

Article # 1321

Technical Note: How Multi-Step MI Work Order Processing Affects the Inventory Quantities

Difficulty Level: Beginner Level AccountMate User

Version(s) Affected: AccountMate 12 for SQL and Express
AccountMate 11 for SQL and Express
AccountMate 10 for SQL, Express, and LAN
AccountMate 9 for SQL, Express, and LAN
AccountMate 8 for LAN

Module(s) Affected: MI

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DESCRIPTION

The multi-step MI work order process feature allows authorized users to post into work-in-process the manufacturing components (i.e., materials, labor, or machine resources) up to a certain step in a multi-level production process or simultaneously post all the steps in a work order. Each component may be assigned to a different step in the process. When processing work orders, AccountMate can be configured to put into process only those components that are assigned a particular step number. Refer to [Article # 1307: Understanding Multi-Step MI Work Order Processing](#) for more information about this feature.

AccountMate updates each component item's allocated quantity as soon as the work order is exploded. This feature makes it easier for users to determine whether the component quantities are sufficient to meet the production demand. This Technical Note presents the effects of each manufacturing phase not only on the component inventory quantities but also on the master item quantities. It also discusses how AccountMate updates the inventory quantities.

SOLUTION

The following sections present each manufacturing phase's effects on the master and component inventory items quantities. We will use the following inventory items for illustration purposes:

- Item# MASTER* ► 5 on-hand quantity, 0 in-process quantity
- Item# COMPONENT ► 18 on-hand quantity, 0 allocated quantity

This is a master item and let us assume that **2 units of item # COMPONENT are required to manufacture **1 unit** of item # MASTER.*

Create Work Order

Assuming that you create a work order for **3 units** of the MASTER item, its manufacturing quantity (Mfg Qty) will increase upon saving the work order. There is no effect on the other inventory quantities.

MI Transactions	Effects on Inventory Quantities											
	On-hand Qty		Allocated Qty		Backorder Qty*		Mfg Qty		In-process Qty		Finished Qty	
M – Master Item C – Component	M	C	M	C	M	C	M	C	M	C	M	C
Create Work Order							↑					

Explode Work Order

When the work order is exploded, both the allocated quantity (Allocated Qty) and manufacturing quantity of the COMPONENT item increases. The MASTER item backorder quantity also increases. The Materials Explosion Report shows that the MASTER and COMPONENT items manufacturing quantities are 3 and 6 units, respectively. The MASTER item backorder quantity is also updated to 3 as shown in the Backorder Report.

In the Inventory Maintenance function the COMPONENT item allocated quantity is updated to 6 units. At this point, you will know how many units of the component item are required to process the work order.

MI Transactions	Effects on Inventory Quantities											
	On-hand Qty		Allocated Qty		Backorder Qty		Mfg Qty		In-process Qty		Finished Qty	
M – Master Item C – Component	M	C	M	C	M	C	M	C	M	C	M	C
Create Work Order							↑					
Explode Work Order				↑		↑		↑				

Post Work-In-Process

Posting the work order to work-in-process decreases the component item on-hand and allocated quantities. It also decreases the master item's backorder quantity but increases the in-process quantity. Using our example, the COMPONENT item on-hand and allocated quantities are updated to 12 and 0, respectively. The MASTER item backorder quantity is also reduced to zero (0). Its in-process quantity, however, is increased to 3 units.

MI Transactions	Effects on Inventory Quantities											
	On-hand Qty		Allocated Qty		Backorder Qty		Mfg Qty		In-process Qty		Finished Qty	
M – Master Item C – Component	M	C	M	C	M	C	M	C	M	C	M	C
Create Work Order							↑					
Explode Work Order				↑		↑		↑				
Post Work in Process		↓		↓		↓				↑		

Post Finished Job

Posting the work order to finished job affects the master item's on-hand, finished, and in-process quantities. Using our example, the MASTER item's on-hand and finished quantities are updated to 3 units; however, its in-process quantity is reduced by 3 units. Note that you can view the finished quantity information by generating the Finished Work Report and Work Order Status Report.

MI Transactions	Effects on Inventory Quantities											
	On-hand Qty		Allocated Qty		Backorder Qty		Mfg Qty		In-process Qty		Finished Qty	
M – Master Item C – Component	M	C	M	C	M	C	M	C	M	C	M	C
Create Work Order							↑					
Explode Work Order				↑	↑			↑				
Post Work in Process		↓		↓	↓				↑			
Post Finished Job*	↑	↓		↓	↓				↓	↑		

*The arrows outlined in red apply only to Post Finished Job without posting to work-in-process.

When you set the Manufacturing module to not require work-in-process for finished jobs (i.e. Require WIP for Finished Jobs checkbox is unmarked in MI Module Setup) and you directly process the work order in the Post Finished Job function without posting it to work-in-process, this decreases the component item's on-hand and allocated quantities and the master item's backorder quantity. Refer to the arrows outlined in red in the table above.

Void Finished Job

Voiding a finished job decreases the master item's on-hand and finished quantities but increases its in-process quantity.

MI Transactions	Effects on Inventory Quantities											
	On-hand Qty		Allocated Qty		Backorder Qty		Mfg Qty		In-process Qty		Finished Qty	
M – Master Item C – Component	M	C	M	C	M	C	M	C	M	C	M	C
Create Work Order							↑					
Explode Work Order				↑	↑			↑				
Post Work in Process		↓		↓	↓				↑			
Post Finished Job (not posted to WIP)*	↑	↓		↓	↓				↓		↑	
Void Finished Job (not posted to WIP)**	↓	↑		↑	↑				↑		↓	

*The arrows outlined in red apply only to Post Finished Job without posting to work-in-process.

**The arrows outlined in red apply to voiding a finished job without posting to work-in-process.

When voiding a finished job that was not posted to work-in-process, AccountMate updates the component item's on-hand and allocated quantities and the master item's backorder quantity. Refer to the arrows outlined in red at the last row in the table above.

Void Work-In-Process

Voiding a work-in-process increases the component item's on-hand and allocated quantities. It also increases the master item's back order quantity but reduces its in-process quantity. Using our example, the COMPONENT item's on-hand and allocated quantities are updated to 18 and 6 units, respectively. The MASTER item's in-process is reduced by 3 units and its backorder quantity is reverted to 3 units.

MI Transactions	Effects on Inventory Quantities											
	On-hand Qty		Allocated Qty		Backorder Qty		Mfg Qty		In-process Qty		Finished Qty	
M - Master Item C - Component	M	C	M	C	M	C	M	C	M	C	M	C
Create Work Order							↑					
Explode Work Order				↑	↑			↑				
Post Work in Process		↓		↓	↓				↑			
Post Finished Job (not posted to WIP)	↑	↓		↓	↓				↓		↑	
Void Finished Job (not posted to WIP)	↓	↑		↑	↑				↑		↓	
Void Work in Process		↑		↑	↑				↓			

Cancel Backorder

If you decide to stop processing the work order and to cancel the backorder, running the Cancel Backorder function will result in reduction of the component item's allocated and manufacturing quantities. The master item's backorder and manufacturing quantities will also be reduced.

MI Transactions	Effects on Inventory Quantities											
	On-hand Qty		Allocated Qty		Backorder Qty		Mfg Qty		In-process Qty		Finished Qty	
M - Master Item C - Component	M	C	M	C	M	C	M	C	M	C	M	C
Create Work Order							↑					
Explode Work Order				↑	↑			↑				
Post Work in Process		↓		↓	↓				↑			
Post Finished Job (not posted to WIP)	↑	↓		↓	↓				↓		↑	
Void Finished Job (not posted to WIP)	↓	↑		↑	↑				↑		↓	
Void Work in Process		↑		↑	↑				↓			
Cancel Back Order				↓	↓		↓	↓				

Thorough understanding of how the inventory quantities are affected during each stage of the manufacturing process can help users easily determine whether the available component quantities are sufficient to meet the master items production needs in each manufacturing phase. It also provides users better control over each phase of the production process.

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