

This guide explains the **build process and cost fields** for QuickBooks Inventory Part items and Inventory Assembly items.

Create the Inventory Part

First, enable inventory management in QuickBooks. This is not set up by default, and it can be confusing to new users as the *item list* is displayed, even if not enabled.

Fro	m the QB ToolBar se	elect Edit > Prefe	rences.			Edit	
Sele	ect Items & Inventor	y from the Prefe	rences pick-list,	click Company Preference	s tab.	<u>U</u> ndo <u>R</u> evert	Ctrl+Z
Che sele	eck the <i>Inventory and</i> ections for the other	d purchase orders fields in this pref	s are active chec ference.	ck box. We recommend usir	ng the default	Cu <u>t</u> <u>C</u> opy <u>P</u> aste	Ctrl+X Ctrl+C Ctrl+V
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	Calendar	Inventory and pu	irchase orders are active.		Uala	<u>F</u> ind	Ctrl+F
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13	Desktop View	When calculating	Quantity Available for my	y inventory, deduct:	Default	Freierences	
%	Finance Charge	Quantity rese	rved for Pending Builds	Quantity on Sales Orders	1000000000		
<u>~</u>	General	Warn if not enou	igh inventory to sell.		Also See:		
¢.	Integrated Applications	When the quantit	ty I want to sell exceeds	Quantity On Hand	General		
	Icho & Estimateo			Quantity Available	Sales and		
	Multiple Currencies	Advanced In	iventory Settings		Customers		
	Payments			Learn about serial #/lots, FIFO and multi-location inventory			
134	Payroll & Employees	UNIT OF MEASURE					
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5 A.	Sales & Customers						
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R	Send Forms						
2	Service Connection						
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TYPE

Service	
Inventory Part	
Inventory Assembly	
Non-inventory Part	
Other Charge	
Subtotal	
Group	
Discount	
Payment	
Sales Tax Item	
Sales Tax Group	

Inventory Part ____ Use for goods you purchase, track as inventory, and resell

With the inventory preference established, add inventory parts to the item list. We recommend using Windows short-cut control keys in QB. To add a new item to the item list, just click **CTRL+N** in the item list. There are several different kinds of items that can be added, this guide will use *inventory part* items.



Add an *inventory part* for each item that requires inventory tracking or is used as a component in an assembly. Create and use *non-inventory parts* for items that don't require tracking by count. If you have a physical count of inventory, then enter that count.



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Create the Inventory Assemblies

After the *inventory part* items have been added to the item list, then add an *inventory assembly* item (as required) for each manufactured item. Inventory assembly items require using either the QB Premier or Enterprise edition. The primary difference from an *inventory part* is the ability to assign a component list, a *bill of materials* (or "BOM") which is a list of all components contained in an assembly item.

TYPE								OK
Inventory Assem	ubly Use for i	nventory iten	ns that you a	assemble fr	rom other i	invento	ory items	
	What's the	e difference t	between an	Inventory As	ssembly a	nd a G	roup?	Cancel
Item Name/Numbe	ar 🔲 Subitem o	of						No <u>t</u> es
WHAS		-	-					Custom Fields
I purchase this	assembly item from	a vendor						Spelling
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Wheel Assembly Sales Price 40.00 Bill of Materials	Assembly D Ta <u>x</u> Co Tax	escription de TYPE	Income Gross	e Account Sales	• QTY	i T	OTAL	Edit Item
Wheel Assembly Sales Price 40.00 Bill of Materials ITEM Screws:SC-12	Assembly D Ta <u>x</u> Co Tax DESCRIPTION Screw, #12 Flex WH	escription de TYPE	Income Gross	e Account Sales COST	ب ۵۲۷	2	OTAL 22.00	Edit Item
Wheel Assembly Sales Price 40.00 Bill of Materials ITEM Screws:SC-12 RORO-4	Assembly D Ta <u>x</u> Co Tax DESCRIPTION Screw, #12 Flex WH Rocky Roller #4	escription	Income Gross	e Account Sales COST 11.00 10.00	▼	2 1	OTAL 22.00 10.00	Edit Item Full View
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In this example, building one "WHAS" wheel assembly requires two SC-12 screws and one RORO-4 roller.



Create Invoices

Ctrl+I

Build the Assemblies



When either of the *build* buttons is clicked, QB will save this build. Two things happen:

QuickBooks moves the cost of the inventory part assets into the inventory assembly asset by removing the *quantity needed* amount of each component item (*consuming* the items in a build) and increasing the quantity of the inventory assembly item



accounting, made simple

by the *quantity to build*. In the example above, 50 SC-12 and 25 RORO-4 inventory part assets are deducted from inventory and 5 WHAS assembly items are added to inventory when the five new WHAS assembly items are built.

- **NOTE**: the *maximum number you can build…* value. QuickBooks won't allow building an assembly if there aren't enough parts on hand to build it. This value shows how many can be built with the available parts.
- If entering a *quantity to build* that's higher than the *maximum number*, QuickBooks will mark the "build" as *Pending*. This means that it hasn't been built, it is waiting to be built. There are reports that list the *pending* builds.
- When entering the quantity to build, much of the information in this dialog will not be updated until moving the cursor to another field, such as date or memo. This can be confusing at first. When moving the cursor off that field the qty needed is updated, the pending stamp could be displayed.

The *Date* field is very important. This is the date the *build* transaction takes place. The *quantity on hand* for the component parts is based on the inventory status as of this date. Sometimes people get frustrated – they look at an inventory report and it says you have enough, but this dialog says you don't! The issue is usually the dates – if the report is dated after a PO is received, but your build is dated earlier, you might not have had those parts on this date. Adjust the date in either your report, or the build.

As expected, the same issue relates to the built assemblies- they are only available on or after the build date, not before.

This has been a quick overview of how to work with an assembly item and to issue a *build*.

To learn more about using QuickBooks in your manufacturing company, click on the **Manufacturing** tab in the menu bar.

Now let's review Inventory and Assembly Cost Fields

An Inventory Part item has two cost fields...

TYPE		ок	The cost field, is a "reference" field. It has
Inventory Part	urchase, track as inventory, and resell.	Cancel	no direct bearing on inventory valuation
		Notes	(the cost of inventory in the inventory
Item Name/Number Subitem of	Manufacturer's Part Number		asset account). This can be confusing
EKM-23IDS-N v.2 #7	¥	Custom Fields	(what, QuickBooks confusing?) this can b
		Spelling	referred to as the "last purchased cost"
			(although that isn't always right). When
Enable			purchasing an item and receiving a bill fo
PURCHASE INFORMATION	SALES INFORMATION		it, the cost of that received item will
Description on Purchase Transactions	Description on Sales Transactions	Item is inactive	usually be displayed here (but not always
	Single-phase energy meter for 230Volt, 2- Wire, 50/60Hz, EKM-23IDS-N v.2		depends on how the company file is set up). This value can be modified directly ir
Cost 14.90	Sales Price 140.00		this edit item user interface, it has no
COGS Account Cost of Goods Sold -	Ta <u>x</u> Code Tax -		direct effect on inventory valuation.
Preferred Vendor	Income Account Gross Sales -		
			The Average Cost field is used in
Asset Account Reorder Point	Average On Hand Cost On P.O.		calculating inventory value, which is
Inventory Asset 👻	-25 14.90 0		calculated by QuickBooks based on the cost of receipt (and adjustment)

transactions. This value field cannot be directly edited, it is a calculation that QuickBooks inserts.

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Inventory Valuation

QuickBooks values inventory using a **weighted average cost** calculation, instead of other more familiar types (LIFO, FIFO, or specific costing). Other costing methods require a third party add-on program to manage inventory, external to QuickBooks.

This is a complicated subject, let's look at an example.

- If starting with an item at no quantity, no value, and receiving a quantity of 10 at \$1.00 each, the cost is \$1.00 and the average cost is also \$1.00, and \$10.00 of inventory in the inventory asset account.
- If receiving another 10 items, but at a unit cost of \$2.00, the cost value set to \$2.00. However, the average cost of the inventory will show as \$1.50. We started with 10 items and a value of \$10.00, we added another 10 items at a value of \$20.00, so we have 20 items with a value of \$30.00. That provides an average cost of \$1.50.

If one of these items is sold, the COGS account is incremented by the average cost of the item at the time of the sale.

This is a simple example. There are long arguments about the costing calculation that QuickBooks uses – relating to more complicated situations where there are many added transactions, and other situations.

If all inventory is sold, and items continue to sell, the item goes to a negative quantity, then the costing calculation runs into problems. It can't accurately account for a negative balance, and some very odd figures display in the average cost field and the inventory valuation reports. Once the balances are brought back to positive, these figures will self-resolve. Good business practices dictate not allowing negative inventory balances. The **Inventory Valuation Detail** report shows exactly how QuickBooks derives the item's average cost.

Manufacturing Cost

							OK
Inventory Assembly	 Use for inv and then s 	entory iter ell	ms that you	assemble fr	rom other ir	iventory items	Control
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tem Name/Number	Subitem of						No <u>t</u> es
WXC-123			*				Custom Fields
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Cost What is this cos	st?		COGS	Account			
15.00			Cost	of Goods So	ld 👻		Itom is inactive
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Description Example assembly ite Sales Price 15 3ill of Materials ITEM C BCT-013-200 #13 S Cal5e=50 • 4	Tax Code Tax DESCRIPTION rolid-core CT, 200A -Twisted Pairs of	TYPE Inv Part Inv Part	Incom Gross	e Account s Sales:PayF cost 11.00 10.00	Pal V	E TOTAL 2 22.00 1 10.00	Edit Item Full View
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Description Example assembly ite Sales Price 15 Bill of Materials ITEM E BCT-013-200 #13 S cat5e-50 • 4 INVENTORY INFORMAT Asset Account	Ta <u>x</u> Code Tax DESCRIPTION Iolid-core CT, 200A -Twisted Pairs of TRON Build	TYPE Inv Part Point	Incom Gross	e Account sales:PayF cost 11.00 10.00 of Materials Average Cost	Pal + GTY Cost On P.O.	2 22.00 1 10.00 32.00	Edit Item Full View

An *Inventory Assembly* item has an additional cost field – the **Total Bill of Materials Cost**.

This *inventory assembly* example item (WXC-123) has two components, a Solid-core (two) and a 4-Twisted Pairs (one). **NOTE**: there are **three costs** shown in this window.

The **Cost** field (15.00) has no real bearing on item valuation. This value can be directly edited in this field. The *cost* value of purchased parts is usually, but not always, the "last purchased cost" of an item.

QuickBooks does **not automatically update this cost** to reflect either the *Total Bill of Materials Cost* or the *Average Cost*.

The **Avg Cost** field (32.00) is the cost that QuickBooks uses to calculate the value of this item. It can only be directly edited adding a new item – after that it is updated by inventory adjustments, receipts and builds.

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Multiply the *on hand* value by *average cost* to get the inventory value for this assembly (assuming you don't have a negative *on hand* quantity).

The **Total Bill of Materials Cost** field (32.00) is not directly tied to the *cost* or *average cost* values. This is the sum of the *cost* values of the components in the BOM. In our starting example it matches the *average cost*, but as seen in later examples they are not always connected.

What is the Cost of a Build?

Let's review the two component items. The SC-12 screw has a *cost* of 11.00, but the *average cost* is 8.86076.

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Inventory Part	- Ose for go	Jous you pu	icitase, track as in	ventory, and resen.		Cancel
	Cubiters of					No <u>t</u> es
Item Name/Number	Subitem of		Manufa	cturer's Part Number	_	Custom Fields
SC-12	Screws		•			
UNIT OF MEASURE						Spelling
Enable						
PURCHASE INFORMA	ATION		SALES INFORMATI	ON		
Description on Pur	chase Transactions		Description on S	ales Transactions		Item is inactive
Screw, #12 Flex W	/HW #3 Tek		Screw, #12 Flex	WHW #3 Tek		
Cost	11.00		Sales Price	25.75		
COGS Account	Cost of Goods Sold	i +	Ta <u>x</u> Code	Tax 👻		
Preferred Vendor	Screws R Us	•	Income Account	Gross Sales	•	
INVENTORY INFORM	ATION		Avera	20		
AssetAccount	Reor	der Point	On Hand Cost	On P.O.		
Inventory Asset	→ 100		158 8.860	76 0		



The RORO-4 roller has a cost of 10.00 and an average cost of 19.44444.

ТҮРЕ	Lise for goods you pu	urchase track as inventory and resell	ок
Inventory Part		arendse, track as inventory, and resen.	Cancel
			Notes
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UNIT OF MEASURE			Spelling
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PURCHASE INFORM	ATION	SALES INFORMATION	
Description on Pur	chase Transactions	Description on Sales Transactions	Item is inactive
0034-210 Rocky Roller #4		Rocky Roller #4	
Cost	10.00	Sales Price 20.00	
COGS Account	Cost of Goods Sold 🔹	Ta <u>x</u> Code 🛛 🔫	
Preferred Vendor	Screws R Us 🔹	Income Account Gross Sales -	
INVENTORY INFORM	ATION		
AssetAccount	Reorder Point	On Hand Cost On P.O.	
Inventory Asset	▼ 100	18 19.44444 0	

When starting, we have six WHAS assemblies at an average cost of 32.00, for a total inventory valuation of 192.00. We will build four of WHAS to bring a total of 10. What will we see for the *cost, average cost* and *total bill of material cost* for WHAS when the transaction is done?

- Start with 6 @ 32.00, for a valuation of 192.00
- Each WHAS that is built, uses 2 screws @8.86076 (the average cost), for \$17.72152
- Each WHAS that is built, used 1 roller @19.44444.
- The cost at this time for one WHAS is 37.16596
- We built four WHAS for a total valuation of 148.66384
- Adding four WHAS with a total cost of 148.66384 to the value of 6 WHAS that were valued at 192.00 provides a total inventory valuation of 10 WHAS for a value of 340.66384
- Dividing that total cost by the total on hand (10), provides average cost for WHAS of 34.06638





Now review the WHAS assembly cost information:

TYPE									OK
Inventory Asser	mbly 👻 🗸	se for inve	entory iten	ns that you	assemble fr	om other	inve	ntory items	
	W	at's the d	ifference l	oetween a	n Inventory As	sembly a	nd a	a Group?	Cancel
Item Name/Numh	or Su	bitem of							No <u>t</u> es
WHAS				*					Custom Fields
I purchase this	assembly iter	n from a v	endor						Spelling
UNIT OF MEASURE									
Enable									Print
Cost What is this	cost2			000	SAccount				
15.00	COSTS			Cost	t of Goods So	ld 👻			_
Description									Item is inactive
Wheel Assembly	1								
Sales Price		Ta <u>x</u> Code		Incon	ne Account				
40.00		Tax	*	Gros	s Sales	•			
Bill of Materials									
ITEM	DESCRIPTIO	N	TYPE		COST	QTY		TOTAL	Edit Item
			Dov Dort				2	22 00	1 m
Screws:SC-12	Screw, #12 F	Tex WH	Inv Part		11.00		4	10.00	Full View
Screws:SC-12 RORO-4	Screw, #12 F Rocky Roller	lex WH #4	Inv Part		11.00		1	10.00	Full View
Screws:SC-12 RORO-4	Screw, #12 F Rocky Roller	Tex WH #4	Inv Part		11.00		1	10.00	Full View
Screws:SC-12 RORO-4	Screw, #12 F Rocky Roller	Tex WH #4	Inv Part	Total Bil	11.00 10.00 I of Materials	Cost:	1	10.00 32.00	Full View
Screws:SC-12 RORO-4	Screw, #12 F Rocky Roller	Hex WH	Inv Part	Total Bil	11.00 10.00 I of Materials	Cost:	1	10.00 32.00	Full View
Screws:SC-12 RORO-4 INVENTORY INFOR Asset Account	Screw, #12 F Rocky Roller	Hex WH #4 Build I	Inv Part Inv Part Point	Total Bil On Hand	11.00 10.00 I of Materials Average Cost	Cost: On P.O.	1	32.00	Full View

The *average cost* is as predicted (QuickBooks did some rounding in).

NOTE: the *cost* and *total bill of material cost* have **not changed**.

This demonstrates the *average cost* of an assembly item is **adjusted by the** *average cost* of the component parts when issuing a build transaction. This is expected behavior, and it demonstrates QuickBooks is properly maintaining the inventory value. The cost of the component parts is being rolled into the cost of the assembly.





Management Information is Misleading

The issue, from a management (not accounting) standpoint is... the **figures are misleading**. As costs fluctuate, the *cost* value does not change. It only changes if it is manually updated. If a report shows the cost of this assembly, you may have an incorrect understanding of the cost of the assembly.

	Inv	ventory As ItemNa	sembly Bill o meNumber V	f Mate VHAS	erials			
Manufacturers Part N Is Purchased No Purchase Description Sales Description	l umber Wheel Assemb Wheel Assemb	ly ly						
Sales Price Cost Total Value Qty OnHand 10 Pending Builds 0	Avg. Cost	40.00 15.00 340.67 34.07	Income Acc COGS Accou Asset Accou On Purch O Build Point	ount unt unt rder	0 0	Gross Cost c Inven On Sa	Sales of Goods S tory Asset les Order	old 0
Bill of Materials <u>ItemName/Num</u> Screws:SC-12 RORO-4	Description Screw, #12 Drill Fl Rocky Roller #45 Total Bill of Mate	ex HWH # rials	Typ 3 Tek Inv Inv	e Part Part		Cost 11.00 10.00	Qty 2 1 3	Total 22.00 10.00 32.00

What is worse, the *change item prices* function in QuickBooks allows using the *cost* of the assembly item, but **not the average cost**, so price updates will be based on information that is often incorrect and out of date.

	Change	e Item Prices	×
Item Type Inventory Assembly			
✓ : ITEM	DESCRIPTION	CURRENT PRICE	NEW PRICE
Test Item	Test Item	15.00	15.00
VHAS	Wheel Assembly	40.00	45.00
			Y
Mark All Include in <u>a</u> ctive			
Adjust price of marked items by (amou	unt or %) 200.0% base	ed on Unit Cost 👻	Adjust
Round up to nearest no rounding	-		

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To take this further, if the WHAS inventory assembly is used as a sub-assembly in a higher level assembly, the *total bill of material cost* value in that higher level assembly will reflect the *cost* of the subassembly, which doesn't reflect any useful value if you are not diligent.

Sales Price	1	a <u>x</u> Cod	le	Income	Account				
60.00	1	Tax	*	Gross	Sales	•			
Bill of Materials									
ITEM	DESCRIPTION		TYPE	i c	OST	QTY	÷τ	OTAL	Edit Item
WHAS	Wheel Assem	bly	Assembly		15.00		2	30.00	C. H.) C.
RORO-4	Rocky Roller	#4	Inv Part		10.00		1	10.00	Full View
				Total Bill o	of Materials	Cost		32.00	
AssetAccount	RMAIION	Build	Point	On Hand	Average Cost	On P.O.			
Inventory Asset	•			0	0.00	0			

Why Is This Important?

Most companies base the sales price on the item manufacturing cost. It is important to have accurate information to make these decisions. Updating prices based on the **current cost of acquisition** is common. That is, the BOM cost should reflect the *last purchase cost* of the components, not necessarily the *average cost*. Updating the *cost* field, when parts are purchased, places this information in the components database.

A simple one-level item structure requires a review of the *total bill of materials cost* as the basis for decisions. This value is hard to find in QuickBooks – it doesn't show in reports other than the individual Bill of Material printout, or in the Edit Item screen.

With a more complicated product structure, using sub-assemblies, getting an accurate cost of the assemblies is more complicated. The *cost* shown for the sub-assembly might not have any relation to the cost of the components.

What To Do?

Obviously, if using the QuickBooks price updating tools, prices should be based on accurate information. QuickBooks requires a periodic review of the *total bill of material cost* of each assembly, and then re-enter that in the *cost* field. Again, this value is only found in that one report or in the edit item screen for the assembly. There isn't a simple report that lists the value.

This is complicated with multiple level product structures – for those cases, update the **lowest level assembly first**, and work your way back up the product structure.

There is a QuickBooks add-on product called CCRQBOM available from ccrsoftware.com. The primary feature is a cost rollup function that will take the *cost* value of the component items and update the *cost* value of the inventory assembly item. In addition, with multiple level assemblies, the program will determine what the lowest level assembly is and start with that, rolling the cost up through all of the levels to the top

