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About This Course
Course Description

QAD designed this course to cover the basics of preparing to implement the Inventory Control module of QAD Enterprise Applications. The course includes

- An introduction to the Inventory Control module
- An overview of key business issues
- Setting up the Inventory Control module
- Using the Inventory Control module
- Activities and exercises throughout the course let students practice key concepts and processes in the Inventory Control module

Note  Mirror accounting is covered in the Financial Training Guide. WIP Lot Trace is covered in the WIP Lot Trace Training Guide.

Course Objectives

By the end of this course students should learn how to:

- Analyze some key business decisions before setting up the Inventory Control module
- Set up and operate the Inventory Control module in QAD Enterprise Applications

Audience

- Implementation consultants and members of implementation teams
- Inventory Control Managers
- Key users

Prerequisites

- Familiarity with .NetUI user interface
- QAD Enterprise Applications Quick Start training course
- Knowledge of basic manufacturing principles is beneficial

Course Credit

This course is valid for 6 credit hours and is typically taught in one-half to one full day.

Virtual Environment Information

This guide applies to both the Standard Edition and the Enterprise Edition of QAD Enterprise Applications. Use the hands-on exercises in this book with the latest Standard Edition learning environment in the Training workspace. When prompted to log in, specify demo for user ID and qad for password.

Note  Users of Enterprise Edition should complete the exercises in the SE environment; the concepts are the same in both environments and can be applied to Enterprise Edition.
Additional Resources

If you encounter questions on QAD software that are not addressed in this book, several resources are available. The QAD corporate Web site provides product and company overviews. From the main site, you can access the QAD Learning or Support site and the QAD Document Library. Access to some portions of these sites depends on having a registered account.

http://www.qad.com/

QAD Learning Center

To view available training courses, locations, and materials, use the QAD Learning Center. Choose Education under the Services tab to access this resource. In the Learning Center, you can reserve a learning environment if you want to perform self-study and follow a training guide on your own.

QAD Document Library

To access release notes, user guides, training guides, and installation and conversion guides by product and release, visit the QAD Document Library. Choose Document Library under the Support tab. In the QAD Document Library, you can view HTML pages online, print specific pages, or download a PDF of an entire book.

To find a resource, you can use the navigation tree on the left or use a powerful cross-document search, which finds all documents with your search terms and lets you refine the search by book type, product suite or module, and date published.

QAD Support

Support also offers an array of tools depending on your company’s maintenance agreement with QAD. These include the Knowledgebase and QAD Forums, where you can post questions and search for topics of interest. To access these, choose Visit Online Support Center under the Support tab.
Chapter 1

Introduction
Course Introduction

Introduction

- Introduction to Inventory Control
- Business Considerations
- Set up Inventory Control
- Process Inventory in QAD Enterprise Applications
Inventory Control

- Materials are received into inventory
- Stock is issued to fulfill work orders
- Stock may also be transferred from one inventory location to another
- Stock is counted periodically to ensure that inventory records are accurate
Terminology

**ABC Analysis.** Classification of a group of items in decreasing order of annual dollar volume or other criteria.

- The A class usually represents 10% to 20% by number of items, and 50% to 70% by projected dollar volume.
- The B class usually represents about 20% by number of items, and 20% of the dollar volume.
- The C class contains 60% to 70% of the items and represents about 10% to 30% of the dollar volume.

The ABC principle states that effort and money can be saved through applying looser controls to the low-dollar-volume class items than will be applied to the high-dollar-volume class items. This is also known as Pareto's Distribution.

**Assay Percent.** Assay percent and grade can be important when allocating items. Specific formulations can require a minimum assay percentage or grade. Review these values prior to allocating or picking ingredients.

An assay is a test of the physical and chemical properties of a sample.

**Grades.** Grades are created by the sublabeling of items to identify their particular makeup and to separate one lot from other production lots of the same item. Graded products include raw materials, intermediates, or finished goods. Grades can determine the price charged for the finished product.
**Backflush.** Use backflush to report production activity on manufacturing work orders. Each time you use this transaction to report production quantities, the system does one or more of the following:

- Issues (backflushes) components to the operation at which you are reporting.
- Backflushes labor and burden to the reporting operation.
- Moves the quantity processed to the input queue of the subsequent operation.
- Receives completed end items into inventory when you report production at the final operation in the routing. At this time, it also updates the quantity completed and reduces the quantity open on the applicable work order.

**Cycle Count.** A cycle count records the number of items physically counted, compares that number with the system quantity-on-hand, and (optionally) updates quantity-on-hand to equal the number counted.

**Enterprise Material Transfer (EMT).** EMT is the automated translation of a sales order into a purchase order within a specific entity. It also includes the creation of sales orders in another entity. This process is common business practice among multinational companies.

**Entity.** The number of sets of financial statements produced by one database is determined by the number of entities set up. An independent unit for financial reporting purposes, an entity does the following:

- Generates a separate balance sheet and income statement.
- Plans budgets.
- Is assessed for taxes.

**Inventory Status.** Inventory status determines whether inventory balances are:

- Available for allocation.
- Considered by Material Requirements Planning (MRP).
- Allowed to go negative.

Inventory status also restricts particular transactions at specific locations. For example, you can restrict issues from an inspection location.

Item quantities received into inventory are automatically assigned an inventory status. You can assign a different inventory status to individual item quantities at a particular site or location, or item quantities in the same location, that are differentiated by:

- Unique lot
- Serial numbers
- Reference numbers

**Key Item.** A key item is an item for which there must be sufficient quantity-on-hand for a work order to be released and a picklist printed. Key items are critical items. Key items are typically difficult to obtain. They may have long lead times or may be in short supply. Only a few items should be designated as key items. For example, glass is a key item for a window manufacturer. If there is not enough glass available to fill an order, the order cannot be started.
Location. A location is a physical area where inventory is stored. Every item in inventory is associated with a location. A given item may be stored in multiple locations. Each location’s parameters identify what can be stored there and how that inventory can be used. Each time you perform an inventory transaction such as an issue, receipt, or transfer, you must specify both a site and location.

You can define the same location code for multiple sites. This is useful if you use an item at more than one site because you set up default locations in the item master rather than on individual item-site records.

Lot and Serial Numbers. If required, a lot number must be entered during issues and receipts. A lot number applies to the entire transaction quantity entered.

If serial numbers are required for an item, a unique serial number must be entered for each item during issues and receipts. For example, if you receive 10, you must enter 10 serial numbers. QAD Enterprise Applications maintains complete lot and serial number traceability.

Nettable. Nettable items are items that MRP and distribution requirements planning (DRP) count as part of quantity-on-hand.

Return Material Authorization (RMA). RMA is a transaction used to manage simple returns. It is an alternative to calls for tracking customer contact. RMA has the following aspects:

- Receipt of returned items for repair or replacement.
- Issue of replacement items.
- Documentation and billing of return activity.

RMA is generally used when engineer involvement is not required.

Shelf Life. Shelf life is typically defined for items that spoil or degrade over time. You can use shelf life to set the expiration date for inventory. Inventory that has expired does not appear on picklists as a quantity to be picked. QAD Enterprise Applications calculates an expiration date when an item is received into inventory by adding the number of days specified for shelf life to the receipt date.

Site. Sites are areas where inventory is manufactured or stored. For example:

- Off-site storage
- Distribution centers
- Warehouses
- Manufacturing facilities
- Any combination of the above

All inventory control and planning information in QAD Enterprise Applications is maintained by site, including:

- Inventory availability
- Manufacturing methods and costs
- Sales
- Purchases
- Manufacturing plans and orders
- Forecasts
Each site is associated with a specific general ledger (GL) entity, allowing complete financial results to be maintained and monitored by site, or by groups of sites. Usually, each site is split into multiple locations where the inventory is actually stored, so you may think of a site as a group of physical locations. For example:

- Stockrooms
- Inspection stations
- Shop floors

*Warehouse Management Systems.* Warehouse Management Systems are computer applications used in external warehouse systems that exchange data with QAD Enterprise Applications through the warehousing interface.
Inventory Flow

Manufacturers buy raw materials or components and store them until they are needed for manufacturing. Once products are made, they are often stored until they are needed to fill a sales order or work order. Items stored for these purposes are called inventory.

Inventory is controlled by:

- Issues (Inventory removed from a stocking location)
- Receipts (Inventory added to a stocking location)
- Transfers (Inventory removed from one location and added to another)
- Cycle Count Adjustments (On-hand inventory balance adjustments at a specific location for items selected for counting)
- Physical Inventory (Counting entire inventory and changing inventory balance)
- Lot and Serial Control
- Inventory Status Codes
- Shipping Groups

Most inventory transactions result from:

- Sales order allocations and shipments
- Purchase order receipts
- Work order issues and receipts

However, a few transactions, such as unplanned issues and receipts, are created in the Inventory Control module.

Questions? Visit community.qad.com
The Inventory Control module is used by the inventory staff to perform the basic inventory functions.
Course Objectives

- Identify some key business considerations before setting up Inventory Control in QAD Enterprise Applications
- Set up Inventory Control in QAD Enterprise Applications
- Process Inventory in QAD Enterprise Applications
Summary

- Introduction to Inventory Control
  - Business Considerations
  - Set up Inventory Control
  - Process Inventory in QAD Enterprise Applications
Chapter 2

Business Considerations
Business Considerations

- Business Considerations
- Set up Inventory Control
- Process Inventory in QAD Enterprise Applications
Business Considerations

- Databases and Domains
- Entities
- Costing Method - Standard or Average
- Number of Sites and Locations
- Cycle Count or Physical Inventory
- Inspect Received Materials
- Lot and Serial Numbers
- Warehousing - Bin Numbers
- Compliance Module
- Backward Exploded Receipts
Operational Structure

Domains

Database

A database is a logical collection of computer records. Separate databases are often used to deal with geographical limitations and security concerns. Within a database, security can be defined to prevent users from modifying or viewing information.

When a multiple database environment is established, you can use distributed functionality that allows planning and execution across the databases. Each user has a profile that determines which database, or databases, they can access.

Domains

Domains comprise business operations using a single base currency and chart of accounts. There may be multiple domains within a single database.

Every database must have one system domain, indicated by a domain type of SYSTEM. The initial system domain is created when the database is created. The system domain includes default data that is required to begin implementing QAD EA such as control program settings, rounding methods, default accounts, and generalized codes.
The system domain is used as a template for new domains. When you create a new domain associated with the current database, default data is copied from the system domain. Since the system domain is used as a template, you may want to add data to it or tailor defaults before creating new domains based on it. The system domain is typically not used for maintaining active transactions.

**Entities**

Entities are assigned to Domains and are unique businesses with financial reporting responsibility. Financial reports, earnings statements and balance sheets, are organized by entity. There may be multiple Entities in a Domain.

You must identify one entity as the primary entity for each domain in your database. This is done in entity maintenance in general ledger setup.

Sites are assigned to Entities and are logical subsets of the business usually associated with a physical location such as a manufacturing plant, a distribution facility, or a warehouse. There may be multiple sites at a single physical location for internal control purposes. There may be many sites assigned to an Entity.

The number of sets of financial statements produced by one database is determined by the number of entities you set up. An entity is an independent unit for financial reporting purposes that:

- Generates a separate balance sheet and income statement
- Plans budgets
- Is assessed for taxes
An Entity is a business unit with financial reporting responsibility. Balance sheets and income statements are organized by entity.

All GL transactions are posted by entity. The primary entity is the default entity for GL transactions. Primary entity is set up in Entity Maintenance in General Ledger setup. Default entity is set up in the Domain/Account Control.

Although there is no limit to the number of entities that can exist in a database, all information for one entity should be contained within a single database.

An entity can be comprised of a single facility (Plant A) or multiple facilities (Plant B and Warehouse), as shown in the figure above.
Two Costing Methods

Standard or Average Costing

Use either cost set at any site; however, only one cost set per site is designated as the general ledger cost set. QAD EA is usually a standard (also called general ledger or GL) cost system, although it can be used as an average cost system.

**Standard (GL) Cost Set**

Product line GL accounts are oriented to standard cost accounting.

- Values for these accounts default from Domain/Account Control

All inventory transactions for an item are recorded in the GL at a single cost, independent of price fluctuations. The difference between Standard and Actual is recorded as a variance.

**Average Cost Set**

Average costs are recalculated each time an item is received.

- Purchase order costs automatically update the current cost for inventory items. The calculation of the new current cost is based on the method selected in the Inventory Control
- Use Average Cost Method Maintenance to allocate costs to the Co-Products and By-Products of a base process
Why Consider Two Methods of Costing?

Normally, all inventory transactions for an item are recorded in the general ledger at a single cost, independent of price fluctuations. In general, standard costs are set once a year. Inventory is valued at standard (GL) cost.

Current costs are updated in one of three ways.

1. Average calculates a weighted average based on the old current cost for the item.
2. Last uses the last purchase order or work order cost for the item.
3. None indicates that costs are updated manually.

Average Costing Implications

Costs are updated using a simple weighted average calculation. For manufactured items, the labor, subcontract, and burden costs are updated when work-order receipt transactions are made and at Accounting Close.

Average Cost Calculation

\[
\frac{(\text{Quality on Hand} \times \text{Current Cost}) + (\text{New Quantity} \times \text{New Cost})}{\text{Quantity on Hand} + \text{New Quantity}}
\]

*Important*  Because of the way average costs are calculated upon receipt, timing and accuracy of transactions are critical.
Number of Sites and Locations

Sites and Locations Allow You To

Categorize locations by type. When an item is received or transferred, the system verifies that the type matches the location type associated with the item (such as VAT, FREEZER).

Make sure items with special storage requirements, such as temperature or humidity, are stored in acceptable areas.

Why Consider Number of Sites and Locations?

Sites are areas where inventory is manufactured or stored (normally entire physical production facilities). This is the default site for the item. The default location for an item is specified in Item Inventory Data Maintenance.

Setup Implications

1. Sites are used for planning, reporting, and costing.
   For each site the system must have a cost set, which needs to be maintained. Therefore, keep sites to a minimum.

2. Locations are where inventory is physically stored (for example, bins, floor space, vats, docks).
Allocations of items are made according to settings in Inventory Control and the inventory status of the locations.

The larger the number of locations, the more transactions are necessary to control inventory.

More locations give better control of master inventory. You may have bulk inventory in a warehouse, a weeks working stock in a local stock room and a days production quantity in a work cell. Ideally you would want three locations to know exactly how much was in each location.
Cycle Count and Physical Inventory

Cycle Count and Physical Inventory Allow You To
- Count inventory by site, location, item, lot number and serial number
- Update actual inventory balances

Only inventory can be counted. You cannot count items in work-in-process (WIP). The value of WIP can be audited using:
- Work Order Status Report
- Work Order Cost Report
- Work Order WIP Cost Report

Why Consider Cycle Count and Physical Inventory?

Cycle Count

Frequency is determined by item’s ABC Class. Cycle Count Worksheet Print determines how to manage the count.

Cycle counting lets you count select items on an on-going basis, focusing attention on items that are more likely to have errors.

Comments? Go to goo.gl/MfwKHm
Physical Inventory

Use physical inventory to conduct a count of items and products on hand. Counts are manually recorded with inventory tags. Tag counts are entered to update live inventory balances. Physical inventory lets you count everything once a year (perpetual).

Setup Implications

Proper procedures in the physical control of inventory are necessary for accurate materials planning. If the balances on hand are not correct, items may be ordered before they are needed or may not be ordered when they are needed.

Cycle counts are preferable because they allow timely detection and correction of errors and are often more accurate than physical inventory counting.

Physical inventory usually allows no time to resolve problems associated with an incorrect balance.
Incoming Inspection

Inspect Received Materials

Inspecting Received Materials Allows You To

Specify the location to which items that require inspection are automatically routed upon receipt. Once inspected, materials are transferred to their appropriate sites/locations. Inspection required is specified by item in Item Planning Maintenance (1.4.7) or Item-Site Planning Maintenance (1.4.17).

Why Consider Inspecting Received Materials?

Inspection lead time uses the Shop Calendar during the calculation process.

- If Inspect is Yes, items are received to the default inspection location in Purchasing Control (5.24), which is used to calculate need and due dates.
- If Inspect is No, the receiving location defaults to the item master location and the need date is set to the due date.

Setup Implications

Inspection lead time is calculated only if the item has Inspect set to Yes in Item Planning Maintenance or Item-Site Planning Maintenance.

Note Quality Order Maintenance (19.7) may be used to record the results of incoming inspections.
Lot and Serial Numbers

Lot and Serial Numbers Allow You To

Track items through the system as items enter inventory and are worked on. One tracking method is to assign a lot and serial number to the item and then require the lot and serial number each time the item is moved or processed.

Why Consider Lot/Serial Numbers?

In certain industries, lot traceability is required by the government for health and safety reasons. Others use it for quality control and defect tracking.

Because each use of an item is tracked in the programs on the Transaction History Menu, it is easy to see when it was received, what happened to it, and who purchased it.

Setup Implications

With lot control, 10 boxes of ink cartridges bought from one supplier can be distinct from 15 boxes from a second supplier, both in inventory and in production.
Lot group in Item Inventory Data Maintenance (1.4.5) determines the format used when assigning automatic lot numbers.

1. If left blank and you are assigning automatic lot numbers with Auto Lot Numbers set to Yes:
   a. Work orders use the work order ID as the lot number, and
   b. Purchase orders are not assigned lot numbers.

2. If Allocate Single Lot is Yes, the picking logic must allocate these items from a single lot, ignoring smaller lots that could partially fill the allocation.

*Important* Lot and serial numbers may significantly increase all transaction activity associated with an item. However, by dealing with inventory in smaller lots accuracy is greatly improved and bar code makes increased activity easy.
Warehouse Management Systems

Warehouse Management Systems Allow You To

Process import transactions from the warehouse system. The warehouse system creates import transactions that send all inventory receipts, shipments and issues, adjustments, and dispositions processed in the warehouse to QAD Enterprise EA.

Why Consider Warehousing?

The warehousing interface treats your warehouse as a satellite storage area within a QAD site. You can transfer data between an external warehouse and QAD EA. You can also create various export transactions that extract information on items, customers, suppliers, and orders of all kinds for exportation to the externally controlled warehouse.

Setup Implications

The warehouse is considered an extension of the QAD site with the QAD system:

• Managing its supply and demand orders
• Recording its summary inventory balances
• Sending it item, trading partner, and order information

In turn, the warehouse system sends most of its inventory transactions back to the QAD system.
Customized programs may be needed to accomplish an interface with some third-party warehouse packages.
Regulatory Attributes

Regulatory Attributes Module

Inventory Management and Transaction Management

- Batch Control
- Lot Control
- Work Order Control
- Controlled Substance

Note  This module is named Compliance module in QAD SE systems; it is named Regulatory Attributes in QAD EE.

Regulatory Attribute Module Allows You To:

Provide batch control, lot control, work order control, and controlled substance fields. Lot Group codes can be automatically assigned.

Why Consider Regulatory Attributes?

Batch Control

Assign batch numbers to work orders for traceability and reporting. Enter batch numbers as you create work orders or add them to existing work orders.

Lot Control

- Provide control enforcement of unique lot numbers
- Define lot groups for assigning lot numbers
- Update inventory attributes for multiple lots
- Restrict receipts to a single lot

Questions? Visit community.qad.com
• Generate reports with lot numbers as an index
• Enter supplier lot numbers and manage expired inventory
• Work with number range management

Multi-Lot Inventory

Change assay percentage, grade, status, and expiration date of inventory items based on lot and serial numbers.

Work Order Control

Restrict component items issued to work orders unless they are on the bill of material (BOM) or they are valid substitute items. There is a similar control for receipts of joint product items.

Inventory Attributes

Enter inventory attributes information on work orders to increase the control and tracking of material as it progresses through manufacturing into inventory.
• Use batch and other work order processes to meet business requirements
• Assign default inventory attributes and change existing attributes by:
  • Assay percentage
  • Grade
  • Expiration date
  • Inventory status

Controlled Substances

• Maintain a list of regulatory agencies
• Link a regulatory or control number to an address code or a site
• Associate a regulatory or control number to an inventory item
• Record GL and individual license information for exports

**Setup Implications**

Each feature can be used in conjunction with or independent of the other features.
Backward Exploded Receipts

Backward exploded receipts are often used in kitting or simple assembly operations. There is no need to set up a work order.

Recording the receipt of the finished item indicates that you used a certain group of materials
Review

- Processes and Procedures
- Reporting Requirements
- Customer Expectations
- Product Configuration
Summary

✓ Introduction to Inventory Control
✓ Business Considerations
  • Set up Inventory Control
  • Process Inventory in QAD Enterprise Applications
Set Up Inventory Control

- Introduction to Inventory Control
- Business Considerations
- Set up Inventory Control
- Process Inventory in QAD Enterprise Applications
Inventory Control Setup

A suggested setup sequence for Inventory Control is illustrated above. This sequence is based on information that flows from one program to another and prerequisites.

Reading the Training flow:

- The current step is highlighted
- Optional steps are marked (optional)
Entities

Inventory Control Setup

- Domains
- **Entities**
- Inventory Status Codes
- Sites
- Locations
- Regulatory Attributes (optional)
- Inventory Control
- Items
- Item Inventory Data
- Inventory Accounts
- Master Comments (optional)
- Load Inventory Balances
An entity is a business that publishes financial statements and files tax returns. Entities allow you to generate separate financial statements (balance sheet, income statement).

You must specify one entity as the primary entity. This is the GL entity when you first log onto the system.
Inventory Status Codes

The system uses inventory status codes to determine if the inventory balance at a site or location is:

• Available for sales order and work order allocations. Allocations are used to reserve inventory and assist in picking inventory to be shipped or issued
• Nettable for MRP calculations
• Issued even if the site or location has a zero or negative inventory balance
• Not available for particular kinds of inventory transactions. For example, material located in scrap locations should not be used for sales order issues
Inventory Status Code Maintenance

Use Inventory Status Code Maintenance (1.1.1) to create and modify inventory status codes.

- Use Site Maintenance (1.1.13) to assign default inventory status codes to sites
- Assign inventory status codes to locations using Location Maintenance (1.1.18)
- Optionally assign default inventory status codes for purchase order or work order receipts to individual items using one of the following:
  - Item Master Maintenance (1.4.1)
  - Item Inventory Data Maintenance (1.4.5)
  - Item-Site Inventory Data Maintenance (1.4.15)

At least one inventory status code must be defined before you can enter site and item combinations. Set up an initial inventory status code (good or ok might be examples) that is available and nettable. Then set up other inventory status codes as needed. Sites, locations and items in inventory are required to have an inventory status code.

While it is a common practice to have a default code of blank, it is not recommended. Blank code fields create ambiguous situations. When printing inventory reports using the Inventory Status Code, blank does not work in the selection criteria.

*Status Code.* This code identifies the status of inventory in a specific site and location with a specific lot/serial number (if lot/serial controlled), and lot reference. Inventory status codes can restrict particular transactions at specific locations. For example, you can restrict issues from an inspection location.
Available. This field indicates whether inventory balances with this status code are available for allocations to sales orders and work orders. This does not affect the available-to-promise calculations.

If this field is Yes, on-hand inventory balances with this status are considered to be available. When allocating inventory, the system calculates the quantity available to allocate as the total quantity on-hand at all inventory locations flagged Available Yes. Any locations flagged Available No are not considered by this calculation.

Most inventory will be assigned available status codes.

Unavailable inventory status codes identify inventory not to be shipped to customers or used in the manufacturing process at the current time, such as inventory waiting for inspection or defective material to be reworked.

Nettable. This field indicates whether MRP considers inventory balances with this status code as quantity-on-hand.

During the planning process, MRP calculates the net quantity on-hand as the sum of the quantity in all locations flagged Nettable Yes. Locations flagged Nettable No are not considered by this calculation.

Most inventory will be assigned nettable status codes.

Non-nettable inventory status codes identify inventory not to be shipped to customers or used in the manufacturing process because it is defective or reserved for some other use.

For multi-site implementations, Nettable must be set to No for in-transit locations. Otherwise, MRP will use supply in that location twice, once from the scheduled receipt, then from the nettable quantity in the location.

Set up inspection locations as nettable because you do not want MRP to plan to order more when you already have inventory on-hand. Inspection locations are controlled by restricting issue transactions.

Overissue. This field indicates whether inventory balances with this status code are allowed to go negative.

If Yes, then inventory can be issued from a location even if that issue results in a negative balance on hand: with only 5 items in stock at a particular location, the system would allow you to issue a quantity of 7, resulting in an on-hand balance of -2. To prevent this, set the Overissue field to No. This stops overissues in all inventory transactions.

However, in the case of two or more users simultaneously committing transactions to ship the same stock, it is possible that due to this close timing the balance will go negative despite a No setting. If the inventory is physically available, the operator should be able to record the issue transaction, even if the data entry for inventory receipt is delayed, as often happens when information is batched for data entry.

In a well-controlled stockroom, most items can safely be allowed overissues. As transactions are processed, balances may temporarily be driven negative, but will be resolved when all transactions are entered.

However, in a regulatory environment or where items are lot/serial controlled, you may want to set the Overissue field to No and develop data entry procedures that ensure the timely entry of inventory transactions.

Overissue should always be set to No when using Average Costing.
Restricted Transaction

Enter a code identifying the restricted inventory transactions for on-hand balances with this inventory status code. A complete list of available transaction type codes is available with the lookup icon on the restricted transaction field.

When you process an inventory transaction, the system checks the inventory status of the affected item and site or location to verify that the transaction is not restricted. If it is, an error message displays and you cannot proceed.

For example, you can create an inventory status that restricts the ISS-WO transaction and assign it to an inspection location. If a user tries to issue a component to a work order from this location, an error displays. To proceed, you must change the location status or transfer the item to another location.

When you define inventory statuses for inspection and scrap locations, restrict both ISS-WO and ISS-SO. This prevents items in these locations from being issued to work orders or shipped to customers. ISS-SO restricts both sales order shipments and RMA issues. Use ISS-RMA to restrict RMA receipts. You typically allow ISS-PRV and ISS-TR for items in inspection, since you want to be able to return them to the supplier or transfer them to a different location.

Some transactions are required by the system. You cannot prevent them from occurring, even if you list them as restricted.
A status code of MRB (material review board) means the material put in a location with this status code is being reviewed for its fitness for use. Set Available (for allocations) to No and Nettable (for MRP) to No.

If material is not fit for use, you do not want to book an order for it, ship it, or issue it to a work order, so the restricted transactions would be:

- ORD-SO Sales Order Booking
- ISS-SO Sales Order Shipments
- ISS-WO Work Order Issue or Backflush
### Key Inventory Transaction Types

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYC-CNT</td>
<td>Cycle Count Adjustment</td>
</tr>
<tr>
<td>CYC-ERR</td>
<td>Cycle Count Error</td>
</tr>
<tr>
<td>CYC-RCNT</td>
<td>Cycle Count Recount</td>
</tr>
<tr>
<td>ISS-CHL/RCT-CHL</td>
<td>Change Inventory Detail</td>
</tr>
<tr>
<td>ISS-DO</td>
<td>Distribution Order Shipment</td>
</tr>
<tr>
<td>ISS-FAS</td>
<td>Configured Item Component Issue</td>
</tr>
<tr>
<td>ISS-PRV</td>
<td>Purchase Return to Supplier</td>
</tr>
<tr>
<td>ISS-RV</td>
<td>Inventory Return to Supplier</td>
</tr>
<tr>
<td>ISS-EO</td>
<td>Sales Order Shipment</td>
</tr>
<tr>
<td>ISS-TR</td>
<td>Inventory Transfer</td>
</tr>
<tr>
<td>ISS-UNP</td>
<td>Inventory Unplanned Issue</td>
</tr>
<tr>
<td>ISS-WO</td>
<td>Work Order Issue/Component Backflush</td>
</tr>
<tr>
<td>ORD-PO</td>
<td>Purchase Order Booking</td>
</tr>
<tr>
<td>ORD-SO</td>
<td>Sales Order Booking</td>
</tr>
<tr>
<td>RCT-CHL</td>
<td>Inventory Detail Maintenance Location Change Receipt</td>
</tr>
<tr>
<td>RCT-DO</td>
<td>Distribution Order Receipt</td>
</tr>
<tr>
<td>RCT-FAS</td>
<td>Configured Product Receipt</td>
</tr>
<tr>
<td>RCT-PO</td>
<td>Purchase Order Receipt</td>
</tr>
<tr>
<td>RCT-RS</td>
<td>Inventory Return to Stock</td>
</tr>
<tr>
<td>RCT-SOR</td>
<td>Inventory Sales Order Return</td>
</tr>
<tr>
<td>RCT-TR</td>
<td>Inventory Transfer Receipt</td>
</tr>
<tr>
<td>RCT-UNP</td>
<td>Inventory Unplanned Receipt</td>
</tr>
<tr>
<td>RCT-WO</td>
<td>Work Order Receipt, Repetitive Receipt</td>
</tr>
<tr>
<td>RUCT-WO</td>
<td>Work Order Reject</td>
</tr>
<tr>
<td>TAG-CNT</td>
<td>Physical Inventory Update</td>
</tr>
<tr>
<td>WIP-ADJ</td>
<td>Work-In-Process Adjustment</td>
</tr>
</tbody>
</table>

This partial list of transaction types contains the types usually associated with inventory movement.
Sites

Inventory Control Setup

- Domains
- Entities
- Inventory Status Codes
- Sites
- Locations
- Regulatory Attributes (optional)
- Inventory Control
- Items
- Item Inventory Data
- Inventory Accounts
- Master Comments (optional)
- Load Inventory Balances

The site code identifies a specific warehouse or group of buildings at the same physical location. Inventory functions are processed by site, including:

- Inventory
- Forecasts and production schedules
- Production methods and costs
- Material and capacity plans
- Reports

Most functions work within one site. For example, manufacturing orders expect to find all components at the same site, and MRP or DRP calculates requirements one site at a time. A few functions deal with multiple sites such as multi-site purchase or sales orders, distribution orders, and distributed inventory inquiries. Site codes must be unique across all databases.

At each site, you can store inventory at multiple locations. A location defines an area, such as a shelf, bin, or tank within a site. Because inventory locations are a subset of site, the same location codes can be used for different sites. By setting the Automatic Locations field in Site Maintenance (1.1.13) to Yes, the system can create locations automatically as it processes receipts. Or you can define them manually in Location Maintenance (1.1.18).

Each site is assigned to a GL entity for financial reporting. You can have more than one site for each entity, and all locations within a site belong to the same entity.
Entity. This field indicates the GL entity tracking the financial aspects of activities at this site. The entity to use on a transaction is determined based on site. Any transaction may reference more than one site, and possibly more than one entity. Intercompany transfer transactions are automatically created when more than one entity is involved.

Example You have two sites (site 1000 and 2000) each at different companies (entity 1 and entity 2). If you have a work order at site 1000 and issue inventory from site 1000 to that work order, the resulting GL transaction only affects entity 1 (crediting inventory and debiting WIP).

Default Inventory Status. The inventory status code associated with a site sets the default for all locations within it. When inventory is received in a location, it takes on the inventory status of the location. Use Inventory Detail Maintenance to change the inventory status code for an individual item once it is in a location.

Automatic Locations. You can control whether new inventory locations can be added automatically during an inventory transaction. If this field is No, then new locations must be set up using Location Maintenance (1.1.18).

Automatically adding locations is handy, but can get you into trouble because of typographical errors, especially if you allow overissues. For example, if you receive 100 units of an item into location STOCK, the system adds a new location record for STOCK.
If you receive an additional 50 units of the same item but accidentally enter the location STOKC, the system displays a warning “Location does not exist” and continues by adding a new location for STOKC. If you later issue 150 units from STOCK, and overissues are permitted, you will end up with a quantity of -50 in STOCK and +50 in STOKC.

It is recommended that Automatic locations should always be set to No. If you have complex location identification schemes, consider using the lot reference field to specify the sub-location, such as the:

- Row
- Shelf
- Bin
- Pallet
- Spool

**EMT Supplier.** This field in Site Maintenance (1.1.13) is used in the EMT order processing environment and specifies the default supplier for this site. If left blank, memo items will be created as non-EMT memo items. When a valid supplier is specified, memo items will be created as EMT memo items.

The default supplier must exist in Supplier Maintenance (2.3.1). The default handler will not accept a blank entry in this field until it has checked the last element in the sequence and found no valid default supplier.

An enhancement to EMT supports the handling of orders across multiple levels within an organization. This functionality is called multi-level EMT.

**External Supplier.** When you are using the direct allocation feature of EMT, specify whether this site corresponds to a secondary business unit (SBU) in an external, connected database.

With direct allocation, the primary business unit (PBU) can make a special, temporary allocation of an EMT sales order or material order line item in the SBU’s database by changing the line-item site to one that corresponds to the SBU’s connected database. When the SBU imports the PBU’s EMT purchase order to create a secondary sales order, the system automatically converts this temporary allocation to a general allocation.

- If this field is No, it indicates that this is an internal supply site.
- If this field is Yes, this site corresponds to an SBU in the connected external database specified in the Database field. The PBU can directly allocate the SBU’s inventory.

**Transfer Variance Account.** This is the GL account code normally used to track cost variances on inventory transfers between two sites.

Inventory activity typically occurs at the site where the order is processed, known as the primary site. However, in a multi-site environment, you can ship, receive, or issue inventory from a different site. If the other site has different costs for the item, a variance occurs.

This variance is posted to the Transfer Variance account. If the two sites are in different entities, an intercompany transaction may also be posted. The system automatically updates costs at both the central and remote sites.
Locations identify areas of a site where inventory is stored. A location defines an area, such as a shelf, bin, or tank within a site. Each location's parameters identify what can be stored there and how that inventory can be used. The same location codes can be used for different sites.

Every inventory transaction must have a site and location. Both default from Item Master Maintenance (1.4.1).
Location Maintenance

**Inventory Status.** The usual status of inventory held in this location. This status defaults into transactions for this location and may be identified. See “Inventory Status Code Maintenance” on page 45.

**Project.** Optionally, specify a GL project code to associate with this location. When Verify GL Accounts is Yes in Domain/Account Control, this field is validated against GL project codes.

If you do not use the Project Realization Management (PRM) module, this field is for reference only.

When you do use PRM, this field identifies a PRM project location. For a project location, the GL project code in this field must have a corresponding PRM project with the same identifier.

**Permanent.** If this field is Yes, the location is permanent. It is retained even if the on-hand balance is zero. When a location is defined as permanent, all location details are maintained on the system until they are deleted using the Zero Balance Delete/Archive.

If this field is No the location is temporary. If you define a location as temporary, the system automatically deletes inventory detail records when the location’s balance falls to zero.

The use of temporary locations helps to keep inventory reports at a reasonable length, particularly when there are lot and serial controlled items with zero balances.

Permanent inventory locations may be desirable when items have fixed or designated stocking location. Even if the inventory balance falls to zero, you want to see that on reports and inquiries.
Type. Locations are categorized by type and each item is assigned to a specific type of location.

When the item is received or transferred, the system verifies that the type of the location that the item is being received into matches the location type associated with the item. If it does not, an error displays and the transaction may not be processed.

The code identifying the type of location is useful for items with special storage requirements, such as temperature or humidity. The location type can flag this and comments describe the exact requirements.

Single Item. Indicates whether more than one item or product may be stored in this location.

Set this field to Yes to prevent receipt of more than one item number into a location.

This field is checked for positive receipt, negative issue, and cycle count adjustment transactions. It is not checked when counting tags or updating inventory balances using Physical Inventory.

Single Lot/Ref. Indicates whether more than one lot/ref number of the same item may be stored in this location.

Set this field to Yes to prevent receipt of more than one lot/serial number into a location.

This field is checked for positive receipt, negative issue, and cycle count adjustment transactions. It is not checked when counting tags or updating inventory balances using Physical Inventory.

Reserved Locations. Used with customer consigned inventories. If checked “yes,” another frame appears to enter one or more customer ship-to addresses.

Transfer Ownership. Used with supplier consigned inventories. If supplier consignment inventories are active in Supplier Consignment Control this field determines when transfer of ownership occurs.

Capacity. The capacity of an inventory storage location is expressed in terms of the capacity unit of measure.

This field is for reference only, and may appear on some selected reports and inquiries.

Unit of Measure (UM). The unit of measure in which the location capacity is expressed.

This field is for reference only and may appear on some selected reports and inquiries.

Physical Address. The address code of this location. Used to generate shippers for transfers between locations that are physically separated.
Regulatory Attributes

If Regulatory Attributes (Compliance in SE) is used, set up the lot control information before setting up the item numbers.

Regulatory Attributes affects receipts, issues, and transfers.
Use the Regulatory Attributes module to ensure manufacturing practices comply with government regulations and with international agreements, such as the following:

- Food and Drug Administration (FDA)
  - Current Good Manufacturing Practices
- North American Free Trade Agreement (NAFTA)
- General Agreement on Tariffs and Trade (GATT)
Inventory Control

Inventory Control (3.24) sets count tolerances, establishes accounting procedures, and defines picking logic. Settings in this program enable the system to:

- Identify inventory imbalance
- Update item current cost
- Generate GL transactions
- Prioritize item picking
Inventory Count Parameters

**Issue Days.** The number of calendar days before expiration that an item with limited shelf life can be picked or issued. Shelf life is usually only defined for items that deteriorate over time. Shelf life automatically sets the expiration date for inventory. The system adds the number of days shelf life to the receipt date. This can be changed manually as needed. Inventory that has expired (or will expire within issue days) does not appear on picklists as a quantity to be picked.

**Item Tolerances.** Tolerances are set up by ABC class. This allows a greater degree of control over class A and B items than others.

Setting tolerances based on annual usage further refines this by putting tolerance into perspective with the amount of use of an item.

Cycle Counting and Physical Inventory functions use this whenever a count is entered that is different than the quantity-on-hand recorded in the system.

Error tolerance is calculated and used to determine whether the entered count should be accepted or flagged as an error. Both percentage and amount tolerance is checked. The error must be within both tolerances for it to be accepted.

If the tolerance method is:
- Q (QOH), item tolerances are calculated as a percentage of quantity-on-hand.
- U (Usage), item tolerances are calculated as a percentage of annual usage.

Value (currency) tolerance is always checked.
Note  In QAD Enterprise Edition, financial control settings are updated separately from operational settings in Inventory Accounting Control (36.9.2). This supports detailed segregation of duties assigned with role-based security. In QAD Standard Edition, all control settings are updated in Inventory Control.

1  How current cost is calculated

Current Cost. Specify the method to use for updating current material, labor, and burden costs. When you have the Cost Management module (Menu 30), this is the default update method for all sites that do not have site-specific cost sets defined in Cost Set to Site Assignment (30.9). When you do not use Cost Management, this setting applies to all sites in the system.

Valid values are:

- Average (default): Current costs are updated during item receipts and other inventory-related activities using a simple weighted-average calculation
- Last: Each item’s current cost is equal to the unit cost from the last receipt or inventory update.
- None: The system does not automatically update current costs. They must be maintained

2  Fold-in or roll-up costs for manufactured items

Sum LL Costs Into Matl Cost. Usually this field is set to No. It specifies how lower-level costs are posted to Cost of Goods Sold. Usually this field is set to No.
However, in some companies, the material cost for an end item is considered to include all costs associated with purchasing or manufacturing components, as well as any direct material costs. Then this field is set to Yes.

If this field is No, lower-level costs are added to this-level costs for each cost component and the total posted to Cost of Goods Sold.

For example, the total material cost (this-level plus lower-level) is posted to Cost of Goods–Material, the total labor cost is posted to Cost of Goods–Labor, and so on for Cost of Goods–Burden, Overhead, and Subcontract.

If this field is Yes, all lower-level costs are summarized into Cost of Goods–Material. Only this-level costs are posted to Cost of Goods–Labor, Burden, Overhead, and Subcontract.

This field does not affect the way costs are calculated or stored in cost sets.

3 Should current cost be modified during Accounts Payable activities

*Current Cost from AP.* This field indicates whether current cost should be affected by AP Rate Variances calculated in Accounts Payable.

If this field is Yes, current material cost is updated to reflect AP Rate Variances. These are variances between the supplier invoice cost and the purchase order cost.

If this field is No, these price variances are not reflected in current cost.

4 Create GL transactions from inventory activity

*Create GL Transactions.* This field indicates if general ledger (GL) transactions are to be created by inventory activities.

- If this field is set to Yes, all inventory issues, receipts, count adjustments, and transfers will create a GL transaction reflecting the change in inventory asset balances. In addition, any transactions that affect work-in-process inventory will create GL transactions, including work order issues and receipts. Companies who do perpetual inventory accounting should set this field to Yes, taking advantage of the automatic journal transactions created by QAD Enterprise Applications.

- If this field is set to No, GL transactions will not be created. Companies using periodic inventory accounting normally set this field to No.

With periodic accounting, the accountant manually calculates Ending Inventory based on Beginning Inventory plus Purchases less Cost of Goods Sold. Manual journal entries must be made to post the Purchases and Cost of Goods Sold amounts, because these will not be posted automatically by the system.

This field does not impact Memo item transactions. These do not create GL transactions regardless of this field.

Another alternative is to allow QAD Enterprise Applications to create the journal transactions but not to post them. This is useful for creating manual journal entries under periodic accounting, or if you are using an external general ledger system. GL transactions can be printed and then deleted using the GL Transactions Report / Delete function on the Manager Functions menu.

*Transfer Clearing Acct.* Enter the GL account code used to track transfers within a site or between sites in the same entity. Transfers between sites in different entities are tracked using the Intercompany Transfer account. If this account is blank, the Purchases account of the item product line is used.
Account code is one component of an account number defined in GL setup functions. Other components of an account number are sub-account, cost center, and project. Project codes are not available for all GL transactions. Each component you enter must be valid on its own and in combination with other account number components.

**Note** You can enter an allocation code, which represents a set of accounts, in any account field. During GL transaction post, the system automatically divides transaction amounts among the set of accounts, based on percentages defined in Allocation Code Maintenance.

**5** Determines how inventory transactions are created

*Summarized Journal.* All inventory transactions normally create GL journal transactions. These may be created in detail, with one general ledger transaction for each inventory transaction, or in summary by day.

Summarized Journal is Yes creates summarized journal transactions by day; generating just one transaction for each entity, account, sub-account, cost center, and project combination used. No creates detailed transactions.

The AR amount of the transaction is always summarized for posting regardless of how you set this field.

When you first implement QAD Enterprise Applications, we recommend you create detailed journal entries. You can verify that each transaction is being processed correctly with the right account numbers, and can identify any mistakes.

Once you feel confident that entries are being correctly made, you can switch to a summarized journal that takes less space and is easier to handle in the GL. Greater detail is always available by printing transaction registers in the original module.

If you have lots of disk space, you may want to consider posting in detail. This can make the GL Account Inquiry with Drill-Down extremely powerful, allowing you to review any GL transaction and drill back to the individual inventory transaction that created it.

*Journal Reference Method.* This field controls the summarization method when field Summarized Journal (icc_gl_sum) is set to Yes.

- Method 0 generates one summarized journal transaction for each combination of date, entity, account, sub-account, cost center, and project. Method 10 generates one summarized journal transaction for each active session.
- Setting Summarized Journal to Yes creates summarized journal transactions by day; generating just one transaction for each entity, account, sub-account, cost center, and project combination used.
- When Summarized Journal is No, this field has no effect, but must be zero.
Items

Inventory Control Setup
- Domains
- Entities
- Inventory Status Codes
- Sites
- Locations
- Regulatory Attributes (optional)
- Inventory Control
- Items
  - Item Inventory Data
  - Inventory Accounts
  - Master Comments (optional)
  - Load Inventory Balances

Use the transactions in menu number 1.4 to set up and maintain item records.

You create item records for items and products stored in inventory and/or planned by MRP or DRP. The item master data contains records for all items, regardless of site. Item records contain information used throughout QAD Enterprise Applications.

You must create an item record/number for every inventory item.
Inventory control is responsible for the security, movement, accuracy, and in some cases the allocation of inventory.

Every item has inventory control information associated with it used to track and control the movement of the item. For example, if an item has an expiration date, the system does not issue the item after that date.

You can make sure that codes are entered consistently by entering the allowed codes into Generalized Codes Maintenance (36.2.13). The system verifies entered codes against these predefined values, preventing incorrect codes from being entered.
### Item Inventory Data Maintenance

**ABC Analysis.** Enter a code classifying and ranking this item. This field is validated against predefined values entered in Generalized Codes Maintenance (36.2.13) for field pt_abc, if any.

ABC classification codes determine the cycle count frequency and the error tolerance allowed for each item. ABC class can also determine how an item is managed.

Class A items often require tighter physical control, such as a locked stocking area, and tighter planning parameters, as well as more frequent cycle counts.

You can generate some reports, such as the Inventory Valuation Report, for ranges of ABC classes.

The value entered in Item Master Maintenance is used as the default for all sites. You can set up site-specific values in Item-Site Inventory Data Maintenance (1.4.16).

You can use Item ABC Status Report/Update (1.5.9 or 3.6.3; in Enterprise Edition, the enhanced .NET UI version is available at 1.5.32 and 3.6.25) to calculate ABC codes automatically based on annual item usage amounts.

The default percentages are:

- The top 20% are given class A
- The next 30% are given class B
- The rest are class C

However, you can adjust these percentages as needed.
Any quantity below C is assigned a blank ABC code. For example, when A is 10\%, B is 20\%, and C is 30\%, the remaining 40\% is set to blank. You can also classify items manually. You might do this for an item that has low use but is expensive or theft-prone.

**Note** When you first implement the system, load ABC classes either from the old system or manually. The Item ABC Status Report/Update or produces meaningful results only when it analyzes at least six-month’s data.

While you can assign other class codes, Item ABC Status Report/Update only reports and updates items with a class of A, B, C, or blank. Be careful not to assign a non-blank and non-ABC code to any item that may become an A, B, or C item.

Assign any non-inventory items such as configured products, pseudo items, or planning parts a different ABC class.

ABC analysis is based on Pareto’s law, which says that in any group of items to be controlled, a small percentage accounts for the largest percentage of the total effect. This is also known as the 80/20 rule, which says that 20\% of the items have 80\% of the effect.

In inventory management, 20\% of the items generally hold 80\% of the inventory value. Usually this value is monetary, but it can also include:

- Usage
- Lead time
- Scarcity
- Shelf life

Value can be any factor that makes this item more important than the average item.
Item ABC Status Report/Update

The system sets the classification of inventory items when you run the Item ABC Status Report/Update (1.5.9). The calculation is based on annual usage, either sales or issues, and cost or gross profit.

The Item ABC Status Report/Update identifies the item’s relative importance and how tightly controlled it should be. More important A items are cycle counted more often and more carefully than C items. Count frequencies and error tolerances are identified by ABC Class. Normally ABC classifications are reviewed and updated at least once a year.

You can choose different methods of classification for different product lines. For example, the top 50% of the items by gross profit of sales may be class A in one product line, but only the top 20% may be class A in another product line. After the ABC analysis is run, you may want to change the system suggestions for classification for some items. A key $0.10 item that takes six months to buy and a $100 item may both be class A items.

Only items with a class of A, B, C, or blank are reported and updated by the Report/Update. Items you assign to any other class are not included. Do not apply a non-blank and non-ABC code to any item that may ever become A, B, or C items. Assign a different ABC class to any non-inventory items, such as warranties, configured products, pseudo items, planning parts.

**Important** Item ABC Status Report/Update does not update Item Master Maintenance or Item Inventory Data Maintenance, **but does update** Item-Site Inventory Data Maintenance. Make manual adjustments in Item-Site Inventory Data Maintenance.
Lot/Serial Control. L for lot control S for Serial Control blank for no control.

Site. The default site code for this item. Displays in the site code field on transactions and should be the site that will generate the most transactions.

Location. The default location code for this item. Displays in the location code field on transactions and should be the location that will generate the most transactions.

Location Type. The location type where this item should be stored, such as tank, silo, freezer. It is matched against location type for the inventory location the item is being received or transferred into.

Auto Lot Numbers. Should the system assign lot numbers automatically, check for yes. Only valid if Lot Control is L. For work orders they system puts the work order ID number in the Lot Number field upon receipt into an inventory location. Not available for purchase items.

Lot Group. If the Regulatory Attributes Module is in use Lot Group Maintenance may be used to create configured lot numbers with leading or trailing characters, defined sequence length and beginning number. Numerous lot group formats may be defined. This field on the item defines which format will be used. The lot number is assigned at inventory receipt and is available for both manufactured and purchased items.

Average Interval. The system maintains an average issues per day value for all items. This field determines how many days of issues should be used in the calculation.
**Cycle Count Interval.** How often should this item be cycle counted? Normally reset by the ABC Status Report/Update based on the items ABC code.

**Self Life.** Number of days from receipt before item expires or becomes questionable. This number of days is added to the receipt date to determine the expire date, after which the item cannot be allocated or issued.

**Allocate Single Lot:** For Lot Control items only, requires sale order and work order issues of this item be from a single lot. Can be over ridden with manually allocations.

**Key Item:** If yes, prevents release of a work order if there is insufficient quantity of a key item.

**PO Receipt Status.** For purchased items sets the default status upon receipt. The Active check box turns this function on or off.

**WO Receipt Status:** For manufactured items sets the default status upon receipt. The Active check box turns this function on or off.

**Memo Order Type.** Memo items do not generate inventory transactions. Items not defined in the Item Master placed on a sales or work order have their line type set to M for memo. You may have items set up in Item Master Maintenance that are memo items, such as sales literature, use this field to code the different types of memo items you create Item Master records for.
Inventory Accounts

Use Inventory Account Maintenance (1.2.13) to assign different GL accounts to combinations of product line, site, and location.

Inventory Account Maintenance (1.2.13) lets you separately track product lines for multiple sites or multiple locations within a site. For example, you may want to track inventory held in a rework location separately from finished goods.
Inventory Account Maintenance

You can assign different GL accounts for combinations of product line, site, and location using Inventory Account Maintenance (1.2.13). This allows tighter monitoring of costs. Often, this is used to associate cost centers with different sites and locations. For default GL accounts, system looks for account/sub-account/cost center for this combination first. If none are found, system takes accounts from Product Line Maintenance.

Some uses for this function could be Material Review Board (MRB) locations, inspection locations, and consignment locations.

Inventory Transactions (Receipts, Issues, Transfers)

Posted to the inventory account.

Work Order Receipt Transactions

Posted to the scrap account whenever a reject quantity is entered.

Inventory Discrepancy Account

Posted when Cycle Count Recounts or Physical Inventory Updates change inventory quantity on hand.
Cost Revalue Account

Posted whenever item GL costs are changed, necessitating a revaluation of inventory. Use:

- Product Structure Cost Roll-Up (13.12.13)
- Routing Cost Roll-Up (14.13.13)
- Current Cost Set Move to GL Set (1.4.22)
- Cost Set Copy to Cost Set (30.3)

Transfer Variance Account

Specify a transfer variance account for combinations of product line and site: these accounts do not apply to locations, they are used to track cost variances for items in this product line when transferred between sites.

When customer consignment inventory is activated an additional frame displays to enter consigned inventory accounts.
Master Comments

You may want to take advantage of the Master Comment Maintenance (1.12) feature, which allows you to store comments and copy them for use in Sales Orders, Quotes, and Purchase Orders and/or with item transactions.
Master Comment Maintenance

This feature is useful for quotations for which standard text common to all or many quotations may be stored as master comments and then copied into individual quotations.

When a header or transaction comment screen is displayed, you can enter the comment ID and other parameters (language code, type code, and page number, for example) or merely press the Down key to scroll through the data. Pressing Enter copies the text to the document. Order-specific text can be added as necessary to complete the comment.

For header and item comments for quotations and sales orders, a pop-up screen appears when the comment is saved. This screen gives you the option to set Yes or No fields to determine whether or not the comment is printed on the quotation, sales order, invoice or packing list.

Multiple Languages

You may want to take advantage of the Master Comment Maintenance (1.12) feature, which allows you to store comments and copy them for use in Sales Orders, Quotes, and Purchase Orders and/or with item transactions.

Secondary Descriptions

Use master comments for secondary descriptions if marketing has a different description than production.
Load Inventory Balances

Inventory Control Setup

- Domains
- Entities
- Inventory Status Codes
- Sites
- Locations
- Regulatory Attributes (optional)
- Inventory Control
- Items
- Item Inventory Data
- Inventory Accounts
- Master Comments (optional)
- Load Inventory Balances
Load Inventory Balances

You can load current balances into the system using one of three techniques. You can count and compare actual, on-hand inventory balances with system using one of three methods. For Cycle Counting or Physical Inventory, see the respective chapters for details.

1. Cycle counting via the Cycle Count Worksheet and Cycle Count Results transactions in the Inventory Control Menu
2. Physical counting using the transactions in the Physical Inventory menu
3. Entering unplanned receipts (3.9)

In each of these methods, you count inventory by site, location, item, and lot/serial number.

**Note** The receipt transactions used during the initial inventory load create general ledger (GL) records that can be review and/or deleted using the GL Transaction Delete/Archive (36.23.3).
Inventory Control Setup Summary

Inventory Control Setup Review

- Domains
- Entities
- Inventory Status Codes
- Sites
- Locations
- Regulatory Attributes (optional)
- Inventory Control
- Items
- Item Inventory Data
- Inventory Accounts
- Master Comments (optional)
- Load Inventory Balances

Comments? Go to goo.gl/MfwKHm
Exercise: Set Up Inventory Data

Note The data used in these exercises may not be the same as the data shown in the screen captures in this lesson.

1 Use Item Inventory Data Maintenance (1.4.5) to set up and manage where and how each item is stored.

   Confirm or set up the following inventory information for the following items (let all other fields default):
   
   Item 01010 is stored in location 010.
   Items 50001, 60001, 60002, 60003, 60005, and 60006 are stored in location 020.
   Make Item 60005 Battery a key item.

2 Use Item-Site Inventory Data Maintenance (1.4.16) to set the ABC class for (60006) at site 10-100 to Z.

3 Use Item ABC Status Report/Update (1.5.9; 1.5.32 for enhanced .NET UI version in Enterprise Edition) to update the ABC class and cycle count interval for all items at site 10-100.

4 Use Item-Site Inventory Data Maintenance, to check that the ABC class for monitor cable (60006) did not change.

Note For additional exercises, workshops, and study questions see Appendix A, “Workshops and Study Questions,” on page 165.
Chapter 4

Using Inventory Control
Inventory Control Processing

Process Inventory

Identify key business considerations before setting up Inventory Control in QAD Enterprise Applications
Set up Inventory Control in QAD
• Process Inventory in QAD
Inventory Control Processing

- Inventory Transactions
- Receipts
- Issues
- Transfers
- History
- Maintenance
- Cycle Count
- Physical Inventory
Inventory Transactions

The system disallows certain inventory transactions when a module replacing them is installed.

**Example**  Issues—Return to Supplier will not work after Purchasing is installed. Use Return to Supplier to tag an issue as a return only if you have not yet implemented the Purchasing module. (This is not a complete return since it does not update purchasing or receiving history or current cost.)
Inventory Flow

Inventory Flow

Inventory comes in from suppliers, is inspected, stored, moved to the shop floor, moved back into stock as finished goods, and then shipped. Most of these movements change the value of inventory in some way.

Receipts and Issues

Receipts (items received from a supplier or shop)
- Value of inventory increased and inventory account debited

Issues (items removed from stock)
- Work in Process (WIP) account is debited (increased) if it is a work order issue
- Inventory account is credited (decreased)

Transfers

Movement from one inventory location to another, for example, from inspection to stock.
- Within a site, transfers do not affect inventory value
Shipments

A shipment is a movement from finished goods to the customer.

- Inventory credited
- Cost of goods sold is debited
  Invoicing debits Accounts Receivable

Adjustments

An adjustment can be a change in inventory at a location, due either to a cycle count or physical inventory.

- May be an adjustment to the GL cost of an item (revaluation)
- Debits or credits inventory and does the opposite to inventory discrepancy account

On-Hand Inventory

On-hand inventory balance for an item can be detailed by site, stock location, status, lot/serial number, and lot reference.

On any inventory transaction, you must specify the same detail that you set up for the item in Item Master Maintenance (1.4.1) or Item Inventory Data Maintenance (1.4.5).
Inventory Transactions – Receipts

Receipt transactions are created by:
- Receipts - Sales Order Return (3.10)
- Purchase Order Receipts (5.13.1)
- Distributed Order Receipt (12.15.20)
- Work Order Receipt (16.11)
- Work Order Receipt Backflush (16.12)
- Repetitive Labor Transaction (18.14)
- Backflush Transaction (18.22.13)
- Move Transaction - Advanced Repetitive (18.22.19)
- RMA Receipts (11.7.1.13)
- Receipts - Unplanned (3.9)
- Receipts - Backward Exploded (3.12)

Receipts (items received from a supplier or shop)
- Value of inventory increased and inventory account debited

Comments? Go to goo.gl/MfwKHm
Receipts - Sales Order Return

Records the receipt and tags it as a return.

- Use only if the Sales Orders/Invoicing module is not implemented
- Does not update sales/commission history or generate a credit invoice
- If Multi-Entry is Yes, another screen pops up for entering a list of sites, locations, lot/serial, and lot reference numbers, together with a quantity for each one
- If the item you are receiving is designated lot/serial controlled, enter a lot/serial number
- Multiple sites and locations, lot/serial and lot reference numbers can be specified on one transaction using the Multi-Entry option
Purchase Order Receipts

- Record receipts against both purchase orders and supplier schedules
- Process multiple line items in a single transaction
- Correct errors made in receiving by entering negative quantities
  May require reopening a purchase order line to do this
Distributed Order Receipt

At a source site, you can process several intersite requests at one time by combining them in a distribution order, the same way purchase requisitions are combined into purchase orders.
Work Order Receipt

Increases inventory quantities at designated sites and locations and decreases work in process (WIP). Updates work orders to reflect the quantity completed and scrapped, and decreases the quantity open for MRP.

**Scrapped Qty.** The number of items rejected on this work order
- Reject quantity appears on work order history and cost reports
- Total GL cost of the rejected items posts to the scrap account

**Ref.** Lot reference, with site, location, and lot/serial number, specifically identifies inventory quantities. This can be either the production lot of the item or a location reference such as a skid, roll, or pallet number

**Multi Entry.** Indicates whether this inventory transaction references multiple sites and locations, or multiple lot/serial numbers or lot reference numbers
- No: This inventory transaction is processed using the site, location, lot/serial, and lot reference entered on this screen
- Yes: Another entry screen is displayed where you can enter multiple lines for this inventory transaction (see “Multi-Entry” on page 91). Each line lets you enter a site, location, lot/serial, lot reference number, and quantity

The open quantity on the order will be updated to reflect the total entered in the multi-entry screen

Comments? Go to goo.gl/MfwKHm
Set Attributes. Indicates whether to accept the default inventory attributes

- No receives the items into the inventory location specified and assigns the default inventory attributes
- Yes lets you enter the Inventory Status, Assay%, Grade, Expire Date, and Active settings

(See “Set Attributes” on page 94.)
Multi-Entry

Multi Entry – 1 of 3

Open Quantity: 1.0

Document:
Quantity: 0.9
UM: EA
Conversion: 1.0000
Scraped Qty: 0.9
UM: EA
UM Conversion: 1.0000

Remarks:

Close

Comments? Go to goo.gl/MfwKHm
Multi-Entry – 2 of 3

<table>
<thead>
<tr>
<th>Work Order</th>
<th>ID: 2200062</th>
<th>Site</th>
<th>19-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Qty.</td>
<td>2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto Lot N.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCR Detail</td>
<td>Quantity</td>
<td>EA</td>
<td></td>
</tr>
<tr>
<td>DOC</td>
<td>Site</td>
<td>Location</td>
<td>Lot/Serial</td>
</tr>
<tr>
<td>10-100</td>
<td>010</td>
<td>0101</td>
<td>1a</td>
</tr>
<tr>
<td>10-100</td>
<td>010</td>
<td>0102</td>
<td>2b</td>
</tr>
<tr>
<td>Conv</td>
<td>0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UOM Conversion</td>
<td>1.0000</td>
<td>Set Attributes</td>
<td></td>
</tr>
<tr>
<td>UOM</td>
<td>EA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Serial quantity entered: 2

Questions? Visit community.qad.com
Multi-Entry – 3 of 3

<table>
<thead>
<tr>
<th>Work Order</th>
<th>ID</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>16190</td>
<td>040</td>
<td>A</td>
</tr>
<tr>
<td>16190</td>
<td>040</td>
<td>B</td>
</tr>
</tbody>
</table>

Next: Information correct

Comments? Go to goo.gl/MfwKHm
Set Attributes

Set Attributes

[Image of the Set Attributes screen with fields for Open Quantity, Lot ID, Location, Conversion Factor, Remarks, and other attributes with values filled in]

Questions? Visit community.qad.com
Repetitive Labor Transaction

<table>
<thead>
<tr>
<th>Item Number: 01012</th>
<th>Operation: 10</th>
<th>Line: 19400</th>
<th>Receiving: R-901</th>
<th>VOA Code: 1600</th>
<th>Department: 6400</th>
<th>Act Run Time: 5.0</th>
<th>Earning Code:</th>
</tr>
</thead>
</table>

Employee: 19 EMP31 | Alex Eisen | Site: 10-100 | Site: 10-100 | Machine: | General Assembly | Start Time: | Elapsed or Stop Time: |

Questions? Visit community.qad.com
Backflush Transaction – Advanced Repetitive

Combines the functionality of Work Order Component Issue (16.10) and Work Order Receipt (16.11).

- Allows backflushing of quantities different from those received
- Keeps track of inventory transactions used to issue components to a work order and excludes floor stock
### Move Transaction – Advanced Repetitive

Use this transaction to register production at a manufacturing operation. It consumes (backflushes) resources required by the operation and receives the completed units.

- The value of these resources is added to work in process
- Reject and scrap quantities may be entered (optional)

The quantity processed, less any reject and scrap, may be moved to the next operation with a receipt to finished material inventory if it is the last operation.

Transfer a quantity from the input queue of a manufacturing operation to the output queue of the following operation. If there is no following operation, transfer to finished material inventory.

When entering a repetitive transaction for the first time, the system creates a cumulative work order.

- Cum orders contain work in process quantities and values
  - When the cum order is created, the routing and product structure as of the effective date entered, along with work center labor and burden rates, are captured into the cum order
  - A cost roll-up is performed on the captured data
  - For standard-costed finished items, these captured and rolled-up costs are used as the rates at which resources are added to or removed from WIP
- General ledger postings are generated for the receipt of finished materials and stored in the unposted transaction table until they are posted

Questions? Visit community.qad.com
Receipts – Backward Exploded

Useful to make up kits, tear down subassemblies, convert part numbers, or assemble packaging when a work order is not needed. Care should be exercised when used to tear down an assembly. Be sure you understand the accounting effects of undoing work that has been completed. Use the Receipts - Backwards Exploded transaction to receive the reported item and optionally issue the components in the BOM of the reported item.
Return Material Authorization (RMA) Receipts

- Records customer return for credit, repair, or replacement.
- Items are put into inventory at specified site and location and customer credit is recorded.
- Once all line items have been received and shipped and all quantities posted, the system removes the RMA.
Receipts – Unplanned

A receipt not related to any open sales, purchase, manufacturing, or quality order is an unplanned receipt.

- Use to record receipt of miscellaneous inventory (floor stock items sent back from production, or materials sent back from engineering)
- If the item you are receiving is designated lot/serial controlled, enter a lot/serial number
- For multiple sites and locations, lot/serial and lot reference numbers can be specified on one transaction using the Multi-Entry option

Use unplanned receipts to record:

- Miscellaneous inventory receipts (floor stock items sent back from production or materials sent back from engineering, for example)
- Receipt of materials from a manufacturing order that has already been closed for accounting purposes
- Can also be used to enter initial inventory balances when first implementing

**Note**  In a tightly controlled environment there should be no usual use of unplanned transactions. Floor stock items could be transferred from stock room to work center stock location, then if sent back to the stock room its another transfer. Partial work order receipts are OK but no work order with open WIP should ever be closed by accounting.
Inventory Transactions – Issues

Issue transactions are created by:

- Sales Order Shipments (7.9.15)
- Work Order Component Issue (16.10)
- Purchase Order Returns (5.13.7)
- Return to Supplier Menu (RTS) (3.8)
- Issues - Unplanned (3.7)
- Distribution Order Shipments (12.17.22)
Sales Order Shipments

Allocations

- Ship Allocated = Yes
- Ship Picked = No

Picklists/Packing Lists

- Ship Allocated = No
- Ship Picked = Yes

The system displays all open line items and quantities for the specified order. Select line items and specify quantity for shipping. Warning messages are displayed when:

- The order value in base currency is less than the control setting, if the Minimum Shipment Amount field in Sales Order Control (7.1.24) is set to Yes
  
  This message can also display in Sales Order Maintenance (7.1.1) and Sales Order Credit Maintenance (7.1.13)

- The cumulative quantity shipped for a scheduled line exceeds the maximum order quantity for that line

After selecting and verifying all items to ship, QAD Enterprise Applications displays the trailer information (financial). You can now enter information such as freight charges, special charges, bill of lading numbers and carrier information.

Comments? Go to goo.gl/MfwKHm
There are two ways to issue inventory to a work order:

1. Directly, using Work Order Component Issue (16.10)
2. As completed products are received, using Work Order Receipt Backflush (16.12)
   
   Work Order Receipt Backflush:
   
   - Combines the functionality of Work Order Component Issue and Work Order Receipt
   - Allows backflushing of quantities different from those received

Both methods keep track of inventory transactions used to issue components to a work order and exclude floor stock issued using an unplanned issue transaction.
### Purchase Order Returns

There are two ways to return goods to a supplier:

1. If the purchase order still exists, use Purchase Order Returns (5.13.7)
2. Use Purchase Order Maintenance (5.7) to enter a new line or, if necessary, a new order for the items to be returned
   - Enter the quantity as negative
   - Receive the items in Purchase Order Receipts (5.13.1)
Return to Supplier (RTS) Maintenance

Records that you have returned a certain quantity of an item to a certain supplier and are expecting either replacement items or a credit, in the Service/Support Management module.
Issues - Unplanned

An issue not involving open sales, purchase, manufacturing, or quality order is an unplanned issue.

- Normally there is just one entry screen
- If you set Multi-Entry to Yes, you can enter a list of sites, locations, lot/serial, and lot reference numbers, and a quantity for each one

Use unplanned issues to record miscellaneous inventory issues such as

- Floor stock items sent out to production
- Materials sent to engineers for building 10-100 types or testing

Use the transactions in the Inventory Transfer Menu (3.4) instead of an inventory issue/receipt to record transfers. Transfer functions maintain complete lot/serial traceability. For example give engineering an inventory location that is non-nettable and not available and transfer the material they request. Accounting can then expense the value of the items to the engineering budget on a monthly or quarterly basis.
Distribution Order Shipments

Records that you have sent items to another site in your company. These items are taken out of your inventory and moved to an in-transit site and location.
Transfer transactions are created by:

- Transfer - Single Item (3.4.1)
- Transfer - Multi Item (3.4.2)
- Transfer With Lot/Serial Change (3.4.3)

Occasionally inventory is moved to a different location for storage (from inspection to stock, for example). This is known as a transfer-inventory movement instead of inventory use. The three types are listed above and discussed on the following pages.
Transfer - Single Item

Transfer a specified quantity of a single item from one location to another. When the inventory status code of the From and To locations differ, you can select which one to use for the item.
The entire quantity of the inventory item is transferred from one location to another.

- Cannot transfer a partial quantity
- Generates a report showing the items and quantities transferred
Transfer With Lot/Serial Change

Changes lot/serial and lot reference numbers associated with an item (in addition to site and location). This is particularly useful for tanks and silos where it is common to pump from one or more tanks into a third tank to create a blended material with a new lot number.
Most QAD reports offer an extensive range of selection options. For the reports you use most often become familiar with how the report setup will affect the end result. For example, many reports offer a choice of summary or detail format. This can have a dramatic effect on the output. Refer to the sample Inventory Detail Reports to see the effect of selecting summary or detail. This is the same inventory record display as a one line summary and with complete detail. The range of selection criteria, sort criteria, effect date ranges allow reports to be tailored to a great extent.
Inventory Transactions – History

Inventory Control Processing

- Inventory Transactions
- Receipts
- Issues
- Transfers
- **History**
- Maintenance
- Cycle Count
- Physical Inventory
Every inventory transaction is registered in an inventory transaction history table that:

- Traces quantity discrepancies and gives complete lot/serial traceability
- Stores the login ID (2 above) of the person making the transaction
  
  If a person walks away from inventory transaction history screens without logging off, he will be the person of record for subsequent transactions
- Records date, transaction type (1 above), item, and order number

Transaction types are used here to define the source of an entry. For example, ORD-SO is used for booking history and tracking sales order line item changes. Inventory transaction types include:

- Issues
- Receipts
- Transfers
- Changes
- Counts
- Bookings

Transactions by Item Browse/Inquiry (3.21.2) lists transactions in reverse order by transaction number for a specific item. Other reports such as Transactions by Order Report (3.21.3) and Transactions Accounting Report (3.21.16) give a variety of selection criteria for the audit trail, including all transactions for a date, an order, or unplanned,
# Transactions Detail Inquiry - Inventory Data

**Transactions Detail Inquiry**

<table>
<thead>
<tr>
<th>Site: 10-200</th>
<th>Begin Balance: 0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: 020</td>
<td>Quantity Change: 1.0</td>
</tr>
<tr>
<td>Lot/Serial: 323</td>
<td>Qty Short: 0.0</td>
</tr>
<tr>
<td>Inv Status: Y-Y-N</td>
<td>Begin Loc Bal: 0.0</td>
</tr>
<tr>
<td>Supplier Lot:</td>
<td>Loc Qty Change: 1.0</td>
</tr>
<tr>
<td>Grade/Assay:</td>
<td>Expire Date:</td>
</tr>
<tr>
<td>Reference:</td>
<td>Batch:</td>
</tr>
</tbody>
</table>

| Material: 0.00 | |
| Labor: 0.00 | |
| Burden: 0.00 | |

Debit Acct: 1500   Mech
Cr Account: 6820   Mech
Amount: 0.00

**RMT-TR**
Debit Acct: 1500   Mech
Cr Account: 6820   Mech
Amount: 0.00
GL Reference: 2010/1000000001

**CM-TR**
Debit Acct: 6820   Mech
Cr Account: 1670   Mech
Amount: 22.00
GL Reference: 2010/999-000000001

Questions? Visit community.qad.com
Stock Availability Browse

Use Stock Availability Browse (3.17) to check on the availability of stock in a single site or in all sites.
## Allocated Inventory Inquiry

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Site</th>
<th>Location</th>
<th>Lot/Serial</th>
<th>Status</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000-16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Allocated Inventory Inquiry](image)

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Site</th>
<th>Location</th>
<th>Lot/Serial</th>
<th>Qty Allocated</th>
<th>Unallocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000-16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Allocated Inventory Inquiry
   - Item Number: 00003
   - Site: 10-000
   - Location: 020
   - Lot/Serial: 22808862
   - Qty Allocated: 2.0
   - Unallocated: 1.0

2. Allocated Inventory Inquiry
   - Item Number: 00003
   - Site: 10-000
   - Location: 020
   - Lot/Serial: 22808862
   - Qty Allocated: 17.0
   - Unallocated: 1.0

3. Allocated Inventory Inquiry
   - Item Number: 00003
   - Site: 10-000
   - Location: 020
   - Lot/Serial: 22808862
   - Qty Allocated: 19.0
   - Unallocated: 1.0

Questions? Visit community.qad.com
Unallocated Inventory Inquiry

- Review non-detail-allocated inventory for a specified item
  Site information shows quantity on hand and quantity allocated
  Location information shows unallocated quantity for the location
- View expiration date and grade

**Note** Unallocated quantity can include quantities reserved by general allocations.
Most QAD reports offer an extensive range of selection options. For the reports you use most often, become familiar with how the report setup will affect the end result. For example, many reports offer a choice of summary or detail format. This can have a dramatic effect on the output. Refer to the sample Inventory Detail Report to see the effect of selecting summary or detail. This is the same inventory record displayed as a one line summary, and with complete detail. The range of selection criteria, sort criteria, and effect date ranges allow reports to be tailored to a great extent.
## Inventory Detail Report

### 10 USA

<table>
<thead>
<tr>
<th>Line Item Number</th>
<th>Site</th>
<th>ABC</th>
<th>IM</th>
<th>Quantity on Hand</th>
<th>Qty on Order</th>
<th>Qty Required</th>
<th>Qty Allocated</th>
<th>Qty Non-Nettable</th>
<th>Grade</th>
<th>Status</th>
<th>Assay</th>
<th>Expire</th>
<th>Status</th>
<th>Qty On Hand</th>
<th>Qty on Order</th>
<th>Qty Allocated</th>
<th>Qty Non-Nettable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Medical Ultrasound</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location Lot/Serial</td>
<td>Ref</td>
<td>Qty on Hand</td>
<td>Qty Allocated</td>
<td>Created</td>
<td>Expire</td>
<td>Grade</td>
<td>Assay</td>
<td>Status</td>
<td>Qty on Order</td>
<td>Qty Allocated</td>
<td>Qty Non-Nettable</td>
<td>Grade</td>
<td>Status</td>
<td>Qty on Order</td>
<td>Qty Allocated</td>
<td>Qty Non-Nettable</td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>s100</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>10/04/10</td>
<td>0.0</td>
<td>Y-M-N</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>s101</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>10/04/10</td>
<td>0.0</td>
<td>Y-M-N</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>010</td>
<td>s102</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>10/04/10</td>
<td>0.0</td>
<td>Y-M-N</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Durable Plastic Housing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location Lot/Serial</td>
<td>Ref</td>
<td>Qty on Hand</td>
<td>Qty Allocated</td>
<td>Created</td>
<td>Expire</td>
<td>Grade</td>
<td>Assay</td>
<td>Status</td>
<td>Qty on Order</td>
<td>Qty Allocated</td>
<td>Qty Non-Nettable</td>
<td>Grade</td>
<td>Status</td>
<td>Qty on Order</td>
<td>Qty Allocated</td>
<td>Qty Non-Nettable</td>
<td></td>
</tr>
<tr>
<td>020</td>
<td>s200</td>
<td>2.0</td>
<td>2.0</td>
<td>10/04/10</td>
<td>0.0</td>
<td>Y-M-N</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments? Go to goo.gl/MfwKHm
Maintenance

Inventory Control Processing

- Inventory Transactions
- Receipts
- Issues
- Transfers
- History
- **Maintenance**
- Cycle Count
- Physical Inventory
Inventory Detail Maintenance

Review and modify the attributes of items held in inventory at a particular site and location. Expire date can be set manually or by the system if shelf life is defined in Item Inventory Data.

The system provides three ways to assign inventory attributes:
- Preset using attribute default settings
- Set at the time of receipt using the Chg Attributes field in receipt functions
- Modify using:
  - Inventory Detail Maintenance (3.1.1)
  - Detail Maintenance by Item/Lot (3.1.2)
  - Multi-Lot Inven. Detail Update (1.22.19)

*Note* This function changes inventory attributes for a specific item at a particular site and location. You should assign security to prevent unauthorized changes.
Exercise: Inventory Transactions

In this section, you will practice entering unplanned inventory transactions and review inventory balances and transaction history.

1. Use Receipts - Unplanned (3.9) to receive each of the following items at site 10-100:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>60001</td>
<td>100</td>
<td>020</td>
</tr>
<tr>
<td>60002</td>
<td>100</td>
<td>020</td>
</tr>
<tr>
<td>60003</td>
<td>200</td>
<td>020</td>
</tr>
<tr>
<td>60005</td>
<td>200</td>
<td>020</td>
</tr>
<tr>
<td>60006</td>
<td>200</td>
<td>020</td>
</tr>
</tbody>
</table>

2. Use Stock Availability Browse/Inquiry (3.17) to review the quantity on hand for the common components (60001 to 60006) at site 10-100.

3. Use Transactions by Item Browse/Inquiry (3.21.2) to look at the transaction history that was created by the unplanned receipt transaction. Note the Trans Type. The system automatically assigned this type.

*Note* Use Inventory Valuation Report (3.16.13) to view an inventory valuation report for site 10-100.
Cycle Count

A cycle count is a periodic count. The frequency with which an item is counted is based on its ABC class.

Companies with an established cycle count business process may count several items every day as part of that process.

- Review total item quantities on hand for a site
- View allocated and unallocated quantities for an item
- Allocated quantity detail information includes:
  - Type of order (sales order or work order)
  - Order number
  - Quantity allocated
  - If it is a detail (Picked) or a general (Qty Alloc) allocation
Each item has a specified count frequency.

- Whenever a count is entered, the last count date is updated
- When the item is due for another count, it will print on the worksheet

When a new count is taken, the quantity counted is entered and compared to the quantity on hand. If the new count is within tolerance, the inventory quantity on hand is updated to the count quantity. If the count is not within tolerance, the count is registered but the balance is not updated. The count has to be registered as a recount before an out-of-tolerance quantity can be forced into the system.

Before entering a recount, verify the physical count and check that all inventory transactions have been processed.
**Cycle Count Worksheet Print**

<table>
<thead>
<tr>
<th>Item Number: 12345</th>
<th>Item Number: 67890</th>
<th>To: 123456</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Line:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site: 12345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last Count:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABC Class:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Items:</th>
<th>A:</th>
<th>B:</th>
<th>C:</th>
<th>Other:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sort by Item or Site:</th>
<th>Randomize Selection:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Items</td>
<td>Supplier Consigned:</td>
</tr>
<tr>
<td>Include</td>
<td>Include:</td>
</tr>
</tbody>
</table>

- Typically sent daily or weekly to the stockroom
- Cycle counts are recorded and used for Cycle Count Results Entry (3.14)
- Date Counted column is reserved for the date of the physical count completed by stockroom personnel

Once printed, stockroom personnel will use the worksheet to record their cycle counts and then return it to the system operator for input.

**Note** It is essential that the timing of input for issues and receipts coincide with the Cycle Count Results Entry (3.14).
### Item-Site Inventory Data Maintain

**Item-Site Inventory Data Maintenance**

<table>
<thead>
<tr>
<th>Item Number: 01010</th>
<th>Site: 10100</th>
<th>UOM: EA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description:</strong> Medical Ultrasound</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Image of Item-Site Inventory Data Maintenance](image)

- **ABC Class:** [Select ABC Class]
- **Lot/Serial Control:** [Select Lot/Serial Control]
- **Location:** [Select Location]
- **Location Type:** [Select Location Type]
- **Auto Lot Numbers:** [Select Auto Lot Numbers]
- **Average Interval:** [Enter Average Interval]
- **Cycle Count Interval:** [Enter Cycle Count Interval]
- **Shelf Life:** [Enter Shelf Life]
- **Last Issue:** [Enter Last Issue]
- **Last Averages:** [Enter Last Averages]
- **Last Count:** [Enter Last Count]

**Last Count**: A system-maintained field recording the last date a cycle count or physical inventory count updated a location detail record. The default is the system date. Last count date can be used to select items for cycle counting, either by a range of dates or past due date only.
Cycle Count Results Entry

If initial count matches the system quantity on hand, or if the difference is within predefined error tolerances, the system accepts the count and changes the inventory balance to the quantity counted.

If initial count is rejected:
- Was there a data entry error? A count error?
- Did you count the right item at the right location?

Often another physical count is taken. Enter the results as Cycle Count Type = Recount and the system changes the inventory balance to equal the number counted.

Error tolerance levels are the primary control over the cycle counting process.
- In Inventory Control, you can enter both quantity and value tolerances for each ABC class, based on volume of annual usage or quantity on hand
- The count is accepted only when you enter an initial cycle count and the variance is within both the quantity and value tolerances

Override the tolerances and any location restrictions when you do a recount. Cycle Count Results Entry (3.14) allows you to correct any mistake previously made.
Cycle Count Results Report

- Items counted
- In tolerance quantity
- In tolerance percent
- Items recounted
Exercise: Cycle Count

Instructions: In this exercise, you will practice all of the steps involved in a cycle count.

1. Print a cycle count worksheet for all items and locations at site train. Set the A, B, C, and Other fields to 100 percent to make sure all items in every class appear on the printout. Next, make sure the Print Quantity OH field (near bottom) is set to Yes. Then press Enter or Next button.
   Use Cycle Count Worksheet Print (3.13) in SE, (3.13.1) in EE

2. Use Cycle Count Results Entry (3.14) SE, (3.13.2) EE, to enter Initial count quantities as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty Counted</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>60001</td>
<td>111</td>
<td>020</td>
</tr>
<tr>
<td>60002</td>
<td>100</td>
<td>020</td>
</tr>
<tr>
<td>60003</td>
<td>205</td>
<td>020</td>
</tr>
<tr>
<td>60005</td>
<td>180</td>
<td>020</td>
</tr>
<tr>
<td>60006</td>
<td>220</td>
<td>020</td>
</tr>
</tbody>
</table>

3. Print the Cycle Count Results Report (3.15 in SE; 3.13.3 in EE, or 3.13.27 for the enhanced .NET UI version in EE) for site 10-100. Identify and investigate the different counts. Which were accepted and which were not accepted? Why were some accepted and the others not accepted?

4. Use Cycle Count Results Entry (3.14) SE, (3.13.2) EE, and Cycle Count Results Report (3.15) SE, (3.13.3) EE, to enter recount quantities at the same amounts and locations as in the previous table for the initial count for items not in balance. Then reprint the Cycle Count Results Report (3.15) SE, (3.13.3) EE, and notice the differences between this report and the first report.

5. What should you do when a count is out of tolerance? Think of at least five things you should do.
   a
   b
   c
   d
   e
   See “Cycle Count Results” on page 168 for answers.
**Physical Inventory**

**Inventory Control Processing**

- Inventory Transactions
- Receipts
- Issues
- Transfers
- History
- Maintenance
- Cycle Count
- Physical Inventory
During physical inventory, production is stopped and many people are involved counting inventory. Every item is counted and there is usually no time to resolve problems associated with an incorrect balance.

This slide shows the basic process. When the process is completed successfully (OK is Yes), it continues on the next slide.
(continued)

- Review Rpt for Count Errors
- Inventory Variance Rpt
  - Yes
    - OK?
    - No
      - Manual Recount
        - Enter Tag Recount
          - Update Zero Tag Report
          - Uncounted Tag Rpt/Update
        - Review Inventory Valuation Rpt
          - Review Inventory Adj Impact
        - Inventory Balance Update
          - Inventory Adjustment Report
  - Tag Inventory Valuation Rpt
    - End

Questions? Visit community.qad.com
Before creating new tags for the physical inventory, delete tags from the last physical inventory. Do this either after completing the physical inventory or before starting the next one. Usually you only delete tags posted using Inventory Balance Update (3.16.21).

Tag Delete/Archive

- Deletes specified tags
- Archives deleted tag information
- Generates a report showing all deleted tags
Inventory Balance Freeze

Freeze inventory balances before entering item counts. This makes a copy of the current quantity on hand for all selected inventory and this copy becomes the frozen inventory. The system uses the frozen inventory copy for all the physical inventory functions.

Enter outstanding inventory transactions before freezing inventory balances. Transactions that affect on-hand inventory balances can still be entered.

Suspend inventory transactions, especially during audited or year-end inventories to help ensure an accurate valuation of inventory and to simplify the audit process.

Freezing inventory does not prevent the system from processing regular inventory transactions on the quantity on hand. If you continue inventory transactions during the physical inventory, keep track of changes in inventory. When you enter the count quantities from the physical inventory, you must also include these changes.

The system selects inventory using one or more of the following:

- Site
- Location
- Product Line
- Item Number
- ABC Class
Create/Print Tags

- Create item tags from existing inventory balance records.
- Use tags to verify and correct quantity balances.
- Print item tags on standard-sized forms. Default form is 3 x 5 card stock.
- Create and print tags either before or after the inventory balance freeze.
- If inventory transactions are entered after item tag records are created, but before inventory balances are frozen, there may be inventory detail records without corresponding item tags, and vice versa.
- Use the tags to record the count information. If you need to recount an item, the recount information goes on the same tag.
Use item tags to verify and correct quantity balances.

Create tags for every item you specify. Select items by item number, site, product line, or ABC class. If you want tags for all items in the item master table, leave the selection criteria blank.
Bulk Tag Create

It is possible to create bulk tags that are not linked to any actual item number or location. Bulk tags are used in the event that you find an item at a location and the system has no record of it.

Create as many bulk tags as you need. They are identical to item tags, except the item information on the tag is blank. Use bulk tags to count items missing item tags.

- Before deleting bulk tags, void the tags using Tag Void Status Update (3.16.7)

Use any one of the following to find out how many bulk tags you need:

- Tag Inquiry (3.16.8)
- Tag Report (3.16.13)
- Uncounted Tag Report/Update (3.16.15)
Use Tag Print (3.16.6) to print both types of tags. If there is an error in the tags, delete them using Tag Delete/Archive (3.16.23), and create and print new tags.
Enter Initial Tag Counts

Tag Count Entry

Use to enter the tag count quantity into the system once tagged items are counted. All count quantities are accepted, even those that are out of tolerance.

Enter count quantity as of the inventory freeze. If you did not suspend inventory transactions after the freeze, you must take into consideration any inventory transaction activity occurring after it to ensure an accurate count total.

<table>
<thead>
<tr>
<th>Action</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen Inventory as of 9/30</td>
<td>100</td>
</tr>
<tr>
<td>Issue Quantity on 10/1</td>
<td>50</td>
</tr>
<tr>
<td>Cost Quantity on 10/2</td>
<td>47</td>
</tr>
<tr>
<td>Count Quantity entered on 10/2 (47+50)</td>
<td>97</td>
</tr>
</tbody>
</table>
Review Results

Before updating inventory balances review the following:

- Inventory Variance Report (3.16.18), which flags out of tolerance counts
- Uncounted Tag Report/Update (3.16.15), which reviews any tags that have not had counts entered for them
- Tag Void Status Update (3.16.7)
  - Uncounted tags should have a count entered or be voided
  - The physical tag should be physically destroyed if voided

For items replaced by bulk tags, enter a count of zero to prevent the system from recording a double balance when the bulk tag count is entered.
Void/Zero Count Unused Tags

Make sure all item and bulk tags are accounted for after completing the physical inventory count.

Identify any tags not counted or voided using Uncounted Tag Report/Update (3.16.15). This report only shows tags that have not been voided or set to zero.

You may have leftover item tags either because the items were not found or they were counted using bulk tags. These cannot be voided. You need to enter a quantity of zero for the item tag using Uncounted Tag Report/Update (3.16.15) with the Set Tag Count to Zero option set to Yes.

Any bulk tags that you are not going to use must be entered as void. Do this using Tag Void Status Update (3.16.7). Only bulk tags with a void status can be deleted.
Once you enter the initial tag count, it can only be changed using Tag Recount Entry. You can change the count as many times as you like, until Inventory Balance Update is run.

- Enter item tags created in Item Tag Create (3.16.1), then enter Qty Counted
- For bulk tags, enter the tag number and Site and Location
Inventory Balance Update

Once all bulk and item tags have been accounted for, update the actual inventory balances. Item quantity on-hand is updated with the difference between the frozen quantity and the count quantity.

**Important** This is a critical step. Performing this function updates on-hand inventory balances. Be sure all counts:

- Are correct as of the “freeze” date
- Include any inventory transactions that occurred after freezing the inventory balances
Exercise: Physical Inventory

Instructions: In this exercise, you will practice all of the steps involved in a physical inventory count.

**Important** The data used in these exercises may not be the same as the data shown in the screen captures in this lesson.

1. Use Inventory Balance Freeze (3.16.4) to freeze the inventory balances for site 10-100. Leave the screen blank for all items and press Go. Note that you can do this before or after you print tags.

2. Use Item Tag Create (3.16.1) to create count tags in site 10-100 for the items in product line 1000 for item numbers 60001 through 60006. Set the Include Zero Quantity field to Yes. Starting Tag Number is a system-maintained field that does not need to be modified. Use Bulk Tag Create (3.16.2) to create two bulk tags.

3. Use Tag Print (3.16.6) to print the tags. Notice the sequence in which the tags print.

4. Enter the following counts using the appropriate tag numbers:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>60001</td>
<td>125</td>
<td>020</td>
</tr>
<tr>
<td>60002</td>
<td>100</td>
<td>020</td>
</tr>
<tr>
<td>60003</td>
<td>225</td>
<td>020</td>
</tr>
<tr>
<td>60005</td>
<td>200</td>
<td>020</td>
</tr>
<tr>
<td>60006</td>
<td>200</td>
<td>020</td>
</tr>
</tbody>
</table>

Use Tag Count Entry (3.16.11)

5. During the course of the physical inventory, you find 100 Probe units (50001) in a box at site 10-100, location 010. Use a bulk tag to record the count for this new item location. Use Tag Count Entry (3.16.11)

6. Use Inventory Variance Report (3.16.18) to print the Inventory Variance Report for site 10-100. Identify items to be recounted.

7. Enter recounts for the items out of tolerance on the first entry. Date Recounted = today’s date. Use Tag Recount Entry (3.16.12)

8. Use Inventory Balance Update (3.16.21) to update inventory balances for the items counted. You must specify Yes in the Update Inventory field.

9. Use Stock Availability Browse (3.17) to review the new inventory balances for items in product line 1000. The inventory quantity on hand will be updated to the count amount.

10. Scroll through the transactions created by the physical inventory update. Use Transactions Detail Inquiry (3.21.1)

**Note** For additional exercises, workshops, and study questions, see Appendix A, “Workshops and Study Questions,” on page 165.
Inventory Control Processing Summary

- Inventory Transactions
- Receipts
- Issues
- Transfers
- History
- Maintenance
- Cycle Count
- Physical Inventory
Chapter 5

Obsolete Inventory Analysis
Obsoletes Inventory Analysis Overview

Obsolete Inventory Analysis

- Current Surplus Inventory Report
- Projected Surplus Inventory Report
- Obsolete Inventory Analysis
  - New sub-module in QAD Enterprise Edition

*Note*  The features of Obsolete Inventory Analysis are only available in QAD EE.
Current Surplus Inventory Report

The Current Surplus Inventory Report reads inventory transaction history (tr_hist) records to determine when each item in the selected range was last issued to a work order, a sales order, or an unplanned order. Inventory in locations that has not been issued since the selected Last Issue date is reported as surplus. If no appropriate tr_hist records are available, the less precise last issue date in the inventory master (in_mstr) is used. If the last issue date is not set, indicating there have been no issues for this item, the last receipt date from the inventory master is used to determine if the inventory qualifies as surplus.

The Current Surplus Inventory Report displays, by site and product line, the last issue date for an item, the expired quantity and valuation, and the quantity on hand and valuation. The expired quantity is the sum of all quantities with location detail records that are beyond the expiration date. The quantity on hand is the total available quantity on hand minus expired quantities. Each affected item is printed; totals are printed for each product line, site and for the report itself.

The Cost Method setting determines whether the valuations use current or GL costs. The Summary/Detail, when set to Summary, excludes item detail.

Comments? Go to goo.gl/MfwKHm
Projected Surplus Inventory Report

Different companies have different criteria for surplus inventory. The most common criteria is that anything over one year’s supply is surplus so effective date would be set to today + 365.

The other common definition of surplus is end of run. For example, I am going to make 200 of item A and then close down the line. In this case you would make sure that you had forecasts covering 200 of item A and sufficient quantity of all other end items so that those items will be fully consumed between now and the effective date that you select. You run MRP and then run the Projected Surplus Inventory report at that effective date. All non-surplus items are consumed (either by forecasts for other end products, or by forecasts for 200 A’s). Any remaining items print on the Projected Surplus Inventory report and are those items left over after 200 sets of A have been built and that are not consumed by other demands.

The Projected Surplus Inventory displays, by site and product line, the quantity on order for an item, the expired quantity and valuation, and the ending quantity (depending on projection method) and valuation. Each affected item is printed; totals are printed for each product line, site and for the report itself.

- The quantity on order is the sum of all outstanding planned and scheduled supply orders.
- The expired quantity is the sum of all quantities with location detail records beyond the expiration date.
- The ending quantity and the items reported are controlled by the Project Method setting.
If you select the MRP projection method, the formula is:

\[
\text{ending quantity} = \text{today's onhand balance} - (\text{MRP demand between now and effdate}) \\
+ (\text{MRP supply between now and effdate}) > 0
\]

When using MRP, run the Regenerate Materials Plan first to make sure that all supply and demand records are current. It is typical when using the Projected Surplus Inventory report in this way to create a forecast for unscheduled production and to make sure that the MRP horizon exceeds the selected date.

If you select the Average Usage projection method, the formula is:

\[
\text{ending quantity} = \text{today's onhand balance} - ((\text{effdate} - \text{today}) \times \text{avg usage}) > 0
\]

When using Average Usage, run Item ABC Status Report/Update first in order to flush the accumulated Issue Change to Average Issues. Average issues is an exponentially smoothed average (see the APICS dictionary) with the Averaging Interval (in_avg_int) used as the smoothing constant.

The Cost Method setting determines whether the valuations use current or GL costs. The Summary/Detail, when set to Summary, excludes item detail. You can also include or exclude firm planned and planned orders.
Set Up Obsolete Inventory Analysis

Use the programs in the Obsolete Inventory Analysis menu (3.5.1) as an analysis tool to identify inventory investments that depreciate and future demand for inventory. Once you identify and analyze obsolete inventory, your company financial experts can book a reserve, then use the reserve to create an inventory write-off.

The obsolete inventory analysis tool calculates an inventory supply value based on current inventory usage for specific inventory types over a predefined period. You define the inventory types. You can also create and assign depreciation rates for each inventory type.

You can use the obsolete inventory analysis tool to calculate demand for future inventory. You can choose to add the demand calculations to coverage calculations or use the greater of the two calculation results when determining the coverage.

You can specify transactions to extract for analysis; using Extract Consumption (3.5.1.7) or using Obsolete Inventory Analysis (3.5.1.9). Obsolete Inventory Analysis calculates the number of periods of supply coverage and the value of obsolete inventory reserve based on depreciation rates.

Obsolete inventory analysis programs summarize and organize analysis data in several reports or for output to several formats. The analysis data provides essential information that lets you reduce inventory and save costs as your company monitors usage and obsoletes any outdated or no-longer-used items. After you analyze data, you can choose to delete or archive the data you extracted for analysis.
**Obsolete Inventory Control**

**Inventory Type Logic.** Indicate how you want the system to display fields associated with an inventory type in Inventory Type Maintenance (3.5.1.1), Inventory Type Item Report (3.5.1.13) and Item Inventory Type Report

No: Default display field labels and values

Yes: Display logical expressions for definitions

**Conflicting Inventory Types.** Specify the action when items with overlapping inventory types are found

BESTFIT (default): Choose the first inventory type with the highest number of fields.

BYPASS: Do not analyze if conflicting. No analysis data is reported where conflicts exist. The system reports conflicts if Report Conflicts is Yes in Obsolete Inventory Analysis.

FIRST: Choose the first inventory type in alphabetical order.

**Use ABC Analysis Usage.** Specify whether to use the average daily usage from existing ABC analysis for obsolete inventory analysis.

No: The system does not use extracted ABC analysis data. It uses the issue transactions you previously extracted in Extract Consumption (3.5.1.7) or it extracts issue transactions as needed when you run Obsolete Inventory Analysis.

Yes: The system uses extracted ABC analysis data when it performs obsolete inventory calculations.
**Retain Consumption Data.** Indicate whether to retain item consumption data the system uses during obsolete inventory analysis.

No (the default): The system does not retain consumption data and you cannot run Extract Consumption or Consumption Report

Yes: The system retains a table of consumption data by item, site, and period; displays the table in Consumption Report; and lets you build extractions in Extract Consumption.

**Consumption Filter Program.** Enter the program used to filter consumption data for obsolete inventory analysis. The default is icobexb.p. If you leave this field blank, the system extracts all data. You can create your own filter program and enter it here.

**Last Transaction Extracted.** Display only, lists the system date and time of the last inventory transaction the system extracted in Extract Consumption (3.5.1.7). This field also displays in Extract Consumption.

**Path for Reserve Output.** Specify the path when you write obsolete inventory analysis data into an output file that you can optionally define in Output File Type Maintenance (3.5.1.5). A blank indicates the system creates the output file in the working directory. Use your system's conventions to specify path and directory.

**Site.** Specify a site to use when gathering past transactions for obsolete inventory analysis. Leave blank for all sites.

**Extract Issue Transactions.** Specify the types of transactions you want the system to extract when analyzing obsolete inventory. Separate multiple transaction types with commas. By default, the following four types are used: ISS-SO, ISS-WO, ISS-DO, ISS-UNP.
Defining Inventory Types

Use Inventory Type Maintenance (3.5.1.1) to select and group similar items into a unique inventory type. The system stores the inventory type with a specific logical structure. Define the structure by specifying:

- A number that identifies a set of related fields. Each type can have multiple sets of associated fields.
- A number for each item-related field that you want to display in obsolete inventory reports and output data that shows inventory types.

**Note** The number is associated with a field in Language Detail Maintenance (36.4.2).

- A value number that identifies one value or value ranges for the fields.
- A single value or a range of values for the fields.

Refer to the user guide for specific examples.
Defining Depreciation Rates

Use Depreciation Rate Maintenance (3.5.1.3) to create and assign depreciation rates for each inventory type. A rate cannot exceed 100%.

You assign depreciation rates for each inventory type; then specify a range for the number of periods the depreciation rate covers. The system applies the depreciation rate you specify up to the period you specify when calculating reserve.

**Example** Specifying an inventory type that groups your purchased items; then set the depreciation rate so that the rate slowly increases for the next two years in periods of six months until you no longer need the purchased item. To do this, set Up to Number of Periods to 6 and Depreciation Rate at 10 percent, and click Next. Then set Up to Number of Periods to 12 and Depreciation Rate at 20 percent, and click Next, and so on. The purchased items depreciate up to 6 months by 10 percent, then up to 12 months by 12 percent.

If you do not want an inventory item type to depreciate until after nine months, specify the rate as 0 (zero) and specify Up to Number of Periods as 9. The system applies a different depreciation rate, depending upon your specification, for the next period when the nine months is over.

**Note** The system does not book GL transactions for reserve that it calculates using actual depreciation rates.

**Inventory Type.** Specify the inventory type to which the system applies the depreciation rate. All items associated with the inventory type are depreciated at this rate when calculating reserve.
Zero Consumption/Demand. Indicate when the system should use a different depreciation rate:
None (the default): Use the depreciation rate specified when consumption, demand, or both have a non-zero value. You can specify the number of periods in Up to Number of Periods. If you enter None but specify 0 (zero) periods, the system uses the depreciation rate you specify.
Consump(tion): Use the depreciation rate specified when there is zero consumption of inventory. The system sets Up to Number of Periods to zero and you cannot edit the field.
Demand: Use the depreciation rate when there is zero demand of inventory. The system sets Up to Number of Periods to zero and you cannot edit the field.
Both: Use the depreciation rate when there is both zero consumption and demand of inventory. The system sets Up to Number of Periods to zero and you cannot edit the field.

Up to Number of Periods. Enter the number of periods this rate covers. Each value you specify indicates the high end or ending period of a range. The system increments this value by 1 to determine the starting point of the next range.
You can optionally create an output file for obsolete inventory analysis data. Use Output File Type Maintenance (3.5.1.5) to specify how the output file converter sorts and formats the data before you run the analysis. See Specifying an Output File.

The system converts and formats obsolete analysis data using the output file of your choice when you run Obsolete Inventory Analysis (3.5.1.9). You specify the name of the output file in Obsolete Inventory Analysis.
Analyze Obsolete Inventory

After all obsolete inventory controls are set and you define inventory types and depreciation rates, you can analyze data.

Because of the way you group items, some items may overlap inventory types. When the system calculates obsolete inventory values, it resolves the conflict of overlapping inventory types within the same site based on the action you specify in Obsolete Inventory Control. If you specify that the system not analyze obsolete inventory data when it encounters conflicts, it does not, but it does present conflicting inventory type data.

In the report setup—in addition to the usual range of report values that specify what is analyzed—you select whether to report Demand, Conflicts, Coverage, and Reserves.
Extract Consumption

Build. Indicate the method you want this program to use to extract consumption data.

Initial. Extract all data starting at the date you specify in Consumption From Date up to the current date. The system collects transaction data and builds consumption data by item, site, year, and period.

Incremental. Extract all transaction data since the previous extraction. The system stores and displays in Last Transaction Extracted in this program and in Obsolete Inventory Control. The system extracts every transaction from the date in Last Transaction Extracted up to the time you initiate the extraction. The system then overwrites Last Transaction Extracted.

Consumption From Date. Enter the date for an initial build of consumption data. The system extracts consumption data from this date up to today's date. The system uses the GL calendar to convert transaction dates to a year and period.

Extract Quantity on Hand. Indicate if the system extracts Quantity on Hand (QOH) balances for initial and incremental builds.

- No: The system does not extract the QOH balance.
- Yes: The system extracts the QOH balance as of the extraction date for both initial and incremental builds.

Customer Consigned, Supplier Consigned. Specify whether the system extracts customer or supplier consignments for initial and incremental builds.

- Exclude: Exclude customer or supplier consignment inventory.
• Include: Include customer or supplier consignment inventory.
Only: Only customer or supplier consignment inventory.

Include Non-nettable Inventory. Indicate whether to include or exclude non-nettable inventory when calculating inventory supply usage for the quantity on hand for the items in the inventory type you specified.
• No: Exclude non-nettable inventory when calculating supply usage.
• Yes: Include non-nettable inventory when calculating supply usage.

Include Negative Inventory. Indicate whether the system includes negative quantity on hand (QOH) when calculating consumption.
• No: The system does not use negative QOH when calculating consumption.
• Yes: The system uses negative QOH when calculating consumption. The system displays items with negative QOH on coverage and reserve reports. Coverage periods and reserve amounts display as 0 (zero), not negative numbers.

Last Transaction Extracted. This field is display only and lists the system date and time of the last inventory transaction the system extracted. This field also displays in Obsolete Inventory Control.
Running the Analysis

After all obsolete inventory controls are set and you define inventory types and depreciation rates, you can analyze data.

Because of the way you group items, some items may overlap inventory types. When the system calculates obsolete inventory values, it resolves the conflict of overlapping inventory types within the same site based on the action you specify in Obsolete Inventory Control. If you specify that the system not analyze obsolete inventory data when it encounters conflicts, it does not, but it does present conflicting inventory type data.

In the report setup besides the usual range of report values that specify what is analyzed you select whether to report; Demand, Conflicts, Coverage, and or Reserves.
Appendix A

Workshops and Study Questions
Study Questions

1. When ABC classes are calculated by the system, they can be calculated based on ___________________ or ___________________ and ___________________ or ___________________.

2. Receipts – Unplanned do not affect Average Sales or Average Issues.
   True or False

3. List three places where the location entered on the item master is used.

4. Shelf life is accessed whenever inventory is received, automatically setting the expiration date of the inventory.
   True or False
   Why?

5. What picking logic options are available? (List all four.)

6. Briefly describe how Issue Days affects picking?

7. ABC Class, Lot/Serial Control, and Shelf Life may be different for the same item at different sites.
   True or False
   Why?

8. Inventory status codes are used to designate whether inventory is Available, Nettable, and subject to Overissues. Transactions can also be restricted for certain types of inventory. Indicate what the settings should be for each of the following types of inventory:

<table>
<thead>
<tr>
<th>Inventory Type</th>
<th>Available</th>
<th>Nettable</th>
<th>Overissues</th>
<th>Restrictions (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Material Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lot controlled items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scrap and Reject</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiting for Rework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxic Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incoming Inspection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. When you froze inventory for a physical count, the inventory balance for a particular item was 150 units. After the freeze, someone processed a receipt for 25 and an issue for 42 that accrued prior to the freeze. The person who conducted the inventory physically counted 135. What should they enter as the physical inventory count? (Circle the correct answer and explain why.)
   108  118  133  135  150  152  175

10. Count tolerances set up in the Inventory Control program apply to all items at all sites in the database, and are used by both cycle counting and physical inventory.
    True or False
Workshop

Instructions: Set up a couple of new items and test out the inventory transactions.

Set up three new items. Make one lot controlled, one serial number controlled, and one neither lot nor serial number controlled. Put a shelf life on one of the items.

1. What transaction would you use to enter beginning inventory balances for these items?
   - Menu Name:

2. Enter a beginning inventory balance of 20 units of the lot-numbered item with 5 units of Lot 9301004, 12 units of Lot 9301005, and 3 units of Lot 9301006. What field did you have to set to do all this in one transaction?
   - Field Name:

3. Enter a beginning inventory balance of five units of the serial numbered item, numbered starting at serial number A4201JJ001-F. Do not type in all the numbers; let the system generate all five numbers for you. What numbers did it generate?

4. Enter a quantity of 100 units of the last item. Put 80 in the regular stock location and put 20 in inspection. What inventory status should be assigned to the items in inspection?

5. Transfer one lot of your lot-numbered items into a different inventory location. What transaction history was maintained?

6. Change the expiration date, assay, grade, or inventory status for this item. What transaction history was maintained?

7. What if you needed to change a lot or serial number of existing inventory. What transaction would you use?
   - Menu Name:

8. Print a Cycle Count Worksheet for your items. Enter an initial count of 800 units of the non-lot/serial controlled item. What happened?

9. Enter a recount for 800 units. What happens now? (List two effects.)

10. Freeze inventory balances for your items and print count tags. Count a different amount or count a different lot/serial number. Print the error reports; then run the Physical Inventory Update function. What happens? Check the results by looking at the Inventory Details for your items. Explain the results.
Answers

Cycle Count Results

When count is out of tolerance, you should check for:

- Correct location
- Correct lot/serial number
- Correct site
- Correct item number
- Unprocessed transactions
- Activity since count
- As a last resort: perform physical recount

Study Question Answers

1. When ABC classes are calculated by the system, they can be based on SALES or ISSUES and COST or GROSS PROFIT.

2. True. For this reason, it is wise to use the Unplanned Receipt transaction to initialize opening inventory balances.

3. Three places where the location entered on the item master is used:
   - The item location displays as the default on all inventory transactions (issues/receipts) for this item, but you can override it.
   - It also displays on sales orders as the default location to ship from.
   - If the Inspection Required field is No on the item, it also displays on purchase orders as the default receiving location. This location is also the default location from which inventory is backflushed, unless you set up to backflush from the line (work center).

4. True. Expiration date is set automatically as the receipt date plus the shelf life.

5. The four ways picking can be done by: Location, Lot/Serial, Date, and Expire Date.

6. Issue days controls the picking of items about to expire. For example, if Issue days is 10, then any inventory due to expire in the next 10 days will not be picked.

7. False. ABC class can be different by site, but if an item is lot/serial controlled or has a shelf life, this applies to all sites.

8. These types of inventory should be assigned status codes as follows:

<table>
<thead>
<tr>
<th>Inventory Type</th>
<th>Available</th>
<th>Nettatable</th>
<th>Overissues</th>
<th>*Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Material Items</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes/No</td>
<td>None</td>
</tr>
<tr>
<td>Lot Controlled Items</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>None</td>
</tr>
<tr>
<td>Scrap and Reject</td>
<td>No</td>
<td>No</td>
<td>Yes/No</td>
<td>ISS-SO, ISS-WO</td>
</tr>
<tr>
<td>Waiting Rework</td>
<td>No</td>
<td>Yes/No</td>
<td>Yes/No</td>
<td>ISS-SO</td>
</tr>
</tbody>
</table>
152. The physical count of 135 should be increased by quantity issued since the freeze (-42) and decreased by the quantity received (+25). When the count of 152 is used to update inventory, it will add two to inventory (the difference between the frozen value of 150 and the 152 counted). This is correct, since we should have had 133 \( (150 + 25 - 42) \) but we in fact counted 135. We found two extra.

9 True.

**Workshop Question Answers**

For setup you should have set Lot/Serial to L for lot control, S for serial control, and blank for neither.

1 You should always use Receipts – Unplanned to initialize opening balances.

2 Use the Multi field to enter multiple lot/serial numbers, sites, locations, or lot references all on one transaction.

3 Serial numbers should be A4201JJ001-F, A4201JJ002-F, A4201JJ003-F, A4201JJ004-F, and A4201JJ005-F. Note that the system increments the last number string it finds.

4 The inventory status for inspection is probably DOCK or any other that is set up as Available No and Nettable Yes.

5 Transaction history keeps an ISS-TR and a RCT-TR transaction, maintaining complete traceability.

6 Transaction history keeps an ISS-CHL and a RCT-CHL transaction, maintaining complete traceability.

7 Transfer With Lot/Serial Change is the only function that can be used to change a lot or serial number, since this maintains traceability.

8 The system records the count, but does not update inventory.

9 The recount updates inventory and creates a GL transaction to increase inventory value.

10 Discuss error finding with class.

### Inventory Type

<table>
<thead>
<tr>
<th>Inventory Type</th>
<th>Available</th>
<th>Nettable</th>
<th>Overissues</th>
<th>*Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic Waste</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>ISS-SO, ISS-WO</td>
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<tr>
<td>Incoming Inspect</td>
<td>No</td>
<td>Yes</td>
<td>Yes/No</td>
<td>None</td>
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Inventory Control Reports
<table>
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<td>Average Cost Accounting Report</td>
<td>3.21.17</td>
<td>3.21.17</td>
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<td>Consumption Delete/Archive</td>
<td>3.5.1.20</td>
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<td>Consumption Report</td>
<td>3.5.1.19</td>
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<tr>
<td>Counted Tag Report</td>
<td>3.16.14</td>
<td>3.16.14</td>
</tr>
<tr>
<td>Current Surplus Inventory Report</td>
<td>3.6.8; 3.6.32 (enhanced .NET UI)</td>
<td>3.6.8</td>
</tr>
<tr>
<td>Cycle Count Results Report</td>
<td>3.13.3; 3.13.27 (enhanced .NET UI)</td>
<td>3.15</td>
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<td>Cycle Count Worksheet Print</td>
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<td>3.6.20; 3.6.44 (enhanced .NET UI)</td>
<td>3.6.20</td>
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<td>3.5.1.7</td>
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<td>Frozen Inventory Valuation Report</td>
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<td>3.6.5; 3.6.29 (enhanced .NET UI)</td>
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<td>Inventory Type Item Report</td>
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### Sorted By Menu Name

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### Sorted By Menu Number

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<td>Reorder Report</td>
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<td>Device History Record Report</td>
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Appendix C

General Ledger (GL) Effects in Inventory Control
GL Consequences of Inventory Transactions

Any inventory transaction has an effect on GL. It is important to know what those effects are, particularly with unplanned issues and receipts. The default accounts used are listed in the previous chart.

Sometimes, however, a transaction is used for other than the usual reason or affects accounts other than the normal. In those cases, it is up to the person making the transaction to be sure that the correct GL account is used. An example might be that a batch of ink concentrate is contaminated. The unplanned issue transaction default would have to be modified to debit the scrap account, not the cost of production.

A location transfer does not affect GL unless the items are transferred between sites or GL entities, or locations with different accounts defined in Inventory Account Maintenance. The value of inventory has not changed, only its position has changed.

Transactions in other modules, such as sales order shipments or purchase receipts, do create GL transactions.
Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

- **QAD Forums (community.qad.com)**
  Ask questions and share information with other members of the user community, including QAD experts.

- **QAD Knowledgebase (knowledgebase.qad.com)***
  Search for answers, tips, or solutions related to any QAD product or topic.

- **QAD Document Library (www.qad.com/documentlibrary)**
  Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

- **QAD Learning Center (learning.qad.com)***
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