

PRODUCTION MANAGEMENT SYSTEM

SYSTEM OVERVIEW

This specification describes the requirements for a Production Management System. It is divided into two sections. The System Overview discusses the concepts, procedures and methods that form the basis of the system. The system specification discusses in greater detail specifically how the programs are to be implemented.

I. Creation of the Product (BOM)

A product is developed or conceived from a sales opportunity, perceived marketing demand or customer request. The system will provide the ability to create a multi-level Bill of Materials for this product. Included in the BOM will be the components to be used, and the quantity of each. Provision will be made for standard labor and overhead costs. Lastly, we can include in the BOM record the manufacturing steps (Routing). The labor costs to each step, can be tied to each step, or have one summary number. The routing can also be used to set up in the work order record, a template to allow the recording of product movement from one stage of production to the next.

The components of the BOM, each will in turn be products in the Product Master file (PROD.MAST). Each product will be identified as a purchased product, manufactured product or customer supplied product. The cost of the product will be stored in summary fashion in the product master file, either based:

- A. On the purchase cost for purchased items, or
- B. Computed Manufacturing cost for manufactured items.

II. Work Order Entry Process

The central requirement of the system is to track manufacturing orders (Work Orders) through the manufacturing process. Key requirements include:

- A. Ability to determine the status of each open work order, including:
 - 1. Where the merchandise is physically.
 - 2. Quantity that has been produced.
 - 3. At what stage of production is the work order.

A proforma work order can optionally be setup. This will allow a needs analysis before the actual work order is created. The proforma work order can then be converted into a work order.

The work order will have a due date and number of days for each routing step so overdue items can be easily tracked. A report will be setup to be generated to the next routing step so they can get their staging area ready, etc. The report will use the date of the last movement (verification) plus the routing days to determine when the product should reach the next routing stage.

II. Work Order Entry Process - (continued)

The routing posting will contain audit trails of the operator, date, and time as well as the quantity completed at that time, quantity use of the raw materials and quantity wasted of the raw materials. An inventory audit record will be created for the raw material quantity wasted with a transaction code of "MFW". Reports can then be run from the inventory audit file.

Note on Production Tracking (Routing)

Note: This requirement has two dimensions. If the components are being manufactured externally, then the status is to identify the outside vendor (contractor), and report on whether the goods (raw materials) were shipped, and the quantity of finished goods returned.

On internally manufactured product, an additional level of sophistication is to record the steps in the manufacturing process (Routing), and track movement of WIP from step to step. Routing information may be physically stored in the BOM record, and provide the ability to report and track the product through the various stages of production, and partial quantities produced in the work order record. The routing information can also be overridden during work order entry.

A routing document will be designed to print the product and routing information for the next routing stage. When the routing posting is done, an option will be available to print the routing document for the next routing stage.

B. The manufacturing/assembly/shipping scenarios include:

1. Items to be manufactured internally.
2. Items to be manufactured internally, value added to item before shipping to customer from warehouse.
3. Items to have value added before shipping to customer from warehouse.
4. Items to be manufactured externally.
5. Items send to 3rd party for assembly.
6. Items send to 3rd party for assembly, then drop shipped to ultimate customer.
Note: Must generate billing upon confirmation of drop shipment.
7. Items send to 3rd party, other item purchased from that 3rd party to be included in the assembly.
Finished goods returned to you.
8. Items send to 3rd party, other item purchased from that 3rd party to be included in the assembly.
Finished goods then drop shipped to ultimate customer.
Note: Must generate billing upon confirmation of drop shipment.
9. Raw materials may also be supplied from the customer.
10. There may be multiple 3rd party assemblies. One vendor may ship the items to another vendor for assembly and the finished goods may be sent to you or to the customer.

The ramifications of each of the above scenarios is accommodated by the system.

II. Work Order Entry Process - (continued)

- C. The possible locations of inventory include:
1. Inventory at third party for processing or drop shipment.
 2. Inventory on site as raw materials in a warehouse.
 3. Inventory on site as finished product or partially finished product at a warehouse.
 4. Raw materials drop shipped from one third party vendor to another to be included in finished product.
 5. Inventory from customer (a different selection number will be used for this product so the GTV inventory and the customer inventory is not intermingled).
- D. A general requirement of the system is to introduce a product locator system as part of the inventory control process. This requirement will include the following:
1. A location file will be established which will describe the attributes of the location. This will include:
 - a. Physical size -- suitable for what size pallet
 - b. Physical location
 - c. Suitable as primary pick, backup overflow, fast pick (flow rack)
 - d. Environmental considerations if any (i.e. refrigeration, heat etc.)
 - e. Is the location in use or vacant.
 - f. Weight limits
 - g. Levels off ground
 - h. Products in the location
 2. The product file will contain a list of all locations for the item.
 3. The lot file will be used to maintain inventory by product by location.
- E. The work order will create an MDS order for all component items internally manufactured and customer items stored in a warehouse, and the MDS backorder system will be used to track the availability of components not available when the Work Order is entered. As merchandise becomes available, either through purchasing or manufacturing receipt, the BO module will allocate the product to the waiting work order shipment. A due date will be entered on the header portion of the work order. This will be used to calculate if the order to pick the raw materials should be a future order or not. If it is a future order, it will be converted during the future order conversion. An "allocate to work order: 99999999" field will be added to the work order header screen. A cross reference will be setup so backorder allocation will allocate the finished product to the "allocate to work order" before the finished product is allocated to any other work orders or regular orders. The allocation will look at the cross reference for that product. If it exists, the work order will be read from the first attribute of the cross reference and the order number will be read from the work order file. The plan number will also be an optional entry during work order header input. A plan maintenance will be setup storing the plan description. The plan maintenance will also contain 4 lines of message lines and prompts for required items for the plan (not yet detailed), such as pricing required, etc. The order number will also store the plan number and work order number. A plan cross reference file will be setup to store all orders for the plan, purchase orders for the plan, and work order for the plan.

II. Work Order Entry Process - (continued)

F. A production posting procedure will be provided to record the completion of a manufacturing process.

Note: The Work Order will double as a Purchase Order with regard to:

1. Receipt of inventory and updating of inventory related audit files
 2. Validating the vendor payment — including the interface to the A/P system. Work Order entry will have the ability to enter agreed to labor charges to the sub-contractor, as well as the agreed to price of vendor supplied product. If the work order is routed through multiple 3rd party vendors, the routing procedure will be used to initiate the vendor payment cycle.
 - a. Approval process and workflow for purchase orders and vendor invoices.
 - b. Allow A/P Credit and Debit memos to properly reference the actual vendor invoice (now stop because system considers the Debit or Credit memo to be a duplicate entry).
 - c. The approval process for vendor invoice received with no PO, or with a PO but with no receipt. TSH's standard system accepts the voucher and places it in an inventory hold stage.
- G. Each Work Order is viewed as a single manufacturing process (Although there may be several steps imbedded, the system will view them as a single step from a paper flow point of view). If there is insufficient product to complete a work order, then procedures will be provided to alert the appropriate party to either:
1. Order the required raw material, if a purchased product,
 2. Manufacture the product, if internally manufactured, or
 3. Alert the customer that the raw materials they supplied are insufficient for the work order

The plan is not to automatically generate all levels of work orders or purchase orders automatically. Rather we will provide the requirements in printed form for the purchasing or production department to determine how they will procure the product. In this way requirements from multiple work orders can be combined for maximum efficiency.

Upon the receipt of the purchased product, or the completion of a work order from a lower level, the next level work order will automatically be released for manufacturing (in a process similar to the MDS backorder allocation system).

If the work order is routed through multiple vendors or one vendor and then to a warehouse, the routing process will need to produce the appropriate documents for the AP/PO interface. If the next step in the routing is a warehouse, the "intransit" quantities in the product detail records need to be updated because the work order is no longer at the vendor's location.

The bill of materials and work order system can be used for products that are purchased from a vendor and then routed to public warehouses before shipment to the customer. A bill of materials can be entered and routing setup. The routing maintenance can then record the physical location of the product. Additional overhead can be added to the bill of materials to account for the freight, warehousing expenses, etc.

III. Costing and Inventory Evaluation

The system will provide inventory valuation analyses at several levels during the work order and production posting process. The program specifics of how the evaluation will be performed are discussed below where appropriate in the detail program specification section. Costs will include labor costs, freight, and other outside costs, as well as the cost of raw materials.

These reports will be designed to answer the following questions:

- A. Value of WIP by work order.
- B. Which contractor has what goods, and what is the value of the internally manufactured product at his site **and** the customer supplied product.

The following is a general outline of the costing methodology that will be used.

- A. The component cost will be determined on each work order. The material cost will be based on actual or standard cost (although any of the following costing methodologies - Standard, Last Cost, Average Cost can be used).
- B. The labor component is determined as follows:
 - 1. If the work order is to be produced externally (i.e. by a subcontractor, each item will have a material as well as labor cost component. (Either one or both columns may be filled in). The total cost will be used in all calculations.
 - 2. On an internal work order the material portion of the cost will be the current purchase cost of the product. In addition, there will be a standard labor hours and associated cost center stored in the BOM record. Upon entry, the hours will be multiplied by the hourly rate of that cost center (stored in a separately maintained record), to determine the unit labor cost.

The standard labor rate will be associated with the routing contained in the BOM. Thus, if three steps are identified in the manufacturing process, then each can have an associated cost center and individual labor rate from the cost center file. The total cost will be the total of the steps time the hours times the center labor rate.

- 3. Similarly there will be provision for an overhead cost center and rate on each BOM record. The rate, which may vary by cost center, will be expressed as a per unit overhead rate rather than a percentage add-on to cost. (I.e. 1.00 per unit produced).
 - 4. Manufactured cost is therefore determined by a combination of the actual (projected) material cost, labor is based on the rate input in the BOM, or the standard rate, and overhead will always be based on a standard unit.
- B. A significant requirement of the system is to maintain a “where used” list, identifying all products in which a specific component is used. Should a component cost change for any reason, all BOM records must be updated to reflect the new cost. In addition, all work orders in process must be similarly updated. If necessary, this cost update will be performed on a batch basis.

III. Costing and Inventory Evaluation – (continued)

- C. The value of inventory will be counted only on the completed portion of the work order. Until the work order is completed, the raw materials remain in inventory (removed from availability by calculation, but remaining in the on-hand). Thus the value of inventory will be determined from completed production, plus the value of the raw materials. It was decided that the “leak” from WIP labor and or overhead was not significant, and would be handled by accounting adjustments at period end.

- D. Costing Decimal –the parameter file will give the ability to have 4 decimal costs for products without changing their current costing. There is a new parameter for RAW.MAT which indicates the decimal for the onhand and cost. Separate fields are maintained for the raw material onhand, raw materials cost and raw materials onhand at physical. During purchase order receipts, work order production posting, and verification both the onhand and the raw materials onhand are updated. The same holds true for the costs during purchase order receipts and production posting.

SYSTEM SPECIFICATION

I. Creation of the Product (BOM)

Each manufactured product will have an associated Bill of Materials. The system will provide the ability to create a multi-level Bill of Materials for the product. Included in the BOM record will be:

- A. Components to be used, and the quantity required of each component
- B. Standard labor and overhead costs.
- C. The product routing will also be included in the BOM record. As discussed in the introductory section, labor costs could be broken down to each step (in hours). Alternately one total standard labor amount could be included in the BOM.
- D. The routing will be used to set up in the work order record a template to record product movement from one stage to the next.

The components of the BOM, each will in turn be products in the Product Master file (PROD.MAST). Each product in the master file will be identified as a purchased product, manufactured product or a customer supplied product. The cost of the product will be stored in summary fashion in the product master file, either based the purchase or manufacturing cost (see costing discussion in the introductory section).

BOM costing will be accomplished as follows:

- A. The component cost will be determined on each work order. The material cost will be based on actual or standard cost (although any of the following costing methodologies - Standard, Last or Average Cost can be used).
- B. The labor component is determined as follows:
 - 1. If the work order is to be produced externally (i.e. by a subcontractor, each item will have a material as well as labor cost component. (Either one or both columns may be filled in). The total cost will be used in all calculations and will be carried through to production posting as discussed above. Therefore, WIP can be determined from the work order.
 - 2. On an internal work order the material portion of the cost will be the current purchase cost of the product. In addition, there will be a standard labor hours and associated cost center stored in the BOM record. Upon entry, the hours will be multiplied by the hourly rate of that cost center (stored in a separately maintained record), to determine the unit labor cost.

The standard labor rate will be associated with the routing contained in the BOM. Thus, if three steps are identified in the manufacturing process, then each can have an associated cost center and individual labor rate from the cost center file. The total cost will be the total of the steps time the hours times the center labor rate.

- 3. Similarly there will be provision for an overhead cost center and rate on each BOM record. The rate, which may vary by cost center, will be expressed as a per unit overhead rate rather than a percentage add-on to cost. (I.e. 1.00 per unit produced).
- 4. Manufactured cost is therefore determined by a combination of the actual (projected) material cost, labor is based on the rate input in the BOM, or the standard rate, and overhead will always be based on a standard unit.

I. Creation of the Product (BOM) – (continued)

5. The labor general ledger number will be stored in the cost center. This will be an optional field. A labor general ledger number will also be added to the general ledger control maintenance (this field will be required if the parameter is set to use production posting). The cost center will be checked for the labor general ledger number first; if none exists, the labor general ledger number from the general ledger control will be used. The finder file will be used to determine which general ledger control record to use (based on the company and warehouse input on the work order header screen).

II. Work Order Entry Process

The central requirement of the system is to track manufacturing orders (Work Orders) through the manufacturing process.

- A. The work order is initiated due to external influences on the system (master schedule, customer order, etc.) A Work Order is entered identifying the finished goods and the corresponding quantities to be produced. Features include:
 1. If the Bill of Materials for the product does not exist, an option will be provided to enter the BOM create program, enter the required information, and then return to the Work Order Entry program.
 2. If the production will be required off-site, the contractor (“vendor”) will be entered as a ship-to address in the routing portion of the bill of materials. Bill of materials ship tos will be setup for the vendors (a separate shipto input/maintenance will be setup similar to the customer shipto screen and a vend.ship.to.xref file will be created) and override will be available in the bill of materials creation and the work order creation.
 3. The system will provide the ability to indicate that one or more of the components is a vendor supplied or customer supplied item. The agreed to cost of labor and product cost will be entered for costing and Accounts Payable interface purposes.
 4. The Bill of Materials for the product may be modified for this work order only.
 5. The routing steps may be modified for this order only as well. As discussed above, this will enable the system to track at which step in the manufacturing process (Routing) the order is at, and track movement of WIP from step to step. This specification assumes that we will establish this routing file, and provide the ability to track the stage of production, and partial quantities produced in the work order record.
 6. Extensive messaging capabilities will be provided.
 7. The creation of the MDS order from the work order will be in a batch mode. After the work order has been completed, a proof listing can be run and then the MDS order will be created. This will allow maintenance of a work order before the MDS order is created.
 8. Work order maintenance will not be available if the MDS order has been created or the work order has been printed. An option will be available to cancel the work order only if the MDS order has also been cancelled.
 9. An option customer number will be available during work order entry. If the customer number is entered only products supplied by that customer and generic products can be entered on that work order.

II. Work Order Entry Process – (continued)

B. Inventory may be in several states, all of which must be accommodated by the system:

1. Inventory may be supplied by the third party doing the manufacturing.
2. Inventory is available and in a warehouse.
3. Inventory may not be available.
4. Raw materials may be at one vendor, and need to be shipped to another vendor or to the warehouse. The system would consider the inventory as not available, and the movement should be handled as a transfer entry -- separate from the work order process or as a purchase order.
5. Raw materials may be supplied by the customer.

Note: The work order entry process will allow the entry of a work order even if the inventory is not available — for any reason.

C. The work order will in turn create an MDS order for all component items, except where the product is being supplied by the sub-contractor. The customer supplied raw materials will print on the MDS order because the stocking product is a different selection number. This will allow us to use the capabilities of MDS to update inventory (including inventory at a lot/location level) and create the necessary shipping papers. In addition, we will be able to use the MDS backorder system to track and allocate components not available when the Work Order is entered. As merchandise become available, either through purchasing, transfers, or manufacturing receipt, the BO module will allocate the product to the waiting work order shipment.

D. The MDS Order and Release records produced from work orders will be flagged as to their origin. This will enable the full use of the existing Purchase Order and Backorder allocation procedures, and yet insure that these Manufacturing Orders are not invoiced. Most importantly, we can avoid the necessity to develop a set of procedures duplicating the shipping and backorder allocation procedures already available.

The verification of the MDS release will trigger the print of the routing document.

E. The work order system will use a two stage commit (with regard to inventory tracking) as follows:

	<u>Work Order</u>	<u>Product Detail</u>	
1. Upon entry of work order	+In work +In use	+In work	(finished good) (component)
2. Creation of MDS Order	+In pick		(component)
3. Ship and verify MDS order		- In pick	(component)
4. Ship raw materials to vendor (optional)	+Intransit +Intransit	+Intransit +Intransit	(finished good) (component)
5. Receive product from vendor (optional)	-Intransit -Intransit	-Intransit -Intransit	(finished Good) (component)
6. Complete work order (production)	- In work +Produced	- In work -On hand +On hand	(finished good) (component) (finished good)
		- In use	(component)

II. Work Order Entry Process – (continued)

Steps 5 and 6 will be combined if the receipt from the vendor is the final step.

If a proforma work order is entered, we will create two new fields for Proforma In Work and Proforma in Use. This will allow a needs analysis before the work order has been converted. The proforma work order conversion will move the proforma in work and the proforma in use to the in work and in use fields.

Note: Product Availability is therefore on hand -in pick -in use - backorder

- F. Once the Work Order for the product has been entered, there are various different paths the Work Order may take.
1. All of the components (supplied by warehouse or customer) on the Work Order are available in inventory:
 - a. The Work Order entry program will create an Order record, and a corresponding release, for the work order components. The items on the release will be placed “in pick”.

Note: Should the components on the Work Order come from different warehouses, the Work Order entry system will use trans-shipping logic (as found in the Order Entry System) to create a separate Release record for each warehouse.
 - b. The Order and Release records, and the Work Order number, will be cross referenced to each other.
 - c. A picking document for each release will be produced, flagged as a Work Order Picking Slip, and the inventory will be picked.
 - d. Once all the inventory has been picked, the release can be verified. The inventory will then come out of “in pick” and be placed in “in work”. (See 5B above). The Release and Inv.Updt.Xref records will be flagged as complete, so they will not fall through to the MDS AR system.
 - e. When the Work Order is entered, Ship-to addresses will be prompted for, so the components can be shipped to the assembling/distributing warehouses.
 - f. For the completion of the Work Order, see the section headed Production Posting.
 2. Some Components (supplied by warehouse or customer) of the Work Order are not available in inventory:
 - a. Components of the Work Order that are not in inventory will be placed on back order in the Order file and the Product Detail File.
 - b. There will be a prompt in Work Order entry for the operator to indicate ‘hold’ or ‘pick’ for a Work Order with backordered components.
 1. If the ‘hold’ option is chosen, any available components will be placed ‘in pick’ (in order to ensure that they are allocated to this Work Order), but no picking document will be produced until all the components are available.

II. Work Order Entry Process – (continued)

2. If the 'pick' option is chosen, the available components on the Work Order will be placed 'in pick', and a corresponding picking document for the appropriate warehouse will be produced, and flagged as a Work Order picking document.
- c. The components of the BOM (not available in inventory) may be purchased, manufactured or customer supplied items, each with their own Bill of Materials. Items will be flagged in the Product Master file to define their source as manufactured (Bill of Materials), purchased items or customer supplied items.
 - d. Daily and/or on-demand reports will be produced for backordered components of Work Orders.
 1. If the back ordered item is a purchased item, it will appear on a "Raw Material" Work Order Backorder report, to alert the purchasing department that this item needs to be purchased.
 2. If the backordered item is a Bill of Materials item, it will appear on a "manufactured item" Work Order Backorder report, to alert the production department that a subsidiary work order should be entered for this item.
 3. If the backordered item is a customer supplied item, it will appear on a "customer supplied" Work Order Backorder report, to alert the appropriate department to notify the customer that there is a shortage of their raw materials for the work order.
 - e. The implication of the approach outlined in step 4, is that the purchasing department will be able to aggregate all product demand when they place an order. Thus if a product is both sold as is, as well as used as a component in a BOM, a single Purchase order can be entered. When the merchandise is received, the backorder allocation module will parcel out the received (or manufactured inventory) as appropriate.

In order to support this concept in purchasing and production, the inventory management module will be modified to use "Used in Production" as one of the product demands (in addition to sales). This information is stored in the Sales.2 file.

- f. Purchase Orders, with inventory required for a Work Order, will be received into inventory through the standard MDS inventory receipts procedures. These items will then go through a back-order allocation procedure (at EOD or on-demand) which will allocate the inventory to the Work Order. The customer supplied items will be received via purchase order receipts from the customer.
- g. Once the backordered components of a work order become available in inventory, the Backorder Allocation system will allocate the inventory.
 1. If a Work order that has been flagged as 'hold' is now completed by the backorder allocation, the Work Order will be taken off 'hold', and a picking document produced for each corresponding warehouse.
 2. If a Work order has been flagged as 'pick', the newly received items will be put 'in pick' on a release, and a picking document produced for these items.

II. Work Order Entry Process – (continued)

3. The work order picking documents will be setup to print out separate from the regular picking documents. The picking document will indicate that this is a work order picking document. All versions of the picking document will be changed to check the transaction type during the picking document print.
 - h. If the backordered product is a customer supplied item, a purchase order will be issued for the product to the customer at \$0.00 cost. When the purchase order is received the backorder will be allocated. Order entry will be modified to check if the product is a customer supplied product so the customer supplied product is not sold.. An override capability will be available in order entry so the customer supplied product can be returned to the customer.
 - i. Purchasing will also be modified to check if the product is customer supplied and will print a message indicating that this is a customer supplied item.
 - j. Some stock status reports, low stock reports, etc. may be modified to indicate if the product is purchased, manufactured or customer supplied.
3. Work Orders Shipped to Third Party Vendors for Processing
 - a. Work Orders that require processing by a third party vendor will be entered with the Ship-to address of the third party vendor. The ship to information will be stored in the vendor master record with override capability in bill of materials maintenance and work order entry/maintenance. The ship to information can be assigned by routing step. If the routing is not to vendor but to a specific warehouse, that can also be entered. The ship to options for each routing step can be: to a specific vendor from the vendor master record, an override of the vendor's ship to, the warehouse ship to or a manual ship to.
 1. Items that are in inventory will be processed and picked as above, and shipped to the vendor.
 2. Components not in inventory must be purchased or manufactured as necessary.
 - b. Items that are sent to a third party can be designated as Work Order 'in transit', for tracking purposes. To track movement between third party vendors, the system will use the vendor code stored in the work order record. Thus a report from this file can determine where a product is, and in what stage of manufacture.

III. Product Movement

As discussed above, the system will provide the ability to record the routing of the work order. This procedure will allow the recording of product movement between steps, and will enable the system to track at which step in the manufacturing process (Routing) the order is at, and track movement of WIP from step to step. The routing information will be stored in the work order file. Routing will also initiate accounts payable when the merchandise is returned from a vendor. The following will be entered during the routing posting: date of transfer to next routing location (required), quantity routed (required), bill of lading number (optional, and 2 lines of notes (30 characters per line). The routing information will be available as a drilldown from the open work order detail inquiry. The lifo and/or fifo layers will not be updated until the finished product is received. The new value of the work order can be calculated based on the costs of the raw materials, the overhead costs, and the routing costs from each routing step, but the value will not be updated to the finished product until production posting of the finished product.

IV. Production Posting

As finished goods for the work order are completed, the manufacturing results will be recorded through the Production Posting procedure. The following discusses this procedure:

This procedure records the manufactured product as the receipt of new inventory. Thus:

- A. Any other work orders or customer orders can be released for shipment via the backorder allocation module. The system will generate picking documents for the next level work order, as with any other back orders (possibly entered through Order Entry), that have been placed for this product, through the backorder allocation procedure. The priority code assigned can be a unique code established for the Work Order process. A routing document will be generated when the verification is done. A new routing document with the next routing stage will be an option during routing posting.
- B. As this procedure is designed to report what actually happened, the program will allow the operator to change:
 - 1. The components used (in the event a substitution is made).
 - 2. The quantity actually produced
- C. This procedure will function as a Purchase Order Receipts procedure, updating the work order file, as well as all the inventory receipt and audit files (LIFO, FIFO, Inv.Audit etc.) updated by PO receipts. Separate transaction codes of "MFG" will be assigned for the manufactured products and "MFR" for vendor or customer supplied products. If the product was a vendor supplied item, the onhand will not be reduced. Two Inv.Audit records will be created – one showing the vendor supplied product coming in and another showing it used in production posting. Customer supplied items will reduce the onhand in the product record.
- D. If the work order was to a subcontractor, an interface paralleling that of PO receipts to AP will be developed so that vendor payables can be approved for payment. This might include labor charges as well as payment for vendor supplied product.

IV. Production Posting – (continued)

- E. During work order production posting, if the finished product has a backorder status, a message will display that this product has a backorder so the finished product is not put away on the shelf and then re-picked. A prod.rcpt record will be created. After production posting has been completed, backorder allocation can be run using the prod.rcpt file to release the backorders for current receipts and work order production posting for that day.
- F. A production posting maintenance (similar to the purchase order receiver maintenance) will be setup to allow for production posting corrections. It will work similar to the MDS PO receiver maintenance and update the work order instead of the purchase order file.
- G. Accounts payable voucher entry will need access to the work order to post freight charges to and from the vendors. The invoice for freight will usually be received after the invoice from the vendor for the assembly. The work order and finished product can be updated with the new cost reflecting the freight charges but any shipments and invoices to customers will have the cost without the new freight charges.

V. Reporting

Work Order Status Report for Open Work Orders
Backordered Work Order Report by Product
Backordered Work Order Report by Product - Raw materials
Backordered Work Order Report by Product - Manufactured Items
Daily Drop Ship Report - Work Orders
Work Orders 'on hold' Report
Daily Work Order Backorder Allocation Report
Routing Report
Master/Subsidiary Work Order Report