Understanding the Unit Cost Logic in the COGS Reconciliation Process

Last Modified on 09/06/2019 3:18 pm EDT

The unit cost value used by the COGS reconciliation process is affected by several factors. Understanding these details can help explain the results you see on various reports.

Open & Closed Purchase Orders

The status of the related PO affects the unit cost of an inventory lot due to the accrued inventory functionality: To maximize accuracy, aACE uses the <u>Accrued Inventory</u> account to manage the balancing credit for goods that are received, but not yet purchased. These accrued inventory calculations *must* use the related PO's Unit Cost, since there might not be a purchased value recorded yet or because the purchased value may change. Because the accrued inventory entries represent the value of the inventory lot on the GL, the accrued inventory and the inventory lot values *must* match. Therefore, the accrued inventory entry and the inventory lot calculations use the same unit cost.

When a PO is closed, any accruals generated by the PO are reversed. We can then determine the actual unit cost using this calculation:

```
(Purchased Value + Freight Value = <u>Landed</u>
<u>Cost</u>)
Received Quantity
```

The following screenshot shows an inventory lot while the related PO is open. The inventory lot's ~Current Value is calculated using the PO's Unit Cost, as noted by the bold highlighting in the Ordered / Purchased section, as well as the italicized note in the Inventory COGS section. This results in a total lot value of 15 * \$35.00 = \$525.00:

Purchase Invento	ry Lot						Notices 😣	Emails 🔀	Docs
eneral Info							Serializ	ad Track b	v Mfr Lot
rans ID >	Date	Office >	Line Item (Code >	Code Description	Re	eference #(s)	ind index of	9 1-111 2.00
0-50014	08/23/19	AI	HP300T		HP 300 Series Toner Cartridge				
rdered / Purchased			\frown		Ordered / Received				
fuercu / Furenuscu		Quantity	Each	Value	ondered y necerved	Quantity	/		Value
Ordered		15	35.00	525.00	Ordered	15	5		525.00
Purchased		15	35.59	533.85	Received	15	5		525.00
Purchased Remaining		0	\bigcirc	0.00	Received Remaining	C)		0.00
ccrued Inventory			-		Current Inventory				
		Quantity		Value		Quantity	/		Valu
Received		15		525.00	Received	15	5		525.00
Purchased		15		533.85	Used	C)		0.00
Accrued Inventory		0		0.00	Current Inventory	15	5		525.00
ventory COGS					Note: The Est Unit Cos	t is used until the Act U	nit Cost is final (i.e.	the related PO is	s closed).
Usage ID T	rans ID	Trans Dat	e Reference #((s)		Quantity	Est Unit Ges	Te	stal Cost

The next screenshot shows the unit cost change when the related PO is closed. The inventory lot's ~Current Value is then calculated using the actual cost from the purchase, as noted by the bold highlighting in the Ordered / Purchased section (and the italicized note being removed). This results in an updated total lot value of 15 * \$35.59 = \$533.85:

	_	_	_	Inve	ntory Lots		
Record: 5 of 7						New 🛖 Edit 🖋 D	elete 💢 🛛 Print 📇 Action
Inventory	Lot: HP30	00T (5017	6)				OPEN
Purchase Inven	ntory Lot					Notices	🥲 Emails 🞽 Doc
eneral Info						s	erialized Track by Mfr Lot
Frans ID >	Date	Office >	Line Item	Code >	Code Description	Reference #(s)	
PO-50014	08/23/19	AI	HP300T		HP 300 Series Toner Cartridge		
Ordered / Purchase	ed		\frown		Ordered / Received		
		Quantity	Each	Value		Quantity	Valu
Ordered		15	35.00	525.00	Ordered	15	525.0
Purchased		15	35.59	533.85	Received	15	533.8
Purchased Remainin	ng	0	\bigcirc	0.00	Received Remaining	0	0.0
ccrued Inventory					Current Inventory		
		Quantity		Value		Quantity	Valu
Received		15		533.85	Received	15	533.8
Purchased		15		533.85	Used	0	0.0
Accrued Inventory		0		0.00	Current Inventory	15	533.8
nventory COGS							
Usage ID	Trans ID	Trans Dat	e Reference #	(S)		Quantity Act Uni	t Cost Total Cost
					Used	0	0.00

While the PO for this product is open, the inventory lot value will be calculated using the PO's estimated cost (i.e. a total of \$525.00); however, the value in the GL will still be

calculated with the purchase cost (i.e. a total of \$533.85). The difference between these costs (\$8.85) will display as a variance on the Inventory Lot / GL Reconciliation Report used for <u>reconciling inventory with the GL</u> (see below). When the PO is closed, this variance will be eliminated.

• •	Inventory Lot / GL Re	econciliation by Ty	/pe, Category			
< > 1 1 Total						
Pages	Save as Excel Save as PDF	Print Page	Setup			
vout: CAT: Invenciliation 🗸 View As:	🗖 🗮 🖩 Exit Preview					
Inventory Let/Cl	Deconciliation k			- 5 00/0	2/2040	
Inventory Lot / GL	Reconciliation t	ру туре, С	ode as	OT U8/2	3/2019	
Description	Line Item Code	Lot Value	GL Value	Variance	True GL Var*	Accr'd COGS
Toner		525.00	533.85	(8.85)	0.00	0.00
HP 300 Series Toner Cartridge	HP300T	525.00	533.85	(8.85)	0.00	0.00
Grand Total		525.00	533.85	(8.85)	0.00	0.00
				\sim		

Impact of Unit Cost Changes on COGS Entries

Changes to unit cost values can result in multiple COGS entries for the related inventory lots. For example, an open PO uses the estimated unit cost and a closed PO uses the actual unit cost (as described above). If these two costs are different, the COGS entries while the PO is open will show the estimated unit cost. When the PO is closed, the COGS entries will be updated to show the actual unit cost and aACE will generate another COGS entry to account for the difference.

Suppose a customer buys units of a certain product. The goods are sourced from an inventory lot associated with a PO that is open. When the COGS reconciliation process runs, it generates an entry calculated using the estimated unit cost: 5 * \$1.035 = \$5.18.

Record: 1 of 1				niver	iory Lord	N	lew 🖶	Edit 🖋	Delete 🗙	Print 🖶	Actions ;
Inventory	Lot: P-He	x (50210)								C	
Purchase Inver	ntory Lot							Notic	es 🕕 🛛 I	Emails <mark></mark>	Docs
General Info									Serialized	Track b	y Mfr Lot
Trans ID >	Date	Office >	Line Item Code	>	Code Description		Re	ference #(s)		
PO-50023	09/03/19	AI	P-Hex		Hexagon Paper Tablet - 50 s	heets					
Ordered / Purchas	ed				Ordered / Received						
		Quantity	Each	Value			Quantity				Value
Ordered		10 1	.035	10.35	Ordered		10				10.35
Purchased		10	1.50	15.00	Received		10				10.35
Purchased Remainin	ng	0		0.00	Received Remaining		0				0.00
Accrued Inventory					Current Inventory						
		Quantity		Value			Quantity				Value
Received		10		10.35	Received		10				10.35
Purchased		10		15.00	Used		5				5.18
Accrued Inventory		0		0.00	Current Inventory		5				5.18
Inventory COGS					Note: The Est L	Init Cost is used until ti	he Act U	nit Cost is f	inal (i.e. the	related PO is	s closed).
Usage ID	Trans ID	Trans Date	Reference #(s)			0	uantity	Est	Unit Cost	Т	otal Cost
> 50035 >	SHIP-50052	9/5/2019	Ord #50022			\subset	5		1.035		5.18
						Used	5				5.18
•											

When the related PO is closed, the actual cost is used to re-calculate the COGS entry: 5 * 1.50 = 7.50.

•				Inve	ntory Lots					
Record: 1 of 1						Nev	🖶 Edit (👂 🛛 Delete 🗙	Print 🖶	Actions
Inventory	Lot: P-He	x (50210)							C	OPEN
Purchase Inver	ntory Lot						N	otices !	Emails 🚩	Docs
General Info								Serialized	Track b	y Mfr Lot
Trans ID >	Date	Office >	Line Item Cod	e >	Code Description		Reference	e #(s)		
PO-50023	09/03/19	AI	P-Hex		Hexagon Paper Tablet - 50 sh	eets				
Ordered / Purchas	ed		\frown		Ordered / Received					
		Quantity	Each	Value		Qu	antity			Value
Ordered		10	1.035	10.35	Ordered		10			10.35
Purchased		10	1.50	15.00	Received		10			15.00
Purchased Remainin	ng	0		0.00	Received Remaining		0			0.00
Accrued Inventory					Current Inventory					
		Quantity		Value		Qu	antity			Valu
Received		10		15.00	Received		10			15.00
Purchased		10		15.00	Used		5			7.50
Accrued Inventory		0		0.00	Current Inventory		5			7.50
nventory COGS										
Usage ID	Trans ID	Trans Date	Reference #(s)			Quar	tity	Act Unit Cost	Т	otal Cost
> 50035 >	SHIP-50052	9/5/2019	Ord #50022				5	1.50		7.50
						Used	5			7.50
a *										1

When the COGS reconciliation process runs again, it generates an entry for the difference between the initial and the updated Total Cost (i.e. \$7.50 – \$5.18 = \$2.32). In the general ledger, you can review the two COGS entries: one for the initial COGS value (\$5.18) and another for the difference (\$2.32):

						Genera	l Ledger								_ _
🔶 Record:	3 of 4												Print 🖶	Actions 🖈	
Gene		ortec	l by Account 1	D								AI O	ffice	Only	
0						p-hex								Q	•
🖿 Account	Transaction ID		Date	Office	Dept	Line Item Code $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	Order	PO		Debit	Credit	Debit Balance	Status		
10011 Text	book Inventory														
> 10011	> GJ-50034	*	09/05/19	AI		> P-Hex	> 50022				5.18	5.18 CR	OPEN	۳ 🔴	-
> 10011	> GJ-50035	*	09/05/19	AI		> P-Hex	> 50022				2.32	2.32 CR	OPEN	۳, 🔴	-
10011 Textboo	ok Inventory										7.50	7.50 CR			
5001 Cost o	f Sales									\frown					
> <u>5001</u>	> GJ-50034	*	09/05/19	AI	AI	> P-Hex	> 50022			5.18		5.18	OPEN	۳, 🔴	-
> 5001	> GJ-50035	*	09/05/19	AI	AI	> P-Hex	> 50022			2.32		2.32	OPEN	اتر 🔴	-
5001 Cost of S	ales									7.50		7.50			
List Totals										7.50	7.50	0.00			
Show All	Constrain to B/S Accounts	s	Constrain to I	I/S Accounts	Constrain	to Inventoried Items	Omit Inventor	ied Items	Omit Auto-O	Generated GJ E	Entries Rela	ited Records 🔻			

Rounding Logic

Unit costs for products in aACE can extend up to six decimal places; however, general ledger (GL) entries are limited to two decimal places. When unit costs with extended decimal places are used in calculations that end up on the GL, they must be rounded to the second decimal place. By default, aACE rounds up. This can cause slight variations between inventory lot values and inventory GL account values.

Example of Rounded Calculations

Suppose a product had a unit cost of \$1.035. Purchasing ten units would generate an inventory lot valued at \$10.35, as shown in this screenshot:

•				Inver	ntory Lots				
Record: 8 of 8						New 🖶 🛛 E	dit 🖋 🛛 Delete 🗄	🗶 🛛 Print 🖶	Actions
Inventory l	.ot: P-Gr	aph (5020	7)					(OPEN
Purchase Invent	ory Lot						Notices 🕒	Emails 🔀	Docs
General Info							Serialize	ed 📃 Track b	y Mfr Lot
Trans ID >	Date	Office >	Line Item Co	de >	Code Description	Refer	ence #(s)		
PO-50020	09/02/19	AI	P-Graph		Graph Paper Tablet - 50 sheets				
Ordered / Purchased	d		\frown		Ordered / Received				
		Quantity	Each	Value		Quantity			Value
Ordered		10	1.035	10.35	Ordered	10			10.35
Purchased		10	1.035	10.35	Received	10			10.35
Purchased Remaining		0	\bigcirc	0.00	Received Remaining	0			0.00
Accrued Inventory					Current Inventory				\frown
		Quantity		Value		Quantity			Value
Received		10		10.35	Received	10			10.35
Purchased		10		10.35	Used	0			0.00
Accrued Inventory		0		0.00	Current Inventory	10			10.35
inventory COGS									\smile
Usage ID	Trans ID	Trans Date	Reference #(s)			Quantity	Act Unit Cost	т	otal Cost
					Used	0			0.00

If we sold all ten units at one time, the COGS value would match the inventory value:

Notices () Purchase Inventory Lot Notices () General Info Serialized Trans ID > Date Office > Line Item Code > Code Description Reference #(s) Ordered / Purchased Ordered / Received Ordered / Received Quantity Current / Received Current / Received Quantity Current Inventory Ordered / Received 10 Received Quantity Current Inventory Ordered / Received 10 Current Inventory Quantity Current Inventory Quantity Value Quantity Quantity Value Quantity Received 10 Notices () Quantity Quantity Quantity Quantity Value Quantity Quantity Quantity Quantity <th></th> <th></th> <th></th> <th></th> <th></th> <th>07)</th> <th>anh (502)</th> <th>ot P-Gr</th> <th>Inventory</th>						07)	anh (502)	ot P-Gr	Inventory
Notices ● Serialized General Info Serialized Trans ID > Date Office > Line Item Code > Code Description Reference #(s) PO-50020 Ø/02/19 AI Pre-Graph Code Description Reference #(s) Ordered / Purchased Ordered / Received Order	CLUSED					07)	upii (502)		inventory
General Info Date Office > Line Item Code > Code Description Reference #(s) Po-50020 09/02/19 AI P-Graph Graph Paper Tablet - 50 sheets Preforeme #(s) Ordered / Purchased 10 1.035 10.35 10.35 10.35 Purchased 10 1.035 10.35 10.35 10.35 Purchased Remaining 0 0.00 Received Remaining 0 Accrued Inventory 0 0.00 Current Inventory 0 Purchased 10 10.35 10.35 10.35 Purchased 10 10.35 10.35 10.35 Purchased Inventory 0 0.00 Current Inventory 0 Soo22 SHIP-50035 9/2/2019 Ord #50021 10 1.035	Emails 🞽 🛛 Doce	Notices 😣	Notic					ory Lot	Purchase Invent
Trans ID > Date Office > Line Item Code > Code Description Reference #(s) P0-50020 09/02/19 AI P-Graph Graph Paper Tablet - 50 sheets Image: Code Description Graph Paper Tablet - 50 sheets Image: Code Description Graph Paper Tablet - 50 sheets Image: Code Description Graph Paper Tablet - 50 sheets Image: Code Description Graph Paper Tablet - 50 sheets Graper Paper Paper Paper Paper	Track by Mfr Lot	Serialized							General Info
Po-50020 09/02/19 AI P-Graph Graph Paper Tablet - 50 sheets Ordered / Purchased Quantity Each Value Ordered / Received Quantity Quantity Ordered / Purchased 10 1.035 10.35 0.35 Ordered / Received Quantity Quantity Quantity Ordered / Received 0 Purchased Remaining 0		Reference #(s)	Reference #	Code Description	ode >	Line Item C	Office >	Date	Trans ID >
Ordered / Purchased Quantity Each Value Quantity Ordered 10 10.35 Ordered 10 10.35 Ordered 10 Inchased 10 Inchased 10 Inchased 0 Received 10 Received 10 Inchased Quantity Value Quantity Quantity Quantity Quantity Quantity Inchased 10 10.35 Inchased 10 10.35 Inchased 10 Inchased 10 Inchased 10 Inchased 10 Inchased Inchased Inchased Inchased Reference #(s) Quantity Act Unit Cost Story Value ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost 10 1.035 Story 2 SHIP-S0035 9/2/2019 Ord #50021 10 1.035 10 1.035				Graph Paper Tablet - 50 sheets		P-Graph	AI	09/02/19	PO-50020
Quantity Each Value Quantity Current Inventory Ordered 10 1.035 10.35 10.35 Purchased 10 1.035 10.35 Received 10 Purchased Remaining 0 0.00 Received Remaining 0 0 Accrued Inventory Quantity Value Quantity Quantity Quantity Received 10 10.35 Received 10 10 Purchased 10 10.35 Received 10 10 Accrued Inventory 0 0.00 Current Inventory 0 0 Itsele ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost Value St0022 SHIP-S0035 9/2/2019 Ord #50021 10 1.035				Ordered / Received				н	Ordered / Purchase
Ordered 10 1.035 10.35 0.75 Ordered 10 1.035 10.35 0.75 Received 10 10 10 10.35 10.35 Received 10 <th< td=""><td>Valur</td><td>lity</td><td>Quantity</td><td></td><td>Value</td><td>Each</td><td>Quantity</td><td></td><td>ordered y rurendse</td></th<>	Valur	lity	Quantity		Value	Each	Quantity		ordered y rurendse
Purchased 10 1.035 10.35 Received 10 Purchased Remaining 0 0.000 Received Remaining 0 Accrued Inventory Quantity Value Quantity Act Unit Cost Quantity	10.35	10	10	Ordered	10.35	1.035	10		Ordered
Purchased Remaining 0 0.00 Received Remaining 0 Accrued Inventory Quantity Value Current Inventory Quantity Act Unit Cost Status Quantity Act Unit Cost Status Quantity Act Unit Cost Status Status Act Unit Cost Status	10.35	10	10	Received	10.35	1.035	10		Purchased
Accrued Inventory Quantity Value Quantity Act Unit Cost Purchased 10 Trans Date Reference #(s) Quantity Act Unit Cost	0.00	0	0	Received Remaining	0.00		0		Purchased Remaining
Quantity Value Quantity Value Received 10 10.35 Received 10 10.35 Purchased 10 10.35 Used 10 Used 10 Accrued Inventory 0 0.00 Current Inventory 0 Current Inventory 0 Usage ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost Usage ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost Usage ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost Usage ID Trans ID Trans Date Reference #(s) Inventory 10 1.035				Current Inventory					Accrued Inventory
Received 10 10.35 Received 10 Purchased 10 10.35 Used 10 Accrued Inventory 0 0.00 Current Inventory 0 Inventory COGS Current Inventory 0 Usage ID Trans ID Trans Date Reference #(s) Cuality Act Unit Cost 5002 SHIP-50035 9/2/2019 Ord #50021 10 1.035	Value	tity	Quantity		Value		Quantity		
Purchased 10 10.35 Used 10 Accrued Inventory 0 0.00 Current Inventory 0 Inventory COGs • • • • • • • • • • • • • • • • • • •	10.35	10	10	Received	10.35		10		Received
Accrued Inventory 0 0.00 Current Inventory 0 Inventory COGS Image ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost Usage ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost 5 50022 SHIP-50035 9/2/2019 Ord #50021 10 1.035	10.35	10	10	Used	10.35		10		Purchased
Inventory COGS Trans ID Trans Date Reference #(s) Quantity Act Unit Cost Usage ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost > 50022 > SHIP-50035 9/2/2019 Ord #50021 10 1.035	0.00	0	0	Current Inventory	0.00		0		Accrued Inventory
Usage ID Trans ID Trans Date Reference #(s) Quantity Act Unit Cost > 50022 > SHIP-50035 9/2/2019 Ord #50021 10 1.035	\frown			•					Inventory COGS
> 50022 > SHIP-50035 9/2/2019 Ord #50021 10 1.035	Total Cost	Act Unit Cost	Quantity Act		i)	ate Reference #(s	Trans Da	Trans ID	Usage ID
	10.35	1.035	10			19 Ord #50021	9/2/20	SHIP-50035	> 50022 >
	\checkmark								
Used 10	10.3)	sed 10	Use					

However, with a similar inventory lot (i.e. 10 units at 1.035 each), if we sold the units one by one, each order would calculate at 1 * 1.035 for a rounded price of 1.04, as shown in this screenshot:

	_	_	_	Inve	ntory Lots	_	_	_
Record: 10 of 10						New =	🕨 Edit 🖋 🛛 Delete 🕽	Print Actions
Inventory	Lot: P-Gr	aph (50209	3)					
invencory		apii (5020.	-)					CLOSED
Purchase Inve	ntory Lot						Notices 😣	Emails M Docs
I X								
Seneral Info	Data	Office >	Line Item Code		Code Description		Serialize	d Track by Mfr Lot
PO-50022	09/02/19	AI	P-Graph	~	Graph Paper Tablet - 50 sheets		Reference #(a)	
Ordered / Purchas	sed				Ordered / Received			
		Quantity	Each	Value		Quan	tity	Value
Ordered		10	1.035	10.35	Ordered		10	10.3
Purchased		10	1.035	10.35	Received		10	10.3
Purchased Remaini	ng	0		0.00	Received Remaining		0	0.0
ccrued Inventory	,				Current Inventory			
	,	Quantity		Value		Ouan	tity	Value
Received		10		10.35	Received		10	10.3
Purchased		10		10.35	Used		10	10.3
Accrued Inventory		0		0.00	Current Inventory		0	0.0
nventory COGS								\frown
Usage ID	Trans ID	Trans Date	Reference #(s)			Quantit	y Act Unit Cost	Total Cost
> 50025	> SHIP-50040	9/2/2019	Ord #50024				1 1.035	1.04
> 50026	> SHIP-50041	9/2/2019	Ord #50025				1 1.035	1.04
> 50027	> SHIP-50042	9/2/2019	Ord #50026				1 1.035	1.04
> 50028	> SHIP-50043	9/2/2019	Ord #50027				1 1.035	1.04
> 50029	> SHIP-50044	9/2/2019	Ord #50028				1 1.035	1.04
> 50030	> SHIP-50045	9/2/2019	Ord #50029				1 1.035	1.04
> 50031	> SHIP-50046	9/2/2019	Ord #50030				1 1.035	1.04
> 50032	> SHIP-50047	9/2/2019	Ord #50031				1 1.035	1.04
> 50033	> SHIP-50048	9/2/2019	Ord #50032				1 1.035	1.04
> 50034	> SHIP-50049	9/2/2019	Ord #50033				1 1.035	1.04
						ad 4	•	10.77
					Us	eu 10	,	10.35

In the preceding screenshot, the total in the Inventory COGS section (highlighted with the blue box) is calculated using Quantity Purchased * Unit Cost (10 * 1.035 = \$10.35). This is *not* the sum of the COGS entries (highlighted with the green oval). Manually totaling the COGS entries (10 * \$1.04) gives a total COGS value of \$10.40, which is a .05 variance from the inventory lot value. This .05 variance displays on the Inventory Lot / GL Reconciliation Report:

Total				4			
Pages	Save as Excel Save as PDF	Prir	nt Pag	ge Setup			
: CAT: Invenciliation 🗸 View As:	🖿 🗮 🖩 🛛 Exit Preview						
Inventory Lot / GL	Reconciliation b	y Ty	pe, (Code as	of 09/0)2/2019	
Description	Line Item Code	Lot	Value	GL Value	Variance	True GL Var*	Accr'd COGS
Textbook			0.00	(0.05)	0.05	0.05	0.00
Graph Paper Tablet - 50 sheets	P-Graph		0.00	(0.05)	0.05	0.05	0.00
Grand Total		<	0.00	(0.05)	0.05	0.05	0.00

When <u>auditing inventory</u>, you can generally prevent these small rounding differences

from displaying on the report by setting the Omit Variance value to a small value (i.e. \$1.00).

Manually Eliminating Rounding Variances

Rounding variances are not errors, per se. They are a natural result of calculations using numbers with more than two decimal places.

However, you can use a general journal entry to remove rounding variances if needed (e.g. to generate an Inventory Lot / GL Reconciliation report that shows zero variances or if the total value of the rounding variance reaches a level that necessitates it). Note: Only take this step if you are *certain* the variance is arising from rounding issues.

The GJ entry should include:

- 1. An entry item that credits the LIC's cost-of-sales account, increasing the account by the rounding variance value (i.e. so the GL Value will match the Lot Value on the report)
- 2. A balancing entry item that debits the LIC's inventory account

Be sure to specify the LIC on each line of the GJ entry and include descriptive notes about the change.