Introduction to MS Dynamics NAV XXVII. (Production)

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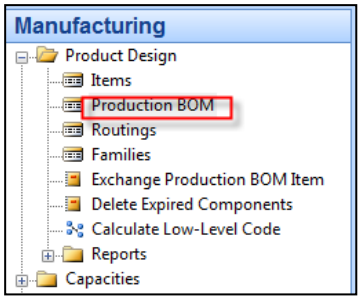
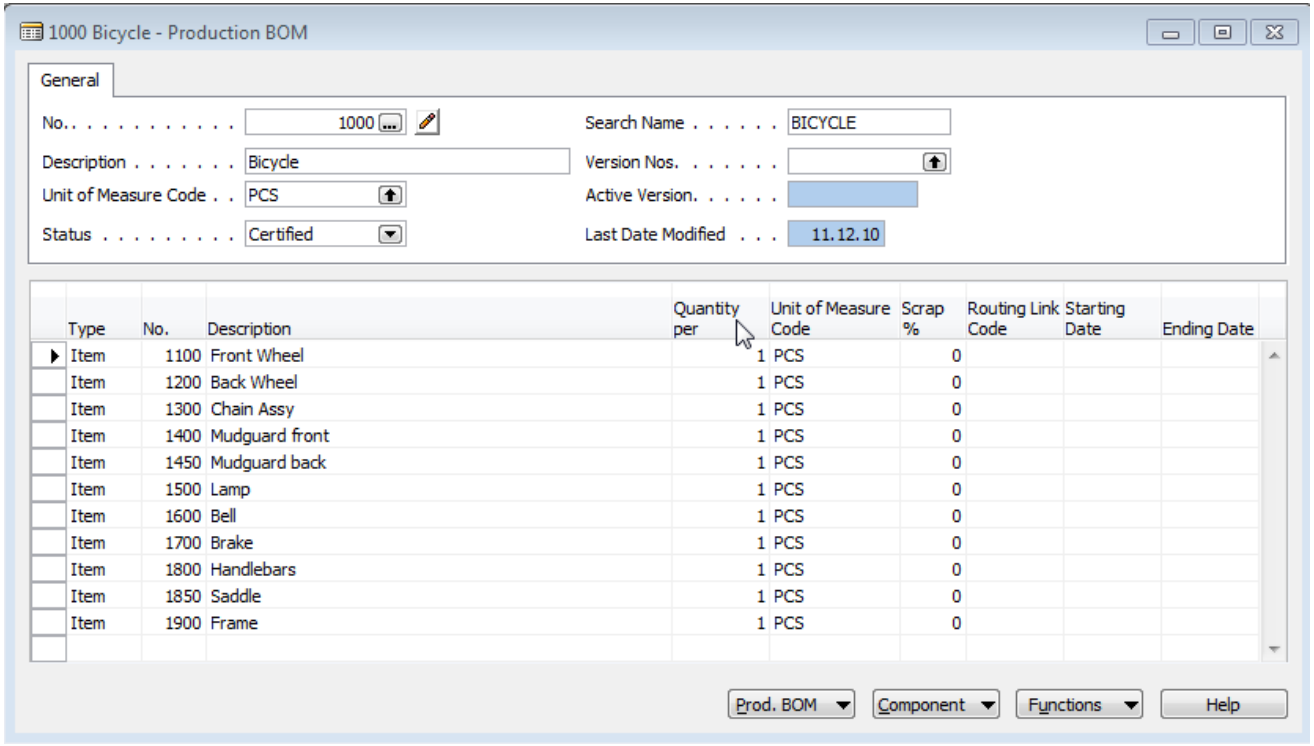
Production -basics

- **What to produce –BOM (Bill of Material)**
  - A BOM is a listing of all the subassemblies, intermediates, parts and raw materials that go into a parent item.
  - **Statuses** : New, Under Development, Certified and Closed (archived)
  - Production BOMs manage the material requirement of production exclusively.
  - Production BOMs may consist of several levels. You can use up to **50 levels**.

BOM

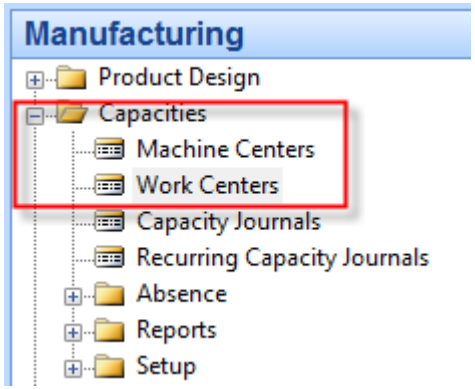

Manufacturing
Product Design
Items
Production BOM
Routings
Families
Exchange Production BOM Item
Delete Expired Components
Calculate Low-Level Code
Reports
Capacities

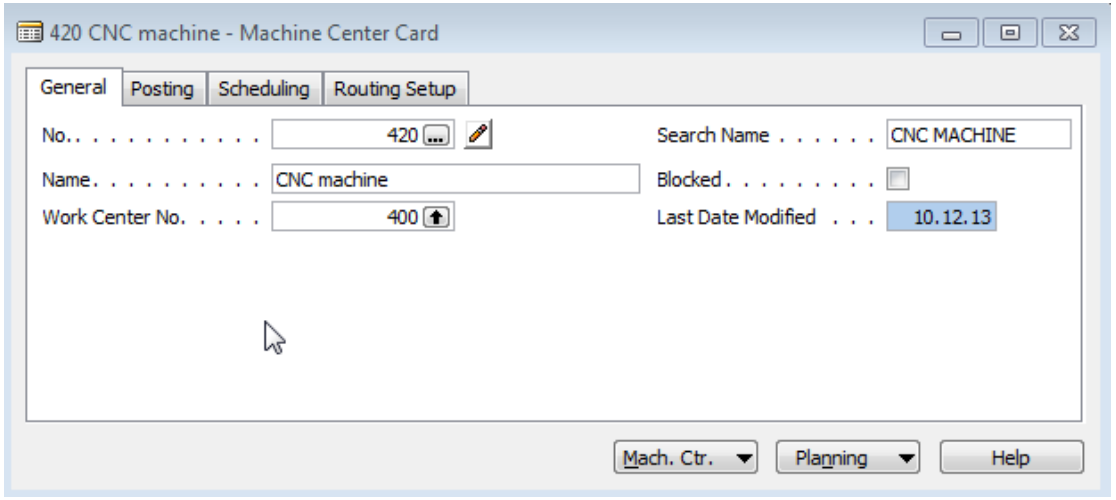

1000 Bicycle - Production BOM
General
No. 1000
Description Bicycle
Unit of Measure Code PCS
Status Certified
Search Name BICYCLE
Version Nos.
Active Version.
Last Date Modified 11.12.10
Type | No. | Description | Quantity per | Unit of Measure Code | Scrap % | Routing Link Code | Starting Date | Ending Date
Item | 1100 | Front Wheel | 1 | PCS | 0
Item | 1200 | Back Wheel | 1 | PCS | 0
Item | 1300 | Chain Assy | 1 | PCS | 0
Item | 1400 | Mudguard front | 1 | PCS | 0
Item | 1450 | Mudguard back | 1 | PCS | 0
Item | 1500 | Lamp | 1 | PCS | 0
Item | 1600 | Bell | 1 | PCS | 0
Item | 1700 | Brake | 1 | PCS | 0
Item | 1800 | Handlebars | 1 | PCS | 0
Item | 1850 | Saddle | 1 | PCS | 0
Item | 1900 | Frame | 1 | PCS | 0
Prod. BOM
Component
Functions
Help

Production -basics

- **What resources will be used**
  - **Machine Centers**
    - Machines
    - Workers (only MC)
    - Costs
    - Load
    - Statistics
    - Absence
    - Load
    - Sent-Ahead Quantity (only MC)
    - **Capacity**
      - In general, the capacity is the amount of work that can be done in a specified time period. The capacity of a machine center indicates how many machines or persons are working at the same time. For example, if the capacity is two, it means that twice as much work can be done at the same time
    - **Efficiency**
      - Efficiency measures the output of a machine center relative to the standard output expected. If you enter 100, it means that the machine center will have an actual output that is the same as the standard output

Machine Centers (MC)

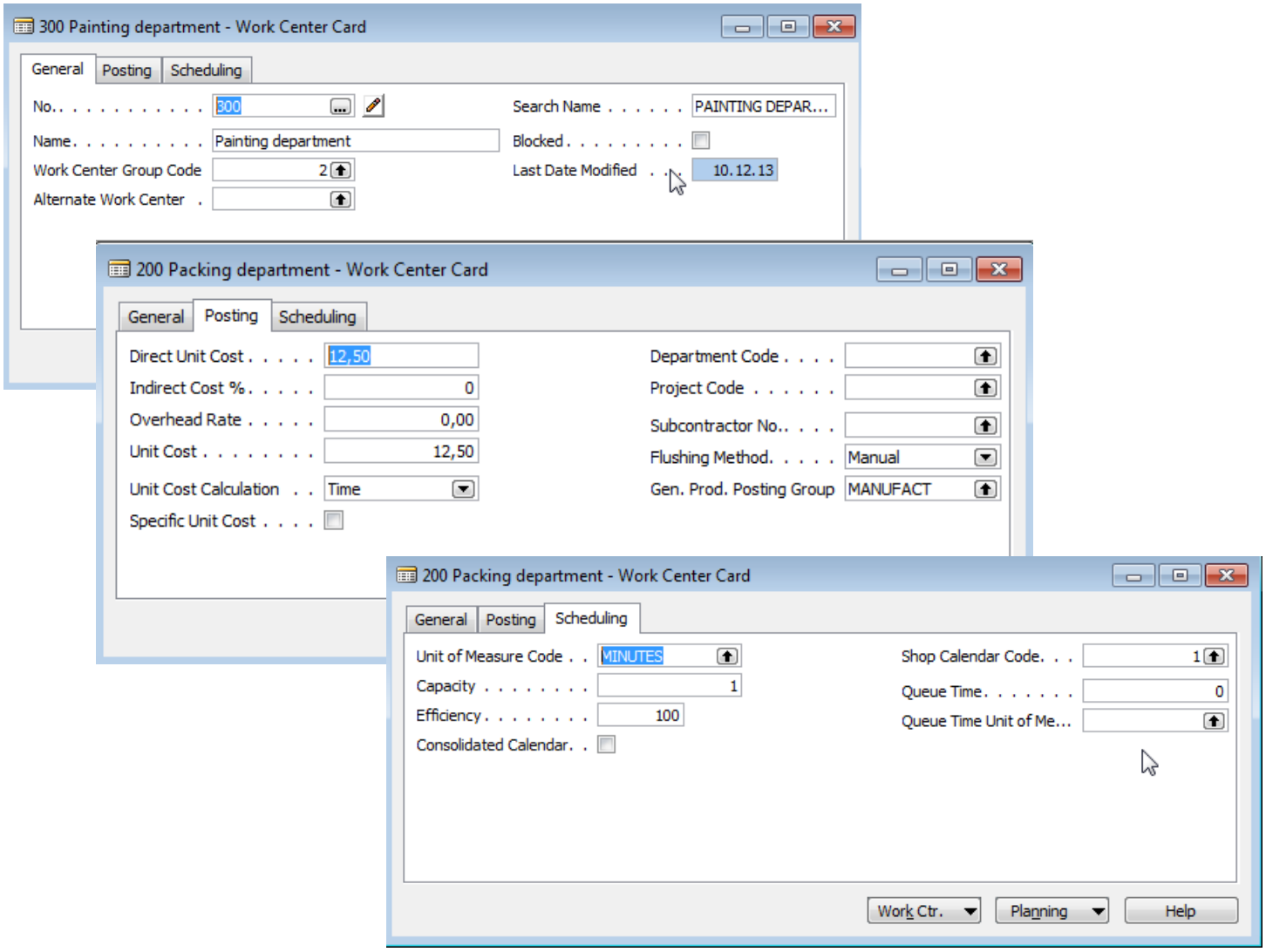




Production -basics

- **What resources will be used**
  - **Work Centers**
    - Related machines (group of machines)
    - Capacity
    - Efficiency
    - Costs
    - Load
    - Statistics
    - Absence
    - **Shop calendar (not in MC)**
    - **Alternate Work Center (not in MC)**
    - **Unit of Measure Code (not in MC)**

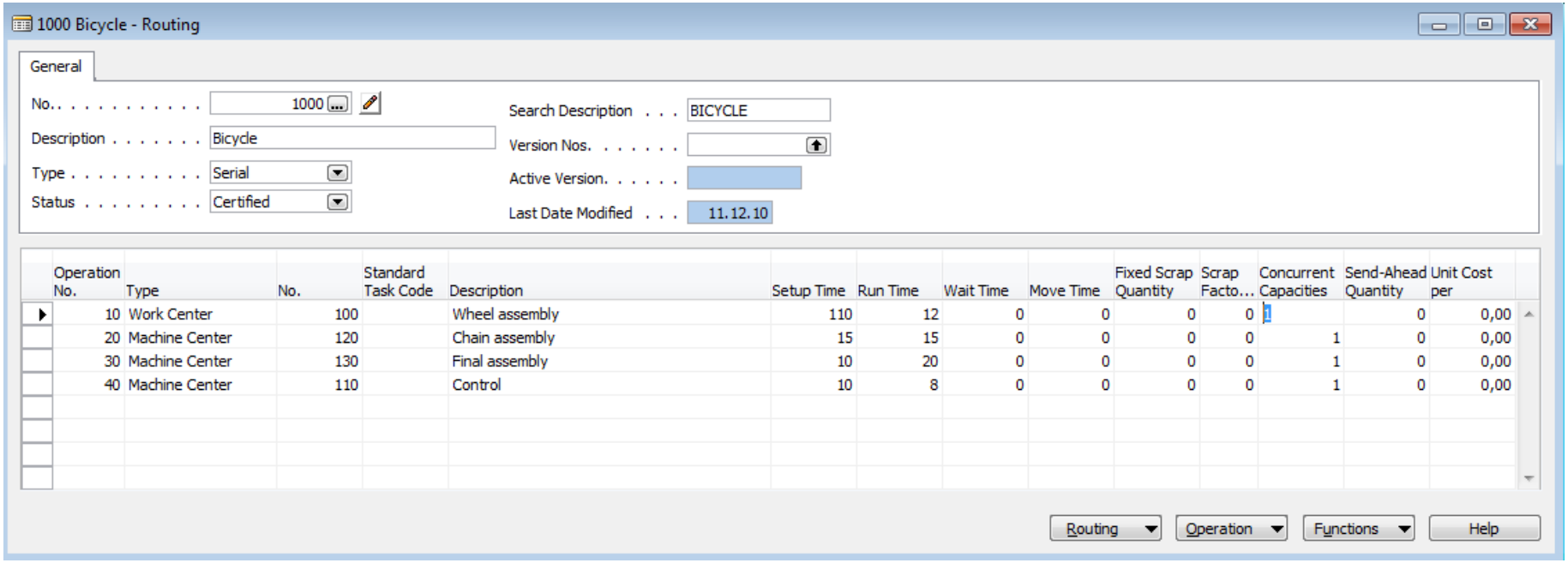
Work Centers (WC)

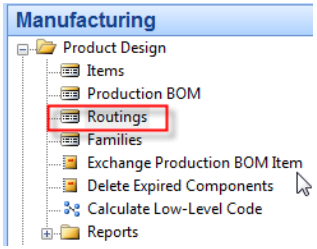


Production -basics

- **How the final product will be produces**
  - **Routing**
    - Statuses (similar to BOM)
    - Serial and Parallel operations mode
    - Operations
    - Setup and production times
    - Waiting and Move times
    - Send-Ahead Quantity
    - Scrap calculation
    - Standard Task Codes

Routing


1000 Bicycle - Routing
General
No. 1000
Description Bicycle
Type Serial
Status Certified
Search Description BICYCLE
Version Nos.
Active Version.
Last Date Modified 11.12.10
Operation No. | Type | No. | Standard Task Code | Description | Setup Time | Run Time | Wait Time | Move Time | Fixed Scrap Quantity | Scrap Facto... | Concurrent Capacities | Send-Ahead Quantity | Unit Cost per
10 | Work Center | 100 | | Wheel assembly | 110 | 12 | 0 | 0 | 0 | 0 | 1 | 0 | 0,00
20 | Machine Center | 120 | | Chain assembly | 15 | 15 | 0 | 0 | 0 | 0 | 1 | 0 | 0,00
30 | Machine Center | 130 | | Final assembly | 10 | 20 | 0 | 0 | 0 | 0 | 1 | 0 | 0,00
40 | Machine Center | 110 | | Control | 10 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0,00
Routing
Operation
Functions
Help


Manufacturing
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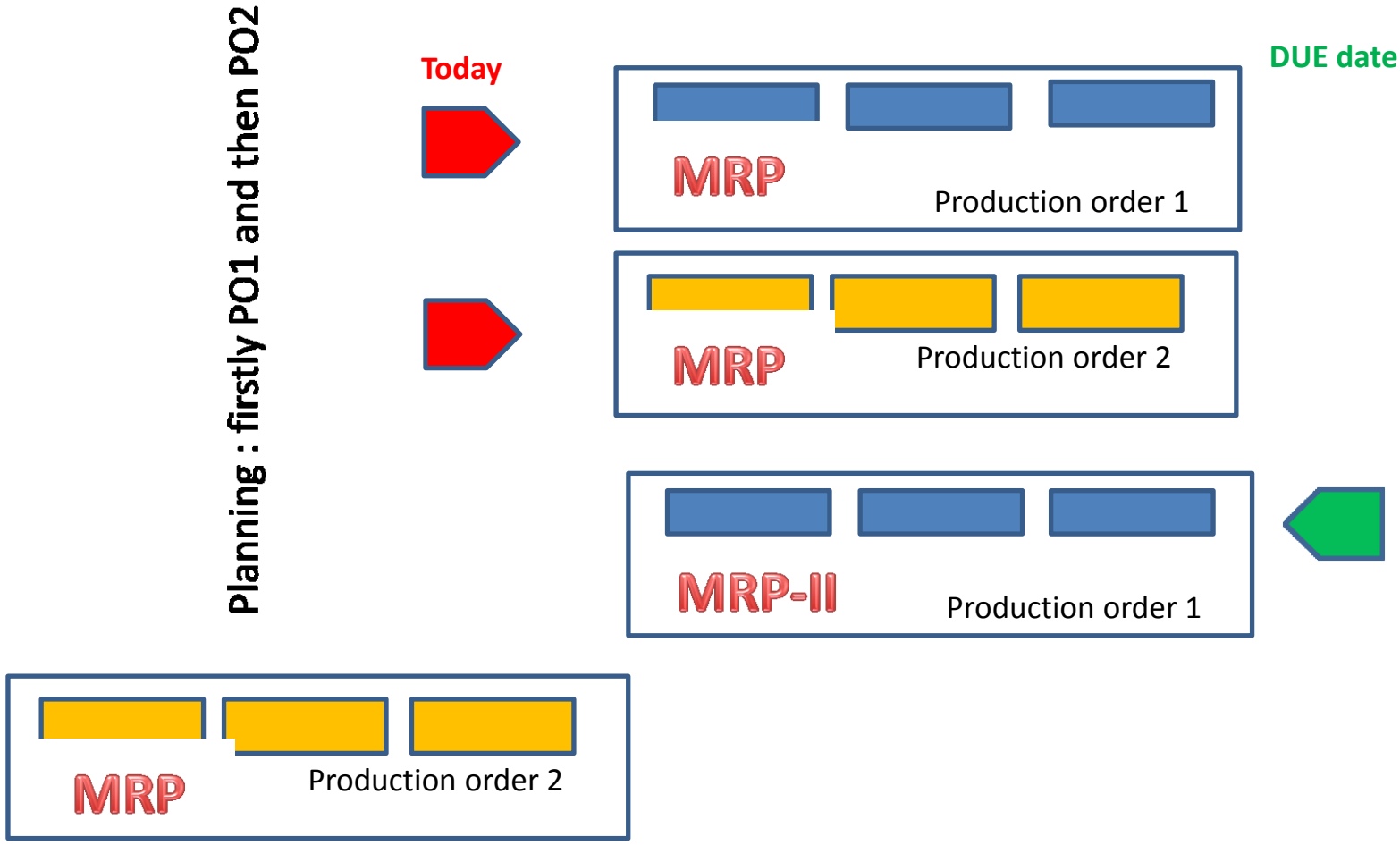
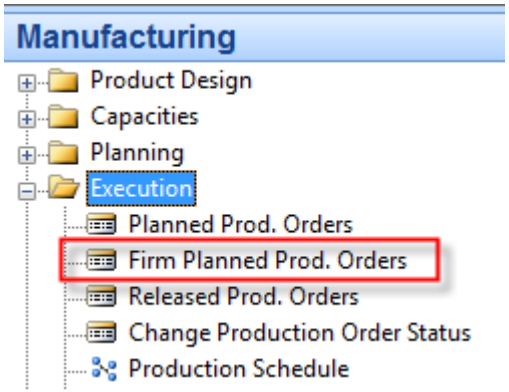
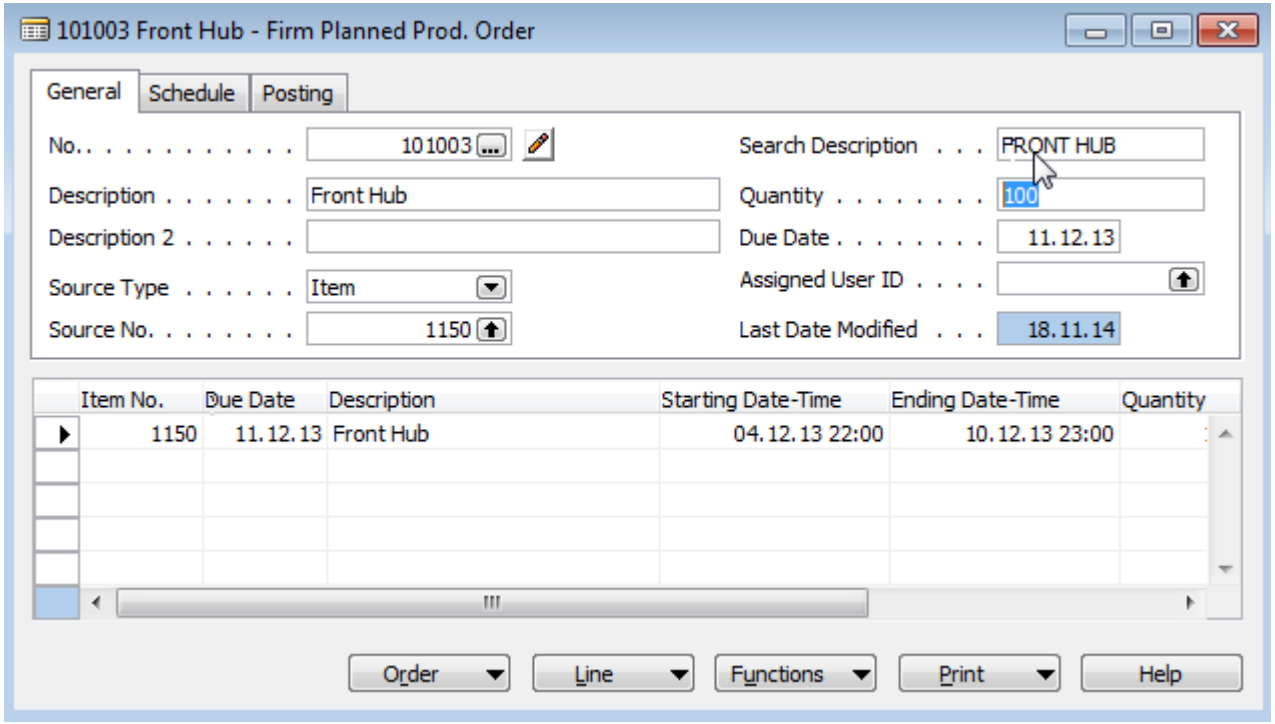
:P and MRP-II in NAV



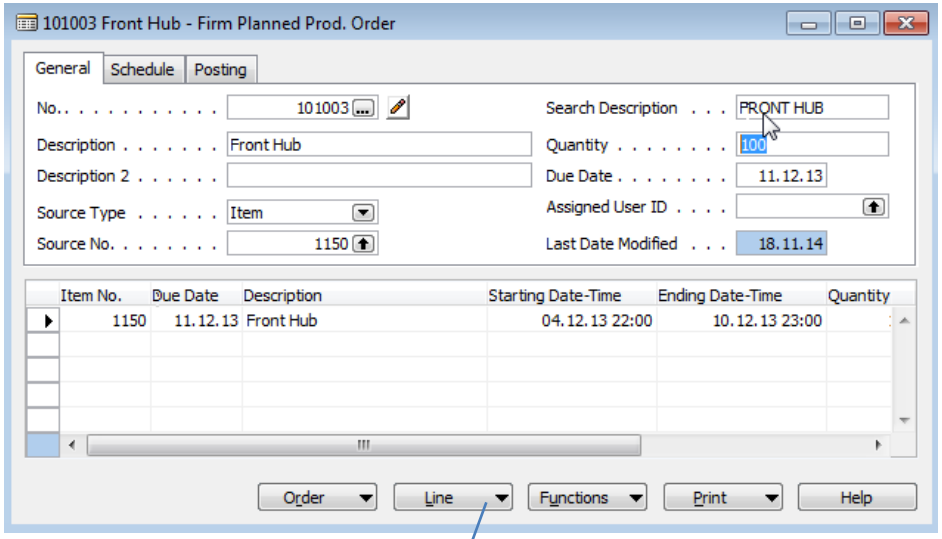
Production Order (manually created)

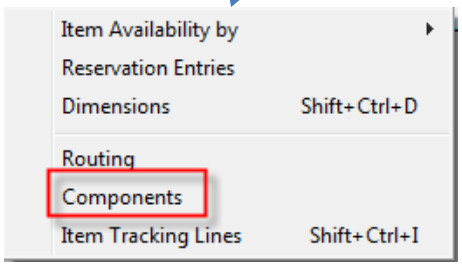


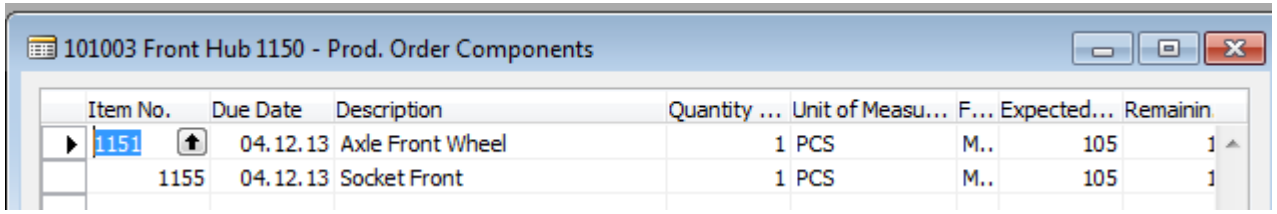
F3, Enter, Item, F6->1150->Quantity=100->Function->
->Refresh->Backward->Ticked (lines, routings and components)



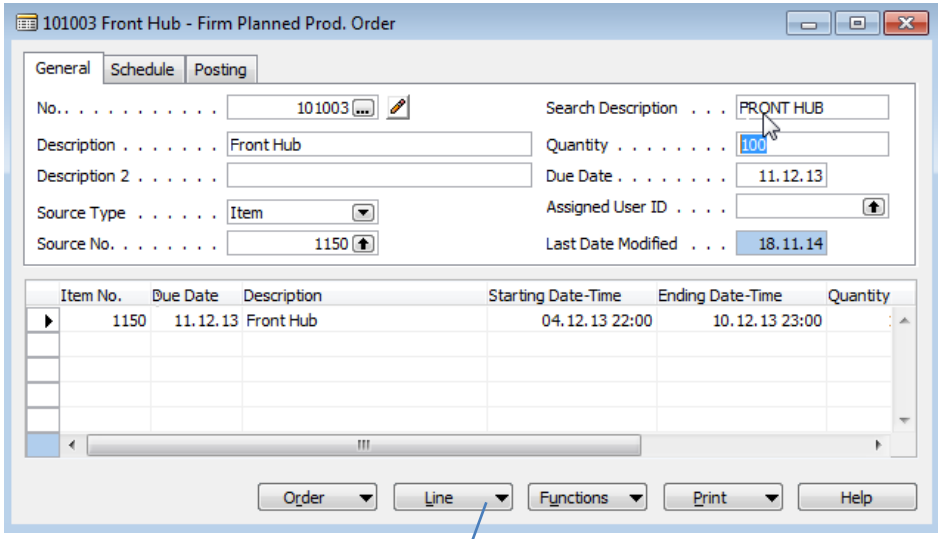
Components from PO





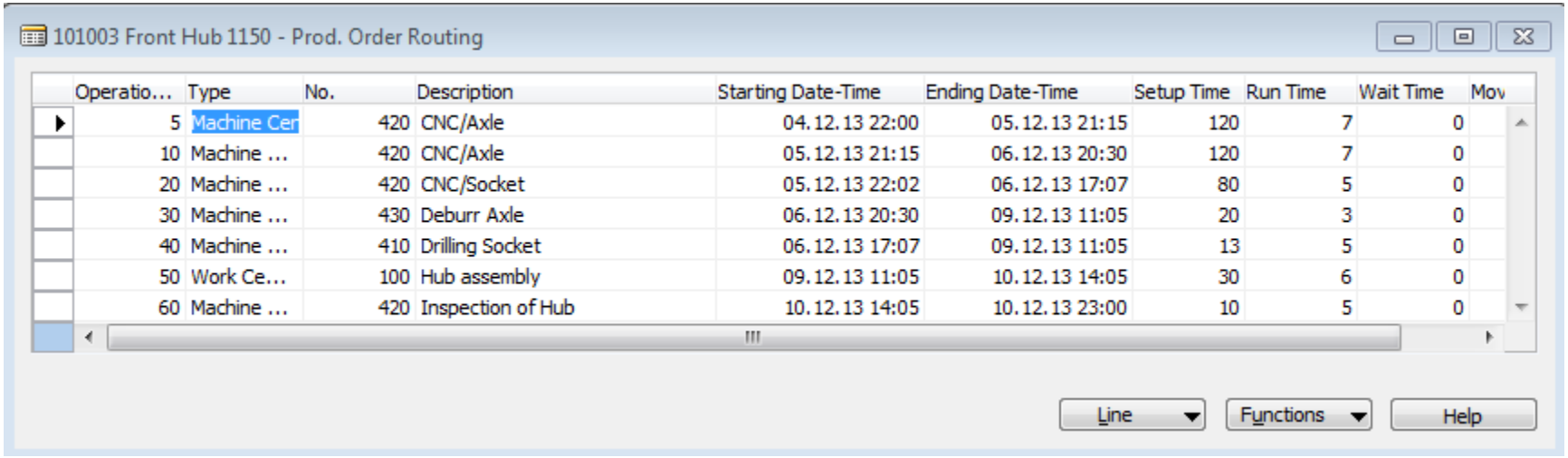


Routing from PO



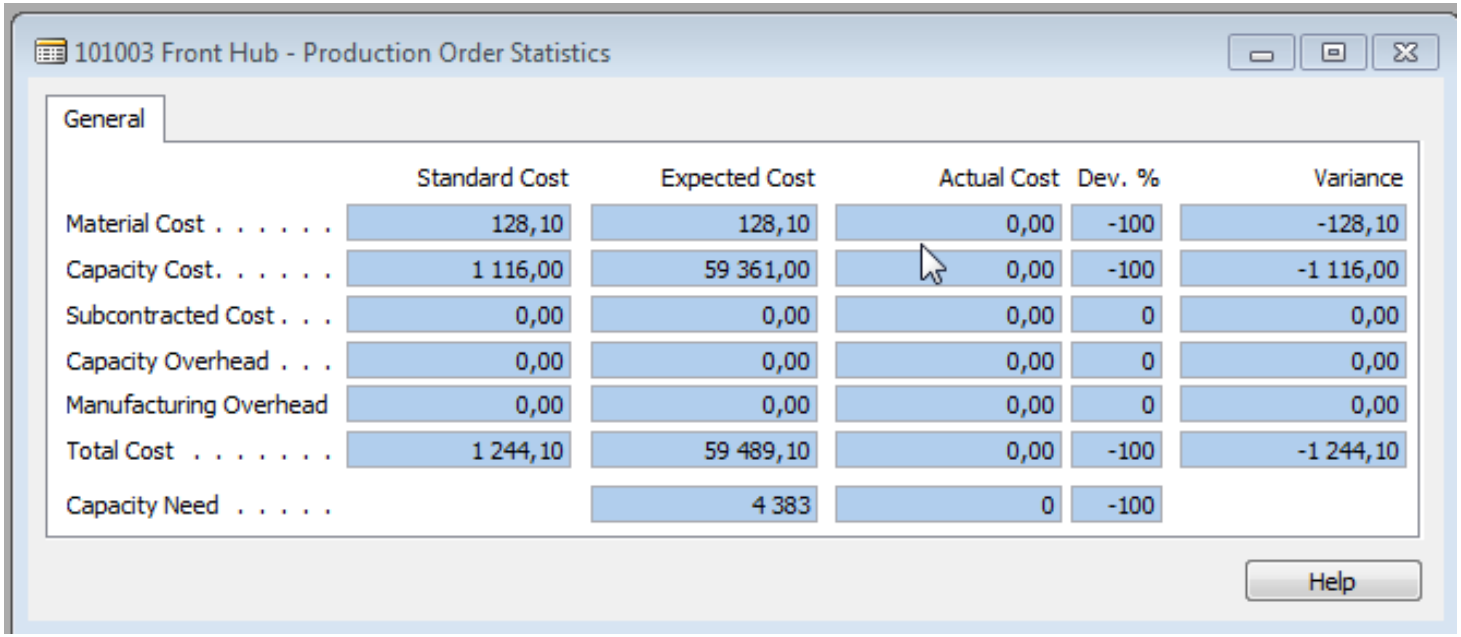
SEE NEXT SLIDE

Routing



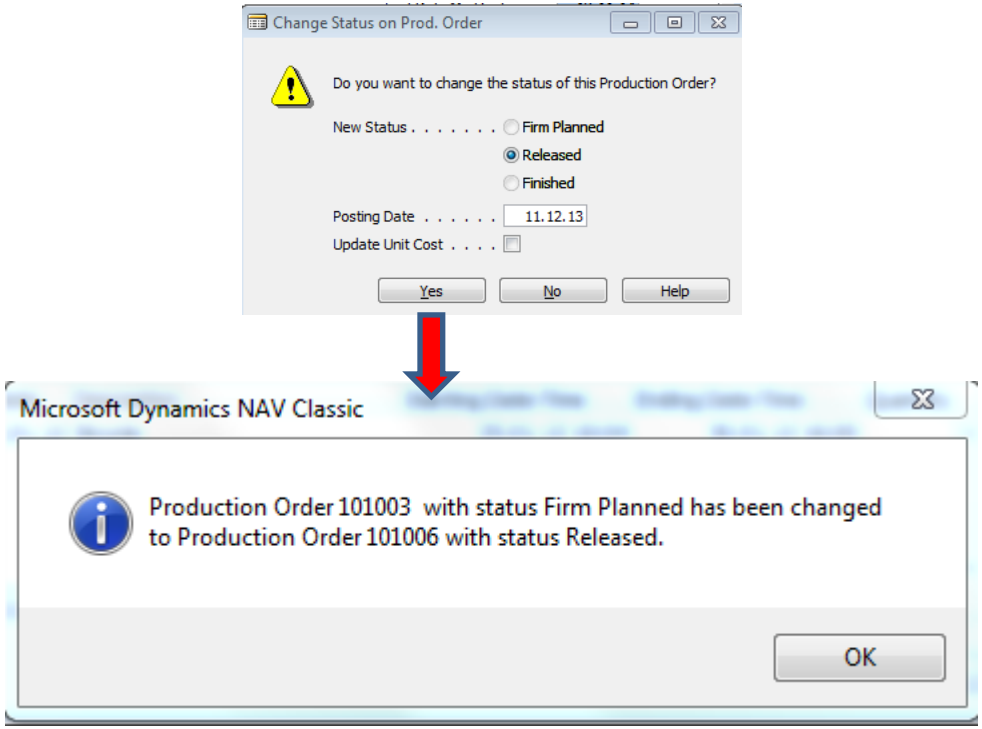
Operatio...	Type	No.	Description	Starting Date-Time	Ending Date-Time	Setup Time	Run Time	Wait Time	Mov
5	Machine Cer	420	CNC/Axle	04.12.13 22:00	05.12.13 21:15	120	7	0	
10	Machine ...	420	CNC/Axle	05.12.13 21:15	06.12.13 20:30	120	7	0	
20	Machine ...	420	CNC/Socket	05.12.13 22:02	06.12.13 17:07	80	5	0	
30	Machine ...	430	Deburr Axle	06.12.13 20:30	09.12.13 11:05	20	3	0	
40	Machine ...	410	Drilling Socket	06.12.13 17:07	09.12.13 11:05	13	5	0	
50	Work Ce...	100	Hub assembly	09.12.13 11:05	10.12.13 14:05	30	6	0	
60	Machine ...	420	Inspection of Hub	10.12.13 14:05	10.12.13 23:00	10	5	0	

Statistics from PO



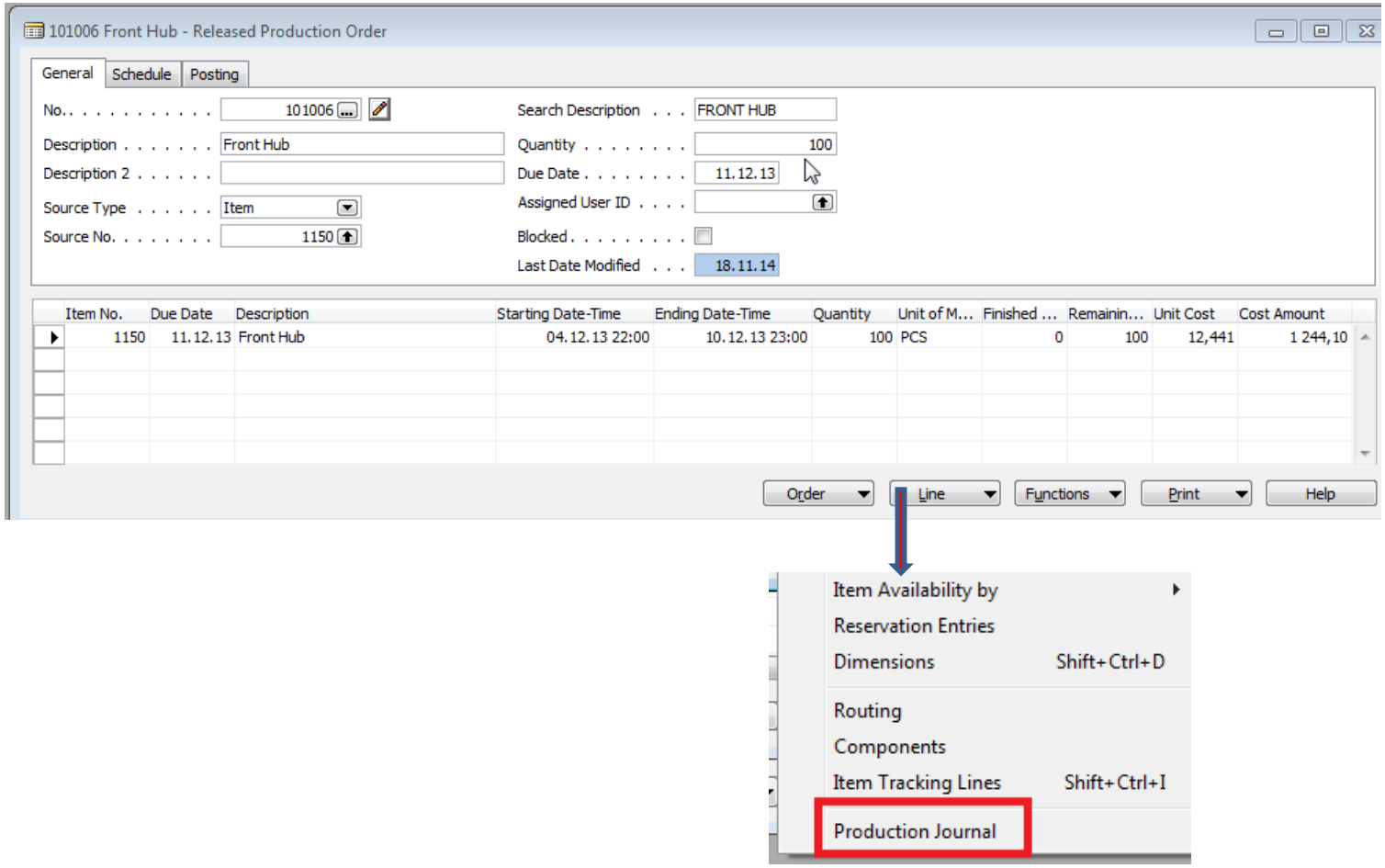
Status change

- PO button Function ->Change unit status ->Released

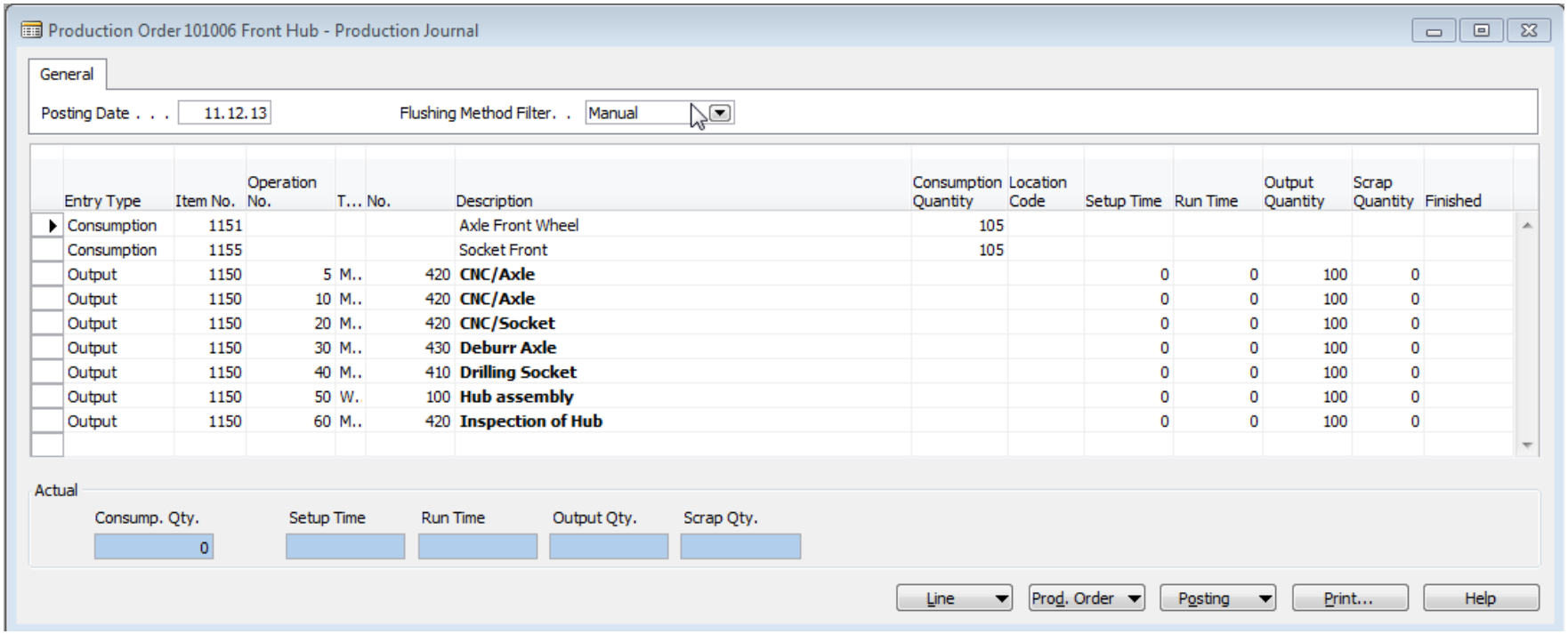


New Released PO has the same structure like Firmed Planned PO !!!

Consumption from Released PO



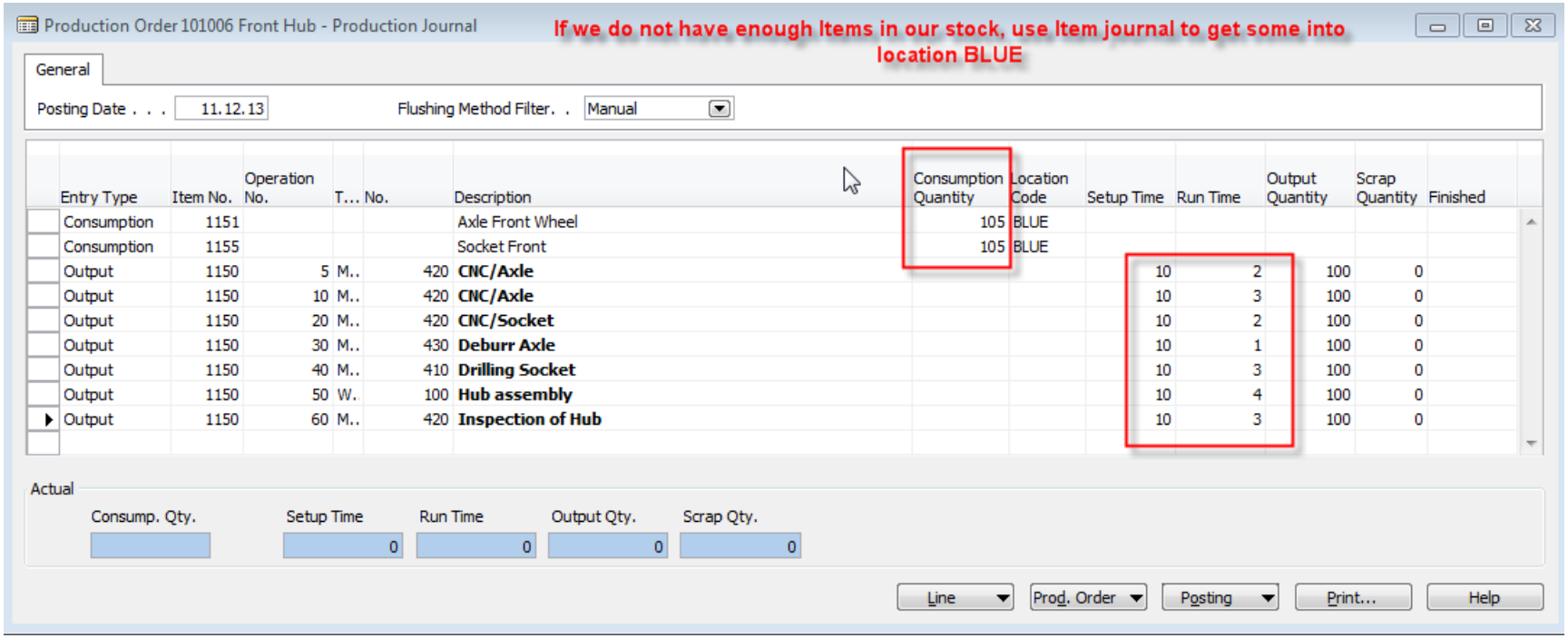
Production Journal I.



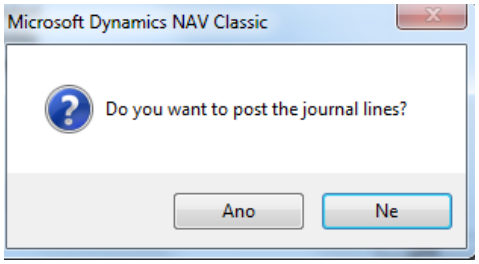
You have to enter Setup times and real Run times for every lines

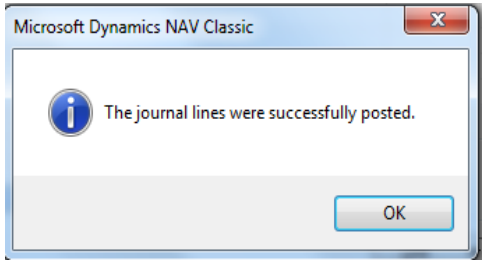
SEE NEXT SLIDE

Production Journal II.



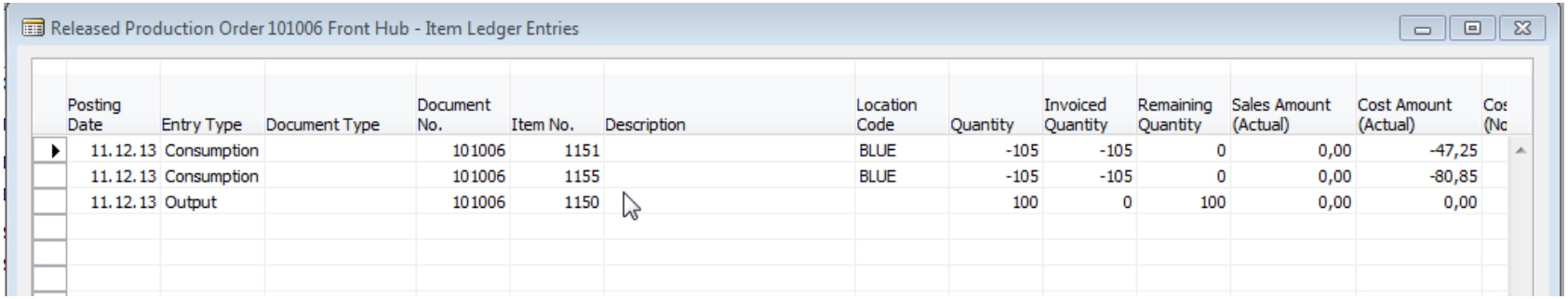
F11



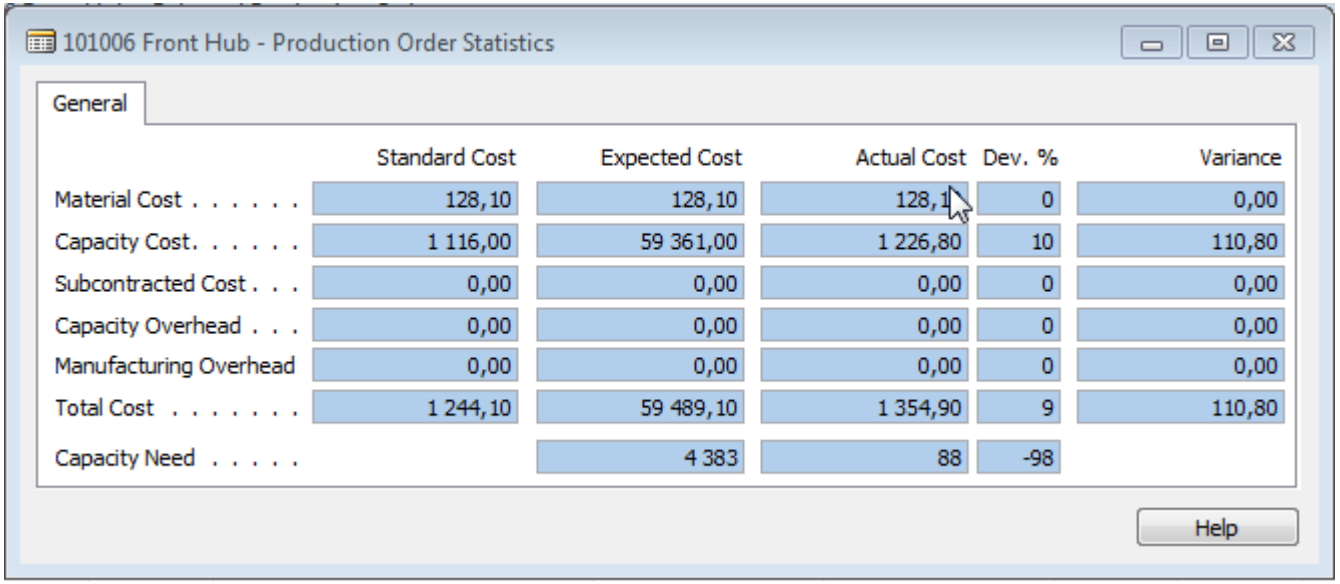


SEE NEXT SLIDE

PO Entries and Statistics (F9)



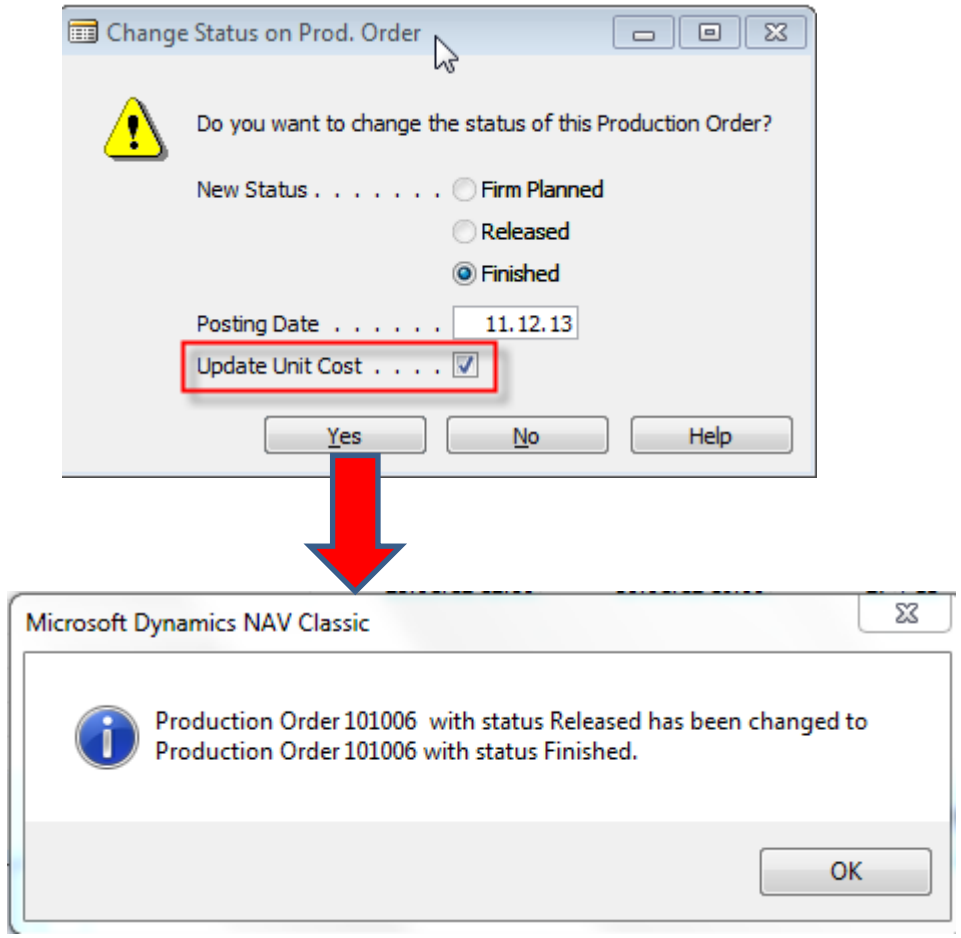
Posting Date	Entry Type	Document Type	Document No.	Item No.	Description	Location Code	Quantity	Invoiced Quantity	Remaining Quantity	Sales Amount (Actual)	Cost Amount (Actual)	Cos (Nc
11.12.13	Consumption		101006	1151		BLUE	-105	-105	0	0,00	-47,25	
11.12.13	Consumption		101006	1155		BLUE	-105	-105	0	0,00	-80,85	
11.12.13	Output		101006	1150			100	0	100	0,00	0,00	



	Standard Cost	Expected Cost	Actual Cost	Dev. %	Variance
Material Cost	128,10	128,10	128,1	0	0,00
Capacity Cost.	1 116,00	59 361,00	1 226,80	10	110,80
Subcontracted Cost . . .	0,00	0,00	0,00	0	0,00
Capacity Overhead . . .	0,00	0,00	0,00	0	0,00
Manufacturing Overhead	0,00	0,00	0,00	0	0,00
Total Cost	1 244,10	59 489,10	1 354,90	9	110,80
Capacity Need		4 383	88	-98	

Help

Change status PO->Finished



End of the section XXVI.