# **AINS/ERP**

#### **Quality Management**

**Specifications & Guide to Use** 

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#### **DMR Functional Flow**

#### **Overview & Concepts**

The DMR subsystem allows material to rejected from anywhere in the production cycle (Receiving Inspection, WIP, or perpetual inventory), then handled in a standardized manner using a relatively uniform procedure. The software keeps track of what other records must be updated once the material is dispositioned, applying controls once disposition action is taken.

Internally, the DMR Subsystem uses a simple concept to guide management action and properly control discrepant material. The controlling quantity is the Undispositioned Quantity. Disposition means a final action, not an intermediate step. Approval for rework (corrective action) is not a final action, but is an intermediate step, since whether the rework will be successful is not yet known. When it is, a final disposition can be made. Dispositions therefore include only the following:

<u>Use-As-Is</u> - means that the rejected items are now acceptable for use, either because the rejection was unneeded, the items were marginal but OK, or they have been reworked into an acceptable condition. They are then ready to be returned to their normal flow (move to perpetual inventory or return to WIP).

<u>Scrap</u> - means that the rejected items have no capability of use and are to be destroyed. If an assembly part number, the assembly can be then dismantled ("canabalized") to recover its component parts.

<u>Return to Vendor</u> - means that the vendor has agreed to accept these items for credit against the purchase order. He may then either replace or rework them and subsequently reship them.

The steps involved in the Discrepant Material Reporting Cycle include:

<u>Discrepant Material Report Entry</u> - this step is essentially the same regardless of where discrepant material is. A code identifies the Source of the rejection, which can be:

- Receiving Inspection ("R") material was rejected during the Receiving Inspection process. Subsequent DMR cycle remains linked to the Receiver Number.
- Work Order ("W") material rejected during production, and is therefore associated with a work order number. Subsequent DMR cycle is independent of the work order for the most part.

• Perpetual Inventory ("P") - material rejected while in warehouse storage, identified as being in a warehouse and location, part of production material inventory ("good" material). Subsequent DMR cycle is independent of the original location of the material.

<u>Material Review Board (MRB) Action</u> - discrepant material is reinspected by the MRB and appropriate action approved. These decisions are entered in the DMR Maintenance screen, which maintains a log sheet style reporting method to track multiple dispositions affecting the same group of rejected material. The DMR Subsystem allows virtually any combination of corrective and disposition actions to be recorded. The program maintains a set of cumulative totals for disposition actions that together cannot exceed the quantity rejected associated with a given DMR Number.

<u>Rework Cycle</u> - Material approved for rework remains linked to the DMR until ultimately accepted ("Use-As-Is"), or scrapped. Special purpose movement transactions report and update Rework Work Order and DMR records to keep the discrepant material within the DMR subsystem control throughout the cycle. These transactions are:

- DMR Issue to Rework reports movement from the MRB quarantine area to the Rework Work Order Number created specifically to perform the corrective action to the discrepant material. This transaction replaces regular work order transaction; Work Order transactions are changed to disallow DMR material from movement with regular transactions.
- Rework Return to DMR reports movement from the Rework Work Order Number back to the MRB for final review and disposition, following completion of the corrective action performed on the discrepant material.

After final disposition by MRB, DMR material is moved with these transactions to carry out the actions approved by the MRB:

- DMR Return to Work Order transaction removes the items from the DMR and adds it as either an unscrapped parent part number (only if the work order is the original one the items were rejected from), or as an issued required component part number.
- DMR Return to Inventory Transaction removes the items from the DMR and adds to regular production material inventory.
- DMR Inventory Scrap Transaction removes the items from the DMR and generates an inventory scrap transaction.
- Receiving RTV Transaction removes the items from the DMR, updates the Receiving Lot record, decreases the PO L/I received quantity and generates a Receiving Transaction History record.

• Receiving Scrap Transaction - removes the items from the DMR, updates the Receiving Lot record, decreases the PO L/I received quantity and generates and Receiving Transactio History record.

#### **Discrepant Material Reporting Procedures**

The procedural steps associated with the Discrepant Material Reporting subsystem is straightforward:

1. Reject the material, reflected in the system by creating a Discrepant Material Report (DMR). A DMR Tag is printed at this time to accompany the rejected items. The screen requires identification of the rejection source.

2. Move the material from where rejected to the segregated inventory control area where it can be efficiently reviewed for disposition by the Material Review Board (MRB). This location is updated via the DMR Location Move transaction.

3. Convene the MRB at a workstation, with the DMR Maintenance screen already started. Using the reports and DMR numbers on the tags, review the material. As each DMR number's material is reviewed and dispositioned, the MRB's actions are entered in the screeen and saved. This process is continued until the MRB meeting is adjourned.

4. Print the Unmoved DMR Items Report to identify items ready for movement, either for rework or for disposition. Move the material as approved by the MRB and enter appropriate transactions reflecting these movements.

5. Use the Open DMR Report to review and age undispositioned material, and to prioritize MRB review actions.

6. Use the DMR Rework Status report to track and prioritize material during the corrective action cycle.

#### **Revised Receiving Cycle**

Associated with the DMR subsystem is a revised receiving inspection cycle, including new screens to separate events previously reported together with the previous Accept & Move to Stock transaction, which included RTV and Scrap dispositions as well. The new screens and revised existing screens include:

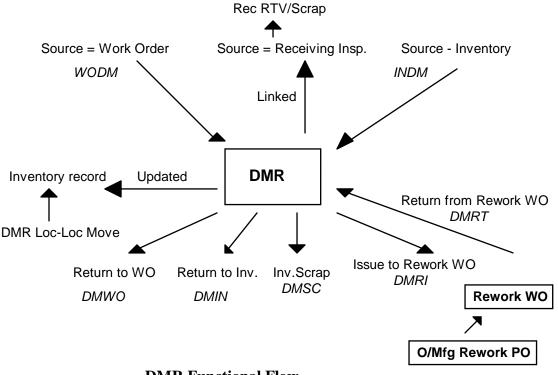
• Revised receipt to Dock Transaction - to control incoming DMR material on rework work orders, and process the new Outside Manufacturing PO type.

- Receiving Inspection Acceptance Entry replaces ATMS transaction to report acceptance separately from movement.
- Receiver Move to Stock transaction replaces ATMS transaction to report movement separately from acceptance.

The following diagram illustrates how the DMR is used to process discrepant material through its cycle. At the top are the sources of rejected material, which are moved into the DMR record, with a update link to the Inventory record for the part number. Rejected Receiving Inspection material is linked to the Receiver Number, not removed entirely.

At the bottom are the movements out of the DMR, including return to a work order or inventory, or scrapping the material. If rework is required, a special transaction issue the DMR material to a Rework Work Order.

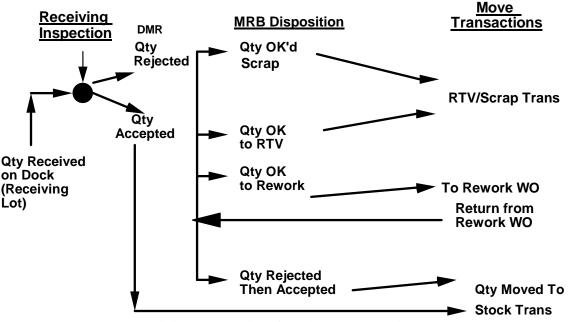
A new Outside Manufacturing PO Type for linking only to Rework Work Orders (which will allow Purchased parts to have an outside manufacturing PO), is provided if the items are to be reworked by a vendor. When completed, the Reworked material is returned to the DMR from the Rework Work Order with a special transaction. The Inventory Transaction History Transaction Codes for each transaction are shown in italics.



**DMR Functional Flow** 

#### **Receiving Inspection Cycle Overview**

The system is designed to account for all outcomes that incoming material can have, from immediate inspection and acceptance, followed by a subsequent move to stock transaction, or rejection of the items and a series of possible outcomes. All Rejected Material is documented as to why it is rejected via the Discrepant Material Report Maintenance screen, which links to the Receiving Lot Master record for the Receiver Number. Rejected material is then reviewed by a Material Review Board which dispositions the items. The following flow diagram shows how this cycle flows and the actions that are available in the system to both enter Receiving Inspection, MRB actions, and to enter the appropriate inventory affecting move transactions as well.



**Receiving Inspection & Rejected Material Flow** 

#### **Receiving Inspection Acceptance Entry**

Screen Data:

Receiver No. xxxxxx PO No. xxxxxx (Display only) Vendor Name xxxxxx(display only) Line Item Part Number xxxxxx (display only) Description (xxxxxxx ) (display only) Stk U/M xx (display only) Received Date xxxxx (display only) Quantity Received xxxxx(display only) Prior Inspection Results: Cumulative Quantity Accepted this Receiving Lot xxxxx (display only) Cumulative Quantity Rejected on DMR's this Receiving Lot xxxxx (display only)

Results of this Inspection:

R/I Quantity Accepted xxxxxx

User-ID (current user-ID) (display only) Transaction Date (system date) (display only) Trnsaction Time (system time) (display only)

Save this screen and go directly to Discrepant Material Report Entry Screen? (Y/N)

Press F9 to save this screen and take the DMR option if indicated.

#### **Functional Logic**

This screen allows an Inspector to enter the acceptance of all or a portion of a received quantity. Rejected material is entered as rejected on the Discrepant Material Report entry screen, which when saved, will updated the Quantity Rejected for the receiving report number that it references. All discrepant material in AIMS/ERP is handled with a standard method, the Discrepant Material Report, which contains linkages to the source of the discrepant material. These linked records are automatically updated by the Discrepant Material control functions.

The Quantity Received of a specific part number form a Receiving Lot. The system requires that all of this particular Receiving Lot be dispositioned before a receipt can be considered completed. This logic prevents entering accepting quantities on a different Receiving Report Number than it was actually received under. This approach insures full reconciliation of all received (and paid for) material. It also provides a clear basis for evaluating vendor quality performance, and for generating debit memo transactions to offset vendor invoices for items that should not be paid for.

This program functions as follows:

Upon selection from the menu, the program displays the screen and positions the cursor at the Receiver Number for entry. A popup is available showing Receiver Numbers, PO Number, the L/I Part Number associated with it, and the Received Date, in Receiver Number sequence.

Receiver Number is entered or selected, and the program then retrieves and displays the associated Purchase Order Number, Vendor Name, Line Item Part Number, Received Date and Received Quantity. The Description and Unit of Measure data are retrieved from the Part Master record for the L/I Part Number.

If the R/I Remaining Quantity is zero, the Receiver is rejected as being completed.

The user refers to inspection actions noted on the printed Receiving Report or associated documentation, then enters the results of the inspection on this screen in the R/I Quantity Accepted, which must be less than or equal to the Unapproved Quantity, calculated from:

Quantity Received minus Quantity Accepted (prior to this transaction) minus Quantity Rejected = Unapproved Quantity

When entry is completed, 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 Receiver Number and enters a new line to the multi-value Acceptance stack, including the Transaction Date to the Acceptance Date, the R/I Quantity Accepted from the screen, and the User-ID from the system value.

The screen contains the option to go directly to the Discrepant Material, which is selected by entering a Y. If a Y is present in this field when the F9 key is pressed, after the program updates the Receiving Lot master record for this Receiver No., it will call the DMR entry screen.

#### **Discrepant Material Report - Maintenance**

Screen Data:

Discrepant Material Report No. xx
Part Number xx
Description (display only) xx
Stk U/M (display only) xx
P/M Code x
Rejection Source Code (W, R, P only) x
Source Work Order (W source only) xx (validates to Open Work Orders)
Source Material Operation No. (W source only) xxxx (validated to WO Material)
Source Receiver Number (R source only) xxxxx (validateds to Receiving Lot Master)
Source Warehouse No. xx (validates to Inventory table for Part Number)
Source W/H Locn's xx Loc'n Qty xx
xx Loc'n Qty xx
(validated to inventory table for P/N, W/H)
Rejected Quantity xx
Rejection Reason xx
XX
Current location of DMR's items:

Bldg/W/H xx Loc'n xxxx

Inspection & MRB Dispotion Action Log:

Action	QC	Qty	Qty	Qty	Qty	Entry	MRB	Comment
Date	Code	OK Rwk	Scrap	RTV	Use-AsIs	User-ID	User-ID	
xx/xx/xx	XXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	
xx/xx/xx	XXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	
xx/xx/xx	XXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	
Totals		XXXXX	XXXXX	XXXXX	XXXXX			

Undispositioned Quantity xxxxxxx (display only)

Move Transaction Totals:

Quantity Scrapped x-----x (display only) Quantity Returned to Vendor x-----x (display only) Quantity Returned to Source x-----x (display only)

QuantityIssued for Rework x----x (display only) Quantity Returned Reworked x-----x (display only)

Print the DMR Traveler? (Y/N) (default is Y)

DMR Traveler Format:

#### AIMS - Discrepant Material Report

DMR Number xxxxxx	DMR Date xx/xx/xx	Date Printed x	xx/xx/xx
Part Number x Description x Stock U/M xx Rejection Reason x			
Source: (print only one set	t of source data)		
Work Order No.xxxxxx Operation No. xxxxxx	Receiver No.	xxxxxx W/H No. xxxx	Loc'n xx-xx-xx
Undispositioned Quantity	хххххх	XXXX	xx-xx-xx

#### **Functional Logic**

This program provides the ability to enter and perform updates for Discrepant Material Report records. A Discrepant Material Report (DMR) is created to identify and segregate material that is suspected of being defective from that which is believed to be acceptable, regardless of where, in the system it may be located.

The source fields provide a linkage to where the material was when identified as suspect. When saved, this program performs appropriate updating. These actions vary with the source. For Work Order and perpetual inventory sources, the quantity of the part number on the DMR is removed from the source records. For Receiving Inspection DMR's, the Receiving Lot record is updated with the Quantity Rejected, to flag the quantity received as being all or partly suspect.

Conceptually, the DMR function removes material from a Work Order (WIP), perpetual inventory, or receiving Inspection and stores it in a segregated storage place, separate from known/believed to be good inventory. From here it is either found to be acceptable, (Use As Is disposition), approved for Return to Vendor (if in Receiving Inspection), approved for scrap, or approved for Rework.

In terms of procedures used, the typical DMR related sequence of steps would be:

1. Material found to be discrepant. If on the assemblly line, it may be tagged for an inspector to review before the DMR is created.

2. Inspector creates DMR, with this screen, which also prints DMR traveler, to accompany parts. The traveler replaces any temporary tag that may have been written up.

3. The material is then moved to the controlled MRB area, via the DMR Location to Location move transaction.

4. The MRB team meets, using this same screen, examines the material, and enters into the DMR record for each DMR, its disposition action at that time in the Inspection & Disposition Action log portion of the screen. When saved, the cumulative quantities for each approval action are updated.

5. If rework was approved, then the DMRI transaction is used to issue the DMR linked items to a rework work order. The DMRC transaction completes the Rework Work Order and updates the cumulative quantity reworked field on the DMR.

6. The MRB team them re-inspects the reworked items and dispositions them for either Use-As-Is, or Scrap.

In the AIMS/ERP DMR flow, all rework, regardless of the part or its status when rejected, is performed by linking the DMR via a special issue transaction to a Rework Work Order. The rework is then scheduled, tracked and completed on the rework work order, then returned to the DMR for re-inspection and MRB disposition/approval, essentially re-entering the MRB disposition "loop." The MRB then may authorize its Use-As-Is or scrap. There is adistinction between Acceptance, which means that it passed initial inspection, and Use-As-Is, which means that it passed after previously failing, with some type of corrective action or adjustment to specifications required to make the item acceptable for use. These terms are reflected in the DMR process and data.

The program functions are as follows:

Upon selection from the menu, the program displays the screen, with the cursor at the DMR No. field. Pressing the Enter key causes the program to enter the word "NEW" in the field. Entering the number of a previously created DMR causes it to be retrieved and its data displayed on the screen. The number for a new DMR is not assigned until the screen is saved with the F9 key and all validations for required data passed successfully. A message is then displayed with the new DMR number. A popup window is available via the F2 key, displaying DMR's is available for selection, including DMR number, Part Number, Rejected Quantity and DMR Date, in Part Number sequence.

Next the Part Number identifying the items found to be discrepant is entered, which must be in the Part Master table. When entered the program retrieves the associated Description, Stock Unit of Measure, and Purchased/Manufactured Code values, displaying them on the screen. This entry is mandatory. A popup is available containing part number and description. Once a DMR record is created, the Part Number may not be changed.

The Rejection Source must be either W, R, or P. Once the DMR record is created, the Rejection Source may not be changed. This entry is mandatory. Depending on which source is entered, the following are required entries:

If the Rejection Source is W, then the Source Work Order and Source Operation No. are required. The Work Order must be in the Open Work Orders table, and the Operation Number, when combined with the Work Order Number, identify a Work Order Material record. Entry to the other Source fields is not allowed. The F2 key brings a popup window containing Open Work Order records with a status of OP, including work order number, Parent Part Number, in Parent Part Number sequence. The Part Number entered on the DMR must be either the Parent Part Number of the work order, or a required part number. If it is not, the Work Order entry is rejected.

Once the DMR record is created, the Source Work Order field may not be changed.

If the Rejection Source is R, then the Source Receiver Number is a required entry. This must identify a Receiving Lot master record having the same part number as the DMR part number previously entered. Entry to the other Source fields is not allowed. Once the DMR record is created, the Receiver Number may not be changed.

If the Rejection Source is P, then the Source Warehouse and W/H Location(s) are required entries. This identifies the quantity in the warehouse that is to be removed from perpetual inventory and transferred to the MRB controlled area for further inspection and disposition. A single warehouse with multiple locations and associated location quantities are allowed on this screen on a single DMR. The location quantities must be less than or equal to the quantity for that part number in the entered warehouse number at that location to be accepted by the program. Once the DMR record is created, the source inventory data may not be changed.

The Rejected Quantity is entered, which must be non-negative and greater than zero. This entry is mandatory. Once a DMR record is created, the Rejected Quantity may not be changed. Validation of the Rejected Quantity also is subjected to the following rules, depending on the Source:

If the Source is W, then the Rejected Quantity may not be greater than the Quantity Issued to that Work Order Material record, or, if the Parent Part Number, greater than the Quantity Remaining (Planned Completion Quantity minus Quantity Completed).

If the Source is R, the Rejected Quantity must be equal or less than the Quantity Remaining in receiving inspection (cannot reject a greater quantity than is available for rejection).

If the Source is P, the Rejected Quantity is a calculated value, being the sum of the Location Quantities issued, and is not directly entered.

The Rejection Reason is a text field, intended to carry a brief narrative explanation of why the items were believed to be discrepant. This information should be reflected in the

choice of Rejection Code that is entered in the Inspection & MRB Disposition Action Log below.

Current Location of DMR'd items - enter the current physical location of the items on the DMR. Bldg/W/H Number must be in the Warehouse table, and Location must be in the W/H-Location table, i.e., be a location within the selected building/warehouse.

The Inspection & MRB Disposition Action Log is a multi-value stack. Each line represents a separate inspection and/or MRB action. The effects of each are cumulative on the totals for each column. The first line entry is required for a new DMR record to be created. Its action date is also copied to the DMR Date field that identifies when the DMR was initially created. The first line's disposition quantities must also be zero.

The disposition quantities are validated by using the computed <u>total</u> for each column (shown at the bottom) and the effect a change to this total has on the overall disposition equation. Errors may be corrected by entering minus quantities, unless other movement transactions, allowable by the disposition action, have already been performed. In other words, errors in dispositioning material must be corrected <u>before</u> movement transactions are processed that related to the DMR disposition quantities. The DMR Disposition Equation is:

DMR Quantity Rejected minus MRB Quantity OK'd for Scrap minus MRB Quantity OK'd for Return to Vendor minus MRB Quantity OK'd for Use-As-Is = DMR Undispositioned Quantity

<u>Action Date</u> - must be a valid calendar date, and may be earlier than the current system date, but not greater, i.e., not a future date. The program requires that the dates be in chronological sequence. The action date keys each line's data.

<u>QC Code</u> - required entry for each line, validated against the QC Code table. This code defines, in standardized terms, the result of each inspection or disposition action, to reduce text entry.

<u>Qty OK to Rework</u> - may be negative, zero, or a positive value. Negative values are allowed to correct errors. Controls quantities that may be issued from the DMR to a rework work order using the DMRI transaction, where the actual rework is performed and tracked. A negative quantity may be entered in this line as long as it does not cause the Total Quantity OK'd to Rework to be less than the Total Quantity Issued for Rework.

<u>Qty OK to Scrap</u> - may be negative, zero, or a positive value. Negative values are allowed to correct errors. Controls the quantities that may be entered in the RTV/Scrap transaction or DMSC transaction. The actual scrap transaction is generated when the

items are actually disposed of. The quantity in this column authorizes this scrap action. A negative quantity may be entered in this column as long as it does not cause the Total Quantity OK'd to Scrap to be less than the Total Quantity Scrapped, or cause the Undispositioned Quantity to become negative.

<u>Qty OK to RTV</u> - may be ngative, zero, or a positive value. Negative values are allowed to correct errors. Controls the quantities that may be entered in the Receiver Scrap/RTV screen, which will validate against this cumulative value and the quantity RTV'd on that receiver to date. A negative quantity may be entered in this column as long as it does not cause the Quantity OK'd to RTV to be less than the Total Quantity Returned to Vendor, or cause the Undispositioned Quantity to become negative.

<u>Quantity OK Use-As-Is</u> - may be negative, zero, or a positive value. Negative values are allowed to correct errors. Controls the quantities that may be entered in the Return to Source transaction screen. Indicates acceptance of items that were previously rejected. For a Receiver source, also increments Quantity Accepted, which will allow the Move to Stock transaction to process. Negative quantity may be entered in this column as long as it does not cause the Quantity OK Use-As-Is to be less than Quantity Returned to Source, and not cause the Undispositioned Quantity to become negative.

When entry in the screen is completed, it is saved with the F9 key. A message is displayed informing the user that the screen is being saved. Update actions include the following:

Revalidate all data fields using the same logic as for each field exit. Any validation failures are identified with an error message and the DMR not created or updated until the error is corrected.

<u>New DMR</u> - If the update is to a new DMR creation (first time saved only), then the following steps are performed:

Retrieve the Inventory record for the part number and add the DMR number, DMR Quantity, DMR W/H No. and DMR Location to the discrepant material mutli-value stack for the part number. DMR W/H and Location data are the Current actual location data entered on the screen.

If the Source is W (work order) perform the following:

Retrieve the source Open Work Order record entered and validated.

If the DMR Part Number is the Parent Part Number on the Work Order, add the Reject Quantity to the Parent Quantity Scrapped for the Operation Number and the header data.

If the DMR Part Number is a Required Part on the Work Order Material record, add the Rejected Quantity to the Quantity Scrapped for the part number.

Create an Inventory Transaction History record, Transaction ID WODM.

If the Source is R (Receiver Number) perform the following:

Retrieve the source Receiving Lot master record entered and validated.

Add a DMR Number and DMR Rejected Quantity line to the Rejected material multi-value stack.

If the Source is P (Perpetual warehouse inventory) perform the following:

Use the warehouse, location and associated quantities entered in the source data and subtract them from the corresponding values in the Inventory record for the part number.

Create and Inventory Transaction History record, Transaction ID INDM.

Create the new DMR record with the data entered, obtaining the next incremental DMR Record ID in the process. Display the DMR Number assigned in a message on the screen, requiring an any key response to clear the message, so the user can note the number if desired.

<u>Existing DMR</u> - If the DMR is an existing one being updated, no inventory transaction history records are created. The DMR record only is saved with new or additional data. This will be updates to the Inspection & MRB Disposition Action Log only, and will alter values that will allow movement transactions to be performed implementing the MRB actions.

#### **Discrepant Material Reports**

#### **Open Discrepant Material Reports - Detailed**

**Options:** 

Single DMR Number All DMR's, regardless of Undispositioned Quantity Only DMR's with Undispositioned Quantities greater than zero

Sort options:

Part Number, then DMR No. DMR No. Rejection Source Code, then Part Number, then DMR No.

Page Break for each new DMR No.

Heading includes: Company Name record, report title, date & time printed, page number, sort sequence selected

Report Data:

Use screen data and general format (see screen layout), combining Entry and Maintenance screen data.

DMR No. Part Number Description U/M **Rejected Quantity Rejection Reason** DMR Date **Rejection Source Code** Receiver No. PO No. WO Number Operation No.; **Undispositioned Quantity** DMR W/H No. DMR Loc Rework WO No. MRB Action Log: (multi-value lines) Insp Date

QC Inspection Code Qty OK'd for Scrap Qty OK'd for RTV Qty OK'd for Use-As-Is Qty OK'd for Rework MRB Person USER-ID Comment Qty Issued for Rework Qty Rtn'd from Rework

Movement Summary: Qty Returned to Inventory Qty Returned to WO's Qty Scrapped Qty RTV'd

#### **Undispositioned Discrepant Material Summary**

Sort options:

Part Number, then DMR No. DMR No. Rejection Source Code, then Part Number, then DMR No.

Heading includes: Company Name record, report title, date & time printed, page number, sort sequence selected

Report Data:

DMR No. Part Number DMR Date Rejection Source Code Rejected Qty Undispositioned Qty Qty in Rework (Quantity Issued to Rework WO's minus Qty Retn'd from Rework)

#### MRB Action Report

This report lists MRB Action lines on DMR's by Action Date, serving as a report of the meeting.

Selection Options:

Enter Dates From and To

Sort Sequence is Action Date

Function: Reads DMR table, retrieves MRB Action lines from each DMR

Heading includes: Company Name record, report title, date & time printed, page number, sort sequence selected

Report Data:

Action Date QC Code Qty OK'd to Rework Qty OK'd to Scrap Qty OK'd to RTV Qty OK'd to Use-As-Is MRB Person Comment

#### **Unmoved DMR Items Report**

This report lists all DMR quantities that have been approved for movement but have quantities showing as unmoved. It is, in effect, an open action items report for material handling personnel in the movement of items out of the MRB quarantine area. This means that the quantity approved for that movement, e.g., scrap, minus the quantity moved to date, is greater than zero in at least one movement category. Its purpose is to provide convenient guidance for material handling personnel who are to retrieve the appropriate items, move them, and process an appropriate transaction.

It is printed daily, or as needed. Items remain on this report until they are moved and have a transaction processed.

Functional Logic: program reads all DMR records, comparing data fields as shown below. Those DMR records with any of these calculations resulting in a value greater than zero will have its data (for all quantities) shown on the report.

Report Data:

Heading includes: Company Name record, report title, date & time printed, page number

DMR No. Part Number Description U/M Quantities to Move: Issue to Rework (Qty OK Rwk minus Qty Issued for Rework) Scrap (Qty OK Scrap minus Qty Scrapped) RTV (Qty OK RTV minus Qty Rtnd to Vendor) Use-As-Is (Qty OK Use-As-Is minus Qty Rtnd to Inventory minus Qty Rtnd to WO's)

#### **Quality Reports & Inquiries**

Reports:

#### **Open Receiving Lots Report**

This report lists all Receiver numbers, identifying receiving lots that have material that has not been completely dispositioned. This can be due to one or more of the following conditions being true:

A. There is a quantity remaining in the following general formula:

#### Quantity Received

Minus Quantity Accepted Minus Quantity Rejected

B. The Quantity Rejected has not been fully dispositioned, as shown by a quantity remaining, according to this formula,

#### Quantity Rejected

Minus Quantity OK'd for Scrap, Vendor Expense Minus Quantity OK'd for Scrap, Company Expense Minus Quantity OK'd for Return to Vendor Minus Quantity OK'd For Rework - Vendor Expense Minus Quantity OK'd For Rework - Company Expense Minus Quantity Rejected Then Accepted

C. The Quantity Rejected has been fully dispositioned, but still has a quantity remaining according to this formula:

Quantity OK'd For Rework (Vendor or Company Expense) Minus Quantity Reworked & Accepted Minus Quantity Reworked & Scrapped

D. Any of the above quantities that reflect disposition or report of rework activity have a quantity remaining because a move transaction has not been reported, indicating that the items have been moved to stock, sent back to the vendor, or scrapped.

#### **DMR Subsystem Tables**

#### Discrepant Material Table

<b>Field Name</b> Discrepant Material Report No Record ID	<b>Description</b> Unique identifier for each D/M report	S/M-V S	Comments
Part Number	Part Number that has been rejected as non- conforming	S	Must be in Part Master; either P or M coded; If on a WO, may be either Parent P/N or Req'd P/N
Rejected Quantity	Quantity of this part number having the same reason for being rejected, and in the same state of completion if partly completed	S	Positive integer greater than zero; may not be greater than Qty Rec'd if Receiver, Qty Issued if on a WO, or Qty OH if perpetual
DMR Date	Date these parts were rejected; date DMR created; same as first inspection date	S	System Date is default, but may be earlier than System Date.
Rejection Reason	Most obvious reason parts were found to be non-conforming	S	Text - initial comments as to why believed to be discrepant material
Rejection Source	Status of parts when rejected; either on a work order, on a Receiving Report, or in warehouse inventory; either W, R, or P (perpetual inv.)	S	Controls program functions when removing or linking DMR to other data records.
Source Work Order No.	Work Order Number that parts were removed from; if Rejection Source = W	S	Blank if Rej. Source not equal to W
Source Operation NO.	Operation Number on the Source WO that a Parent Part Number was removed from	S	Blank if Rej. Source not equal to W, or if DMR Part Number not equal to WO Parent Part Number.

Source Receiving	Receiving Report No.	S	Blank if Rej. Source not
Report No.	that parts were on when found to be non- conforming; Rejection source = R		equal to R
Source Warehouse No.	Warehouse that parts were removed from as non-conforming; Rejection Source must equal P	S	Blank if Rej. Source not equal to P; one DMR to a warehouse No.
Source WH Location	Location within warehouse that parts were removed from as non-conforming; Rejection Source must equap P	М	Blank if Rej. Source not equal to P; Loc'ns are an MV list.
Inspection Date	Date on an inspection action occurred; includes initial rejection/ DMR creation date	Μ	AMV stack providing history of inspection actions; date is "key" to stack.
Inspection Results	Accept/Failure codes, including why failed	Μ	Indicates results of each inspection or re- inspection; linked to and validates against the QC Code table.
MRB Qty OK'd for Scrap	Quantity Dispositioned as OK for scrap	М	Part of inspection &disposition action lines
MRB Quantity OK'd for RTV	Quantity dispositioned as OK for RTV	Μ	Part of inspection &disposition action lines
MRB Qty OK'd for Rework	Quantity dispositioned as OK for Rework	М	Part of inspection &disposition action lines
MRB Qty Use-As-Is	Quantity dispositioned as Acceptable, although previously rejected.	Μ	Part of inspection &disposition action lines
MRB Person	Name of person on MRB leading disposition action	Μ	Part of inspection &disposition action lines
User ID	User-ID of person entering disposition action	Μ	Part of inspection &disposition action lines

Rework Work Order No.	Rework WO No. that this DMR was issued to	S	All material on same DMR must be reworked on same Rework WO No.
DMR Quantity Issued for Rework	Cumulative quantity issued from DMR to Rework WO on DMRI transactions	S	multiple transactions may be processed; all must have same DMR and WO No.
DMR Quantity Returned from Rework	Cumulative quantity returned from Rework WO to DMR on DMRT transactions	S	multiple transactions may be processed; all must have same DMR and WO No.
Returned to WO No.	WO Number that the dispositioned items were returned to after OK Use-As-Is	Μ	Multiple transactions may be processed for the DMR; Returned to WO forms a multi-value stack associated with the Quantity Returned to Work Orders.
Quantity Returned to Work Orders	Cumulative quantity returned to Work Orders after Use-As-Is disposition	Μ	multiple DMWO transactions may be processed for the DMR, different Work Order Numbers
DMR Closed Date	Date that all the quantity on this DMR No. were completely dispositioned and moved	S	
Quantity Ret'd to Inventory	Cumulative quantity moved from this DMR to warehouse inventory	S	Total of DMIN transaction ID's
Unreturned Quantity	Symbolic; Total Quantity OK'd Use-As-Is, minus Qty Rtnd to WO's, minus Qty Rtnd to Inventory	S	
DMR Quantity Scrapped	Cumulative quantity scrapped from this DMR	S	Total of DMSC transaction ID's or Receiving RTV/Scrap transctions w/Scrap option.
DMR Quantity RTV'd	Cumulative quantity RTV from this DMR	S	Total of receiving RTV/Scrap transactions w/RTV option.

Total Qty OK'd to Use-As-Is	Symbolic - total of all lines, MRB Qty OK Use- As-Is	S	Cumulative total of all lines MRB Quantity Use-As-Is
Total Qty OK'd to Rework	Symbolic - total of all lines, Qty OK to Rework	S	Cumulative total of all lines MRB Quantity OK'd to Rework
Total Qty OK'd to Scrap	Symbolic - total of all lines, Qty OK to Scrap	S	Cumulative total of all lines MRB Quantity OK to Scrap
Total Qty OK'd to RTV	Symbolic - total of all lines, Qty OK to RTV	S	Cumulative total of all lines MRB Quantity OK to RTV
Undispositioned Qty	Symbolic - calculated from Rejected Quantity minus Cum Qty's OK'd to Rework, Scrap, RTV, Use-AsIs	S	

Inventory table fields used:

Part Number	Record ID	
DMR No.	Discrepant Material	Μ
	Report No.	
DMR Quantity	Quantity Remaining on	Μ
	this DMR No.	
DMR WH No.	Building were this DMR	Μ
	is currently located	
DMR Location	Location within	Μ
	building/warehouse	
	where this DMR's	
	quantity is physically	
	located	
MRB Qty	Symbolic field; total of	S
	all DMR Quantities in	
	which part number/s	
	record	

key to multi-value stack	
Updated by DMR	

functions & transactions

Receiving Lot Master table fields used:

Quantity Rejected	Symbolic; sum of DMR		
	Rejected Quantities		

Quantity Received	Updated by Receipt to Dock program; written once when Receiving Lot record is created	S	Defines Receing Lot quantity; full quantity must be either moved to stock, RTV'd or scrapped to close out receiver.
DMR No.	Added by DMR Maintenance program	M/V	key to multi-value DMR/rejected material lines.
DMR Rejected	Added by DMR	M/V	part of DMR Rejected
Quantity	Maintenance program		material line
Quantity Use-As-Is	Updated by DMR	M/V	part of DMR Rejected
-	maintenance program		material line
Acceptance Date	Updated by Receiving	M/V	key to multi-value
-	Inspection Acceptance		Acceptance lines
	program.		
R/I Quantity	Updated by Receiving	M/V	part of multi-value
Accepted	Inspection Acceptance		Acceptance lines
	program.		
Acceptance User-ID	Updated by Receiving	M/V	part of multi-value
	Inspection Acceptance program.		Acceptance lines
Total Quantity	Symbolic; sum of R/I	S	Used to validate Move to
Accepted	Quantity Accepted +		Stock transaction.
	Quantity Use-As-Is		
Total Quantity RTV'd	Updated by RTV/Scrap	S	Cumulative of RTV
	transaction		transaction quantities
Total Quantity	Updated by RTV/Scrap	S	Cumulative of Scrap
Scrapped	transaction		transaction quantities
Quantity Moved to	Updated by Move to	S	Cumulative of Move to
Stock	Stock transaction		Stock transaction
			quantities
Total Quantity OK to	Symbolic; sum of DMR	S	Used to validate RTV
RTV	Quantities OK to RTV		transaction quantities
Total Quantity OK to	Symbolic; sum of DMR	S	Used to validated Scrap
scrap	Quantities OK to Scrap		transaction quantities
R/I Remaining	Symbolic; equals		Used to identify R/I
Quantity	Quantity Received minus Total Quantity Scrapped,		remaining quantity.
	minus Total Quantity RTV'd minus Quantity		
	Moved to Stock		
	MOVED TO DIOER		

Open Work Order fields used:

DMR No.	DMR number issued to Rework WO number for rework; DMR P/N must match ReworkWO Parent P/N	Μ	Key to a multi-value stack; allows multiple DMR's to be issued to the same Rework WO.
DMR Quantity Issued	Quantity Issued to this Rework WO on the associated DMR number.	Μ	Allows multiple DMR's to be issued to the same Rework WO, and multiple transactions for the same DMR.
DMR Qty Returned	Quantity Returned from the Rework WO to the associated DMR number.	Μ	Allows multiple DMR's to be returned from the same Rework WO, & multiple transactions for the same DMR.
DMR Remaining Rework Quantity	Symbolic; DMR Quantity Issued minus DMR Qty Returned	М	calculated for each DMR line.

Inventory Transaction History records:

Transaction ID	When Generated	Comment
WODM	DMR saved, Source $=$ WO	Upon DMR creation
INDM	DMR Saved, Source = Inventory	Upon DMR creation
DMLO/DMLI	DMR Location to Location Move;	Separate I&WM
	paired	transaction
DMIN	Moves Use AS-Is mtl from DMR to	Separate I&WM
	Inventory	transaction
DMWO	Moves Use AS-IS Mtl from DMR	Separate I&WM
	To work order	transaction
DMSC	Moves OK to Scrap Mtl from DMR	Separate I&WM
	to scrap	transaction
DMRI	Moves OK to Rwk Mtl to Rework	Separate I&WM
	WO, linked to DMR	transaction
DMRT	Moves reworked mtl back to DMR	Separate I&WM
	from Rework WO.	transaction