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LIVE
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Working with Assembly Orders in Business Central

Presented by:

Dave Wiser

- President & Lead Consultant for Dynamics Northwest
- Raised as an Accountant & Controller
- BCUG Legend and All Star
- Active in the user group communities
- Using NAV/BC for almost 20 years

- Plus…

Hot Air Balloon Pilot

Session Objectives

1. What are Assembly Orders
2. Assembly Orders vs. Production Orders
3. Setups for Assemblies
4. Processing Assembly Orders
   - Assemble to Order
   - Assemble to Stock

What are Assembly Orders

- Formerly known as “Kitting”
- AKA – Light Production, Junior Production, etc.

Assembly orders are internal orders, just like production orders. Use assembly orders to manage the assembly process and to connect sales requirements with warehouse activities. Assembly orders involve both output and consumption when posting. Assembly order headers are similar to output journal lines. Assembly order lines are similar to consumption journal lines.

Licensing

- Assembly – Requires only Essential license
- Production – Requires Premium license

Assembly vs. Production

Similarities:

- Multi-level BOM
- Integration with sales, planning, reservations, logistics.
- To Stock and To Order
- Planning worksheet can be used to create AO
- Consume and output variants
- Can have assembly BOMs within assembly BOMs

Assembly vs. Production

Differences:

- No routing or capacity (resources instead)
- Versioning not available with assemblies
- Production BOM can include calculation formulas
- Production has various production order statuses
- Items and resources on same page (no separate BOM and Routing)
- Component and output can be posted separately.
- Consumption and Output Journals can be used.
- No negative Consumption or Output

Why Choose Manufacturing/Production

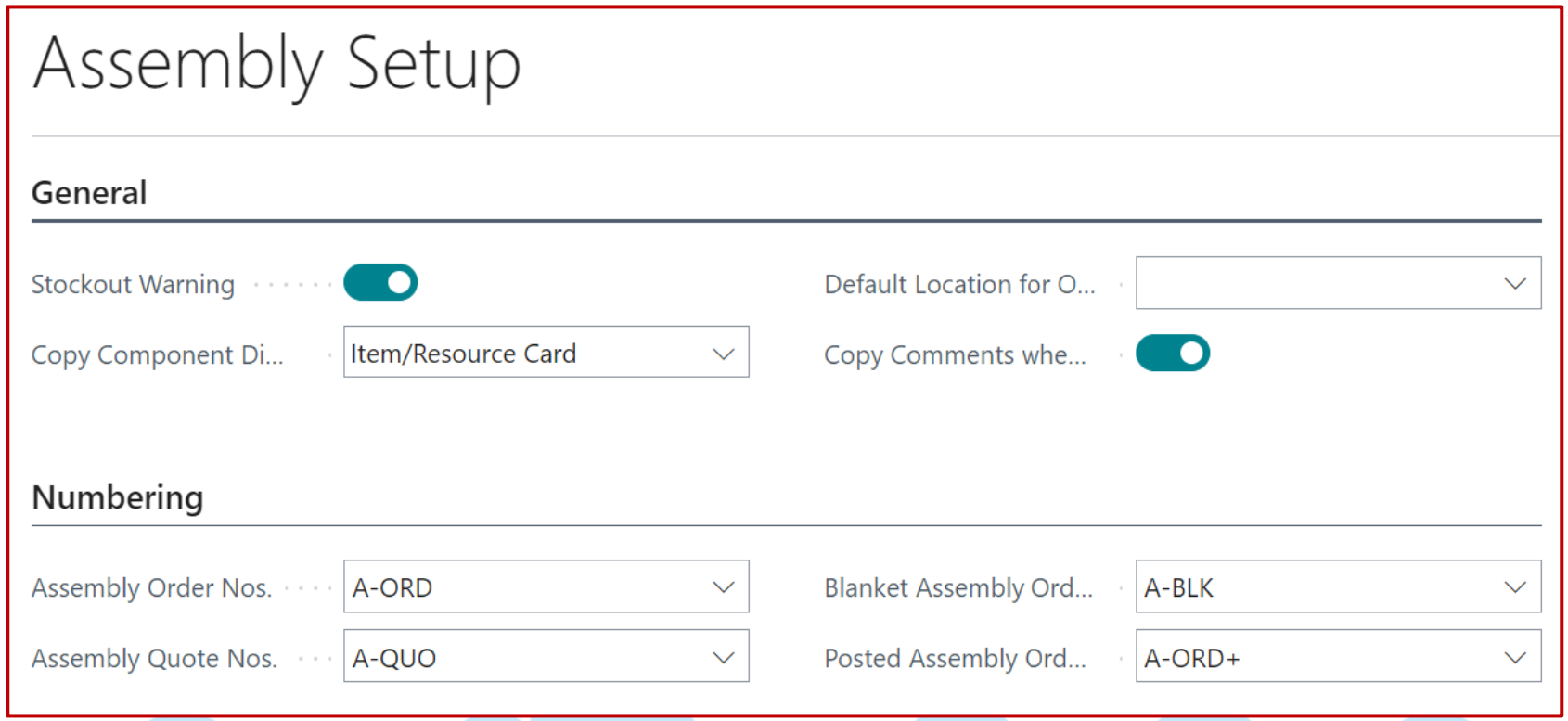
- Need tight control over the shop floor including workstation capacities and scheduling resources
- Have complex MRP requirements with the ability to manage the timing of inventory purchases or manufacture of sub-components.
- Need to manage scrap.
- Assembly routings are important.
- Linking consumption to routing steps needed
- Use Sub Contracting

Why Choose Assemblies

- Want your sales people to easily configure items and related assembly orders on the fly without regard to formal business rules.
- Don’t care about shop floor management or capacity, or are willing to manage them manually from reports or a third party drag and drop scheduler.
- Order items solely on committed demand, min/max’s, and inventory forecasts without any consideration of lead time.
- Want something simple and fast to implement. Assembly can be used in conjunction with Manufacturing in the future.
- Have a limited implementation budget.
- No WIP needed.

Assembly Setup

- Assembly Setup – Minimal settings



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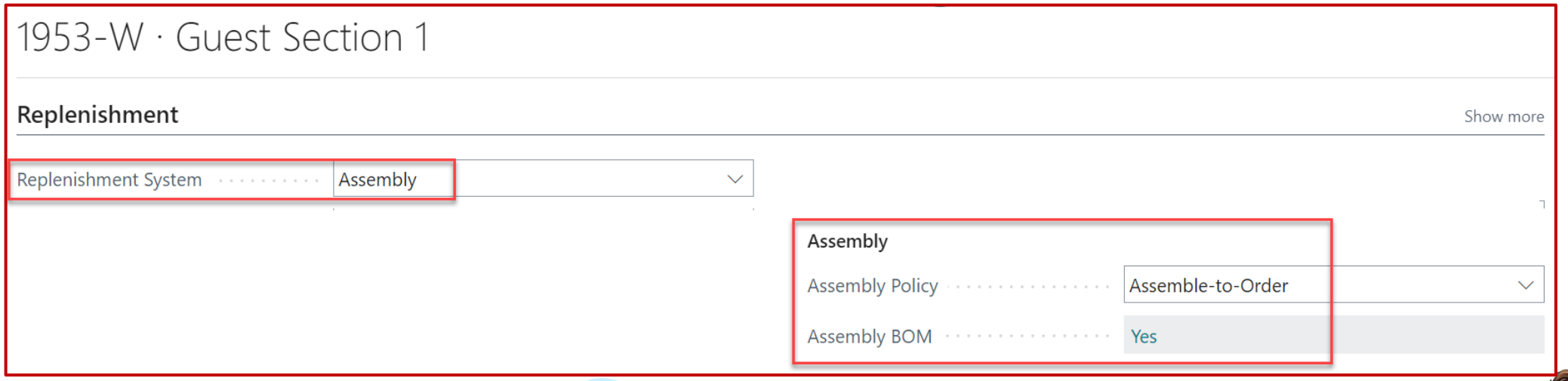
Assembly Setup (cont.)

- Item Card:
  - Replenishment System
  - Assembly Policy
  - Assembly BOM



Assembly Setup (cont.)

- Resources – Use to capture non-item costs.
  - No.
  - Base UOM
  - Gen. Prod. Posting Group
  - Direct and Overhead Costs
- General Posting Setup – Inventory Adjustment Account Needed

Assembly BOM

- Accessed through item list/card.
- Add items and resources.
- No versioning allowed or status changes.
- Can includes lot/serial tracked items.

1953-W · Guest Section 1

Assembly BOM | Search | Analyze | New | Edit List | Delete | Item | BOM | ···

Type	No.	Variant Code	Description	Assem... BOM	Quantity per	Unit of Measure Code
→ Item	1960-S		ROME Guest Chair, green	No	4	PCS
Item	1906-S		ATHENS Mobile Pedestal	No	1	PCS
Item	1000		Monitor	No	1	PCS
Resource	KATHERINE		KATHERINE HULL	No	4	HOUR

Costing of Assembled Item

- Cost Shares is available.
- Roll up assembly costs to item card.

BOM Cost Shares

Type	No.	Description	Qty. per Parent	Qty. per Top Item	Unit of Measure Code	Replenishment System	Rolled-up Material Cost	Rolled-up Capacity Cost	Rolled-up Capacity Ovhd. Cost	Total Cost
Item	**1953-W**	**Guest Section 1**	1	1	PCS	Assembly	1,089.40	308.00	30.80	1,428.20
Item	1960-S	ROME Guest Chair, green	4	4	PCS	Purchase	601.20			601.20
Item	1906-S	ATHENS Mobile Pedestal	1	1	PCS	Purchase	338.20			338.20
Item	1000	Monitor	1	1	PCS	Purchase	150.00			150.00
Resource	KATHERINE	KATHERINE HULL	4	4	HOUR	Transfer		308.00	30.80	338.80

Assemble to Order Process

- Assembly order tied to sales order through “Qty. to Assemble to Order” field on sales line.
- Assembly order automatically created.
- Assign lot/serial numbers to assembly order lines.
- Can create picks if needed.
- No posting of assembly order directly (Must post through sales order).
- Refresh lines if assembly BOM changed.
- Can add/delete assembly order lines as needed.

Qty. to Assemble to Order on Sales Line

Lines | Manage | Line | Order

New Line | Delete Line | Select items...

	Type	No.	Description	Location Code	Quantity	Unit of Measure Code	Unit Price Excl. Tax	Line Amount Excl. Tax	Qty. to Assemble to Order
→	Item	1953-W	Guest Section 1		10	PCS	2,000.00	20,000.00	10

Resulting Assembly Order

A00009 · Guest Section 1

Home | Prepare | Print | Warehouse | Order | Actions | Related | Automate | Fewer options

Preview Posting | Release | Show Availability

General

No.	A00009	Due Date	12/31/2024
Item No.	1953-W	Starting Date	12/30/2024
Description	Guest Section 1	Ending Date	12/30/2024
Quantity	10	Remaining Quantity	
Quantity to Assemble	10	Assembled Quantity	
Unit of Measure Code	PCS	Assemble to Order	Yes
Posting Date	12/31/2024	Status	Open

Lines

Manage | Line | Functions

New Line | Delete Line

Avail. Warni...	Type	No.	Description	Variant Code	Location Code	Unit of Measure Code	Quantity per	Quantity	Quantity to Consume	Consumed Quantity	Remaining Quantity	Unit Cost
	Item	1960-S	ROME Guest Chair, green			PCS	4	40	40	0	40	150.30
	Item	1906-S	ATHENS Mobile Pedestal			PCS	1	10	10	0	10	338.20
	Item	1000	Monitor			PCS	1	10	10	0	10	150.00
	Resource	KATHERINE	KATHERINE HULL			HOUR	4	40	40	0	40	84.70

Assembly Orders

- On Assemble-to-Stock, BOM is not exploded until quantity is filled in.
- Allows you to make changes to assembly BOM (including variants).
- For Lot or Serial items, must assign lot/serial number(s) prior to posting.
- Can create warehouse picks from the assembly order.
- Limited scheduling is allowed.

Assemble to Stock Process

- Assembly order created manually (or through planning worksheet). Not tied to sales order.
- BOM explosion as soon as item and quantity are entered.
- Changes to assembly order lines allowed.
- Posting allowed on assembly order. Components posted when output posted (backward flushing).
- Can partially post output.

Assemble to Order/Stock

- If item is assemble to stock, you can still make assemble to order by entering quantity in Qty. at Assemble field on sales line.
- Qty. to Assemble quantity can be less than sales line quantity if some quantity assembled and some pulled from stock.
- Other features remain the same.

Quotes and Blanket Orders

- Assembly Quotes and Blanket Assembly Orders are used when an Assembly-to-Order items is placed on a sales quote or blanket sales order.
- A corresponding Assembly Quote or Blanket Assembly Order is also created.
- When the “Make Order” function is executed, the sales and assembly orders are also automatically created.

Summary

- Assemblies can be very efficient.
- Essential license is all that is needed. Everyone can use.
- Less complex setup and operation.
- Allows for basic production/assembly.

Thank you for attending!

Dave Wiser
Dynamics Northwest LLC
dave@dynamicsnorthwest.com
www.dynamicsnorthwest.com