

Understanding the Relationship Among Inventory Lots, Usage, & Transactions

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This guide explains inventory lots, inventory usage, and inventory transactions. It is intended for advanced users.

These three records and modules interact to help you manage your inventory and [calculate COGS](#) (<https://aace6.knowledgeowl.com/help/understanding-the-cogs-reconciliation-process>):

- [Inventory Lots](https://aace6.knowledgeowl.com/help/understanding-the-relationship-among-inventory-lots-usage-and-transactions#OverviewofInventoryLots) (<https://aace6.knowledgeowl.com/help/understanding-the-relationship-among-inventory-lots-usage-and-transactions#OverviewofInventoryLots>) — Represent the source of goods (i.e. items received or produced)
- [Inventory Usage](https://aace6.knowledgeowl.com/help/understanding-the-relationship-among-inventory-lots-usage-and-transactions#OverviewofInventoryUsage) (<https://aace6.knowledgeowl.com/help/understanding-the-relationship-among-inventory-lots-usage-and-transactions#OverviewofInventoryUsage>) — Represent the use of goods (i.e. items shipped to customers or used in production)
- [Inventory Transactions](https://aace6.knowledgeowl.com/help/understanding-the-relationship-among-inventory-lots-usage-and-transactions#OverviewofInventoryTransactions) (<https://aace6.knowledgeowl.com/help/understanding-the-relationship-among-inventory-lots-usage-and-transactions#OverviewofInventoryTransactions>) — Track the changes to the quantity balances of inventoried line items

Each of these modules is explained below.

Note: Inventory lots are related to, but distinct from, [manufacturer lot tracking](#) (<https://aace6.knowledgeowl.com/help/understanding-inventory-tracking-with-manufacturer-lots>).

Overview of Inventory Lots

aACE uses inventory lot records to track inventoried and inventoried assembly [line item codes](#) (<https://aace6.knowledgeowl.com/help/overview-of-line-item-codes#LICoffices>). Navigate from Main Menu > Inventory > Inventory Lots.

Lot	Code	Transaction ID	Date	Office	Ref #(s)	Lot Qty	Lot Value	Curr Qty	~Curr Value	Accr Value	Status
> 60000	> TB-LIT102	> PO-60003	07/18/22	AI		0	0.00	0	0.00	0.00	OPEN
> 60001	> TB-SCI4	> PO-60003	07/18/22	AI		0	0.00	0	0.00	0.00	OPEN
> 60003	> TB-SCI4	> PO-60008	07/18/22	AI		50	7,499.50	50	7,499.50	0.00	OPEN
> 60004	> TB-SCI4	> PO-60013	07/18/22	AI		0	7,499.50	0	0.00	-7,499.50	OPEN
> 60005	> TB-LIT6	> PO-60030	07/19/22	AI		50	8,250.00	50	8,250.00	0.00	OPEN
> 60006	> TB-HIST	> PO-60030	07/19/22	AI		50	4,499.50	50	4,499.50	0.00	OPEN
> 60007	> SW-HIS2	> PO-60009	07/18/22	AI	Order #60016	50	998.50	50	998.50	0.00	OPEN
> 60008	> SW-HIS1	> PO-60009	07/18/22	AI	Order #60016	50	998.50	50	998.50	0.00	OPEN
> 60009	> TBLT-8C	> PO-60038	07/19/22	AI		0	0.00	0	0.00	0.00	OPEN
> 60015	> TM-INVTRY	> PO-60050	07/20/22	AI		0	0.00	0	0.00	0.00	OPEN
> 60019	> TM-INVTRY	> PO-60051	07/20/22	AI		0	0.00	0	0.00	0.00	OPEN
> 60024	> SE-B-G4	> PO-60073	07/20/22	AI		4	18.40	4	18.40	0.00	OPEN
> 60025	> SE-B-H	> PO-60073	07/20/22	AI		8	46.00	8	46.00	0.00	OPEN

Click on a specific inventory lot to display additional details:

Inventory Lot: 60000 | TB-LIT102 OPEN

Purchase Inventory Lot Notices Tasks Emails Docs

General Info Serialized Track by Mfr Lot

Trans ID >	Date	Office >	Code >	Code Description	Reference #(s)
PO-60003	07/18/22	AI	TB-LIT102	The Complete Works of Shakespeare	

Ordered / Purchased

	Quantity	Each	Value
Ordered	80	79.99	6,399.20
Purchased	0	0.00	0.00
Purchased Remaining	80		6,399.20

Accrued Inventory

	Quantity	Value
Received	0	0.00
Purchased	0	0.00
Accrued Inventory	0	0.00

Ordered / Received

	Quantity	Value
Ordered	80	6,399.20
Received	0	0.00
Received Remaining	80	6,399.20

Current Inventory

	Quantity	Value
Received	0	0.00
Used	0	0.00
Current Inventory	0	0.00

Inventory COGS *Note: The Est Unit Cost is used until the Act Unit Cost is final (i.e. the related PO is closed).*

Usage ID	Trans ID	Trans Date	Reference #(s)	Quantity	Est Unit Cost	Total Cost
				Used	0	0.00

Creating an inventory lot record can be triggered from various modules:

- Purchase Orders module – Opening a PO
Note: The lot's quantity is not populated until the shipment is received. The lot's value is initially an estimate, which is finalized when the purchase is opened.
- Orders module – Through the Management tab > Procurement or Fulfillment tabs of an order by creating a PO or Job
- Jobs module
- Inventory Adjustments module – Posting an Assembly, Division, or Beginning Balance

adjustment

Overview of Inventory Usage

Navigate from Main Menu > Inventory > Inventory Usage.

Usage	Code	Transaction ID	Date	Office	Order	Ref #(s)	Quantity	~ COGS	Unallocated	Accrued COGS	Status
> 60000	> 16G-W	> SHIP-60000	07/18/22	AI	> 60007	Order #60007	1,000	1,990.00	1,000	1,990.00	OPEN
> 60002	> 16G-W	> SHIP-60000	07/18/22	AI	> 60010	Order #60010	100	199.00	100	199.00	OPEN
> 60003	> TM-FRNCH3	> SHIP-60002	07/18/22	AI	> 60011	Order #60011	50	3,749.50	50	3,749.50	OPEN
> 60009	> TB-LIT102	> SHIP-60021	07/20/22	AI	> 60029	Order #60029	20	1,599.80	10	799.90	OPEN
> 60014	> PEN-SPF	> SHIP-60029	07/20/22	AI	> 60042	Order #60042	0	0.00	-20	-6,560.00	OPEN
> 60030	> TM-FRNCH3	> INVTRYADJ-60001	07/21/22				75	5,624.25	75	5,624.25	OPEN
> 60031	> TM-FRNCH3	> INVTRYADJ-60002	07/21/22				-125	-9,373.75	-125	-9,373.75	OPEN
> 60032	> TB-FRNCH3	> SHIP-60062	07/22/22	AI	> 60059	Order #60059	1	33.00	1	33.00	OPEN
> 60033	> TB-FRNCH3	> SHIP-60065	07/22/22	AI	> 60059	Order #60059	14	462.00	14	462.00	OPEN
> 60034	> TB-HIST	> SHIP-60065	07/22/22	AI	> 60059	Order #60059	1	89.99	1	89.99	OPEN
> 60035	> TB-SCI4	> SHIP-60070	07/22/22	AI	> 60062	Order #60062	15	674.85	15	674.85	OPEN

Click on a specific usage record to review details:

Inventory Usage: 60009 | TB-LIT102 OPEN

Inventory Usage Details

General Info

Trans ID > SHIP-60021 | Date > 07/20/22 | Office > aACME Education Solutions, Inc. (AI) | Department > aACME, Inc. (AI)

Code > TB-LIT102 | Code Description > The Complete Works of Shakespeare

Order > 60029 | Reference #(s) > Released to general inventory | Order #60029

COGS Allocation

Inventory Used	20
Allocated	10
Unallocated	10
Est Unit Cost	79.99
Estimated Accrued COGS	799.90
Actual COGS	799.90
Total COGS	1,599.80
Average Unit Cost	79.99

Inventory COGS

Lot ID	Trans ID	Trans Date	Reference #(s)	Quantity	Unit Cost	Total Cost
> 60002	> PO-60008	07/18/22		10	79.99	799.90

Allocated **10** **799.90**

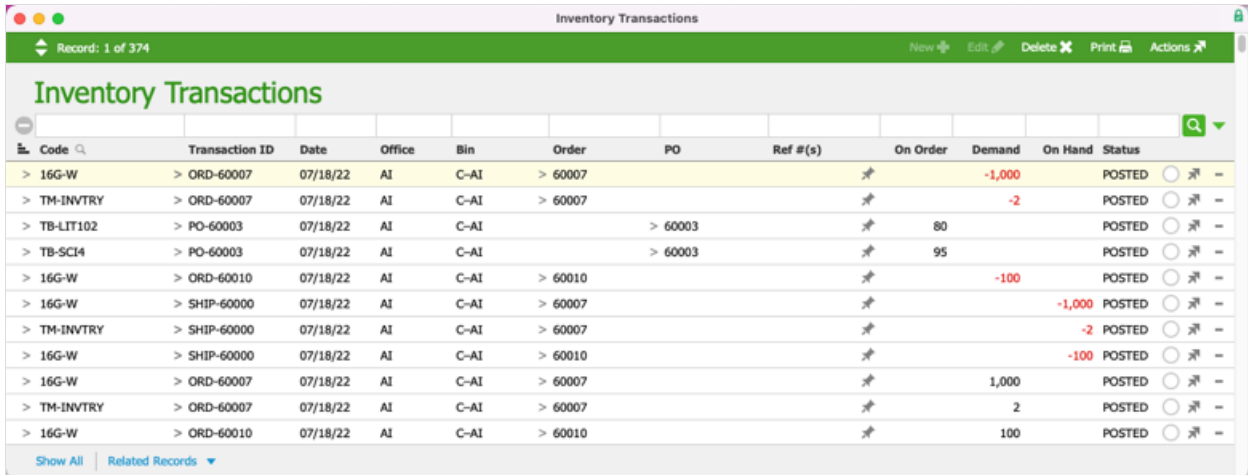
Inventory usage records are created from events in various modules, such as Jobs, Shipping Log, and Inventory Adjustments.

Inventory usage records are helpful for identifying and [resolving unallocated inventory](#)

[Usage](https://aace6.knowledgeowl.com/help/using-inventory-adjustments-to-resolve-unallocated-inventory-usage/) (https://aace6.knowledgeowl.com/help/using-inventory-adjustments-to-resolve-unallocated-inventory-usage).

Overview of Inventory Transactions

Navigate from Main Menu > Inventory > Inventory Transactions.



The screenshot shows a software window titled "Inventory Transactions" with a green header bar. Below the header, there is a search bar and a table of transaction records. The table has columns for Code, Transaction ID, Date, Office, Bin, Order, PO, Ref #(s), On Order, Demand, On Hand, and Status. The records show various transactions with their respective values and statuses.

Code	Transaction ID	Date	Office	Bin	Order	PO	Ref #(s)	On Order	Demand	On Hand	Status
> 16G-W	> ORD-60007	07/18/22	AI	C-AI	> 60007				-1,000		POSTED
> TM-INVTRY	> ORD-60007	07/18/22	AI	C-AI	> 60007				-2		POSTED
> TB-LIT102	> PO-60003	07/18/22	AI	C-AI		> 60003		80			POSTED
> TB-SCI4	> PO-60003	07/18/22	AI	C-AI		> 60003		95			POSTED
> 16G-W	> ORD-60010	07/18/22	AI	C-AI	> 60010				-100		POSTED
> 16G-W	> SHIP-60000	07/18/22	AI	C-AI	> 60007					-1,000	POSTED
> TM-INVTRY	> SHIP-60000	07/18/22	AI	C-AI	> 60007					-2	POSTED
> 16G-W	> SHIP-60000	07/18/22	AI	C-AI	> 60010				-100		POSTED
> 16G-W	> ORD-60007	07/18/22	AI	C-AI	> 60007				1,000		POSTED
> TM-INVTRY	> ORD-60007	07/18/22	AI	C-AI	> 60007				2		POSTED
> 16G-W	> ORD-60010	07/18/22	AI	C-AI	> 60010					100	POSTED

Inventory transaction records are calculations that track the changes or 'movement' in inventory balances. This module is akin to a general ledger for inventory balances.

The Inventory Transactions module can help you track the various records that change inventory quantities:

- Purchase Orders – Opening a PO increases the On Order count for each line item code (LIC) on the PO. Receiving the incoming shipment reverses this count.
- Orders – Opening an order posts a negative on the Demand count for each LIC on the order. Shipping the outgoing shipment reverses this count.
- Shipments – Receiving an incoming shipment increases the On Hand count for each LIC. Shipping the outgoing shipment reverses this count.
Note: As mentioned above, incoming shipments also reverse the On Order count for PO's while outgoing shipments reverse the Demand count for orders.
- Inventory adjustments – Positive adjustments increase the On Hand count for each LIC. Negative adjustments decrease this count.
- Jobs – May increase or decrease the count in On Order, Demand, or On Hand, depending on the specific tasks of the job.

Note: When you receive items that are tracked by manufacturer lot, each lot is recorded as a separate transaction. Also, when handling returns for lot-tracked inventory (and serialized inventory), the needed [inventory adjustments](https://aace6.knowledgeowl.com/help/handling-returns-and-inventory-adjustments-for-lot-tracked-and-serialized-items/) require additional details.

Understanding Inventory Quantity Values

In both the Inventory Lots and Inventory Usage modules, quantity values are naturally positive. In other words, “We received three units” would equate to an inventory lot record with a quantity of three. Likewise, “We used three units” would equate to an inventory usage record with a quantity of three.

In contrast, the Inventory Transactions module presents a positive quantity as an increase in the balance and a negative quantity as a decrease in the balance. The On Hand values from inventory transaction records are added together to determine the current total balance. With that in mind, an inventory *usage* record with a quantity of three will have a corresponding inventory *transaction* with an On Hand quantity of negative three (i.e. the positive usage depletes three units of inventory).

The relationship between these three modules can be summarized with this equation:

$$\begin{array}{l} \text{Inventory Transactions} \\ \text{On Hand balance} \end{array} = \begin{array}{l} \text{Inventory Lot quantities} \\ \text{(source of goods)} \end{array} - \begin{array}{l} \text{Inventory Usage quantities} \\ \text{(use of goods)} \end{array}$$
