



Consignment Inventory -- A customized solution

Linda Leslie

Motorola, Inc

Automotive & Industrial Electronics Group

gims191@email.mot.com



Program Goals

- Develop a supplier managed consignment inventory program that
 - Is transparent to the user
 - Has inventory available for planning
 - Can be tracked as a non-asset in the general ledger



Topics

- Overview
- Consignment program objectives
- Supplier agreements and communication
- Design review
- Setup
- Custom reports
- Benefits
- Future enhancements
- Summary
- Q & A



Motorola AIEG

Seguin, Texas

- 200 users of Oracle Manufacturing applications
- Operate three shifts/day and seven days a week, 24 hours a day
- Build electronic engine controls
- Data base:
 - 40,000 items
 - 14,000 assemblies with common components
 - 8 level bills of material
 - Dedicated manufacturing lines
 - Utilize computer aided manufacturing systems
 - Utilize bar coding for inventory control



System Overview

- One SID (single instance of the data base)
- IBM S70 computers
- Oracle 10.7SC, PROD 16.1
- Windows NT Operating System
- Partnered with BPA Systems, Inc. to provide bar coding capability with consignment inventory
 - Intermec radio network
 - Intermec Janus hand held units
 - Zebra 130si thermal printers for labels



Oracle Manufacturing

- Implemented in January, 1999
 - Inventory
 - Bills of Material
 - Engineering
 - Work in Process
 - MRP
 - Purchasing
 - Accounts Payable



Consignment Inventory

A system that allows stocking of suppliers' material in the plant stockroom and ownership is maintained by the supplier until material is picked from the stockroom for production at which time receipt, invoice and PPV (Purchased Price Variance) are generated.



Consignment Material Objectives

- Transparent to the user
- Requires no special handling in Receiving
- Viewable as available in inventory
- Nettable and available for planning
- Can be cycle counted
- Track as an non-asset in general ledger



Supplier Related Objectives

- Can be started or ended at any time for any item/supplier
- No need to buy back or sell back inventory
- Item can be multi-sourced
- Supplier identity must be maintained
- Notification of consignment activity
- Ability to reconcile inventory by item and supplier



Supplier Agreement

- Establish min/max inventory levels with a periodic review
- Supplier owns and controls inventory buffer
- Modified payment terms
- Improved delivery performance measurements
 - Based on stock outs



Supplier Requirements for Consignment

- Must be on Schedule Sharing™
- Must be on pay on receipt program
- Item must be certified
 - Dock to stock (direct delivery)



Motorola Schedule Sharing™

- Provides demand for purchased items
- Oracle Purchasing procedure
 - Purchase order or blanket release
 - One item per purchase order
 - Open quantity for receiving
 - Firm line or release to control exception messages



Motorola Schedule Sharing™

SHR - Supplier Requirements Query Screen - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print

Address http://shamu.comm.mot.com/cgi-bin/ss_screens/caot0001 Go Links >>

13-MAR-2000 ZD 0610164H77 Query

(ZD) AECG SEGUIN, TX (0001749) KOA SPEER

Item: 0610164H77 Issue: AJ Mfg Item: CF1/4XXXJT52 ABC Code: U Plan:

BkLog	13-Mar-00	20-Mar-00	27-Mar-00	03-Apr-00	10-Apr-00	17-Apr-00
65672	16460	13168	12640	12400	10560	13080
	24-Apr-00	01-May-00	Avg 9-13	Avg14-26	Avg27-52	Ttl Reqd
	12640	12700	11622	9704	3828	453116

Last Shipment Id#	0035389	0986257	0985569	0930869	0895880
Last Receipt Nbrs	192376	187420	186198	180012	175665
Last Receipt Qty	40000	50000	15000	50000	35000
Last Receipt Dates	28-Feb-00	07-Feb-00	01-Feb-00	05-Jan-00	13-Dec-99

Available Inventory:	A 95162	Quantity in VQC:	0
Minimum Quantity:	12443	Quantity Rejected:	0
Maximum Quantity:	87099	Purchase Order Number:	426116020101
Buyer Code:	29	Purchase Order Balance:	105000

Done Local intranet

Start Microsoft PowerPoint - [co...] SHR - Supplier Requi... 5:56 AM



Consignment Modifications

- Improved receipt information
 - Notification of physical receipt
 - Notification of change of ownership
 - Multiple times per day
 - Faxing of inventory movement
 - Aids reconciliation process



Design Overview

- Receipt of consignment material
 - Generates a miscellaneous receipt
 - Received directly into Inventory
 - Receipt information stored on a custom table
 - Monthly adjustment to GL inventory balance
- When material is used
 - Create a receipt using stored information
 - Generates a miscellaneous issue
 - Recognize Purchase Price Variance



System Design -- Receiving

- Receiving a consignment item
 - Scan packing slip for
 - Packing slip number
 - Purchase order number
 - Quantity
 - Item number
 - System processes a Miscellaneous Receipt
 - Creates debit to an inventory clearing account



BPA Systems, Inc.

Customizations

- Custom Table stores:
 - Packing slip number
 - Purchase order number
 - Quantity
 - Item number
 - Supplier
 - Date and time of transaction
 - Stock locator
 - Flexfields for capturing transaction details



Customization Advantages

- Meets goals of being transparent to user, requires no special handling, inventory is available
- Maintains supplier identity
 - Facilitates reconciliation process and cycle counting
- Can randomly stock material



Incoming Inspection

- Consignment items that require Incoming Inspection
 - Receiver scans packing slip
 - Message on hand held advises Inspection Required
 - Item revision level, QS9000 documentation, skip lot
 - A cone is scanned
 - Inspection is completed
 - Inspection move is performed
 - System performs a subinventory transfer



System Design -- Stockroom

- Random stocking of parts
- Locator control
- Storage criteria rules



Material Storage Criteria

- Multiple part numbers can be stored in the same locator.
- The same part number can be put in a locator if it has the same supplier as the part that is already there.
- If the same part has different suppliers, the new part must be put into a different locator.



Material Storage Criteria

- Consignment items cannot be mixed with non-consignment items of the same item number in the same locator.
- Consignment items in the same locator with the same part number can have different receipt numbers.
- An exception exists when a cycle count adjustment causes items that have been paid for to be placed in a single location.



BPA Customization -- Material Request

- Custom form designed to generate Material Pick Requests

Oracle Applications - [Wave Pick Requests]

Action Edit Query Go Folder Special Help Window

Wave Pick Requests

Subinventory Locator **Save / Process**

Item	Revision	Requested Qty	Picked Qty	Requested Date	Req. Time	Drop Location	Request Status	Account Alias
			0	18-OCT-1999				

Error Message

Wave Pick Lines

From Subinventory	Location	In Transit SubInventory	Location	Allotted Quantity	Picked Quantity	Error Message

FRM-40106: No enterable items in destination block.
Count: *0 <List>

Start | Microsoft Word | Microsoft Exc... | Oracle Ap... | Microsoft Po... | 6:43 PM



BPA Customization -- Wave Picking

- Paper free system of picking
- Enforces scanning
- Allows user input of data
 - Time and warehouse zone
- Directs picker to the locator with the oldest receipt date, ensuring FIFO
- Scans locator and item number
- Verify quantity
- Completes transaction



Ownership

- Transfer of ownership occurs
 - Move to a non-consignment subinventory
 - Outside processing
 - Cycle count loss
 - Internal transfer



BPA Customization -- Transfer of Ownership

- Creates miscellaneous issue transaction
 - Credits the inventory clearing account
- Creates a direct receipt using information stored on the custom table
 - Debit the inventory account
 - Debit or credit to purchase price variance
- Generates a unique packing slip number



BPA Customization -- Return to Stock

- Ownership does not transfer back to the supplier
- Store in raw material stock
- Picking logic directs wave pick to this locator first



Cycle Counting

- Consignment material is included in the on hand balance
- Included in cycle count compile
- Losses are recognized as a change in ownership
 - Generates miscellaneous issue and purchase order receipt
- Gains are treated the same as a return to stock



Set Up -- Subinventory and Stock Locators

- Added descriptive flexfield segment on Subinventory and Stock Locator
 - Consignment = Yes or No
 - If yes for the Subinventory, and if it is under locator control, then the flexfield on the Stock Locator form must also be set to yes for those locators that store consignment inventory items



Set Up -- Account Alias

- Add an Account Alias transaction type of Consignment
 - Allows for the accumulation of miscellaneous issues and receipts
 - Mapped to the inventory clearing account



Set Up -- AutoSource Rules

- Descriptive flexfield segments for incoming inspection criteria
 - Match revision level
 - QS9000 documentation requirement
 - Skip lot



Set Up -- AutoSource Rules

- Descriptive flexfield segment for Schedule Sharing™
 - Min/max inventory level code



Set Up -- AutoSource Rules

- Added descriptive flexfield segment for Consignment
 - When changed to yes, the next receipt becomes consignment
 - Allows for consignment and non-consignment inventory from the same supplier to be stored in the same subinventory
- Meets goals
 - Ability to start/stop at any time for any item/supplier, avoiding buy/sell back
 - Allows for multi-sourcing



Set Up Locations & Locators

- Set up locations for Incoming Inspection
- Set up corresponding Stock Locators



Custom Reports

- On hand inventory by supplier, by item, by locator
- All items on consignment based on AutoSource rule descriptive flexfield
Consignment = Yes
- Multiple sorts of a consignment report
 - By Item Number
 - By Buyer
 - By Supplier



Custom Reports

- Summary report for items received on consignment
 - Sorted by supplier
 - Details include item numbers and value at purchase order price
 - Total value



Custom Reports

- Reconciliation report
 - Detailed transaction history for a given period of time
 - Data stored in BPA flexfields on custom table
 - Include all transactions for a consignment item from initial receipt to transfer of ownership
 - Used to reconcile discrepancies between faxed data and supplier records



Custom Reports

- Modified Inventory Value Report
 - Subtotaled for consigned inventory and owned inventory values at standard frozen cost
 - Consigned inventory value should match the inventory clearing account used when generating miscellaneous receipts and issues
 - Used at month end by Cost Accounting to create a manual journal entry to subtract the consignment value from the inventory value balance sheet account



Benefits of Customized Solution

- Improved inventory turns
- Does not require a designated stockroom or subinventory for consigned material
- Is totally transparent to the user
- Provides information to the supplier
- Can turn on or off at any time without buy back or sell back



Future Enhancements

- Develop the capability to electronically transmit supplier transaction information on a daily basis
 - Generate an 861 EDI transaction (Receipt Acknowledgement) file to include:
 - Transactions received under consignment control from the miscellaneous receipt data (physical receipt)
 - Generate 867 EDI transaction (Product Transfer/Resale Report) to include:
 - Transactions pulled from receipted consigned inventory movements (ownership transfer)



Summary

Meet goals of the consignment program

- Transparent to the user
- Requires no special handling in Receiving
- Viewable as available in inventory
- Nettable and available for planning
- Can be cycle counted
- Item/supplier specific
- Track as an non-asset in general ledger
 - Manual journal entry is required
 - Purchase price variance information is captured



Linda Leslie

Motorola, Inc., AIEG

Seguin, Texas

830-372-7446

gims191@email.mot.com