



## Article # 1067

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### Technical Note: Understanding the Impact on Inventory Value when Items are Shipped in Excess of Quantities On Hand

**Difficulty Level:** Beginner Level AccountMate User

**Version(s) Affected:** AccountMate 7 for SQL and Express; AccountMate 6.5 for SQL and MSDE; AccountMate 6.5 for LAN

**Module(s) Affected:** Sales Order, Accounts Receivable, Inventory Control, Purchase Order

**Posting Date:** 1/23/2008

#### DESCRIPTION

Depending on the inventory cost method being used, shipping inventory items in excess of their on-hand quantities results in different transaction entries but it ultimately has the same effect on the inventory balances. This document aims to present the different transaction entries and to explain why the effect on inventory balances does not vary regardless of the inventory cost method being used.

#### SOLUTION

For the purpose of illustration, consider the following assumptions and scenarios:

#### Assumptions:

Inventory – Item # A	Quantity	Unit Cost	Total
Beginning Balance	10	\$50	\$500
Add: Purchases	5	\$53	\$265
Total Number of Units Per Record	15		\$765
Average cost (\$765/15)		\$51	
Cost of the first unit in inventory		\$50	
Cost of the last unit in inventory		\$53	
Selling Price per Unit		\$75	
Accrue Received Goods option in the vendor record is activated			

Assuming that you sell 16 units of Item # A on credit, the system will create the following transaction entries:

Debit: Accounts Receivable	\$1,200	
Credit: Sales Revenue		\$1,200
To record sales computed as follows: 16 units @ \$75/unit		

### Effects on Inventory Balances using the various Inventory Cost Methods:

When you ship inventory items in excess of their on-hand quantities, the system uses the inventory item's cost method to calculate the cost of sales for the excess quantity. If the actual cost of the excess units shipped differs from the system's calculated cost, the variance will have to be properly recorded. The succeeding paragraphs illustrate this process and describe the steps that AccountMate takes to resolve the cost variance.

#### 1. Average Cost Method

When the average cost method is used, the system calculates the average cost per unit by dividing the total inventory cost by the total on-hand quantity. It is this average cost that is assigned to the units shipped in excess of the on-hand quantity. Based on the assumptions above, the system generates the following transaction entries to increase the cost of sales and decrease the inventory upon shipment of the 16 units of Item # A:

Debit: Cost of Sales	\$816	
Credit: Inventory		\$816
To record cost of sales computed as follows: 16 units @ \$51/unit (average cost)		

To continue our example, assume that you purchase and receive 12 units of Item # A at \$45 each. The transaction entries are as follows:

Debit: Inventory	\$540	
Credit: Accrued Received Goods Liability		\$540
To record the receipt of inventory computed as follows: 12 units @ \$45/unit		

Debit: Inventory	\$6	
Credit: Cost Adjustments		\$6
To record the cost adjustment for the excess shipment of one (1) unit computed as follows:		
Cost of Sales should be	\$45	(purchase cost)
Cost of Sales per record	<u>51</u>	(average cost)
Cost Variance	\$6	(Cost of sales is overstated)

**Note:** The system records the \$6 adjustment to recognize the cost variance for the one (1) unit that was shipped in excess of on-hand quantity. In this scenario, the cost of sales was overstated (i.e. \$51 instead of \$45) so the system records a debit to the Inventory GL Account ID and a credit to the **Cost Adjustment** GL Account ID assigned in the **GL Accounts** tab of the Module Setup function in the **PO, IC, SO, or AR** module. The cost adjustment is not recorded until you receive the units to replenish the items shipped in excess of on-hand quantity. In this example, you can generate the **AP**

**Transfer to GL Report** to verify the Cost Adjustment entries resulting from this transaction.

The foregoing transactions and accounting entries have the following effects on the Inventory GL Account ID balance and inventory item balance:

Inventory – Item # A	Quantity	Unit Cost	Total
Beginning Balance	10	\$50	\$500
Add: Purchases	5	\$53	\$265
Subtotal	15		\$765
Less: Shipment	16	\$51	\$816
Balance	(1)		(\$51)
Add: Purchases	12	\$45	\$540
Add (Less): Cost Adjustment			\$6
Adjusted Ending Balance	11		\$495

## 2. First-In, First-Out (FIFO) Cost Method

The First-In, First-Out (FIFO) method is based on the assumption that inventory items are sold and therefore charged to expense (cost of sales) in the order in which the items are received; thus, inventory is stated in terms of the most recent received costs. Assuming that the FIFO method is used in costing Item # A, the system will compute the cost of sales for the shipment of the 16 units in this manner:

From beginning quantities (10 units @ \$50/unit)	\$500
From purchases (5 units @ \$53/unit)	265
Excess shipment (1 unit @ \$53/unit)	53
Total cost of sales (16 units)	\$818

The system will generate the following transaction entries to increase the cost of sales and decrease the inventory upon shipment of 16 units of Item# A:

Debit: Cost of Sales	\$818	
Credit: Inventory		\$818
To record cost of sales computed as follows:		
10 units @ \$50/unit	\$500	(beginning quantities cost)
5 units @ \$53/unit	265	(last received cost)
1 unit @ \$53/unit	53	(last received cost)
Total Cost of Sales	\$818	

**Note:** The computation of the cost of sales for the excess unit shipped is based on the last received cost of \$53.

Assuming that you purchase additional 12 units of Item # A at \$45 per unit, the system will generate the following transaction entries:

Debit: Inventory	\$540	
Credit: Accrued Received Goods Liability		\$540
To record the receipt of inventory computed as follows: 12 units @ \$45/unit		

Debit: Inventory	\$8	
Credit: Cost Adjustments		\$8
To record the cost adjustment for the excess shipment of one (1) unit computed as follows:		

Cost of Sales should be	\$45	(purchase cost)
Cost of Sales per record	<u>53</u>	(last received cost)
Cost Variance	\$8	(Cost of sales is overstated)

**Note:** The system records an adjustment of \$8 to recognize the cost variance for the one (1) unit that was shipped in excess of the on-hand quantity. The system records a debit to the Inventory GL Account ID and a credit to the Cost Adjustment GL Account ID.

The foregoing transactions and accounting entries have the following effects on the Inventory GL Account ID balance and inventory item balance:

Inventory – Item # A	Quantity	Unit Cost	Total
Beginning Balance	10	\$50	\$500
Add: Purchases	<u>5</u>	\$53	<u>\$265</u>
Subtotal	15		\$765
Less: Shipment	(15)	\$51 (average)	(\$765)
	<u>(1)</u>	\$53 (last received cost)	<u>(53)</u>
Total Shipment Balance	(1)		(\$53)
Add: Purchases	12	\$45	\$540
Add (Less): Cost Adjustment			<u>\$8</u>
Adjusted Ending Balance	11	\$45	\$495

### 3. Last-In, First-Out (LIFO) Cost Method

The Last-In, First-Out (LIFO) method is based on the assumption that the units most recently received are sold first thus the latest costs of the specific item should be charged to cost of sales. Consequently, inventory is stated at the earliest cost. Assuming that the LIFO method is used in costing Item # A, the system will compute the cost of sales for the shipment of the 16 units as follows:

From purchases (5 units @ \$53/unit)	\$265
From beginning quantities (10 units @ \$50/unit)	500
Excess shipment (1 unit @ \$50/unit)	50
Total cost of sales (16 units)	\$815

The system will generate the following transaction entries to increase the cost of sales and decrease the inventory upon shipment of 16 units of Item# A:

Debit: Cost of Sales	\$815	
Credit: Inventory		\$815
To record cost of sales computed as follows:		
5 units @ \$53/unit	\$265	(last received cost)
10 units @ \$50/unit	500	(beginning quantities cost)
1 unit @ \$50/unit	<u>50</u>	(earliest cost)
Total Cost of Sales	\$815	

**Note:** The computation of the cost of sales for the excess unit shipped is based on the earliest cost (i.e. beginning quantities cost) of \$50.

Assuming that you purchase additional 12 units of Item # A at \$45 per unit, the system will generate the following transaction entries:

Debit: Inventory	\$540	
Credit: Accrued Received Goods Liability		\$540
To record the receipt of inventory computed as follows: 12 units @ \$45/unit		

Debit: Inventory	\$5	
Credit: Cost Adjustments		\$5
To record the cost adjustment for the excess shipment of one (1) unit computed as follows:		
Cost of Sales should be	\$45	(purchase cost)
Cost of Sales per record	50	(earliest cost)
Cost Variance	\$5	(Cost of sales is overstated)

**Note:** The system records an adjustment of \$5 to recognize the cost variance for the one (1) unit that was shipped in excess of on-hand quantity. The system records a debit to the Inventory GL Account ID and a credit to the Cost Adjustment GL Account ID.

The foregoing transactions and accounting entries have the following effects on the Inventory GL Account ID balance and inventory item balance:

Inventory – Item # A	Quantity	Unit Cost	Total
Beginning Balance	10	\$50	\$500
Add: Purchases	5	\$53	\$265
Subtotal	15		\$765
Less: Shipment	(15)	\$51 (average)	(\$765)
	(1)	\$50 (earliest cost)	(50)
Total Shipment	(16)		(\$815)
Balance	(1)		(\$50)
Add: Purchases	12	\$45	\$540
Add (Less): Cost Adjustment			\$5
Adjusted Ending Balance	11	\$45	\$495

As the preceding illustrations have shown, AccountMate is designed to take the necessary measures to ensure that the inventory item balances (quantities and costs) will match the Inventory GL Account ID balance. To ensure that the adjustments correctly update the cost of sales, we suggest that you assign to the Cost Adjustments field in the GL Accounts tab the same GL Account ID that you assign to the Cost of Goods Sold in your Revenue Codes. If this account varies for each Revenue Code, you can use a separate GL Account ID that you can track and which balance you can re-allocate to the corresponding Cost of Goods Sold accounts at the end of the period. You can use the Inventory Transaction Log or the Inventory Adjustment Report to facilitate re-allocation of the Cost Adjustment account balance to the proper Cost of Goods Sold accounts.

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