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## **Don't Whine, Consign! Lower Your Inventory \$\$\$ Through Pay-on-Use.**

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*Motorola*

### **Introduction**

Consignment Inventory is a win-win solution for Suppliers who enjoy schedules unfettered by discrete orders and Customers who have virtually eliminated their onhand inventory dollars. Here's a unique solution which makes the entire process transparent to the users while providing all the right transactions to the GL.

### **Broad Requirements**

To provide a procedural and physical process whereby inventory is brought into factory stores and is not paid for (or change ownership) until it is disbursed to production.

### **Goals**

A seamless, transparent process for the users (Purchasing, Receiving, Stores, Accounting). A minimum of customization. No unique Items. Acceptable to both the Suppliers and the Customer's financial community. Increase inventory turns by a minimum of 25%.

### **Constraints**

Since this customer uses agency employees in their Stores and Receiving operations, the process must be made simple and transparent to the operator. This customer also uses a distributed EDI system with its suppliers called Schedule Sharing™. This system sends certain information such as Item, demand, on hand, min-max and receipts to the suppliers.

### **Internal Control Groundrules**

1. Procedures must be established to account for the movement of inventory and account for how the inventory is to be recorded and updated.

2. Any Billing Procedures established must be approved by Finance.
3. All A/P Procedures established must be approved by Accounts Payable.
4. Any Shipping and Receiving Procedures established must be approved by the respective Department Managers.
5. Documentation must be generated on how we account for shrink and adjust for it relative to Consignment material (including excess and obsolescence).
6. Consignment Material must be clearly segregated and secured from the Customer's inventory.
7. Established security procedures and Supplier access controls should be reviewed and approved by the Security Manager.
8. Established Supplier Agreements must be prepared by Supply Management and the Legal Department.
9. Consignment material must be confirmed and reconciled annually by the consignee.
10. No Consignment material will be transacted with the Federal Government unless approved by the Government Compliance Committee, Internal Control Manager and General Manager.
11. No Consignment material will be transacted with International Suppliers unless procedures have been established and approved by Traffic and Import Controls relative to customs laws and regulation.
12. Any Consignment material that is transacted must have ESIH approval.

### **Benefits to Supplier**

Factory scheduling independent of discrete purchase orders to take advantage of the

inherent efficiency gains of lot-size manufacturing.

### **Benefits to the Customer**

To be able to carry one to two weeks of "free" safety stock; a real benefit in a low-volume, high-mix manufacturing environment.

### **Downside To The Customer**

The Supplier may exceed established guidelines on inventory levels (creating problems if storage space is limited).

### **Business Environment at Motorola**

Four Factories, 12 Product Families 74 Product sub-Families. One Receiving Dock, Incoming Inspection for new or problem parts only, 29 Stockrooms, a remote Accounts Payable (which services several groups), 4 Production Purchasing Departments plus one MRO Purchasing Department. Frozen standard cost method with annual updates. Receipt variation accrued and spread by product.

### **Business Process (Summary)**

Material is received in house on a zero-costed Purchase Release and moved to a segregated, secured, Consignment Stores area. When the material is to be disbursed to a non-consignment stores location, a receipt is cut on a costed Purchase Release and delivered to the non-consignment stores location. The inventory in the Consignment Stores location is posted to a Consignment Clearing location.

### **Oracle Process (Summary)**

Create a Vendor and two Vendor Sites. Create a Purchase Agreement for each Vendor Site and a Purchase Release for each Agreement. The receipt for the first (zero-cost) Release is a Standard Receipt for the actual material. A Deliver transaction moves the material to Consignment Stores. When a disbursement occurs, a Standard Receipt is cut on the costed

Release followed by a Deliver to the destination stockroom. A SubInventory Transfer moves the item and quantity from the Consignment Stores location to the Consignment Clearing location.

### **Accounting Flow (Summary)**

The first (zero-cost) receipt creates a credit in the PPV account when Consignment Stores is debited. When the second (costed) receipt is posted to Inventory, dollars @ Frozen Standard Cost are moved from Consignment Stores to Consignment Clearing. A JV at closing moves the dollars from Consignment Clearing to PPV to offset the credit created by the zero-cost receipt. Any balance remaining in this account is "true" PPV.

### **Business Process (Detailed)**

A delivery of Consignment material shows up on the receiving dock. The bar-coded Purchase Agreement number is scanned on the carton (or packing slip) and the ENTER RECEIPTS form is populated with the Purchase Agreement/Release number, Item, Packing Slip, etc. Standard Receipt is selected and the quantity and Destination are entered and verified. When the material is put away in Consignment Stores, Item and Quantity are verified and a Deliver transaction is performed. When a disbursement from Consignment stores is requested, the ENTER RECEIPTS form is again accessed and the Item (NOT the PO number) is entered. Paging to the next form will display two Purchase Releases; one at zero cost and one costed. The identity of each is obvious by viewing the "Note to Receiver", previously entered on the Purchase Agreement. The costed Release is selected, Item and Destination verified, quantity entered and a Standard Receipt transaction is performed. When the material is physically received in the destination (non-Consignment) stockroom, the putaway person verifies the Item and quantity and performs a Deliver transaction. The operator then performs a SubInventory Transfer (for the Item and Quantity) from Consignment Stores to Consignment Clearing. This completes the business process.

## Modifications To Oracle Applications

Barcode functionality for ENTER RECEIPTS data entry is optional.

### New Accounts Required

One Consignment Clearing account and one Consignment Stores account.

### New SubInventories Required

Two new SubInventories are required; a Consignment Stockroom and a posting location for the Clearing Account.

### Modifying The Vendor

Create one Consignment Vendor and (at least) two Sites; I used 001 (our standard convention) for the costed Purchase Agreement and 999 for the zero-cost Purchase Agreement.

### Using Two Vendor Sites

We used one Vendor but two vendor sites per item as the Customer's Schedule Sharing™ process is site specific and they did not want to send receipt data on the costed Purchase Orders.

### Using Two Purchase Agreements

We use two Purchase Agreements for the same item; one at zero cost and the other at contract cost. Each Purchase Agreement is placed on the same Vendor but a different site (see above).

### Creating the Purchase Agreements

On the form: Enter Purchase Agreements, tab down to Additional Purchase Agreement Header Information and QuickPick to Brief Notes. For the zero-cost Agreement, type in: "Caution! Zero Cost Receipt!", in the Notes to Receiver section. For the Costed Agreement, type in: "Costed Receipt" in the Notes to Receiver section. Be sure all Destinations are filled in and correct.

## Creating the Releases

On the form: Enter Releases, page down to Release Distributions. On the Destination flexfield for the zero-cost Release, insert the Consignment Stores location in the SubInventory field. For the costed Release, insert the SubInventory location most closely associated with the material immediately prior to pick.

### Accounting Flow (zero-cost Receipt)

Frozen Standard Cost = \$9.00		
Purchase Agreement Cost = \$0.00		
Material is received @ zero cost:		
Liability		0
Receiving-inspection	0	
Material moves from Receiving-inspection to Receiving-inspection:		
Receiving-inspection		9
Consignment Stores	9	
The Receiving-inspection account is balanced with a credit to PPV:		
PPV		9
Receiving-inspection	9	

### Accounting Flow (Costed Receipt)

Frozen Standard Cost = \$9.00		
Purchase Agreement Cost = \$8.00		
A Receipt is cut @ Agreement cost:		
Liability		8
Receiving-inspection	8	
Receipt moves from Receiving-inspection to Inventory:		
Receiving-inspection		9
Inventory	9	
The Receiving-inspection account is balanced with a credit to PPV:		
PPV		1
Receiving-inspection	1	

## Accounting Flow (Clearing)

Material is posted from Consignment Stores to Consignment Clearing:

Consignment Stores		9
Consignment Clearing	9	

## Accounting Flow (Closing)

The zero-cost PPV credit is cleared:

Consignment Clearing		9
PPV	9	

Balances after closing are:

Liability	(8)
Inventory	9
PPV	(1)
Receiving-inspection	0
Consignment Stores	0
Consignment Clearing	0

## Positive Cycle Counts

A physical overage in Consignment Stores is a result of either an excess physical receipt which was not caught by Receiving or Putaway or a physical under-disbursement. A positive cycle count is performed and the Supplier will eventually get paid for the difference.

## Negative Cycle Counts

If the physical count in Consignment Stores is less than the SubInventory balance, a Direct Receipt (on the Costed Release) is cut to the destination tied to the P&L write-off account and a negative no-charge adjustment is made to Consignment Stores. This adjusts the SubInventory balance and pays the Supplier.

## Training Required

Consignment stores personnel are trained to do a Consignment disbursement and Negative Cycle Count.

## Problems

Receipt (Deliver) of Consignment material to non-consignment stores and receipt (Deliver) of non-Consignment material to Consignment Stores due to a return from another plant or a Tape & Reel Supplier. In either case, the receipts are backed out and re-Delivered.

## Results At Motorola

In four months, turns on Consignment items increased from 16 to 52.6 and Total Inventory turns increased from 7.7 to 11.4.

## Future Modifications

- A new form: "Enter Consignment Disbursements" combining Enter Receipts and SubInventory Transfer.
- Form security for Consignment Stores personnel only.
- A procedure to automatically perform the SubInventory Transfer triggered by the Note To Receiver on the Costed Receipt.

## Supplier Agreement #1 (General)

1. The Supplier shall consign to a mutually agreed location on the Customer's premises (and hereafter referred to as "Shared Inventory Site") the mutually agreed upon parts and inventory levels as established in the Schedule Sharing™ System.
2. The components shipped to the Shared Inventory Site for storage shall be hereafter referred to as "Shared Inventory".
3. The Customer Segment Partnership Agreement applies to all Shipping and Shipping Costs.
4. The Supplier will keep title to the Shared Inventory while in transit to the Customer and while in the Customer's Shared Inventory site. Title will pass to the Customer when the Shared Inventory is issued from the Shared Inventory Site or when the Shared Inventory is lost, stolen, damaged, or destroyed by any cause while at the Customer's Shared Inventory Site.

5. Material lost, stolen or damaged while in transit to the Customer's Shared Inventory Site shall be covered under the Rapid-NET agreement where applicable, otherwise standard terms and conditions apply.
6. Upon receipt of each shipment of Shared Inventory, the Customer shall cause it to be placed in storage at the Shared Inventory Site. The Customer shall be liable for the security of the Shared Inventory.
7. The Customer shall consume the Shared Inventory on a "first in, first out" basis, using receipt date at the Shared Inventory Site.
8. The Customer shall, at a mutually agreed to frequency, send to the Supplier, by electronic transmission, a confirmation of the quantities and Customer Part Number of Shared Inventory received into Shared Inventory.
9. Physical removal of Shared Inventory from the Shared Inventory Site constitutes the sale to and purchase by the Customer of the quantities so removed, and title to such removed quantities shall pass to the Customer upon removal.
10. At a mutually agreed upon frequency, the Customer will send to the Supplier, by electronic transmission, a confirmation of the quantities and Customer Part Number of Shared Inventory removed. For record keeping purposes, the confirmation will include the Customer purchase order number. Upon receipt of the transaction, the Supplier shall invoice the Customer for the removed Shared Inventory. Note: For Customers that Pay From Receipt, the transmission shall include a unique identifier for each item of consumption. This identifier shall be used by the Supplier as the invoice number to match to the Customer's payment. No invoice is sent to the Customer.
11. Within two working days after any Shared Inventory is identified as lost, stolen, damaged or destroyed, the Customer will notify the Supplier of quantities and Customer Part Numbers of Shared Inventory lost, stolen, damaged or destroyed. Upon receipt of notification, the Supplier will invoice the Customer for these items. Note: For Customers that Pay From Receipt, the transmission shall include a unique identifier for each item that is lost, stolen or damaged. This identifier shall be used by the Supplier as the invoice number to match to the Customer's payment. No invoice is sent to the Customer.
12. If after 90 days from receipt of Shared Inventory into the Shared Inventory site, no quantities have been sold to the Customer, the Supplier and the Customer shall meet to review the device's requirements and a determination shall be made within 2 weeks from the meeting date regarding the material disposition.
13. The Customer shall issue to the Supplier a weekly Schedule Sharing transmission for each of the part numbers covered by this Agreement containing the following information: New forecasted demand, Shared Inventory received since last forecast, total inventory, to include Work-In-Process inventory on the production line (if available and accurate) and product in all other banks owned by the Supplier or the Customer.
14. The Supplier shall review the weekly forecast to determine the quantities of Shared Inventory which it will ship to the Customer's Shared Inventory Site.
15. To be eligible for the Shared Inventory program, devices must meet the following criteria in addition to criteria mentioned elsewhere in this agreement:
  - The Customer must procure 100% of devices from the Supplier.
  - Devices must be on the Customer contract.
  - Additional criteria may be established for each individual location. This criteria shall be documented and agreed upon in the Shared Inventory Manual for that location.
16. During the term of this Agreement, the Supplier and the Customer shall meet monthly to review/revise stocking levels (minimums and maximums) and delivery schedules for Shared Inventory.

17. Upon mutual agreement, the Supplier and the Customer may also decide to return some portion of the Shared Inventory from the Customer's Shared Inventory Site to the Supplier. Requesting party will pay the Freight.
18. Inventory shall not be returned from the Customer's WIP to the Shared Inventory location without an RMR from the Supplier.
19. The Customer agrees to pay the contract price in effect at the time the product is pulled from the Shared Inventory, or at the time the product is identified as lost, stolen, damaged or destroyed.
20. The Customer may remove from the Shared Inventory Site no less than the pre-packaged Minimum Package Quantity (MPQ), and in increments of the MPQ thereafter. If the tamper seal is broken, then the entire pre-packaged quantity shall be deemed purchased by the Customer.
21. Payment Terms shall be negotiated for parts on the Shared Inventory program and may be different from the Payment Terms in the current Partnership Agreement.
22. Upon reasonable prior notice by the Supplier, the Customer shall permit the Supplier, through a Supplier employee, to physically inspect the Shared Inventory at the Shared Inventory Site.
23. Upon such examination, the Supplier shall notify the Customer of any inventory discrepancies. If the Customer is unable to reasonably account for such inventory within ten (10) days, the Supplier may invoice the Customer for such inventory at the agreed upon contract price for such Shared Inventory, and the Customer shall pay the Supplier any invoiced sum.
24. The Customer shall be responsible for the reporting and payment of personal property taxes, if any, on such Shared Inventory stored at the Customer's Shared Inventory Site and any sales, use or other taxes except those based on the Supplier's income.

25. This Agreement shall not be amended or modified except through a written statement, signed by duly-authorized representatives of the parties.

### **Supplier Agreement #2 (Terms)**

1. Terms of payment for Shared Inventory material shall be based upon the inventory turns of the Shared Inventory stock for the Customer and the percentage of total dollar value purchased from the Supplier in Shared Inventory stock.
2. Inventory turns will be evaluated on a quarterly basis by the Customer's Materials Manager and reviewed by both the Supplier and the Customer's Accounting Manager. The terms of payment will then be adjusted based upon any changes in inventory turns.
3. The percent of the Supplier material that is part of the Shared Inventory program will be evaluated quarterly by the Customer's Materials Manager and reviewed by both the Supplier and the Customer's Accounting Manager.
4. Notification of changes in the terms of payment will be sent to the Accounts Payables Manager by the Customer's Accounting Manager.
5. Calculation of payment terms based on percentage of the Supplier material in Shared Inventory and the number of inventory turns:

<u>% of \$</u>	<u>Avg. # of Days</u>	<u>Terms</u>
100	14	16 Days
75-99	14	20 Days
50-74	14	23 Days
25-49	14	27 Days
0-24	14	30 Days

This calculation of the average number of days in inventory is based upon Q4, '96, annual consumption numbers. If the average number of days in inventory were to decrease, the payment terms would increase by the same number of days in relation to the base number of 14 days in inventory. Terms in days were calculated using a weighted average of the % of inventory in Shared Inventory and the Supplier material that is not Shared Inventory:

example.....

50%-74% Inventory is Shared:
.50 * 16 Days == 8 Days
.50 * 30 Days == 15 Days
Total Days == 23 Days

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### **About the Author**

Jack Robert is a Strategic Planning Business Manager with the Radio Products Group at Motorola. He has over 30 years of Materials Management and Procurement experience and has worked with Oracle Applications for one year. He is currently a member of the Oracle Applications implementation team in Plantation, Florida.