



**Robotics and Industrial
Automation**

CNTR8011–Factory Talk Automation

Summer
2025

Project 2

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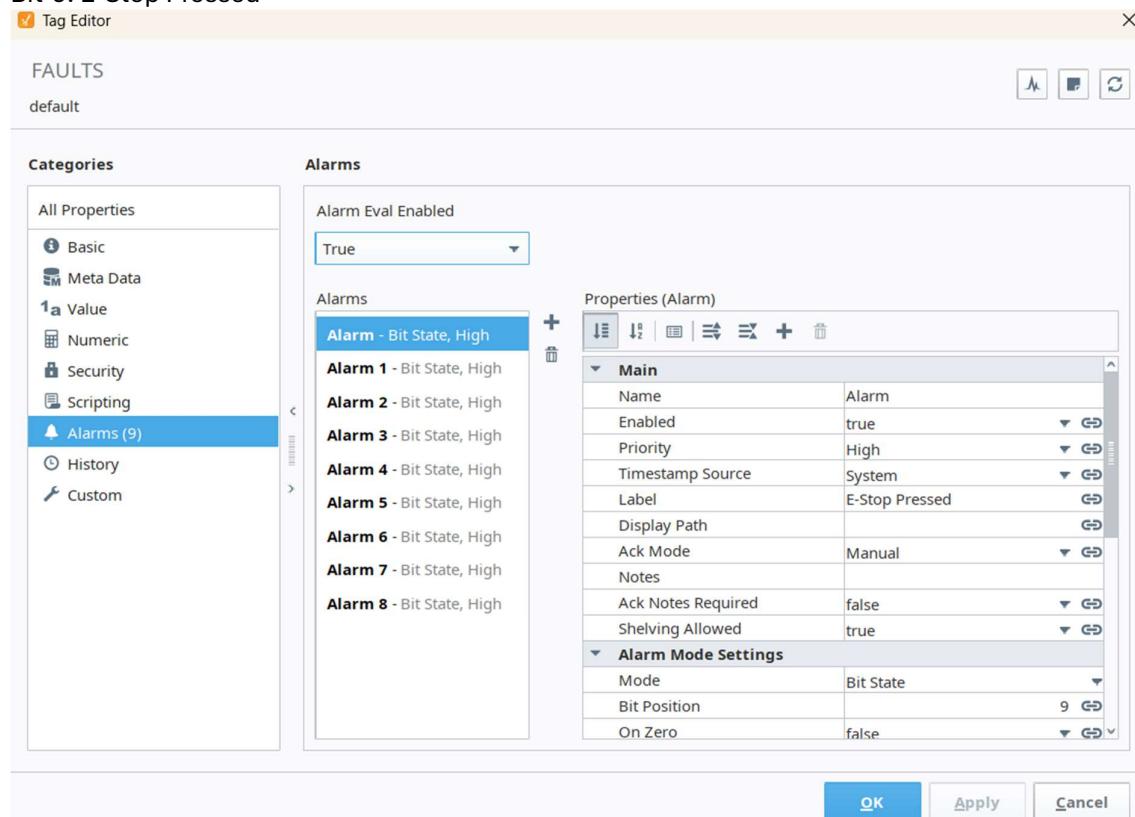
Instructor: Robert Gurr

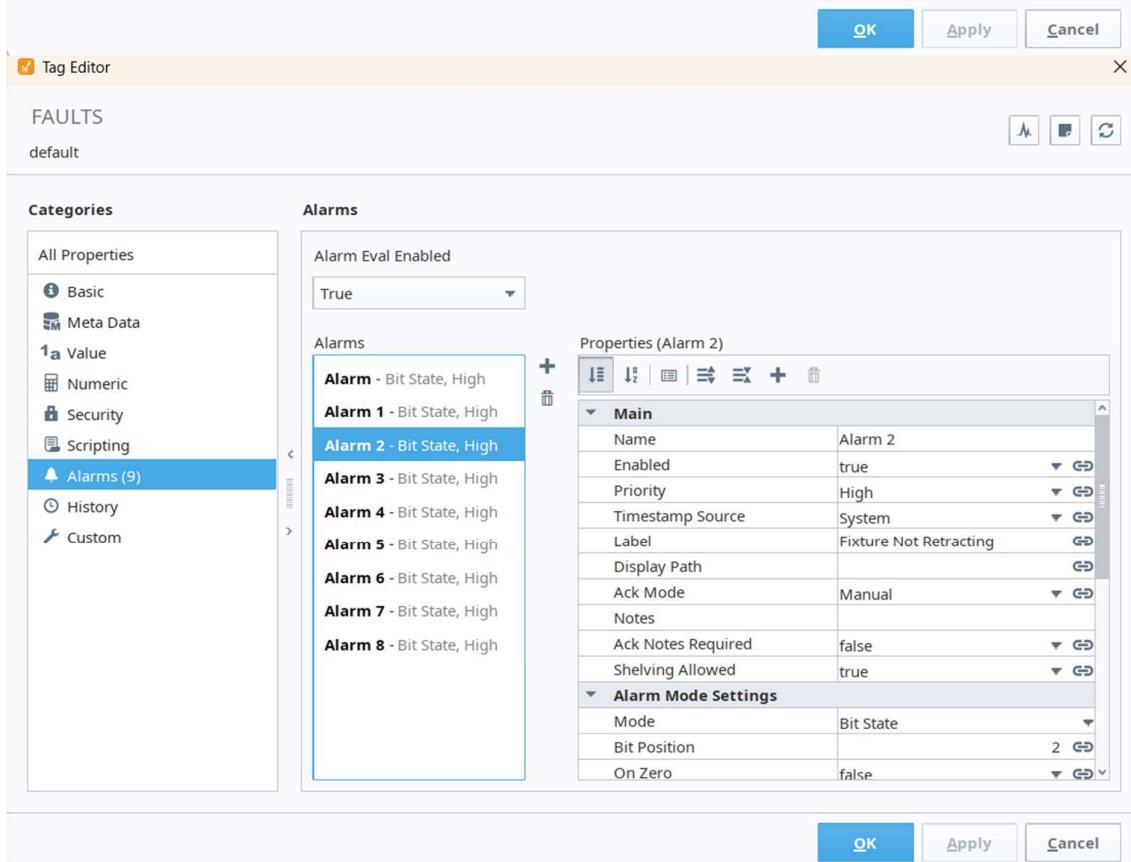
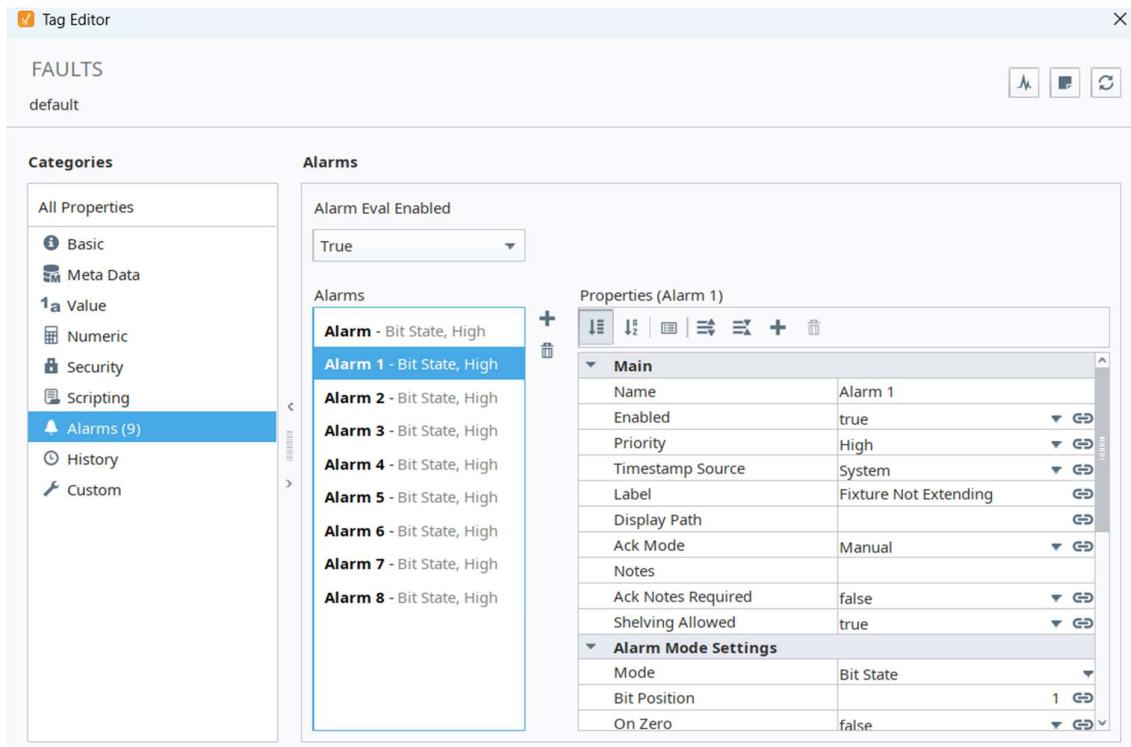
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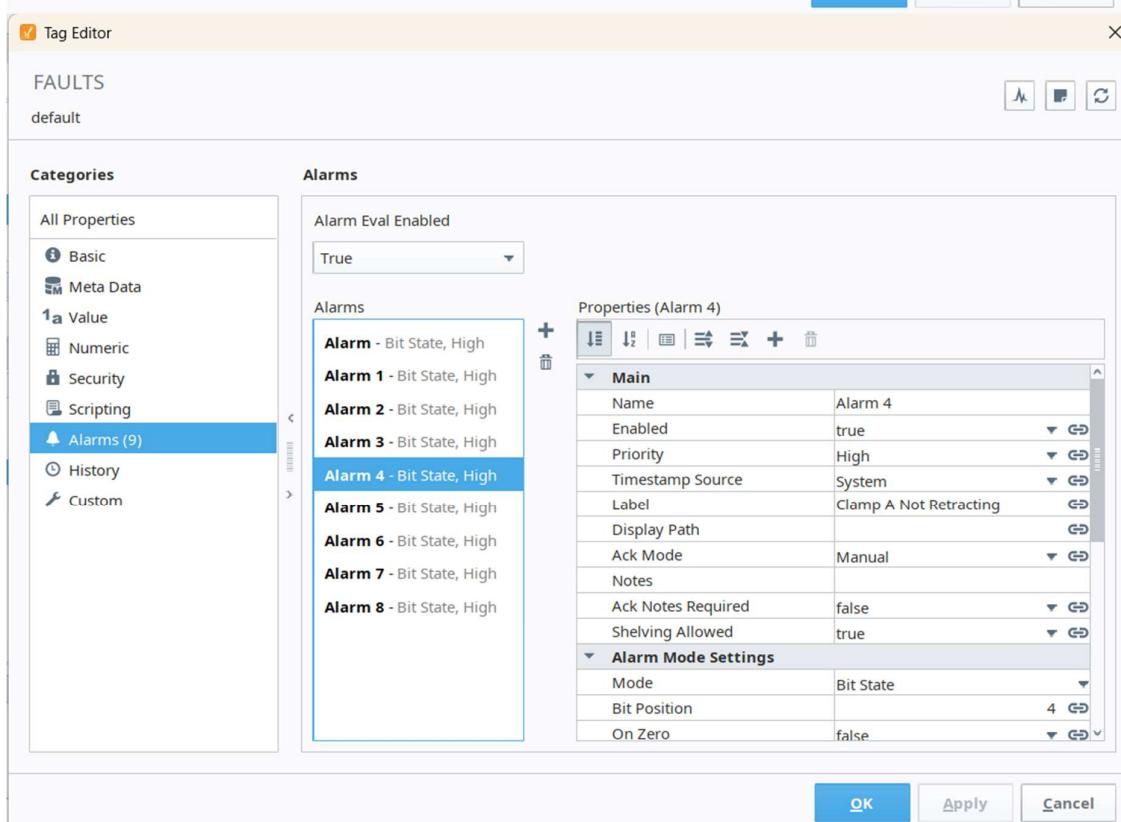
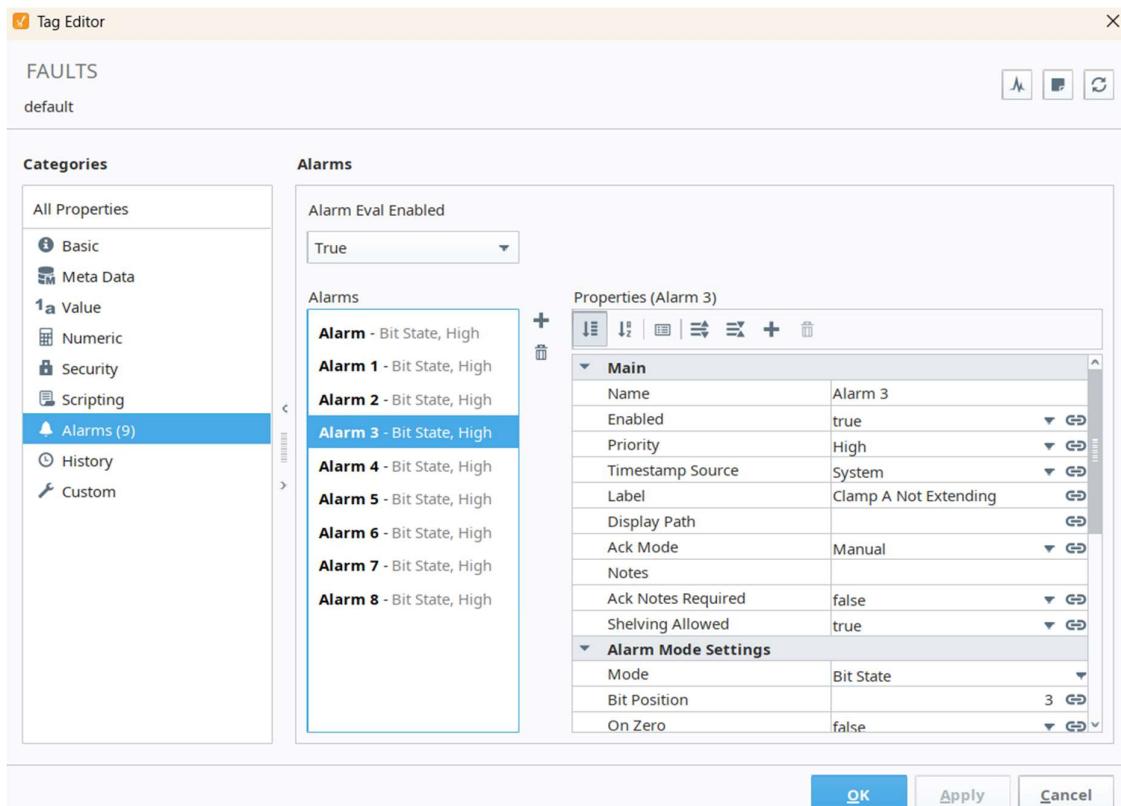
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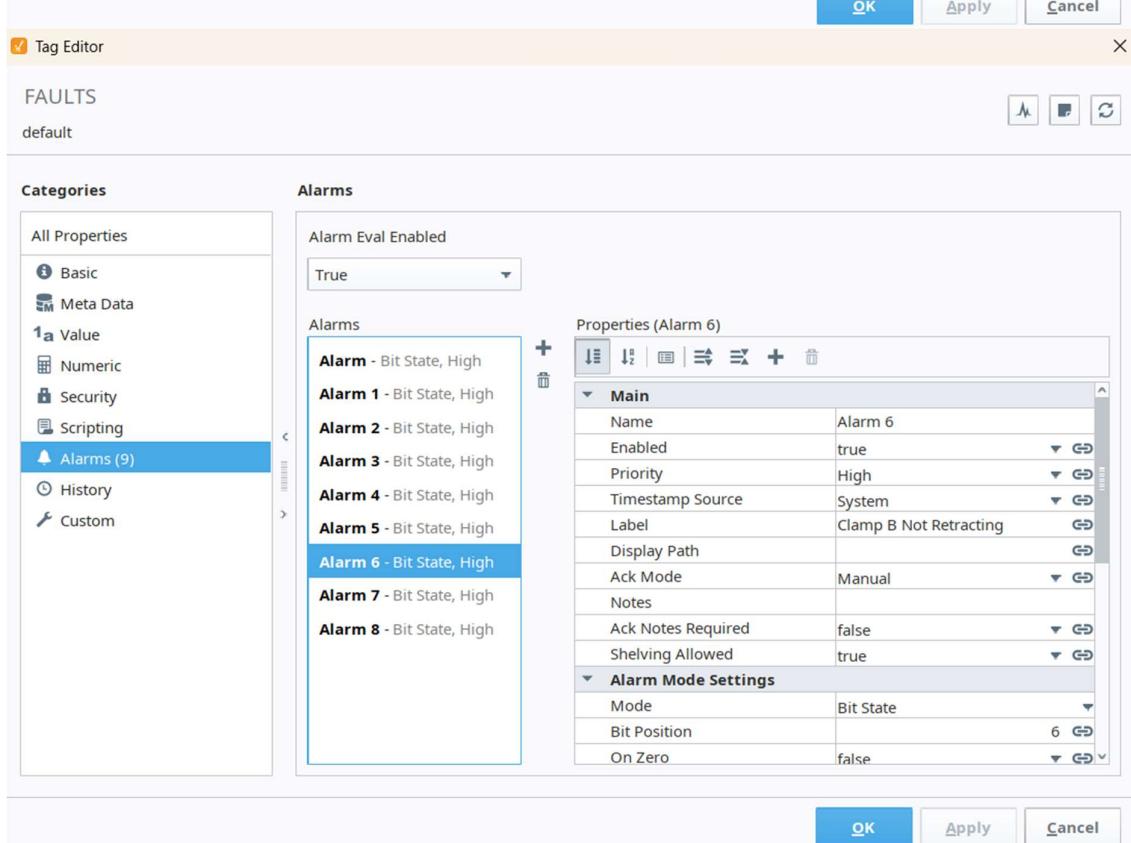
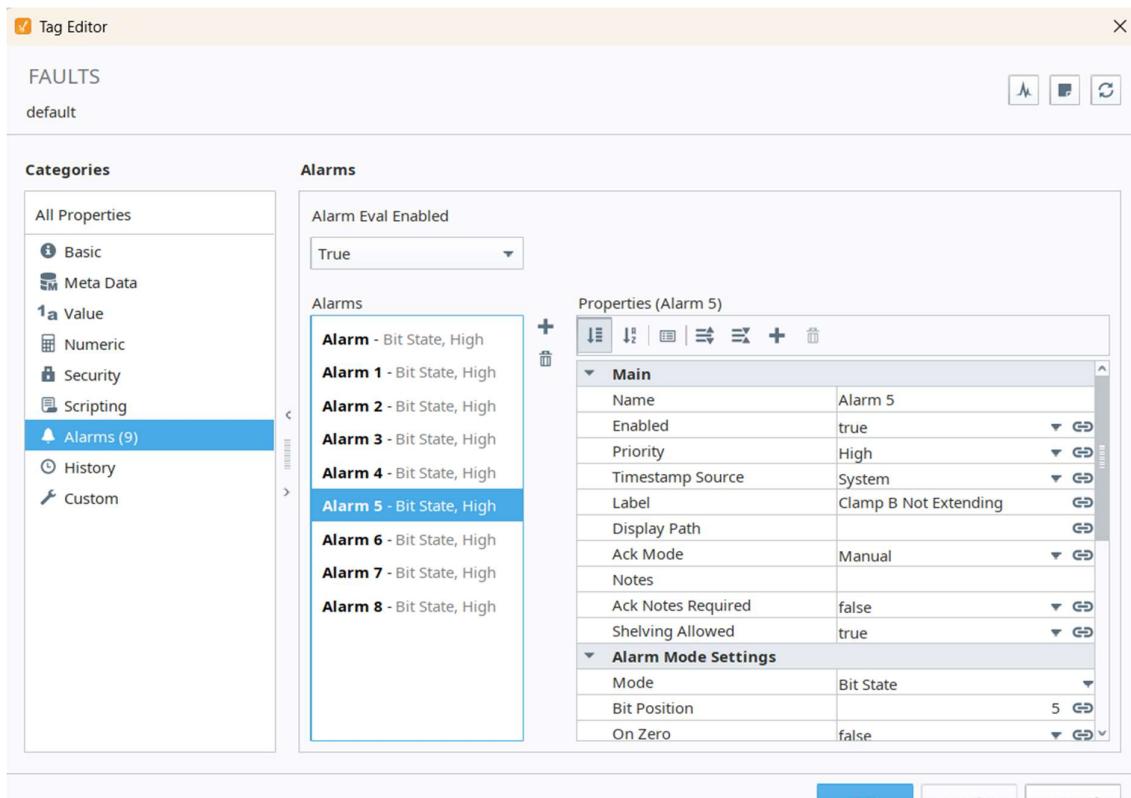
Alarms Setup:

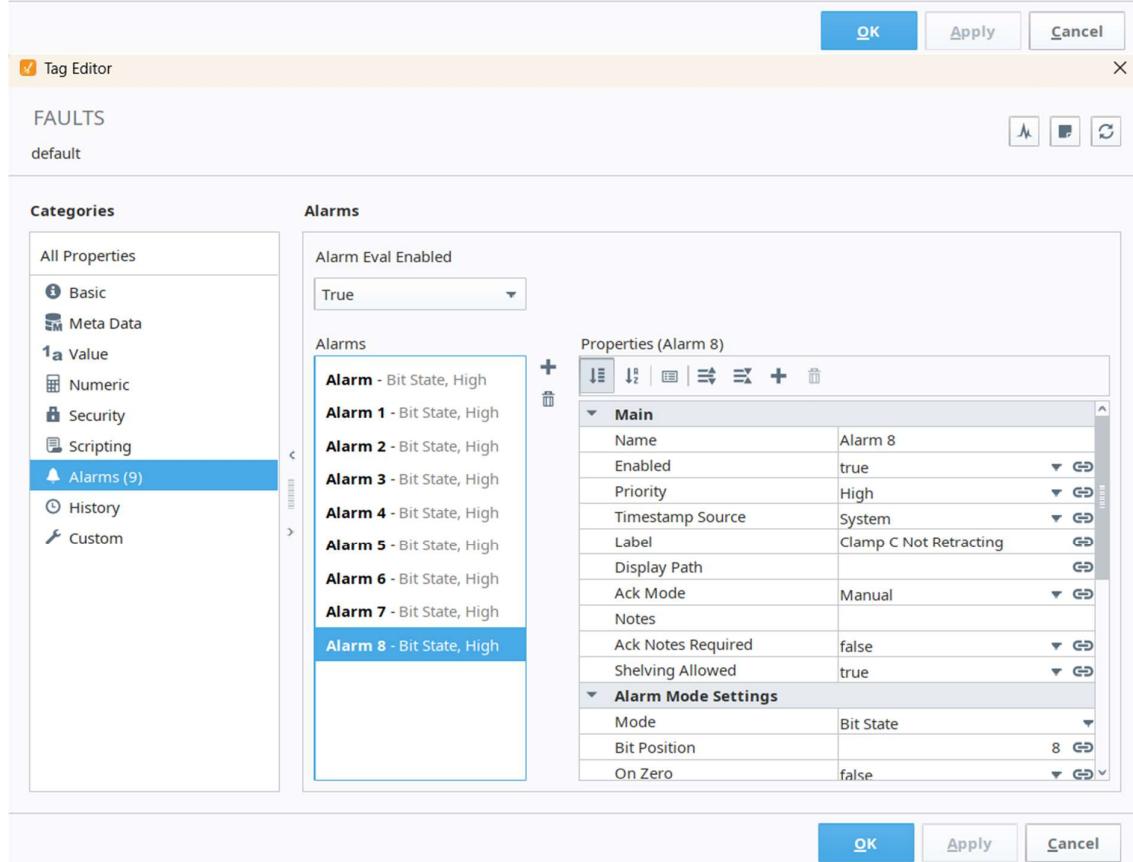
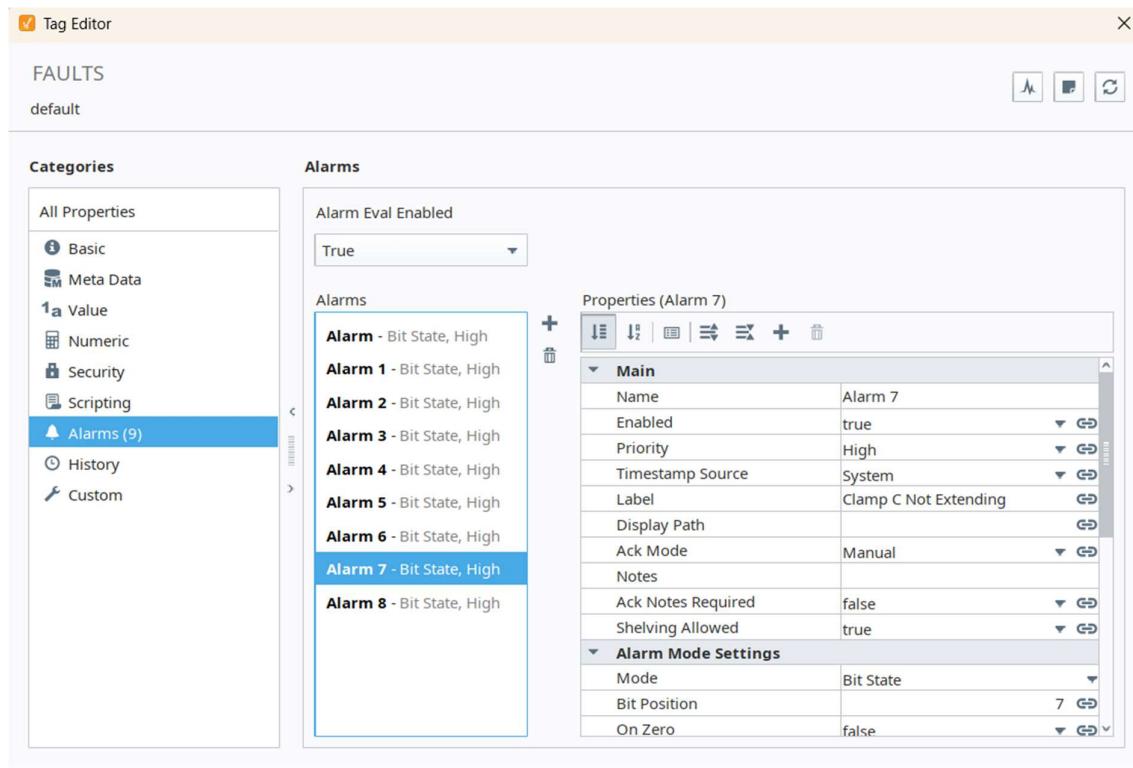
Bit-1 : Fixture Not Extending
 Bit-2 : Fixture Not Retracting
 Bit-3: Clamp A Not Extending
 Bit-4: Clamp A Not Retracting
 Bit-5: Clamp B Not Extending
 Bit-6: Clamp B Not Retracting
 Bit-7: Clamp C Not Extending
 Bit-8: Clamp C Not Retracting
 Bit-9: E-Stop Pressed











Alarm Screen:

Contains Active Alarms and Alarm History

The screenshot displays the FactoryTalk Alarm Screen with two main sections: **ACTIVE ALARMS** and **ALARM HISTORY**.

ACTIVE ALARMS:

Active Time	Display Path	Current State	Priority	Event Id	Label
7/27/25, 5...	Level Lo Alarm	Active, Un...	Med...	b5bdc...	Lo
8/14/25, 6...	Ramp High Ala...	Cleared, U...	Low	ba4da...	High ...
8/14/25, 6...	Ramp High Ala...	Cleared, U...	Low	b60d...	High ...
8/14/25, 6...	Ramp High Ala...	Cleared, U...	Low	686ba...	High ...
8/14/25, 6...	Ramp High Ala...	Cleared, U...	Low	c6b30...	High ...
8/14/25, 6...	Ramp High Ala...	Cleared, U...	Low	6e8c9...	High ...

Buttons below ACTIVE ALARMS:

- Acknowledge
- Shelve
- Search icon
- Print icon
- Help icon

ALARM HISTORY:

Event Time	Even...	Display...	Event...	Pri...	Syst...	Ack'...	Event...	Curr...	Label	
8/14/25...	45...	evt:Sy...	Acti...	Low	True				Acti... Sys...	
8/14/25...	74...	Ramp ...	Clear	Low	False	-9.9...	Cle...	Hig...		
8/14/25...	00...	Ramp ...	Ack	Low	False	Liv...			Cle... Hig...	
8/14/25...	74...	Ramp ...	Acti...	Low	False		9.05...	Acti...	Hig...	
8/14/25...	01...	Ramp ...	Clear	Low	False	-9.9...	Cle...	Hig...		
8/14/25...	01...	Ramp ...	Acti...	Low	False		9.02...	Acti...	Hig...	
8/14/25...	81...	Ramp ...	Ack	Low	False	Liv...			Cle... Hig...	
8/14/25	af7	aut:Sv	Acti	Low	True				Acti Svc	

Buttons below ALARM HISTORY:

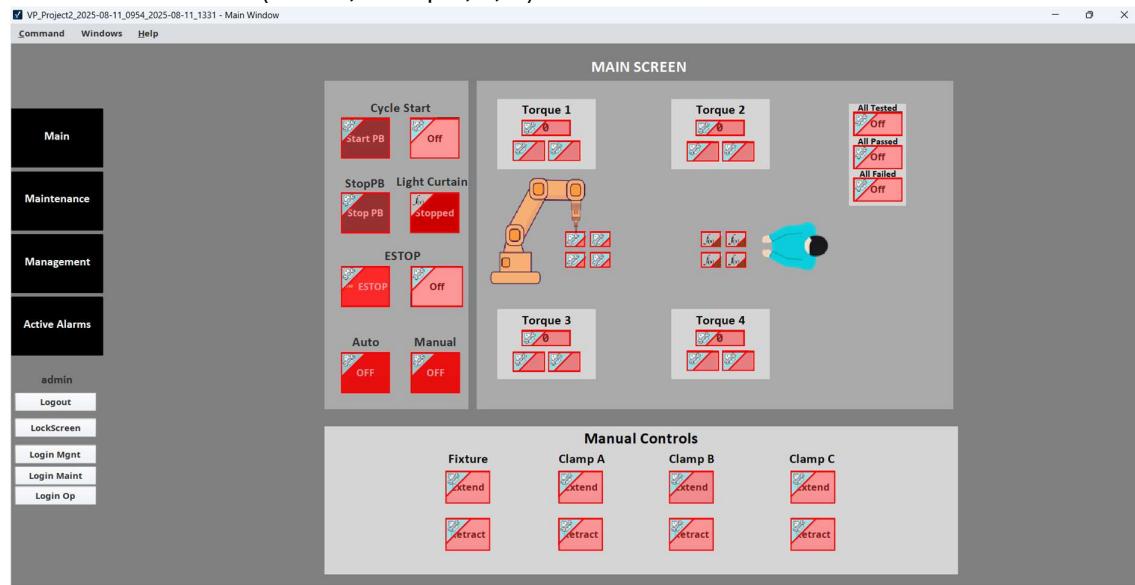
- Search icon
- Print icon
- Help icon

12 events

Main Screen:

Contains:

- Cycle Start PB and indicator
- Stop PB
- Light Curtain Indicator
- Estop PB and Indicator
- Auto And Manual PB
- Detailed Screen for Torque 1 to 4 (Torque Values, Failed/Passed)
- Indicator for (All tested/ All Failed/ All Passed)
- Manual Controls for (Fixture, Clamp A, B, C)



Maintenance Screen:

Contains:

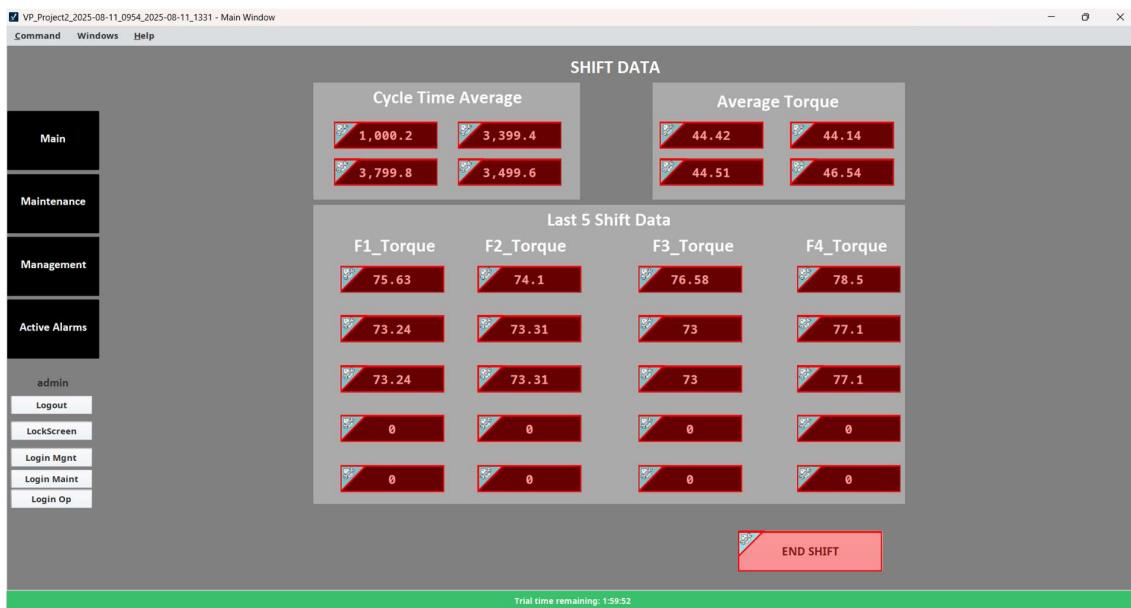
- Input for Model Change (Select from - 1/2/3)
- Load Button for loading specific model
- Inputs for Fastner 1 to 4 (Lower and Upper Limit)
- Numeric Display(Total Count, Total Passed, Total Failed – For Fastner 1-4)
- Numeric Display(Total Count and Count for Fastner 1-4)



Management:

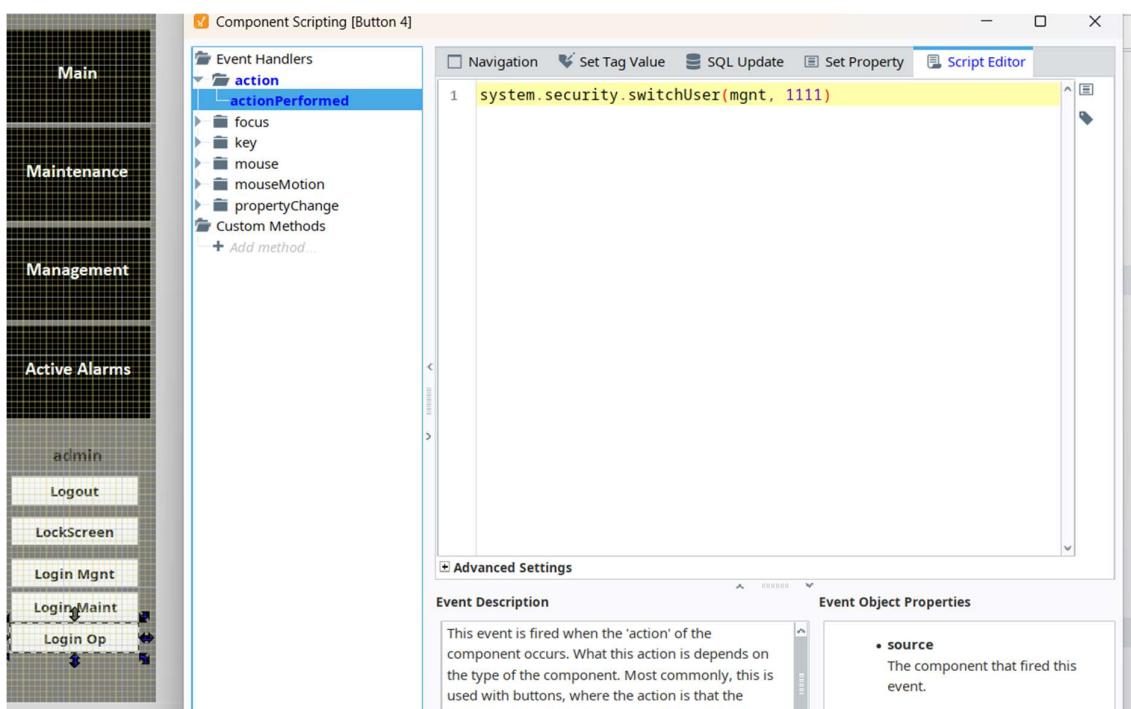
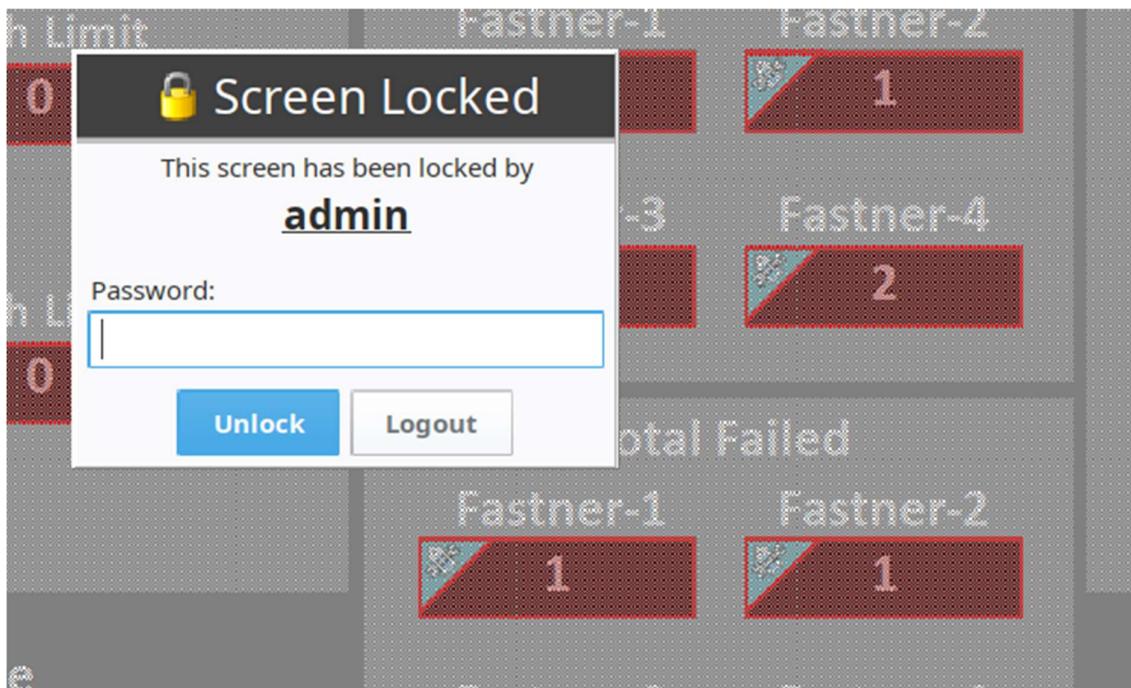
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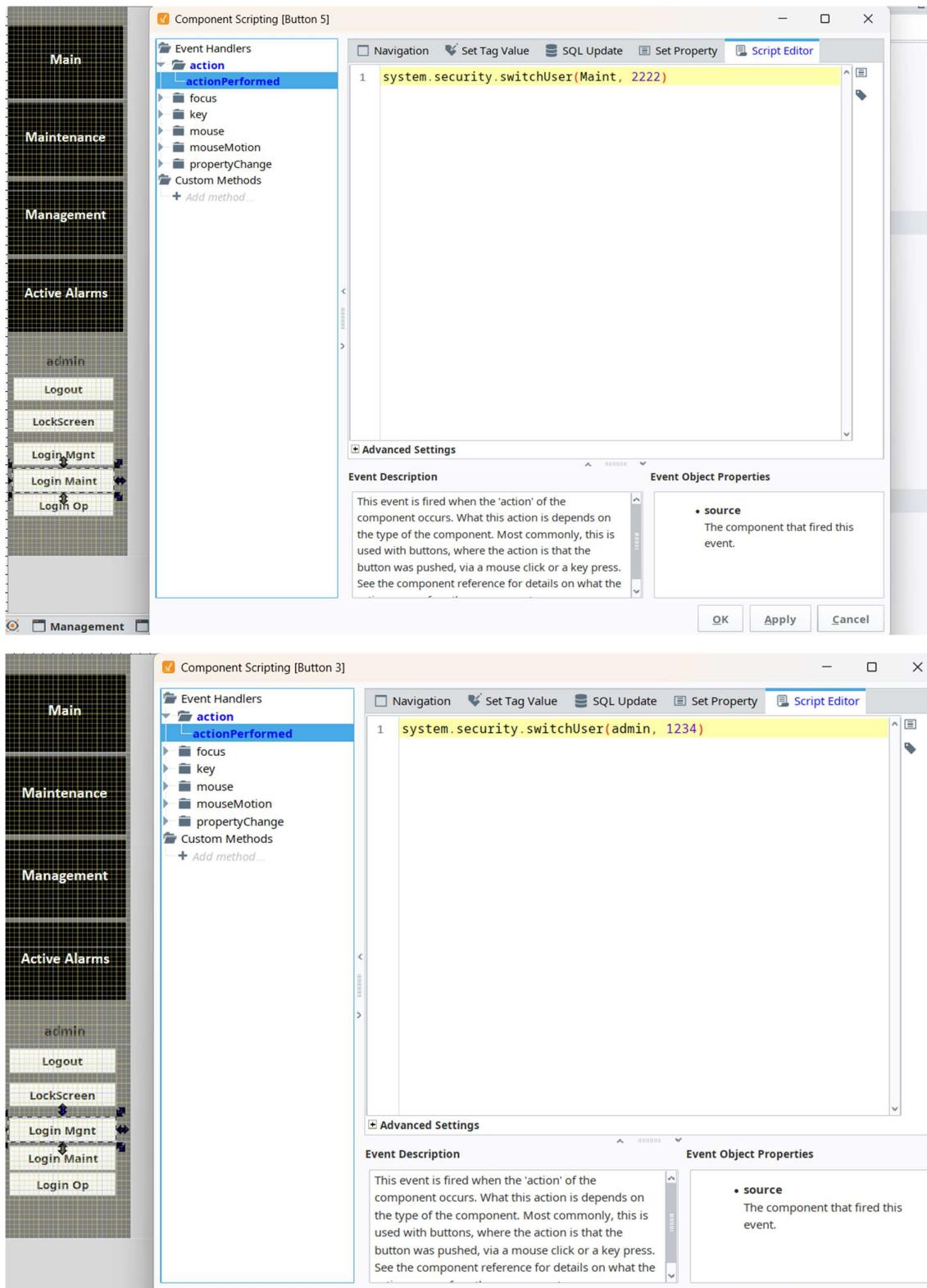
- Cycle time Average (F1-F4)
- Average Torque(F1-F4)
- Last 5 Part Data(F1-F4)
- End Shift Button to reset the stats and start new shift



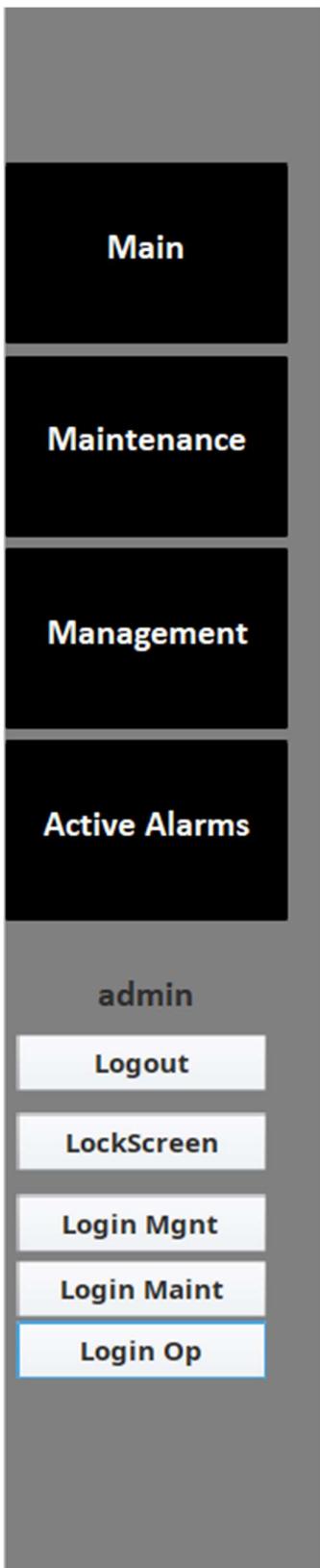
Security:

-Showing lock screen – password is 1234

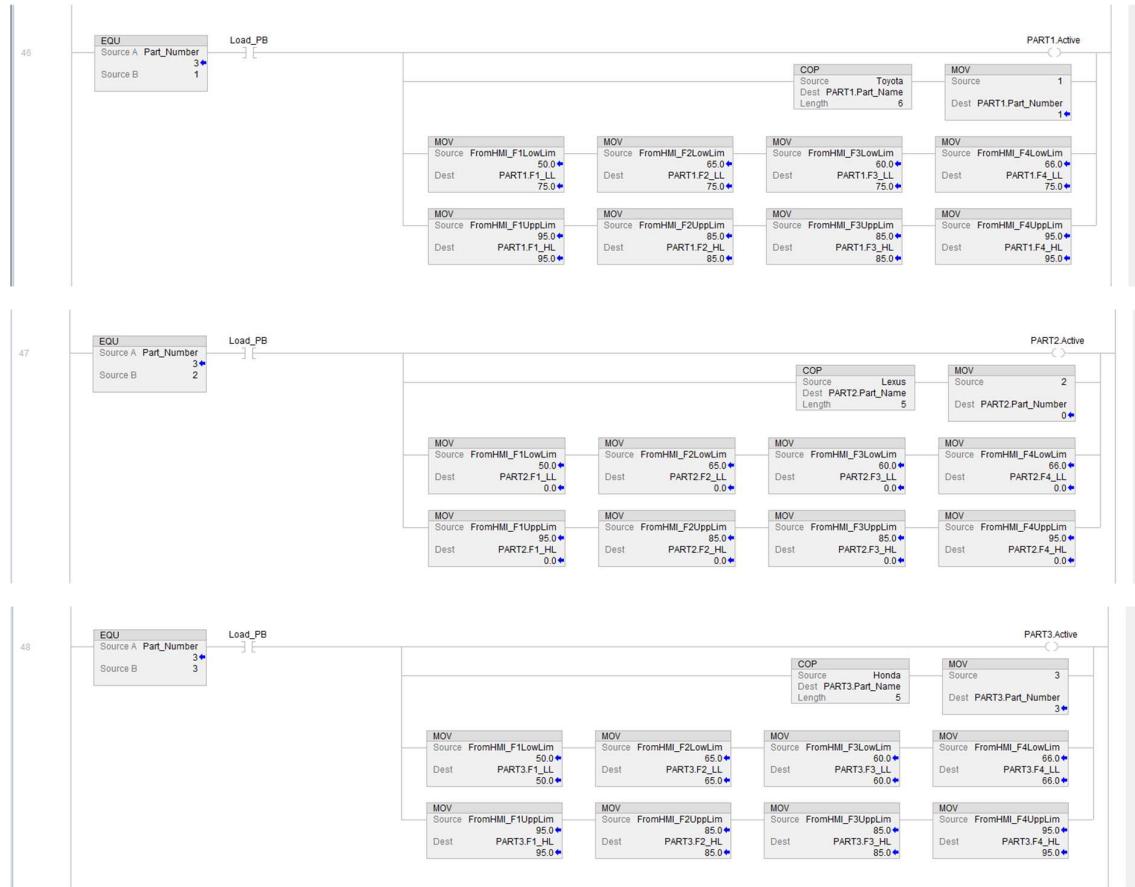




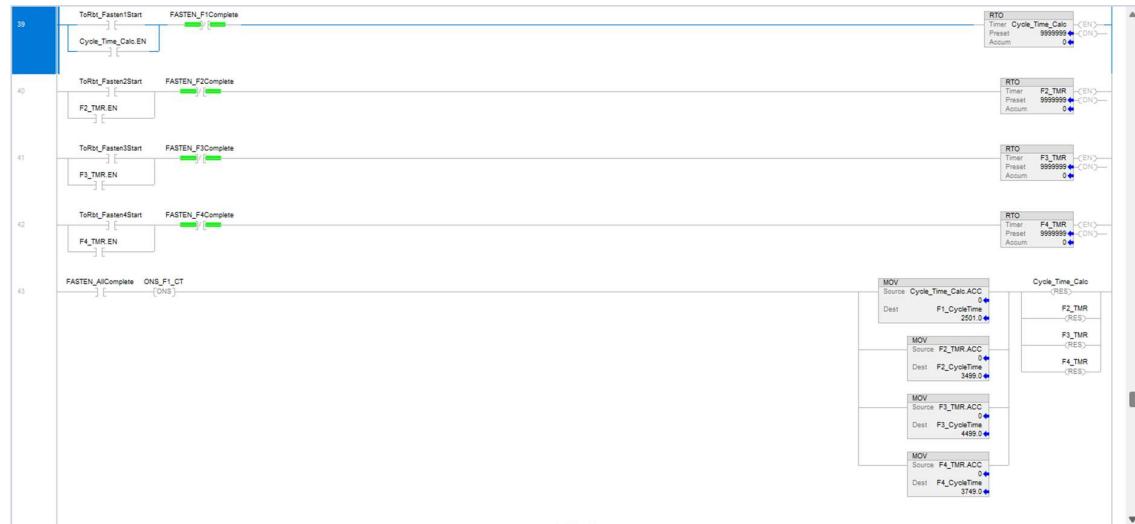
Navigation Screen:

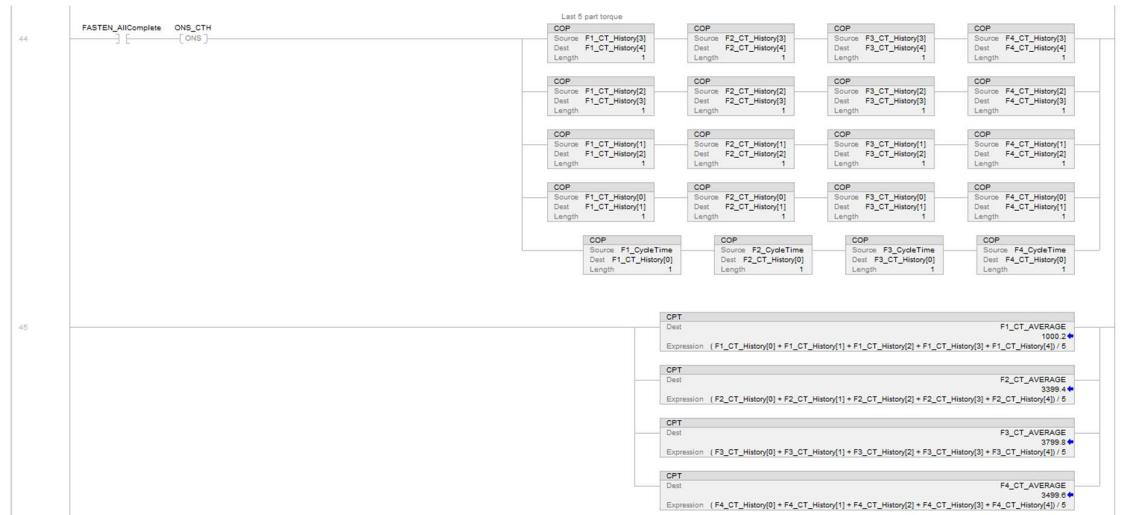


PLC Logic for Different Partstyles:



PLC Logic for Average Cycle Time:





PLC Logic for Average Torque:

