



Article # 1164

Technical Note: Understanding Finished Job Cost Calculation Methods and Their Effect on Production Variances

Difficulty Level: Advanced Level AccountMate User

Version(s) Affected: AccountMate 6.0/6.5 for SQL, AccountMate 6.0/6.5 for MSDE, and VAM/LAN 5, All Builds

Module(s) Affected: MI

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Description

AccountMate's Manufacturer's Inventory system provides three different options by which to calculate finished job cost in manufacturing inventory items. This technical note discusses how the system calculates finished job costs using these three methods including the calculation of production variances. It also shows the appropriate GL entries for the different methods used to calculate finished job costs.

Solution

A. Finished Job Cost Formula

Below are the finished job cost's formula and the factors affecting the cost components.

Finished Job Cost = (a) Total cost of component items + (b) Total machine cost + (c) Total labor cost + (d) Total overhead cost

- (a) Cost of component items depends on the option selected in Finished Job Cost Calculation section in the General (1) tab of the MI Module Setup.
- (b) Machine cost depends on the Mfg Time (machine hours) in the Post Finished Job Line Items tab and the machine cost in the machine record. Default settings for the Mfg Time in the Post Finished Job Line Items tab is taken from the Bill of Materials.
- (c) Labor cost depends on the Mfg Time (labor hours) in the Post Finished Job Line Items tab and the labor cost in the labor record. Default settings for the Mfg Time in the Post Finished Job Line Items tab is taken from the Bill of Materials.
- (d) Application of overhead cost depends on the option selected in the Finished Overhead Cost Calculation section in the General (1) tab of the MI Module Setup.

B. Finished Job Cost Calculation Methods

This section explains the different ways to calculate finished job cost and any applicable production variance based on the available Finished Job Cost Calculation options in the MI Module Setup function. The following data is used in the illustration for each available finished job cost calculation option.

Component item 1: Average costing, unit cost \$57.92, standard cost* \$44.00

Component item 2: FIFO costing, unit cost \$100.00, standard cost* \$85.00

Component item 3: LIFO costing, unit cost \$168.80, standard cost* \$200.00

Master item A: Average costing, standard cost* \$625.00

Machine cost: \$40.13

Labor cost: \$95.15

Applied overhead cost: \$55.00

* Each item's Standard cost is defined in its Inventory Maintenance record.

a. Finished Job Cost Calculation Based on Actual Costs

If you select the Actual Cost option, the finished job cost assigned to the master item is the sum of the actual costs of all its components, including any applied overhead. The formula for the finished cost is as follows:

$$\text{Master Item's Finished Cost} = \text{Actual Component Item Cost} + \text{Actual Labor Cost} + \text{Actual Machine Cost} + \text{Applied Overhead Cost}$$

The cost methods of the component items also affect the inventory costs used in the calculation of the master item's finished job cost.

Illustration 1

<u>Cost Components</u>	<u>Unit Cost</u>	<u>Qty</u>	<u>Extended Cost</u>
Component item 1	\$57.92	1	\$57.92
Component item 2	\$100.00	1	\$100.00
Component item 3	\$168.80	1	\$168.80
Machine Cost			\$40.13
Labor Cost			\$95.15
Applied Overhead Cost			\$55.00
Total finished job cost for master item A		1	\$517.00

Assuming information from the example above, when the finished job is posted, the system records one unit of master item A in the inventory record, with a unit cost of \$517.00. It also records the following GL entries for this transaction:

DR: Inventory (stock) – master item A	517.00	
CR: Inventory (stock) – component item 1		57.92
CR: Inventory (stock) – component item 2		100.00
CR: Inventory (stock) – component item 3		168.80
CR: Machine Clearing		40.13
CR: Labor Clearing		95.15
CR: Overhead Allocation		55.00

b. *Finished Job Cost Calculation Based on Standard Costs for Component Items and Master Item*

If you select the Standard Cost option, the system adds up the standard cost specified in the master item record and the applied overhead cost, if there is any. The system calculated cost (standard cost + applied overhead) becomes the finished job cost of the master item. This method results in production variances which can be attributed to the following:

- (a) Difference between component items' standard costs and their actual costs and,
- (b) Difference between the sum of the master item's standard cost plus the applied overhead cost, and the calculated finished job cost using standard cost for component items.

Illustration 2

Cost Components

Master item's standard cost (specified in inventory record)

Applied overhead cost

Total standard cost for master item A

Per unit cost

\$625.00

55.00

\$680.00

Based on the given data, the finished job cost for one unit of master item A is \$680.00 and the system records a net production variance of -\$163.00, which is calculated as follows:

Cost Components	Standard cost / unit	Actual cost / unit	Cost used in production of master item A	Production Variance
Component item 1	44.00	57.92	44.00	13.92
Component item 2	85.00	100.00	85.00	15.00
Component item 3	200.00	168.80	200.00	(31.20)
Total costs of component items	\$329.00	\$326.72	\$329.00	
Production variance for component items				(2.28)
Machine Cost	N/A	40.13	40.13	-
Labor Cost	N/A	95.15	95.15	-
Applied Overhead Cost	N/A	55.00	55.00	-
Total machine, labor, and applied overhead cost	N/A	\$190.28	\$190.28	
Total calculated finished job cost			\$519.28	
Less: Standard cost + applied overhead for master item A	\$680.00			
Production variance for master item A				(160.72)
Net Production Variance				(163.00)

These are the GL entries for this transaction:

DR: Inventory (stock) – master item A	680.00	
DR: Production Variance – component item 1	13.92	
DR: Production Variance – component item 2	15.00	
CR: Inventory (stock) – component item 1		57.92
CR: Inventory (stock) – component item 2		100.00
CR: Inventory (stock) – component item 3		168.80
CR: Machine Clearing		40.13
CR: Labor Clearing		95.15
CR: Overhead Allocation		55.00
CR: Production Variance – component item 3		31.20
CR: Production Variance – master item A		160.72

NOTE: If you do not specify a standard cost in the inventory record of master item A, the system will use the total calculated finished job cost for master item A (\$519.28). The production variance will be composed solely of the variances between the standard costs and actual costs of the component items (-\$2.28).

c. *Finished Job Cost Calculation Based on Actual Costs for Component Items and Standard Cost for Master Item*

If you select the Standard Cost for Masters Only option, the system uses the master item's system calculated standard cost (standard cost + applied overhead) for the finished job cost. The resulting production variance is the difference between the master item's system calculated standard cost and the actual finished job cost.

Illustration 3

In the example, master item A's finished job cost is \$680.00** and the production variance is -\$163.00 calculated as follows:

<u>Cost Components</u>		<u>Per unit cost</u>
System calculated standard cost for master item A		\$680.00**
Actual finished job cost components:		
Component item 1	57.92	
Component item 2	100.00	
Component item 3	168.80	
Machine Cost	40.13	
Labor Cost	95.15	
Applied Overhead Cost	55.00	
Total Actual Finished Cost		517.00
Production Variance		<u>(\$163.00)</u>

The GL entries for this particular transaction are as follows:

DR: Inventory (stock) – master item A	680.00	
CR: Inventory (stock) – component item 1		57.92
CR: Inventory (stock) – component item 2		100.00
CR: Inventory (stock) – component item 3		168.80
CR: Machine Clearing		40.13
CR: Labor Clearing		95.15
CR: Overhead Allocation		55.00
CR: Production Variance – master item A		163.00

In AccountMate, you have three different options for calculating your finished job costs. Depending on your manufacturing process, policies, and industry standards, select the best method for your company.

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