Inventory Management

Specifications & Guide to Use

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NOTICE

Inventory Transaction Codes

This table defines and list the valid Transaction Codes used through the inventory to identify each type of transaction that is included in the Inventory Transaction History Table. These are maintained in the Transaction Code Table. Each transaction that affects inventory balances, with or without other functions, is written to the Inventory Transaction History Table to create a full audit trail for all events that can affect the on-hand balance, warehouse, or location within a warehouse, to enable reconstruction of prior on hand balances and to identify clearly all incoming and outgoing material. The general format of the Codes is one letter for each of the terms describing its functions.

Trans-action Code	Transaction Description	Table(s) Updated	Comments
AMTS	Accept & Move to Stock	Receiving Lot, Inventory	Replaced by RMTS & R/I acceptance screen
RMTS	Receiving Move to Stock	Receiving Lot, Inventory	Replaced AMTS
LTLM	Location to Location Move	Inventory	Replaced by LLMO & LLMI
LLMO	Loocation to Location Move Out	Inventory	replaces LTLM
LLMI	Location to Location Move In	Inventory	replaces LTLM
MSRC	Miscellaneous Receipt	Inventory	
MSIS	Miscellaneous Issue	Inventory	
WOPC	Work Order Pick Complete	Work Order Material, Inventory	
WOPS	Work Order Pick Shortage	Work Order Material, Inventory	
WOAI	Work Order Attrition Issue	Work Order Material, Inventory	not programmed
WOCB	Work Order Credit Back	Work Order, Inventory	
WODM	Work Order to MRB	Work Order Material, Inventory	new transaction, linked to DMR
INDM	Inventory to DMR	Inventory, DMR	new transaction, linked to DMR

DMSC	Scrap DMR Inventory	Inventory, DMR	New transaction, linked to DMR
DMIN	DMR to Inventory	Inventory, DMR	
WCMS	Work Order Complete & Move to Stock	Work Order, Inventory	
SOIS	Sales Order Issue & Ship	Inventory	Not linked to any order; similar to Misc. Issue.
PNCO	Part Number Change - Out	Inventory	
PNCI	Part Number Change - In	Inventory	
WXFO	Warehouse Transfer Out	Inventory	
WXFI	Warehouse Transfer In	Inventory	
CCAJ	Cycle Count Adjustment	Inventory, Cycle Count Master	
DMLO	DMR Location to Location Move Out; paired with DMLI	Inventory, DMR	
DMLI	DMR Location to Location Move In, paired with DMLO	Inventory, DMR	
DMRI	DMR to Rework WO Issue	DMR, Inventory, Work Order, WO Material	
DMRT	Move from Rwk WO back to DMRT	DMR, Inventory, Work Order, WO Material	
INWC	Issue to Work Center Inventory	Inventory, Work Center Inventory	not programmed
WCIN	Credit back from Work Center to Inventory	Inventory, Work Center Inventory	not programmed
PCBF	Production Completion & Backflush	Inventory, Work Center Inventory, Open Work Order, WO Material	not programmed Completes WO, issues mtl from w/c to WO Mtl, updates Inv.

COIS	Customer Order Issue & Ship	Inventory, To Be Picked, Order detail Shipment	Issues, ships in one TX, MER order type.
CISG	Customer Order Issue & Stage	Inventory, To Be Picked, Order Detail, Staged	Issues items to order, not shipped, held in Staged
INSG	Issue To Staged	Inventory, To Be Picked, Staged	Issues items to staging area (not shipped, not to Cust. Ord. - FG product, volume shipping
RIWO	Receive & Issue to Work Order	Receiving Lot, Rec. Trans Hist, Work Order Material, PO	not programmed - receives to PO & issues to WO in one screen

Receipt to Dock Transaction

Revised 10/7/93 - additional changes for O/Mfg Work Order functions
CHANGED 5/12/94 - changes for multiple product completion

Screen Data:

Receiver Number

PO Number
PO Type Code (display only)
Vendor Name (display only)
Packing Slip No.
Number ofCartons Received

L/I	Part No.	Desc	Pur U/M	Stk U/M	Balance Remaining
(display only >>>>>>>>>>>>>>>>>>>>>>>>)					

Delivery Schedule Status for line item:

Delivery Date	Quantity Scheduled	Quantity Applied	Quantity Due
(display only >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>)			

L/I Quantity Received
Transaction Comments
Work Order No. (Production PO's)
Delivery To (Expense PO's)

User-ID (display only)
Date/Time (display only)

Print Receiving Report? (Y/N)

Next Receiver Same PO No.? (Y/N)

Outside Manufacturing PO Options:

1. Receive Items into Receiving Inspection for inventory storage.
2. Receive Items directly to a Next Higher Assembly Work Order
3. Receive Items Drop Shipped to Another Vendor

Options 1 — Popup Screen Data:

Completing Work Order Number
From Operation Number (display only)
From Operation Description (display only)

From Work Center ID (display only)
From Work Center Description (display only)
From Operation Quantity Moved/Completed to date (display only)
QtyReceived /Moved This Transaction (display only)
New Operation Qty Moved/Completyed to date (calculated display only)

Option 2 — Popup screen data

Completing Work Order Number
From Operation Number (display only)
From Operation Description (display only)
From Work Center ID (display only)
From Work Center Description (display only)
From Operation Quantity Moved/Completed to date (display only

Next Higher Assembly Work Order No.
Parent Part Number (display only)
Description (display only)
Unit of Measure (display only)
Linking Operation No.
Linking Operation Description (display only)
Linking Work Center ID (display only)
Linking Work Center Description (display only)

Option 3 — Popup Screen Data:

Work Order Number
From Operation Number
From Operation Description (display only)
From Work Center ID (display only)
From Work Center Description (display only)
From Operation Quantity Moved/Completed to date (display only)
To Operation Number
To Operation Description (display only)
To Work Center ID (display only)
To Work Center Description (display only)
To Operation Quantity Moved/Completed to date (display only)

Functional Logic

CHANGE SUMMARY - 5/12/94

Program is revised to handle Multiple Product Part Numbers:
When receiving an Outside Manufacturing PO, program checks part master record for designation as a Multiple Product Part Number status, then prompts for selection of the power supply code to be selected, then retrieves the associated part number to be received. Once Receiving function has identified the PO Line Item, then the associated Work Order is retrieved, and from its

Multiple Products List the user is prompted to select a power supply code and associated completing part number. The L/I P/N is used to update the PO L/I and the WO Header information, and the completing part number appears on the receiving lot master record and printed receiving report/traveler.

Receiving Options - changes:

- Receiving Inspection option- as described above.
- NHA Link option - as described above, except that issue to work order is updated with the completing part number also.
- WO Operation Move option - power supply designation not allowed during Work in process operation to operation move; only when WO is completed.

Screen Changes:

Add screen fields

Power Supply - accessible only if Part Number is a MPA?=Yes part number. Otherwise, cursor skips the field.
Completing Part Number - display only at all times.

Change screen labels of existing Part Number fields to "L/I Part Number"

During Line Item screen, once PO L/I is selected, program at this point retrieves the default work order number, to obtain its multiple product list. Require entry in the Power Supply field, and based on the selection, retrieve the associated Completing Part Number and display it. The Quantity Received field must be of this completing Part Number. If the cursor is on the Power Supply field, the F2 key brings the multiple product list (power supply codes, and associated part number data) to the popup window.

Work Order screen display and validation remains unchanged, although posting is changed.

When the F9 key is pressed, each window is saved, until the first window is saved and the pre-save process is started. The following additional steps are added, modified, or are described for clarification:

- In the Work Order record, the Quantity Received is added to the Actual Quantity Completed field in the header information.

- For the completing part number (power supply code selected), add the Quantity Received to the corresponding Power Supply Quantity Completed in the Multiple Product list in the Open Work Order record.

- Use the Completing Part Number when creating the Receiving Lot Master record in its part number field (not the PO L/I Part Number), and the associated Receiving Transaction History record.

- The Quantity Received is added to the PO L/I's Quantity Received for the PO L/I Part Number (even though its associated part number is the non-power supply designated part number).

- If the NHA Link option was selected, the Completing Part Number is used to select the required part number in the Issue To Work Order's work order material record, and against which to post the quantity received & issued, and it is the same part number that appears in the WIP Material Transaction History record for the issue quantity.

END OF 5/12 CHANGE:

CHANGE SUMMARY: (updated to 10/7 changes)

Added Data fields to Receiving Lot Master record:

NHA Work Order No.
NHA Operation No.
Moved From Opn No.
Moved To Opn No.

1. Program revised to retrieve the Outside Manufacturing Standar Unit Cost from the Routing Master record, using the Purchased Routing, Purchased Operation No. data that was added to the PO Header Data portion of the PO record. This replaces previous logic using either the Part Master or the From Operation Number. If Part Exception data exists, the program will use it. If not, then the Operation Outside Manufacturing Unit Standard Cost is used.

2. Work Order Operation Move Option - in the process of receiving for PO Types DO and FO, (outside manufacturing types) if the Work Order Move option is taken, the program stores the Moved From Operation No. and the Moved To Operation No. in new data fields (defined above), in the Receving Lot Master record, sets the Move to Stock? flag to "N", and prints a message on the

Receiving Traveler reminding the user that these items are not in receiving inspection and may not be moved to stock, and includes the work order operation that they were moved to. The Work Order Number used for the move is stored in the existing Work Order number field in the Receiving Lot record.

3. Work Order Next Higher Assembly Link Option - in the process of receiving for PO Types PO and FO (outside manufacturing types) if the Work Order NHA Link option is taken, the program stores the NHA QWork Order and NHA Operation No. in new fields in the Receiving Lot Master record, sets the Move to Stock? flag to "N", and prints a message on the Receiving Traveler reminding the user that these items are not in receiving inspection and may not be moved to stock, and includes the NHA work order operation that they were issued to. The Completing Work Order number is stored in the existing Work Order field in the Receiving Lot record.

The screen's functions are modified to allow the user to select between a last operation on the Completion Work Order that is a primary number, and a last operation for the primary one that is an alternate, i.e., has a decimal value, making it the numerically largest and therefore last operation.

Also edits are added to prevent the Quantity Received from being greater than the quantity remaining at the last operation, which may be either of the last two as defined above.

4. Receiving Inspection Option -

The screen's functions are modified to allow the user to select between a last operation on the Work Order that is a primary number, and a last operation for the primary one that is an alternate, i.e., has a decimal value, making it the numerically largest and therefore last operation.

Also edits are added to prevent the Quantity Received from being greater than the quantity remaining at the last operation, which may be either of the last two as defined above.

End Change Summary

- This screen allows Receipt to Dock of all six PO Types, modifying its functions depending on the PO Type Code. The types include:

- Domestic Production PO's
- Foreign Production PO's
- Domestic Expense PO's
- Foreign Expense PO's
- Domestic Outside Manufacturing PO's
- Foreign Outside Manufacturing PO's

Since the PO data for foreign currency functions is converted to US$, the only essential differences are between the expense type, production material, and outside manufacturing types.

The screen functions are as follows:

- First, the screen displays the next numerically higher Receiving Lot record number, the Receiver Number. The number is obtained by reading the Next Receiver Number Global parameter record from the Global Parameters table, incrementing it by one, then rewriting it. If the screen is exited without saving (and using this number) this receiving number is simply skipped. This will enable multiple receiving operations to run concurrently without conflicts.

- Next, the screen prompts for entry of a PO number, or selection of a valid, open PO from a pop-up window containing PO number, Vendor ID. Retrieval of the PO will also determine remaining screen functions, depending on the PO Type Code in the PO record.

- Retrieve and display Vendor Name using Vendor ID from the PO record, from the Vendor Master file.

- Packing Slip Number and Number of Cartons, which apply to all items received at this time may be entered, optionally.

- Entry (mandatory) of Line Item number, which may be selected from the PO record via a popup window containing line item number, part number and description.

- Line item related data is retrieved from the PO record, then displayed, including L/I Part Number, Description, Purchase & Stocking Units of Measure, and the Balance Remaining.

NOTE: The relationship between line item balance remaining and delivery quantities is handled by posting all quantities received at the line item level, then applying these quantities to the oldest delivery date first. This screen

and all determination of quantities due elsewhere in the system calculates the quantity remaining due for any delivery increment by simply subtracting the quantity received for the line item from each successive delivery date's quantity until a delivery increment is reached where the Delivery Quantity minus the remaining unapplied quantity received is greater than zero. This allows the delivery schedule to be modified after some quantities are received. Since the delivery schedule status is a calculated table, not hard data fields, the quantities already received are simply re-applied to the new delivery schedule.

The following example illustrates this process:

Line Item Quantity Ordered = 100 units
Line Item Quantity Received to Date = 45 Units

Delivery Schedule Status:

Delivery Date	Quantity Scheduled	Quantity Applied	Quantity Due
1/15/99	25	25	0
2/15/99	25	20	5
3/15/99	25	0	25
4/15/99	25	0	25

- The screen displays the delivery schedule status as shown above, before the Quantity Received (for this receipt) is entered, then applies this quantity to the display, updating it to show the new delivery schedule status after the receipt is posted to the PO.

- Entry (mandatory) of Line Item Delivery Quantity Received. This quantity may not be larger than the Line Item Balance Remaining plus the PO Receive % Filter amount (Balance Remaining X PO Receipt % Filter). The screen displays a message if the quantity is exceeded and re-entry is allowed.

From this point on, the screen functions depend on the PO Type Code.

Production Material PO's — If the PO Type Code is Foreign or Domestic Production Material, then the following functions are performed:

- Allow entry to the Work Order Number field. It may be blank, but if entered, it must be a valid Work Order in the Open Work Order table.
- Allow only one Line Item per Receiver Number and Receiving Lot record.
- The Print Receiver option is disabled.
- Allow the option, Next Receiver Same PO Number?, which causes the program to carry forward all PO header information, including packing slip data, to the next Receiving Number screen. This allows the user to go directly to the next line item's data when receiving shipments containing multiple line items on the same PO.
- Upon saving the screen with the F9 key, the program performs the following functions:

    - Creates the Receiving Lot record, including:
        - From the Part Master table for the L/I part number, copy the Current Standard Material Cost into the record.
        - From the PO, copy the PO Line Item US$ Unit Cost into the record.
        - Set the Move to Stock? flag to Y (yes) in the record.
    - Quantities recorded are in terms of the Purchase Unit of Measure. Conversion to Stocking Unit of Measure occurs when the items are moved into Inventory.
    - In the PO record, adds the Line Item Quantity received to the PO Line Item Quantity Received.
    - In the PO record, if the Line Item Quantity Received is equal or greater than the Line Item Quantity Ordered (balance due is less than or equal to zero), for all line items on the PO, then sets the PO Closed? flag to Y (closed).
    - In the Inventory table record for this part number, adds the Line Item Quantity Received to the Quantity In Receiving Inspection.
    - Creates a Receiving Transaction History record, Type REC for the Line Item being received.
    - Prints the Receiving Report.
    - Retains PO header data on the screen if the option was selected.

<u>Expense PO's</u> — If the PO Type Code is Foreign or Domestic Expense, then the program performs the following functions.

- The screen allows entry of multiple line items under the same Receiver Number. These are displayed in scrollable columns on the screen.
- Changes are allowed to the Delivery To field.
- Entry is not allowed to the Work Order Number field.

- The option to Print Receiving Report (default is Yes) is allowed. If No, the printing routine is skipped when the screen is saved.
- Upon saving the screen with the F9 key, the program performs the following functions:

    - Creates the Receving Lot record, including:
        - Sets the Move to Stock? flag to No in the record.
        - Stores all Line Items received in the same Receiving Lot record.
    - In the PO record, adds the Line Item Quantity received to the PO Line Item Quantity Received.
    - In the PO record, if the Line Item Quantity Received is equal or greater than the Line Item Quantity Ordered (balance due is less than or equal to zero), for all line items on the PO, then sets the PO Closed? flag to Y (closed).
    - Creates a separate Receiving Transaction History record, Type REC for each of the Line Items received, using the same Receiver Number.
    - Prints the Receiving Report, if the option was selected.

Outside Manufacturing PO's — If the PO Type Code is Foreign or Domestic Outside Manufacturing, then the program performs the functions described below.

NOTE: All Outside Manufacturing PO Receipts include a mandatory Work Order Operation Move function, in order to report the movement of previously issued and moved material. This will involve one of three alternatives, as shown by the options on the screen.

- The screen displays the options, allowing selection of one. The program functions depend on this selection and are as follows:

Option 1 - To Receiving Inspection/Stock

- The screen prompts for entry of a Completing Work Order Number, which must be in the Open Work Orders Table. Selection from a popup window containing only open work orders where the Parent Part Number matches the PO Line Item Part Number is allowed. The Parent Part Number of the Work Order entered must match the PO Line Item Part Number being received. If not, an error message is displayed and reentry is allowed.

- Upon entry of the Work Order Number, the program retrieves the last Operation Number in its routing and displays it as the From Operation. Its

data, including Operation Description, Work Center ID & Description, and Quantities Moved/Completed, which includes the PO LIne Item Quantity Received, are also displayed.

CHANGE 10/7:

Compare the Received Quantity to the Quantity Remaining at the last Operation on the Work Order. The last operation may be an alternate operation number, i.e., one with a decimal value. If a quantity has been moved into the last operation which is an alternate, that operation number will have been added to the Open Work Order record's operation list.

Reject a transaction where the Received Quantity is greater than the Quantity Remaining at the last operation on the work order.

The last operation may, in effect, be either the last primary operation number, i.e., with zero decimal value, or some units may have been moved to an alternate operation, one with a decimal value. Units being moved to stock may come from either of these. The default value should always be the operation number with the greatest total value, i.e., an alternate to the largest (last) primary operation number.

Modify the screen to allow the user to select between either last operation, using the preceding definitions, when the Receiving Inspection option is taken.

In either case, the Received Quantity may not be greater than the Parent Part Number Quantity Remaining. Quantity Remaining equals the Planned Completion Quantity minus Quantity Completed minus Parent Quantity Scrapped.

End of Change for 10/7

- When the screen is saved with the F9 key, the program performs the following functions:
    - Creates the Receiving Lot record, including:

CHANGES:

Use the PO Header data Purchased Routing, Purchased Operation and and Line Item Part Number to retrieve the Outside Manfacturing Unit Standard cost from the Routing Master table:

Route Name = Purchased Routing

Operation No. = Purchased Operation No.

Exception Part Number = Line Item Part Number (if Exception Part Number is not present that equals the L/I Part Number, use the O/Mfg Standard Unit Cost for the Operation No.

The program stores the resulting cost data in the Receiving Lot master record's Unit Standard Cost field. The contents of this field must not be the Outside Manufacturing Unit Standard Cost from the Part Master table.

This logic replaces the previous use of the From Operation number as the source of the Receiving Lot master record's Unit Standard Cost field or use of the Part Master data.

Store the Completing Work Order Number and Moved From Operation Number (which is the Work Order's last operation number), in the corresponding field in the Receiving Lot master record.

End of Change.

- From the PO, copy the PO Line Item US$ Unit Cost into the record.
- Set the Move to Stock? flag to Y (yes) in the record.)

- In the PO record, adds the Line Item Quantity received to the PO Line Item Quantity Received.
- In the PO record, if the Line Item Quantity Received is equal or greater than the Line Item Quantity Ordered (balance due is less than or equal to zero), for all line items on the PO, then sets the PO Closed? flag to Y (closed).
- In the Inventory table record for this part number, adds the Line Item Quantity Received to the Quantity In Receiving Inspection.
- Creates a Receiving Transaction History record, Type REC for the Line Item being received.
- Prints the Receiving Report.
- In the Work Order record, performs the following functions:

- Adds the Quantity Received to the Operation Quantity Moved Complete for the From Operation Number.
- Adds the Quantity Received to the Parent Part Number Quantity Completed and Moved to Stock.

- Creates a WIP Material transaction History record, (WIP Material Transaction Code MVWO), to record the movement.

Option 2 — Receive Directly to NHA Work Order

In this option, the user may by-pass the receiving inspection and storeroom functions, and move the items directly to a next higher assembly work order. This function involves two work orders, and in effect completes the lower level work order and issues the same item as a component to the next higher level one. This is for situations where items are coming in from a outside manufacturing vendor, but are to be delivered directly to the production line. Quality control functions are presumed to have been accomplished as a step in the routing.

- The screen prompts for entry of a Completing Work Order Number, which must be in the Open Work Orders Table. Selection from a popup window containing only open work orders where the Parent Part Number matches the PO Line Item Part Number is allowed. The Parent Part Number of the Work Order entered must match the PO Line Item Part Number being received. If not, an error message is displayed and reentry is allowed.

- Upon entry of the Work Order Number, the program retrieves the last Operation Number in its routing and displays it as the From Operation. Its data, including Operation Description, Work Center ID & Description, and Quantities Moved/Completed, which includes the PO LIne Item Quantity Received, are also displayed. The Work Center data is displayed so the user can verify that the Work Center is in fact the outside manufacturing vendor that performed the work, or a suitable alternate, i.e., it is not an internal or in-transit work center.

CHANGE 10/7:

Compare the Received Quantity to the Quantity Remaining at the last Operation on the Completing Work Order. The last operation may be an alternate operation number, i.e., one with a decimal value. If a quantity has

been moved into the last operation which is an alternate, that operation number will have been added to the Open Work Order record's operation list.

Reject a transaction where the Received Quantity is greater than the Quantity Remaining at the last operation on the completing work order.

The last operation may, in effect, be either the last primary operation number, i.e., with zero decimal value, or some units may have been moved to an alternate operation, one with a decimal value. Units being moved to stock may come from either of these. The default value should always be the operation number with the greatest total value, i.e., an alternate to the largest (last) primary operation number.

Modify the screen to allow the user to select between either last operation, using the preceding definitions, when the NHA Link option is taken.

In either case, the Received Quantity may not be greater than the Parent Part Number Quantity Remaining. Quantity Remaining equals the Planned Completion Quantity minus Quantity Completed minus Parent Quantity Scrapped.

End of Change for 10/7

- Entry of the Next Higher Assembly Work Order Number and Operation Number, which becomes the Linking Operation Number, is allowed, or selection of one from the work order popup window.

- The program checks to determine if the Parent Part Number of the Completing Work Order Number (which matches the Part Number being received on the PO) is a Material Required Part Number on the NHA Work Order. If it is not, a warning message is displayed informing the user that the part number that is to be linked is not required on the NHA Work Order. The user may choose to override this message, causing the program to add it to the NHA Work Order's Material Required Part Number list.

- When the Linking Operation number is selected and is valid, the related operration description, work center ID and description are displayed.

- Upon saving the screen with the F9 key, the program performs the following functions:

- Creates the Receiving Lot record, including:

CHANGES:

Use the PO Header data Purchased Routing, Purchased Operation and and Line Item Part Number to retrieve the Outside Manfacturing Unit Standard cost from the Routing Master table:

Route Name = Purchased Routing

Operation No. = Purchased Operation No.

Exception Part Number = Line Item Part Number (if Exception Part Number is not present that equals the L/I Part Number, use the O/Mfg Standard Unit Cost for the Operation No.

The program stores the resulting cost data in the Receiving Lot master record's Unit Standard Cost field. The contents of this field must not be the Outside Manufacturing Unit Standard Cost from the Part Master table.

This logic replaces the previous use of the From Operation number as the source of the Receiving Lot master recor's Unit Standard Cost field or use of the Part Master data.

Store the NHA Work Order Number and the associated NHA Operation No. in the corresponding fields in the Receiving Lot master record.

Set the Move to Stock? flag to "N"

End of Change

- From the PO, copy the PO Line Item US$ Unit Cost into the record.

- In the PO record, adds the Line Item Quantity received to the PO Line Item Quantity Received.
- In the PO record, if the Line Item Quantity Received is equal or greater than the Line Item Quantity Ordered (balance due is less than or equal to zero), for all line items on the PO, then sets the PO Closed? flag to Y (closed).

- Creates a Receiving Transaction History record, Type REC for the Line Item being received.

- Prints the Receiving Report.

CHANGE: on the Receiving Report, print the information "Items Issued Directly to Work Order xxxxxx. Not placed in Receiving Inspection. May not be moved to Stock."

The Work Order number is the NHA work order entered on the screen.

End of change.

- In the Work Order record for the Completing Work Order Number, performs the following functions:

    - Adds the Quantity Received to the Operation Quantity Moved Complete for the From Operation Number.
    - Adds the Quantity Received to the Parent Part Number Quantity Completed and Moved to Stock.

- In the Work Order record for the Next Higher Assembly Work Order, performs the following functions:

    - Adds the Quantity Received to the Actual Quantity Issued for the component part number where PO Line Item Part Number equals the Material Required Part Number. If there is no match, the part number is added to the Material Required list, with the Quantity Required equal to zero.

- Creates a WIP Material transaction History record, (WIP Material Transaction Code LKWO), to record the movement.

<u>Option 3 — Drop Ship/Move</u>

This popup screen allows entry of operation number data for the movement from one operation to the next on the work order's routing. All moves occur by updating information in an Open Work Order record. The quantity being moved is the Line Item Quantity Received.

As with the normal Work Order Operation Move transaction, the user has the option to move the material to either a primary operation, defined in the routing as ending with the decimal value .0, or to an alternate operation at that point in the sequence, or directly to another operation in the same routing, jumping in effect over other operations in either direction in the routing.

Screen functions are as follows:

- The screen prompts for entry of a Work Order Number, which must be in the Open Work Orders Table. Selection from a popup window containing only open work orders where the Parent Part Number matches the PO Line Item Part Number is allowed. The Parent Part Number of the Work Order entered must match the PO Line Item Part Number being received. If not, an error message is displayed and reentry is allowed.

- The selected Work Order record is retrieved and the Parent Part Number, Description and Unit of Measure are displayed.

- Upon entry of the From Operation Number, the program displays the From Operation data, including Operation Description, Work Center ID & Description, and Quantities Moved/Completed, which includes the Quantity Received. The From Operation must be in the routing for the Work Order, and can be selected from a popup window containing routing steps for that Work Order number. Only primary operation numbers are stored in the Work Order. Alternate operations are defined in the Routing Master table for the parent part number's routing. but when used, are added to the Work Order's list.

- The screen next prompts for entry of the To Operation Number, which can be any of the following options:

    - The next primary operation number. For example, if the From Operation Number is 2.0, the next primary operation number could be 3.0.

    - An alternate operation may be selected by choosing the Alternate Operation? function. This causes the program to retrieve the Alternate Operation data from the Routing Master File for the Parent Part Number's Route Name. Alternate operations may be selected as follows:

- An alternate operation at the same operation. For example, if the From Operation Number is 2.0, operation 2.3, an alternate could be selected.

- An alternate operation in the next operation set. For example, if the From Operation Number is 2.0, the items could be moved to operation 3.2, an alternate to operation 3.0.

- Another operation on the route, either before or after the current From Operation Number, in effect, "jumping" the items directly to another operation.

- When the To Operation Number is entered, and is a valid operation, the To Operation data is displayed from the Work Order record.

- When data entry is complete and acceptable, the screen is saved with the F9 key. Upon saving, the program performs the following:

  - Creates the Receiving Lot record, including:

CHANGES:

Use the PO Header data Purchased Routing, Purchased Operation and and Line Item Part Number to retrieve the Outside Manfacturing Unit Standard cost from the Routing Master table:

Route Name = Purchased Routing

Operation No. = Purchased Operation No.

Exception Part Number = Line Item Part Number (if Exception Part Number is not present that equals the L/I Part Number, use the O/Mfg Standard Unit Cost for the Operation No.

The program stores the resulting cost data in the Receiving Lot master record's Unit Standard Cost field. The contents of this field must not be the Outside Manufacturing Unit Standard Cost from the Part Master table.

This logic replaces the previous use of the From Operation number as the source of the Receiving Lot master recor's Unit Standard Cost field or use of the Part Master data.

Store the Moved From Operation No. and Moved To Operation Number in the corresponding fields in the Receiving Lot master record.

Set the Move to Stock? flag to "N"

End of change

- From the PO, copy the PO Line Item US$ Unit Cost into the record.

- In the PO record, adds the Line Item Quantity received to the PO Line Item Quantity Received.
- In the PO record, if the Line Item Quantity Received is equal or greater than the Line Item Quantity Ordered (balance due is less than or equal to zero), for all line items on the PO, then sets the PO Closed? flag to Y (closed).

- Creates a Receiving Transaction History record, Type REC for the Line Item being received/moved.

- Prints the Receiving Report.

CHANGE: on the Receiving Report, print the information "Items Moved to Operation No. xxxx, Work Order xxxxxx. Not placed in Receiving Inspection. May not be moved to Stock."

The Work Order number is the moved Work Order entered on the screen. The Operation Number is the To Operation Number entered on the screen.

End of change.

- In the Work Order record for the Completing Work Order Number, performs the following functions:

  - Adds the Quantity Received/Moved to the From Operation Quantity Moved/Completed for that operation number.

  - Adds the Quantity Received/Moved to the Operation Quantity In for the To Operation Number.

- Creates a WIP Material Transaction History record for the received/moved quantity (WIP Material Transaction Code MVWO).

Receiving Report Format

Use the following format for the printed Receiving Report:

Receiver No. x-------x
PO No. x-------x Date Rec'd x--------x Rec'd By x----------x
Vendor ID x---------x
Work Order x---------x Packing Slip No. x---------x
No. of Cartons x----------x Inspect? xx

L/Item No.	Part Number	Description	U/M	Qty Rec'd	GL No.
x-----x	x----------x	x----------x	x--x	x----------x	x----------x

(multiple lines and GL No.'s only if an Expense PO Type)

Receiver Move to Stock Transaction

Screen Data:

Receiver No. xxxxxxx
PO No. (display only)
L/I Part Number (display only)
Received Quantity(display only)
Accepted Quantity Remaining in R/I (calculated)
Warehouse xxxx
Location Quantity
xxxxx xxxxx
xxxxx xxxxx
Quantity Moved to Stock:
xxxxx (total)

Transaction Comment xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

User-ID (current system user-id)
Transaction Date (system date)
Transaction Time (system time)

Functional Logic

This transaction moves a previously accepted quantity of an item from Receiving Inspection to one or more warehouse locations. It allows reporting of inventory movement from receiving inspection for quantities on a receiver that have been either approved initially by receiving inspection or dispositioned use-as-is by an MRB action on a Discrepant Material Report. One or more RMTS Inventory Transaction History Records are generated from a single screen update, one for each warehouse. The program's function are as follows:

The screen prompts the user for Receiver No., or allows selection of one from a pop-up window. Once retrieved, the associated data showing the status of the received lot. Received Quantity is the quantity received to dock on this receiver number. Accepted Quantity Remaining is calculated from:

Total Quantity Accepted
minus Quantity Moved to Stock

The warehouse that the items are being moved to is entered, which must be in the Warehouse table. A popup is available showing warehouse/building ID's and their names.

The Location and associated quantity for each is entered. The Locations must be valid locations within the warehouse previously entered. A popup is available showing locations within the selected warehouse.

Each location's quantity is added to the calculated Quantity Moved to Stock, which must be less than or equal to the Accepted Quantity Remaining in R/I. If it is, the entry is rejected and the transaction not allowed. Quantity entries must be greater than zero and not negative.

When data entry is completed, the user saves the screen's data with the F9 function. The Receiving and Inventory records are updated as follows:

Receiving Lot record - for this Receiver number, add Quantity Moved to Stock to the corresponding value already present.

Inventory Record - Subtract the Quantity Moved to Stock from the Quantity in Receiving Inspection for the part number. For the Warehouse entered, add each Location and associated Quantity either to the value already present, or add it to the multi-value stack.

Create an Inventory Transaction History record, Transaction ID RMTS.

Location to Location Warehouse Move Transaction

Screen Data:

Part Number
Description (display only)
U/M (display only)
Quantity Moved
From Warehouse No.
From Location

To Warehouse No.
To Location

Transaction Code
Transaction Date (current system date/time)
Performed by User-ID (current system user-id)

Functional Logic

- This screen prompts the user for entry of a valid Part Number, which must be on the Part Master file.

- After the Quantity Moved, From Warehouse Number, and From Location have been entered, if the quantity being moved is greater than the quantity shown at that location, display a warning message and the current quantity shown on hand at that warehouse/location, to indicate that the user is moving a greater quantity than the system shows is available at that location that could be moved.

- Allow the transaction to proceed if the user chooses, or to return to enter a different part number, quantity, or warehouse and location data.

- Once data entry is complete, the screen is saved with the F9 key. The program updates the warehouse, location and on hand quantity data in the Inventory File record for this Part Number, and writes an Inventory Transaction History record.

Miscellaneous Receipt Transaction

Screen Data:

Part Number
Description (display only)
Unit of Measure (display only)
Quantity Received
Department Received From
Received From Name
GL Acct. No.
Warehouse No.
Location
Received/stored by
Comments
Transaction Date (system date/time)
Transaction User-ID

Functional Logic

This screen allows receipt of items from any source. Typically it is to received items previously issued to a department for examination or review, or to receive items that were found or discovered. Differences discovered during a cycle count or physical inventory count should be entered via the cycle count adjustment screen, however.

- The screen prompts for part number, which may be entered or selected from a pop-up window. It must be in the Part Master file to be accepted. When found, the Desciption and Unit of Measure are retrieved and displayed.

- Next, the screen accepts entry of the Quantity Received, which must be greater than zero, Deptment Received From (optional), Received From Name (optional) (person bringing the items to the warehouse/stockroom), Received/Stored By person's name; defaults to the current user-id), Comments (optional) and the GL Account number (optional at this time).

- The warehouse number and location where the items were strored must be valid warehouse and location data.

- The screen uses the system date/time and user-id to complete the Transaction Date and User-ID fields. It is saved with the F9 key.

Miscellaneous Issue Transaction

Screen Data:

Part Number
Description (display only)
Unit of Measure (display only)
Quantity Issued
Department Issued To
Issued To Name
GL Account No.
Warehouse No.
Location
Items Issued by
Comments
Transaction Date (system date/time)
Transaction User-ID

Functional Logic

This screen allows issuing of items to any department and/or person. Typically it is to issue items to a department to a variety of uses. These transactions are picked up by GL interface, costed and charged to the department''s GL account. Items may be for R&D, product development, repair, production line use but not identified with a particular product (such as solder or cleaning agents), or other expensed activity. Differences discovered during a cycle count or physical inventory count should be entered via the cycle count adjustment screen, however.

- The screen prompts for part number, which may be entered or selected from a pop-up window. It must be in the Part Master file to be accepted. When found, the Description and Unit of Measure are retrieved and displayed.

- Next, the screen accepts entry of the Quantity Issued, which must be greater than zero, Department Issued To (may not be blank) Issued To Name (may not be blank) (person taking the items from the warehouse/stockroom), GL Account Number (may not be blank) Issued By person's name (defaults to the current user-id) and Comments (optional).

- The warehouse number and location where the items were removed from must be valid warehouse and location data. The screen allows a popup to

view current valid locations within the selected warehouse number where some quantity of this part number currently is shown as on hand.

- The screen uses the system date/time and user-id to complete the Transaction Date and User-ID fields. It is saved with the F9

Work Order Pick List Print

Screen Data

Work Order /Kit ID No.
Operation No.
Operation Description (display only)
Enter another Work Order/Operation No.?

OK to Print Pick Lists?

Report Data/Format

Work Order/Kit ID No.
Parent Part Number
Description
Order Quantity
Scheduled Start Date
Scheduled Compl Date
Operation Number
Operation Description
Work Center ID
Work Center Description
Work Center Location
Date/Time Printed

For each component/material required:

Work Station Used On (print as a sub-heading, if present in the data, not a column heading)
Part Group
Part Number
Description
Unit of Measure
Quantity Required

Blank fields/columns:

Quantity Picked
Quantity Short
Pallet Number

Functional Logic

This screen allows entry or selection of a work order and operation number to have its associated pick list generated. It accumulates more than one work

order/kit id no. then performs the print generation cycle for all in a batch mode after data entry is complete.

The product configuration data is integrated with the routing structure used to manufacture the parent part number, which may be a manufactured component part, sub-assembly, or finished good product. Material required to manufacture the item is introduced at one or more steps in its production cycle, which may be simple or very complex. Accordingly, the pick list groups all material to be issued to the work order at the same point in time. Required material added to the production cycle at different operations (stages in production) is picked and issued at different points in time. As a result, this screen must know not only the work order number, but which operation's material is to be picked and issued.

This program selects previously entered or released work order data and generates the pick list for printing. Functions are as follows.

- The screen functions by prompting for entry or selection of a valid, open work order/kit ID number, which must be on the Work Order Master File and not have been picked complete for this operation number.

- The program cycles, allowing entry of multiple work order/kit ID numbers, by answering Y to "enter another work order or operation number?"

- Answering No to this question causes the program to access the OK to Print Pick List question. Answering N to this question returns the program to the top of the screen, allowing the user to enter more work order/kit ID numbers. A Yes answer ends the entry process and starts the print generation process.

- For each work order/kit ID and operation number entered, the program generates a separate pick list. Within each pick list, the header information is repeated at the top of each page, regardless of the number of pages.

- For each component or material required, listed in column format, if Work Station Used On is present in any of the component records from the Work Order's material data. If it is, the work station is printed as a sub-heading, to group and separate with a page break each work station's material. These work stations are within a single work center and operation, and provide the material handling function a tool to pre-arrange material for more efficient handling and moving to the assembly line work stations.

- The sort sequence for the component/material record data is Work Station Used On, Part Group, then Part Number.

Work Order Pick Complete Transaction

Screen Data:

Work Order /Kit ID Number
Operation Number
Parent Part Number (display only)
Parent Part Number Description (display only)
Operation Descriptino (display only)
Work Center ID (display only)
Work Center Description (display only)

Entire Pick List Picked Complete? (Y/N)

Transaction Comments:

Part Numbers Issued for other than the Quantity Required:

Part Number
Description (display only)
Unit of Measure (display only)
Quantity Actually Issued

Press F9 to save the screen data and begin processing this pick list.

User-ID (display only)
Date/Time (system data/time - display only)

Functional Logic

This screen allows entry of a work order/operation number identifying a specific pick list that was picked and which is to now have the items that were removed from storage and issued to the work order reflected with a work order issue transaction in the system for each of the items picked.

The program generates a single Inventory Transaction History record for each item on the work order's pick list for the operation selected, allowing the user to initiate this process by merely indicating that the entire pick list was picked and issued as a matched set of items as planned. Any items that were issued differently than as shown on the pick list are entered, resulting processing being "exception" oriented.

Transaction created in the system by this program perform the same function as the Work Order Pick Shortage transaction except that the WOPS transaction is entered one transaction at a time, the data entered being the source of the

transaction, whereas in the WOPC transaction, the work order's material data (its copy of the extended bill of material) is the primary source of data for the transactions.

The screen functions are as follows:

- The Work Order/Kit ID Number is entered, along with an Operation Number. The resulting combination is used to locate the appropriate work order/operation keyed pick list data used to generate the pick list. The Parent Part Number, associated Description, Operation Description, Work Center ID & Description are displayed from the Work Order data to aid in insuring that the correct Pick List has been selected.

- If the answer to the Entire Pick List Picked Complete question is Yes, then the screen does not allow the entry of items picked short and proceeds directly to the option to save the screen and begin processing the pick list.

- If the answer is No, the screen allows entry of Part Numbers and Quantities Actually Issued for each of the item issued differently than on the pick list. After each of these is entered, the program will allow the screen save option with F9 to begin the processing.

- Description and Unit of Measures are retrieved from the Part Master Table. These may be an item issued for less than the planned quantity, more than the planned quantity, an item not issued at all (zero quantity issued is allowed); or a substitute item to be added to the work order's material data.

- Comments may include information such as the name of the person physically staging and approving the movement of the work order accuracy of the data shown on the pick list.

- The exception items are held in a table temporarily to allow data entry to be completed, until the pick list has been completely processed. The list is processed as follows:

- Reads the material data for the work order and operation number.

- For each component part number in the pick list, using the Material Required Part Number as the lookup source, retrieves the default/standard warehouse and location from the Part Master record for each part number.

- The Quantity Required is used as the Transaction Quantity (quantity issued).

- A separate WOPC transaction is created for each item, subtracting the Transaction Quantity from standard Warehouse & Location, and adding the Transaction Quantity to the Actual Quantity Issued for that Material Required Part Number.

- An Inventory Transaction History record is created showing the appropriate data.

- Part numbers entered as exceptions to the pick complete are handled as follows:

    - If the part number in also on the Work Order's pick list, the program substitutes the Quantity Actually Issued from the exception list in place of the Quantity Required as shown on the pick list. This may be zero quantity issued, if the item was not included in the pick at all, for example. If the quantity is zero, the program does not create a Inventory Transaction History record, since nothing occurred to report.

    - If the part number is not on the pick list, such as with a substitution, the program adds it to the Work Order's material data, with Quantity Required equal to zero, and other BOM type information left blank or zero.

Work Order Shortage Issue Transaction

Screen Data:

Work Order /Kit ID Number
Operation Number
Parent Part Number (display only)
Parent Part Number Description (display only)
Operation Descriptino (display only)
Work Center ID (display only)
Work Center Description (display only)
Part Number
Description (display only)
Unit of Measure (display only)
Quantity Issued
Warehouse Number
Location
Transaction Comments

Functional Logic

This screen allows the issuing of one part number at a time to a work order, generally to fulfill a shortage created by the previous issuance of a complete pick list, excepting this/these items. If a work order attrition issue transaction is not available, this transaction may be used until it is.

It requires that the Work Order be valid, and that the part number be a valid part number. If it is not on the work order's material data (because it was not on the bill of material at the time the work order was created), the program will display a warning message, but will allow the item to be issued to the work order, adding it to the work order's material data.

The screen functions as follows:

- It allows entry of Work Order and Operation Number, then attempts to retrieve the appropriate work order material data information.

- If the Work Order/Kit ID number is valid, but the operation number is not identified as a material linked operation, a warning message will be displayed.

- The user then has the option of trying again to enter an operation already identified as one where material is to be issued, or can enter any other valid operation number on the routing associated with this Work Order. A popup

window will allow display and selection of any operation number from the routing associated with this work order.

- Once the valid work order and operation number combination has been entered, the program retrieves an displays the Parent Part Number, Description, Operation Description, Work Center ID & Description.

- Having established a valid work order and operation number to issue the items to, the screen then allows entry of any part number in the Part Master Table, retrieving its Description and Unit of Measure from the Table.

- The Quantity Issued, Warehouse Number and Location that the items were removed from, and any Transaction Comments are entered. If the quantity issued is greater than that available at the warehouse and location entered for that part number, the program displays a warning message and allows the calling of a popup window displaying all current warehouse and location data for that part number from the Inventory Table. A different warehouse and location can be selected and carried into the screen data fields. The program will allow the issuing of more than is shown on hand by overriding the warning message.

- The screen can then be saved with the F9 key.

- Upon saving, the program posts the transaction to the Work Order material data. If the part number issued is already in the material data record for the work order, the transaction Quantity Issued is added to any previous Quantity Issued to Date for that part number. If it is not already in the material data for the work order, the part number is added and the quantity posted to the Quantity Issued to Date. The Quantity Issued is subtracted from the Quantity On Hand for that Warehouse and Location.

DMR - Work Order Transaction Changes

To support the controls of reworked items under the DMR subsystem, the transactions from regular production work orders are modified to not allow certain fundtions to be performed if the work order type is R, a rework work order.

Under the DMR subsystem, movement of the discrepant material is linked to the DMR, and uses special purpose DMR related transactions to move the discrepant material to and from the Rework Work Order.

The transactions changed are summarized below:

Work Order Pick Short (Transaction ID WOPS) - This transaction is used to issue additional material for reworking the parent part number of the rework work order, but is disallowed if the Transaction Part Number matches the Parent Part Number of the Work Order Number if the Work Order Type is R, indicating a rework work order. A special purpose DMR related transaction is used instead, the DMR Issue to Rework Work Order transaction.

Work Order Completion and Move to Stock - (Transaction ID WCMS) - this transaction cannot be used for a Rework Work Order, and so will be rejected if the Work Order type is R. The Rework Return to DMR transaction is used instead, insuring that the DMR is properly closed and inspection has been performed on the reworked items.

Work Order Pick Complete (Transaction ID WOPC) - this transaction cannot be used for a Rework Work order, so it will be rejected if the Work Order type is R. The Work Order Pick Short transaction is used to issue additional material one item at a time.

Next Higher Assembly Link (WIP Material Transaction ID LKWO) - the completing work order in this transaction may not be a work order with a work order type of R, indicating a rework work order. Reworked material must first be returned to the DMR for documentation of inspection and MRB disposition.

Component Transfer Work Order to Work Order - WIP Material Transaction ID CXFR - in this transaction, if the From Work Order has a work order type of R (rework work order), and the Component Part Number (being transferred) matches the Parent Part Number of the From Work Order or the To Work Order, the entry is rejected. This would allow the part number being reworked to be

moved off of a rework work order without going back to the DMR for inspection and disposition.

Work Order Completion & Move to Stock Transaction

REVISED 4/15/94

Screen Data:

Work Order/Kit ID No.
Part Number
Description (display only)
U/M (display only)

Warehouse No.	Location(s)	Quantity Moved to Stock
x ----x	x------x	x------x
x ----x	x------x	x------x
	Total	x------x

Transaction Date/Time
Entered by User-ID

Functional Logic

CHANGE SUMMARY:

Added logic to update MPS record's MPS Quantity Completed field.

This screen allows entry of completed items manufactured under a work order to report movement of these items into a warehouse inventory location(s), and off of the work order. The program updates not only inventory records, but posts the completed quantities to the Work Order data as well. The screen functions include:

- This screen prompts the user to enter the Work Order/Kit ID No., which must be a valid, open Work Order, and the Part Number, which must match that of the Parent Part Number on the Work Order's header data. A popup window allows viewing of all Open Work Orders, and browsing of the list to select the correct Work Order Number/Parent Part Number combination.

- Next it requires entry of the quantity moved, warehouse number, and location within the warehouse (warehouse number and location default values are obtained from the Part Master record for this Part Number).

- The Transaction Quantity can be spread among more than one warehouse and more than one location within each warehouse.

- When data entry is complete, the screen's data is saved with the F9 key. The program posts the Quantity Completed to this field in the Work Order header data, increase the Quantity On Hand for that location, adding the location if necessary, and writes an Inventory Transaction History record reflecting the screen's data.

Added:

Retrieves the Part Master record for the Parent Part Number, and if the Consume MPS Flag = Y, then retrieves the MPS record for that Part Number. If the MPS record is not present, ignore this condition and continue processing. If it is present, most the Quantity Completed to the MPS record via the following steps:

Scan the MPS Date lines, ignoring the Dates that are earlier than the current system date, selecting the first MPS Date that is equal or greater than the current system date.
Add the Transaction Quantity to the MPS Completed Quantity value previously present for that MPS Demand Date line.
Subtract the MPS Quantity from the MPS Completed Quantity just posted to obtain the MPS Remainder.
If the MPS Remainder is a negative number or zero, the MPS posting process is completed at this point.
If the Remainder is a positive value, read the next MPS Demand line and add the MPS Remainder to its MPS Completed Quantity.
Repeat the subtraction process and check to see if there is a positive MPS Remainder value.
Continue this loop until the MPS Remainder value is negative or zero.

NOTE: The purpose of this step is to not consume only 100% of a given MPS Demand line's quantity, carrying the excess forward in time. This indicates that production is completing the MPS ahead of schedule. The opposite condition is that a MPS Demand Date's line falls into the past before it is 100% complete, indicating a behind schedule condition. In either case, these data provide the basis for measuring production performance to the MPS.

DMR Return to Inventory Transaction

Screen Data:

DMR Number xxxxxx
Part Number xxxxx (display only)
Description xxxxxxxxxxxxxx (display only)
U/M xx (display only)
Warehouse No. xxxx

Location	Quantity	
xxxx	xxxxxx	
xxxx	xxxxxx	
xxxx	xxxxxx	
	xxxxxx	Quantity Returned to Inventory (calculated; display only)

Transaction Comment xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

User-ID (system; display only)
Transaction Date (system; display only)
Transaction Time (system; display only)

Functional Logic

This transaction allow return from a DMR to production inventory for material that was previously rejected and subsequently accepted, either via rework or reinspection only. All discrepant material is controlled via the DMR. The DMR's Rejection Source must have been either P (perpetual inventory) or W (work order). Material rejected during the Receiving Inspection cycle, with a DMR Source of R, cannot be moved to inventory with this program. This transaction cannot return a greater quantity to inventory from the DMR than was approved for Use-As-Is by an MRB disposition action.

The program's functions include:

Upon selection from the I&WM menu, the program is ready to accept entry of the DMF number, which may be from a barcoded scan, if the DMR traveler carries a bar coded DMR number. A popup is available showing DMR numbers, Part Number for each DMR, DMR Date, Rejection Source and in Part Number squence. Entry or selection of the DMR is accepted, which must be in the Discrepant Material Report table, must have a Source of P or W, and have an Undispositioned Quantity greater than zero.

When the DMR Number is accepted, its associated Part Number is displayed, and the Part Number's Description and Unit of Measure retrieved from the Part Master table.

Warehouse Number is entered, which must be in the Warehouse table. A popup is available showing valid warehouse numbers.

Location and the associated Quantity for each location is entered next. Locations must be in the Warehouse/Location table showing valid locations within the selected warehouse. A popup is available showing these locations, which may be selected from.

As each location associated Quantity is entered, the Quantity Returned to Inventory is calculated. This quantity must be greater than zero, not negative, and less than or equal to the Unreturned Quantity, calculated from:

DMR Quantity OK'd Use-As-Is
minus DMR Quantity Returned to Inventory
= Unreturned Quantity

When entry is complete, the screen is saved wih the F9 key. The program displays a message informing the user that the transaction is being processed. Upon saving, the program performs the following:

Revalidates all field level validations performed using the same logic. If there are validation rejections, an error message is displayed, the transaction is not processed, and screen returned for corrections by the user.

Retrieves the DMR record, adding the Quantity Returned to Inventory to the DMR Quantity Returned to Inventory value already present.

Retrieves the Inventory record for the Part Number and subtracts the Quantity Returned to Inventory from the associated DMR number's DMR Quantity. If the result is zero, the DMR multi-value line is deleted.

To the Inventory record, each warehouse/location/quantity line on the screen is applied to the corresponding fields in the Inventory table. If a new warehouse/location line is required, the program adds it. Otherwise the new quantity is added to the value already present.

For each warehouse/location/quantity line, an Inventory Transaction History record is created, capturing the before and after update balance and other related data. The Transaction ID is DMIN.

DMR Location-Location Move

Screen Data

DMR Number xxxxx
Part Number xxxx (display only)
Description xxxxxxxxxx (display only)
UM xx (display only)

From Location:	To Location:
Warehouse No. xx (display only)	Warehouse No. xxx
Location xxxxxxxx (display only)	Location xxxxxxx

Transaction Comment xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

User-ID (system) (display only)
Transaction Date (system) (display only)
Transaction Time (system) (display only)

Functional Logic

This transaction allows movement of material on a Discrepant Material Report from one location within the Discrepant Material Status locations to another. It will not allow movement to or from a warehouse or location for production inventory. It only updates the warehouse and location data for a DMR multi-value stack in the Inventory record for the DMR Part Number. Each DMR can have only one warehouse and location identified with it. The program updates both the DMR record and the DMR related data in the Inventory record.

The program functions as follows:

Upon selection from the menu, the screen is displayed. Entry of the Discrepant Material Report Number is accepted. A popup is available showing DMR numbers, Part Number for each DMR, DMR Date, Rejection Source and in Part Number squence. Entry or selection of the DMR is accepted, which must be in the Discrepant Material Report table, and have an Undispositioned Quantity greater than zero.

When the DMR Number is accepted, its DMR record is retrieved, and associated data displayed, including Part Number, the current Warehouse No., and Location data as shown in the DMR record. Description and Unit of Measure are retrieved from the Part Master record for the part number.

Next the screen allows entry of the To Location data. Warehouse Number is entered, which must be in the Warehouse table. A popup is available showing valid warehouse numbers.

Location is entered next. Locations must be in the Warehouse/Location table showing valid locations within the selected warehouse. A popup is available showing these locations, which may be selected from.

When entry is completed, the screen is saved with the F9 key. Upon saving, the program performs the following:

Revalidates the DMR, To Warehouse and To Location data.

Retrieves the DMR record, updating it with the new DMR warehouse and location data.

Retrieves the Inventory record for the Part Number, updating the DMR line for that DMR number with the new warehouse and location data for the line.

Creates two Inventory Transaction History records, one showing the movement out of the DMR location, Transaction ID DMLO, and one showing the movement to the new location, Transaction ID DMLI.

DMR - Issue to Rework WO

Screen Data:

DMR Number xxxxxxx
Part Number xxxx (display only)
Description xxxxxxxxxx (display only)
UM xx (display only)

Rework Work Order No. xxxxxxx (display only if DMR Rework WO No. present)
Material Operation No. xxxxx
Quantity Issued xxxxxxx

Transaction Comment xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

User-ID (system) (display only)
Transaction Date (system) (display only)
Transaction Time (system) (display only)

Functional Logic

This program issues material on a DMR that has been OK'd for rework from the DMR to a Rework Work Order. The link to the DMR is retained in the Rework Work Order record. When the rework is completed, the entire quantity issued must be returned to the DMR for re-inspection and disposition, including acceptance for use. In this way the DMR forms a closed loop system, and all discrepant material can be accounted for completely.

The program functions as follows:

Upon selection from the menu, the screen is displayed. Entry of the Discrepant Material Report Number is accepted. A popup is available showing DMR numbers, Part Number for each DMR, DMR Date, Rejection Source and in Part Number squence. Entry or selection of the DMR is accepted, which must be in the Discrepant Material Report table, and have an Undispositioned Quantity greater than zero.

When the DMR Number is accepted, its DMR record is retrieved, and associated data displayed, including Part Number, the current Warehouse No., and Location data as shown in the DMR record. Description and Unit of Measure are retrieved from the Part Master record for the part number.

If the DMR record contains a Rework Work order Number in it, this number is used for the Rework Work Order Number, entry to this field is disallowed on the screen, and the cursor shifted to the Material Operation No. field. This is to maintain the requirement that all material on a single DMR must be reworked on one Rework Work Order. A single Rework Work Order, however, may have more than one DMR's material issued to it.

Next, entry of the Rework Work Order is accepted if the DMR record's Rework Work Order Number field is blank. This is an Open Work Order record with a Work Order Type of R only. A popup is available showing Rework Work Order Numbers with a status of RNP or OP, and their associated Parent Part Numbers, in Part Number sequence. To be accepted, the Parent Part Number of the Rework Work Order must have the same Parent Part Number as the DMR Part Number.

When a valid entry is accepted, the Material Operation Number is entered next. A popup is available showing the valid material operation numbers for this Rework Work Order Number. This and the Rework Work Order Number will be used to retrieve the Work Order Material record.

Next the Quantity Issued is entered. This must be not negative, greater than zero, and less than or equal to the Unissued Rework Quantity, calculated from:

DMR Quantity OK'd for Rework
minus DMR Quantity Issued for Rework
= Unissued Rework Quantity

When entry is complete, the screen is saved with the F9 key. A message is displayed informing the user that the transaction is being processed. Upon saving, the program performs the following:

Revalidates the DMR number, Rework Work Order, Material Operation Number, and Quantity Issued.

Retrieves the DMR record and adds the Quantity issued to the DMR Quantity Issued for Rework in the DMR record.

Retrieves the Open Work Order record with the Work Order Number on the screen, and adds the DMR Number, if not already present, and the Quantity Issued to the associated DMR Quantity field. If there is already a multi-value line for the DMR Number and its associated Quantity, this transaction's Quantity Issued is added to the DMR Quantity value already present. This will occur if

there are multiple issues moving material from the same DMR to its associated Rework Work Order Number.

Retrieves the Work Order Material record for this work order and operation number and adds the DMR Part Number to the Required Part Number list, if not already present, and adds the Quantity Issued on this transaction to the Quantity Issued for this Required Part Number line in the Work Order Material record.

Retrieves the Inventory record for the DMR Part Number, and subtracts the Quantity Issued from the DMR Warheouse/Location Quantity associated with the DMR number in the Inventory record's DMR multi-value stack.

Creates an Inventory Transaction History record, Transaction ID DMRI for the transaction.

Rework Return to DMR

Screen Data:

Rework Work order No. xxxxx
Part Number xxxx (display only)
Description xxxxxxxxxx (display only)
UM xx (display only)
DMR Number xxxxxxx
Quantity Returned xxxxxxx
Warehouse No. xxxx
Location xxxxx

Transaction Comment xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

User-ID (system) (display only)
Transaction Date (system) (display only)
Transaction Time (system) (display only)

Functional Logic

This program allows return of reworked material that was previously issued to a rework work order on a DMR, back from the Rework Work Order to the DMR for review. The controls of the DMR system link the DMR to a specific Rework Work Order. Issues and Return transaction therefore use these controls. After material has been reworked, it is returned to the DMR for MRB review, acceptance for use or other action.

The program functions as follows:

Upon selection from the menu, the program displays the screen and accepts entry of the Rework Work Order Number. This is an Open Work Order record having a Work Order Type of R. It must also have a Work Order Status of RNP or OP. A popup is available showing Open Work Order Numbers, with the Order Type code, Status Code, and Parent Part Number.

After a valid Rework Work Order Number is entered, its associated Parent Part Number is retrieved and displayed, with Description and Unit of Measure being retrieved from the Part Master record for the part number.

Next the DMR number is entered. A popup is available showing DMR Numbers, their associated DMR Quantity Issued and DMR Quantity Returned from the Open Work Order record for this Work Order Number. A selection can be made.

Quantity Returned must be not negative, greater than zero, available for movement from the last Operation Number on the routing, which may be an alternate operation number, and less than the DMR Remaining Rework Quantity for that DMR Number, calculated for this DMR number from:

DMR Quantity Issued
minus DMR Quantity Returned
= DMR Remaining Rework Quantity

Warehouse Number is entered next which must be in the Warehouse table. A popup is available showing valid warehouse numbers.

Location is entered next. Location must be in the Warehouse/Location table showing valid locations within the selected warehouse. A popup is available showing these locations, which may be selected.

When entry is completed, the screen is saved with the F9 key. Upon saving, the program performs the following:

Revalidates the DMR, Rework Work Order, DMR Number, Warehouse, Location and Quantity Returned data.

Retrieves the DMR record, updating it with the new DMR warehouse and location data, adding the Quantity Returned to the DMR Quantity Returned from Rework value already present.

Retrieves the Inventory record for the Part Number, updating the DMR line for that DMR number with the new warehouse and location data for the line. If necessary, the line is added for this DMR number. The Quantity Returned is added to the DMR Quantity value already present.

Retrieves the Open Work Order record for the Work Order Number, adds the Quantity Returned to the DMR Quantity Returned for this DMR number, and to the Parent Part Number Quantity Completed, and the Operation Quantity Completed for the last operation number. The last operation number is the largest numeric value, with or without decimal portion included, so it may be a primary or alternate operation.

Creates an Inventory Transaction History record, Transaction ID DMRT for the transaction.

DMR Return to Work Order Transaction

Screen Data:

DMR Number xxxxxxx
Part Number xxxxxxx (display only)
Description xxxxxxx (display only)
U/M xx (display only)
Work Order Number xxxxx
Parent Part Number xxxxxxxx (display only)
Description xxxxxxxx (display only)
Material Operation Number xxxx
Operation Description xxxxx (display only)
Quantity Returned xxxxxxxx

Transaction Comment xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

User-ID (system) (display only)
Transaction Date (system) (display only)
Transaction Time (system) (display only)

Functional Logic

This program returns material previously rejected on a Work Order or production inventory that has been reviewed by the MRB team, and subsequently found to be acceptable for use. In the DMR, this acceptance is defined as Use-As-Is, to be distinct from Accepted, which is the term for passing inspection the first time, in essence. Only material with a Rejection Source of W or P can be returned to a source with this transaction. It removes the quantities shown in DMR inventory status and adds them to the work order as an issue.

If the DMR part number is a Parent Part Number on the Rejection Source work order, the main purpose of this transaction is to return it directly to the Work Order Number that it was taken from. To allow it to be returned to another work order from which units were not previously rejected will make reconciliation of material issued to units produced becomes very difficult, and so it not allowed in AIMS/ERP.

If the DMR part number is a Required Part Number on the Rejection Source work order, then it may be in effect, issued to any Work Order having this Part Number as a Required Part Number.

If the DMR Part Nuumber is a Parent Part Number on the Rejection Source work order, then it may be issued to a work order where the DMR Part Number is a Required Part Number.

The program functions as follows:

Upon selection from the menu, the program displays the screen and positions the cursor for entry of the DMR Number. A popup is available showing DMR Numbers, associated DMR Part Number, and the DMR Undispositioned Quantity.

When a valid DMR number is entered or selected, the program retrieves the DMR's Part Number, displaying it on the screen. The associated Description and Unit of Measure are retrieved from the Part Master table for the part number.

Work Order Number is entered next, which must have a Work Order Type of W, and a Status of RNP or OP. A popup is available showing Work Order Numbers, Type Code, Status Code, and Parent Part Number, in Part Number sequence.

When the Work Order record is retrieved, its associated Parent part Number is displayed, with the Description retrieved from the Part Master table.

Material Operation Number is entered next. A popup is available showing operations having Work Order Material records for this Work Order Number. The associated Operation Description is then retrieved from the Open Work Order record when a valid material operation number is entered.

Quantity Returned is entered next, and must not be negative, must be greater than zero, and less than or equal to Unreturned Quantity, which is calculated from:

Total Quantity OK'd Use-As-Is
minus Quantity Returned to Work Orders
minus Quantity Returned to Inventory
= Unreturned Quantity

In addition, if the DMR Part Number is the Parent Part Number on the Work Order, the Quantity Returned must be less than or equal to the Parent Quantity Scrapped on the Work Order. If it is not, the entry is rejected with a message informing the user that this work order does not have a sufficient quantity available to accept the return.

If the DMR Part Number is not the same as the Parent Part Number on the Work Order to which the items are being returned, then it must be on the Required Part Numbers in the Work Order Material record identified with the Work Order and Operation Number previously entered.

When entry is complete, the screen is saved with the F9 key. A message is displayed informing the user that the transaction is being processed. Upon saving the program performs the following:

Revalidates the DMR number, Work Order and Operation Numbers, and the Quantity Returned as required during entry.

Retrieves the DMR record, adding the Quantity Returned to the Quantity Returned to Work Orders field.

Retrieves the Inventory record for the Part Number, subtrating the Quantity Returned from the DMR Quantity associated with this DMR number.

If the DMR Part Number is the same as the Parent Part Number on the work order, retrieves the Open Work Order record for the Work Order number and subtracts the Quantity Returned from the Parent Quantity Scrapped, and subtracts it from the Operation Quantity Scrapped for the Source Operation Number in the DMR record.

If the DMR Part Number is not the same as the Parent Part Number on the work order, retrieves the Work Order Material record for the Work Order number and entered Material Operation Number. The Quantity Returned is then added to the Quantity Issued for the Require Part Number that matches the DMR Part Number.

Creates an Inventory Transaction History record, Transaction ID, DMWO.

Receiving RTV/Scrap Transaction

Screen Data:

DMR Number xxxxx
Receiver Number xxxxx (display only)
Part Number xxxxxx (display only)
Desription xxxxxx (display only)
Unit of Measure xxxx (display only)
PO Number xxxxx (display only)
PO L/I Number xxx (display only)
Quantity Returned to Vendor xxxxxx
Quantity Scrapped xxxxx

Transaction Comment xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

User-ID (system) (display only)
Transaction Date (system) (display only)
Transaction Time (system) (display only)

Functional Logic

This transaction moves items received on a purchase order that were documented as failing initial inspection on a Discrepant Material Report, and which then were dispositioned as OK for RTV or OK for Scrap by the Material Review Board. The program is intended for Production Material only, and will decrease the Line Item Quantity Received on the Purchase Order shown in the Receiving Lot record.

Units that have been received on an Outside Manufacturing Purchase Order are not returned in the same way. If rejected, they are documented on a DMR, then sent to the vendor for rework on a Rework Work Order. If there is to be payment for this rework, it is on a separate Outside Manufacturing PO. When the rework is completed of these units, they are received back from the Rework Work Order to the DMR, as with all other reworked material. The MRB then inspects the units again and makes a final disposition.

The program functions as follows:

Upon selection from the menu, the program displays the screen and positions the cursor at the DMR number field for entry. A popup is available showing DMR numbers, the associated Part Number, and Rejection Source. Only DMR Numbers with a Rejection Source of R can be accepted by this program.

When a valid DMR Number is entered, its associated Receiver Number, PO Number, PO Line Item Number are retrieved and displayed. The Description and Unit of Measure are retrieved from the Part Master record for the part number.

Depending on the disposition of the items, either the Quantity Returned to Vendor is entered, or the Quantity Scrapped, or both. Each field is validated separately. Neither can contain a negative quantity, but one may be zero. Validation is to the DMR data fields, not the Receiving Lot record, and includes:

The Quantity Returned to Vendor must be less than the UnRTV'd Quantity, calculated from:

Total Quantity OK'd to RTV (for DMR)
minus DMR Quantity RTV'd
= UnRTV'd Quantity

The Quantity Scrapped must be less than or equal to the Unscrapped Quantity, calculated from:

Total Quantity OK'd To scrap (for DMR)
minus DMR Quantity Scrapped

When entry on the screen is completed, it is saved with the F9 key. A message is displayed informing the user that the transaction is being processed. Upon saving, the program performs the following:

Revalidates all data as required during data entry, including DMR Number, Quantity RTV'd and Quantity Scrapped.

Retrieves the DMR record for this DMR number and adds the Quantity Returned to Vendor to the DMR Quantity RTV'd, and the Quantity Scrapped to the DMR Quantity Scrapped.

Retrieves the Receiving Lot record for the Receiver Number in the DMR record, and adds the Quantity Returned to Vendor to the Total Quantity RTV'd field and the Quantity Scrapped to the Total Quantity Scrapped field.

Retrieves the Purchase Order record for the PO number in the Receiving Lot record, and for the PO Line Item, subtracts the Quantity Returned to Vendor and the Quantity Scrapped from the Line Item Quantity Received.

Retrieves the Inventory record for the Part Number and subtracts the Quantity Returned to Vendor and the Quantity Scrapped from the Quantity in Receiving Inspection and from the DMR Quantity for the DMR Number. If the result is zero remaining for the DMR, the multi-value line is deleted.

Creates a separate Receving Transaction History record for the Quantity Returned to Vendor and the Quantity Scrapped as the Transaction Quantities, each otherwise carrying the same Receiver Number, PO Number and other related data.

DMR Inventory Scrap Transaction

Screen Data:

DMR Number xxxxx
Part Number xxxxx (display only)
Description xxxxxxxxx (display only)
U/M xx (display only)
MRB Quantity OK'd to Scrap xxxxxz (display only)
Total Quantity Scrapped xxxxx (display only)
Quantity Scrapped xxxxxxx

Functional Logic

This program allows the reporting of scrapped of DMR Material that has been approved by the MRB for scrapping and which did not have a Rejection Source of R (receiving inspection). Material that is scrapped from Receving Inspection requires the Receiving RTV/Scrap Transaction to update other data that is related.

The program functions as follows:

Upon selection from the menu, the program displays the screen, with the cursor at the DMR Number field. A popup is available showing DMR number, associated Part Number, Rejection Source, and DMR Date. When a valid DMR number is entered, its data is retrieved and displayed on the screen.

The Quantity Scrapped is entered, and must not be negative, must be greater than zero, and must be less than or equal to the Unscrapped Quantity, calculated from:

MRB Quantity OK'd To Scrap
minus Total Quantity Scrapped
= Unscrapped Quantity

When entry is complete, the screen is saved with the F9 key. A message is displayed informing the user that the transaction is being processed. Upon saving, the program performs the following:

Retrieves the DMR record and adds the Quantity Scrapped to the Total Quantity Scrapped value already present.

Retrieves the Inventory record for the part number and subtracts the Quantity Scrapped from the DMR Quantity for that DMR number. If the result is zero for the DMR Quantity, that multi-value line is deleted.

Creates an Inventory Transaction History record, Transaction ID, DMSC.

Part Number Change Transaction

Screen Data:

Current Part Number
Description (display only)
Product Class (display only)
Product Line (display only)
Unit of Measure (display only)
Current Warehouse Number
Current Location
Quantity to redesignate

New Part Number
New Warehouse Number
New Location

Name of Person Redesignating Items

Transaction Comments

User-ID (display only)
Transaction Date (display only)

Functional Logic

This screen allows an authorized user to change the part number identification for items in inventory. A matched pair of inventory history transactions is created, essentially issuing and re-receiving the items back into the same or a different inventory location. This allows any adjustment in inventory value to be tracked and linked to GL inventory, because the old and new part numbers may have different standard costs. One transaction will carry a Transaction ID of PNCO for the quantity removed that is to be redesignated, and its matching record will carry a Transaction ID of PNCI for the quantity restored under the new part number designation. The program assumes that the quantity to be changed as already been received into inventory. The system does not allow changes to part numbers on work orders or purchase orders.

NOTE: This transaction has the potential for causing significant inventory accuracy problems. It is vital that the items that are having their part number changed also be physically re-identified at the same time as the redesignation transaction is performed. Also, since each part number typically has a primary

or standard inventory location within a standard warehouse, redesignated items should also be moved to their correct, new location, although the program allows use of the current warehouse and location as the default information.

The program functions as follows:

- Entry of the part number to be redesignated is required. If desired, a popup containing part number, description, warehouse number and total warehouse quantity of the part number in that warehouse, from the Inventory file can be initiated. An entered or selected part number must be in the Inventory File. The transaction will not accept part numbers that may be in the Part Master file, but which have never had a receiving transaction performed to create the Inventory File record.

- Once a valid Part Number in the Inventory File is entered, its related data is retrieved and displayed.

- Next the program accepts entry of the Warehouse Number from which the items are to be withdrawn for redesignation. A popup is available displaying all warehouses that have quantities for current part number. If a warehouse number is entered that is not on this list, a warning message is displayed, which the user may override, that this transaction will create a negative onhand balance if it is completed.

- Next the Location entry is accepted. A popup is available displaying all locations having inventory quantities for the already entered current part number and warehouse number. If a location is entered that is not on this list, a warning message is displayed, which the user may override, that this transaction will create a negative onhand balance if it is completed.

- Next the Quantity To Redesignate is entered. If it is greater than the quantity on hand at the warehouse and location previously entered for current part number, a warning message is displayed, which the user may override, that this transaction will create a negative onhand balance if it is completed.

- Next, the New Part Number (mandatory entry) is entered. The new part number must be in the Part Master file, but does not have to have already be in the Inventory file. If it is not, a new record in the Inventory file will be created when the screen is saved.

- The new warehouse number will default to the current warehouse number, but any valid warehouse number, selectable from a popup window containing

the warehouse numbers and descriptions from the warehouse number lookup table.

- The new location number will default to the current location previously entered if the current warehouse was used as the new warehouse number also. If the new warehouse is not the same as the current warehouse number, any location may be entered that is in the warehouse/location lookup table for that warehouse number. A popup window containing valid locations within the new warehouse number is available.

- The name of the person redesignating the items may be entered and may be different from the User-ID of the person performing the transaction. The default, however, is the User-ID currently logged into the system.

- The User-ID and Transaction Date are obtained from the system's data.

- If desired, the user may enter comments to be included in the Inventory Transaction History records for this transaction.

- Once completed, the screen is saved with the F9 key.

- Upon saving, the program updates the Inventory file records for both the current part number and the new part number, subtracting the Quantity To Redesignate from the Current location and adding it to the New location. For the Current Part Number portion of the transaction, the program creates an Inventory Transaction history record with a Transaction ID of PNCO to reflect the subtraction of the current part number's quantity from inventory. For the New Part Number portion of the transaction, an Inventory Transaction History record is created with Transaction ID of PNCI to reflect the addition of the new part number's quantity to inventory. This overall transaction includes both of these history records along with their corresponding Inventory file records.

Inventory Status Inquiry

Screen Data:

Part Number
Description
P/M Code
Part Group
Product Class
Product Line
Unit of Measure
Warehouse No
Location
Location Quantity
Total (all locations) Quantity On Hand
Quatity In Receiving Inspection

Sales Order Issue & Sale Transaction

CHANGED: 5/2/94

Screen Data:

Part Number
Description (display only)
Unit of Measure (display only)
Product Class (display only)
Product Line(display only)
Sales Order
Warehouse Number
Location
Quantity Issued
Issued By
User-ID (from system)
Transaction Date (system date)
Transaction Comments

Functional Logic

CHANGE SUMMARY - Consumption of Sales Forecast data:

This screen allows the issuing of one part number at a time to a sales order, although at this time the sales order is not validated. It creates an Inventory Transaction History record that clearly identifies that these items were issued for sales purposes and carries a unique Transaction Code. This information can then be used to relieve finished goods inventory in the general ledger system, and calculate cost of sales at standard cost.

Since it is not integrated to the Sales Order entry system, essentially this transaction functions like the Miscellaneous Issue transaction, updating only the Inventory record for the part number being sold, except that it carries a unique transaction code and data pertinent to an issue for sales purposes. Accounting will manually reconcile these transactions to invoices to identify any item issued but not sold.

Finished product issued from inventory for sales samples, engineering analysis, or other purposes should use the Miscellaneous Issue transaction to create the appropriate department/GL charge data. The system makes no internal distinction between finished goods and other items in inventory, which allows any item in inventory to be sold/issued.

The screen functions as follows:

- Entry of the part number to be issued for sales purposes is required. If desired, a popup containing part number, description, warehouse number and total warehouse quantity of the part number in that warehouse, from the Inventory file can be initiated. An entered part number must be in the Inventory File. The transaction will not accept part numbers that may be in the Part Master file, but which have never had a receiving transaction performed to create the Inventory File record.

- Once a valid Part Number in the Inventory File is entered, its related data is retrieved and displayed.

- An entry is required in the Sales Order field, but is currently not validated against open Sales Orders.

- Next the program accepts entry of the Warehouse Number from which the items are to be issued. A popup is available displaying all warehouses that have quantities for this part number. If a warehouse number is entered that is not on this list, a warning message is displayed, which the user may override, that this transaction will create a negative onhand balance if it is completed.

- Next the Location entry is accepted. A popup is available displaying all locations having inventory quantities for the already entered part number and warehouse number. If a location is entered that is not on this list, a warning message is displayed, which the user may override, that this transaction will create a negative onhand balance if it is completed.

- Next the Quantity Issued to this Sales Order is entered. If it is greater than the quantity on hand at the warehouse and location previously entered for this part number, a warning message is displayed, which the user may override, that this transaction will create a negative onhand balance if it is completed.

- The name of the person issuing the items may be entered and may be different from the User-ID of the person performing the transaction. The default, however, is the User-ID currently logged into the system.

- The User-ID and Transaction Date are obtained from the system's data.

- If desired, the user may enter comments to be included in the Inventory Transaction History record for this transaction.

- Once completed, the screen is saved with the F9 key.

- Upon saving, the program updates the Inventory file record for this part number and creates an Inventory Transaction History record with a Transaction ID of SOIS, identifying it as a Sales Order Issue & Sale transaction, along with other data pertinent to the transaction.

Added Functions:

Retrieves the Part Master record for the Parent Part Number, and if the Consume MPS Flag = Y, then retrieves the Sales Forecast record for that Part Number. Retrieves the MPS Planning Period record and its First Period From Date value. If the Sales Forecast record is not present, ignore this condition and continue processing. If it is present, most the Quantity Completed to the Sales Forecast record via the following steps:

Scan the Forecast Date lines, ignoring the Dates that are earlier than the current system date, selecting the first Forecast Date that is equal or greater than the First Period From Date.
Add the Transaction Quantity to the Forecast Completed Quantity value previously present for that Forecast Demand Date line.
Subtract the Forecast Quantity from the Forecast Completed Quantity just posted to obtain the Forecast Remainder.
If the Forecast Remainder is a negative number or zero, the Forecast posting process is completed at this point.
If the Remainder is a positive value, read the next Forecast Demand line and add the Forecast Remainder to its Forecast Completed Quantity.
Repeat the subtraction process and check to see if there is a positive Forecast Remainder value.
Continue this loop until the Forecast Remainder value is negative or zero.

NOTE: The purpose of this step is to not consume only 100% of a given Forecast Demand line's quantity, carrying the excess forward in time. This indicates that production is completing the Forecast ahead of schedule. The opposite condition is that a Forecast Date's line falls ealier than the First Period From Date before it is 100% complete, indicating a behind schedule condition. In either case, these data provide the basis for measuring production performance to the Forecast.

Return to Vendor Transaction

Screen Data:

Receiver Number
PO Number (display only)
Quantity Received this Receiver (display only)
Quantity Remaining in Receiving Inspection (display only)
Vendor Name (display only)
Part Number being RTV'd
Unit of Measure
Quantity to Be Returned to Vendor
RTV Authorized by
Return from Receiving Inspection? (Y/N)
Warehouse No. RTV'd From
Warehouse Location RTV'd From

Functional Logic:

This screen accepts entry of a Receiver Number, and records the physical movement of items out of the company back to a vendor after previous receipt, inspection, rejection and concurence with the vendor to return the items. All items to be returned must have previously been received on a Receiving report, will be either returned from Receiving Inspection, in which case the Receiver record must still show a quantity remaining in receiving inspection, or from a warehouse location, in which case the items must be in Inventory. This allows the return of items that were previously received, accepted and moved to stock, but discovered later to be unacceptable. A valid PO relationship is required, which may be a closed PO, to assist in reconciling invoice payments to the vendor. The RTV screen creates a Receiving Transaction record which appears on the Receiving Report used by Accounts Payable.

- The screen first prompts for a Receiver Number, or allows selection of one from a popup containing Part Number, PO No. Vendor ID and Date Received. The retrieved record furnishes PO, quantity Received this Receiver, Quantity Remaining in Receiving Inspction, and Vendor Name. The Receiver record's Part Number becomes the default entry for the Part Number being RTV'd. Unit of Measure is retrieved from the Part Master file record for this Part Number.

- Accept entry of the Quanity To Be Returned to Vendor, which must not be greater than the quantity Remaining in Receiving Inspection for that

Reveiver Number. If it is, the user must enter a second RTV transaction returning the remainder from Inventory or another Receiver Number.

- Accept entry of the RTV Authorized by person's name.

- Accept a Y/N response to Return from Receiving Inspection? If Y, perform the following additional functions:

    - Do not allow Warehouse number or location entries and require that the Quantity being RTV'd be less than or equal to the Quantity Remaining in Receiving Inspection.

    - Post the Quantity being RTV'd to the Quantity RTV'd field in the Receiverrecord previously retrieved, and the system date to the Qty to RTV Date, and the current User-ID to the RTV'd by User-ID. Post the RTV Authorized By screen entry to the Disposition User ID field on the record.
    - Subtract the Quantity Received to the value already present for the Part Number in the Inventory File's Quantity in Receiving Inspection.
    - Generate an RTV type Receiving Transaction History record showing the action.

- If No is the response, require the entry of a valid warehouse number and location from which to subtract the quantity being RTV'd and perform the following additional functions:

    - Subtract the Quantity being RTV'd from the appropriate warehouse and location record in the Inventory File for this Part Number.

    - Create an Inventory Transaction History record for the transaction, including PO number, Receiver Number, quantity RTV'd, warehouse number and location, date/time, and user-id.
    - Generate an RTV type Receiving Transaction History record showing the action.

- Allow saving of the screen with the F9 key, and update the Receiver record and generate the appropriate transaction history record(s).

Work Order Credit Back to Stock Transaction

Screen Data:

Work Order Number
Operation Number
Parent Part Number (display only)
Parent Part Number Description (display only)
Operation Descriptino (display only)
Work Center ID (display only)
Work Center Description (display only)
Part Number
Description (display only)
Unit of Measure (display only)
Quantity Returned
Warehouse Number
Location
Transaction Comments
Transaction Date/Time (display only; system value)
Transaction User/ID (display only; system value)

Functional Logic

This screen allows the returning of one part number at a time from a work order, and its return to inventory. Generally this is to return items that have been over issued to a work order for any of several reasons, such as expected attrition that did not actually occur, cancellation of a work order, or reduction in the planned completion quantity.

It requires that the Work Order be in the Open Work Order table, have a Work Order Status code of RNP or OP (not "C") , and that the part number be on the Work Order Material record and that the quantity being returned is not greater than the quantity issued.

The screen functions as follows:

- It allows entry of Work Order and Operation Number, then checks the status of the work order number in the Open Work Order table, and if it has a status of "C" (closed), the update is disallowed, and the program displays an error message. If it is open, the program retrieves the appropriate work order material data record.

- Once the valid work order and operation number combination has been entered, the program retrieves and displays the Parent Part Number, Description, Operation Description, Work Center ID & Description.

- Having established a valid work order and operation number identifying the desired Work Order Material record that the items being returned are to be posted to, the screen then allows entry of any required part number that is in on the list of required part numbers for that record.

- The Quantity Returned, Warehouse Number and Location that the items were returned to, and any Transaction Comments are entered. Quantity Returned must be greater than zero and non-negative.

- The screen is then saved with the F9 key.

- Upon saving, the program posts the transaction to the Work Order material data, by subtracting the Quantity Returned from the Quantity Issued To Date for that Required Part Number. The Quantity Returned is added to the Quantity On Hand for that Warehouse and Location in the Inventory record for the part number being returned. An Inventory Transaction History Record is created with a Transaction ID of WOCB (Work Order Credit Back) containing the transaction data.

Warehouse to Warehouse Transfer Capability

This includes two screens and a simple report. Together they comprise a simple movement control system where each warehouse enters transactions that effect data that is under the control of that warehouse's personnel. The list serves to tie the movements together and as a reconciliation basis. It also eliminates the possibility of "disappearing" items while moving between warehouses, with finger pointing as to who was responsible later.

The issue and receipt transactions will also update a special warehouse/location line in the Inventory table record for the part number so the total quantity of the part number issued to a transfer ship list will still appear on perpetual inventory reports.

The two screens are an Issue to Transfer Ship List screen, and a Receipt from Transfer Ship List screen. Either can print the Transfer Ship List document, a simple listing with a number containing the part numbers and quantities that were issued to it.

Warehouse to Warehouse Move/Issue To Transfer Ship List

Screen Data:

Transfer List Number (accesses existing list if number entered, or assigns new one from Global Default value; If Esc out, number is skipped as with receiver Numbers)
Transfer Out Warehouse Number (must be valid W/H number)
Part Number (multi-value) (display only)
Description (display only)
U/M (display only)
Transfer Out Quantity (multi-value) (display only)
Transfer In Quantity (multi-value) (display only)
Quantity Due (multi-value) (display only)

Transaction Line:

Shipped Part Number
Description (display only)
U/M (display only)
Transfer Out Location
Transaction Quantity

Transaction Date
Transaction Time
Transaction User-ID

Print Transfer Ship List? (Y/N) (default = Y)

Functional Logic

This screen retrieves the next Transfer List number from the Global Default record each time it is brought up. The purpose of the number is simply to create a unique list record. If an existing Transfer List number is entered, the cumulative quantities previously issued to it are displayed. If it is a new list, these lines are blank. The separate transaction line allows the user to enter new quantities to lists previously created, one line at a time.

After each transaction line is entered, pressing F9 posts the issue to the Inventory table record for the part number as follows:

Subtracts from Warehouse/Location Quantity entered
Adds to Warehouse = TX and Location = TX

then adds it to the Transfer List displayed on the screen, and creates and Inventory Transaction History record, Transaction ID WXFO and a negative Transaction Quantity. If a transaction is entered is for a part number that was previously issued to the Transfer List, its quantity is added to the value previously in the record. If the result in the entered warehouse/location line in the inventory record results in a zero or null value, the that line is removed. The Transaction Number is added to the multi-value stack in the Transfer List record for each issue posted.

This process is continued until all items to be issued to the list at this session have been processed. If the list fills the display window, it can be scrolled by placing the cursor in it.

Pressing F9 again will print the Transfer Ship List, if the option has been selected. This function can be accessed without entering any new transaction lines if a re-print or initial printing of the list is desired.

The printed list accompanies the items from one warehouse to another, serving as a computer-printed Packing Slip, the procedure now in use. When they arrive at the next warehouse, each item on the Transfer Ship List is entered, after confirming identity and quantity of the items. Any missing items in the shipment are confirmed at this point.

Warehouse to Warehouse Move/Receipt From Transfer List

Screen Data:

Transfer List Number (accesses existing list if number entered, or assigns new one from Global Default value; If Esc out, number is skipped as with receiver Numbers)
Transfer Out Warehouse Number (must be valid W/H number)
Part Number (multi-value) (display only)
Description (display only)
U/M (display only)
Transfer Out Quantity (multi-value) (display only)
Transfer In Quantity (multi-value) (display only)
Quantity Due (multi-value) (display only)

Transaction Line:

Received Part Number
Description (display only)
U/M (display only)
Transfer In Location
Transaction Quantity

Transaction Date
Transaction Time
Transaction User-ID

Print Transit Ship List? (Y/N) (default = Y)

Functional Logic

This program is similar in logic to the Issue to Transfer Ship list program, only in reverse. The Transfer Ship List of part number and quantities can be displayed and printed, and there is a transaction line entry used to enter each item's quantity received.

The receipt process is run from within the Transfer Ship List screen, so all receipts must have an open, valid Transfer Ship List to receive from. Part Numbers must be those that are on the list, and quantities received may not exceed quantities that were issued to the Ship List.

Each receipt transaction line is saved with the F9 key, at which time it updates the Transfer Ship List record, updating the display, posts the issue to the Inventory table record for the part number as follows:

Adds to from Warehouse/Location Quantity entered

Subtracts from Warehouse = TX and Location = TX

then creates an Inventory Transaction History record, Transaction ID WXFI, with a transaction quantity carrying a positive sign. If the result in the TX/TX line in the inventory record results in a zero or null value, the TX/TX line is removed. The Transaction Number is added to the multi-value stack in the Transfer List record for each receipt posted.

Receipt to Dock Reversal Transaction

Screen Data:

Receiver Number xxxxx
PO Number (display only) PO Type xx Date Received xx/xx/xx
Vendor ID xxxxx Vendor Name xxxxxxxxx
Work Order Number xxxxxxx From Opn No. xxx

PO L/I No.	PO L/I Part No.	Description	Qty Rec'd Dock
xx	x--------x	x----------x	x----x
xx	x--------x	x----------x	x----x
xx	x--------x	x----------x	x----x

(Display only)

Note: This reversal transaction can be performed only if no approval or movement transactions have been performed against this Receiver Number.

Completely reverse this Receipt? (Y/N) (default = N) x

Press F9 to reverse this Receiver Number

Functional Logic

This transaction completely reverses a previously entered Receipt to Dock transaction, including all related work order and inventory table related functions. History records created in the Receiving Transaction History and WIP Material Transaction History tables are not deleted, but offset by correcting entries to provide an audit trail. The function is normally performed only by the Inventory Control manager or supervisor, not by the same person responsible for entering Receipt to Dock transactions.

The Reversal function is available only if not action has been taken on the item. If quantities have been approved, moved to stock, etc., then the Reversal transaction is not allowed. Only a complete reversal can be processed.

All types of PO's may be reversed. If an expense PO type is to be reversed, and multiple line items were received together, all will be reversed. Reversal of a single line item on an expense PO is not supported.

The program functions by displaying the screen, and accepting a Receiver Number that is to be reversed. When the field is exited, the program reads the Receiving Lot Master record for this Receiver Number. The program checks the record for values greater than zero in the Quantity Accepted, Quantity Moved to

Stock, and Quantity Rejected fields. If there are non-zero values in these fields, the Receiver Number is rejected with the message "This Receiver Number is not reversable; disposition and/or movement transactions have been performed."

If the Receiver Number passes these validation tests, it is accepted, and its associated data displayed on the screen. If the PO Type is an expense PO, and more than one line item was received on the same Receiver Number, those PO Line Items belonging to this Receiver Number will be displyaed from the Receiving Lot Master record. The PO data is not accessed and may reflect different data.

If the PO Type is an Outside Manufacturing PO Type, the PO L/I Work Order number data is displayed, along with the From Operation Number carried in the Receiving Lot record. This will be used to reverse the Work Order update effect of the receiver.

The cursor then moves to the Completely reverse this Receipt? field. The user must enter a Yes response, then press the F9 key to initiate the reversal.

Upon saving the screen with the F9 key, the program performs the following:

Receiving Lot Master - replaces the Quantity Received to Dock with a zero value.

Receiving Transaction History table - creates a record with a Transaction ID of "REV" for each PO Line Item in the Receiving Lot record for this receiver number, to show the reversal of previous REC transaction history records.

If the PO Type is DO, DR or FO (outside manufacturing PO's), using the Work Order and Operation Number data in the Receiving Lot record, retrieve the Open Work Order record and perform the following:

If the Work Order status code is "C", change it to "OP" (re-opening a closed work order. Otherwise no change is made to the WO Status.

If the Receipt being reversed used Option 1, receiving inspection, then the Completing Work Order number is corrected by subtracting the Quantity Received in the Receiving Lot record from the work order record's Quantity Completed and Moved to Stock, and from the From Operation Number's Quantity Completed and Moved. This option is identified by the presence of a work order number and a From

operation, but no To Operation Number or NHA Work Order Number in the Receiving Lot record.

If the Receipt being reversed used Option 2, NHA Link, the Completing Work Order number is corrected by subtracting the Quantity Received in the Receiving Lot record from the work order record's Quantity Completed and Moved to Stock, and from the From (last) Operation Numbers' Quantity Completed and Moved. This option is identified by the presence of a NHA Work Order number in the Receiving Lot record.

If the Receipt being reversed used Option 3, Operation Move, the moved Work Order is corrected by subtracting the Quantity Received in the Receiving Lot record from the To Operation's Quantity In and from the From Operation's Quantity Completed and Moved.

Creates WIP Material Transaction History records to reflect the correction actions performed.

WO Completion & P/S Selection Sub-Program

Screen Data:

New initial Screen for Work Order Completion & Move to Stock Program:

Work order No. x----------x

NOTE: Depending on processing logic, executed as described below, either the existing transaction window is called, with the work order number shown in display only mode, or the screen shown below is called, and this program is run instead of the existing work order completion & move to stock program.

WO Number (displayed)
Product (display only) (WO Parent P/N)
WH No. x-------x Location x----------x

Power Supply Code	PS'd Part Number	Qty
xx	x----------x	xxx
xx	x----------x	xxx
xx	x----------x	xxx
xx	x----------x	xxx
xx	x----------x	xxx
xx	x----------x	xxx
xx	x----------x	xxx
	Total Qty	xxx

Transaction User-ID
Transaction Date/Time
Transaction Comments

Functional Logic

When selected from the menu, the program first displays the first brief screen, shown above, prompting for Work Order Number only.

When the Enter is pressed, the program validates the Work Order Number by checking to insure that it is a Open Work Order record having an OP Status.

If it does, the program next determines if the Multiple Products Allowed? flag in the Open Work Order record is Yes or No (null may equal No). If it is No (or null), the regular work order completion & move to stock program is called and run.

If it is Yes, then the second screen shown above is displayed, with the work order number shown in display only mode and the rest of the transaction is performed by this program. When it is saved with the F9 key, or the Escape key is pressed, the program returns to the intitial Work Order Number entry window.

When called, this program performs the following steps:

Displays the Work Order Number and associated data from the previous screen.

Prompts and accepts entry of the Warehouse Number and Location to which the items have been (or are to be) moved. These must be in the Warehouse and Warehouse/Location tables respectively. To keep this screen's functioning straightforward, the program requires that the total quantity for all power supply designated part numbers be moved to the same warehouse and inventory location. The Location to Location Move Transaction can be used to indicate subsequent movement of specific items to different locations.

Each Power Supply Code is entered, or can be selected from a popup containing the power supply code and associated Part Number data from the Open Work Order record. As each is entered, the associated Part Number is displayed, and the cursor moves to the Quantity field for that power supply code.

The Quantity field must be greater than zero and not negative.

Multiple power supply designated lines and associated quantities may be entered, the the cumulative total being calculated and displayed at the Total Quantity field at the bottom of the display.

When completed, the screen is saved with the F9 key.

The transaction User-ID and Date/Time values are from the system values.

Upon saving, the program performs the following steps:

For the WO Number, adds the Total Quantity to the Actual Quantity Completed field in the Open Work Order record.

For each power supply'd part number, add that line's quantity completed to the existing cumulative value for Power Supply Quantity Completed.

For each Power Supplied Part Number, retrieves the Inventory record, and adds the quantity associated with that Power Supplied Part Number to the Warehouse

and Location line quantity in that record and creates an Inventory Transaction History record, continuing the process until all Power Supplied Part Numbers and associated quantities have been posted to the inventory record and have related inventory transaction history records.

When completed, the program returns to the initial Work Order Number entry screen. The regular Work Order Completion and Move to Stock Transaction program is also modified to return to this initial Work Order Number entry screen.

Drop Ship Receipt & Issue Transaction

Screen Data:

Vendor Identification Window:

Vendor ID
Vendor Password

Transaction Window:

Receiving Data:

Receiver Number x---x (display only)
PO Number x--------x
Received at (Ship To) Vendor ID x----------x (display only)
No. of Cartons x-------x
Packing Slip Number x--------x
L/I x-x
Part Number x----------x (display only)
Quantity Received x----x

Issue Data:

WO Number x---------------x
Mtl Opn No. x-----x
W/C ID x--------x (display only)
W/C Vendor ID x------x (display only)

Trans. Comments x----------x
Transaction Date xx/xx/xx (display only)

Functional Logic

This program has two versions. One is designed to be used primarily by off-site outside manufacturing vendors to report the receipt of Alesis purchased material that is drop-shipped directly to the O/Mfg vendor and is not included in a kit of consigned material. Access is via a dial-in modem and PC. The dial-in/logon routine takes the vendor's personnel directly to this screen.

This version includes several design features to improve system security and provide an enhanced audit trail. Each vendor assigns one or more of their personnel to be designated data entry/reporting personnel. Each has a user-ID in the system. In addition, the Vendor ID has its own password that must be entered on each screen, to prevent one vendor from accidentally reporting

receipts to another's PO's. The program also cross checks this validation logic against the vendor ID in the PO, so only PO's that match can be even seen, let alone updated. Finally, the work order information to be updated must be the Work Order in the Purchase Order record. This requires the Buyer to be in full control of which material on a PO is for which work order and keeps the Vendor's personnel from needing to browse the work order table looking for something to update.

The internal-use version of this program does not display or prompt for the Vendor ID and Password functions, instead going directly to the actual transaction screen. Other than these two different entry points, the program is the same for either version.

In terms of data that is updated, this program performs the normal receipt to dock function for DP and FP type purchase orders but directly issues the material to a work order instead of requiring a series of transactions to achieve the same result. Drop Shipped material bypasses the Receiving Inspection cycle, with the Receiving Lot record indicating that the quantity was approved. When the update process is complete, the received quantity will, in effect, appear to have been processed through the receiving inspection cycle into perpetual inventory and issued to a work order.

No printed receiving report (traveler) is printed.

It updates and/or creates these records in its process:

- PO - L/I quantity received
- Receiving Lot Master
- Receving Transaction History record
- Work Order Material - updated quantity issued field for part number.
- Inventory Trans History - records issue to Work Order, using a new transaction type code, RIWO.

When selected from the menu, the internal version of the program displays the Transaction Window, with the cursor at the Receiver Number field. A new Receiver Number field is assigned as with the regular receiver program by reading the Global Default receiving number parameter record, incrementing it by one, and saving the new record's value. If the screen is exited without saving it, this receiving number remains unused.

The PO number is entered next. Only DP and FP PO Types may be received with this window. The PO also must not have a status of "C" (closed). If the

entry is valid, the Ship To Vendor ID is retrieved from the PO and displayed to allow verification by the user.

After the PO is validated, the Number of Cartons in the received shipment and associated Packing Slip Number are entered. These fields are optional, as the data may not be available for an off-site shipment.

The Line Item Number on the PO that is being received is entered next. The F2 key brings a popup window containing the Line Item Numbers and associated Part Numbers for that PO. One may be selected. The Line Item number must be on the PO. When the Line Item is entered, the program displays the associated Part Number for that line item.

The quantity being received and issued is entered next, and must be greater than zero, not negative, and less than or equal to the PO Line Item's quantity remaining for that line item, plus the PO Receiving % Filter value in this Global Default table record.

After the receiving information is entered and accepted, the program next accepts the Work Order Number that the items are to be issued to. The default value is the PO Header information's Work Order field value. When a Work Order Number is entered, the program validates the entry as follows:

- Open Order - The work order must be in the Open Work Orders table and must have a status of PLND, RNP, or OP.
- Outside Manufacturing Vendor Match - The program scans the routing and retrieves work center master data to insure that at least one of the operation lines in the routing data for the work order contains a work center that is an outside manufacturing work center, i.e., it has a Vendor ID that matches the Ship To Vendor ID on the PO. [This validation ensures that there is a clear linkage between the PO and Work Order, and that these items are being issued to a work order that is or will be at this vendor's. Otherwise the traceability could be lost.] When this work center match is completed, the Work Center and associated W/C Vendor ID are displayed. If there is no match, the work order number entry is rejected, with an error message explaining that this work order does not have a work center with matching vendor ID.
- Part Number Required on Work Order - The Part Number must be in at least one (if there are multiple) Work Order Material record's Required Part Numbers list, ascertained by retrieving Work Order Material records and scanning their lists until a match is encountered. When this record is located, its operation number is displayed as the Material Operation

Number. If there a multiple work order material records, and the Part Number is on both Required Part Numbers lists, the program will select the first work order material record with the part number in its required part number list.

Transaction Comments may be entered for this transaction only, or left blank. The Transaction Date that will be appear in the records is displayed.

When the entries are complete, the screen is saved with the F9 key. The save process revalidates all entries as defined above, then updates the appropriate records as follows:

Purchase Order - retrieves the PO record, locates the Line Item number and Part Number, adding the Received Quantity from the screen to the previous value of the Line Item Quantity Received.

Receiving Lot - creates a new record for this Receiver Number, obtaining the data fields as defined below:

Field	Data Source	S/M	Comments
RCVR_NO	Program - incremented from Global Default	S	
PO	PO number entered	S	
PO_TYPE	From PO record	S	
RCVD_DT	Program	S	Current system date
PACKG_SLIP_NO	Screen entry	S	
PACKG_SLIP_QTY	left blank	S	
MOVE_TO_STK_FLG	Set to Yes (Y)	S	
WO_NO	Work order No. entered	S	
DELIVER_TO	left blank	S	
PO_CMT	from PO Record	S	
CRNT_MTL_STD_COST	From Part Master record for Part Number	S	Current Material Standard Cost field
CRNT_OM_RTE_CST	left blank	S	
PO_LN_ITM_NO	Screen entry	S	
PART	Screen entry	S	
PO_LN_ITM_DESC	Description from PO record, this L/I	S	
PO_LN_ITM_US_CST	PO Record, this L/I no.	S	

QTY	Quantity Received & Issued from screen	S
PO_LN_ITM_PUR_UM	PO Record, this L/I	S
PO_LN_ITM_STK_UM	PO Record, this L/I	S
ACCEPTED_QTY	Quantity Received & Issued from screen	S
RTV_QTY	left blank	S
SCRP_QTY	left blank	S
MVD_STK_WTY	Quantity Received & Issued from screen	S
NO_CRTNS_RCVD	Screen entry	S
LI_GL_NO	left blank	S
USER_ID	Program - system logon IS	S
CMNTS	Screen entry	S
NHA_WO_NO	left blank	S
NHA_OPR_NO	left blank	S
MVD_FROM_OPR_NO	left blank	S
OM_OPT	left blank	S
DMR_NO	left blank	S
DMR_REJECTED_QTY	left blank	S
DMR_QTY_USE_ASIS	left blank	S
ACCPT_DATE	Program - current system date	S
ACCPT_USER_ID	Program - current logon ID	S

Receiving Transaction History Record - creates a new record with data field sources as shown below:

Field	Data Source	S/M	Comments
PO_LINE_ITM_NO	Screen entrty	S	
RCVR_NO	Receiving Lot record ID	S	
TRAN_DT	Program - current system date	S	
TRAN_TYP	Set to "REC"	S	

PO_NO	PO Number - screen entry	S
DESC	PO Record's this line item part number description	S
TRAN_QTY	Quantity Received & Issued in screen	S
USR_ID	Program - current logon ID	S
LI_PART_NO	Screeen entry, PO record's Line Item P/N	S

Work Order Material - After locating the Required Part Number line in the record that matches the Received & Issued Part Number on the screen, the program adds the Quanity Received & Issued to the previous value of the Quantity Issued for this Required Part Number line.

Inventory Transaction History - creates a new record using the data field sources as shown below:

Field	Data Source	S/M	Comments
TRANS_NO	Next incremental record ID	S	
PART_NO	L/I Part Number, entered on screen	S	
TRANS_DATE	Program - current system date	S	
TRANS_TIME	Program - current system time	S	
TRANS_ID	Set to "RIWO"	S	Received, Issued to Work Order
WH_NO	Set to "0" (zero)	S	Indicates not issued from an in-house warehouse no.
LOC_NO	Set to "0" (zero)	S	Indicates not issued from a location
ORDER_NO	PO Number entered on screen	S	
TRANS_QTY	Quantity Received & Issued on screen	S	
ISSUE_RCVD_PERSON	Program - current system logon ID	S	

ISSUE_RCVD_DEPT	left blank	S	
ISSUE_RCVD_BY_PERSON	left blank	S	
GL_ACCT_NO	left blank	S	
COMMENT	Program - screen entry	S	Transaction comment
QTY_ON_HAND	left blank	S	
NEW_QTY_ON_HAND	left blank	S	
USER_ID	Program - current logon ID	S	
RCVR_NO	Receiving Lot record ID	S	
WO_NO	Work Order Number entered on screen	S	
SHIP_LIST_NO	left blank	S	
DMR_NO	left blank	S	

Part Number Standard Location Maintenance

Screen Data:

Part Number
Description (display only)
Part Group (display only)
Part Class (display only)
Stocking U/M (display only)
Engineering Part Status (display only)
Vendor Stocked Item? (display only)
Weight (display only)
Shipping Volume
Volume U/M
Issue From (default) Warehouse
Issue From (default) Location

Functional Logic

This screen allows a warehouse manager/supervisor to enter the standard or default warehouse and location information to be used by the Pick Complete program when creating issue transactions to work orders.

This standard location for each part number is also intended to be the primary location where this part number is stored, other locations being acceptable, but essentially being secondary or overflow locations. The operating assumption of the overall system is that picking of items for work orders (or for finished goods, for sales orders) is always done from the standard/default warehouse and location identified in the part master record. When the quantity in this location is depleted, material is moved into the location from the overflow or secondary locations.

It allows entry of a part number to be retrieved from the Part Master table, displays its associated data, and allows changes to the Shipping Volume, Volume U/M, and Issue From (default) warehouse and Location data.

The volume U/M must be on the U/M lookup table, which is accessible via popup window.

The Issue From Warehouse Number must be on the warehouse lookup table, which is accessible via popup window.

The Issue From Location must be on the warehouse/location lookup table, and is accessible via popup window showing all locations for the warehouse number previously entered. If an attempt is made to call the warehouse/location popup window with no warehouse number entered, the popup will not display.

When maintenance is completed, the screen is saved with the F9 key, which writes the data to the Part Master table record for that part number.

Transaction Error Correction Procedures

The following describes the procedure and/or transaction to be used to correct erroneously processed inventory affecting transactions in AIMS/ERP.

Original Trans.	Trans Desciption	Correcting Transaction	Procedure /Explanation
AMTS	Accept & Move to Stock	MSIS	Corrects O/H balance data only, not PO or receiving data; no other correcting trans. available now.
LTLM	Location to Location Move	LTLM	Enter reversing data
MSRC	Miscellaneous Receipt	MSIS	Use same Dept, GL #, Quantity
MSIS	Miscellaneous Issue	MSRC	Use same Dept, GL #, Quantity
WOPC	Work Order Pick Complete	WOCB (when available) - use MSRC until availabe	Enter one for WOPC trans with same WO/Opn No.
WOPS	Work Order Pick Shortage	WOCB (when available) - use MSRC until available	Enter same offsetting WO, quantity
WOCB - when available	Work Order Credit Back	WOPS	Enter same offsetting WO, quantity
WCMS	Work Order Complete & Move to Stock	MSIS	Corrects O/H balance data only, not WO status
SOIS	Sales Order Issue & Ship	MSRC	Reference SOIS SO#; same quantity
PNCO	Part Number Change - Out	PNCI	Run same transaction, but in reverse to correct
PNCI	Part Number Change - In	PNCO	Run same transaction, but in reverse to correct

CCAJ (when available)	Cycle Count Adjustment	CCAJ (when available)	Enter offsetting quantity, ref; original trans. date/time

Cycle Counting/Physical Inventory Subsystem - Overview

The cycle counting/physcial inventory subsystem features several major activites, including:

Capture of perpetual/work order/receiving inspection system data into a Cycle Count Master record. Each running of the Capture program generates a date/time value in the CC Capture table. The most recent date/time is, by definition, the capture/count/adjust cycle that is considered open. Other values are stored to facilitate selection of previous cycles for reporting purposes.

The capture record serves as a permanent of each comparison of system data with reality. As a result, a continuous record of each part number's count history, including both physical inventories and cycle counts are available over time. A physical inventory in this subsystem is simply a cycle count of everything. All comparison reports use this record as its basis. When the capture & count entry cycle is complete, the Cycle Count Master record will contain one of the following conditions:

1. The capture program copied system data that indicated that a quantity of a part number was in a certain location/status and the physical count(s) confirmed that. If the capture source is a perpetual record, there may be multiple tag/counts resulting from the same part number being in multiple warehouses/locations. If the quantities are correct, but locations differ, these will be reflected in the two sets of mult-value fields.

2. The capture program copied system data that indicated that a quantity of a part number was in a certain location/status but physical count(s) confirmed a different quantity/locations.

3. The capture program copied system data that indicated that a quantity of a part number was in a certain location/status but physical count(s) disclosed no matching data at all. In this case, the Count portion of the Cycle Count Master record will remain blank.

4. There was no data in the system for the capture program to capture, but physical count(s) dislosed one or more locations/status where quantities of the part number existed. In this case, the Cycle Count Master record is created by the Tag/Count entry program(s) to provide a consistent trail of the counting activitity, provide a comparison basis,

and to generate adjustment transactions. When this occurs, the Record portions of the record will remain blank.

Tag generation, for physical inventories or a tag based cycle counting methodology, features a number of options. All tag generation options create a record in the data base against which tag accountability controls, tag data entry, and tag costing are performed. To speed computer printing, tag numbers are printed on pre-printed (lithographed) multi-part forms carrying all field labels and blank spaces for writing or printing data. Thus, the computer does not have to print blank lines for each tag's data fields, 10,000 times. To allow for partially built assemblies in WIP, an assembly less component part numbers costing capability is built in. Tag records are the costed basis for these items, which may be in WIP on a work order only.

Batched Tag Data Entry of bar-coded tag numbered tags, using full batch control techniques, including hash totaling, coupled with cursor movement tailored to the type of tag (warehouse, receiving, or work order inventory), and ability to carry repeating data forward to the next tag as default, all of which work together to substantially speed tag data entry and increase the accuracy of data entry.

Tag Costing using standard cost data in the Part Master file, so corrections in standard cost data will be reflected in corrected tag costs. Tag cost calculations are net, subtracting component part numbers and quantities identified as missing.

Tag Posting to both the Tag Master and Cycle Count Master tables, carrying forward both tag quantities and cost data. Tag posting is linked to the currently open capture/count/adjust cycle.

Record vs Count quantity comparison reports using Cycle Count Master record data, which become part of the cycle count record keeping system.

Adjustments to perpetual warehouse inventory are generated programatically by selecting the currently open cutoff date as a match. No program generated adjustments to Work Order or Receiving Inspection records are generated, as these require additional analysis prior to creating any adjusting entries. In particular, work order material information is inherently limited to the accuracy with which it can be physically verified via a record vs. actual comparison.

New Tables:

Cycle Count Master - Captures perpetual, receiving inspection, and/or work order component part number, quantity & associated data for subsequent comparison. Tag or actual count data is posted to this record to provide a permanent, easy to access record of countable quantities of each item. The record is created either by the capture program, or by the tag/count entry program and provides a permanent record of all count and verification activities over time.

A set of multi-value fields store multiple location data for perpetual inventory under a common record ID for the part number and cut-off time. For Receiving Inspection lots, and Work Order Component data, the multi-value field stack is not used, with only one combination of work order, or receiving report number, and part number data being stored.

The record ID consists of 3 fields, the Part Number, the date/time the cutoff is run, and a third field that depends on where the data captured was from. The three data capture sources and their associated data are:

1. Perpetual inventory system - a "P" is inserted in this field since all data for all warehouses and locations pertaining to the same part number is captured in a single record. It is generated by reading the Inventory file data for each part number.

2. Receiving Inspection - this data is obtained by reading the Receiving Lot table, with a single Cycle Count Master record being created for each Receiver Number with a quantity remaining in receiving inspection. To indicate this, the capture program fills this field with an "R" plus the receiver number.

3. Work In Process - this data is obtained by reading open work order records where the parent part number quantity completed is less than the quantity planned, and the work order status code is not "C" (closed). For each component part number with a quantity issued greater than zero, the capture program generates a Cycle Count Master record for the quantity issued. For each component part number where a quantity has been issued, a single capture record is generated, with the program entering the Work Order number in this field. The quantities estimated at each operation in the work order's routing are shown in the mult-value stack including work center, operation number, and the quantity calculated to be at each operation in the routing (may be zero).

Cycle Count Master - Data Fields:

Part Number - Record ID field
Cutoff Date/Time- Record ID field
Capture Source - Record ID field (see above explanation for contents)
Adjustment Transaction Date/Time M/V
Adjustment Qty M/V

(first Associated Multi-Value Field Stack)
Record Quantity M/V "sub-key"
Record Warehouse No. M/V (work center ID if a WO capture source)
(blank for non-perpetual records)
Record Lot No (blank) M/V (blank in current AIMS/ERP)
Record Location M/V (Operation No if a WO capture source)
(blank for non-perpetual records)

(Second Associated Multi-Value Field Stack)
Count Tag No. M/V "sub-key"
Count Warehouse M/V (work center ID if a W tag type)
Count Lot No. (blank) M/V (blank in current AIMS/ERP)
Count Location M/V (Operation if a W tag type)
Count Quantity M/V
Incomplete Assy? M/V ("W" tags only; if Missing P/N's
are present)

Tag Master - generated to print, store tag data

Tag No. - Record ID
Tag Type (P, R, W only)
P/N
Warehouse No.
Lot No. (blank)
Location
Receiver No.
Work Order No.
Operation No.
Work Center ID
Count Quantity
Missing Component P/N M/V
Missing Component Qty/Assy M/V
Missing Component Total Unit Cost M/V (symbolic - from Part Mstr)
Missing Component Total Extended Cost M/V (symbolic)

Tag Printed (Y/N)
Tag Print Verified (Y/N)
Tag Net Total Cost (See costing algorithm)
Flag for Scrap? (Y/N) (default = N)
Batch No.
Tag Unused? (Y/N)

Tag Batch Control - used to stored entered, unposted tags

Batch Number - Record ID
Balance To Hash Total
Calculated Hash Total
Tag Type (P, R, W only)
Posted Date/Time
Batch Enter By User-ID
Batch Saved Date/Time

Multi-Value tag records within Batch Control record:

Tag No. - Record ID	M/V
P/N	M/V
Warehouse No.	M/V
Lot No. (blank)	M/V
Location	M/V
Receiver No.	M/V
Work Order No.	M/V
Operation No.	M/V
Work Center ID	M/V
Count Quantity	M/V

Secondary M/V fields within tag M/V AMV fields:

Missing Component P/N	M/V
Missing Component Qty/Assy	M/V
Missing Component Total Unit Cost	M/V
Missing Component Total Extended Cost	M/V

Tag Printed (Y/N)
Tag Total Cost
Flag for Scrap? (Y/N

C/C & P/I System - Cutoff & Data Capture

Screen Data:

Selection Options:

1. Individual part numbers to be cutoff & counted - enter P/N's
2. Full physical inventory - cutoff all W/H, R/I, W/O data
3. Physical inventory for single warehouse - enter W/H No.
4. Physical inventory for all perpetual warehouses (no R/I, no W/O data)

Note: This program may take considerable time to run.

Cutoff Date/Time to Use (display only & acknowledged)

Press F9 to initiate processing.

Functional Logic

This program reads warehouse, receiving and/or work order required part data and creates the Cycle Count Master records, capturing these data as of the cutoff time (which is the date/time the program is actually run). All Cycle Count Master records have, as part of their Record ID, the date/time that the cutoff is actually run. This value is the same for the entire run, being the date/time that the program begins executing this process. It is established at each run, and stored in a CC Capture table record that is subsequently access as a default, used by the Batch Tag Posting program to identify which CC Master records to update, and serves to establish the currently open capture/count/adjust process.

The program has several options to allow the system to be used either as a method to manage and track cycle counting on an individual part number basis, to perform a full physical inventory, or a partial physical inventory. These include:

1. Cycle Count Warehouse Inventory - this option requires the user to enter individual part numbers to be counted and will capture on hand data for that part number at all warehouse & locations. Counts of these items are then performed, with or without tags, the count results entered, and after approval, adjustments generated.

2. Full Physical Inventory - this option generates cutoff capture data for all part numbers within all warehouses and locations, analyzes Receiving Lot records for quantities remaining, capturing those that have open balances, and reviews

open, picked work order records, capturing quantities issued for each work order.

3. Physical Inventory - Single Warehouse - this process captures on hand data for each part number within a single warehouse only. Quantities of that part number that are at other warehouses are ignored in the capture, counting, comparison and adjustment process.

4. Physical Inventory - All Warehouses Only - this option captures data for each part number at all warehouse and locations, but does not generate capture data for receiving inspection quantities remaining on receiver numbers, nor quantities shown as issued to work orders.

The program functions by first displaying the selection screen. Selection of options are accepted, then the program's functions are initiated by the F9 key.

A message is displayed during the program's processing, informing the user of the state of its processing.

The steps performed by the program in each of the three areas are described below.

Perpetual Warehouse Data Cutoff & Capture

The program reads all records in the Inventory table. For each record, creates a corresponding Cycle Count Master record, containing the part number, warehouse(s), location(s) and quantities at each warehouse/location combination. If lot traceability is in use, copies this data as well.

If the single warehouse option has been selected, the capture process skips warehouses and their associated location & quantity data that are not equal to the selected warehouse number. Only the data associated with the selected warehouse is copied into the Cycle Count Master record for each part number.

When all records in the Inventory table have been read, the Cycle Count Master records contain all (selected) inventory warehouses, locations, and their associated quantities in the record for each part number, and a Cycle Count Master record has been generated for each part number in the Inventory Table, including part numbers showing zero quantity on hand at any location.

Receiving Inspection Quantities

The program reads all records in the Receiving Lot table. Only records showing a quantity remaining in Receiving Inspection are selected to have their data captured in a Cycle Count Master record.

Receiver Numbers for expense Purchase Order types are excluded from this process.

The Receiving Inspection Quantity is calculated from the following formula:

Quantity Received to Dock
minus Quantity Accepted & Moved to Stock
minus Quantity RTV'd
minus Quantity Scrapped
= Receiving Inspection Quantity

If the Receiving Inspection Quantity is greater than zero, this quantity is written to the Cycle Count Master record, which is identified with the Receiving Report number that is the record identifier for the Receiving Lot record.

Open Work Order Material Quantities

1. Select Work Orders for analysis - the program reads all records in the Open Work Order table. Only work orders with a status of "OP" (open, picked) are analyzed. If the work order status is RNP (released, not picked) or C (closed), the work order is skipped, since this indicates that its material has been either not issued, or otherwise dispositioned.

Both regular and rework work orders are selectable for analysis.

2. Calculate the Portion Remaining (to account for material that has already been consumed into product, as reported in completion and move to stock transaction on each work order, using the following formulat:

1.0 minus (Work Order Quantity Completed/ Planned Completion Quantity)
= Portion Remaining

This value is calculated and used as a decimal quantity, representing the portion of the issued material that has been already consumed by converting into the parent part number. It is saved temporarily and used to modify quantities issued as described below.

3. Identify Operations with material & associated portions - for each selected Open Work Order record, the program performs the following steps:

Identify the operations where material may be located, and the portion at that operation by the following formulas:

Operation Quantity In minus Operation Quantity Completed minus Operation Quantity Scrapped
= Operation Quantity Remaining

Operation Quantity Remaining/WO Planned Completion Quantity
= Operation Fraction

If the Operation Quantity Remaining is zero, skip the operation number, its associated work center, and do not capture any data for this operation number in the Cycle Count Master records for that part number.

The resulting operation numbers and associated Operation Portion values are saved and used to apportion required part number quantities by operation/work center found in the related Work Order Material records.

4. Identify & calculate issued P/N's & quantities - read the Work Order Material record(s) for the Work Order Number just selected and processed to obtain the list(s) of required component part numbers and the quantity of each that has been issued to date. Merge required part number lists from all WO Material records with the same WO number to obtain a combined total list and quantities that reflect all issues of the same required part number on more than one WO Material record. Perform all following calculations from this combined list.

For each required component part number where the Quantity Issued is greater than zero, calculate the Adjusted Issued Quantity from the following formula:

Quantity Issued X Portion Remaining
= Adjusted Issued Quantity

Obtain the Cycle Count Master Record Quantity associated with each Operation in the multi-value stack from the following formula:

Adjusted Issued Quantity X Operation Fraction
= Operation Record Quantity

5. Generate Cycle Count Master Record - for each required part number on each work order number having a Quantity Issued greater than zero, create a Cycle Count Master record, with a multi-value stack consisting of an associated set for each combination of operation number, work center, and operation quantity. The material operation number that is part of the Work Order Material record ID is omitted, since material issued at one operation is subsequently moved to others.

The table below summarizes this process.

Cycle Count Master Data =	Work Order Record Data	Comments
Part Number	Required Part Number	separate record for each req'd P/N in WO Mtl record(s)
Work Order No.	Work Order Number	
Record Quantity	Qty Issued	Modified by formulas
Record Warehouse No.	Work Center	W/C for this operation
Record Lot No.	N/A	unused - remains blank
Record Location	Operation No.	Generate a multi-value row for each operation in the routing where material is estimated to be

C/C & P/I System - Tag Record Generation

Screen Data

Selection:

1. Generate Blank Tags - enter quantity of tags to generate

2. Location Sequenced Tags, no P/N data, From Location table- enter one warehouse number, plus number of tags per location.

3. Location Sequenced Tags w/P/N's, From Inventory table - enter one warehouse number

4. Cycle Count Tag Generation - Enter cutoff date/time

Press F9 to initiate tag record generation.

Functional Logic

This program generates tag records in the Tag Master table, according to the option selected. Tag records are printed in a separate program, which flags each record as printed as it is succesfully printed. Options allow generation of tags associated with other data, or completely blank. The options include:

1. Generate Blank Tags - enter number of tag records to generate, numbering starts with the last record already existing in the table, incrementing upwards. If the Tag File is being used for the first time, the program prompts, one time only, for the beginning tag number.

2. Location Sequenced Tags, No P/N Data, From Location Table - accepts entry of one warehouse number, plus the number of tags per location. The program then reads the location master records for the entered warehouse number, generating tag records with tag numbers that follow the location sequence. Tag records include only warehouse number, location , no part number data.

3. Location Sequenced Tags W/ P/N's, From Inventory Table Tags - accepts entry of one warehouse number, then the program reads the Inventory table's on hand balance data, and generates tag numbers that follow location sequence. Generates one tag for each combination of part number and location within the warehouse.

4. Tags by Cycle Count Master - generates tags for those records for the currently open date/time cutoff (most recent value). Allows tags to be used in conjunction with the cycle counting activity as well as a full physical inventory.

Generates one tag for each part number, warehouse, location shown in the C/C Master record. This option will generate tags only from Cycle Count Master records with a Capture Source = "P". Other capture sources will be ignored.

The last tag number used is stored in a Global Default system parameter record. For each tag record generation process, the program retrieves this record, locking it for the duration of the run. The number is incremented for the first and subsequent tag numbers. At the conclusion of the run, the last tag number used is stored in this record for the next run.

C/C & P/I System - Tag Printing & Verification

Screen Data:

Options:

1. Print new tags

start w/ next tag no to end of file Global default start no.

2. Reprint previously printed, unverified tags

looks for printed = Y and Verified -= N

3. Verify Tags already printed OK
into veriy screen

New Tag Print Screen:

Print Tag numbers from xxxxxx

Press F9 to start the printing process.

Interrupt printing by pressing the _____key

2. Reprint Tag Screen:

Reprint Tag Numbers xxxx to xxxxx

Press F9 to start the printing process.

Interrupt printing by pressing the _____key

Tag Print Verification Screen:

3. Verify Satisfactory Printing of

Tag Numbers from xxxxxxx to xxxxx
xxxxxxx to xxxxx
xxxxxxx to xxxxx
xxxxxxx to xxxxx

Press F9 to intiate tag verification update for the above tag numbers.

Functional Logic

The program functions by first displaying a selection screen with three options. Depending on the option selected, it then branches. These are:

1. Print New Tags - this option displays a window containing the next tag number to be printed, obtained from the Global Default record containing last tag number printed, together with instructions for initiating, pausing, and stopping the printing process. If no interruption is made, the program will continue until all records in the Tag Master table have been printed. Each tag record printed has its Printed? flag set to Y.

2. Reprint Unverified Tags - this option displays a window containing a From and To tag number range. When initiated with the F9 key, it will read the Tag Master table records, identify records where Printed? = Y, and Verified? = N, and reprint only those tag records. If there is part number, warehouse, and location data, these are reprinted also. All other tag records within the entered range will be skipped. No updating is performed to those tag records that are reprinted.

3. Verify Printed Tags - this option displays the Tag Verification window, containing one or more from and to tag number ranges. When all ranges have been entered, pressing F9 initiates the process. The program then reads the Tag Master records for each range, and checks the Verified? flag. If it = N, the program sets it to Y. If a Y is already present, the program skips the record, interpreting the entry as a duplicate verification. No error report or message is generated in this case. It continues until all Tag Master records within the entered range have been read and set to Verify? = Y.

A Global Default table record is maintained containing the last tag number printed, to aid in starting the program without searching the file.

The Print Interruption key(s) can be pressed at any time to pause the printing process. Pressing them again at this point terminates it.

If a tag record has been generated with warehouse, location, and/or part number data, the print program will print it on the tag, along with the tag number and the same value expressed as a bar code. No print option exists for this data.

Refer to the continuous form tag format below for printing locations of tag data. The program prints: Tag Number, with an accompanying bar code, for all tags. If present in the Tag Master record, it may also print Part Number, U/M, Description, Warehouse No., and Location Code

In the top right corner, spaced well to the right of the bar code, also print the following additional line:

W F/S Cnt Pr/Cnt

These allow the counting crew to indicate the basis for the counting and will be circled.

TAG NO.

Part Number **U/M** **Description**

Status & Location of Items (use A, B, or C)

A. Warehouse No.: **Loc'n Code:**

B. Receiving Inspection:

Receiver No. _____

C. WIP - Work Order No. _____

Operation No. _____

Work Center ID _____

1st Count Qty _____ **Counter** _____ **Checker** ____

2nd Count Qty _____ **Counter** _____ **Checker** ____

Final Cnt Qty _____ **Auditor** _____

Pallets	X	Boxes	X	Qty/Box	= Total Qty
_____		_____		_____	_____
_____		_____		_____	_____
_____		_____		_____	_____
				Grand Total	_____

Assemblies Missing Parts (WIP only) **(attach BOM list):**

Missing P/N	Description	Qty/Assy Missing
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Flag to Scrap? ☐ **QC Approval** _____

Comments/Calculations:

Original - Tag No. Control File **2nd Copy - Tag Data Entry** **3rd Copy - Attach to Items Counted**

C/C & P/I System - Tag Data Entry

Screen Data:

Batch Control Screen:

Batch Number x-------x (entered)

Balance To Hash Total x----------x (entered)

Calculated Hash Total x---(display only)---x

Number of tags in batch x--display only ---x

Enter Tag Type in Batch (P, R, or W only)

Press Shift +F1 to initiate tag data entry

Press F9 to save this batch of tags

Tag Entry Screen - Tag Type = "P"

Batch No. x---display only---x Tag Type x (display only()

Tag No.	Part Number	U /M	Description	W/H No.	Loc'n Code	Count Qty	Flag Scrp
x-----x	x---------x	xx	x----------x	xx	x--------x	x-----x	x
x-----x	x---------x	xx	x----------x	xx	x--------x	x-----x	x
x-----x	x---------x	xx	x----------x	xx	x--------x	x-----x	x
x-----x	x---------x	xx	x----------x	xx	x--------x	x-----x	x

Tag Entry Screen - Tag Type = "R"

Batch No. x---display only---x Tag Type x (display only()

Tag No.	Part Number	U /M	Description	W/H No.	Rec eivr Qty	Count Scrp	Flag
x-----x	x---------x	xx	x----------x	xxxxx	x-----x	x	
x-----x	x---------x	xx	x----------x	xxxxx	x-----x	x	
x-----x	x---------x	xx	x----------x	xxxxx	x-----x	x	
x-----x	x---------x	xx	x----------x	xxxxx	x-----x	x	

Tag Entry Screen - Tag Type = "W"

Batch No. x---display only---x Tag Type x (display only()

Tag No.	Part Number	U /M	Description			W/O No.	Opn No.	W/C ID	Count Qty	Flag Scrp
x-----x	x---------x	xx	x----------x	xxx xxx	xxx	x--xx	x-----x	x		
x-----x	x---------x	xx	x----------x	xxx xxx	xxx	x--xx	x-----x	x		
x-----x	x---------x	xx	x----------x	xxx xxx	xxx	x--xx	x-----x	x		

To Enter Missing P/N's for a tag, press Shift + F1 to access entry screen.

Missing P/N Screen:

Missing P/N	Description	U/M	Qty/Assy Missing
x----------x	x--(display only)---x	xx	x--------x
x----------x	x--(display only)---x	xx	x--------x
x----------x	x--(display only)---x	xx	x--------x
x----------x	x--(display only)---x	xx	x--------x

Functional Logic

The tag data entry work flow involves the following steps:

1. Group tags into batches of approximately 100 tags. All tags within a batch must be of the same tag type.

2. With a printing calculator, add up the Count Quantities for the tags in the batch, running a tape. The final total is the Balance To Hash Total.

3. With this Tag Data Entry program, enter all the tags in the batch.

4. At completion of tag data entry, the program compares the Balance To Hash Total to the Calculated Hash Total it accumulated during the entry process. This value is stored in the Tag Batch record.

5. If the Hash totals agree, the batch is ready to be posted, using the Post Tag Batchs program. Once posted, the tags may not subsequently be modified. The posting program updates both the Tag Master records and associated Cycle Count Master table records as well as the Tag Batch record.

6. If there are differences in the Hash totals, the List Tag Batch report may be used to facilitate review of the data entered in a batch. The batch may also be reviewed by scrolling the records through the entry window.

The Tag Data Entry program is used to enter tag data resulting from actual counts of items and quantities in warehouses, receiving inspection and in WIP on work orders. Depending on the tag type entered on the batch control screen, the program will display one of three different entry screens, each of which prompt for different combinations of data, depending on the type.

Batch Control - the program functions by first displaying the batch control screen upon selection from the menu. A batch number is entered by the user, and if already present and not posted, it will be retrieved and its associated totals displayed on the screen. This is to allow a batch to be partly entered, saved, then completed at another time. If there are hash total differences, this will facilitate one person entering the tags, and another finding errors, which may be in either the tape total run by hand prior to data entry, or in the data entry itself.

If the batch number has been posted, a message will be displayed. If it is a new batch number, which may be any combination of characters and numbers, a new batch is created. All tag data for a single batch is entered and stored in one physical record, with the tag data being stored in a multi-value stack in the batch record. This facilitates rapid retrieval and keeping all tags in the same batch together. The type of tag that is in the batch is also entered. Tag types cannot be mixed within a batch. Once selected, and tag data entered, the tag type cannot be altered for a batch.

A batch can be partly entered, saved with the F9 key, then reentered for additional tag entry. Individual tags entered are not saved to the Tag Batch table until the F9 key is pressed from within the the Tag Entry screen, then again from the Batch Control screen. When a batch is re-entered, since the tag type cannot be changed, the program will automatically call up the appropriate tag entry screen.

To move to the Tag Entry screen from the Batch Control screen, the Shift +F1 keys are pressed.

Tag Entry - the Batch number and tag type is displayed during the entry process of each tag.

For all types of tags, the tag data entry logic is the same. The cursor is positioned at the Tag Number field, where a bar-code read tag number and field

exit entry are accepted from a wedge-type bar code reader. Tags may be ented in any numerical sequence.

Upon field exit the program looks up that tag number in the Tag Master table, checking the tag's Batch Number field and the Unused Tag? field. If a value is present in the Batch Number field, that tag number has already been entered, the entry is rejected, a message is displayed and acknowledged, and the cursor re-postioned at Tag Number for re-entry.

If the Unused Tag? field contains a "Y" value, the tag has already been flagged as unusued and may not be subsequently updated. The entry is rejected, a message is displayed and acknowledged, and the cursor re-positioned at Tag Number for re-entry.

If the tag number is acceptable for data entry, the Batch number of the current batch is written to the Tag Master record for that tag number. If the tag number is deleted, either via the Control + D keys, or by writing over it, the previous tag number record is re-retrieved, and its batch control number replaced with null values. The batch control number currently in use is then written to the Tag Master record for the newly enteed tag number.

A hand-keyed tag number may also be entered in place of the bar-code reader, subject to the same validation.

Once the tag number has been entered and validated, subsequent functions depend on the tag type specific data entry screen, and are as follows:

Tag Type = "P"

If the Tag Master record contains data in its part number, warehouse and/or location fields, the cursor moves directly to the Count Quantity field, retrieving those three data fields from the Tag Master record, and the Part Number's unit of measure and description fields from the Part Master table. None of these data may be changed on the screen, since they are printed on the tag itself. A Count Quantity of zero is valid. Negative quantities are rejected by the program.

If the tag record has no part number or warehouse data, the cursor moves through each data field on the screen. U/M and Description are retrieved from the Part Master table for each part number and are display only. Validation is as follows:

Part Number - must be in the Part Master table

Warehouse Number - must be in the warehouse table. The value entered becomes the default for the next tag, accepted by pressing the Enter Key.
Location code - must be in the Warehouse/location table for the entered warehouse number. The value entered becomes the default for the next tag, accepted by pressing the Enter Key.
Count Quantity - must be zero or greater.
Flag Scrap? - Yor N only, default is No

Tag Type = "R"

The cursor moves through each data field on the screen. U/M and Description are retrieved from the Part Master table for each part number and are display only. Validation is as follows:

Part Number - must be in the Part Master table
Receiver Number - may be any number; does not have to be on the Receiving Lot table.
Count Quantity - must be zero or greater.
Flag Scrap? - Yor N only, default is No

Tag Type = "W"

The cursor moves through each data field on the screen. U/M and Description are retrieved from the Part Master table for each part number and are display only. Validation is as follows:

Part Number - must be in the Part Master table
Work Order Number - the entered number is validated against the Open Work order table, with a warning message displayed if a match is not found. This message can be overridden and the data entered accepted. The value entered becomes the default for the next tag, accepted by pressing the Enter Key.
Operation Number - not validated. The value entered becomes the default for the next tag, accepted by pressing the Enter Key.
Work Center ID - must be in the Work Center Master table. The value entered becomes the default for the next tag, accepted by pressing the Enter Key.
Count Quantity - must be zero or greater.
Flag Scrap? - Yor N only, default is No

Missing Part Numbers in an Assembly - to enter missing part numbers for incomplete assemblies encountered, with the cursor on the appropriate tag number line, pressing the Shift + F1 keys causes the Missing P/N screen to appear.

The cursor moves to the Missing P/N field. Missing part numbers must be in the Part Master table. For each entry, retrieve the Description and Stock U/M from the Part Master table and display them.

The Quantity/Assy Missing field must be greater than zero. If a value greater than 10 is entered, display a warning message "Are you sure this is the correct quantity per assembly?" Override and acceptance of the value is allowed. The cursor then moves to the next line to accept the next missing part number entry. The screen scrolls up to allow entry of more missing part number's and the associated Quantity/Assy for each.

Pressing the F9 key saves the missing part number screen's data for that tag. The F9 key may be pressed at any time after a missing part number and its associated quantity/assembly missing values are entered.

The tag data entry screen may be saved and exited back to the batch control screen at any time with the F9 key. The program then recalculates the Calculated Hash Total by adding all the Count Quantity fields for all tags in the batch, and adds up the number of tags in the batch. The program also re-performs all validations required for each tag record to insure that validations were not circumvented by use of the mouse within the screen.

To save the batch of tags entered and or changed, from the Batch Control screen, the F9 key is pressed again, saving the Tag Batch record, its associated tag data, and updating the Tag Batch record with the user-ID of the person entering the data, as logged on, and the date/time the batch was saved.

C/C & P/I System - List Tag Batch

Screen Data:

Enter Batch Numbers to be listed
x----------x
x----------x
x----------x

Batch List Format:

Batch No.mber of Tags inBatch Entered Hash Total Calc No.

Batch No.	No. Tags In Batch	Hash Total	Calc'd H/Total	Tag No.	P/N	Count Qty
xxx	xxxx	xxxxx	xxxxx	xxxxxx	xxxxxx	xxxxx
				xxxxxx	xxxxxx	xxxxx
				xxxxxx	xxxxxx	xxxxx
				xxxxxx	xxxxxx	xxxxx

Functional Logic

The purpose of this report is to aid the tag entry process in locating data entry or calculator tape errors, i.e., differences between the entered Hash Total, calculated by hand with a calculator from the tags prior to entry, and the Calculated Hash Total, which is calculated by the Tag Data Entry program during the tag entry process.

This report retrieves tag batches using the list entered on the initial screen. It then prints, with a page break at each new batch number, a listing of all tags comprising the batch.

C/C & P/I System - Post Tag Batches

Screen Data

Batch Numbers to be posted
x----------x
x----------x
x----------x

Press F9 to post selected batches

Functional Logic

As each batch number is entered, the program looks up the associated record in the Tag Batch table and checks that it is ready to be posted. This is indicated by:

Posted Date/Time = null or blank
Balance To Hash Total = Calculated Hash Total

This validatation is made as each batch number is entered onto the list. If a batch number is entered which is not elegible for posting, or has already been posted, a message is displayed and acknowledged and the cursor positioned for reentry.

When all batches to be posted have been entered, the F9 key initiates the posting process, which involves the following steps:

1. Retrieve the Tag Batch Control record, which contains all tag record data to be posted.

2. Post Tag Data - for each logical tag data record, post data to the tag master on a field for field basis, with the Tag Batch Record fields being written to the corresponding Tag Master record with the same tag number. Once the Count Quantity has been posted to the Tag Master record,

3. Post Cycle Count Master - the program also posts count data to the CC Master table by performing the steps described below. The steps performed depend on the type of the Tag that is the source data.

A. Applicable to all tags - The record ID for the CC Master record is the tag's Part Number, the Cutoff Date/Time value currently in us, as stored in the System Parameter record, with the Capture Source portion being dependent on the tag type. If there is no match between tag data and the CC Master table, it is because physical counting discovered material that was not reflected in the AIMS/ERP system records. To compensate for this condition, this program will create a CC Master record with a Record ID equal to what would have been created had there been records in AIMS/ERP that corresponded to what was counted. The Record Quantity, Warehouse No., Lot Number, and Location fields remain blank. The resulting CC Master record will then reflect that quantities were counted, but no previous record was in AIMS/ERP at time of the data capture.

Each tag and its associated count data form an associated multi-value data stack, the "sub-key" to the Count data fields being the tag number.

B. Perpetual Inventory Tag Type:

For each tag with the defined characteristics of a Perpetual Inventory Tag type, post Tag data to the associated CC Master record according to the following table.

Tag Data Field	**CC Mstr Data Field**	**Comment**
Part Number	Part Number	
	Cutoff Date/Time	From value in System Parameter record for Current Cutoff Date/Time
	Capture Source	= "P"
Tag No.	Count Tag No.	
Warehouse No.	Count Warehouse	
Lot No.	Count Lot No.	always blank in current AIMS/ERP version
Location	Count Location	
Count Quantity	Count Quantity	

C. Receiving Inspection Tag Type:

For each tag with the defined characteristics of a Receiving Inspection Tag type, post tag data to the associated CC Master record according the following table.

Tag Data Field	CC Mstr Data Field	Comment
Part Number	Part Number	
	Cutoff Date/Time	From value in System Parameter record for Current Cutoff Date/Time
Receiver No.	Capture Source	= "R" + Receiver No.
Tag No.	Count Tag No.	
	Count Warehouse	blank for R/I tags
Lot No.	Count Lot No.	always blank in current AIMS/ERP version
	Count Location	blank for R/I tags
Count Quantity	Count Quantity	

D. Work in Process (Work Order) Tag Type:

For each tag with the defined characteristics of a WIP Tag type, post tag data to the associated CC Master record according to the following table.

Tag Data Field	CC Mstr Data Field	Comment
Part Number	Part Number	
	Cutoff Date/Time	From value in System Parameter record for Current Cutoff Date/Time
Work Order No.	Capture Source	
Tag No.	Count Tag No.	
Work Center	Count Warehouse	
Lot No.	Count Lot No.	always blank in current AIMS/ERP version
Operation No.	Count Location	
Count Quantity	Count Quantity	
	Incomplete Assy?	= Y only if missing p/n's are present in tag data, otherwise N

E. At completion of each successfully posted tag batch, update the Tag Batch Control record with the date/time posted.

C/C & P/I System - Unused Tag Entry

Screen Data:

Tag No.

Unused Tag = Y (forced entry)

Functional Logic

This screen is designed to be driven automatically by bar-code scanned entry of only the tag number. The program accepts the tag number from the keyboard/wedge reader. The bar code reader will generate the tag number and associated field exit. The program then "presses F9" automatically to write the "Y" (yes) to the Unused Tag? field for that tag number and clears the screen, ready for the next tag entry.

The planned mode of use is that a user will simply scan the bar-coded tag number of each unused tag using this screen and the program will do the rest, enabling the user to quickly mark a large number of tags as unused efficiently.

C/C & P/I System - Capture vs Count Quantity Comparison Reports

Screen Data:

Perpetual Inventory Capture Report

Selection:

- Cutoff Date/Time (default is the most recent Date Time in the CC Capture table)

Receiving Inventory Capture Report

- Cutoff Date/Time (default is the most recent Date Time in the CC Capture table)

WIP Inventory Capture Report

- Cutoff Date/Time (default is the most recent Date Time in the CC Capture table)

Sort Options:

By Record W/H or W/C, then Part Number
By Count W/H or W/C, then Part Number
By Part Number

Press F9 to generate the report

Reports Formats:

Perpetual Inventory Capture Report

Cutoff-Date/Time xx/xx/xx - xx:xx:xx

Sorted by: Part Group then Part Number

Part Group (from Part Master)
Part Number
Description (from Part Master)
Stk U/M (from Part Master)
Record W/H or W/C
Record Loc'n or Opn
Record Quantity
Count Tag No.
Count W/H or W/C
Count Loc'n or Opn
Count Quantity
P/N Difference

Total Quantites for Part Number for Record, Count Quantities

Receiving Inventory Capture Report

Cutoff-Date/Time xx/xx/xx - xx:xx:xx

Sorted by: Part Group then Part Number

Part Group (from Part Master)
Part Number
Description (from Part Master)
Stk U/M (from Part Master)
Record W/H or W/C
Record Loc'n or Opn (blank on this report)
Record Quantity
Count Tag No.
Count W/H or W/C
Count Loc'n or Opn
Count Quantity
P/N Difference

Total Quantites for Part Number for Record, Count Quantities

WIP Inventory Capture Report

Cutoff-Date/Time xx/xx/xx - xx:xx:xx

Sorted by: Record W/H or W/C then Part Number
or By Count W/H or W/C, then Part Number
or By Part Number

Part Group (from Part Master)
Part Number
Description (from Part Master)
Stk U/M (from Part Master)
Record W/H or W/C
Record Loc'n or Opn
Record Quantity
Count Tag No.
Count W/H or W/C
Count Loc'n or Opn
Count Quantity
P/N Difference

Total Quantites for Part Number for Record, Count Quantities

Functional Logic

These reports each select a different type of capture data record to develop its data and totals. The resulting information is grouped differently, depending on

the capture source. All use the Cutoff Date/Time to select Cycle Count Master table records for the report. A given report can include only data from a single Cutoff Date/Time.

The Adjustment Transaction Generation program will create adjustment transactions for perpetual record vs. count differences.

The Receiving Inspection and Work Order differences as shown on these reports are the basis for analyzing the causes for differences between Record and Count data. No program generated adjustments in these areas are possible because there are other factors, such as purchase and work order data and status that are involved in the correction process.

Pressing the F9 key starts the report generation process for each report. The program reads the Cycle Count Master table, selecting those records with values that equal the selection values entered. These are sorted and the P/N Difference calculated. The formula for this difference is:

Sum of Record Quantities for the same part number
minus
Sum of Count Quantities for same part number

C/C & P/I System - Tag Sequence Control Report

Screen Data:

Tag Number Range to Check
From x------x
To x--------x

Press F9 to start the checking process.

Report Format:

Tag Sequence Control Report

Verified From Tag Number x----x To Tag Number x----------x0

Missing Tag Numbers	Part Number	W/H	Location
x----------x	x-------x	xx	xx
x----------x	x-------x	xx	xx
x----------x	x-------x	xx	xx

Functional Logic

This program accepts a range of tag number to check in the Tag Master table. It begins with the From Tag number, then reads each tag number in sequence, comparing the numbers, to identify tag numbers that are shown as not accounted for by one of the following means:

Batch Number = blank
Count Quantity = blank
Tag Unused = Yes

If there are data in the tag master record for an unaccounted for tag number, it is printed along with the tag number. Tag Master table is read beginning with the From Tag Number, with each successive record being checked for one of the above conditions. If the program encounters a a record with all three of these tests valid, i.e., the record has never been entered in a batch (batch number present), never posted (count quantity would be updated to zero or more), or entered as unused (tag unused = yes), then it is unaccounted for an its number and associate data is printed on the report.

C/C & P/I System - Part Group Tolerance Factor Maintenance

Screen Data:

Part Group xx
Tolerance Range Value xx

Functional Logic:

This screen updates the table used by the Cycle Count Adjustment Generation program and in calculating acceptable differences between Record and Count Quantities in the Cycle Count Master file generated reports.

The values are appended to the Part Group values used to classify Part Numbers. They are entered as a 2 digit decimal value representing a percentage range, stored and processed as a decimal value that is used to define the acceptable range of accuracy for a capture/count record.

The tolerances are applied only to perpetual type CC Master records, since adjustments are not entered or generated for Receiving Inspection and Work Order types.

The formula for accuracy range calculation is:

Record Quantity X Tolerance Range Value = Acceptable Count Variation

C/C & P/I System - Pro Forma Adjustment Transaction Report

Screen Data:

Selection:

- Cutoff Date/Time (default is the most recent Date Time in the CC Capture table)
- Part Group (default to ALL)
- Warehouse No. (default to ALL)

Print to Screen or Printer (S/P)

Press F9 to generate the report

Report Data:

Pro Forma Cycle Count Adjustment Transaction s

Cutoff Date/Time xx/xx/xx- xx:xx:xx

Sorted by Part Group, Part Number,Record W/H No., Record Location

Part Group
Part Number
Description
Stk U/M
Record Warehouse (multiple values)
Record Location (multiple values)
Record Count Quantity (multiple values)
Count Warehouse (multiple values
Count Loc'n (multiple values)
Count Quantity (multiple values)
Acceptable Range Low Value
Acceptable Range Hi Value
Adj. Warehouse xx
Adj. Location xxxxxxxx
Adjustment Quantity xxxxxxxxx (with sign)

Functional Logic

This report performs the same logic as the automatic adjustment transaction generation program except that the actual transactions are not generated. Instead, it generates a report that shows what adjustment transactions would be generated if the program is run with the current Record vs. Count data in the CC Master records for a given Cutoff Date/Time.

The program functions by displaying an option selection screen, allowing entry of the desired Cutoff Date/Time value to be used. The default is the most recent Date/Time in the CC Capture table and in the associated Global Parameter record.

The report may be restricted to a subset of items with the same Cutoff Date/Time, including Part Group and an individual warehouse option.

Selects CC Master records that equal the entered Cutoff Date/Time. If Part Group selection is in effect, those records that do not equal the selected Part Group are skipped.

If warehouse selection is in effect, each CC master record with the matching Cutoff Date/Time and Part Group selections, and that is a "P" type CC Master record, the Record and Count data in the record is screened for those Record and Count data that are for the selected warehouse number.

For each resulting CC Master record, and its selected set of Record and Count data, generate pro forma adjustment transactions with the following procedure:

Read the first line in the Count data multi-value stack (warehouse, location, quantity).

Read the Record data multi-value stack and attempt to find a match for warehouse and location. If there is a match, subtract the Record Quantity from the Count Quantity. Retrieve the Tolerance Range for the Part Group assigned to this part number. Calculate the Acceptable Range Low and Hi Values. If the Result of the Count Quantity minus the Record Quantity is outside the Low and Hi values range, generate a pro forma adjustment transaction line, including plus or minus sign, for the result of this calculation. If it is between this range, do not. In either case, if there is a warehouse & location match, remove the matched Record data line from its multi-value stack.

If there is no match on warehouse and location, generate an adjustment transaction line that equals the Count Data.

Continue until each multi-value line in the Count data's multi-value stack has been processed.

Any remaining values in the Record data's multi-value stack represent information in the system that was not confirmed by the counting process.

Those that were have been removed from the stack by the preceding matching process.

Generate pro forma adjustment transaction lines on the report for each of the remaining Record data lines in the multi-value stack to correct these erroneous data in the system.

The result of this process should be that the Inventory table record for this part number, and warehouse if selected, will equal the information that was counted, with non-matching Record data's effect removed.

The process is continued until all eligible CC Master records have been processed and all CCAJ transactions that will be generated by the automatic generation program are printed on the report.

C/C & P/I System - Adjustment Transaction Generation/Entry & Report

Screen Data:

Selection Options:

Cutoff Date/Time to be adjusted xx/xx/xx-xx:xx:xx (default is current global default value indicating currently open cutoff)

Individual Adjustment Transaction Entry? (Y/N - default = Y)

Automatic Adjustment Generation? (Y/N - default = N)

Pro Forma Report only- no Inventory Update? (Y/N - default =Y)

Press F9 to initiate automatic adjustment transaction generation.

Adjustment Transaction Entry Screen:

Cutoff Date/Time (display only from first screen)

Part Number x----------x
Description (display only)
Stk U/M (display only)
Part Group (display only)
Tolerance Range Value (display only)
Record Warehouse xx (display only) (multiple values)
Record Location xxxxxxxx (display only) (multiple values)
Record Count Quantity (display only) (multiple values)
Count Quantity (display only, from CC Master record)
Adj. Warehouse xx
Adj. Location xxxxxxxx
Adjustment + or - ? (+ or - entry only) (no default)
Adjustment Quantity xxxxxxxxx

Report Data:

Costed Cycle Count Adjustment Transaction Report

Pro Forma Report - No Updates Performed (prints only if this option is selected)

Cutoff Date/Time xx/xx/xx- xx:xx:xx

Sorted by Part Group, Part Number,

Part Group
Part Number
Description

Stk U/M
Record Warehouse (multiple values)
Record Location (multiple values)
Record Count Quantity (multiple values)
Count Warehouse (multiple values
Count Loc'n (multiple values)
Count Quantity (multiple values)
Adj. Warehouse xx
Adj. Location xxxxxxxx
Adjustment Quantity xxxxxxxxx (with sign)
Unit Standard Cost (sum of all cost elements)
Extended Standard Cost

Functional Logic

This program allows either manual entry of Cycle Count Adjustment transactions, or alternatively, it can generate adjustment transactions for all Cutoff Date/Time records with the same value automatically. These transactions are generated for those Record vs Count differences, so that when all transactions are posted, the perpetual Record data will match the Count data.

All CCAJ transactions, from either source, are listed on a report generated by the program. If the Pro Forma Report Only option is selected, the report is generated, but the updating of the inventory file is not performed. This option is available only for the automatically generated transactions. If manual entry is performed, the associated Cycle Count Master records are flagged for each transaction entered, the tables are updated, and a report printed.

The program functions by first displaying the initial screen, where a Cutoff Date/Time value is entered. The most recent value in the CC Capture table is the default. Pressing Enter twice will automatically select the default Cutoff Date/Time, select Individual Adjustment Transaction Entry = Y, and bring up the Adjustment Transaction Entry Screen.

For automatic adjustment generation to be selectable, the Cutoff Date/Time must be entered as a valid date, a "N" must be entered in the Individual Adjustment Transaction Entry, and a "Y" must be entered in Automatic Adjustment Generation. If these are the case, the program prompts for the Pro Forma Report Only option, which may be Y or N. If No is selected, the Inventory table will be updated and the transactions posted to the CC Master table as well, preventing additional automatic generation processes from being run.

Only then will the program accept the F9 key to initiate the process, otherwise generating an error message and repositioning the cursor for re-try.

Manual Transaction Entry - To enter transactions via the second screen, the program requires the following validation rules.

Overall - adjustments are allowed only for part numbers that have CC Master records generated by a previously run Capture. This is to create a clear audit trail for the basis of the adjustment, rather than simply allowing adjustments to inventory quantities without capturing the record quantity data associated with it. This also prevents entering adjustments for items that have never been received into inventory at any time, i.e., have no Inventory table record. These situations should not simply be adjusted into existence. If encountered during a physical inventory, entering these items via the tag entry procedure will provide an appropriate audit trail and basis, and generate a CC Master record when the tag is posted. This record then becomes the basis for generating the adjustment.

Part Number - Using previously entered and stored Cutoff Date/Time, a "P" capture source, and the entered Part Number, the program attempts to read the CC Master record using these three values as the Record ID. If unsuccessful, an error message informs the user that no data capture was performed at this Cutoff Date/Time. When a valid CC Master record is encountered, the program also retrieves Description, Part Group, and Stock U/M from the Part Master table for the part number.

Record and Count data is retrieved and displayed from the CC Master record. Multiple values are displayed in a stack.

Adj. Warehouse Number - must be in the Warehouse table.
Adj. Location - must be a Location value for the Warehouse Number entered.
Adjustment Sign - must be entered, either + or -l.
Adjustment Quantity - value must be non-blank, non-negative (sign is already accounted for in the previous field) greater than zero.

Each adjustment transaction is saved with the F9 key.

Upon saving, the program, adds or subtracts, depending on the Adjustment Sign entered, the Adjustment Quantity to/from the Warehouse and Location entered as the Adj. Warehouse and Location in the Inventory table record for the Part Number, and creating an Inventory Transaction History record with a Transaction ID of CCAJ, and the Transaction Quantity field carrying the Adjustment Sign value.

The CCAJ transaction date/time and Transaction Quantity is added to the Adjustment transaction multi-value stack in the CC Master record used as the basis for the adjustment. Multiple adjustments may be made against the same CC master record, to correct multiple location and warehouse differences.

Each record is written to the Cycle Count Adjustment Transaction Generation/Entry Report.

Automatic Transaction Generation - If this option is selected, the program generates CCAJ transactions by using the same logic as the Pro Forma Adjustment Transaction Report, printing a similarly formatted report showing CC Master data that is the basis for each CCAJ transaction, and each CCAJ transaction that was generated. These are posted to the Inventory Table, with Inventory Transaction History records created. Its logic is as follows:

The process may be restricted via selection option to a subset of items with the same Cutoff Date/Time, including Part Group and an individual warehouse option.

Selects CC Master records that equal the entered Cutoff Date/Time. For each resulting CC Master record, and its selected set of Record and Count data, generate adjustment transactions with the following procedure:

1. Read each Record data line in the multi-value stack, and then read the Count multi-value stack, attempting to find a line with the same warehouse and location values.

2. If there is a match, subtract the Count Quantity from the Record Quantity to obtain the Adjustment Quantity, and the + or - sign. If the result = zero, read the next Record data line (no adjustment is needed). Generate an adjustment transaction record for this warehouse, location, and signed adjustment quantity.

3. Remove each matched set of Record and Count data lines from further processing.

4. If there is no match in the Count data stack, generate an adjustment transaction record with the warehouse and location data the same as the Record data, and the Adjustment Quantity = the Record Quantity X -1 to give it a minus sign. Remove each line from further processing.

5. When all lines in the Record data multi-value stack have been processed, if there are remaining unmatched count data lines, for each generate an

adjustment transaction where the warehouse and location is the same as the Count data, and the Adjustment Quantity = the Record Quantity (positive sign).

Depending on whether the Pro Forma Report Only option was selected, either write each transaction only to the report or also post it by performing the following steps:

1. In the Inventory table, for the Transaction Part Number, warehouse and location data, either add or subtract the Adjustment Quantity from the Inventory record's Quantity

2. Create an Inventory Transation History Record, Transaction ID = CCAJ, including the + or - sign used in the transaction in the Transaction Quantity field.

3. Locate the corresponding Cycle Count Master record, using the Cutoff Date/Time entered at the beginning, "P" for the source, and the Part Number find it. Add the Transaction Date/Time and Adjustment Quantity (with sign) to the adjustment multi-value stack for each CC Master record updated.

On the report, obtain the Unit Standard Cost from the Part Master for each part number, and multiply it time the Adjustment Quantity (with sign) to obtain a signed Extended Standard Cost. This is the cost effect of this adjustment on Inventory value in the General Ledger system.