












 **Controller Example\_9\_1** **Controller Fault Handler** **Power-Up Handler****Tasks** **MainTask** **MainProgram** **MainRoutine** **Simulation** **Simulation** **Unscheduled****Motion Groups** **Ungrouped Axes****Add-On Instructions****Data Types** **User-Defined** **Seq\_Type**

Counter-Based Sequencer

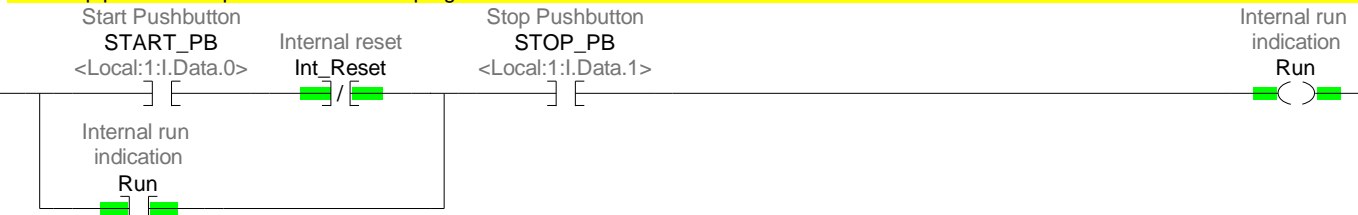
 **Strings** **Add-On-Defined** **Module-Defined** **AB:1756\_DI:C:1** **AB:1756\_DI:I:0** **AB:1756\_DO:C:0** **AB:1756\_DO:I:0** **AB:1756\_DO:O:0****Trends****I/O Configuration** **1756 Backplane, 1756-A10** **[0] 1756-L71 Example\_9\_1** **[1] 1756-IB32/A Disc\_In** **[2] 1756-OB16I Disc\_Out**

Example 9.1 - Engine Inverter with move-based sequencer

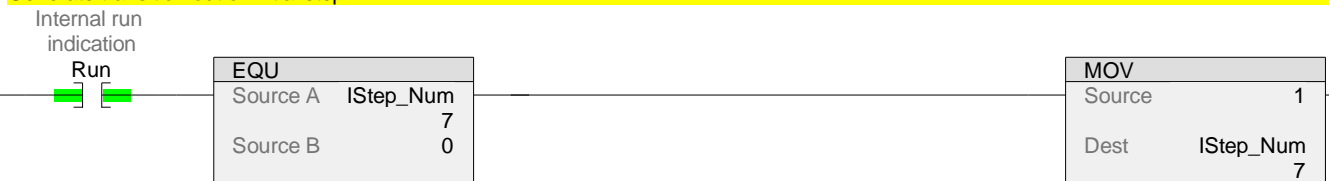
Copyright (c) 2022 Dogwood Valley Press, LLC

0 [ NOP ]

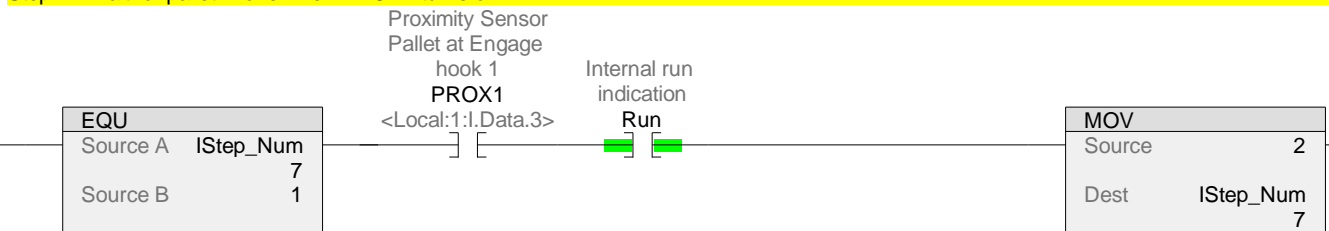
Start/stop/pause. Start prevented if reset in progress.



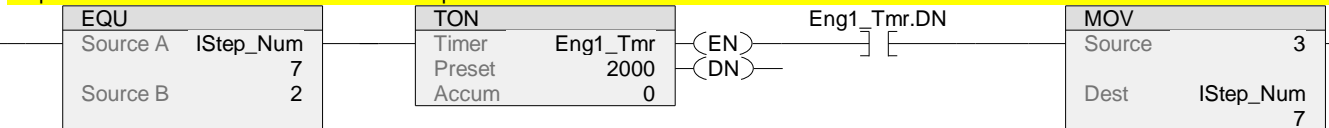
Generate transition out of initial step



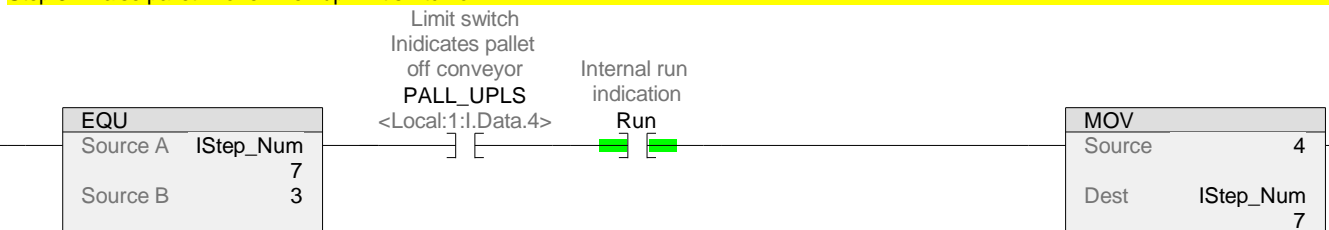
Step 1 - Wait for pallet. Done when PROX1 turns on.



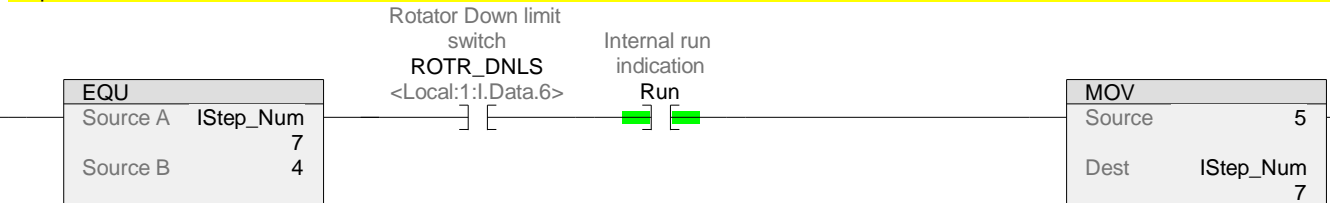
Step 2 - Move to hook 2. Done when 2 sec elapsed.



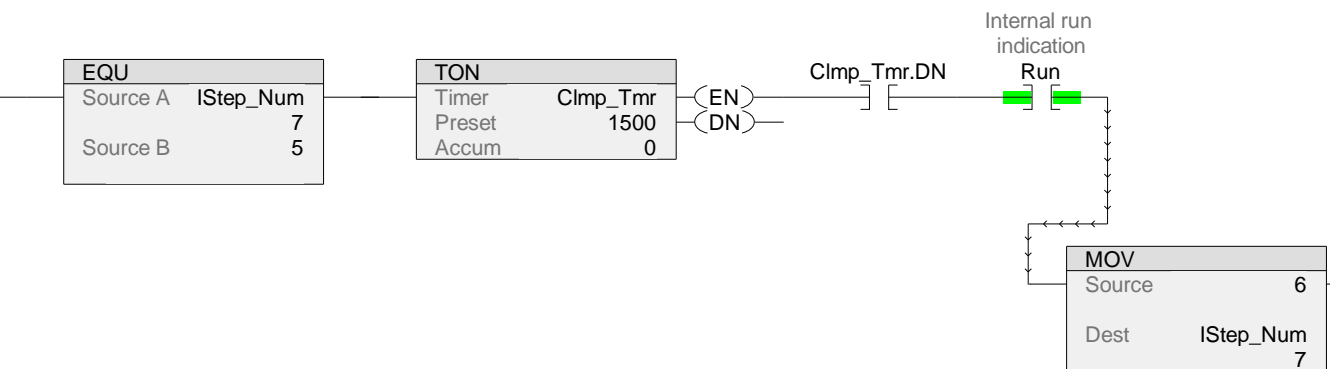
Step 3 - Raise pallet. Done when up limit switch on.



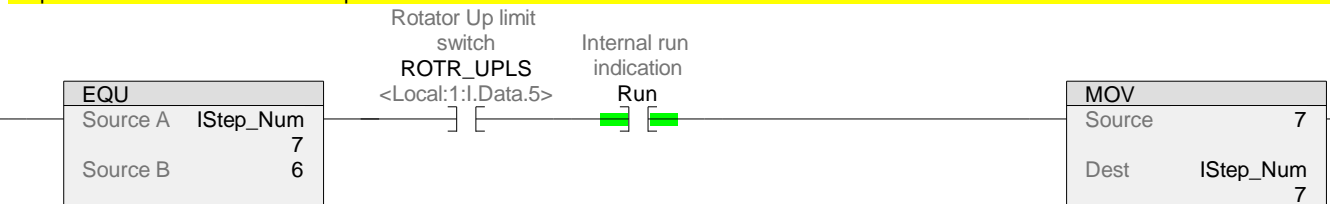
Step 4 - Lower rotator. Done when limit switch on.



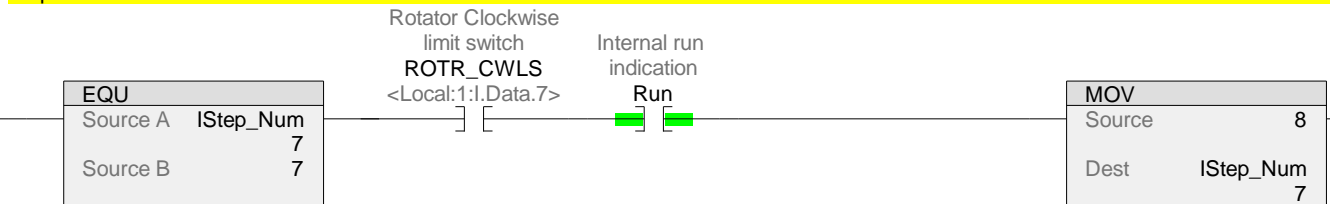
Step 5 - Clamp engine. Done when 1.5 sec elapsed.



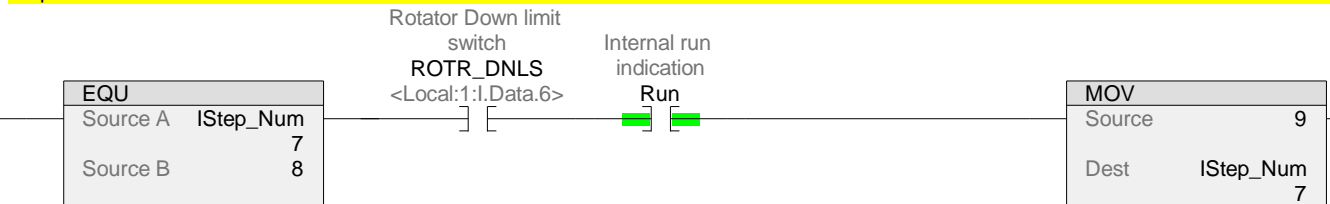
Step 6 - Raise rotator. Done when up limit switch on.



Step 7 - Rotate CW. Done when cw limit switch on.

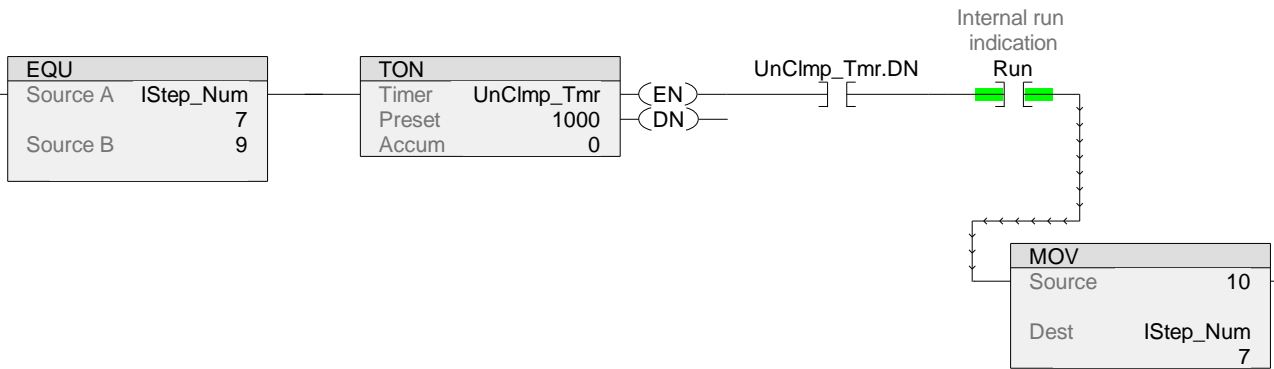


Step 8 - Lower rotator. Done when down limit switch on.



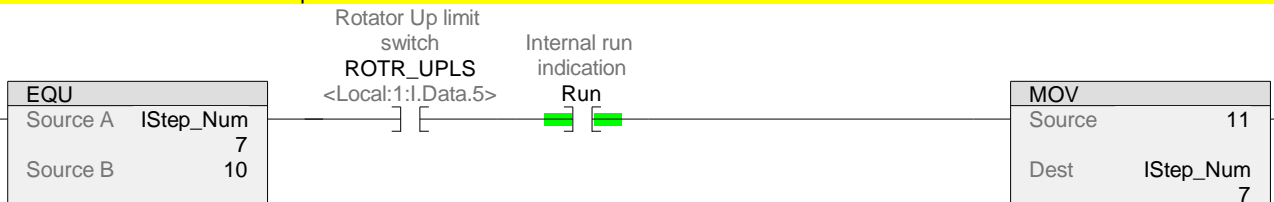
## Step 9 - Unclamp engine. Done when 1 sec elapsed.

11



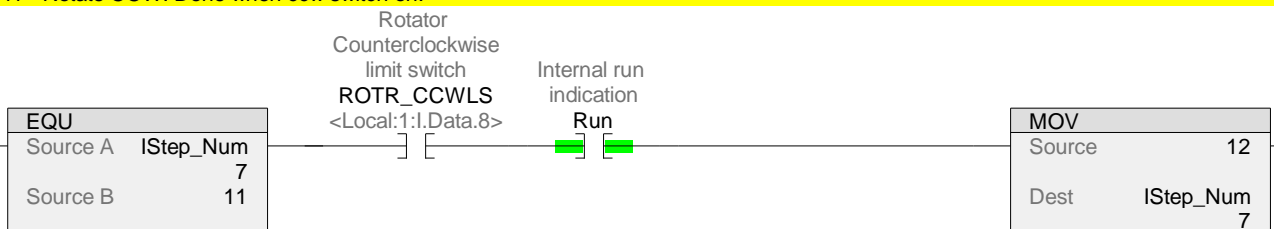
## Step 10 - Raise rotator. Done when up limit switch on.

12



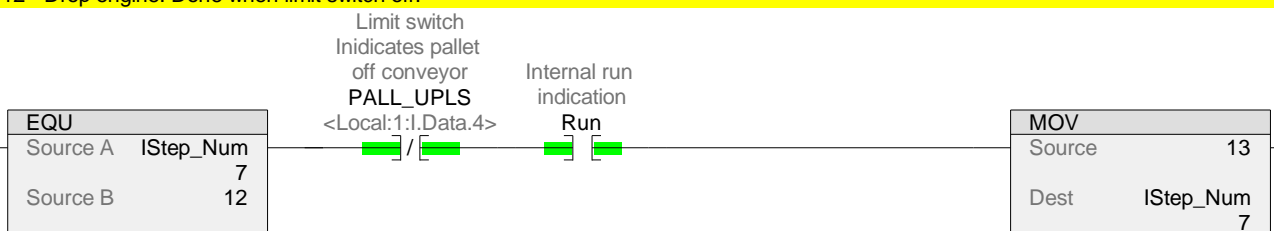
## Step 11 - Rotate CCW. Done when ccw switch on.

13

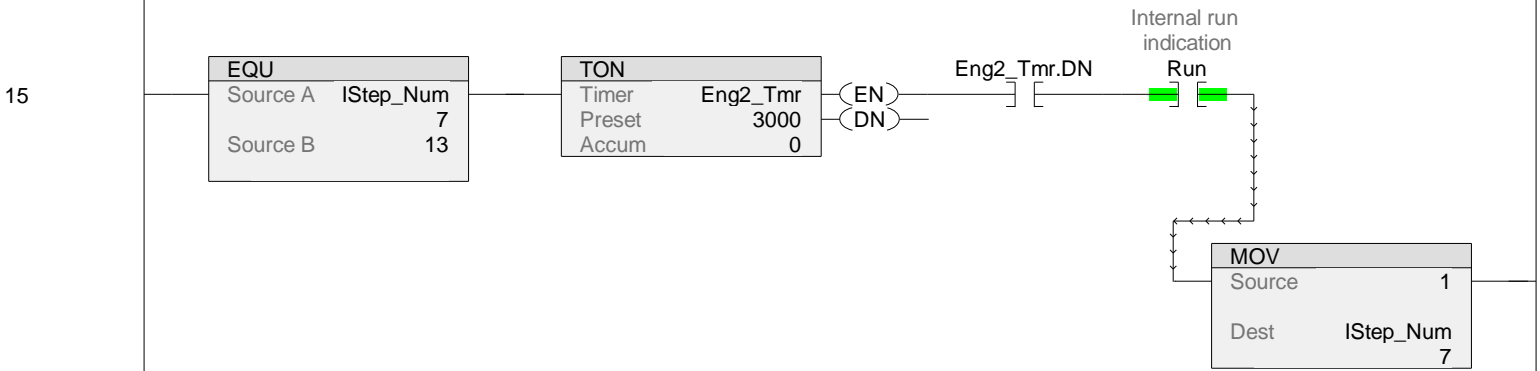


## Step 12 - Drop engine. Done when limit switch off.

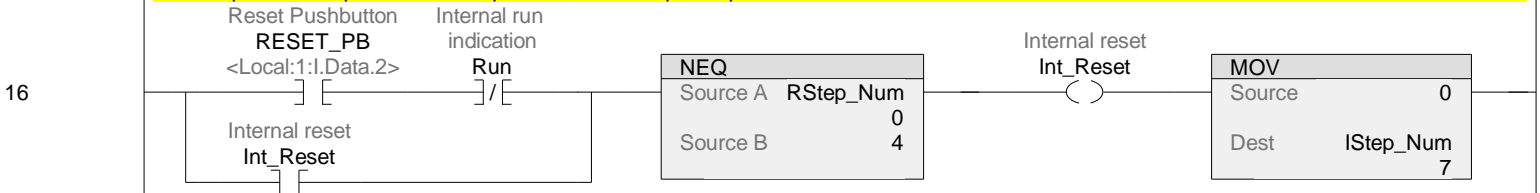
14



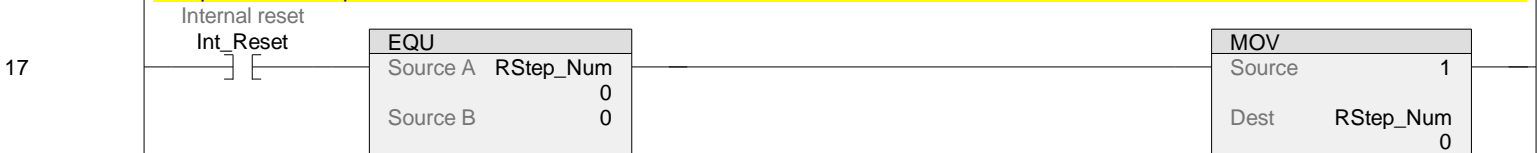
Step 13 - Move pallet out. Done when 3 sec elapsed. Jump to step 1.



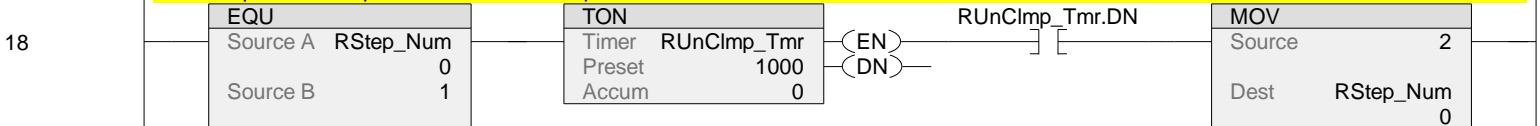
Start/stop for reset operation. Reset pb starts, reset step 4 stops it.



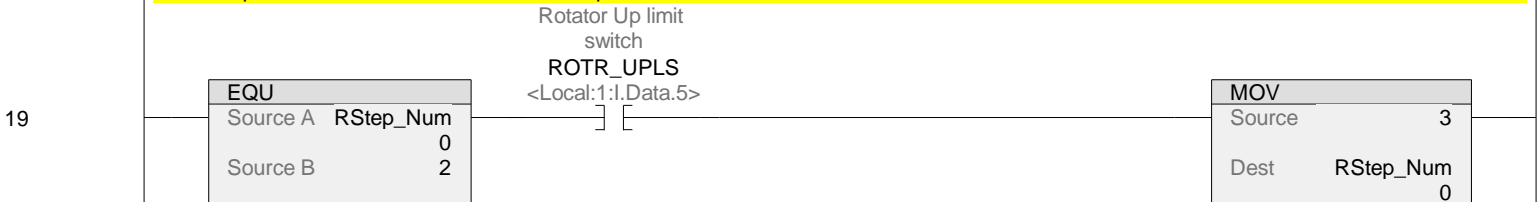
First press of Reset pb starts reset.

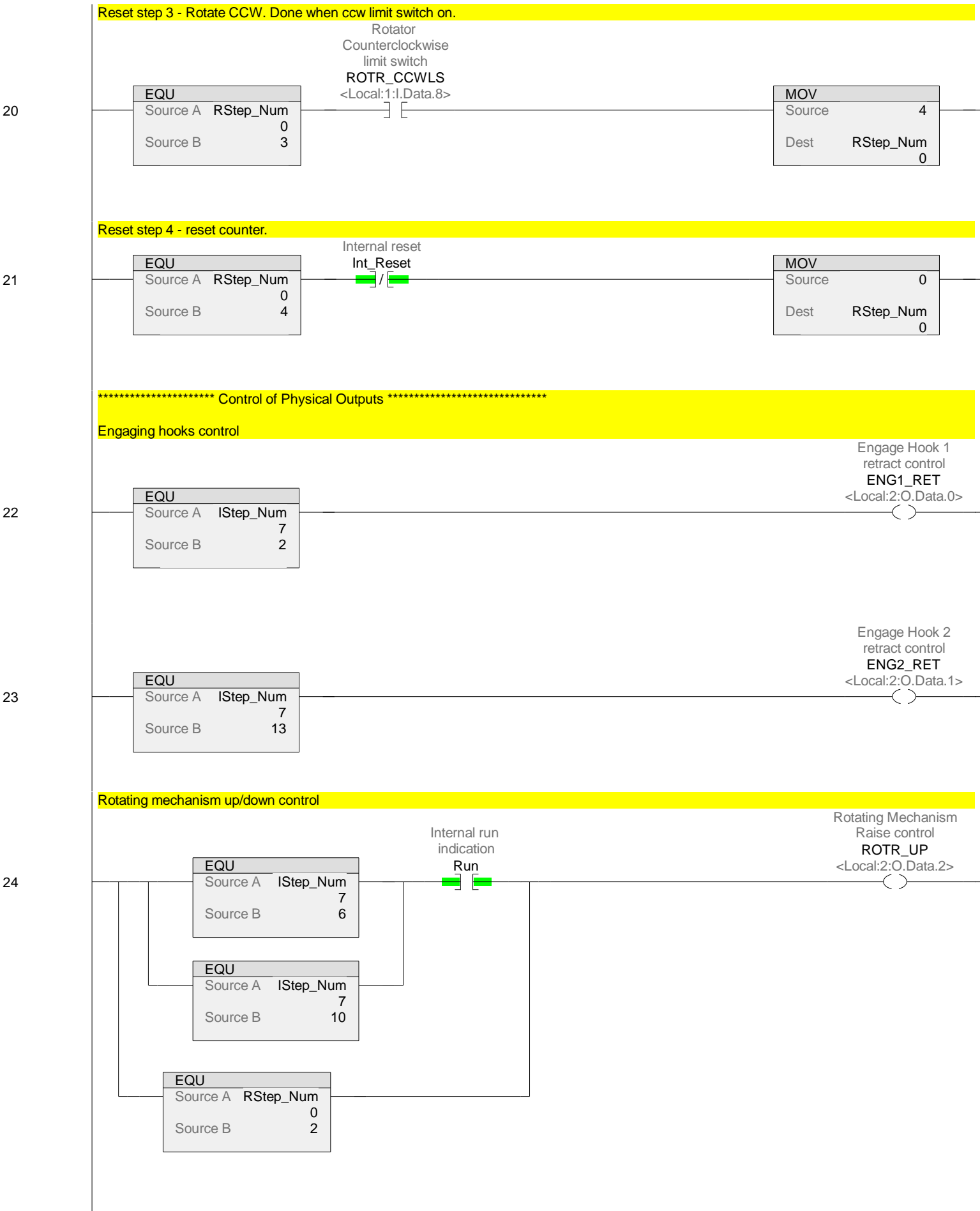


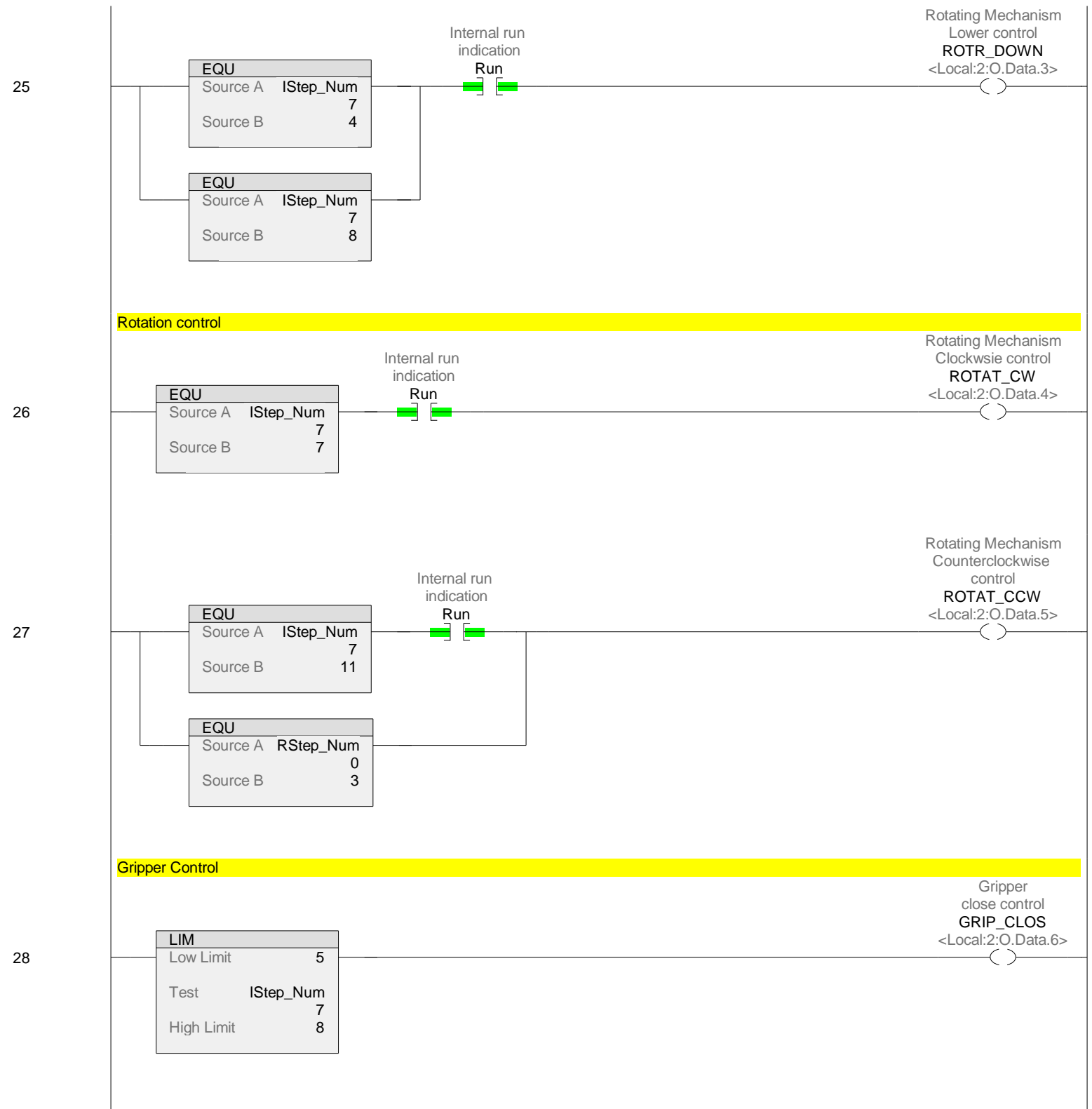
Reset step 1 - Unclamp. Done when 1 sec elapsed.



Reset step 2 - Raise mechanism. Done when up limit switch is on.







## Pallet up control

Pallet Retainer  
Up and off conveyor  
control  
**PALL\_UPCTL**  
<Local:2:O.Data.7>

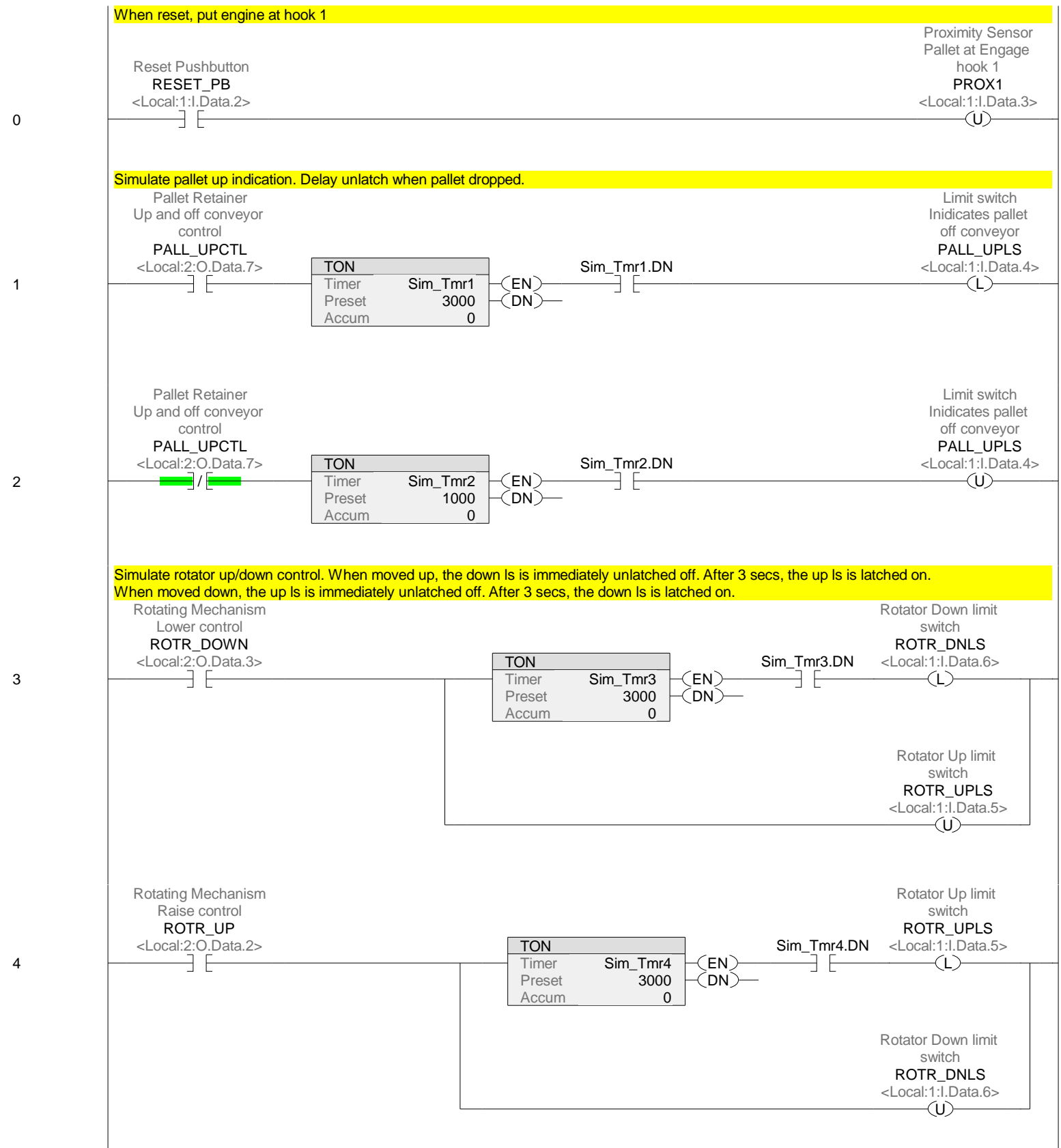
LIM		
Low Limit		3
Test	IStep_Num	7
High Limit		11



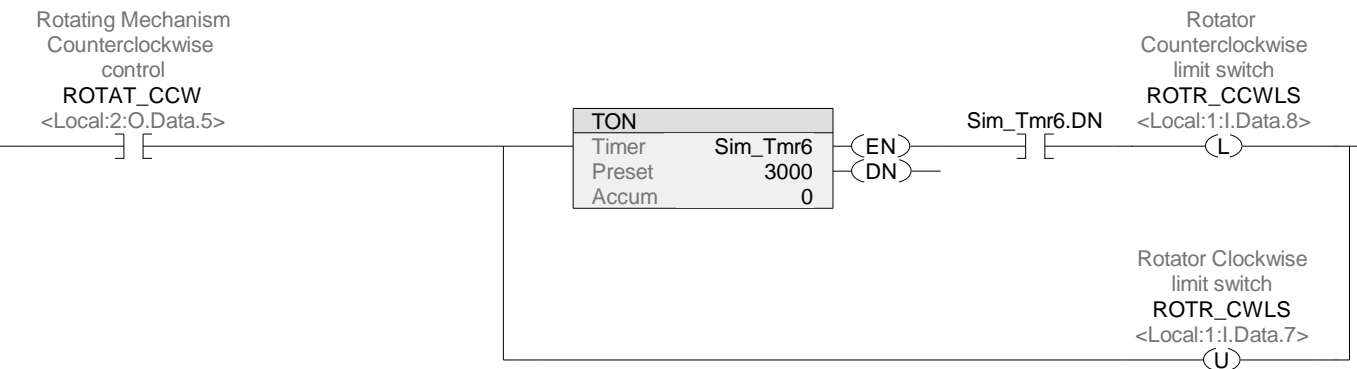
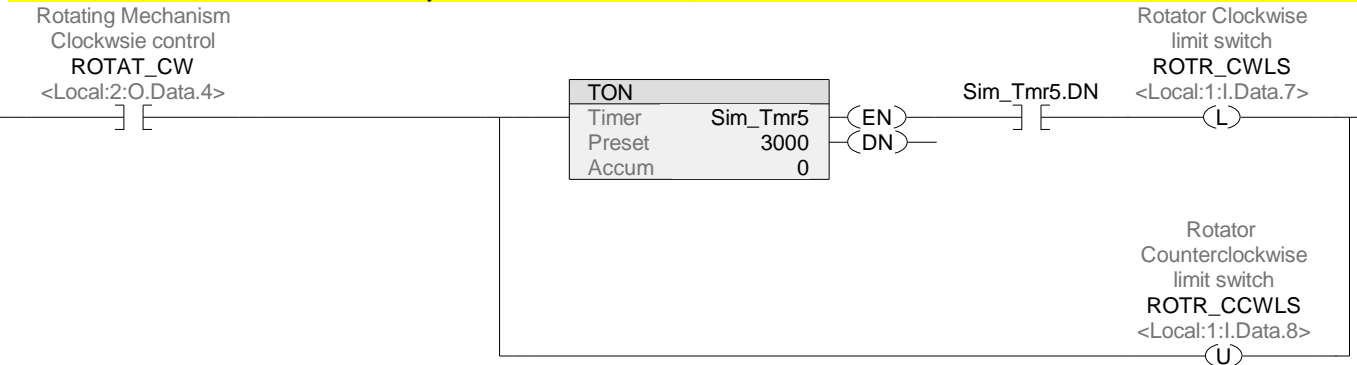
29

(End)

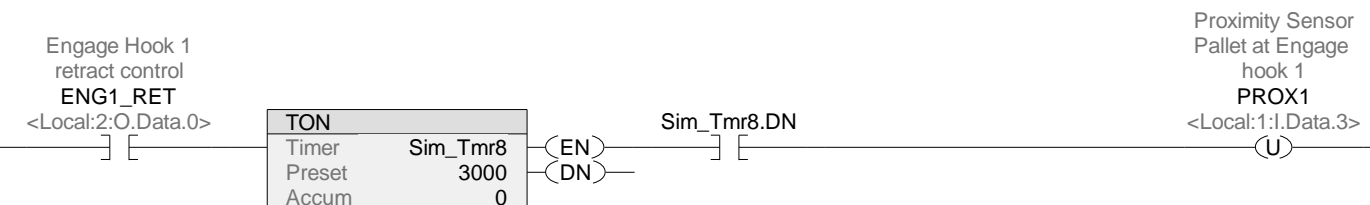
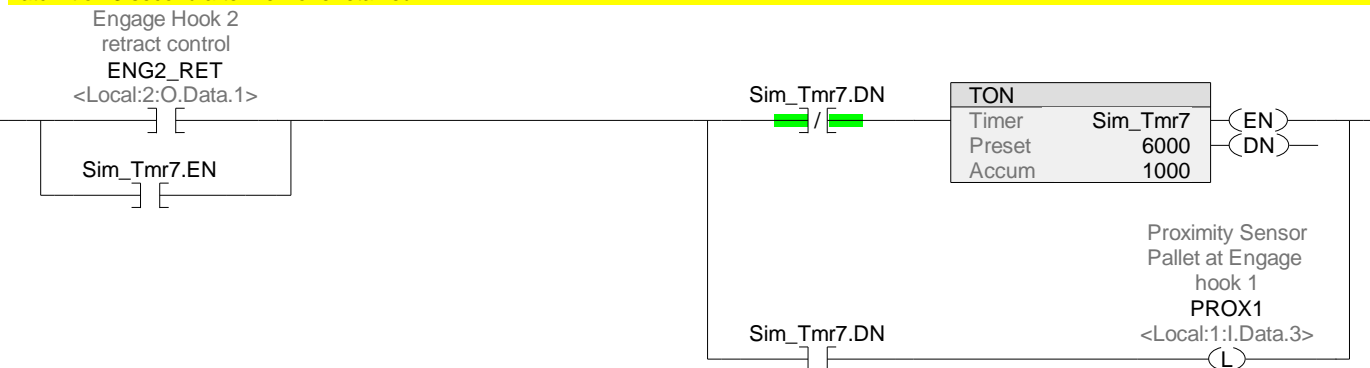




Simulate rotator rotating control. When rotated CW, the CCW Is is immediately unlatched off. After 3 secs, the CW Is is latched on.  
When rotated CCW, the CW Is is immediately unlatched off. After 3 secs, the CCW Is is latched on.



Simulate Pallet Prox  
Latch it on 6 seconds after one has left the station.  
Latch it off 3 second after new one retained.



(End)