the temperature of the product in the package cannot be determined.

Record a rebrand when product is mislabeled as it arrives at the depot and needs to be renamed. Alternatively, you might want to record a rebrand if the same product is sold under different names to different customers for marketing reasons. One way to handle such a case is to designate one product to be a parent item and the other, a component of a kit.

The system requires that all volume and weight units of measure have conversions to kilograms (KG) and cubic meters (M3) for calculation purposes.

Additionally, you can account for gains or losses that might occur during a stock movement, and record stock movements involving kit items.

When you record stock movements, the system updates the following tables:

- Item Ledger (F4111)
- Bulk Product Transactions (F41511) if a bulk item is moved
- Gain/Loss Transactions (F41512) if a gain or loss is created
- Account Ledger (F0911)
- Item Location (F41021)
- Location Detail (F4602) if warehouse control is activated for the branch/plant

Note

You can record stock movements only to the current accounting period.

There are six processing groups, defined by the processing options that determine how each of the stock movements is processed.

Recording Intra-Depot Stock Movements

Record stock movements whenever you must account for stock that can no longer be found in the location or container to which it was previously assigned.

For each type of intra-depot stock movement, you complete the same basic steps to record the movement. The version that you use and the information that you need to enter vary, depending on the type of movement that you are recording. The stock movement types are defined by the processing group and the processing option settings.

► To record an intra-depot stock movement

From the Stock Movements menu (G415011), choose a stock movements option.

1. On Work With General Stock Transactions, click Add.
2. On General Stock Movements, complete the following fields:
    - Document Number
    - G/L Date
    - Explanation
    - Depot
    - Trans Date

- Linked Information Not Found

3. Complete the following fields in the detail area:
    - F T
    - Item Number
    - Location
4. Complete one of the following fields in the detail area:
    - Ambient Volume
    - Standard Volume
    - Weight Result

    Alternatively, you can use the Dip Volume Calculator or Weighbridge Information programs to calculate ambient volume. See *Calculating Volume from Dip Readings* or *Calculating Volume from Weighbridge Information*.

    You can also let the system calculate the Stock Total in standard volume.
5. Complete the following optional fields in the detail area, then click OK:
    - Unit Cost
    - Extended Cost/Price
    - U F
    - Agreement Number
    - Supp No
    - Lot Serial Number
    - Expiration Date
    - Lot Stat Code
    - Reason Code

Related Tasks

When you enter an intra-depot stock movement, you can choose an option to display the Journal Entries program to review the accounting information for the transaction.

Reviewing item availability If you need to review item availability, you can choose an option to access the Item Availability program.

Searching for a location If you do not know the tank ID, you can choose to search for it from the Loc/Tank field. The system returns the tank ID, as well as the lot number, if one exists.

Changing or deleting transactions

You cannot change or delete previously entered transactions. This is because the inventory has been updated and G/L records have been written.

If you enter a transaction in error, perform the following:

- Locate the transaction
- Reverse the entry
- Enter any information on a blank line to correct the error

When you reverse a transaction, post the batch created by the reversal to update the general ledger. On a reversal, the program stores the general ledger date from the original transaction as the historical date.

Processing Options for General Stock Movements

Process Type
1. Enter the Processing Type:
1=Adjustments 4=Repack, Decant, Fill
2=Consumed in Op 5=Rebrand, Regrade
3=Tank-toTank Transfer 6=Blending

Default Values
1. Document Type
2. Reason Code
3. Gain/Loss Location
Inventory
1. Enter '1' to allow transfers greater than quantity available.
2. Enter '1' if From and To quantities must balance to zero.
3. Enter '1' if From and To lines must have the same packaged items.
4. Enter '1' to update the Item History file.
Lot Options
1. Lot expiration date assignment -
1 = Assign Manually 3 = Oldest From Expiration
2 = Newest From Exp 4 = Trans date + shelf life.

2. Enter '1' to allow transfers from held lots.
G/L Info
1. Enter '1' to summarize JE's by account within document.
2. Enter '1' to allow entry of account number information.
Agreements
1. Enter '1' to assign agreement if only one is found. Enter '2' to always display all applicable agreements. Enter '3' to assign the agreement with the earliest expiration date. If left blank, no agreement assignment will occur.

What You Should Know About Processing Options

Multiple Agreements

On the Agreements tab, if you enter a 2 in the field, the system finds multiple agreements and displays a check mark in the row header that is located in the detail area and in the Agreements Exists column. You must use a row exit to select an agreement.

Recording an Intra-Depot Stock Movement for a Kit

You might need to record a stock movement that involves a kit item, such as when entering a simple blend transaction. When you enter a transaction that includes a kit item in the movement, you first copy a bill of material to obtain the parent item information for the kit. Then, enter any detail information for the stock movement.

Note

If you specify detail information prior to copying a bill of materials, the system deletes the information. You must enter it again.

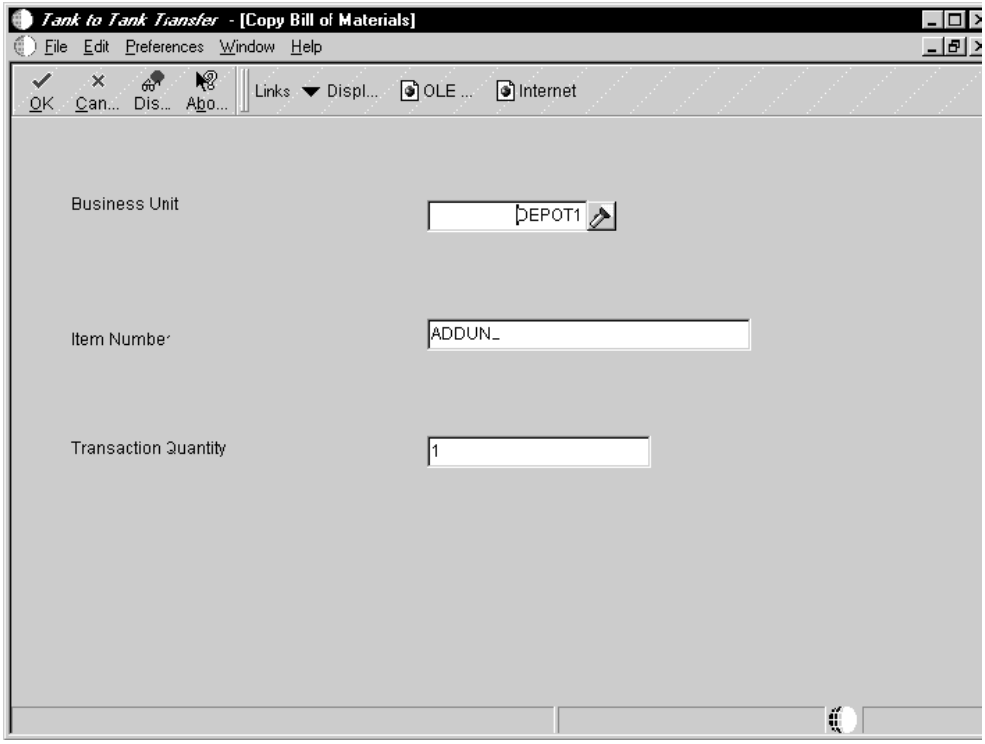
See Also

- *Processing Options for General Stock Movements* for the processing options for this program

► To record an intra-depot stock movement for a kit

From Stock Movements (G415011), choose a stock movements option.

1. On Work With General Stock Transactions, click Add.
2. On General Stock Movements, complete the following fields:
    - Document Number
    - Do Ty
    - G/L Date
    - Explanation
    - Depot
    - Trans Date
    - Linked Information Not Found
3. From the Form menu, choose Copy BOM.



4. On Copy Bill of Materials, complete one or more of the following fields, and click OK:
    - Business Unit
    - Item Number
    - Transaction Quantity
5. On General Stock Movements, follow the steps to record an intra-depot stock movement.

See Also

- *Recording Intra-Depot Stock Movements*

Recording a Gain or Loss on an Intra-Depot Stock Movement

When product is moved from one location, tank, or container to another, a change in volume can occur, for example, due to spillage, leakage, evaporation, and temperature changes. You can account for these gains or losses when recording the "from" and "to" movements of the product.

You can specify gains or losses for the following stock movements:

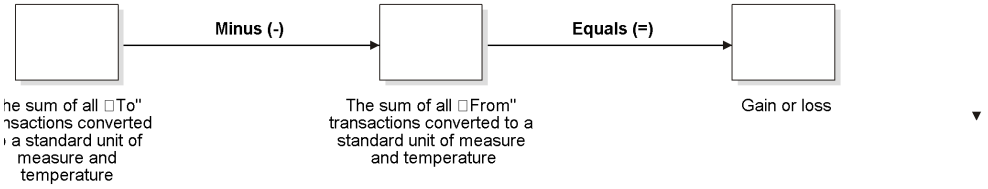
- Tank to tank transfer
- Repack
- Decant
- Fill

You use processing options to control how gains or losses are recorded, as follows:

- Set a processing option to specify a default gain/loss location.
- Set a processing option to ensure that the From, To, and Gain/Loss quantities equal zero.
- Set a processing option to require that the "From" quantity, the "To" quantity, and the gain/loss quantity balance.

The system calculates gains and losses as follows:

> The sum of all "To" transactions converted to a standard unit of measure and temperature, minus the sum of all "From" transactions converted to a standard unit of measure and temperature, equals the gain or loss.

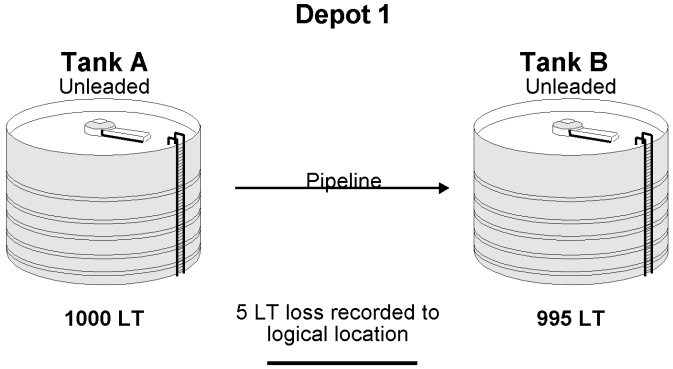


You record gains and losses to a logical location instead of a physical location to prevent them from adjusting actual inventory. Because no item or location record exists, searching by a location will not display the inventory for the location.

The program converts all products within a transaction to the primary unit of measure associated with the gain or loss bulk product. If the unit of measure conversion is not set up by item, the system uses the standard unit of measure conversions.

Example: Recording Loss

The following graphic illustrates the transfer of 1000 liters (LT) from Tank A to Tank B. After the transfer, Tank B reports receiving only 995 liters. To accurately account for the transfer, you record a 5-liter loss to the logical location.



You do not record a 5-liter loss to Tank A because 1000 liters actually left Tank A. Likewise, you do not record a gain of 5 liters to Tank B because only 995 liters actually entered Tank B.

See Also

- *Setting Up Depot Locations* for information about setting up a logical location
- *Recording Intra-Depot Stock Movements* for the processing options for this program

► To record a gain or loss on an intra-depot stock movement

From Stock Movements (G415011), choose a stock movements option.

1. On Work With General Stock Transactions, click Add.
2. On General Stock Movements, follow the steps to record an intra-depot stock movement that includes both a "From" and a "To" transaction on two lines.

   The system calculates the gain/loss quantity and displays it in the primary unit of measure.

3. Complete the following required fields for Gain/Loss and then click OK:
   - Location
   - Item Number

Calculating Volume from Dip Readings

You use Dip Volume Calculator to calculate volume for stock movements when you obtain dip readings based on tank strappings information.

Typically, a dip reading is taken before and after a movement occurs. After you enter these readings, the program calculates the following:

- Ambient volume
- Standard volume
- PSAU volume
- Weight

It also calculates the difference between the before and after quantities. An after dip that is lower than the before dip is considered a discharge from the tank. The reverse is considered a receipt of product.

When you enter before and after dip readings, the program uses the tank strappings information to calculate the ambient volume for each dip reading. The system takes the tank type and the dip type into account, and applies the floating roof displacement correction, if necessary.

You can calculate volume from dip readings while recording stock movements or receiving products, or as a single step from the Bulk Stock Management menu. When you calculate volume as a single step, the program acts as a calculation tool only. It does not store the values. When you use the Dip Volume Calculator program while recording stock movements or receiving products, the calculations are stored in the Bulk Product Transactions table (F41511).

You can access the Dip Volume Calculator directly from the Bulk Stock Management menu (G41501) or any stock movement form on the Stock Movements menu (G415011). Alternatively, from the Purchase Order Receipts form, choose Bulk, and then Dip Volume Calc from the Row menu.

For liquified petroleum gas (LPG) products, the Dip Volume Calculator program does the following:

- Corrects the liquid volume to 15ºC using the LPG tables
- Calculates liquid mass (weight)
- Determines the presence of inert gas that affects vapour density calculation
- Derives vapour density
- Calculates vapour mass (weight)
- Calculates vapour volume
- Calculates volume as follows: total volume = liquid volume + vapour volume
- Calculates weight as follows: total weight = liquid weight + vapour weight
- Calculates the liquid volume from the strapping tables

See Also

- *Understanding Bulk Stock* for general information on dip readings and volume conversions

Calculating Volume for a Stock Movement

To calculate volume for a stock movement, take information from the tank strappings table and enter the dip readings. You must enter them in the same units that are set up in the system's tank strappings table: centimeters, feet or inches, and fractions. The calculation program will not convert dip readings.

You might not need to take tank strappings. Alternatively, you can enter the ambient volume directly in the Other Volume field. The program will convert ambient volume to standard volume. If you directly enter ambient volume, you must also enter the before and after dip readings as zero.

If the dip type is E for an electronic gauge reading, the system considers the gross dip readings that you enter as volumes, not strappings, and does not make strappings conversions. It only makes the conversion to standard volume. The program uses the unit of measure from the default tank strappings. You can enter electronic gauge readings in ambient volume, standard volume, or weight.

If you record an electronic reading in weight, enter the weight in the Gross Dip field. The Gauging Method in the Tank Master must be specified as "W" (weight). The program uses the entry as a weight (where the unit of measure is the weight unit of measure specified in the Item Master) and enters the appropriate amounts in the Bulk Item Ledger.

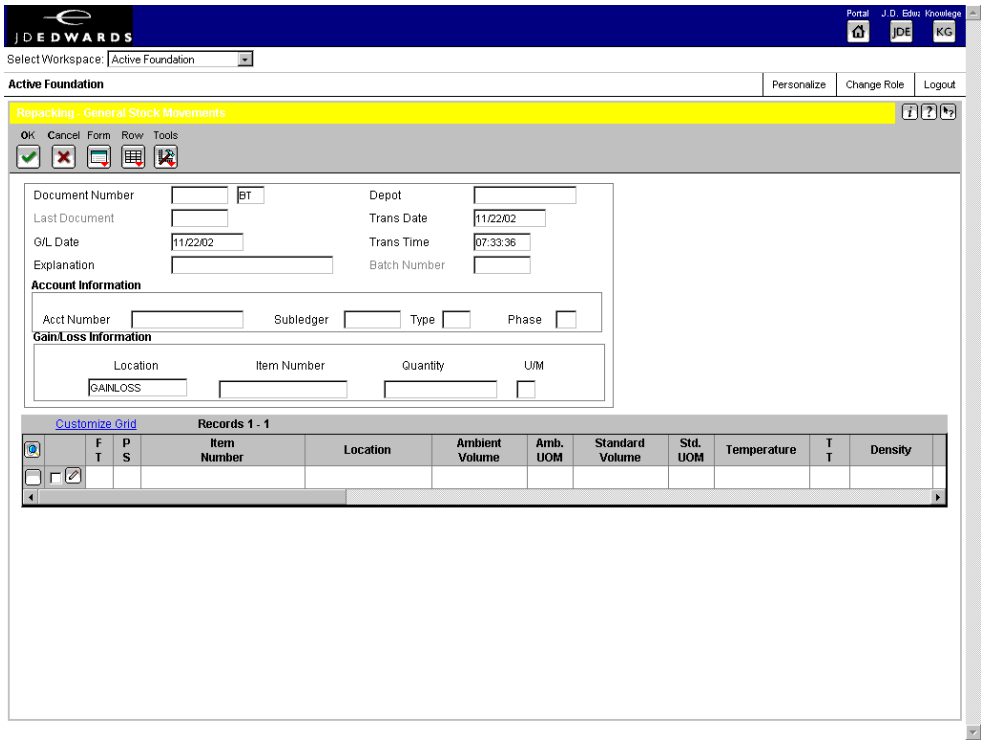
If you are moving a large quantity of product, you can enter the Before reading now and record the After reading at a later time.

If you use an LPG item and if vapor calculations are activated, the program processes the entry as if no vapor is involved. If you enter a total weight (liquid + vapor), the program cannot determine which portion is liquid and which is vapor, so vapor calculations are invalid, regardless of whether vapor calculations are activated.

► To calculate volume for a stock movement

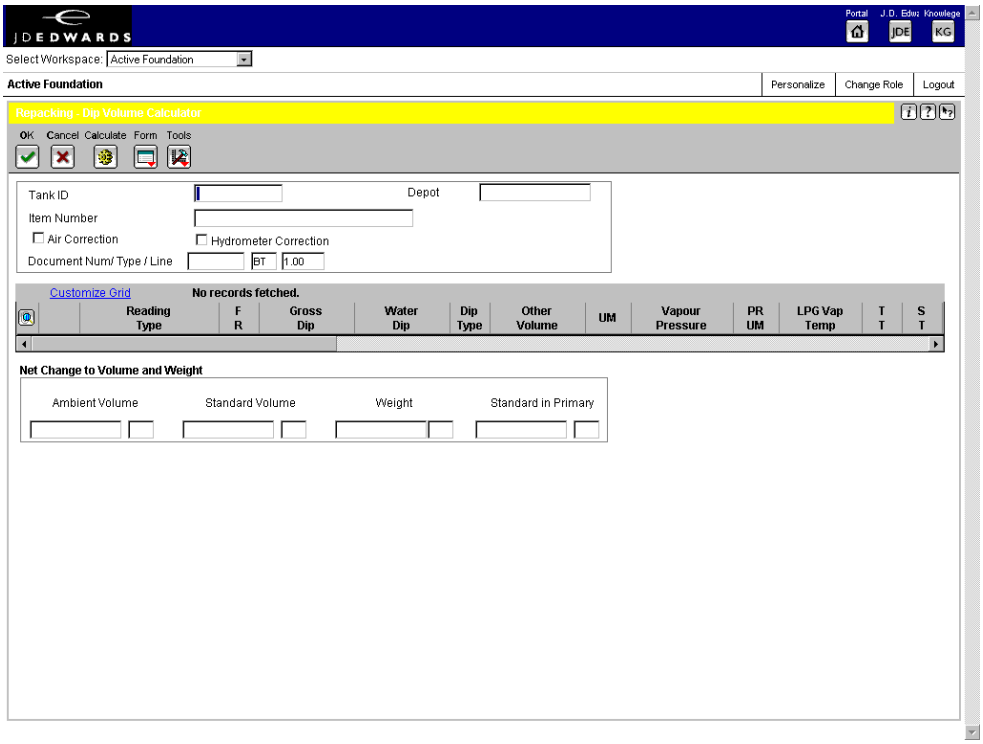
From the Stock Movements menu (G415011), choose a stock movements option.

1. On Work With General Stock Transactions, click Add.



2. On General Stock Movements, complete the following fields:
   - F T
   - Item Number
   - Location
   - Depot

3. From the Row menu, choose Dip/Meters.



4. On Dip Volume Calculator, complete the following fields in the detail area:

    - Gross Dip
    - Water Dip

    You might need to review the strappings information for the tank. You can choose an option to access the Tank Strapping Table program. In addition, you might need to review default information for the tank. You can choose an option to access the Default Tank Information program.

    The Temperature and TT fields default in from the Default Tank Information table (F41508).

5. Complete the following optional fields in the detail area:

    - Other Volume
    - Display Density
    - D T
    - Density Temp
    - T U

6. If the item is an LPG product, indicated by a Y in the calculate vapor field, complete the following fields in the detail area:

    - Vapour Pressure

- LPG Vap Temp
- T T
- S T
- Vapour Weight

The system performs volume calculations and retrieves values for the following fields: Ambient Volume, Volume - Standard, Weight Result, and Quantity - Primary Stock Accounting Unit.

Calculating Volume for a Simultaneous Movement

You can calculate volume for a simultaneous movement, such as simultaneously receiving and withdrawing product from the same tank.

When you calculate volume from dip readings, you can also record the meter readings from a withdrawal of product. When you enter these readings, the system adds the quantity that you withdraw back into the quantity calculated from the dip readings. A message appears to indicate that there was a simultaneous withdrawal.

You cannot calculate volume for a simultaneous movement if you choose Dip Volume Calculator from the Bulk Stock Management menu.

You must record any gain or loss associated with this type of transaction to the outturn gain/loss.

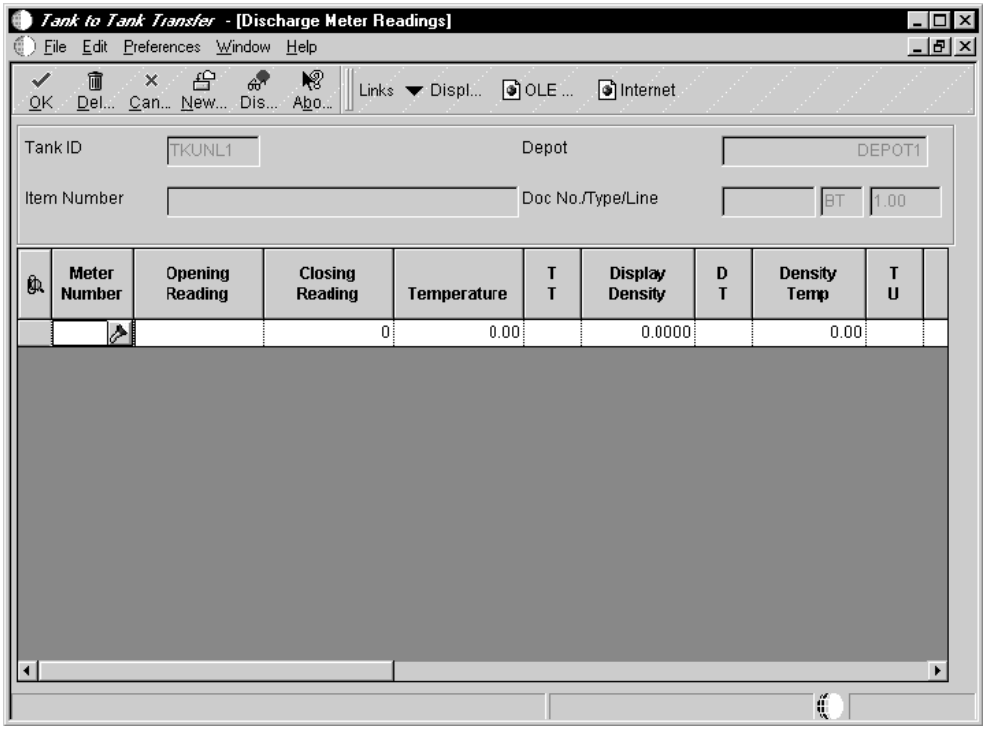
See Also

- *Recording a Gain or Loss on an Intra-Depot Stock Movement*

► To calculate volume for a simultaneous movement

From the Stock Movements menu (G415011), choose a stock movements option.

1. On Work With General Stock Transactions, click Add.
2. On General Stock Movements, complete the following fields:
    - F T
    - Item Number
    - Location
    - Depot
3. From the Row menu, choose Dip/Meters.
4. On Dip Volume Calculator, choose Meter Readings from the Form menu.



5. On Discharge Meter Readings, complete the following fields in the detail area:
    - Meter Number
    - Opening Reading
    - Closing Reading
6. Complete the following optional fields:
    - Temperature
    - T T
    - Display Density
    - D T
    - Density Temp
    - T U
7. Click OK.

    The date, read time, ambient volume, and stock total appear in the detail area.

Calculating Volume from Weighbridge Information

You use the Weighbridge Information program to calculate volume for stock movements when you have weight readings from a weighbridge. This program calculates the weight or volume of the product by subtracting the weight of the vehicle. The program stores

Weighbridge calculations in the Bulk Product Transactions table (F41511) when calculating volume is performed as part of a stock movement.

The system calculates the following:

- Weight (by subtracting the weight before loading from the weight after loading)
- Ambient volume
- Standard volume
- PSAU quantity (either weight or volume)

The Weighbridge Information program requires the following:

- The Before Loading weight cannot be below the empty weight of the vehicle.
- The After Loading weight cannot exceed the weight capacity or maximum gross weight of the vehicle.
- The volume calculated cannot exceed the volume capacity of the vehicle.

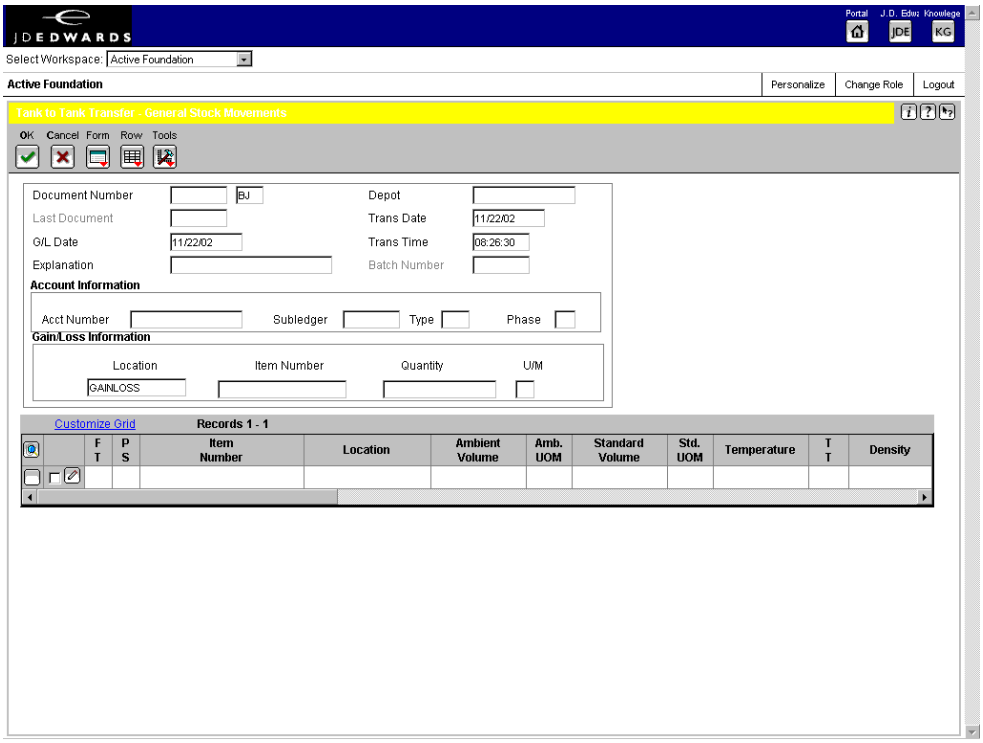
You can access the Weighbridge Information directly from the Bulk Stock Management menu (G41501), from any stock movement form on the Stock Movements menu (G415011), or from Purchase Order Receipts form, choose Bulk, then Weighbridge from the Row menu.

If you access Weighbridge Information directly from the Bulk Stock Management menu, the program serves as a calculation tool only. It does not store the values.

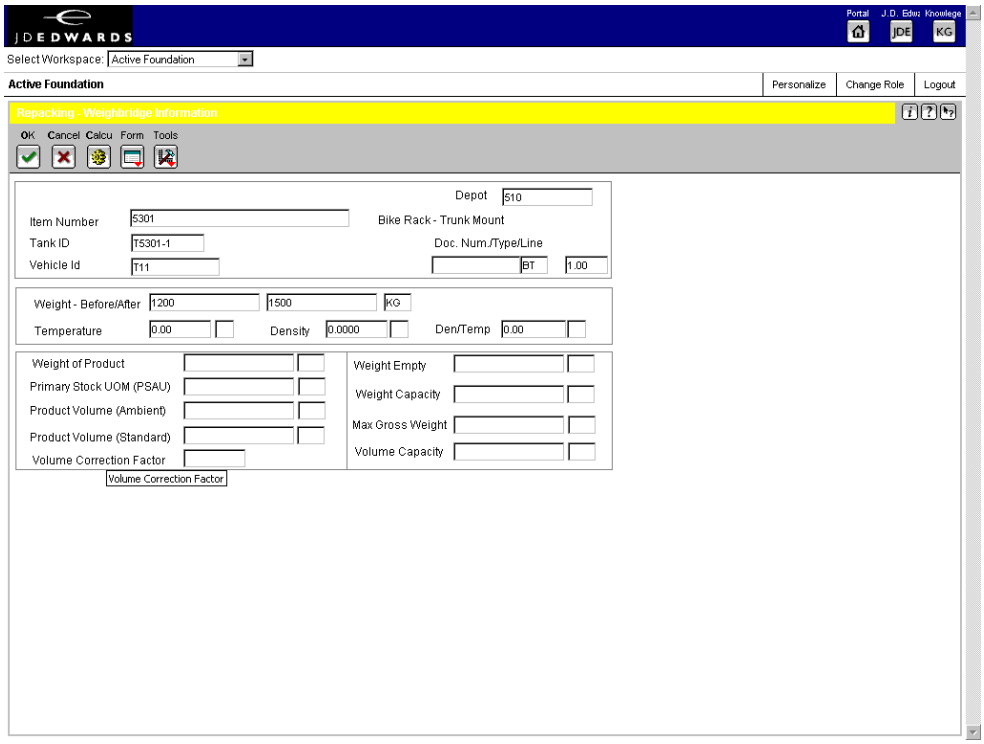
► To calculate volume from weighbridge information

From the Stock Movements menu (G415011), choose an option.

1. On Work With General Stock Transactions, click Add.



2. Complete the following fields and choose Weighbridge from the Row menu:
    - F T
    - Item Number
    - Location



3. On Weighbridge Information, complete the following fields:
    - Vehicle Id
    - Weight - Before Loading
    - Wt U/M
4. Complete the following optional fields and click OK:
    - Temperature
    - T T
    - Density
    - D T
    - Den/Temp

    The system defaults temperature type values from the Default Tank Information table.

    The system performs volume calculations and retrieves values for the following fields: Weight of Product, Primary Stock UOM (PSAU), Product Volume (Ambient), Product Volume (Standard), Volume Correction Factor.

    If you need to review information for the vehicle, you can choose an option to access the Vehicle Master program.

See Also

- *Setting Up Vehicle Maintenance Information* in the *Transportation Management Guide* for information on vehicle maintenance

Bulk Product Receipts

You record the receipt of bulk products requested on a purchase order as they arrive at the depot. You can confirm the receipt of the products requested on the purchase order, record the volumes received, and make adjustments to correct variances.

You can also calculate any gains or losses that might have occurred during transportation-for example, due to spillage, theft, and faulty meters. To do so, you perform a four-point analysis. Four-Point refers to the opening and closing readings at a supplying location, and the opening and closing readings at a receiving location. "Analysis" refers to the variance between the two results (that is, the gain or loss). You perform a four-point analysis primarily to determine the quantity lost in transit of stock that undergoes a lengthy voyage, but you can record the data for any movement.

If you take ownership for the product when it is loaded onto a vehicle at a supplier's depot, you can track the quantity loaded onto the vehicle and record it as a liability. Then you can calculate and record any gain or loss that might have occurred at the time of delivery at your depot.

See Also

- *Entering Receipts* in the *Procurement Guide* for information about purchase orders and receiving inventory

Recording Bulk Product Receipts

You record the receipt of bulk products requested on a purchase order as they arrive at the depot. You can confirm the receipt of the products or make adjustments to correct variances. The system updates the Item Ledger table (F4111), the Purchase Order Receiver table (F43121), and the Bulk Product Transactions table (F41511).

When you record bulk product receipts, you can display all purchase order lines that have an open quantity or amount to be received, and record the receipt of a bulk product. An open quantity is the purchase order quantity minus the previous quantities received.

When you receive a bulk item, the Bulk Product Receipts form allows you to record temperature and density information, and calculate standard volume and weight. A bulk item is defined by the Bulk/Packed field on the Item Master form.

You can set a processing option to record differences in receiving as a temperature gain or loss, to recalculate the unit cost, or to receive as standard quantities for the items that were purchased in standard quantities.

You might want to receive the entire amount ordered, and not perform a temperature or density conversion from ambient to standard. If you record a gain or loss, the amount is calculated as follows:

[(Standard Quantity - Ambient Quantity) x Unit Cost] - Temperature Gain or Loss

This amount is debited to the temperature gain or loss Automatic Accounting Instruction (AAI) account, with the offset as a credit to Inventory AAI. Quantities are stored as a temperature gain or loss.

If you choose to recalculate the unit cost for bulk products that require a temperature conversion, the unit cost is recalculated as follows:

Unit Cost = (Extended Cost)/(Standard Quantity)

The unit cost is recalculated in receiving, and there is no variance in voucher match. The difference is recorded to the Item Ledger table (F4111) and the Bulk Product Transactions table (F41511).

If you choose to receive as standard, the items that are purchased in standard quantities, the product is received as if it were a packaged product. There is no gain or loss, and no adjustment to unit cost.

Before You Begin

- Verify that you have entered purchase orders into the system.

See Also

- *Creating Receipt Routes* in the *Procurement Guide*

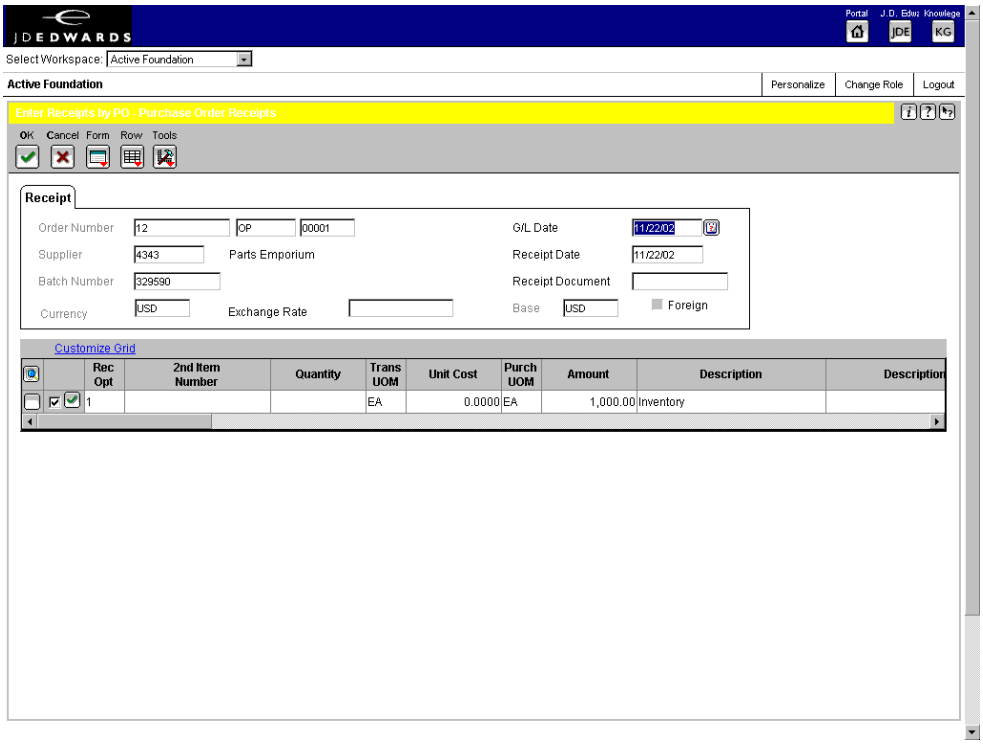
► To record bulk product receipts

From the Purchase Order Processing menu (G43A11), choose Enter Receipts by PO.

1. On Work With Purchase Orders to Receive, locate open purchase order details lines that correspond to a receipt. Complete the following fields and click Find:
    - Branch/Plant
    - Order Number
    - Item Number
    - Account Number

    Only those detail lines appear with a next status code that is equal to your processing options specifications.

2. Choose a detail line for which to enter a receipt and click Select.



If you enter receipts by order number, all detail lines appear that are on the same order as the detail line that you selected. If you enter receipts by item, all detail lines appear that contain the item that is on the detail line that you selected.

3. On Purchase Order Receipts, complete the following fields:
    - G/L Date
    - Receipt Date
4. Compare the receipt details to the detail line information and adjust the following fields, as necessary:
    - Quantity
    - Trans UOM
    - Unit Cost
    - Amount
5. Adjust the remaining information for each detail line as necessary.
6. Type 1 in the following field for each detail line that you want to receive and click OK:
    - Rec Opt

    The option that you enter determines whether the system leaves the balance of the line open (option 1), closes the balance (option 7), or cancels the line entirely (option 9).

Related Tasks

Calculating quantity You can access Dip Volume Calculator or Weighbridge Information from Purchase Order Receipts if you need to calculate the volumes to enter.

Calculating gain or loss You can access Four-Point Analysis Maintenance from Purchase Order Receipts if you need to calculate gains or losses.

See Also

- *Calculating Volume from Dip Readings* and *Calculating Volume from Weighbridge Information* for information about calculating volume
- *Calculating Gain or Loss for Received Products* for information about performing a four-point analysis

Processing Options for PO Receipts

Defaults
1. Inquiry Order Type
2. Receipt Document Type

Status Default
1. Acceptable Incoming Status Code 1
2. Acceptable Incoming Status Code 2
3. Acceptable Incoming Status Code 3
4. Outgoing Status for Partial Receipts
5. Outgoing Status for Closing
6. Outgoing Status for Canceling

Display
1. Sales Order Backorders
 Blank = Do not release
 1 = Display the release form
2. Lot Information
 Blank = Do not display
 1 = Display
 2 = Display and Protect
3. Cost Protection
 Blank = Display cost fields
 1 = Disable cost fields
 2 = Hide cost fields
4. Kits
 1 = Parent line
 2 = Component lines
5. Receiving Mode
 1 = Receive by purchase order
 2 = Receive by item
 3 = Receive by G/L account
 4 = Receive by shipment number

Process
1. Supplier Update Mode
 Blank = Do not update
 1 = Update only if the supplier number is zero
 2 = Update
2. Lot Default
 Blank = No

1 = Yes
3. Option Default
Blank = No
1 = Yes
4. Serial Numbers
Blank = Disallow
1 = Allow
5. Quantity Entry
Blank = Default from open quantity
1 = Manually
6. Landed Costs
Blank = Do not perform
1 = Display Landed Cost Selection form
2 = Perform blind processing
7. Receipt Traveler Document
Blank = Do not print
1 = Print
8. Supplier Analysis
Blank = Do not capture
1 = Capture
9. Text Deletion
10. Direct Ship Status
11. Receipt Routing
Blank = Do not activate
1 = Activate
12. Journal Entries
Blank = Do not summarize
1 = Summarize

Tolerance
1. Quantity and Amount
Blank = Do not check
1 = Display a warning
2 = Display an error message
2. Date
Blank = Do not check
1 = Display a warning
2 = Display an error message

Warehousing
1. Putaway Mode
Blank = Do not create request
1 = Create request only
2 = Create request and process the request
3 = Do not create request, receive goods directly
2. Cross Docking

Currency
1. Effective Date
Blank = Today's Date
1 = G/L Date
2. Protect Rate
Blank = Do not protect
1 = Protect

Versions
1. Open Order Inquiry (P4310)
2. Sales Order Backorder Release (P42117)
3. Receipt Traveler (P43512)
4. Receipt Routing (P43250)
5. Putaway Requests (P46171)
6. Online Reservations (P46130)
7. Purchase Order Entry (P4310)
8. G/L Journal Entries (P0900049)
9. Landed Cost Selection (P43291)
10. Test Results Revisions (P3711)

Flex Acct
1. Flex Accounting
Blank = Do not activate
1 = Activate
Bulk
1. Quantities
Blank = Standard
1 = Calculate temperature gain or loss
2 = Update unit cost
2. Transaction Volumes
Blank = Ambient
1 = Standard
Interop
1. Transaction Type
Workflow
1. Receipt Email
1 = Buyer
2 = Originator
3 = Buyer and originator
2. Completion Email
Blank = Do not send email
1 = Planner

Calculating Gain or Loss for Received Products

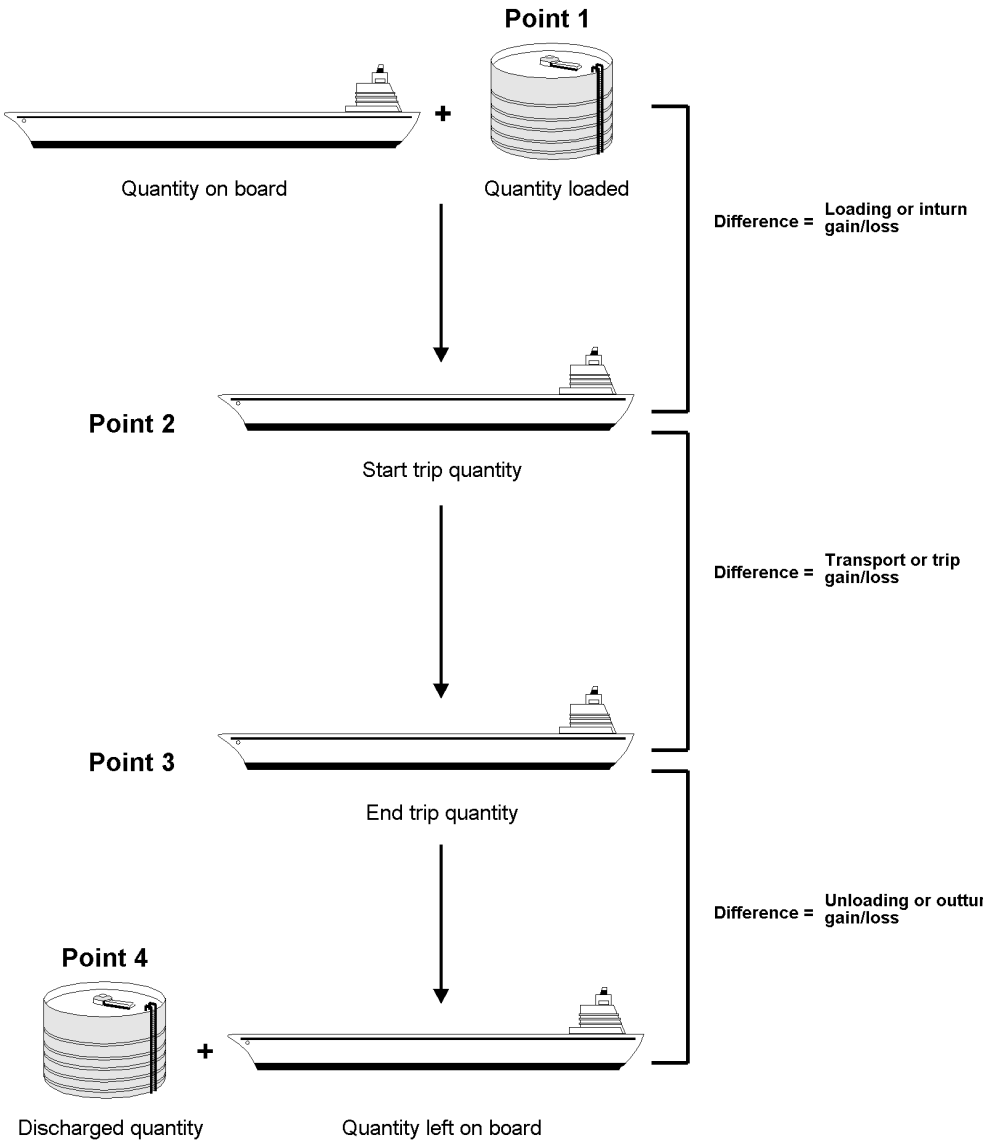
Use Four-Point Analysis when you record received products to calculate any gains or losses that might have occurred during shipment. "Four-Points" refers to the opening and closing readings at a supplying location, and the opening and closing readings at a receiving location. "Analysis" refers to the variance between the two results (that is, the gain or loss).

You can choose to perform a four-point analysis for each line item on a purchase order. You can also perform a four-point analysis on partial receipts. The program creates a four-point record for each receipt.

The data from Four-Point Analysis is informational only. It does not update the gain/loss table or the general ledger. You cannot retrieve this data for other programs. If you need the output elsewhere, for example, to enter a gain or loss manually, print the form and enter the data in the required program.

If you receive an item that is set up for receipt routing, you can set a processing option in receipts entry to call Four-Point Analysis when product is routed to the payment eligible and on-hand steps.

The following graphic illustrates a four-point analysis:



During four-point analysis, the system does the following:

- Adds the opening on-board quantity to the quantity loaded (Point 1) and compares the total to the start trip quantity (Point 2). Any difference represents the loading (inturn) gain or loss. The system calculates a percentage based on the sum of opening on-board plus loaded quantities.
- Compares the start trip quantity (Point 2) to the end trip quantity (Point 3). Any difference represents the transport (trip) gain or loss. The system calculates a percentage based on the opening on-board quantity.

- Compares the end trip quantity (Point 3) with the sum of the discharged (Point 4) and left-on-board quantities. Any difference represents the unloading (outturn) gain or loss. The system calculates a percentage based on the end trip quantity.
- Calculates the total gain or loss, both in volume and percent.

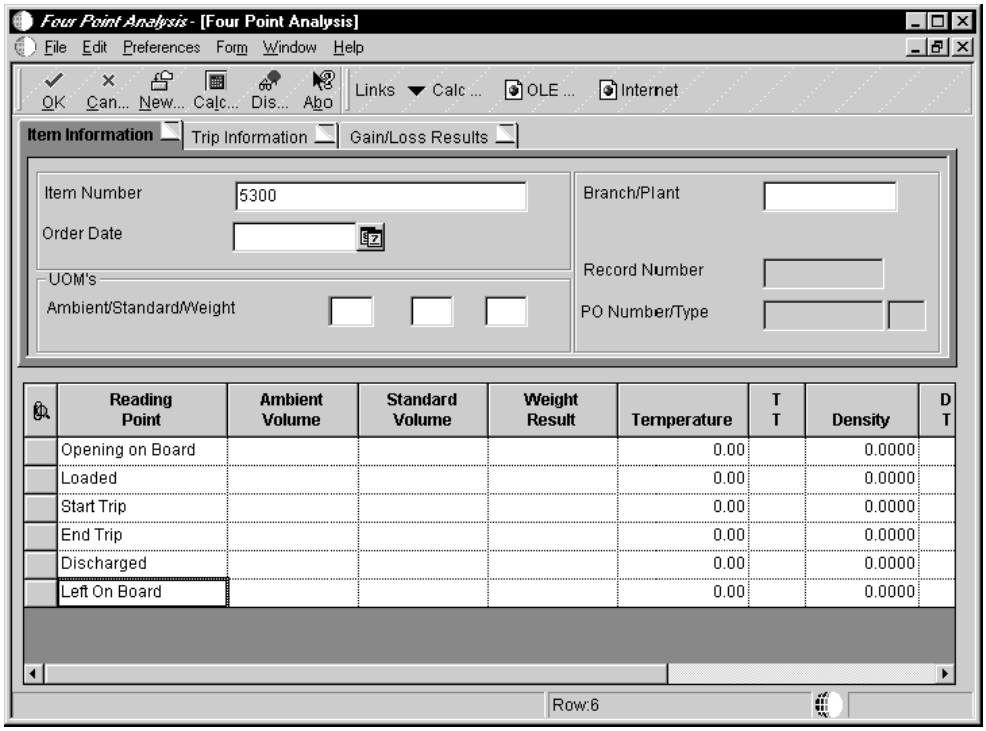
See Also

- *Working with Items in a Receipt Route* in the *Procurement Guide*

► To calculate gain or loss for received products

From the Bulk Stock Management menu (G41501), choose Four Point Analysis.

1. On Work with Four Point Records, click Add.



2. On Four Point Analysis, complete the following fields:
    - Item Number
    - Order Date
    - Ambient/Standard/Weight
    - Branch/Plant
3. Enter an ambient or standard volume or weight for the following Reading Points:
    - Opening on Board

- Loaded
- Start Trip
- End Trip
- Discharged
- Left On Board

4. Complete the following optional fields for the corresponding reading you completed in the detail area, and click OK:
    - Temperature
    - TT
    - Density
    - D T
    - Density Temp
    - T U

Technical Considerations

Recording standard quantities

You can enter standard quantities if you already have them. If you enter standard quantities, you do not need to access the Four-Point Temperature/Density form to convert ambient quantities to standard quantities.

Calculating volume for Four-Point Analysis

You can use Dip Volume Calculator to enter the opening and closing dip readings of any supplying or receiving point, and calculate volumes. You can then print the dip calculations, return to the Four-Point Analysis form, and enter the quantities in the appropriate fields.

Reversing a receipt

If you reverse a receipt entry for a bulk product, the system calls the Four-Point Analysis Server and reverses the four-point analysis record.

Reconciliations

As part of the management of bulk stock, you must reconcile confirmed sales figures for a given period. To do so, you compare the transactions and inventory levels recorded in the system to the actual inventory levels in the depot. During the reconciliation process, the system identifies any discrepancies. A gain might be due to transactions not being entered (lost invoices). A loss might be due to theft, leakage, or faulty meters.

A processing option allows reconciliation of the document types for load-confirmed sales, non-metered outgoings, and other metered outgoings.

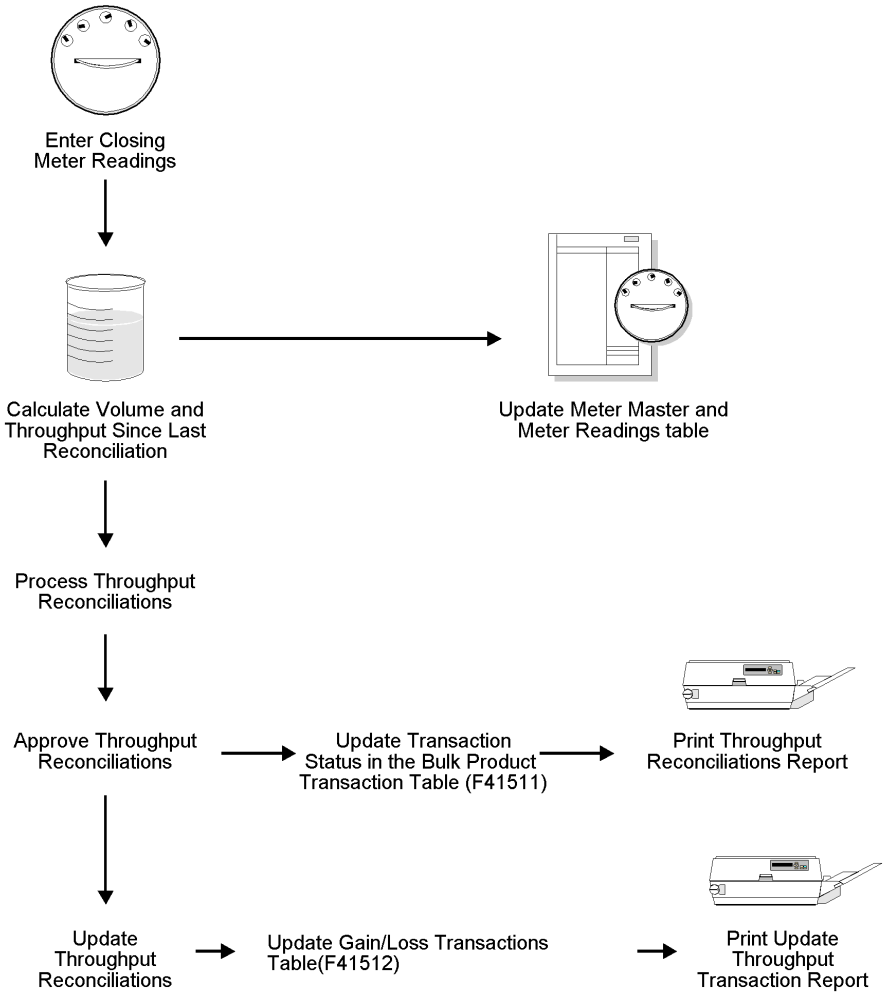
Throughput Reconciliations

Throughput reconciliation compares confirmed sales figures and other metered outgoing transactions for a given period with the metered throughput at the point of reconciliation. The comparison identifies discrepancies due to transactions not being entered, theft, leakage, or faulty meters.

Throughput reconciliation is optional. However, if you perform throughput reconciliation through the time period in which you begin operational reconciliation, the operational reconciliation process will be more accurate.

Throughput reconciliation compares the transactions entered in the system with the throughput meter readings. Throughput reconciliation does not update inventory and general ledger tables. Upon your review and approval, the program updates the reconciliation status in the Bulk Product Transaction table (F41511) and the Gain/Loss Transactions table (F41512).

The following graphic illustrates throughput reconciliation:



Operational Reconciliations

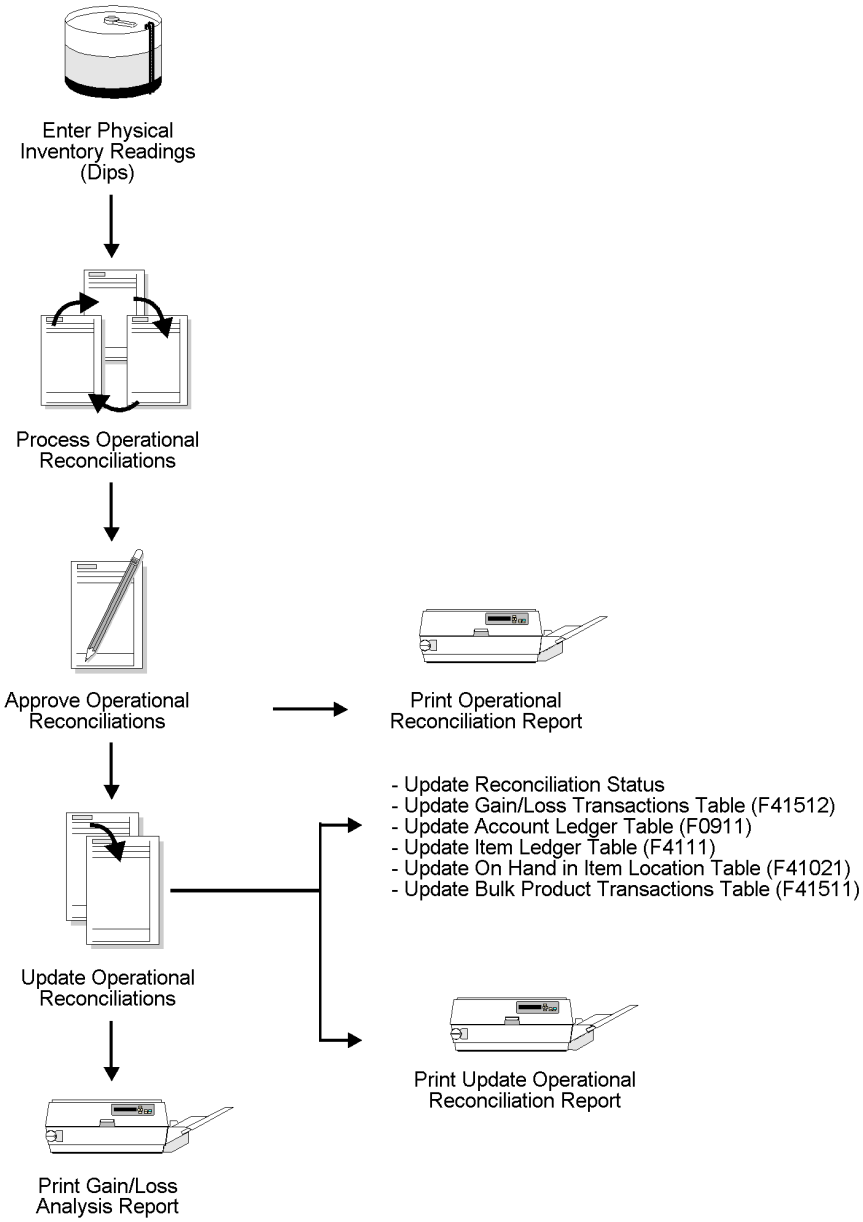
Operational reconciliation updates inventory and general ledger tables. Using all inbound and outbound transactions since the previous reconciliation, the system calculates the amount that should be in physical inventory and compares it with the actual amount in the tanks (from the final physical tank dip). In other words, it measures and compares the physical inventory levels with the book inventory levels so that any differences can be reconciled, and operational gains or losses recorded. The system then updates inventory tables to reflect the current physical stock levels. Although most companies perform operational reconciliations daily, some companies perform them monthly.

During operational reconciliation, the system can include the throughput gains and losses with the operational gains and losses and update the general ledger.

Operational reconciliation updates the following tables:

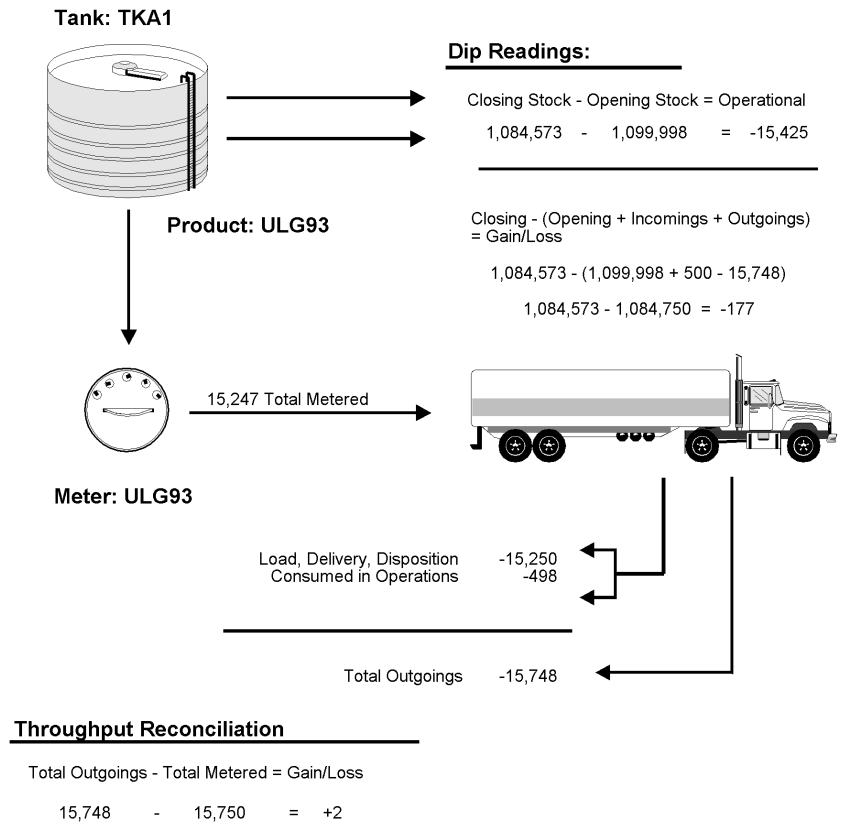
- Gain/Loss Transactions (F42512)
- Account Ledger (F0911)
- Item Location (F41021)
- Bulk Depot/Product Information (F41022)
- Item Ledger (F4111)
- Bulk Product Transactions (F41511)

The following graphic illustrates operational reconciliation:



Example: Calculating Reconciliations

The following graphic illustrates how reconciliations are calculated for bulk products. The quantities (in liters) are shown to help you understand the process.



Processing Throughput Reconciliations

You process throughput reconciliations to reconcile the metered throughput with load-confirmed sales transactions and other metered transactions for a given period. The throughput reconciliation provides an information process to verify that all outgoing movements through meters have been recorded.

Before You Begin

- Set up the user defined code tables for throughput reconciliation. See *Understanding User Defined Codes for Bulk Stock.*

Recording Closing Meter Readings

To determine the amount of product that has passed through a meter, use the Multi-Meter Readings program to record the most current closing meter readings. This program allows you to update the throughput volume since it was previously reconciled.

You can enter readings in volume or weight. When you enter a reading, the program retrieves the current tank information and performs volume to weight conversions. The converted quantities are stored in the Multi-Meter Readings table (F41515) and used later for throughput reconciliations.

You update metered throughput by entering closing meter readings for the period. The system multiplies meter units entered by the number of units per meter unit in the Meter Master (F41506). For example, the closing reading is 500 and the meter units are 2 liters/unit, then the throughput is 1,000.

If no previous readings exist for a particular meter, the system updates the meter status with an "I" for inactive and does not calculate throughput for the initial reading. You must enter the initial reading as the closing reading. The system sets the previous reading to equal the closing reading and changes the Reconciliation Yes/No status to Y.

You can enter transactions for a tank before an initial meter reading. Be sure to enter an initial reading date and reading time that is prior to the transaction dates. If the initial meter reading date is not prior to the transaction dates, the transactions are treated as retroactive (that is, before the last reconciliation) and are not included in the current reconciliation.

To locate previous meter readings-for example, to review or make a change-enter the date for the readings that you need to locate in the Skip To Date field. The system locates all meter readings from this date to the current date.

The Multi-Meter Readings program allows you to review readings by product or by meter.

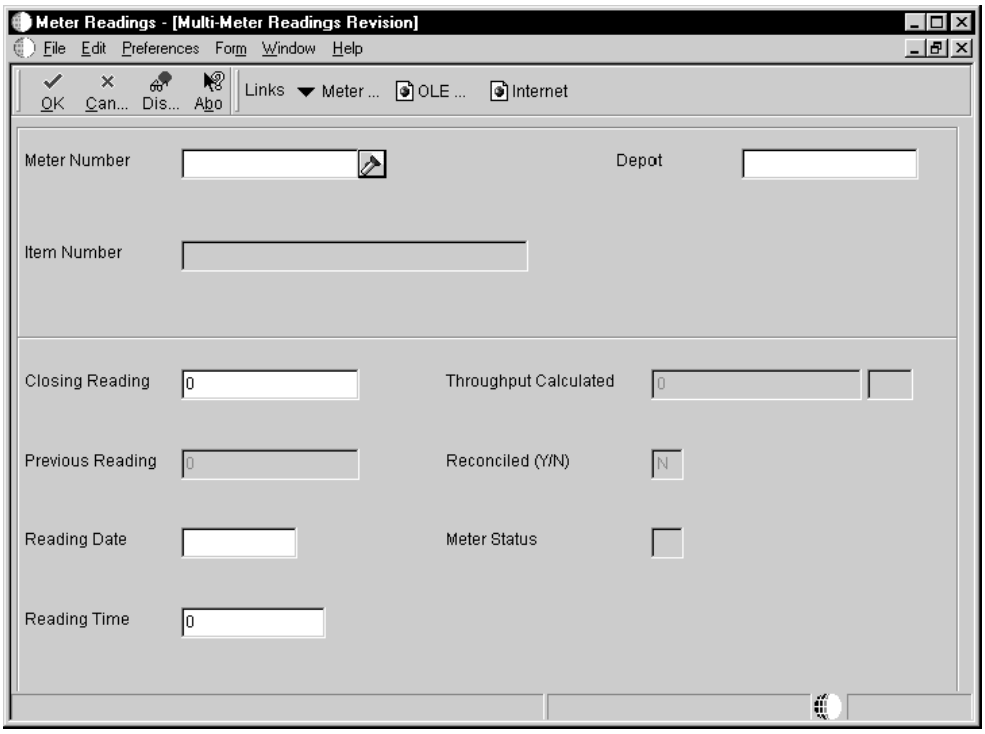
Before You Begin

- Set the processing options for this program to specify the status code for transactions that have been throughput reconciled.

► To record closing meter readings

From the Bulk Stock Reconciliations menu (G41502), choose Meter Readings.

1. On Work With Multi-Meter Readings, locate an item. Complete the following field and click Find:
    - Item Number
2. Choose an item, and click Select, or to add a new reading, click add.



3. On Multi-Meter Readings Revision, complete the following field:
    - Meter Number
    - Depot
    - Closing Reading
4. If the meter reading applies to a date and time other than the current date and time, complete the following fields, then click OK:
    - Reading Date
    - Reading Time

    The system calculates the throughput.

    While recording meter readings, you can access the Meter Master Maintenance program from the Form menu to review or change meter information.

Processing Options for Multi-Meter Readings

Default Multi-Meter Readings 1. Enter the Reconciliation Status Code which indicates the transaction has been throughput reconciled. Records with this status (and any status greater than the one entered) will be protected from changes.

Updating Throughput Transaction Status

After you record closing meter readings, you need to compare the metered throughput with the outgoings in order to update the transaction status and approve the transactions for reconciliation. The program retrieves the metered throughput from the Multi-Meter Readings table (F41515).

In the comparison, the system includes only transactions with the document types specified in the processing options. The system also includes only those transactions that have a last reconciliation status equal to the last reconciliation status specified in the processing options.

You can view throughput reconciliations in standard volume or ambient volume. The standard volume displays in the primary stock accounting unit of measure. The ambient volume displays in the volume unit of measure that is set up for the item.

If you are using a gantry interface, temperature-compensated meters return the quantity in the standard volume, not the ambient volume. The system does not do a conversion from ambient volume to standard volume. To perform throughput reconciliations, you view the data in standard quantities and compare the difference to the standard throughput quantities, rather than ambient throughput quantities.

The quantities for non-metered outgoings are informational only. They are not calculated in the metered throughput withdrawals or the throughput gain or loss.

If the meter is out of service, you can estimate the amount of product that passed through the meter and still perform throughput reconciliation by completing the following:

- Access the Out of Service Meter Quantity form
- Record the meter number and estimated quantity
- Return to Throughput Reconciliations

The Throughput Reconciliation program performs the conversions, then displays the default tank information and the calculated ambient volume and standard volume.

After you reconcile the throughput transactions, you approve the information to update the transaction status and move the reconciliations to the next step in the process. Depending on the status codes set up for throughput reconciliations and specified in the processing options, the update process moves the reconciliations to an additional approval step described below or to Update Throughput Reconciliations, which updates the Gain/Loss Transactions (F41512) table.

Some companies prefer to include an additional approval step to allow a manager to approve the reconciliations before running Update Throughput Reconciliations. In this case, a person with the proper authority approves the reconciliations from Review/Approve Variances and updates the transaction status to proceed to Update Throughput Reconciliations.

If you want to approve and update the transaction status in a separate step, you must set an additional current and next status step in the processing options and set the processing option to approve reconciliations in a separate step. This creates two different versions of the Throughput Reconciliations program.

After you have approved the reconciliations, you can print the Throughput Reconciliations Report.

Before You Begin

- ❑ Perform load confirmations on all sales transactions for the items that you want to reconcile. See *Confirming Loads* in the *Transportation Management Guide*. Also, see *Confirming Delivery* in the *Transportation Management Guide*.
- ❑ Verify that the document types for the transactions that you want to reconcile are specified in the processing options.
- ❑ Verify that the correct beginning and next reconciliation status codes are specified in the processing options.
- ❑ Record closing meter readings to calculate metered throughput. See *Recording Closing Meter Readings*.

► To reconcile throughput transactions

From the Bulk Stock Reconciliations menu (G41502), choose Throughput Reconciliations.

1. On Work With Throughput Reconciliations, complete the following fields to locate an item:
    - Item
    - Depot
2. Complete the following optional fields and click Find:
    - As of Date
    - Time
3. If the variance is correct, click Update to update the transaction status.
4. If the variance is not correct, you can perform the following steps to correct the variance and resume reconciliations:
    - From the Form menu, access the transaction details forms to display the transactions associated with each type of outgoing and determine if a transaction was missed or a reading was entered incorrectly. You can choose Corrections, Load Confirmed Sale, Other Metered Outgoing, or Non-Metered Outgoing.
    - Exit the program and correct the variance if the cause is known (for example, an order that has gone out has not been load-confirmed).

Processing Options for Throughput Transactions

Document Types
1. List the User Defined Codes which contain the document types that make up the following categories:
Load Confirmed Sales
System Code
Record Type
Other Metered
System Code
Record Type
Non Metered
System Code
Non-Metered Record Type
Status
1. Please enter the current reconciliation status
2. Please enter the next reconciliation status

► To approve throughput reconciliations

From the Bulk Stock Reconciliations menu (G41502), choose Review/Approve Variances (P415111).

On Work With Throughput Reconciliations, complete the following fields to locate an item:

- Item
- Depot

1. Complete the following optional fields and click Find:
   - As of Date
   - Time
2. If Gain/Loss is correct, click Update to update the transaction status.

Processing Options for Throughput Reconciliations

Document Types
1. List the User Defined Codes which contain the document types that make up the following categories:
Load Confirmed Sales
System Code
Record Type
Other Metered
System Code
Record Type
Non Metered
System Code
Non-Metered Record Type
Status
1. Please enter the current reconciliation status
2. Please enter the next reconciliation status

► To print the Throughput Reconciliations report

From the Bulk Stock Management Reports menu (G415012), choose Throughput Reconciliations Report.

After you have approved throughput reconciliations, you can print the Throughput Reconciliations Report. This report provides the following information:

- Detailed transactions that make up a throughput reconciliation
- Totals for a throughput reconciliation

The report displays the transactions with the document types entered in the processing options. It also displays the transactions with a last reconciliation status equal to the last reconciliation status entered in the processing options. The metered withdrawals are displayed as standard volumes only.

Alternatively, you can print the Throughput Reconciliations Report from Review/Approve Variances after you approve the throughput reconciliations, or you can print it from Throughput Reconciliations, if your reconciliation process is not set up to require approvals.

Before You Begin

- Verify that the document types for the reconciled transactions that you want to view are specified in the processing options.
- Verify that the last reconciliation status for the transactions is specified in the processing options.

Processing Options for Throughput Report

UDC Options
1. List the User Defined Coses which contain the document types that make up the following categories
Load Confirmed Sales
System Code
Record Type
Other Metered Outgoings:
System Code
Record Type
Non-Metered Outgoings
System Code
Record Type
Job Options
This job has various options described below. Enter the desired values
1. Enter a '1' to print the detailed transactions or a '2' to print totals only. The default is to print totals only.
2. Enter the current reconciliation status.
3. Enter the "As Of" date thru which you want records to be included
4. Enter '1' to print all quantities as ambient. ' ' is the default and will print quantities as standard

Updating Throughput Reconciliations

From the Bulk Stock Reconciliations menu (G41502), choose Update Throughput Reconciliation.

Run Update Throughput Reconciliation program to do the following:

- Update the reconciliation status on the Multi-Meter Readings table (F41515)
- Update the reconciliation status on transactions
- Update reconciliation status in the Bulk Product Transactions table (F41511)
- Update each transaction and reading with the date when it was reconciled
- Update the Gain/Loss Transactions table (F41512) with the calculated gain or loss values
- Print the Update Throughput Reconciliations Report

You can run this program in proof mode before you complete the actual update. This allows you to review each transaction and verify the information before updating the tables. To run a proof, add a proof version and leave blank the processing option to update tables.

Processing Options for Update Throughput Reconciliations

UDC Tables
List the User Defined Codes which contain the document types that make up the following categories:
Load Confirmed Sales:
System Code
Record Type
Other Metered Outgoings:

System Code
Record Type
Non-Metered Outgoings:
System Code
Record Type
Status
1. Enter the current reconciliation status
2. Enter the next reconciliation status
3. Enter the Transaction Date to use when selection records. All unreconciled records thru this date will be included.
Print Options
1. Enter '1' to print the report data at ambient. The default of blank will print the report data at standard
Update Options
1. Enter '1' to update the Gain/Loss File. Default of blank will run the report in proof mode.
2. Enter the Reconciliation Date to use when in update mode. If no date is entered, the current system date will be used.

Recording Out-of-Service Meter Quantities

If the meter is out of service, you can estimate the amount of product that passed through the meter and still perform throughput reconciliation. To do so:

1. Access the Out of Service Meter Quantity form.
2. Record the meter number and estimated quantity.
3. Return to Throughput Reconciliations.

The estimated quantity appears next to Corrections under Metered Throughput.

The program performs the conversions, and then displays the default tank information and the calculated ambient volume, standard volume, and weight.

Reviewing Transaction Details

During Throughput or Operational Reconciliations, you can access the Transaction Details window to determine if a transaction was missed or a reading was entered incorrectly. You can review the following information:

From Throughput Reconciliations:

- Load Confirmed Sales Transaction details
- Other Metered Outgoing Transaction details
- Non-Metered Outgoing Transaction details

From Operational Reconciliations:

- Incoming Transaction details
- Outgoing Transaction details

The option that you choose from the appropriate reconciliation form determines which detail information displays.

Processing Operational Reconciliations

The operational reconciliation process calculates the amount that should be in physical inventory, based on all inbound and outbound transactions since the previous reconciliation, and compares the amount with the actual amount in the tanks (from the final tank dip). In other words, it measures and compares the physical inventory levels with the book inventory levels so that differences can be reconciled, and operational gains or losses recorded. The process then updates inventory to reflect the current physical stock levels. The operational reconciliation process uses only standard volumes, but displays ambient and weight values.

Before You Begin

- Set up the user defined code tables to define the document types to include in the operational reconciliation. See *Understanding User Defined Codes for Bulk Stock*.
- Set up the gain/loss, and inventory automatic accounting instructions (AAIs). See *Understanding AAIs for Bulk Stock*.

Recording Tank Dip Readings

Use the Tank Dip Readings program to record the physical stock (dip) levels in the tanks. The system uses the dip readings to calculate tank volume, which is necessary to process operational reconciliations.

After you record the readings, the system checks the following to calculate volume:

- Gross dip reading against the tank height and the tank reference height
- Water dip reading against the gross dip height
- Dip temperature against the minimum and maximum temperatures allowed for the tank
- Density temperature against the minimum and maximum temperatures allowed for the tank

For LPG products, the system uses the vapor pressure and temperature to calculate the liquid equivalent of the vaporized portion of the product. It then adds this liquid amount to the liquid volume calculated from the dip reading to calculate the total volume of product in the LPG tank.

The system retrieves existing tank levels from the Bulk Product Transactions table (F41511). You can change this information and enter dip readings to record the current stock levels. You cannot change the tank levels that appear after the reconciliation process has begun.

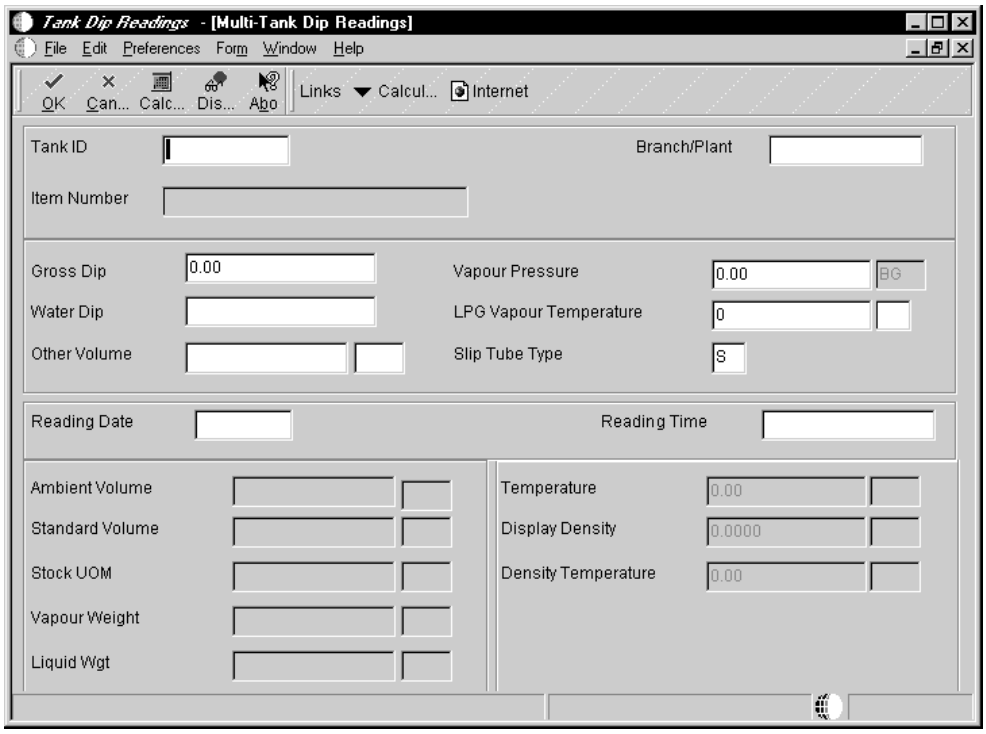
If no previous readings exist for a particular tank, the system updates the tank status with an inactive.

You can record transactions for the tank before an initial dip reading. If the initial reading is not prior to the transaction dates, the system treats the transactions as retroactive (that is, before the last reconciliation) and does not include them in the reconciliation.

► To record tank dip readings

From the Bulk Stock Reconciliations menu (G41502), choose Tank Dip Readings.

1. On Work with Tank Dip Readings, click Add.



2. On Multi-Tank Dip Readings, complete the following fields:
    - Tank ID
    - Branch/Plant
    - Gross Dip

If you record an electronic reading in weight, enter the weight in the Gross Dip field. The Gauging Method in the Tank Master must be specified as W (weight). The program considers the entry to be a weight (where the unit of measure is the weight unit of measure specified in the Item Master) and enters the appropriate amounts in the Bulk Product Transactions table (F41511).

3. Complete the following optional fields:
    - Water Dip
    - Reading Date

4. Complete the following fields:
    - Temperature
    - Display Density

- Density Temperature

5. If the item is an LPG product, complete the following fields and click OK:
    - Vapour Pressure
    - LPG Vapour Temperature
    - Slip Tube Type

Related Tasks

Reviewing tank readings To review tank dip readings, return to the Work with Tank Dip Readings form and enter the Tank ID to review.

Reviewing tank information While you record tank readings, you might need to review additional tank information. You can choose options to access the Tank Strapping Table Maintenance, Tank Master Maintenance, and Default Tank Information programs.

Processing Options for Tank Dip Readings

Processing
1. Enter the status code beyond which a dip reading cannot be changed. This will indicate the point at which a reading has been operationally reconciled.

Updating Operational Transaction Status

After you record tank dip readings, you need to compare all incoming and outgoing transactions recorded since the last reconciliation with the physical stock levels in each tank. Then, you can update the transaction status and approve the transactions for reconciliation.

In the comparison, the system includes only transactions with the document types specified in the processing options. The system also includes those transactions that have a last reconciliation status equal to the last reconciliation status specified in the processing options. You must reconcile any differences prior to recording any operational gains or losses.

After you reconcile the operational transactions, you update the transaction status to send the reconciliations to the next step in the process. Depending on the status codes set up for operational reconciliations and specified in the processing options, updating at this point takes the reconciliations to an additional approval step or to Update Operational Reconciliations.

Some companies prefer to include an additional approval step to allow a manager to approve the reconciliations before running Update Operational Reconciliations. In this case, a person with the proper authority approves the reconciliations from Review/Approve Variances and updates the transaction status to proceed to Update Operational Reconciliations. If you want to approve and update the transaction status in a separate step, you must set the current and next status processing options differently, and set the processing option to approve reconciliations in a separate step. This creates two different versions of the Operational Reconciliations program.

Operational Reconciliations displays values in standard volume, ambient volume, and weight. Standard volume appears in the accounting unit of measure. Ambient volume appears in the volume unit of measure set up for the item. When resolving discrepancies, you should use the ambient volume.

If the variance in the comparison is not correct, perform the following steps to correct the variance. Then resume reconciliations:

- Access the transaction details forms to review incomings and outgoings, and determine if a transaction was missed or a reading was entered incorrectly. You can choose Incomings Transactions Detail or Outgoings Transactions Detail.
- Exit Operational Reconciliations and correct any variance if the cause is known.

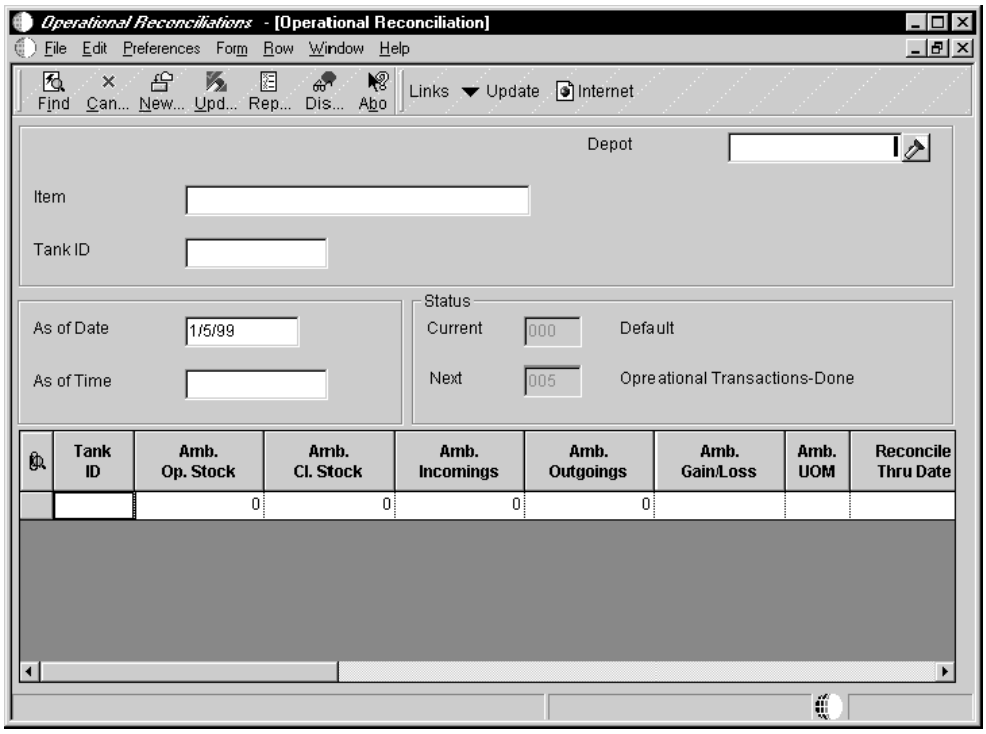
After you have approved the reconciliations, you can print the Operational Reconciliations reports.

Before You Begin

- ❑ Perform throughput reconciliation up through the time period that you perform operational reconciliations (optional). See *Processing Throughput Reconciliations*.
- ❑ Verify that all prior operational reconciliations are completed through Update Operational Reconciliations.
- ❑ Verify that the document types for the transactions that you want to reconcile are specified in the processing options.
- ❑ Verify that the correct beginning and next reconciliation status codes are specified in the processing options.

► To reconcile operational transactions

From the Bulk Stock Reconciliations menu (G41502), choose Operational Reconciliations.



1. On Operational Reconciliation, complete the following field:
    - Depot
2. Complete one of the following fields and click Find:
    - Item
    - Tank ID
3. Complete the following optional fields:
    - As of Date
    - As of Time

    The system displays Current and Next Status information.
4. Compare the transactions against the physical stock levels.
5. If the variance is correct, click Update to update the reconciliation status.

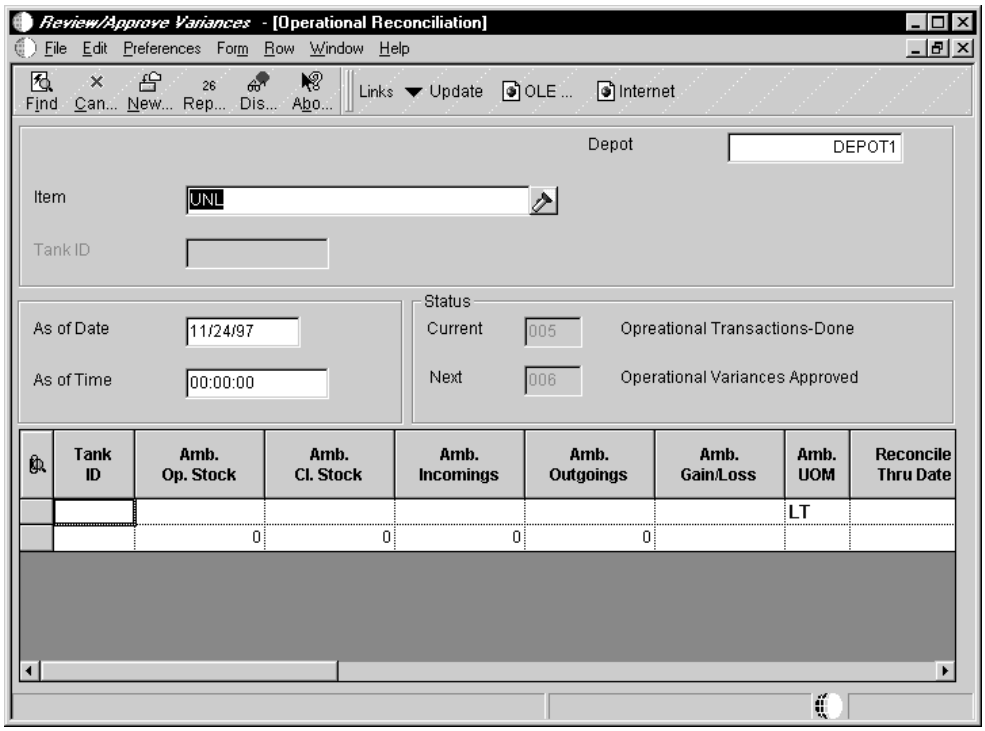
Processing Options for Operational Transactions

Document Types
1. List the User Defined Code containing the document types for the following:
Incomings - system code:
Incomings - record type:
Outgoings - system code:
Outgoings - record type:
Throughput Rec

1. Enter the User Defined Code for doc. types that must be Throughput reconciled prior to being operationally reconciled:
system code :
record type :
2. Enter the reconiliation status of records that have been throughput reconciled. If Document Types: Outgoings is non-blank.
Status:
Status
1. Enter the beginning CURRENT reconciliation status:
2. Enter the NEXT reconciliation status:
Processing Mod
1. Enter one of the following processing modes:
" " = Review Only. (Default) Only selects OUTGOINGS that are at the previous given current STATUS FOR THROUGHPUT RECONCILIED. Also selects all other OUTGOINGS and INCOMINGS that are at the previous given CURRENT status. Only updates all transactions to the NEXT given status.
"0" = Review and Approve. Only selects OUTGOINGS that are at the previous given current STATUS FOR THROUGHPUT RECONCILIED. Also selects all other OUTGOINGS and INCOMINGS that are at the previous given CURRENT status. Updates all transactions to the NEXT given status and the reconciliation flag to "1".
"1" = Approve. Selects all transactions at the previous given CURRENT status. Updates all transactions to the NEXT given status and the reconciliation flag to "1".
Selection value

► To approve operational reconciliations

From the Bulk Stock Reconciliations menu (G41502), choose Review/Approve Variances (P415112).



1. On Operational Reconciliations, complete the following fields:
    - Depot
    - Item
    - Tank ID
2. Complete the following optional fields and click Find:
    - As of Date
    - As of Time

    The system displays Current and Next Status information in the detail area.
3. Compare the transactions against the physical stock levels.
4. If the variance is correct, click Update to update the transaction status.

Processing Options for Operational Reconciliations

Document Types

1. List the User Defined Code containing the document types for the following:

    Incomings - system code:

    Incomings - record type:

    Outgoings - system code:

    Outgoings - record type:

Throughput Rec

1. Enter the User Defined Code for doc. types that must be Throughput reconciled prior to being operationally reconciled:

    system code :

    record type :

2. Enter the reconiliation status of records that have been throughput reconciled. If Document Types: Outgoings is non-blank.

    Status:

Status

1. Enter the beginning CURRENT reconciliation status:
2. Enter the NEXT reconciliation status:

Processing Mod

1. Enter one of the following processing modes:

" " = Review Only. (Default) Only selects OUTGOINGS that are at the previous given current STATUS FOR THROUGHPUT RECONCILIED. Also selects all other OUTGOINGS and INCOMINGS that are at the previous given CURRENT status. Only updates all transactions to the NEXT given status.

"0" = Review and Approve. Only selects OUTGOINGS that are at the previous given current STATUS FOR THROUGHPUT RECONCILIED. Also selects all other OUTGOINGS and INCOMINGS that are at the previous given CURRENT status. Updates all transactions to the NEXT given status and the reconciliation flag to "1".

"1" = Approve. Selects all transactions at the previous given CURRENT status. Updates all transactions to the NEXT given status and the reconciliation flag to "1".

Selection value

► To print operational reconciliations reports

From the Bulk Stock Reconciliations menu (G41502), choose Operational Reconciliations Detail Rpt.

You can also print a summary of operational reconciliations reports. From the Bulk Stock Management Reports menu (G415012), choose Operational Reconciliations Report.

After you approve operational reconciliations, you can print the Operational Reconciliations Detail Report and Operational Reconciliations Report.

You can use both reports to compare all incoming and outgoing transactions to the physical stock levels in each tank. Volumes are displayed as standard volumes only. The Operational

Reconciliations Detail Report displays the detailed transactions for incoming and outgoing products. The Operational Reconciliations Report displays only summary information.

The reports display the transactions with the document types entered in the processing options. The reports also display those transactions with a last reconciliation status equal to the last reconciliation status entered in the processing options. The program selects the records with operational reconciliation dates within the From and Thru dates specified in the processing options.

Before You Begin

- Verify that the document types for the reconciled transactions that you want to view are specified in the processing options.
- Verify that the last reconciliation status for the transactions is specified in the processing options.
- Verify that the From and Thru dates in the processing options for the reconciliations are correct.

Processing Options for Operational Reconciliations Reports

Document Types
List the User defined Code containing the document types for the following:
Incomings - system code:
Incomings - record type:
Outgoings - system code:
Outgoings - record type:
Status
The current reconciliation status:
Date
The "From" reconcilation date to use when selecting records:
The "Thru" reconciliation date to use when selecting records:
Processing Mod
Enter the point through which records have been processed. This option controls the retrieval of records.
' ' = Review (default)
'0' = Approval without prior review
'1' = Approval with prior review
Selection value
Tot. Depot UOM
Enter the unit of measure you want the Total Depot Gain/Loss displayed in.

Processing Options for Operational Reconciliation Detail

Document Types
List the User defined Code containing the document types for the following:
Incomings - system code:
Incomings - record type:
Outgoings - system code:
Outgoings - record type:
Status
Enter the current reconciliation status.
Date
Enter the "From" reconciliation date to use when selecting records.
Enter the "Thur" reconciliation date to use when selecting records.
Processing Mod
Enter the point through which records have been processed. This option controls the retrieval of records.

' ' = Review (default)
'0' = Approval without prior review
'1' = Approval with prior review
Selection value
Tot. Depot UOM
Enter the unit of measure you want the Total Depot Gain/Loss displayed in.

Updating Operational Reconciliations

From Bulk Stock Reconciliations (G41502), choose Update Oper Reconciliations.

Run the Update Operational Reconciliations report to update the following:

- The reconciliation status on transactions to indicate that they are reconciled
- Each transaction with the date that it was operationally reconciled
- The Gain/Loss Transactions table (F41512) with the values calculated
- Inventory balances to reflect physical stock levels
- The adjusting entries to the Item Ledger table (F4111)
- The Account Ledger (F0911) with adjustments to the Bulk Gain/Loss and the Physical Inventory accounts
- The Reconciled Thru Date on the Depot/Product Information form (after all tanks for a product are reconciled)
- The Item Location table (F41021) with the quantity on hand
- The Bulk Product Transactions table (F41511) with the reconciliation status, reconciled flag, and the operational reconciled date

The program does not allow retroactive adjustments. It rejects any record with a general ledger date that is prior to the current accounting period.

You can run this program in proof mode before you complete the actual update. This allows you to review each transaction and verify the information before you update the tables. To do this, add a proof version and leave the appropriate processing option blank.

Failure of operational reconciliations might be due to the following:

- Company dates are not current.
- AAIs are not set up.
- Branch/plant constants are missing.
- Lot numbers are mistakenly placed in transactions.
- The account unit of measure on AAI accounts is blank or does not have a conversion factor.

Processing Options for Update Operational Reconciliations

Date/Time
1. Enter the As of Date:
2. Enter the As of Time:

Status
1. Enter the current reconciliation status.

2. Enter the next reconciliation status.
Update - Y/N
1. Enter '1' to update records. Default of blank will not update records.
Document Type
1. Enter the document type to be used for creating the adusting entry.
G/L info.
1. Enter the General Ledger date for processing the update. If left blank the current system date will default.
2. Enter the General Ledger date for processing the retroactive gain/loss. If left blank the current system date will default.
3. Enter '1' to run in summary mode, then the G/L accounts will be summarized within each document number. If left blank then wil run in detail mode and the G/L accounts will be produced for each detail line.
4. Enter the Processing Option version to use for the G/L Functional Server XT0911Z1. If left blank the default verison ZJDE0001 will be used. (N4002400)
UDC info.
1. List the User Defined Code containing the document types for the following:
Incomings - system code:
Incomings - record type:
Outgoings - system code:
Outgoings - record type:

Reviewing Gains and Losses

You can print the Gain/Loss Analysis Report or review the Gain/Loss Inquiry to examine the overall gains and losses for a depot and product, based on the Gain/Loss Transactions table (F41512).

► To print the Gain/Loss Analysis Report

From the Bulk Stock Management Reports menu (G415012), choose Gain/Loss Analysis Report.

This report shows the quantity and financial impact of the gains and losses.

Depending on how you set processing options, you can compare either the volume difference or the percent variance.

The system performs variance (or tolerance) checking as follows:

- For a volume difference, the system compares the total gain or loss for each product with the quantity entered in the processing options. This produces a report in which variances are greater than, equal to, or less than a certain volume.
- For a percent variance, the system compares the total gain or loss as a percent of total outgoings with the quantity entered in the processing options. This produces a report in which the variance is greater than, equal to, or less than a specified percentage.
- If you do not enter a quantity for comparison in the processing options, the report displays all records.

Processing Options for Gain/Loss Analysis Report

Dates
Enter the range of transaction dates for inclusion of records. (Blanks will default to system date).
From Date
Thru Date
Variance
Enter the relation to use for variance selection. (GT=greater than, LT=less than, EQ=equal to)
Enter "A" to compare the volume difference. Enter "%" to compare the percent variance.
Enter the quantity to compare the variance to: (Enter a volume amount or a percentage amount.)
Comment Text

► To review the Gain/Loss Inquiry

From the Bulk Stock Management menu (G41501), choose Gain/Loss Inquiry.

On Work With Gain/Loss Transactions, complete one or more of the following fields to narrow your search or accept the default values, and then click Find:

- Item Number
- Branch/Plant
- Location
- From Date
- Thru
- Gain/Loss Reason

The program displays the gain or loss information based on the selection criteria that you specify.

Working with Reconciliations Status

As part of your depot operations, you might need to review totals of transactions that have been processed through operational reconciliations. Additionally, you might need to review or change a reconciliation status.

Reviewing Operational Reconciliation History

To resolve discrepancies in the current reconciliation period, you can review totals of transactions that have been processed through operational reconciliations. When you process operational reconciliations, the system creates a historical record for each depot, item, tank, reconciliation date, and reconciliation time. The system tracks data for the total of incoming transactions, outgoing transactions, opening quantity, closing quantity, and gain or loss quantity. Reconciliation History Review uses this data to display the historical record of past operational reconciliations.

You can choose to view all history by item or by tank within a depot. Alternatively, you can display the history of a selected date.

► **To review operational reconciliation history**

From the Bulk Stock Reconciliations menu (G41502), choose Reconciliations History Review.

1. On Work with Reconciliation History Review, complete the following field:
    - Branch/Plant
2. Complete one or more of the following fields to narrow your search and click Find:
    - Item Number
    - Tank ID
    - Skip To Date
    - Skip To Time

    The system displays the operational reconciliation history according to your selection criteria.

Reviewing Reconciliation Status

You can review the status of a reconciliation record or change the status if necessary. The same program enables both tasks. You can review the reconciliation status of a transaction recorded in the system by item number, tank ID, or last status. The system displays the reconciliation status according to your selection criteria.

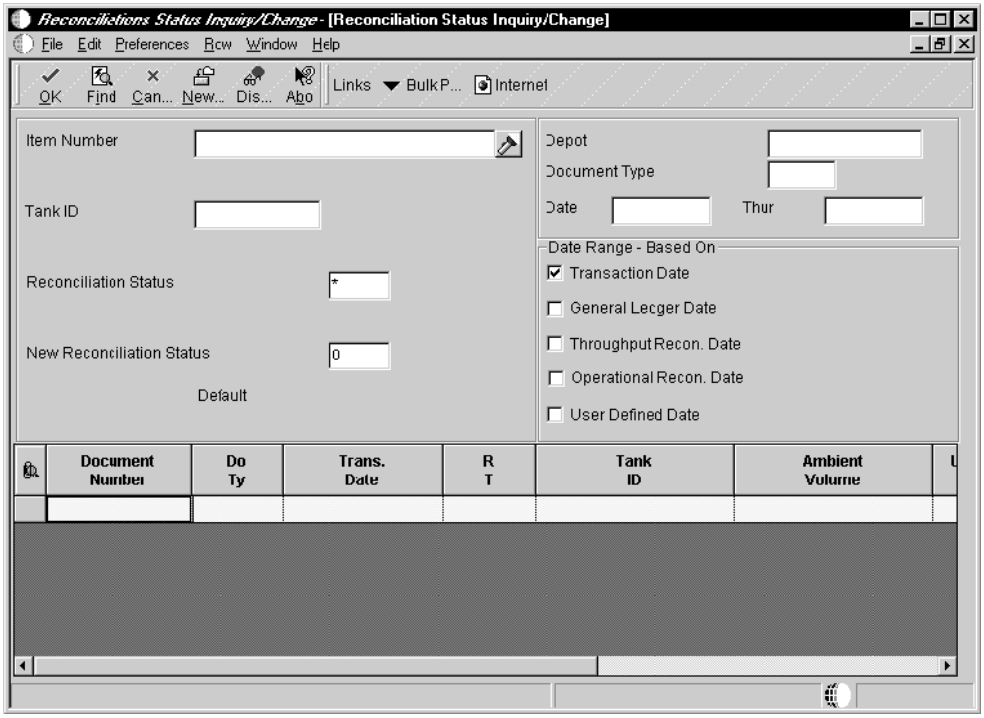
You can manually change the reconciliation status of a transaction recorded in the system. This is useful, for example, if you approved reconciliations prematurely. You can reset the reconciliation status, enter missed transactions or other information, and then approve the reconciliations again. This program is not meant to change a reconciliation status after you have run the update reconciliations program. Manually changing the reconciliation status of a record without running the appropriate processes to update the status could create inaccurate records in the system.

Caution

If you inquire on a record and click OK, the records are changed to the default information contained in the New Reconciliation Status field.

► To review reconciliation status

From the Bulk Stock Reconciliations menu (G41502), choose Reconciliations Status Inquiry/Change.



1. On Reconciliation Status Inquiry/Change, click Find.
2. Complete one or more of the following optional fields to narrow your search and then click Find:
    - Item Number
    - Depot
    - Tank ID
    - Reconciliation Status
    - New Reconciliation Status
    - Document Type
    - Date
    - Thru
3. To determine what the date range is based upon, choose one of the following and click Find:
    - Trans. Date
    - General Ledger Date

- Throughput Recon. Date
- Operational Recon. Date
- User Defined Date

Periodic

Bulk Stock Information

As part of managing bulk stock, you might need to review the following:

- Product transactions
- Current status of tank stock
- Availability and demand of stock
- Bulk stock transactions
- Meter and tank readings used for reconciliation

Reviewing Bulk Stock Information

Several programs let you review information about your bulk stock. You can review bulk product transactions, monthly tank stock statuses, meter readings, tank readings and inventory balances for tanks containing commingled or custody stock.

Reviewing Product Transactions

You can review the history of all transactions for a specific bulk product or product and location. These transactions might be the result of an intra-depot stock movement, a sale (posted after the customer sales update process), or a purchase receipt.

You can access Bulk Product Transaction Inquiry from the Bulk Stock Management menu or the Intra-Depot Stock Movements menu.

► To review product transactions

From the Bulk Stock Management menu (G41501), choose Bulk Product Transaction Inquiry.

1. On Work With Bulk Transaction Inquiry, complete the following field:
    - Item Number
2. Complete the following optional fields and click Find:
    - Depot
    - Tank ID
    - Lot/SN
    - From/Thru Date
    - Document Type
3. Choose the row for which you want to review product transactions and click Select.

Related Tasks

Working with meter readings You can access Work With Multi-Meter Readings directly from the Bulk Stock Reconciliations menu or from Meter Readings.

Processing Options for Bulk Product Transaction Inquiry

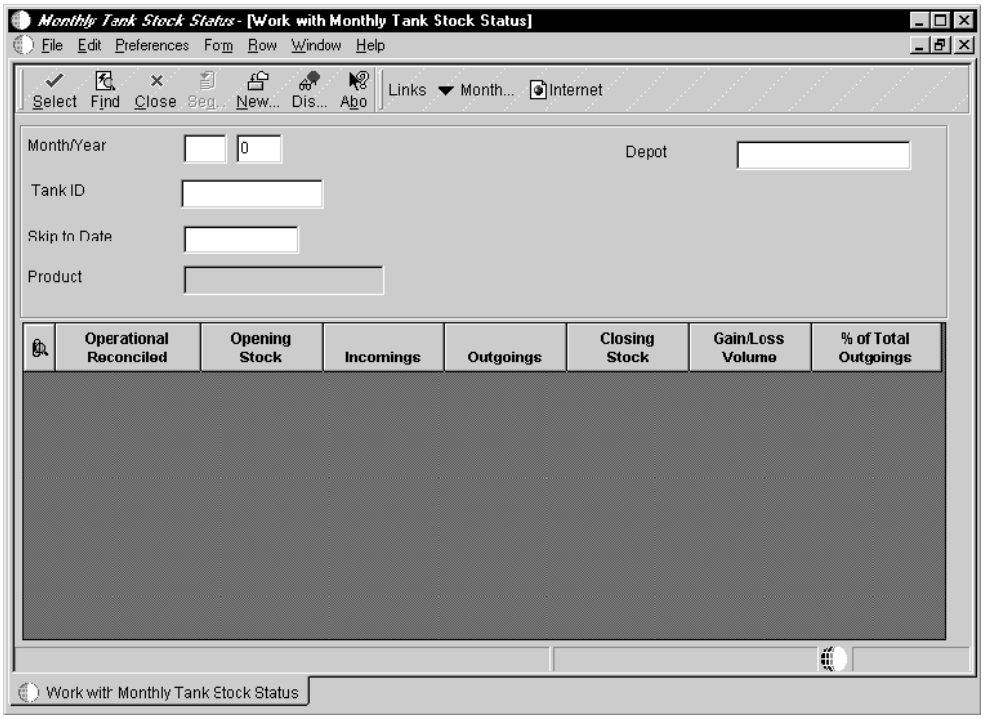
Default
Enter a Document Type.
Document Type
Enter the versions of called programs. (ZJDE0001) is the default.
Employee (History and Turnover)
2. Load & Delivery Ledger Inquiry P49511.

Reviewing Monthly Tank Stock Status

Use Monthly Tank Stock Status to review a monthly summary of all transactions that affect tank stocks. You can only review transactions that have been operationally reconciled. The Work with Monthly Tank Stock Status form allows you to print the Monthly Tank Stock Movements report.

► To review monthly tank stock status

From the Bulk Stock Management menu (G41501), choose Monthly Tank Stock Status.



1. On Work with Monthly Tank Stock Status, complete the following fields:
    - Tank ID
    - Depot
2. Complete one of the following optional fields and click Find:
    - Month/Year
    - Skip to Date
3. To print the Monthly Tank Stock Movements report, choose Monthly Tank Rpt from the Form menu.

Processing Options for Monthly Tank Stock Status

UDC Doc. Types
List the User Defined Code containing the document types for the following:
  Incomings:
    System Code:
    Record Type:
  Outgoings:
    System Code:
    Record Type:
Versions
Bulk Product transaction Inquiry (P415201).
The default version is ZJDE0001.
Version
Recon. Status
Enter reconciliation range:
From...
To .....

Reviewing Meter Readings

You can review meter readings for a given product or meter for a specific time period. You can view records of reconciled stock, unreconciled stock, or both, depending on the status codes set in the processing options. You cannot delete meter readings from the Meter Readings form. The system stores records in the Multi-Meter Readings table (F41515).

► To review meter readings

From the Bulk Stock Reconciliations menu (G41502), choose Meter Readings.

1. On Work With Multi-Meter Readings, complete the following field:
    - Item Number
2. Complete the following optional fields and click Find:
    - Reading Date
    - Meter Number

- Depot

Processing Options for Multi-Meter Readings

Default Multi-Meter Readings 1. Enter the Reconciliation Status Code which indicates the transaction has been throughput reconciled. Records with this status (and any status greater than the one entered) will be protected from changes.

Reviewing Location Segment Inquiry

Use Location Segment Inquiry to review the inventory balances for tanks containing commingled or custody stock.

Balances for some tanks by owner might be negative. This occurs when only one tank is current and all product is withdrawn from that tank, regardless of ownership.

▶ To review Location Segment Inquiry

From Inventory Inquiries (G41112), choose Location Segment Inquiry.

1. On Location Segment Inquiry, complete one of the following fields and click Find:
   - Tank
   - Product
   - Owner
2. The system displays inventory balances relating to the search criteria, as well as the following field:
   - S C

   While you review commingled stock, you can access the Bulk Product Transaction Inquiry program to review additional product and transaction information.

   You can review quantity information for commingled stock and determine your current and future needs with the Item Availability program (P41202) from the Bulk Stock Management menu (G41501).

Reviewing Tank Readings

Use Tank Dip Readings to view all of the physical tank dip readings as of a specific date and time. The system displays information from the Tank Master table (F41500) and the Bulk Product Transactions table (F41511). If no dip reading is available as of the specified date, the system retrieves the data from the Default Tank Information table (F41508) .

► To review tank readings

From the Bulk Stock Reconciliations menu (G41502), choose Tank Dip Readings.

On Work with Tank Dip Readings, complete the following fields and click Find:

- Item
- Branch/Plant
- Tank ID

Processing Options for Multi-Tank Dip Readings Entry

Processing 1. Enter the status code beyond which a dip reading cannot be changed. This will indicate the point at which a reading has been operationally reconciled.

Setup

Bulk Depot Setup

Managing bulk inventory transactions is key to controlling inventory and product movements. To successfully manage transactions, you must first set up your depots.

You set up each depot to supply the default information that is used throughout the Bulk Stock Management system. The system preloads these default values whenever you perform a bulk transaction, print reports, or use programs to locate information. You can revise this information as your business situations change.

You can set up separate depots for bulk and packaged products or set up one depot for both. Your company's business processes determine how you set up depots.

Before You Begin

- Create an Address Book record for each depot (branch/plant) or owner for commingled stock. See *Working with Address Book Records* in the *Address Book Guide.*
- Set up each depot as a business unit to define information about inventory, expense, and revenue entries. Even if your company chooses not to post any accounts at the depot level or wants to record accounting activity to another business unit, you must set up each depot as a business unit. See *Setting Up Companies* in the *General Accounting Guide*.
- Define a default branch/plant. See *Setting Up Constants* in the *Inventory Management Guide*.

Setting Up Depot Constants for Bulk Products

The system uses the constants that you set up on Branch/Plant Constants as the default values for bulk products. You must define constants for each depot. The system preloads the default values whenever you perform bulk transactions, but you can override the values in various bulk programs.

For depots with bulk products, you must define the format specifications for the stocking locations, the default temperature, and density information.

Before You Begin

- Define the depot default values used for managing inventory, processing orders and recording to the general ledger. See *Defining Branch/Plant Constants* in the *Inventory Management Guide.*

Defining Format Specifications for a Depot Location

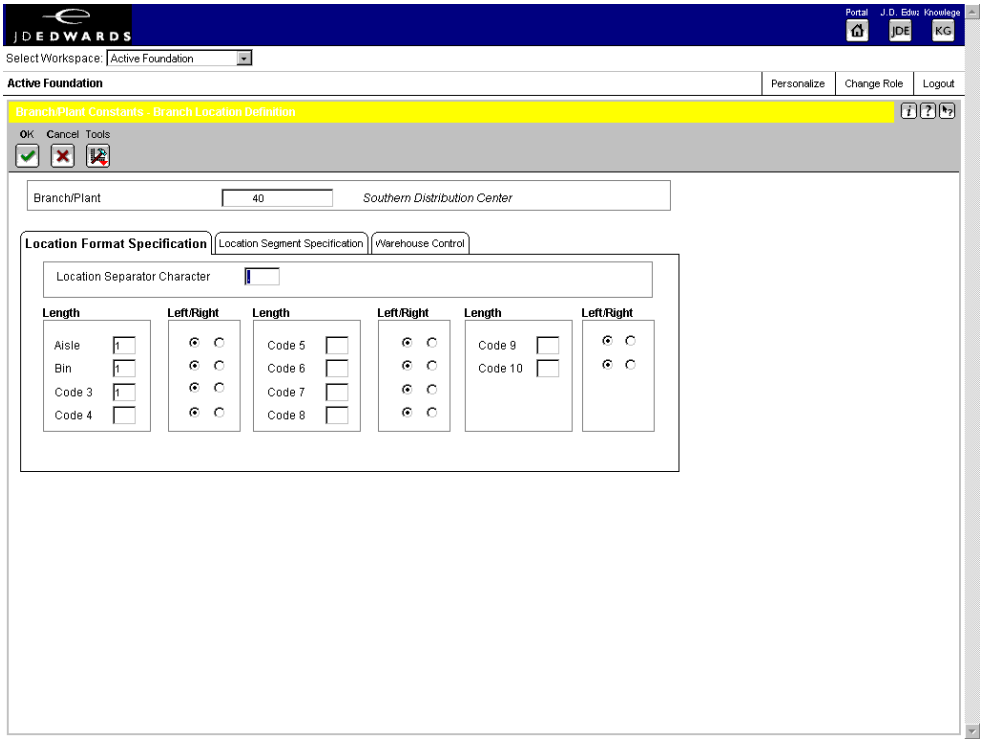
You must define the format specifications for your stocking locations before setting up the locations for this depot. Format specifications are values that store the numbering scheme used for stocking locations. You also define the units of measure that this depot uses for volume, weight, and dimensions of the stocking items.

► To define format specifications for a depot location

From the Bulk Stock Control Setup menu (G415041), choose Branch/Plant Constants.

1. On Work With Branch/Plant Constants, complete the following field and click Find:
    - Branch/Plant

2. Choose the row that contains the branch/plant, and then choose Location Def. from the Row menu.



3. On Branch Location Definition, complete the following fields on the Location Format Specification tab:
    - Location Separator Character
    - Aisle
    - Bin
    - Code 3
    - Code 4
    - Code 5
    - Code 6
    - Code 7
    - Code 8

- Code 9
- Code 10

4. For each Location Format Specification, choose a justification option from the following choice:
   - Left/Right
5. Click the Location Segment Specification tab.
6. To enter edit rules and values for each location segment, complete the following fields:
   - Aisle
   - Bin
   - Code 3
   - Code 4
   - Code 5
   - Code 6
   - Code 7
   - Code 8
   - Code 9
   - Code 10

Note
To determine the location ownership, the Aisle or Bin field must contain the Address Book number.

7. To allow a blank location for this branch/plant, choose the following option:
   - Blank Location Allowed
8. Click OK.

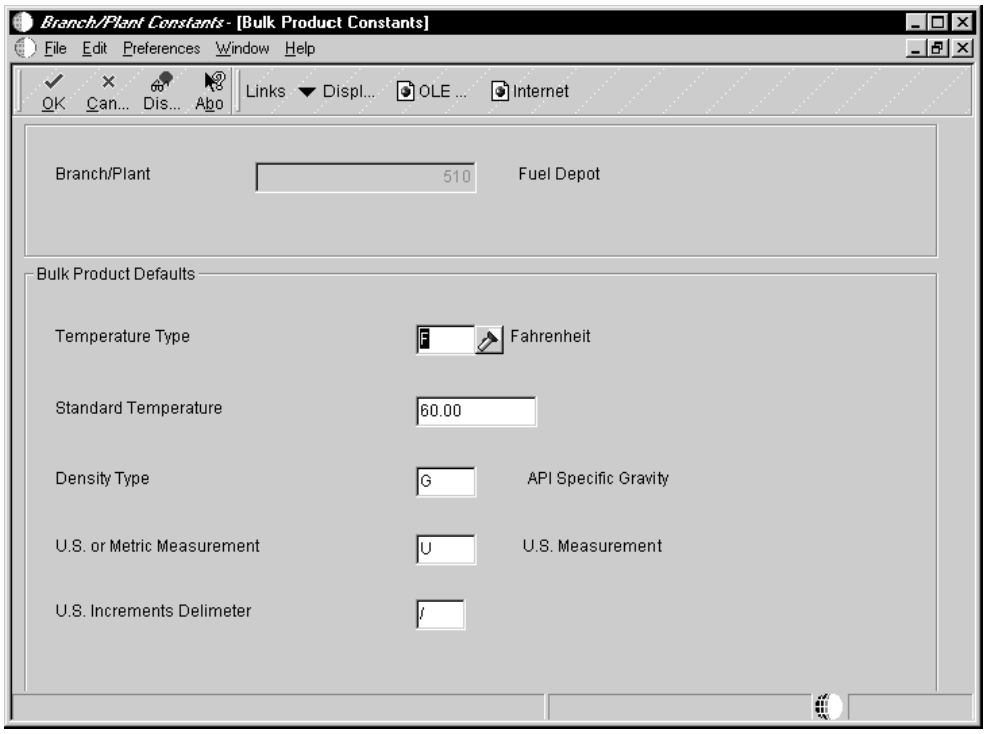
Defining Depot Temperature and Density

You must define the default values that the depot uses for temperature, density, and measurement of bulk products.

► To define depot temperature and density

From the Bulk Stock Control Setup menu (G415041), choose Branch/Plant Constants.

1. On Work With Branch/Plant Constants, complete the following field and click Find:
   - Branch/Plant
2. Select the row that you want to define, and choose Page 3 from the Row menu.



3. On Bulk Product Constants, complete the following fields and click OK:
    - Temperature Type
    - Standard Temperature
    - Density Type
    - U.S. or Metric Measurement
    - U.S. Increments Delimeter

Setting Up Depot Locations

After you set up the location format specifications for your depots, you set up locations, such as tank farms, for the depots. The system stores the locations that you define in the Location Master table (F4100). All programs that require location specifications use this table to verify locations.

In addition to setting up physical locations for the depots, you need to set up logical locations. A logical location stores the gains and losses for each product resulting from the various stock movements. The system records gains and losses in the Gain/Loss Transactions table (F41512).

When you set up the logical location in the Location Master table, you do not specify item location records and associated tanks. Therefore, if you search for inventory by location, the system does not include the inventory from the logical location because there are no item or location records. Most users set up a separate logical location for each product in the depot.

For commingled stock (product with multiple owners), set up a logical location at the owner level.

As part of setting up a depot location, you must assign a name to the location. To name a location, identify the tank, or if the tank has commingled stock, identify both the tank and owner.

The name that you assign can be the same as the tank ID. However, the location name can also designate the owner. Following are some typical conventions for naming locations:

TNK1A	Use this convention to identify a single tank that contains product with only a single owner.
TNK1C.Owner1 **TNK1C.Owner2**	Use this convention to identify a single tank that contains commingled stock. The period (.) between the tank ID and the owner corresponds to the separator character that you defined when you set up the depot constants.
*** (blank location)**	Use an asterisk (*) in the Location field to define a blank location. The system uses a blank location for the initial soft commit when you enter sales orders.

Before You Begin

- Define the format specifications for locations. See *Defining Format Specifications for a Depot Location*.

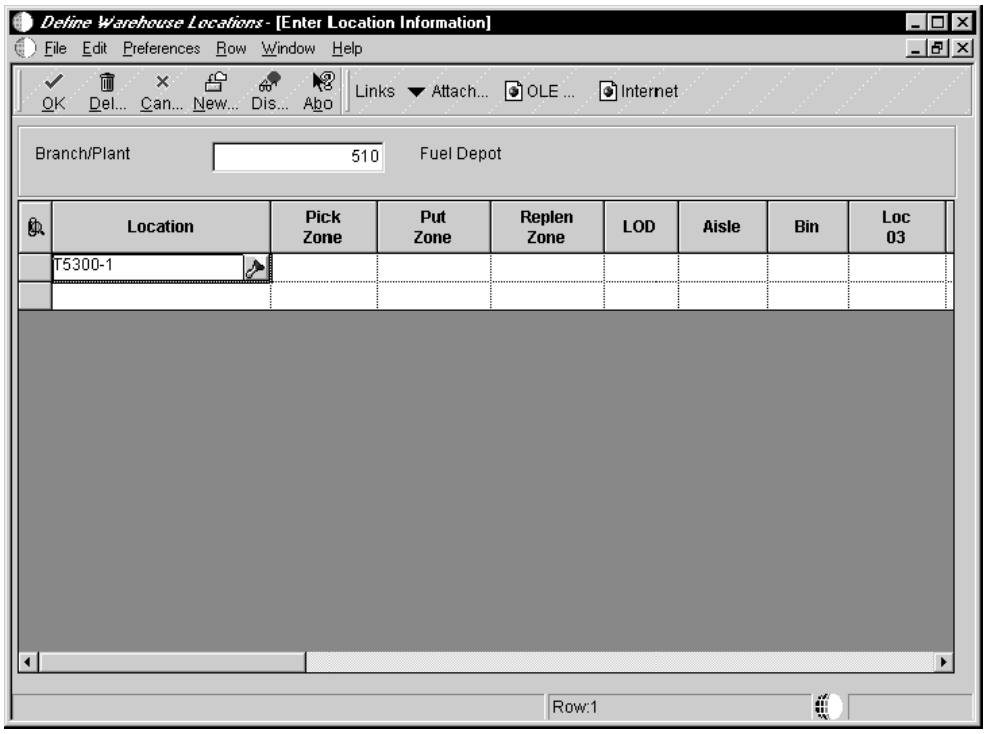
See Also

- *Setting Up Warehouse Locations in the Inventory Management Guide*
- *Understanding Commingled Stock*

► To set up depot locations

From the Inventory Setup menu (G4141), choose Define Warehouse Locations.

1. On Work With Location Master, click Add.



2. On Enter Location Information, complete the following fields:
    - Branch/Plant
    - Location
3. Complete the following optional field and click OK:
    - LOD

Processing Options for Location Master

Display 1. Enter a '1' to omit item location records with no quantity available and no quantity inbound/outbound when calling Availability by Location.

Bulk Item Setup

When you set up an item, you define basic information and specify how the system should process transactions for the item. Setting up a bulk item provides the item-level default values used throughout the various processing programs for bulk transactions. In addition, you set up item information specific to a depot.

Setting Up Standard Conversions for Bulk Items

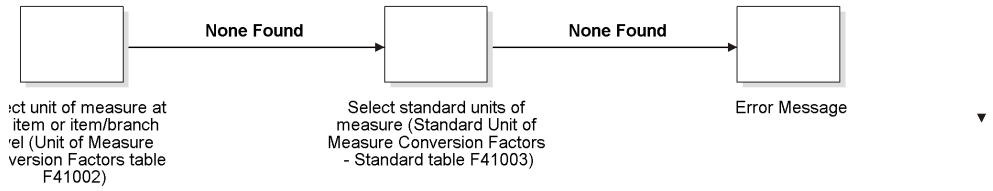
You set up standard unit of measure conversions for conversions that are constant. For example, if 100 centimeters always equals 1 meter, you set this up as a standard unit of measure conversion.

To set up conversions, define all common volume-to-volume and weight-to-weight conversions that your company needs for bulk item transactions. You can also set up volume-to-weight conversions for bulk items.

Whenever a conversion is needed for recording a transaction, the system uses standard unit of measure conversions if it is unable to find item-specific conversions. The system stores standard conversions in the Unit of Measure Conversion table (F41003).

The system processes transactions according to the following hierarchy of conversion factors:

First, select unit of measure at the item or item/branch level (Unit of Measure Conversion Factors table F41002). If none found, select standard units of measure (Standard Unit of Measure Conversion Factors - Standard table F41003). If none found, the system will display an error message.



Note

No special logic in the program keeps you from creating conflicting conversion factors, so use care when setting them up.

You can set up an unlimited number of conversion factors. However, you must set up conversion factors that calculate each unit of measure back to the primary unit of measure-for example, from pallets, to cartons, to boxes, to units.

The following is an example of valid conversions:

- 1 BX = 2 UN
- 1 CR = 2 BX
- 1 PL = 2 CR

To perform volume-to-weight conversions for bulk items:

- Set up conversion factors from cubic meters to all other units of measure used for volume calculations. You must use M3 for cubic meters.
- Set up a unit of measure conversion from kilograms to all other units of measure used for weight calculations. You must use KG for kilograms.

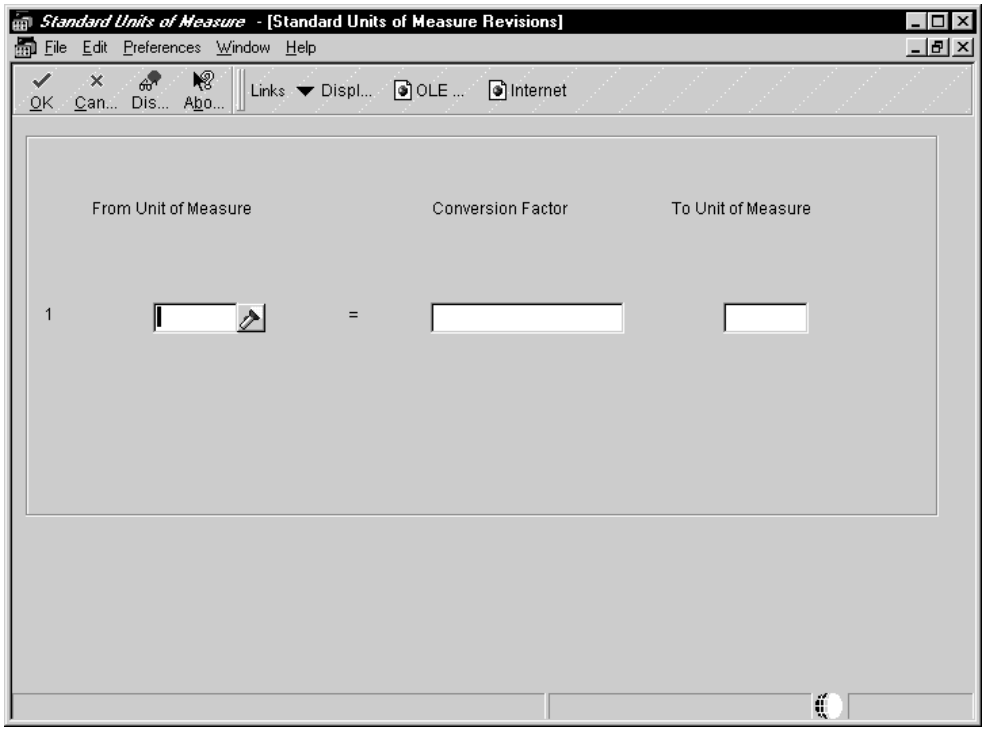
See Also

- *Setting Up Unit of Measure Conversions by Bulk Item*
- *Unit of Measure Conversions*

► To set up standard conversions for bulk items

From the Inventory Setup menu (G4141), choose Standard Units of Measure.

1. On Work With Standard Units of Measure, click Add.



2. On Standard Units of Measure Revisions, complete the following fields:
    - From Unit of Measure
    - Conversion Factor
    - To Unit of Measure
3. Click OK.

Setting Up a Bulk Item

You set up a bulk item by defining the basic information that the system uses to process transactions. This information includes:

- Item number and description
- Price and cost rules

- Availability and inventory commitment rules
- Item-specific system messages

You can set the processing options to display certain forms automatically when you enter information. Otherwise, you can choose the forms that you need from Item Master Information.

See Also

- *Entering Item Master Information in the Inventory Management Guide*

Setting Up Basic Bulk Item Information

You must set up basic item information, such as stocking information and pricing groups, that the system needs to process transactions for stock and non-stock items.

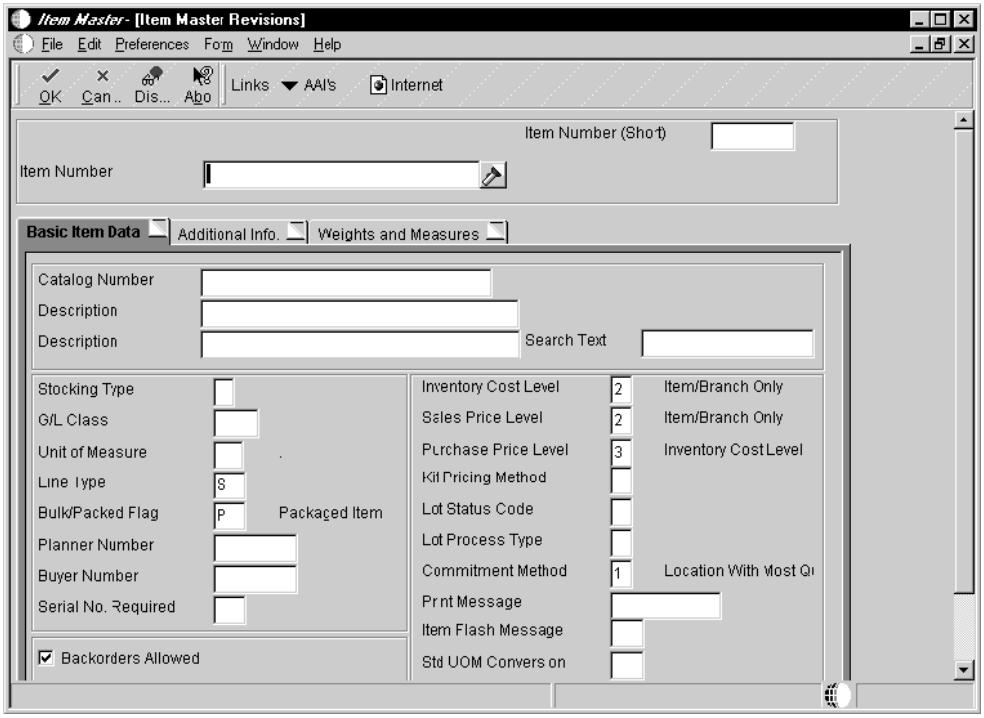
You can use an existing item setup as a model for a new item to speed data entry. Locate an item previously entered, copy the record, add the new item, and complete any of the information specific to your new item.

You cannot delete an item record if the item is referenced as an Item Branch/Plant record, Bill of Material item, or Item Cross-Reference.

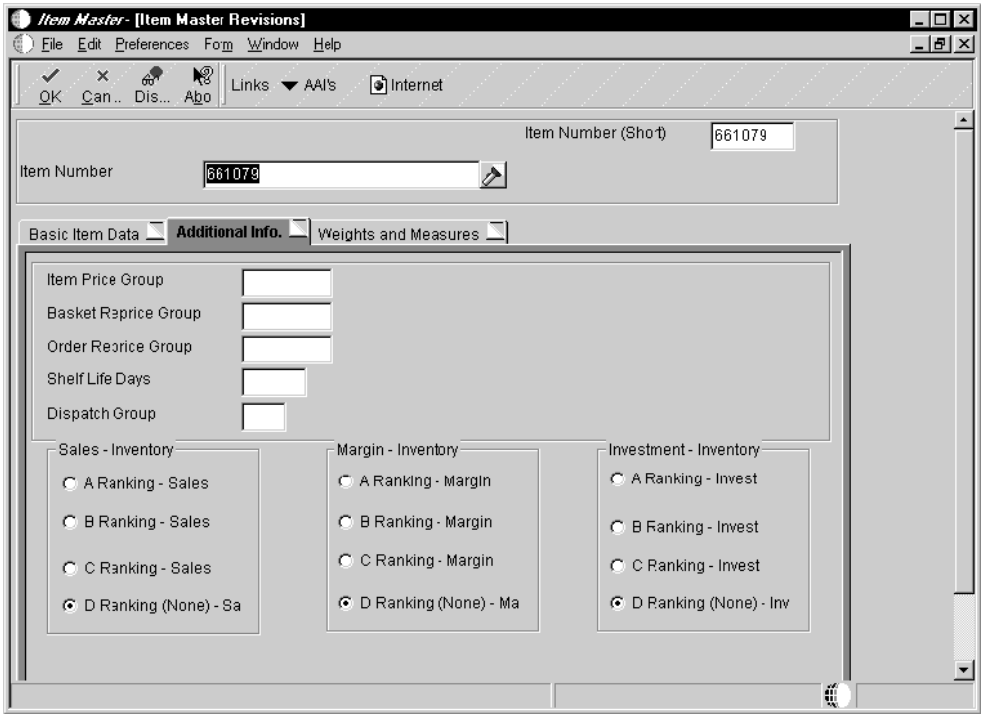
► To set up basic bulk item information

From the Inventory Master/Transactions menu (G4111), choose Item Master.

1. On Work With Item Master Browse, click Add.



2. On Item Master Revisions, complete the following fields:
    - Item Number
    - Description
    - Stocking Type
    - G/L Class
    - Line Type
    - Bulk/Packed Flag
3. Complete the following optional fields:
    - Catalog Number
    - Search Text
    - Unit of Measure
    - Serial No. Required
    - Inventory Cost Level
    - Sales Price Level
    - Purchase Price Level
    - Kit Pricing Method
    - Lot Status Code
    - Lot Process Type
    - Item Number (Short)
4. Choose the following options:
    - Backorders Allowed
    - Check Availability
5. Click the Additional Info. tab.



6. Choose the appropriate option to rank the item as A, B, C, or D under each of the following headings and click OK:
   - Sales
   - Margin
   - Investment

Related Tasks

Recording quantities when the meter is out of service

If the meter is out of service, you can estimate the amount of product that passed through the meter and still perform throughput reconciliation.

- Access the Out of Service Meter Quantity form
- Record the meter number and estimated quantity
- Return to Throughput Reconciliations

The Throughput Reconciliation program performs the conversions, then displays the default tank information and the calculated ambient volume, standard volume, and weight.

Processing Options: Item Master (P4101)

Defaults

1. Primary Unit of Measure

Blank = EA

Use this processing option to identify the primary unit of measure that the system uses. If you leave this option blank, the system uses EA (each).

2. Weight Unit of Measure

Blank = LB

Use this processing option to identify the unit of measure for weight that the system uses. If you leave this option blank, the system uses LB (pounds).

3. Volume Unit of Measure

Blank = GA

4. Template

Blank = None

Process

1. Notes From Date

Blank = System Date

Use this processing option to specify the effective from date that the system uses in the Item Notes table (F40163). If you leave this option blank, the system uses the system date.

2. Notes Thru Date

Blank = Last day of default century

Use this processing option to specify the effective thru date that the system uses in the Item Notes table (F40163). If you leave this option blank, the system uses the last day of the default century.

3. Category Codes

Blank = Do not display screen
1 = Display screen

Use this processing option to specify whether the system displays the Category Codes form when you add or change information on the Item Master Revisions form. Valid values are:

Blank Do not display the form.

1 Display the form.

4. Additional System Information

Blank = Do not display screen

1 = Display screen

Use this processing option to indicate whether the system displays the Additional System Information form when you add or change information on the Item Master Revisions form. Valid values are:

Blank Do not display the form.

1 Display the form.

5. Storage/Shipping

Blank = Do not display screen

1 = Display screen

Use this processing option to specify whether the system displays the Storage/Shipping form when you add or change information on the Item Master Revisions form. Valid values are:

Blank Do not display the form.

1 Display the form.

6. Cost Revisions (Conditional)

Blank = Do not display screen

1 = Display screen

Use this processing option to specify whether the system displays the Cost Revisions form when you add or change information on the Item Master Revisions form. Valid values are:

Blank Do not display the form.

1 Display the form.

In order for the system to display the Cost Revisions form, you must also have

the Inventory Cost Level set to one on the Item Master Revisions (P4101) form.

7. Price Revisions (Conditional)

Blank = Do not display screen

1 = Display screen

Use this processing option to specify whether the system displays the Price Revisions form when you add or change information on the Item Master Revisions form. Valid values are:

Blank Do not display the form.

1 Display the form.

In order for the system to display the Price Revisions form, you must also have the Sales Price Level set to one on the Item Master Revisions (P4101) form.

8. Item Branch

Blank = Do not display Item Branch screens

1 = Display Item Branch and return to Item Master

2 = Display and remain on Item Branch

Use this processing option to specify whether the system displays the Item Branch form when you add or change information on the Item Master Revisions form. Valid values are:

Blank Do not display the Item Branch form.

1 Display the Item Branch form but return to the Item Master form.

2 Display and remain on the Item Branch form.

9. Attachments

Blank = Display the Internal Attachments

1 = Display Item Notes

Use this processing option to specify whether the system displays the Item Notes form when you select a media object on the Work With Item Master Browse form. Valid values are:

Blank Display the internal attachments.

1 Display item notes.

10. Use Templates

Blank = Do not use Templates

1 = Use Templates

Workflow

Workflow

Blank = Do not activate Workflow

1 = Adds

2 = Changes

3 = Adds and Changes

For future use.

Allow Changes (Restart Workflow) (FUTURE)

Blank = Do not allow additional changes

1 = Allow a rocord change and restart Workflow

For future use.

Log as History Record (FUTURE)

Blank = Do not log item as a history record

1 = Log all additions and changes as history records

For future use.

Global Update

1. Transfer Changes

1 = Transfer changes to 2nd and 3rd item numbers

2 = Transfer changes to records in selected files

Use this processing option to specify whether the system updates the changes that you have made to item numbers in the Item Branch records or to records in tables that you have selected. Valid values are:

Blank Do not update other tables.

1 Transfer changes made to the second and third item numbers to the Item Branch records.

2 Transfer changes made to the records in the selected tables.

Versions

1. Item Availability (P41202)

Blank = ZJDE0001

Use this processing option to specify the version that the system uses when

you access the Item Availability program (P41202). If you leave this option blank, the system uses version ZJDE0001.

2. Item Branch (P41026)

Blank = ZJDE0001

Use this processing option to specify the version that the system uses when you access the Item Branch program (P41026). If you leave this option blank, the system uses version ZJDE0001.

Interop

1. Transaction Type

Blank = No outbound interoperability processing

Use this processing option to define the type of document on which you want the system to search. Transaction type is a user defined code (00/TT) that identifies the type of transaction, such as an invoice or a sales order. Enter a transaction type to use as the default or choose it from the Select User Define Code form. If you leave this field blank, the system does not perform export processing.

2. Before/After Image Processing

Blank = Write only the after image

1 = Write the before image

Use this processing option to specify whether the system creates a record of a transaction after the transaction is changed or whether the system creates a

record of a transaction before and after a transaction is changed. Valid values are:

Blank Create a record of a transaction after the transaction is changed.

1 Create one record of the transaction before it is changed and one record after it is changed.

These processing options define the default information that the system uses, such as unit of measure.

These processing options allow you to specify the effective from and thru dates that the system uses in the Item Notes table and whether the system displays certain forms when you add or change information on the Item Master Revisions form.

For future use.

This processing option allows you to update changes made to the second or third item numbers to records in selected tables.

These processing options allow you to specify the versions for various programs that you access from the Item Master program. Versions control how the system processes and displays information. Therefore, you might need to set the processing options to meet your specific needs.

These processing options allow you to specify whether the system performs outbound interoperability processing and whether the system creates a record of a transaction prior to changes to the transaction.

Defining Default Units of Measure for Bulk Items

Each item in the Item Master table can have several units of measure associated with it for different situations. For example, you can purchase and ship an item in cases, stock it in individual units, and sell it by the dozen. The system retrieves the item-level units of measure throughout the Inventory Management and Sales Order Processing systems. You need to define the units of measure associated with each item.

You can define additional units of measure in user defined code table (00/UM). To do so, verify the special handling code in the detail area of User Defined Codes Revisions. The weight and volume units of measure must have a special handling code of W (weight) or V (volume). The weight-to-volume conversion process must be able to determine whether to treat a unit of measure as weight or volume.

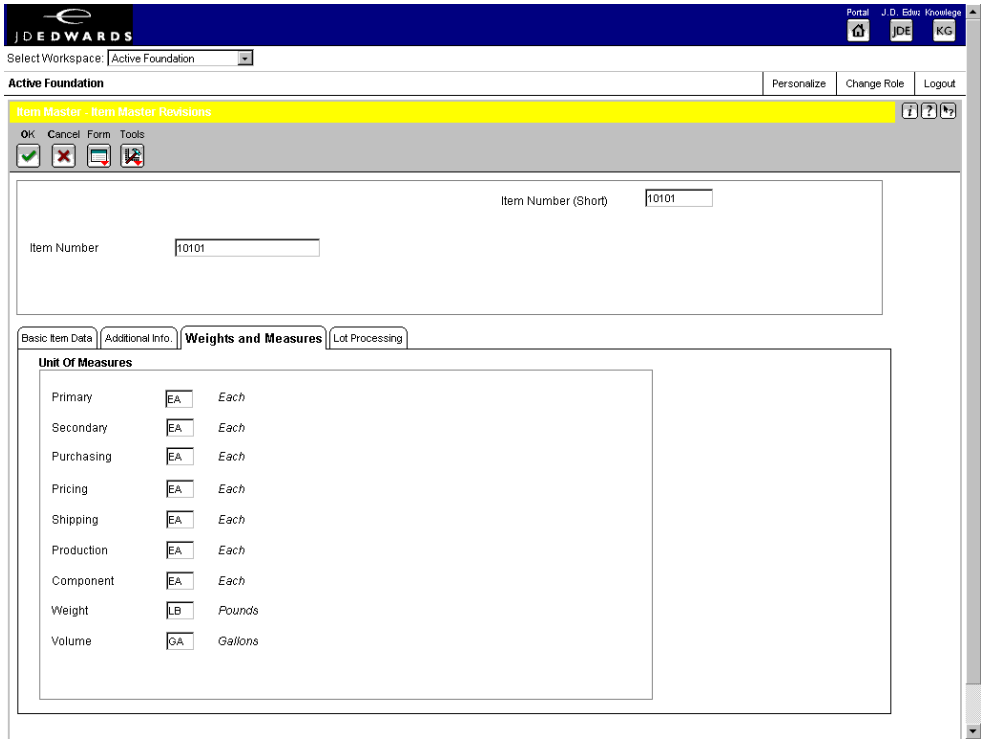
Before You Begin

- Add an item to the Item Master table (F4101). See *Setting Up Basic Bulk Item Information*.
- Set up standard unit of measure conversions. See *Setting Up Standard Conversions for Bulk Items*.

► To define default units of measure for bulk items

From the Inventory Master/Transactions menu (G4111), choose Item Master.

1. On Work With Item Master Browse, complete the following field and click Find:
    - Item Number
2. Choose the row for the item and choose Item Revisions from the Row menu.



3. On Item Master Revisions, complete the following required field:
    - Unit of Measure
4. Click the Weights and Measures tab.
5. Complete the following required fields and click OK:
    - Weight
    - Volume
    - Unit of Measure

See Also

- *Understanding User Defined Codes for Bulk Stock* for information about revising user defined code tables

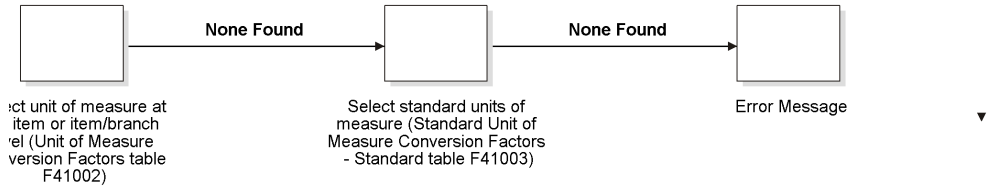
Setting Up Unit of Measure Conversions by Bulk Item

In addition to the standard unit of measure conversions, you need to set up unit of measure conversions that are item specific. For example, a drum of additive might have a different conversion factor than a drum of oil. You set up conversions that are unique for an item at the item level, or item branch/plant level. The system stores this information in the Unit of Measure Conversion Factors table (F41002). If you do not set up unit of measure conversions by item, the system uses the standard unit of measure conversions.

If you record fill, repack, and decant stock movements for a bulk item, you must also set up unit of measure conversions for the package quantity-for example, 1 DR (drum) = 209 LT (liters).

The system processes transactions according to the following hierarchy of conversion factors:

First, select unit of measure at the item or item/branch level (Unit of Measure Conversions Factors table F41002). If none found, select standard units of measure (Standard Unit of Measure Conversion Factors - Standard table F41003). If none found, the system displays an error message.



You can set up an unlimited number of conversion factors. However, you must set up conversion factors that calculate each unit of measure back to the primary unit of measure, for example: from pallets, to cartons, to boxes, to units.

The following is an example of valid conversions:

- 1 BX = 2 UN
- 1 CR = 2 BX
- 1 PL = 2 CR

Before You Begin

- Add an item to the Item Master table (F4101). See *Setting Up Basic Bulk Item Information*.

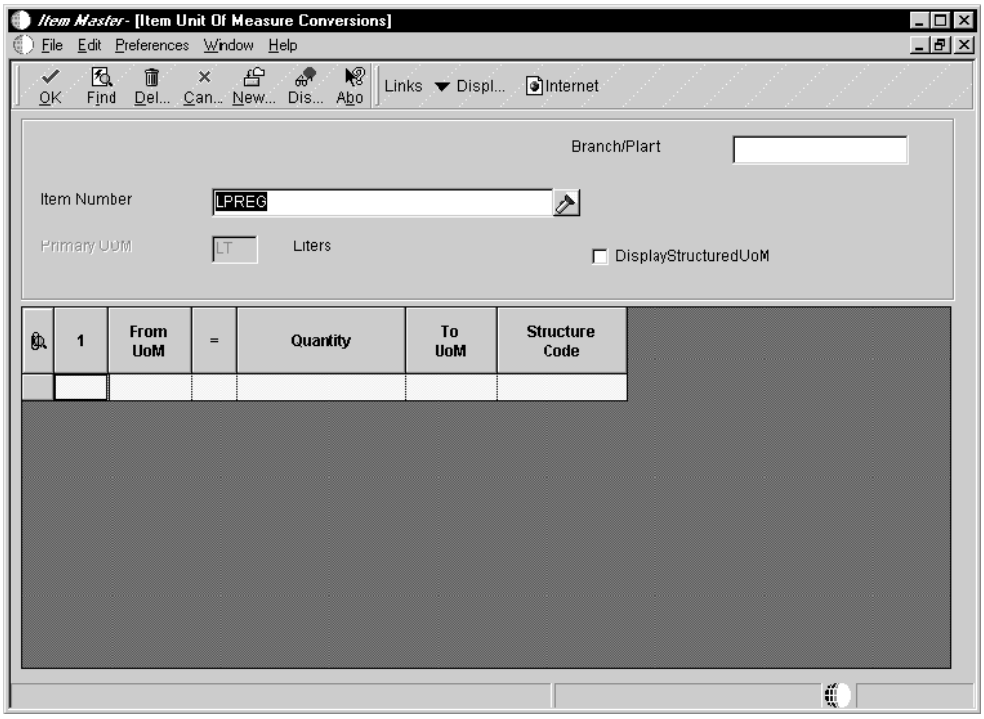
See Also

- *Setting Up Standard Conversions for Bulk Items*
- *Unit of Measure Conversions*

► To set up unit of measure conversions by bulk item

From the Inventory Master/Transactions menu (G4111), choose Item Master.

1. On Work With Item Master Browse, complete the following field and then click Find:
    - Item Number
2. Choose the item and then choose Item Revisions from the Row menu.
3. On Item Master Revisions, click the Weights and Measures tab.
4. Choose Conversions from the Form menu.
5. On Work With Item Unit of Measure Conversions, click Add.



6. On Item Unit of Measure Conversions, complete the following fields and click OK:
    - From UoM
    - Quantity
    - To UoM

Working with Item Temperature and Density

For each item, you must define the default values that the system uses for temperature, density, and measurement. In addition, you specify the density and temperature tables to use for each item. You can also create your own temperature and density tables, as necessary.

The system uses the following temperature and density tables for most bulk products. Allowable ranges are shown for each table.

Temperature Range

Conversion Tables	Range: Minimum - Maximum
24B	0 to 300 F 23B
54B	-18 to 150 C 53B
54C	-18 to 150 C
54D	-20 to 150 F 54B
LPG	-50 to 50 C LPG
D4311	Table 1 1 to 500 F Table 2 -25 to 275 C

Density Range

Density Tables	Range: Minimum - Maximum
23B	.6535 to 1.0750 Relative Density - 4 decimal places
53B	653 to 1075 Absolute Density - 1 decimal place
53D	800 to 1164 Absolute Density - 1 decimal place
LPG	.5000 to .6530 Relative Density - 4 decimal places
D4311	Up to 14.9 API specific gravity 15.0 to 34.9 API specific gravity

Creating a New Conversion Table

You can add a conversion routine that you have written. You must write the C code for the conversion routine yourself. After you have created your own routine, you can use it to define item temperature and density.

Caution

You can inquire on a previously created table by choosing the table and clicking Select. When you select a table, a message appears warning you that the table is shipped with data that is needed to perform Bulk temperature and density conversions. A change made to the table can result in an inoperable Bulk System.

Defining Item Temperature and Density

For each item, the system uses default values for temperature, density, and measurement that are defined by you.

When defining item temperature and density, consider the following guidelines:

- When you enter a transaction, the system verifies that the temperature or density that you enter is within the range specified in the selected table for the item.
- When adding an item, choose the Bulk Information tab on Additional System Information. When you use this method, you can add or change information only for that specific item.
- If an item currently exists in the Item Master table (F4101), you can access Bulk Product Information from the Bulk Stock Management Setup menu.
- You cannot delete an item from Bulk Product Information. You can delete items only from Item Master Information.
- You can use a different temperature table for reporting purposes, such as government reporting requirements. Specify this table in the Reporting Temperature Table field.
- You can access Conversion Tables from Bulk Production Information Revisions to set up or edit your own conversion tables.

See Also

- *Setting Up Conversion Tables*
- *Conversion Routines* for more information about American Society for Testing and Materials (ASTM) tables

► To define item temperature and density

From the Inventory Master/Transactions menu (G4111), choose Item Master.

1. On Work With Item Master Browse, complete the following field and click Find:
    - Item Number
2. Select the row for the item and choose Addl System Info from the Row menu.
3. On Additional System Information, click the Bulk Information tab.
4. On Additional System Information, complete the following optional field:
    - Product Group

5. If the item requires temperature conversion, click the following option:
    - Required
6. To specify the conversion tables, complete the following fields:
    - Density
    - Temperature
    - Reporting Temperature
    - Coefficient of Expansion
7. Complete the following fields:
    - Display Density
    - Density Temperature
    - Density Minimum
    - Density Maximum
    - Temperature Minimum
    - Temperature Maximum
8. If the item is an LPG product, choose the following options:
    - LPG Product
    - Calculate Vapour
9. If the item is an LPG product, complete the following field:
    - Vapour Temperature
10. Click OK.

Setting Up Conversion Tables

You can add your own conversion tables to customize your operations. You can specify the tables that you set up here on Bulk Product Information Revisions during your item setup.

► To set up conversion tables

From the Bulk Stock Control Setup menu (G415041), choose Bulk Conversion Table.

1. On Work with Conversion Table Interfaces, click Find.
2. Choose a row and click Select.
3. On Warning!, click OK.
4. On Conversion Table Interface Revisions, complete the following fields:
    - Table

- Minimum
- Maximum
- Type

5. Under the Temperature Conversion Routine heading, click the following option and then click OK:
    - Business Function

Setting Up Item Information by Depot

As part of your bulk item setup, you must set up item information specific to a depot (branch/plant), such as stocking information, primary locations, cost methods, and pricing groups.

Before You Begin

- Add or locate an item on the Item Master Information form. When you access Item Branch/Plant Information and specify the depot for which you want to complete item information, the item and depot that you specify provide the default values for the next form or window that you access.

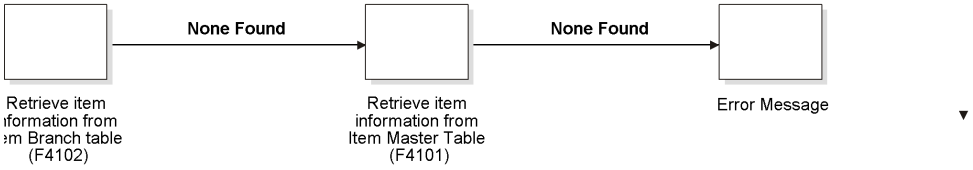
See Also

- *Entering Branch/Plant Information* in the *Inventory Management Guide*

Setting Up Basic Item Information by Depot

You must set up item information, such as stocking information and pricing groups, specific to a depot. The system stores this information in the Item Branch table (F4102).

The system retrieves item information as follows:



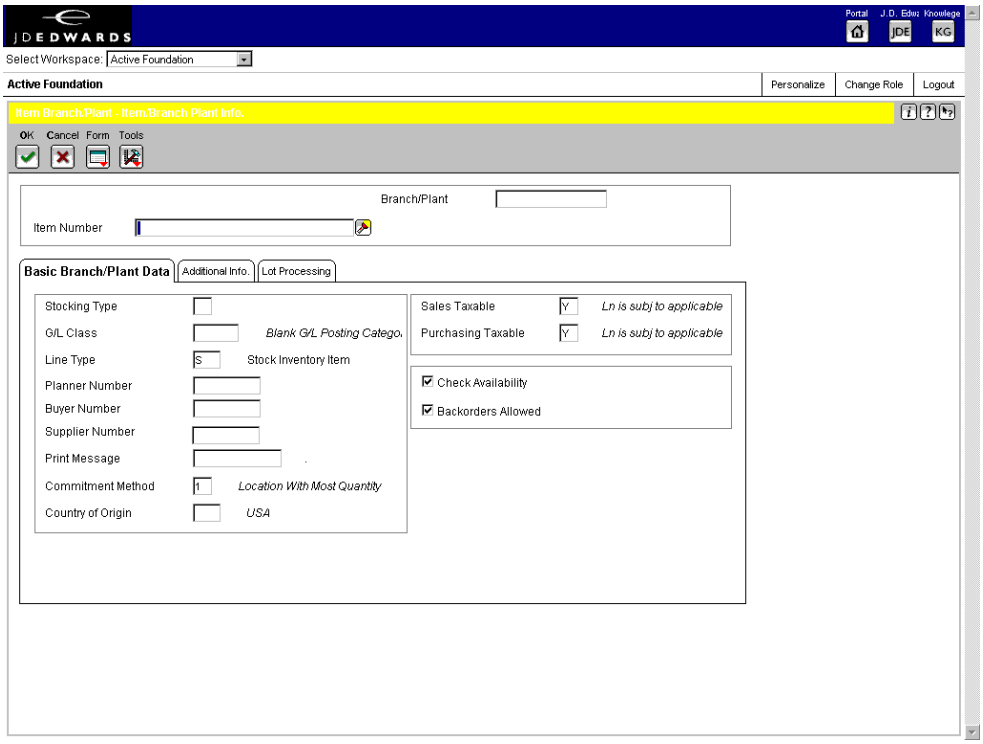
Retrieve item information from Item Branch table (F4102). If none found, retrieve item information from Item Master table (F4101). If none found, the system displays an error message.

When processing transactions, the system retrieves item information specific to a depot from the Item Branch table. If none is found, the system retrieves item information from the Item Master table.

► To set up basic item information by depot

From the Inventory Master/Transactions menu (G4111), choose Item Branch Plant.

1. On Work With Item Branch, click Add.



2. On Item/Branch Plant Info., complete the following fields:
    - Branch/Plant
    - Item Number
3. On the Basic Branch/Plant Data tab, complete the following fields:
    - Stocking Type
    - G/L Class
    - Line Type
4. Complete the following optional fields specific to a branch/plant and then click OK:
    - Supplier Number
    - Print Message
    - Sales Taxable
    - Purchasing Taxable

Related Tasks

To delete an item from Item Branch/Plant Info., verify the following:

- All associated balances for the item must be zero.
- All on-hand balances, backordered quantities, and any commitments must be transferred or satisfied.
- The Average Cost Work table (F41051) must not contain any transactions for the item and branch.

If the requirements above have been met, the system deletes the records from the following tables:

- Cost Ledger (F4105) if the cost level is 2 or 3
- Item Location (F41021)
- Item Branch (F4102)

Defining a Primary Depot Location

You can define a primary depot location and assign a lot number when you add an item branch/plant record.

After you assign an item to a location on Location Revisions, you can change the primary depot location for the item from Work With Item Locations. The primary location designates a specific location in the depot where you will store the item.

You can assign a lot number to bulk products. However, the system will not select bulk products by lot, nor does the Bulk Load Confirm process allow you to load confirm bulk products by lot. Therefore, although you can set up bulk products by lot, you will not be able to use this information for sales transactions.

► To define a primary depot location

From Inventory Master/Transactions (G4111), choose Item Master.

1. On Work With Item Master Browse, complete the steps to set up basic item information by depot. See *Setting Up Basic Item Information by Depot*.
2. On Work With Item Master Browse, complete the following field and click Find:
    - Item Number
3. Choose the item and then Item Branch from the Row menu.
4. On Work With Item Branch, choose the branch/plant and then Location Revisions from the Row menu.
5. On Work With Item Locations, choose the location and then Change Primary from the Row menu.
6. Click Close.

Defining Cost Methods for Bulk Items

You need to define all cost methods specific to an item. You can create an unlimited number of cost methods. The system stores cost methods in the Item Ledger table (F4105).

If you delete the Sales and Inventory cost method, a warning appears, indicating that the inventory value will drop to zero. The system does not delete the cost record, but updates it to a zero cost.

If you change the Sales and Inventory cost method, the system creates general ledger and item ledger transactions to reflect the change.

What You Should Know About Processing Options

Displaying cost methods

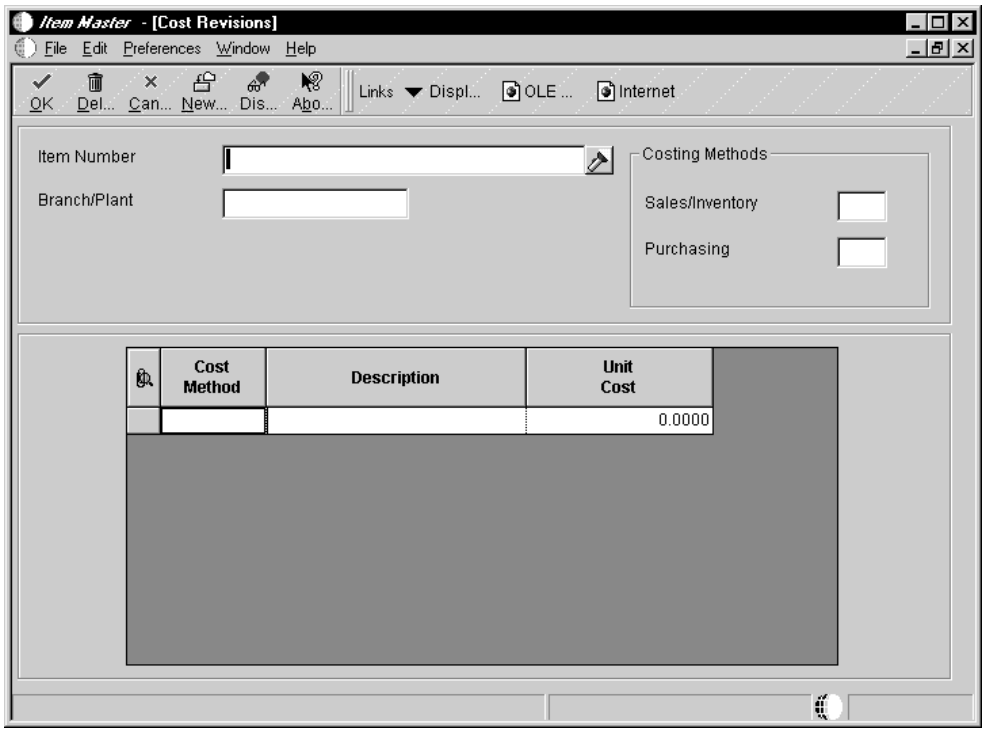
You can set processing options to display the following formats:

- One cost method at a time, which also displays all locations and lots for the item
- Multiple cost methods per item

► To define cost methods for bulk items

From Inventory Master/Transactions (G4111), choose Item Master.

1. On Work With Item Master Browse, complete the following field and click Find:
    - Item Number
2. Choose the row for the item and choose Cost Revisions from the Row menu.
3. On Work With Item Cost, click Add.



4. On Cost Revisions, complete the following fields:
    - Item Number
    - Branch/Plant
    - Sales/Inventory
    - Purchasing
5. Enter costs for each cost method in the following field and click OK:
    - Unit Cost

Processing Options for Cost Revisions

Process
1. Enter a '1' to prevent the standard cost from being changed.

Interop
1. Enter the transaction type for the interoperability transaction. If left blank, outbound interoperability processing will not be performed.

Setting Up Additional Item and Depot Information

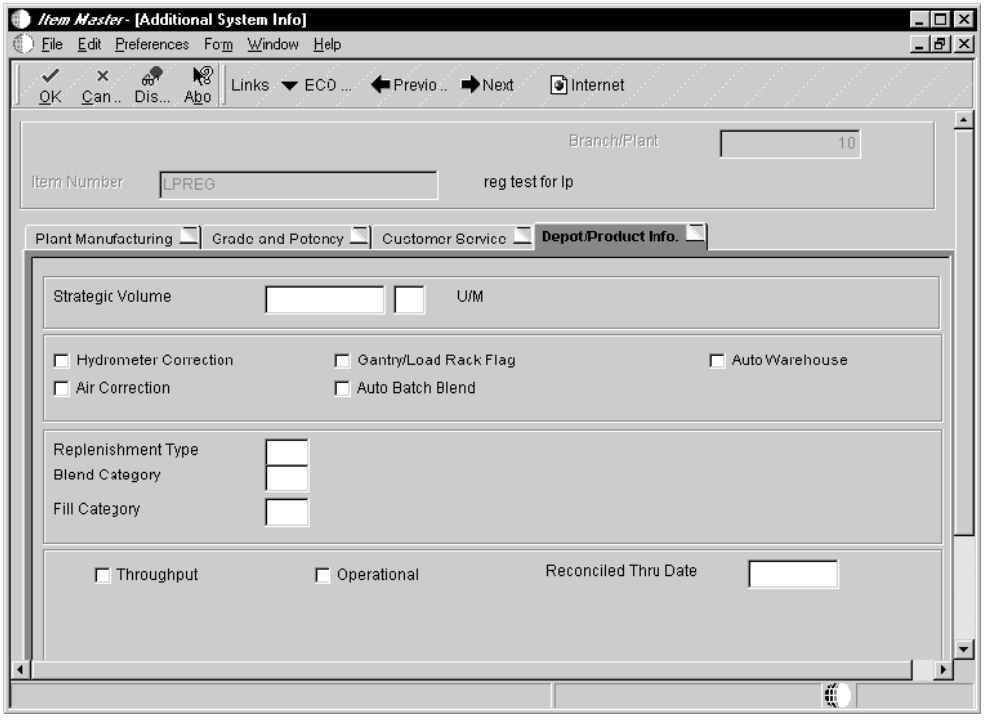
You need to set up additional information by depot that is specific to bulk items. The information includes additional volume conversion information, automated depot processes, and blending and filling categories.

When you access Depot/Product Information Revisions, the system updates the Reconciled Through Date based on the Operational Reconciliations program.

► To set up additional item and depot information

From Inventory Master/Transactions (G4111), choose Item Master.

1. On Work With Item Master Browse, complete the following field and click Find:
    - Item Number
2. Choose the row for the item and then Item Branch from the Row menu.
3. On Work With Item Branch, choose the row and then Addl System Info from the Row menu.
4. On Additional System Info, click the Depot/Product Info. tab.



5. Complete one or more of the following fields:
    - Strategic Volume
    - Replenishment Type

- Blend Category
- Fill Category
- Reconciled Thru Date

6. Choose one or more of the following options and click OK:
    - Hydrometer Correction
    - Gantry/Load Rack Flag
    - Auto Warehouse
    - Air Correction
    - Auto Batch Blend

Tank and Flow Meter Setup

A depot consists of tanks that hold various products. You must define the tanks, the allowed products, and the flow meters at the depot location. The system uses this information to calculate volumes and optimize tank usage.

Before You Begin

- ❑ Set up the depot and tank locations. See *Setting Up Depot Constants for Bulk Products*.
- ❑ Set up the items that will be placed in the tanks. See *Setting Up a Bulk Item*.

Setting Up a Tank

To set up a tank, you specify the structural information about the tank, such as capacity, height, and tank specifications. The system uses this information to calculate volume and optimize tank usage.

Setting Up Basic Tank Information

You must define the basic structural information about a tank. The system retrieves this information when processing transactions to calculate volume. The system stores this information in the Tank Master table (F41500). If your tanks are set up as fixed assets, you can record the asset number when you set up basic tank information. You can also record whether a tank is heated and requires an expansion correction factor to calculate volume, such as for tanks containing asphalt or bitumen products. If you set up a heated tank, you must also record an expansion correction factor and a strapping temperature.

When you delete the record for a tank, the system automatically deletes the corresponding records in the Tank Strapping Table Maintenance (F41503) and the Default Tank Information (F41508) tables.

While you use the Tank Master Maintenance program, you can access the Fixed Assets Master program and locate or record fixed asset information, such as depreciation and accounting values, for the tank.

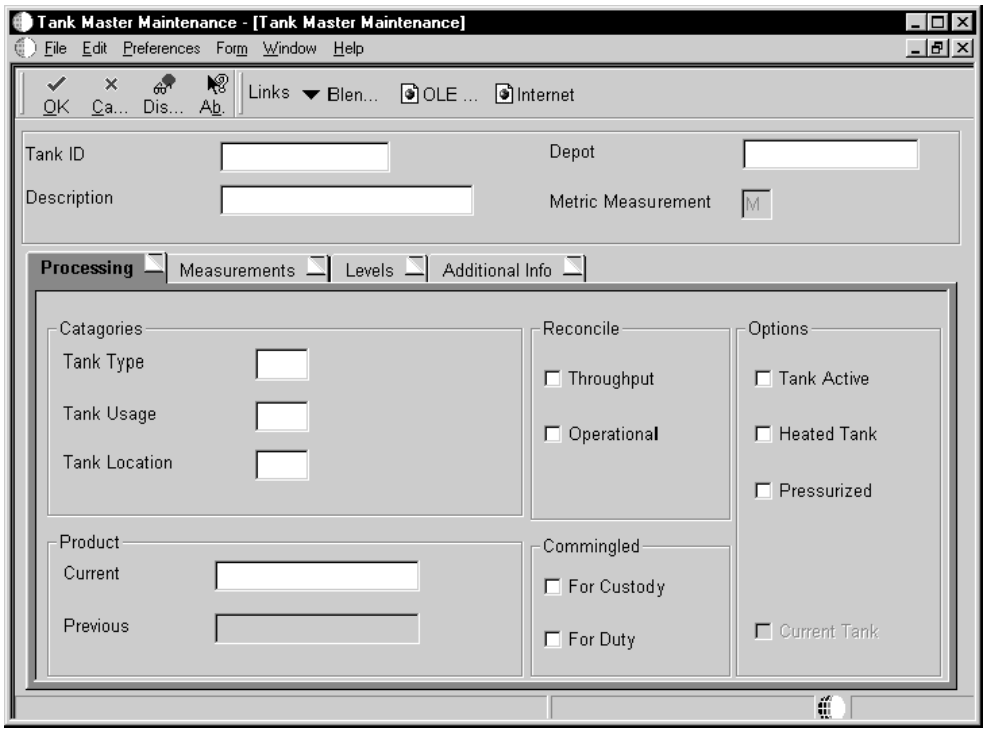
See Also

- *Creating an Asset Master Record* in the *Fixed Assets Guide*

► To set up basic tank information

From the Bulk Stock Control Setup menu (G415041), choose Tank Master Maintenance.

1. On Work With Tank Master, click Add.



2. On Task Master Maintenance, complete the following fields:
    - Tank ID
    - Depot
    - Description
3. On the Processing tab, complete the following fields:
    - Tank Type
    - Tank Usage
    - Tank Location

4. On the Measurements tab, complete the following fields:
    - Diameter
    - Tank Height
    - Reference Height
    - Units
    - Temp
    - Dip Type
    - Gauging Method
5. On the Levels tab, complete the following fields:
    - Tank Capacity
6. Complete the following optional fields on the Additional Info tab:
    - Process Control ID
    - Date Installed
    - Date Cleaned
    - Temperature Expiration Period
7. If you are using a floating roof, complete the following fields on the Measurements tab:
    - Weight
    - Height
8. Choose the following options on the Processing tab, and click OK:
    - Heated Tank
    - Pressurized

Setting Up a Blending Tank

A blending tank is a tank that can hold more than one product. When you set up a blending tank, you define the blending categories that are allowed in that tank.

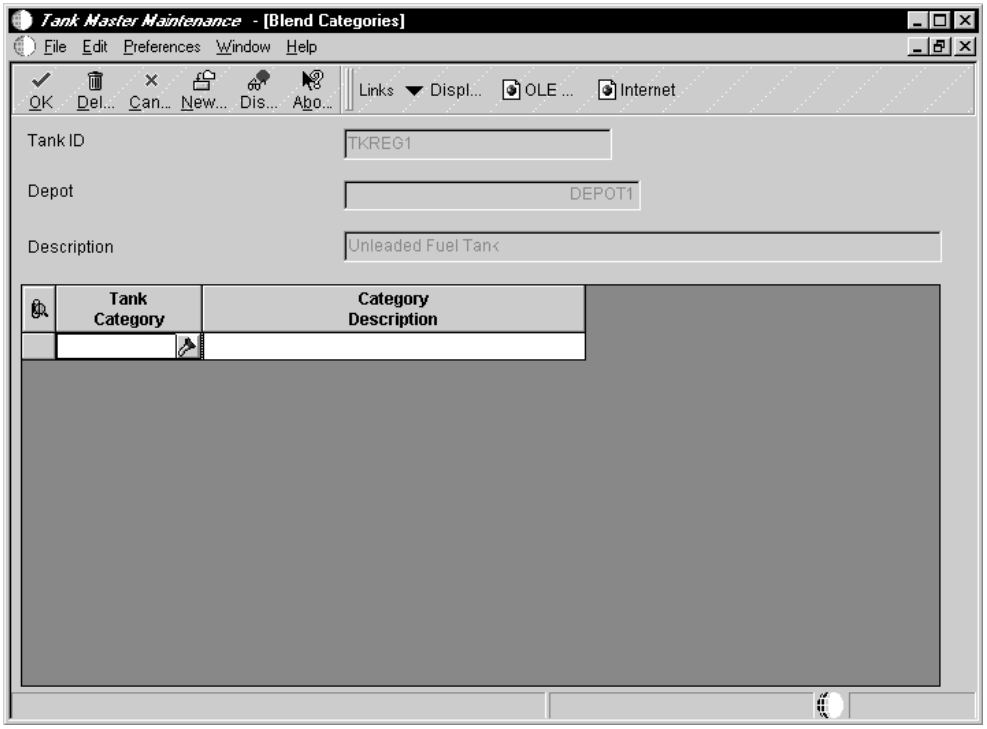
Before You Begin

- ❑ Set up the tank in the Tank Master table (F41500). See *Setting Up Basic Tank Information.*

► To set up a blending tank

From the Bulk Stock Control Setup menu (G415041), choose Tank Master Maintenance.

1. On Work With Tank Master, follow the steps to set up a tank.
2. On Tank Master Maintenance on the Processing tab, enter the code for a blending tank in the following field:
    - Tank Usage
3. Choose Blending Category from the Form menu.



4. On Blend Categories, complete the following fields:
    - Tank Category
    - Category Description
5. Click OK.

Setting Up Additional Tank Information

You must define additional information about a tank that the system uses to calculate volume and manage depot transactions. This information includes discharge and filling rates, tank status, and commingled stock.

If you set up a tank to accommodate commingled stock, all transactions (such as general stock movements, load confirm, and disposition) require you to enter the owner of the

product. All tanks for the product must be defined as commingled because any of them could be the current tank at any time.

Before You Begin

- ❑ Set up the tank in the Tank Master table (F41500). See *Setting Up Basic Tank Information*.

► To set up additional tank information

From Bulk Stock Control Setup (G415041), choose Tank Master Maintenance.

1. On Work With Tank Master, follow the steps to set up a tank.
2. On Tank Master Maintenance on the Processing tab, complete the following fields:
    - Tank Status
    - Current Product
3. Complete the following optional fields on the Levels tab:
    - Unpumpable Volume
    - Pipeline Volume
    - Low Stock Warning
    - Fill Rate Per Hour
    - Discharge Volume
    - Discharge / Hour
4. Complete the following optional fields on the Additional Info tab:
    - Date Cleaned
    - Temp Exp Period
5. If the tank contains commingled stock, click the following options on the Processing tab and click OK:
    - Commingled for Custody
    - Commingled for Duty

Setting Up Tank Strappings Information

You must set up the strappings (reading height) information for the storage, blending, and holding tanks in a depot. The system uses tank strappings to convert tank dip readings to gross volumes when you record tank dips.

You can enter information in both metric and U.S. measurements. The delimiter for U.S. measurements is the one that you defined in the U.S. Increments Delimiter field on Branch/Plant Constants - Page 3 Row exit.

Before You Begin

- Set up the tank in the Tank Master table (F41500). See *Setting Up Basic Tank Information*.

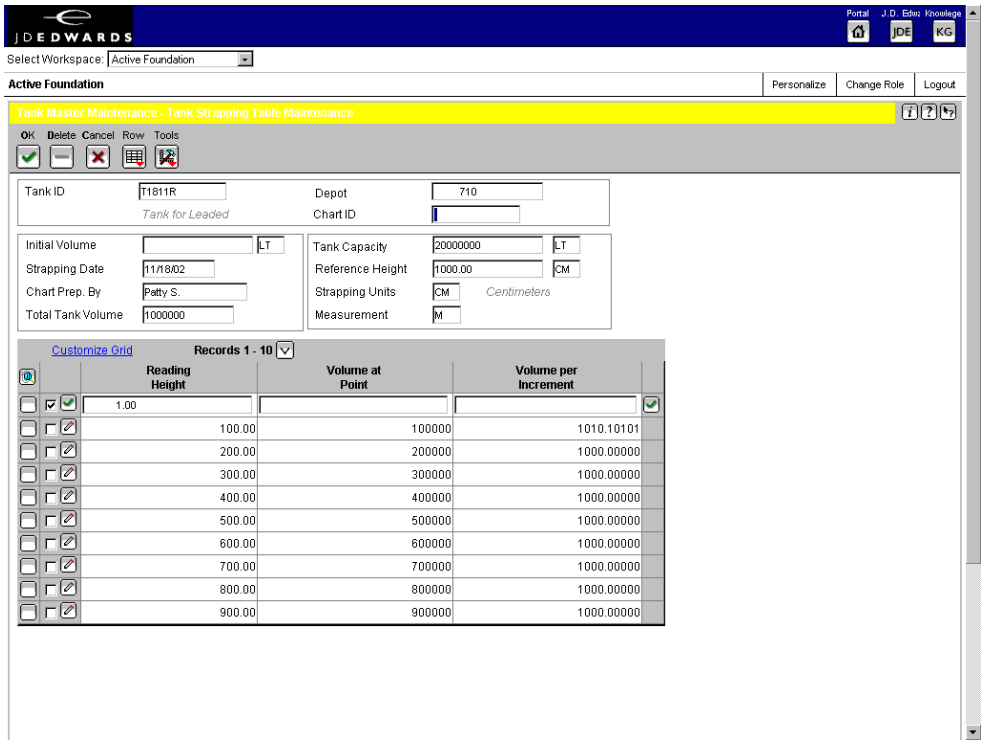
See Also

- *Defining Depot Temperature and Density*

▶ To set up tank strappings information

From the Bulk Stock Control Setup menu (G415041), choose Tank Master Maintenance.

1. On Work With Tank Master, follow the steps to set up a tank.
2. Choose the tank and choose Tank Strapping from the Row menu.



3. On Tank Strapping Table Maintenance, complete the following fields for each strapping point:
   - Reading Height
   - Volume at Point
   - Volume per Increment
4. Complete the following optional fields, and click OK:
   - Chart ID
   - Initial Volume

- Strapping Date
- Chart Prep. By

Defining Tank Temperature and Density

The system uses the default temperature and density that are specific to a tank to calculate volume, and process the stock movements. If you do not enter the temperature and density information when performing a stock movement, the system retrieves the default temperature and density for the tank from the Default Tank Information table (F41508).

If you enter the date and time, the system uses this information in all records added in all detail lines.

If you enter the date and time on the form, you can display different information for each record.

To delete a record, choose only the line for the tank to delete on the Work With Default Tank Information form.

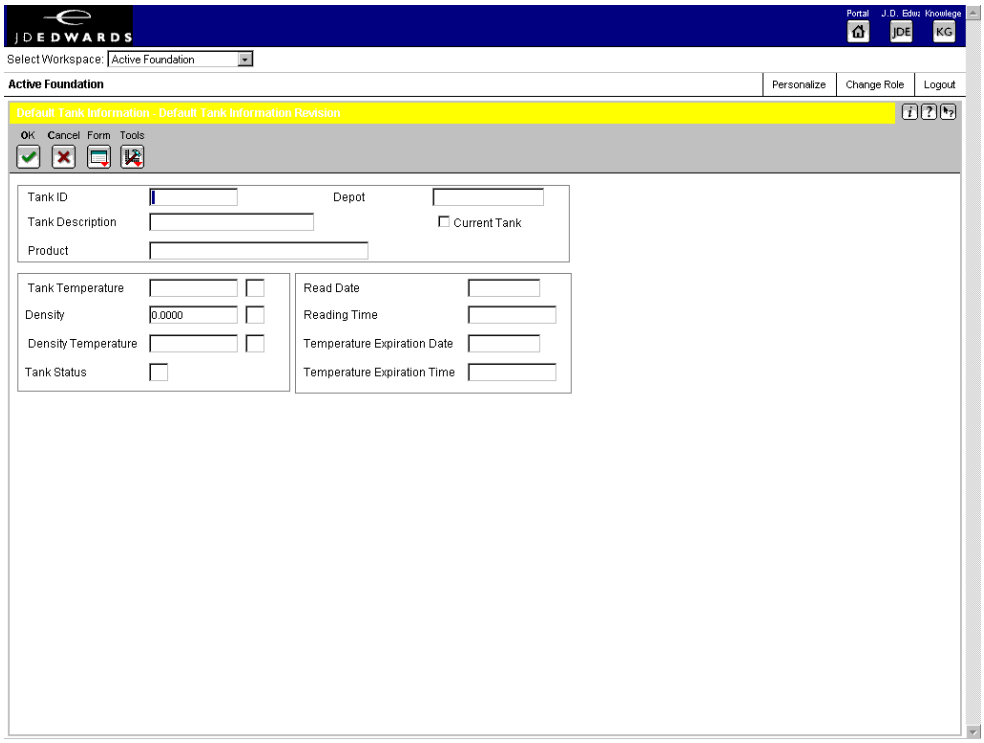
See Also

- *Setting Up a Tank*
- *Setting Up a Bulk Item*
- *Setting Up Additional Tank Information*

► To define tank temperature and density

From the Bulk Stock Control Setup menu (G415041), choose Default Tank Information.

1. On Work With Default Tank Information, click Add.



2. On Default Tank Information Revision, complete the following fields:
    - Tank ID
    - Depot
    - Tank Temperature
    - Read Date
    - Density
    - Density Temperature
    - Reading Time

    The system calculates the temperature expiration date and time based on the temperature expiration period from Additional Tank Information.

3. Complete the following fields to calculate this information manually and then click OK:
    - Temperature Expiration Date
    - Temperature Expiration Time

Defining Product Groups

You must define the product groups that a tank or filling line can hold. You must also specify the order in which products can be put into the tank without requiring the tank to be cleaned.

The system displays a warning message if you need to flush the tank prior to adding another product.

The system uses this information whenever you perform any of the following activities:

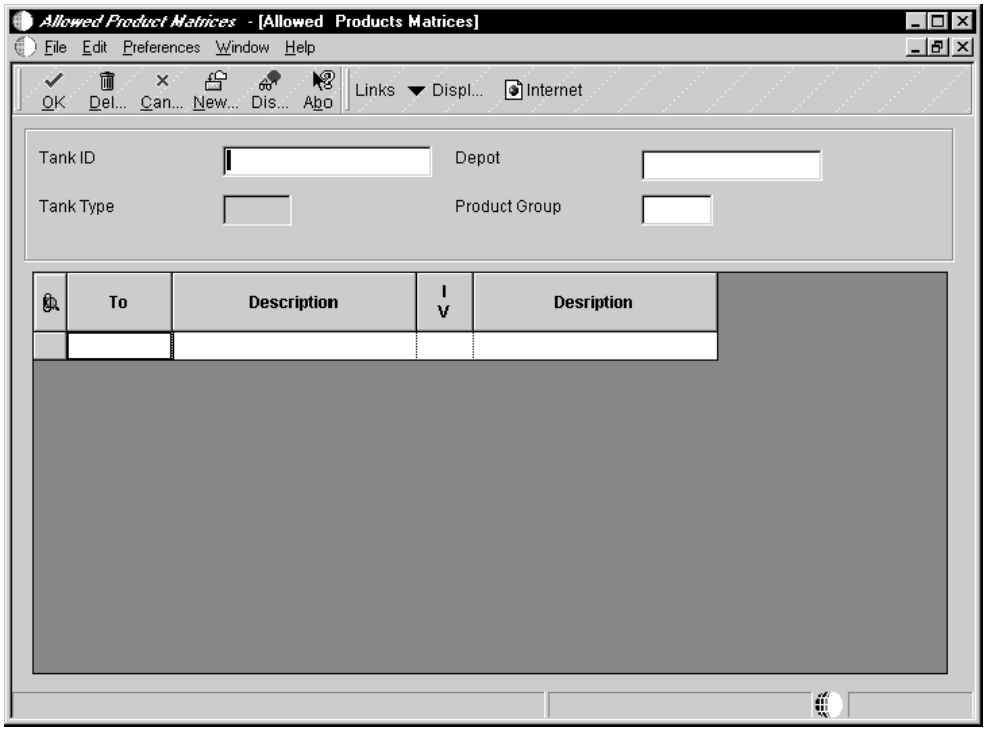
- Transfer product into the tank as part of a general stock movement
- Receive product into the tank
- Change the current product in the tank on the Additional Tank Information form

You can set up the product groups for individual tanks or by tank type, depending on your needs.

► To define product groups

From the Bulk Stock Control Setup menu (G415041), choose Allowed Product Matrices.

1. On Work With Product Matrices, click Add.



2. On Allowed Product Matrices, complete the following fields:
    - Depot
    - Product Group
3. Complete the following optional fields and click OK:
    - Tank ID
    - To

- Desription
- I V
- Description

Processing Options for Allowed Product Matrix

Processing
1.Enter the type of matrix to be displayed.
'T' - Tanks (default)
'F' - Filling Line (Future)

Setting Up a Flow Meter

You set up a flow meter to define such information as the current product, location, and calibration dates. The system uses this information during the throughput reconciliation process.

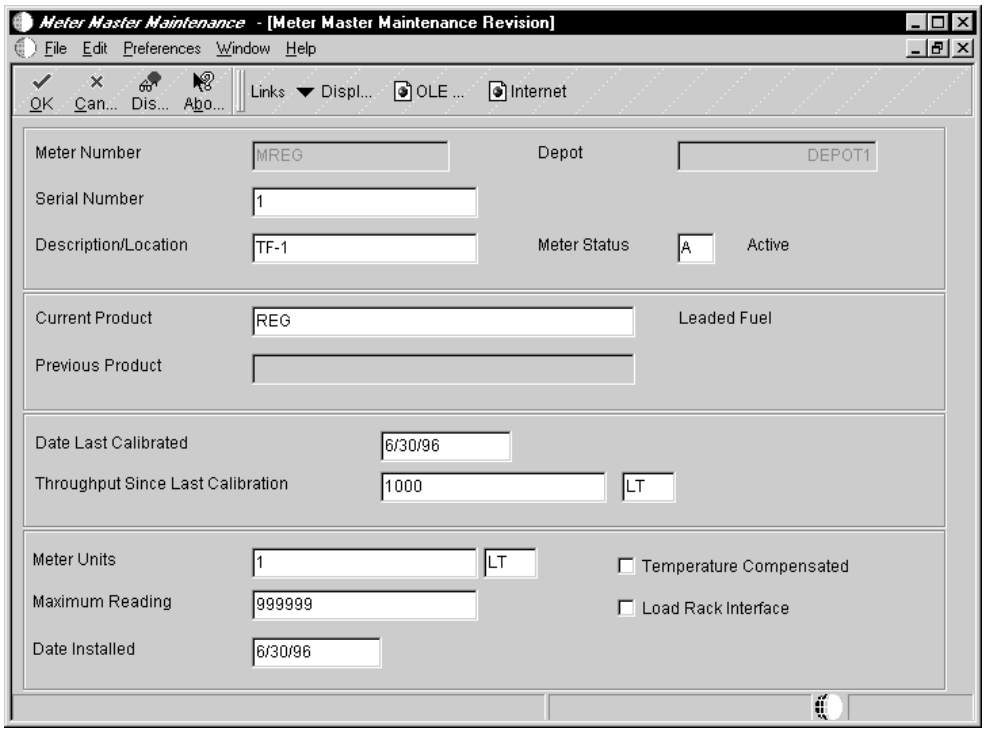
If you want to change the current product of an existing meter, you must enter a closing meter reading for the prior product.

You can attach notes about the meter from Work With Meter Master Maintenance.

► To set up a flow meter

From the Bulk Stock Control Setup menu (G415041), choose Meter Master Maintenance.

1. On Work With Meter Master Maintenance, click Add.



2. On Meter Master Maintenance Revision, complete the following fields:
    - Meter Number
    - Depot
    - Serial Number
    - Meter Status
    - Current Product
    - Meter Units
3. Complete the following optional fields:
    - Date Last Calibrated
    - Throughput Since Last Calibration
    - Maximum Reading
4. Choose the following options:
    - Temperature Compensated
    - Load Rack Interface
5. Complete the following optional field and click OK:
    - Date Installed

System Setup

To work with the Bulk Stock Management system, you need to activate Bulk Stock Management and review or revise some system setup tables.

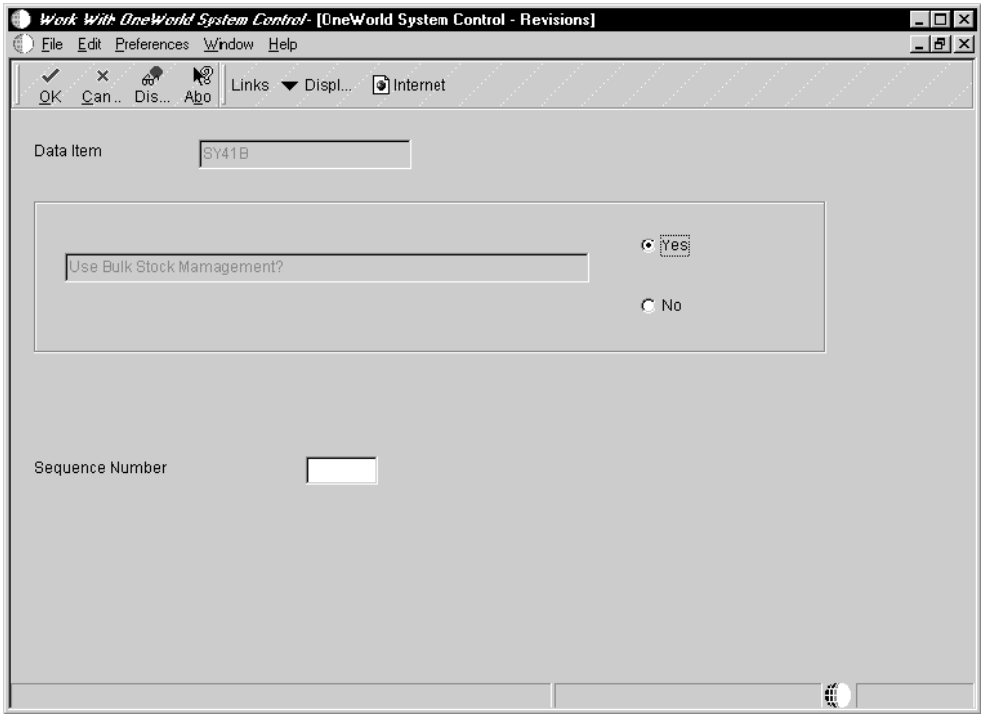
Activating Bulk Stock Management

Before you can use the Bulk Stock Management system, you must activate it within OneWorld.

► To activate Bulk Stock Management

In the Fast Path field, enter P99410.

1. On Work With OneWorld System Control, choose the row containing the data item SY41B and then click Select.



2. On OneWorld System Control - Revisions, choose the following option and then click OK.
    - Yes

Understanding AAIs for Bulk Stock

You need to set up the automatic accounting instructions (AAIs) for the Bulk Stock Management system. The AAIs for the Bulk Stock Management system identify the general ledger (G/L) accounts that the system updates when recording transactions. You must create AAIs for each unique combination of company, document type, and G/L class code that you use.

The following table identifies the AAIs used in the Bulk Stock Management system:

4122 Provides the inventory offset account. This AAI is used by the General Stock Movements program.

4124 Provides the offset account for expense or cost of goods sold. This AAI is used by the General Stock Movements program.

4152 Provides the inventory account used in the reconciliations process.

4182 Provides the physical gain/loss account. This AAI is used by the General Stock Movements and Reconciliations programs.

4184 Provides the work-in-process account to record the interim gain or loss on bulk items. This AAI is used by the General Stock Movements program.

The following example illustrates the accounting transactions for these AAIs:

If decreasing inventory Debit AAI = 4182 Gain/Loss
Credit AAI = 4152 Inventory

If increasing inventory Debit AAI = 4152 Inventory
Credit AAI = 4182 Gain/Loss

Understanding User Defined Codes for Bulk Stock

The User Defined Codes (UDCs) program allows you to establish and maintain a table that defines valid codes for various types of information. Codes are categorized by system and code type. You might need to review or revise codes for the Bulk Stock Management system. In addition, you need to define the UDCs for the various document types used by the system.

The Bulk Stock Management system uses the following UDCs:

Blending Categories (Type BC)	Identifies valid product groups that can be put into a specific blending tank
Dispatch Group (Type DG)	Used by the Transportation Management system to group bulk products for dispatch
Density Table (Type DN)	Indicates the density conversion algorithm to be used in calculations
Dip Type (Type DP)	Identifies the method of measurement when calibrating volumes from tank dips

Density Type (Type DT)	Identifies the type of density
Fill Category (Type FC)	Identifies the different filling categories
Gauging Method (Type GM)	Indicates the method used to measure product
Meter Status (Type MS)	Indicates whether the meter is active or inactive
Product Group (Type PG)	Identifies the line of products with similarities allowing them to be grouped
Replenishment Type (Type RT)	Indicates the type of supply, such as blended product, purchased, and filled
Tank Status (Type ST)	Indicates whether the tank is active or inactive
Strapping Units (Type SU)	Indicates the size of the strapping table increments, such as centimeters
Tank Location (Type TL)	Identifies the location of the tank
Temperature Type (Type TL)	Identifies the type of temperature, such as Celsius or Fahrenheit
Temperature Conversion Table (Type TT)	Indicates which standard ASTM-IP-API table to invoke for calculation of standard stock accounting units
Tank Usage (Type TU)	Indicates the primary usage for the tank-for example, storage, blending, and holding
Tank Type (Type TY)	Identifies the physical shape of the tank

The following UDCs indicate document types for System 41B:

Load Confirmed Sales (Type LC)	Includes all of the codes for the document types for load-confirmed sales that will go through the meter
Other Metered Outgoings (Type OM)	Includes all document types for all other types of transactions that will go through the meter
Non-Metered Outgoings (Type NM)	Includes all document types for transactions that left the tank but did not go through the meter
Incomings (Type IN)	Identifies the document types to include in the incoming transactions
Outgoings (Type OT)	Identifies all document types to include in the outgoing transactions
Throughput Reconciliation (Type TR)	Identifies any documents for which you must complete throughput reconciliation before completing operational reconciliation

See Also

- *Working With User Defined Codes* in the *OneWorld Foundation Guide* for more information about UDCs

Setting Up System Next Numbers

When you enter a document, such as an invoice, a voucher, a work order, or a journal entry, you can assign a document number or let the Next Numbers program assign one. Next numbers is an automatic numbering feature. The Next Numbers program assigns numbers to documents using either or both of the following types of numbers:

- Standard next numbers. The system finds the next available number in the Next Numbers - Automatic table (F0002) and assigns that number to the document.
- Next numbers by company and fiscal year. The system finds the next available number by company and fiscal year, or by company only, in the Next Numbers by Company/Fiscal Year - Automatic table (F00021).

Next numbers work in conjunction with the data dictionary. Each data dictionary item that uses next numbers contains a next numbering index value that corresponds to the line number containing the next number value for that data item.

J.D. Edwards makes several important recommendations to set up next numbers. J.D. Edwards recommends that you:

- Do not change a next number. Changing the numbers can result in duplicates as well as the inability to locate previously added numbers. If you must change a next number, change it to a greater value only.
- Do not delete next number values. If you delete a next number value, you might get unexpected results.
- Do not change the sequence of the next numbers in the table. Each next number must remain on its current line because programs reference a specific line in the table. For example, in the General Accounting system, the next number for journal entries must be on the second line. .
- Do not use blank as a next number value.

You can have the system assign check digits for any set of standard next numbers. Check digits prevent errors caused by transposition during data entry. For example, activating check digits in the address book for suppliers prevents a voucher from being assigned to the wrong supplier if digits are transposed during voucher entry.

J.D. Edwards recommends that you use check digits for next numbers only if a transposition during data entry is likely to create errors.

Appendix

Unit of Measure Conversions

The following tables show typical measurement conversion. The information is not necessarily what is set up in your system, but it is useful for reference in setting up your own conversions.

To Convert	To Length	Multiply By
Meters	Yards	1.0936
	Feet	2.3808
	Inches	39.370
Yards	Meters	0.9144
Feet	Meters	0.3048
Inches	Centimeters	2.54
To Convert	To Weight	Multiply By
Long tons	Pounds (avoirdupois)	2240
	Short tons	1.12
	Metric tons (tonnes)	1.01605
Short tons	Pounds (avoirdupois)	2000
	Long tons	0.892857
	Metric tons (tonnes)	0.907185
Metric tons (tonnes)	Long tons	0.984206
	Short tons	1.10231
Pounds (avoirdupois)	Kilograms	0.453592
Kilograms	Pounds (avoirdupois)	2.20462

To Convert	To Volume & Capacity*	Multiply By
U.S. gallons	Cubic inches	231
	Cubic feet	0.133681
	Imperial gallons	0.832674
	U.S. barrels	0.0238095
	Liters	3.78541
U.S. barrels	U.S. gallons	42
	Cubic inches	9702
	Cubic feet	5.61458
	Imperial gallons	34.9723

	Liters	158.987
Imperial gallons	Cubic inches	277.42
	Cubic feet	0.160544
	U.S. gallons	1.20095
	U.S. barrels	0.0285941
	Liters	4.54596
Cubic feet	Imperial gallons	6.22883
	U.S. gallons	7.48052
	U.S. barrels	0.178108
	Liters	28.3169
	Cubic meters	0.0283169
Cubic inches	Imperial gallons	0.00360465
	U.S. gallons	0.0043290
	Liters	0.0163871
Liters	Cubic inches	61.0238
	Cubic feet	0.0353147
	Imperial gallons	0.219969
	U.S. gallons	0.264172
	U.S. barrels	0.00628981
Cubic meters	Imperial gallons	219.969
	U.S. gallons	264.172
	U.S. barrels	6.28981
	Cubic feet	35.3147

*These factors are only for conversion at the same temperature.