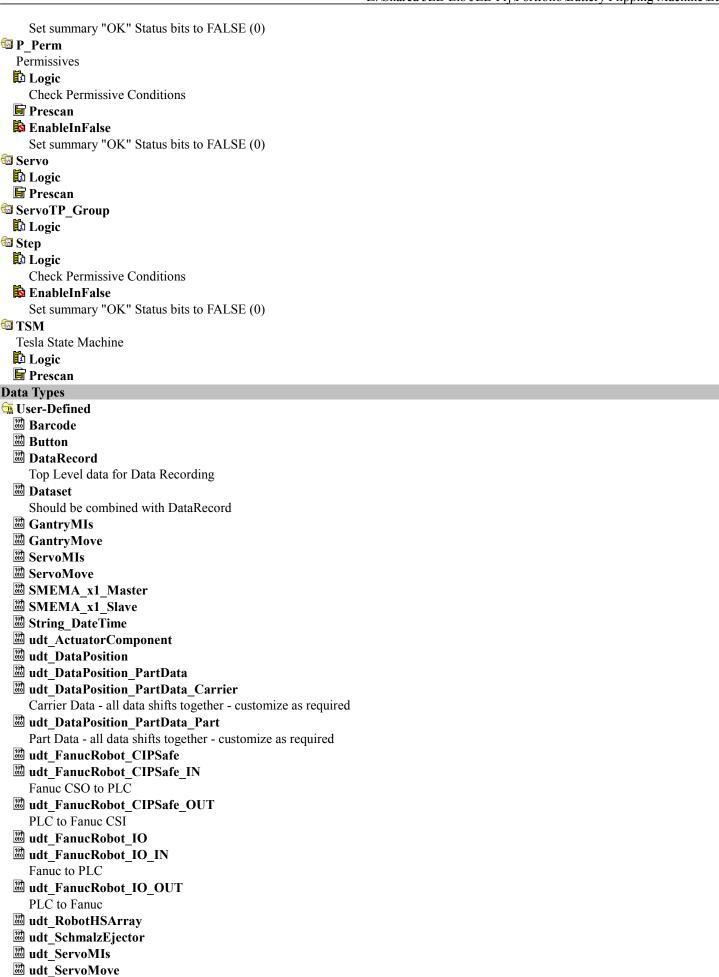
Controller BatteryLift Controller Fault Handler Power-Up Handler Tasks ProgramTask **BatteryLift** 🛍 Main **Alarms** CD\_Actuator\_GripperBarrel CD GripperVac CD\_Servo\_Lift CD Servo Rotate **■** Constants 🗎 MapHMI MapInputs\_Gripper MapInputs PLC MapOutputs Gripper MapOutputs PLC Seq\_1000\_Homing Seq\_2000\_Running Seq 3000 Aborting Seq\_4000\_Pausing Seq\_5000\_Proceeding Unscheduled **Motion Groups** 👼 MotionGroupServos LiftAxis P RotateAxis Ungrouped Axes **Add-On Instructions** 🛅 Actuator Logic Logic Frescan 🛅 AlarmConfig Logic Logic 🛅 DataPosition Logic Logic Prescan 🛅 FanucRobot Logic Logic Prescan 5 FB\_Ejector\_IOLv1\_0 Logic Logic 🛅 FB VSi Logic Logic 🛅 Gantry Logic Logic Frescan 🕮 PartPresent PART PRESENT Logic Logic 🛅 P Intlk Interlocks Logic Logic **Check Interlock Conditions** Prescan Clear "lurking" Commands

🔯 EnableInFalse



```
udt SPQ CompleteStep
 udt SPQ CreateUnit
 udt_SPQ_EnterStep
 udt SPQ GetCurrentStep
 🕅 udt SPQ GetRecipe
 udt_SPQ_StartStep
 udt_SPQ_Transaction
    SPARQ Transaction Parameters
 🕅 udt TaskParameter
😘 Strings
 ₩ S05
 ₩ S19
 ₩ S26
 STRING2000
 STRING_12
 STRING 16
 STRING_20
 STRING 40
Add-On-Defined
 M Actuator
 M AlarmConfig
 IIII DataPosition
 M FanucRobot
 ₩ FB Ejector IOLv1 0
 ₩ FB_VSi
 聞 Gantry
 M PartPresent
    PART PRESENT
 關P Intlk
    Interlocks
 P Perm
    Permissives
 Servo
 ServoTP_Group
 關 Step
 聞TSM
    Tesla State Machine
🚂 Module-Defined
 B AB:1769_DI16:I:0
 ₩ AB:1769 DO16:C:0
 3 AB:1769 DO16:I:0 1 AB:1769 DO16:I:0
 ₩ AB:1769_DO16:O:0
 M AB:ETHERNET_MODULE:C:0
 AB:ETHERNET MODULE DINT 496Bytes:I:0
 MAB:ETHERNET_MODULE_DINT_496Bytes:O:0
 M AB:ETHERNET MODULE SINT 262Bytes:O:0
 AB:ETHERNET_MODULE_SINT_392Bytes:1:0
 M AB:Motion Diagnostics:S:1
 👪 CC:InSight10 Control:O:0
 M CC:InSight10 NODATA:0:0
 CC:InSight10_SINT488:I:0
 CC:InSight10 Status:I:0
 FR:Safety_Robot_8Bytes:SI:0
 FR:Safety_Robot_8Bytes:SO:0
 FR:Standard_Robot_44Bytes:I1:0
 FR:Standard Robot 44Bytes:O1:0
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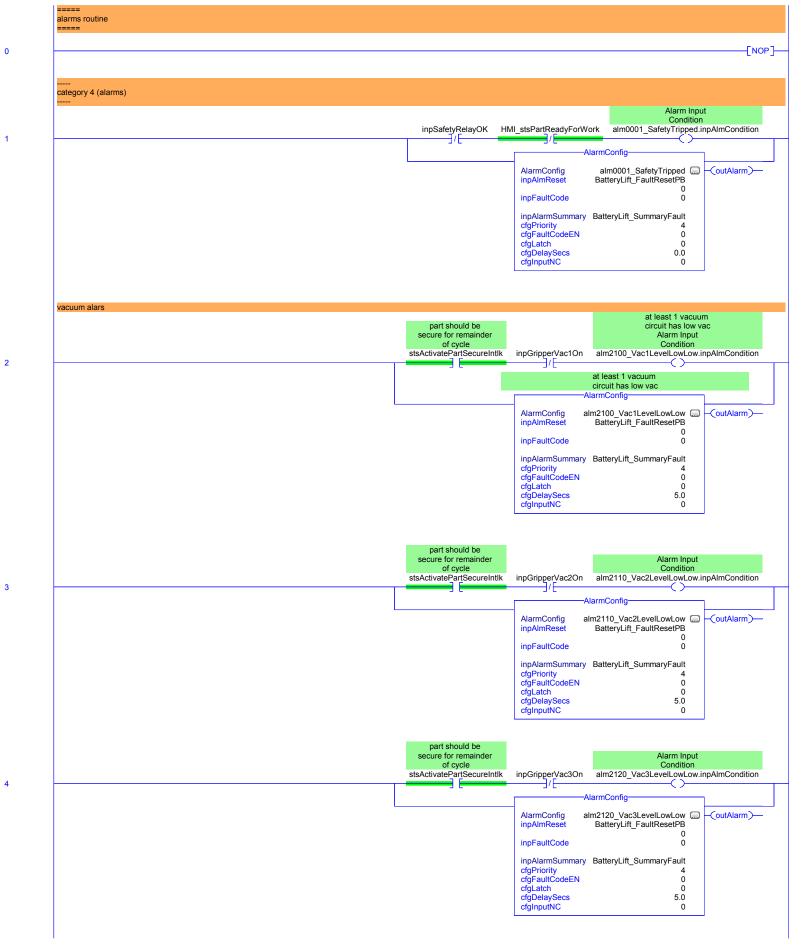
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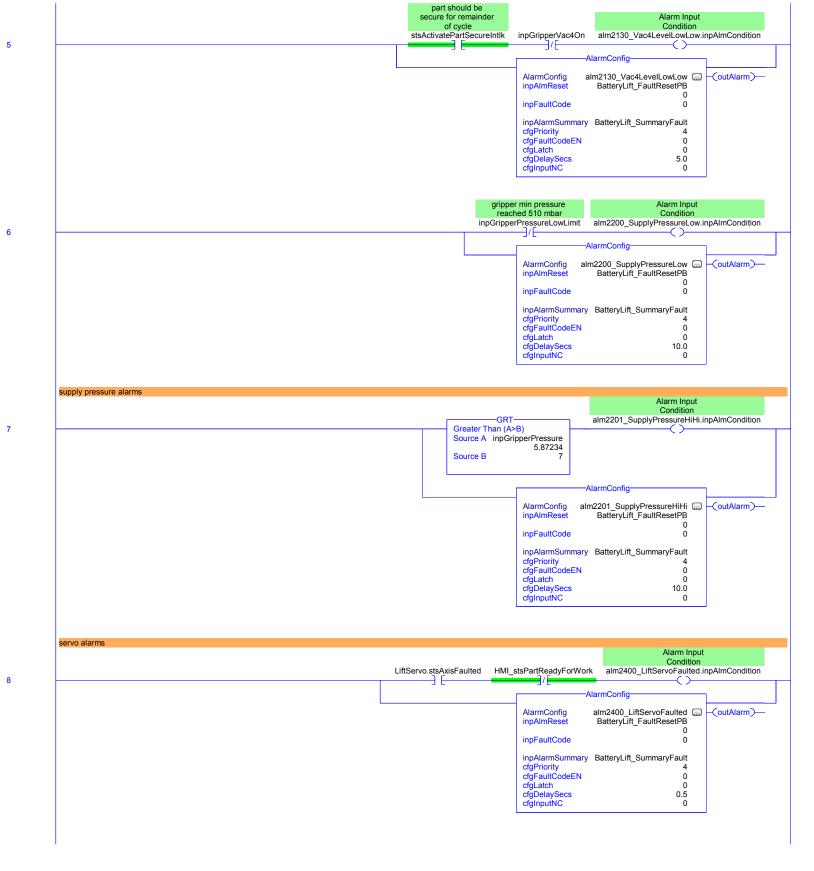
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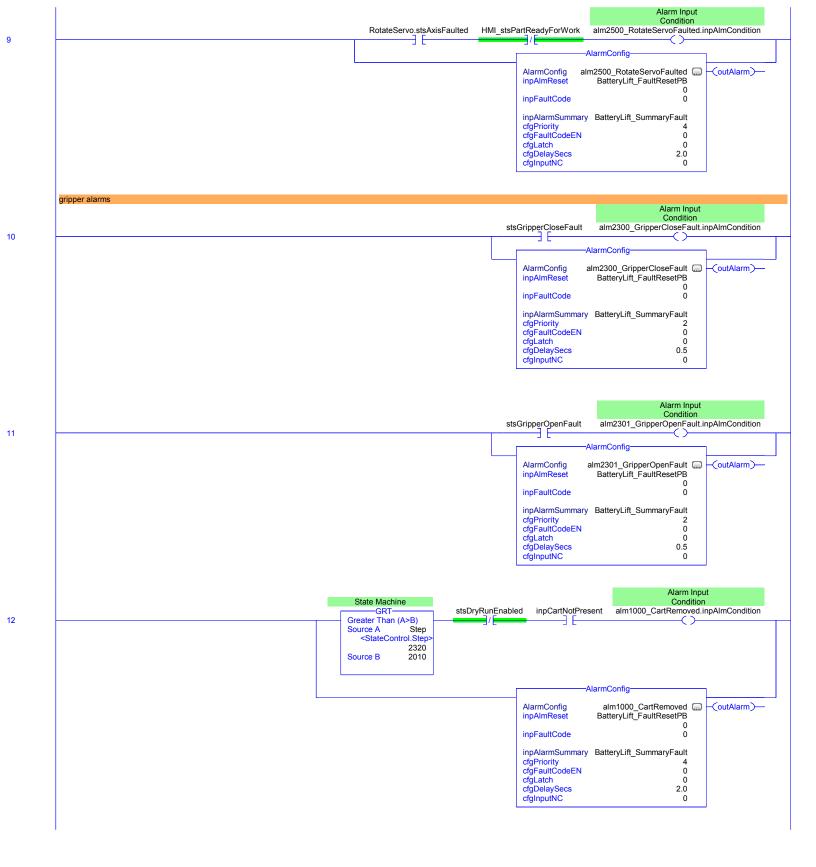
## Trends

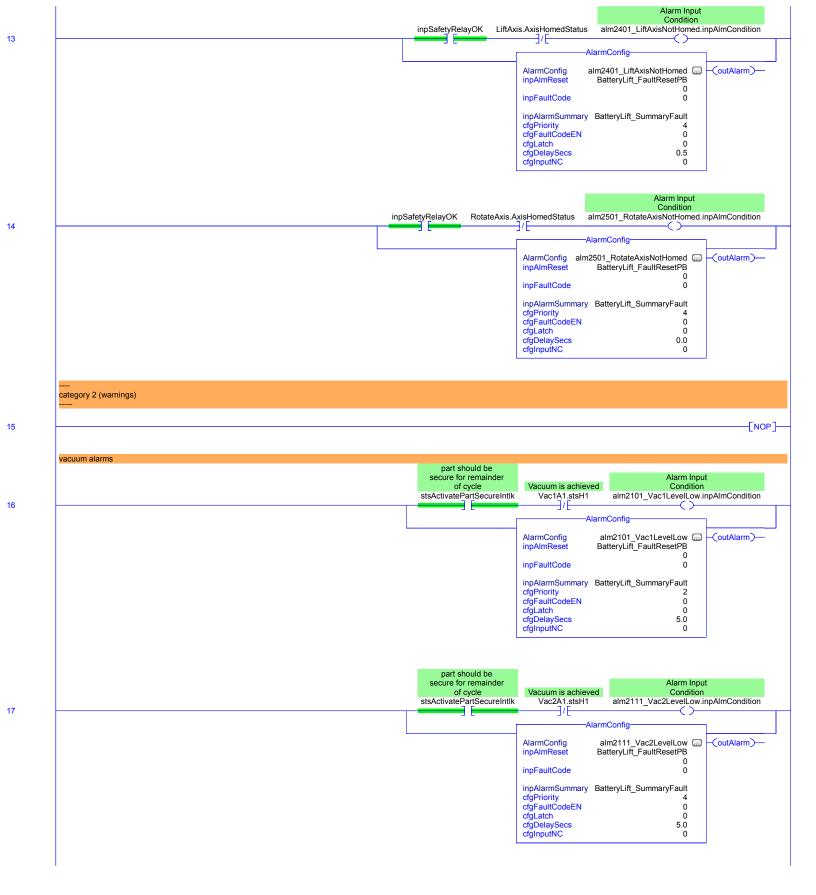
## I/O Configuration

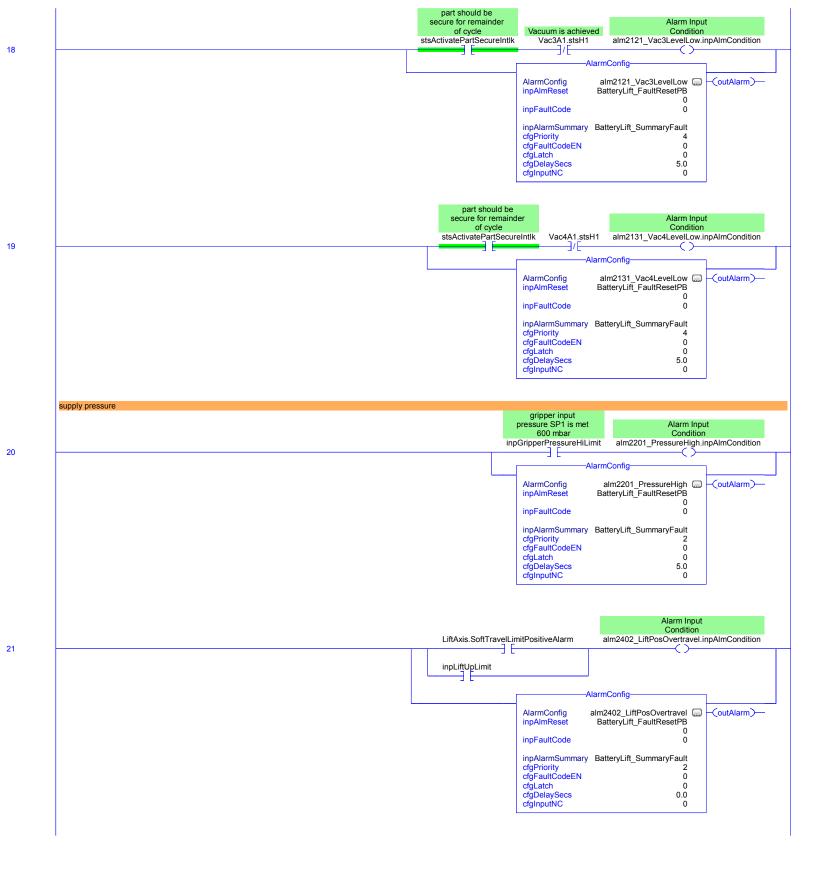
- **1769 Bus** 
  - **□** [0] 1769-L30ERM BatteryLift
  - **I** [1] 1769-IQ16/A
  - 1 [2] 1769-OB16/B
- 器 Ethernet
  - **№** 1769-L30ERM BatteryLift
- 2097-V33PR6-LM LiftServoDrive
- **2097-V33PR6-LM RotateServoDrive**
- BNI006A K1
- BNI004F K2

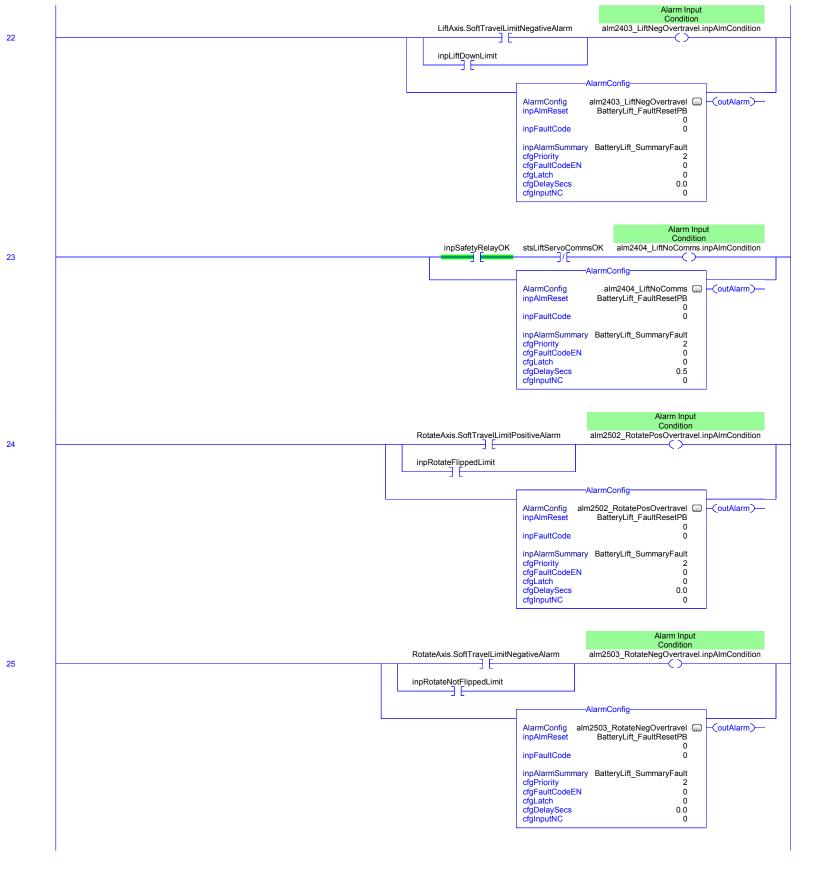




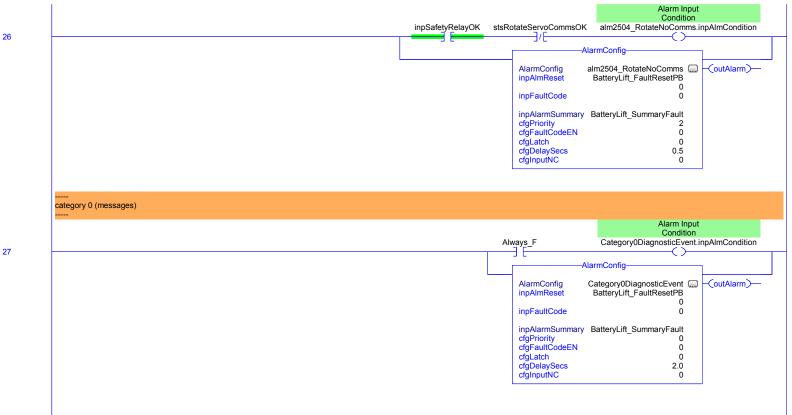


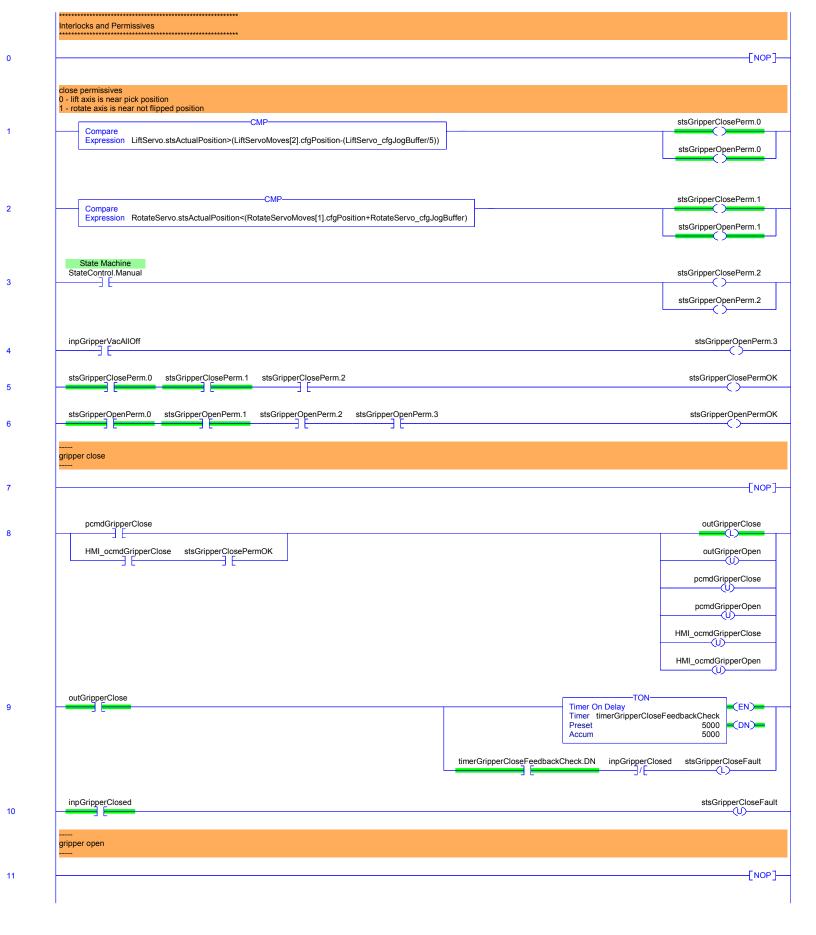






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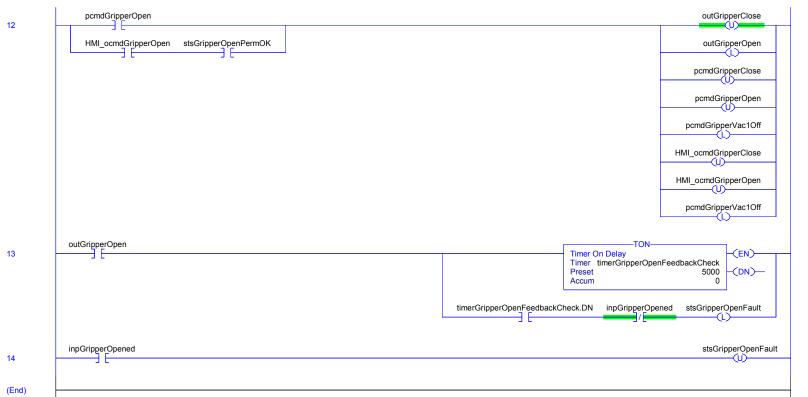




CD\_Actuator\_GripperBarrel - Ladder Diagram
BatteryLift:ProgramTask:BatteryLift

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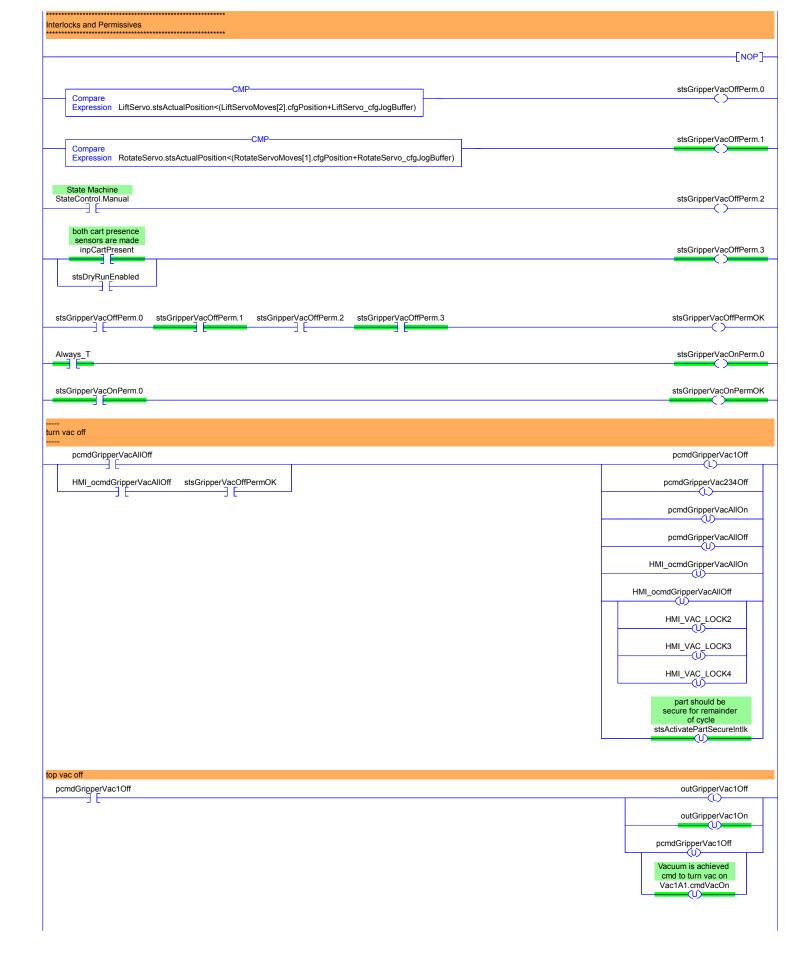
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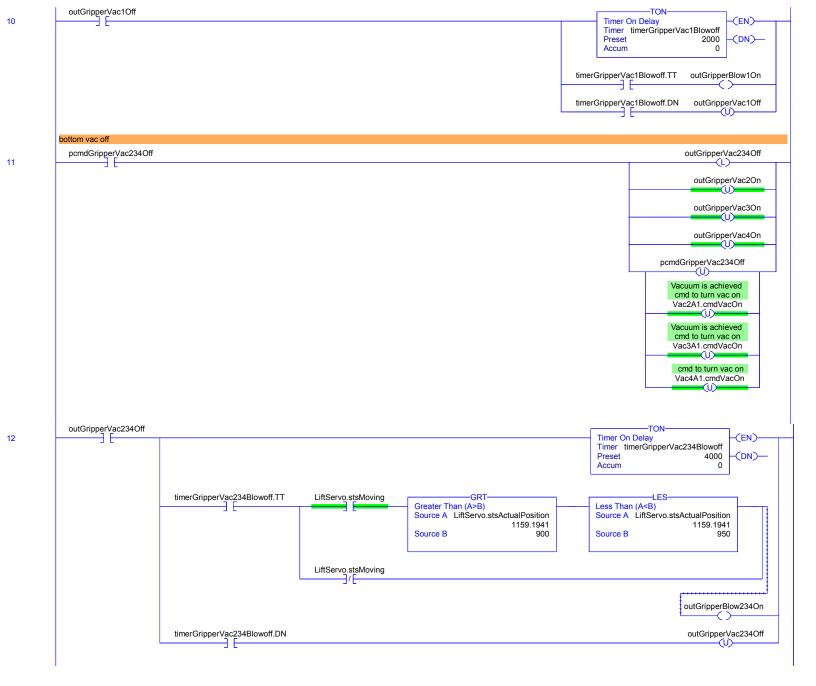
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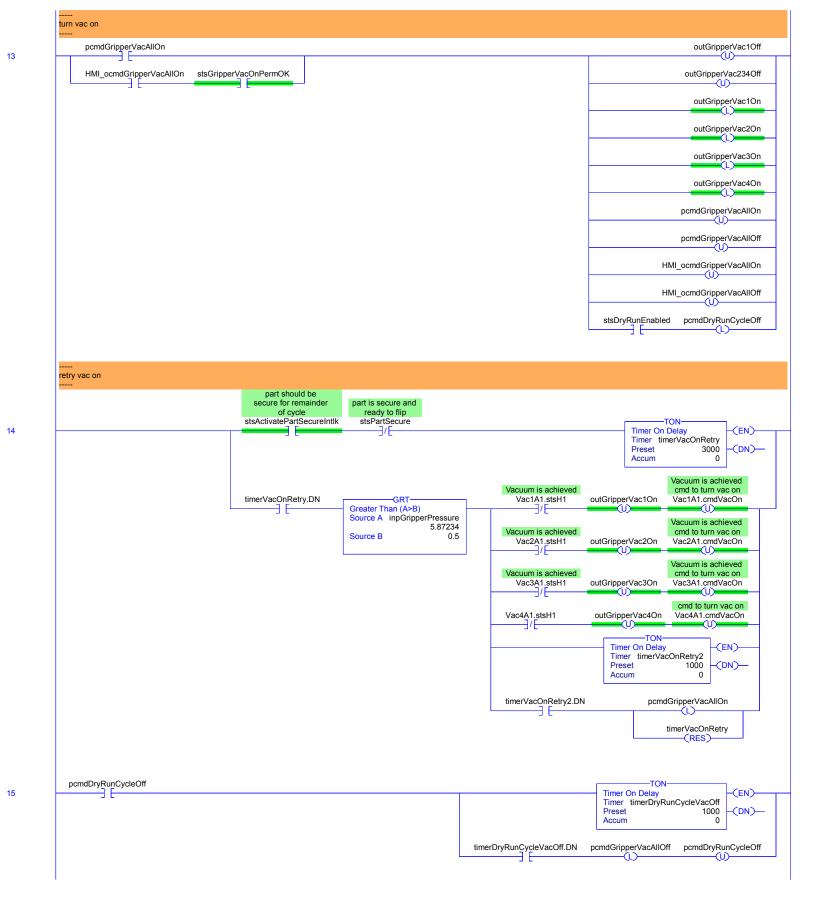
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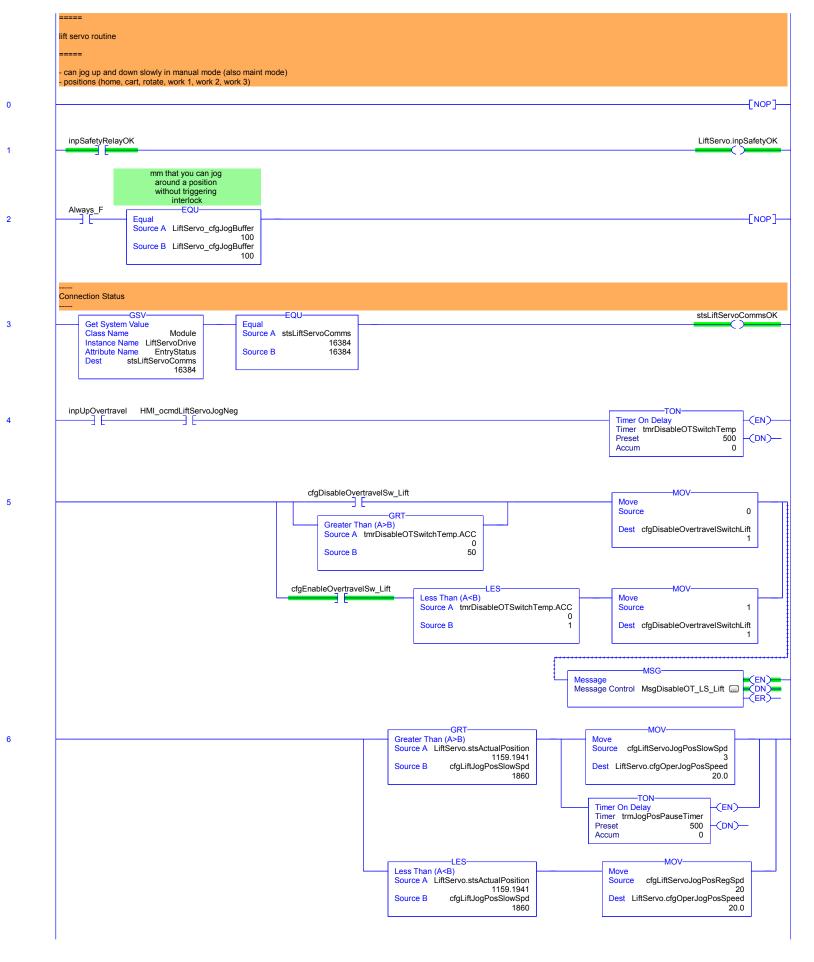


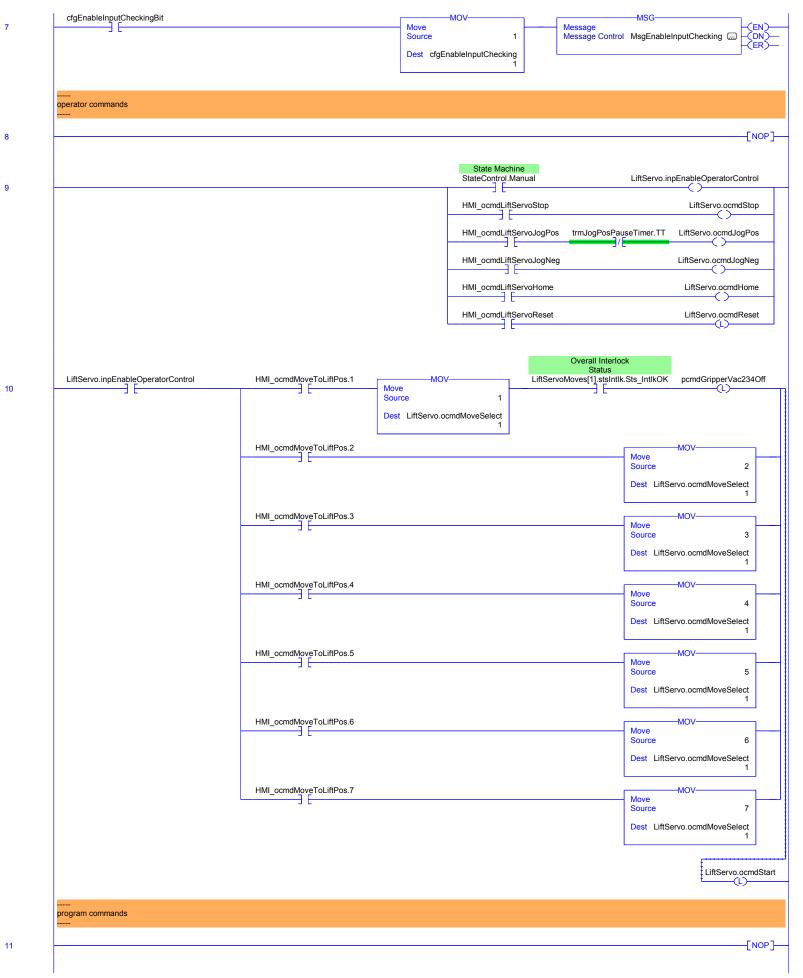


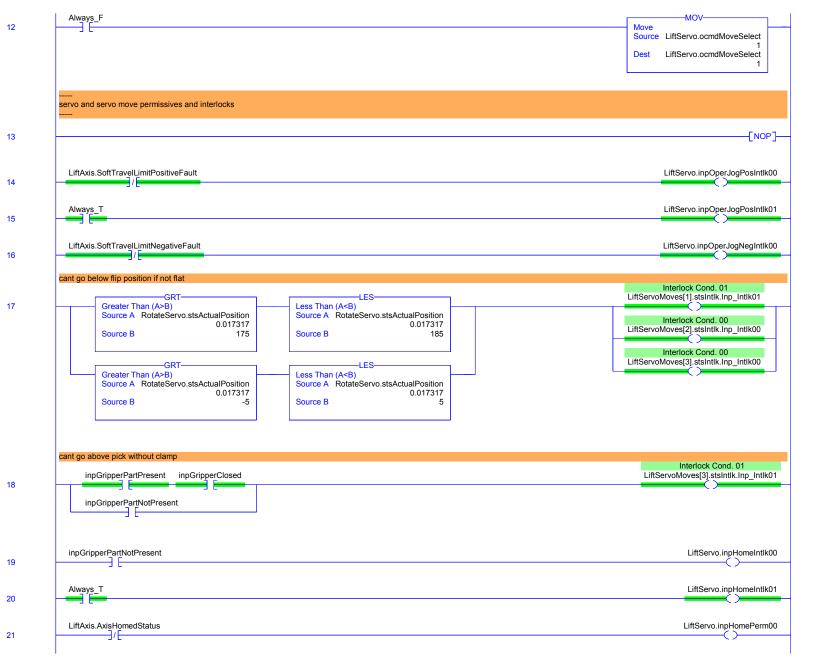


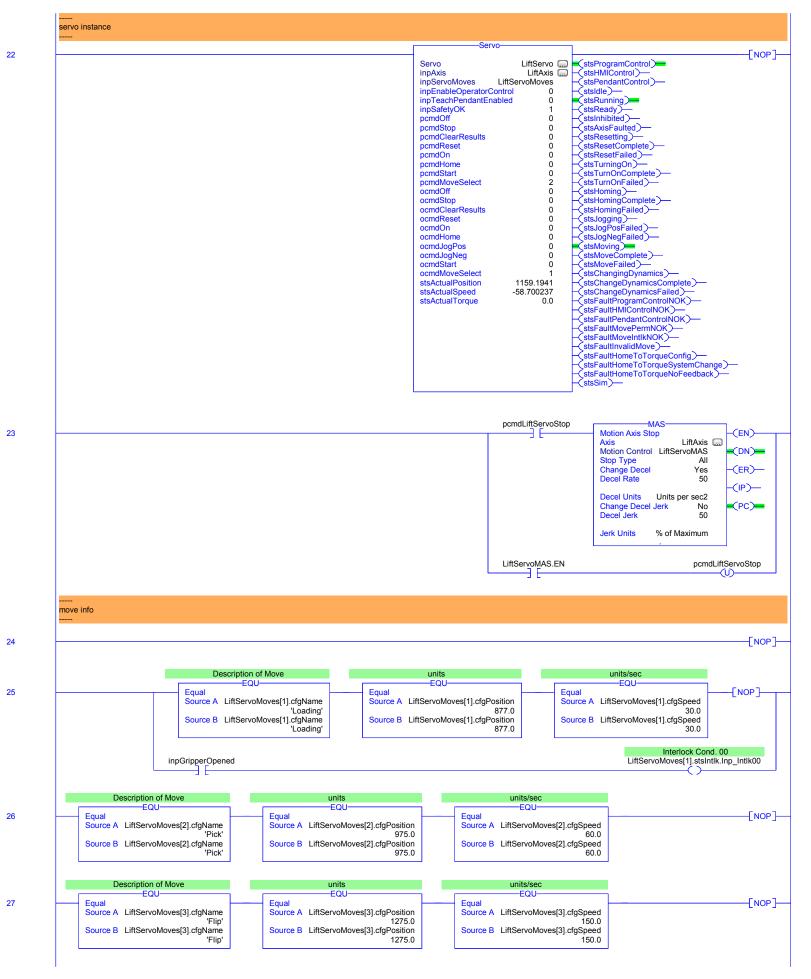
-FB\_Ejector\_IOLv1\_0-

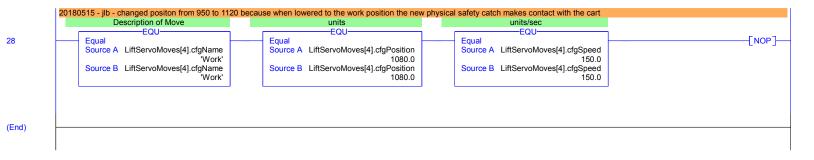
VacEjector3A1 🛄 FB\_Ejector\_IOLv1\_0 btEjectorType 0  ${\bf btValveType}$ bVacOn Vac3A1.cmdVacOn bBlowOn Vac3A1.cmdBlowOn bVacOnWithDiag Vac3A1.cmdVacOnWithDiag btPDIData K1:I.Data[200] Vac3A1.stsH1 bH1 Vac3A1.stsH2 bH2 bStateGreen Vac3A1.stsStateGreen Vac3A1.stsStateRed bStateRed bLEDFlashing Vac3A1.stsLEDFlashing Vac3A1.stsCMEvent bCMEvent Vac3A1.stsErrorEvent bErrorEvent 0 K1:O.Data[134] btPDoData -FB\_Ejector\_IOLv1\_0-20 FB\_Ejector\_IOLv1\_0 btEjectorType VacEjector4A1 btValveType 0 Vac4A1.cmdVacOn bVacOn Vac4A1.cmdBlowOn hBlowOn bVacOnWithDiag Vac4A1.cmdVacOnWithDiag btPDIData K1:I.Data[248] Vac4A1.stsH1 Vac4A1.stsH2 Vac4A1.stsStateGreen bStateGreen Vac4A1.stsStateRed bStateRed Vac4A1.stsLEDFlashing bLEDFlashing bCMEvent Vac4A1.stsCMEvent bErrorEvent Vac4A1.stsErrorEvent 0 K1:O.Data[166] btPDoData (End)

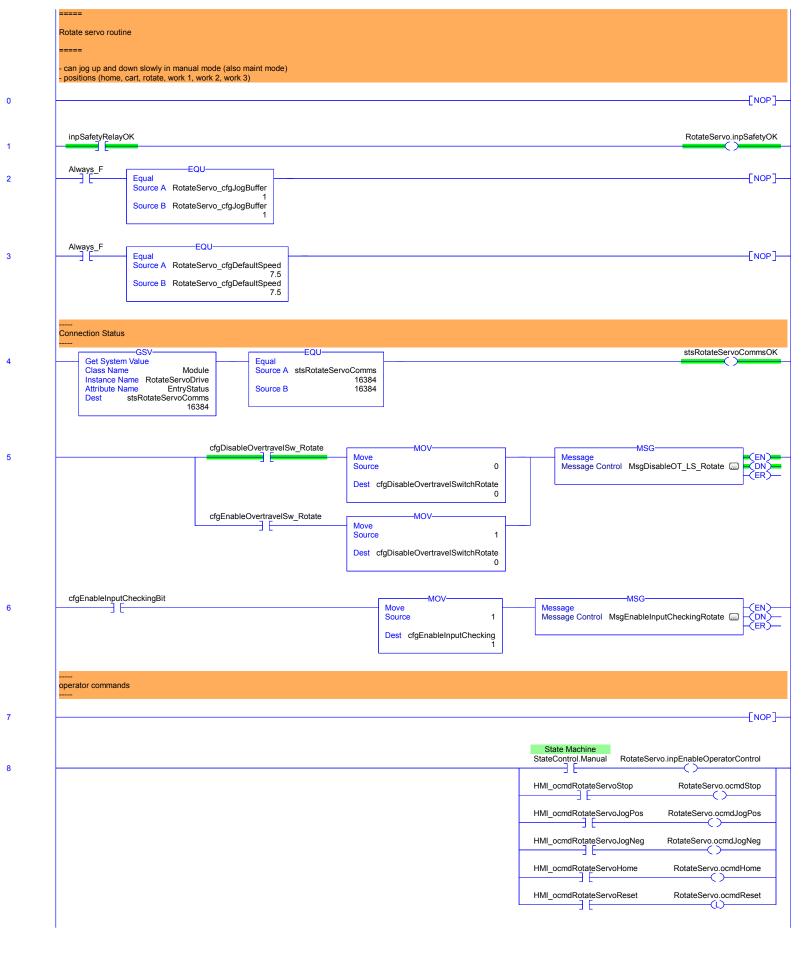


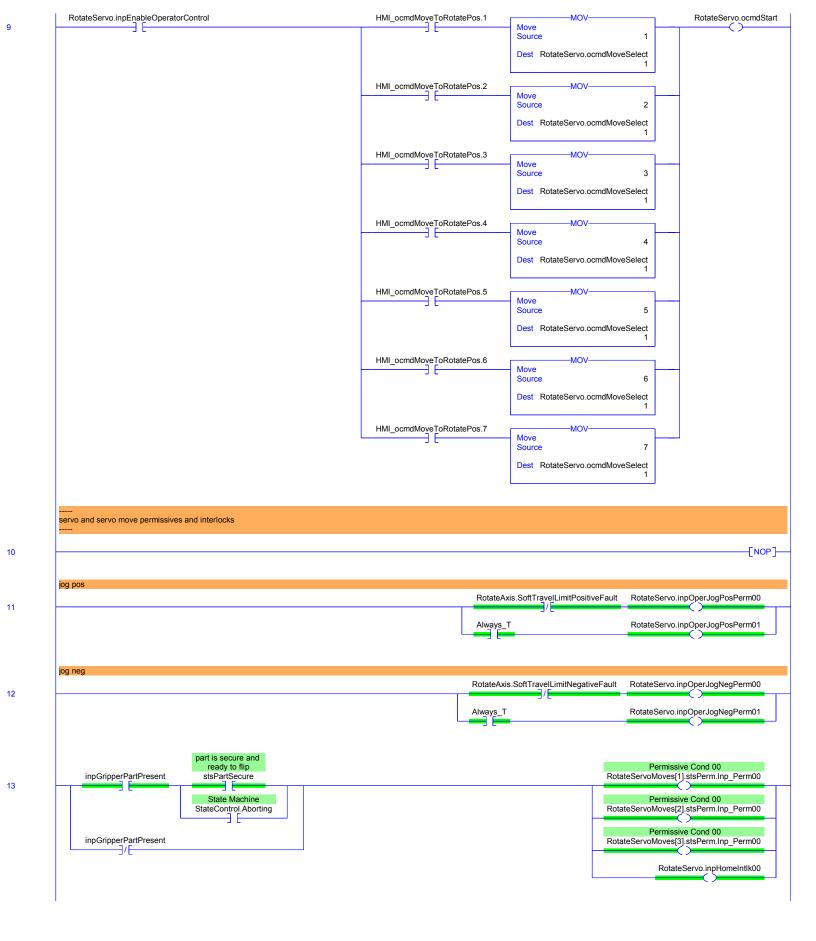


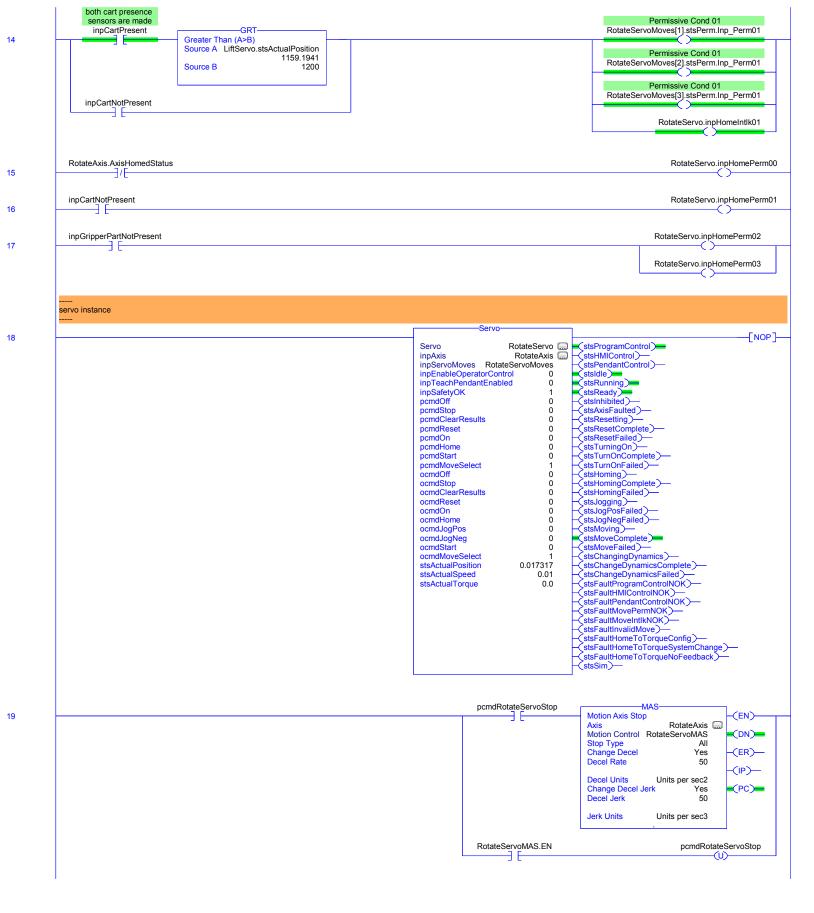


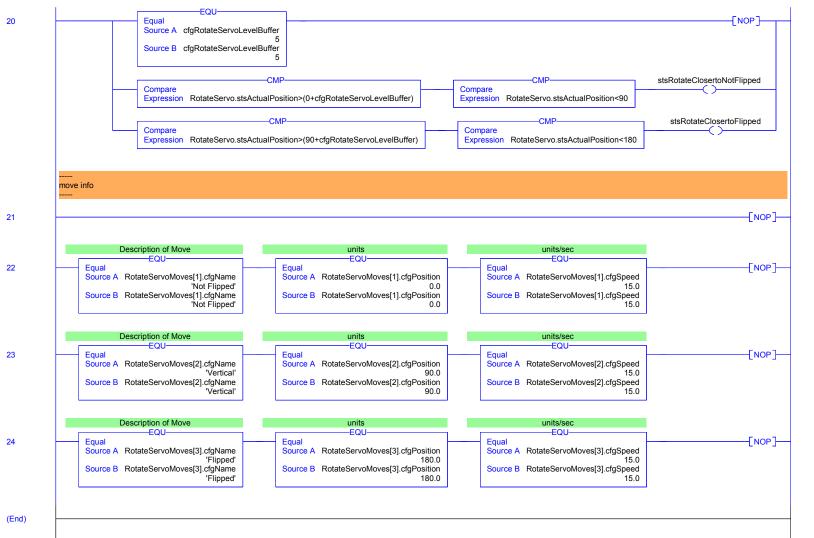


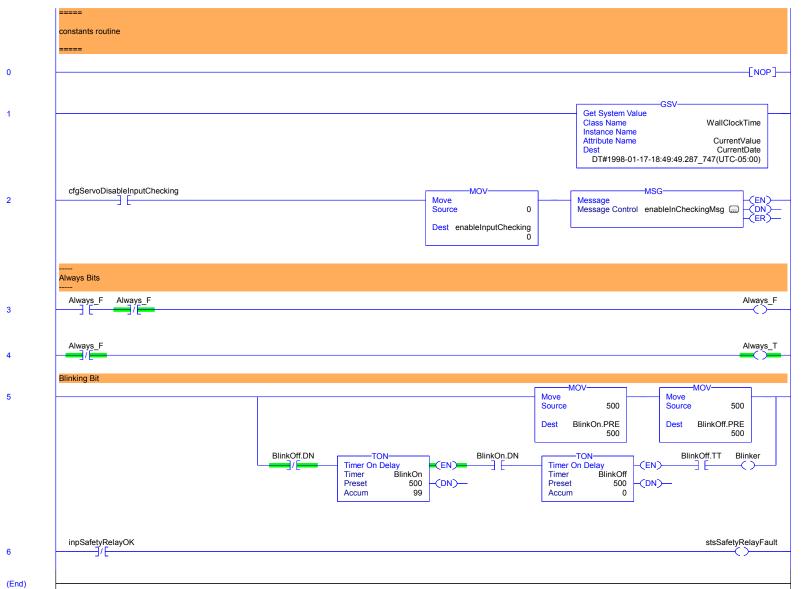










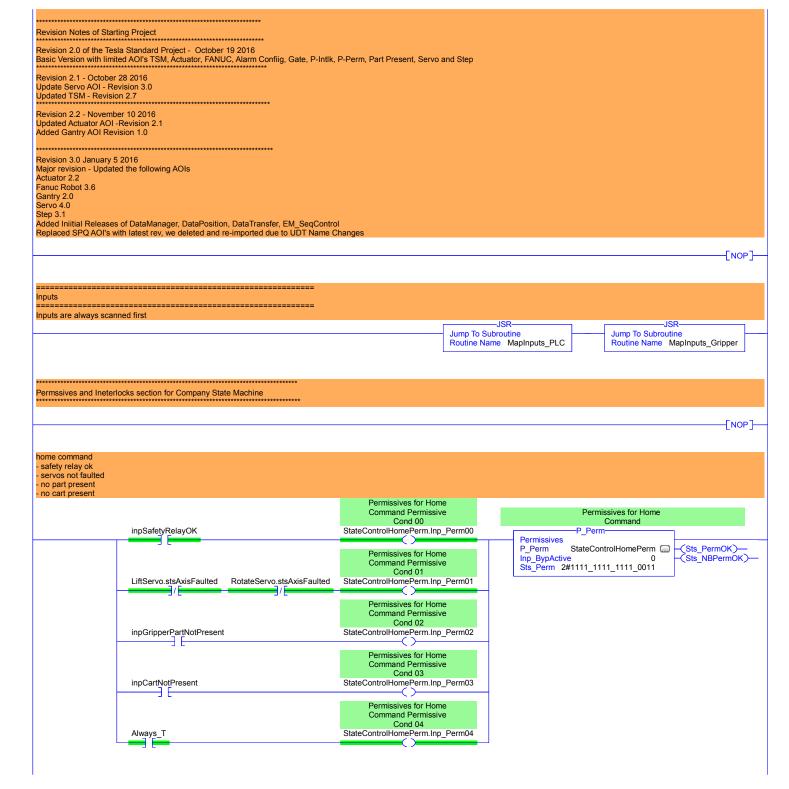


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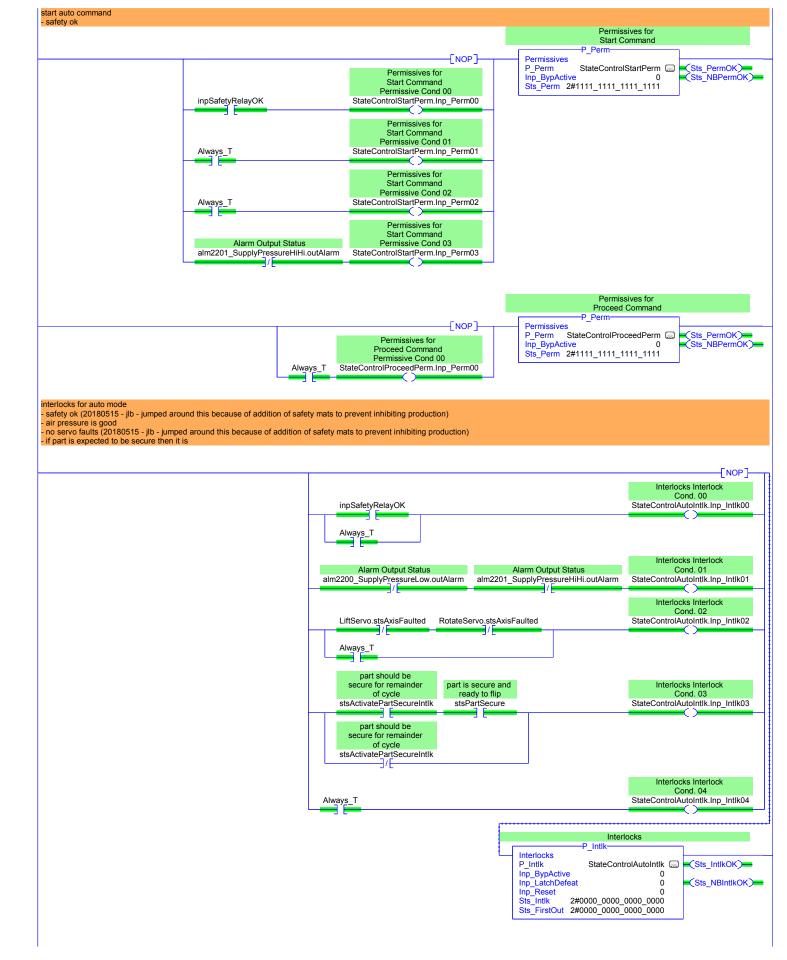
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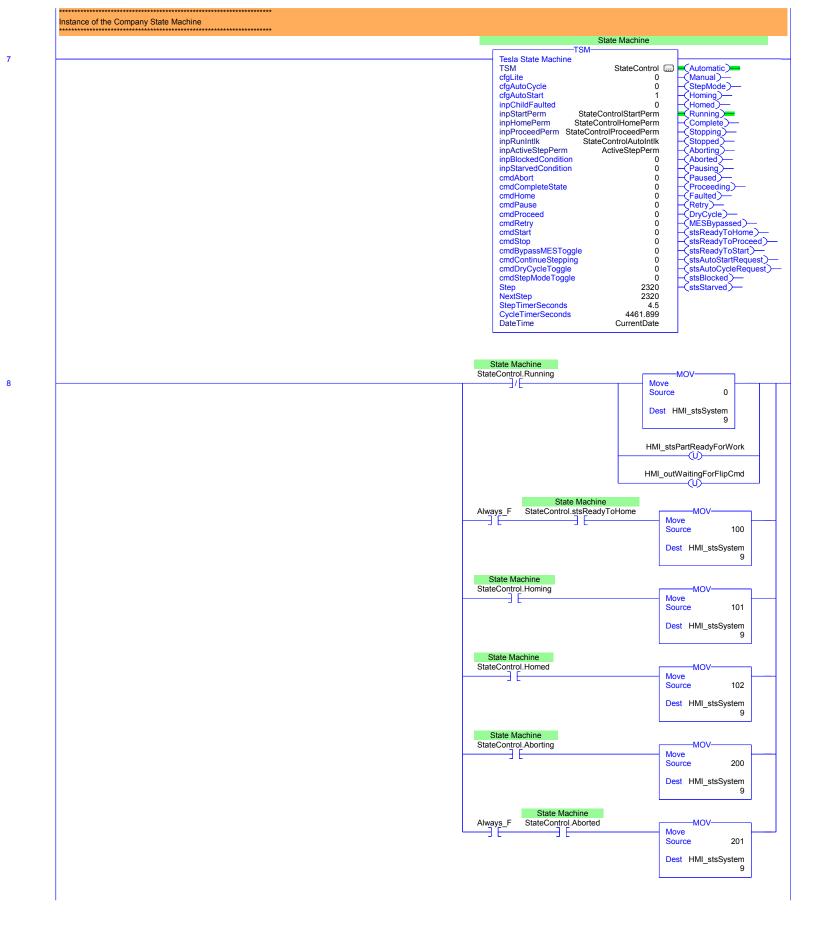
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BatteryLift:ProgramTask:BatteryLift

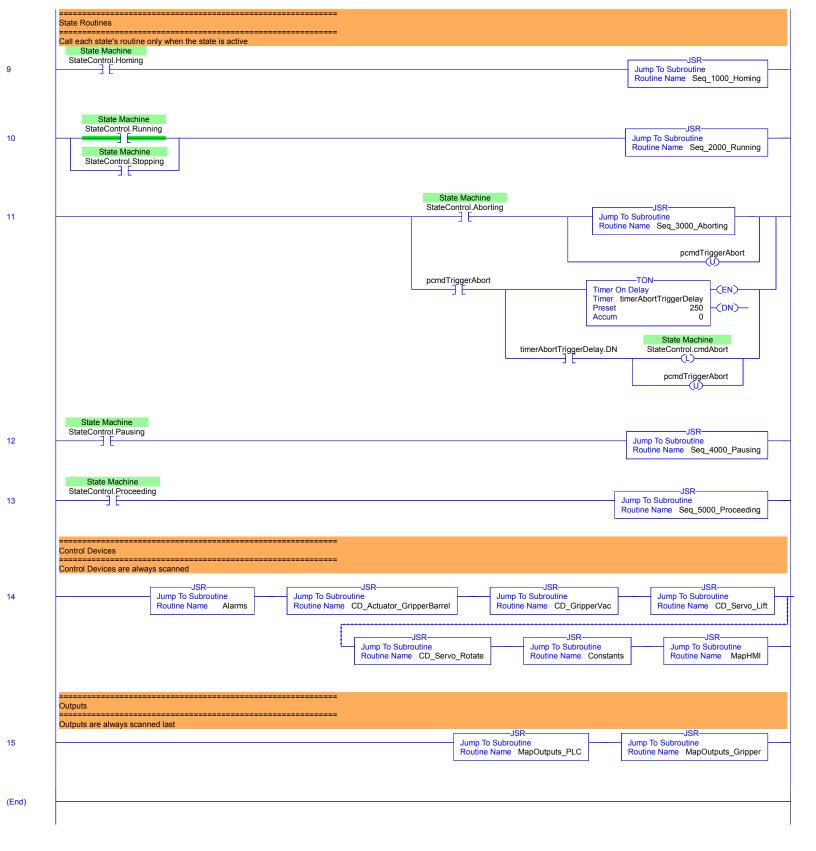
Page 31

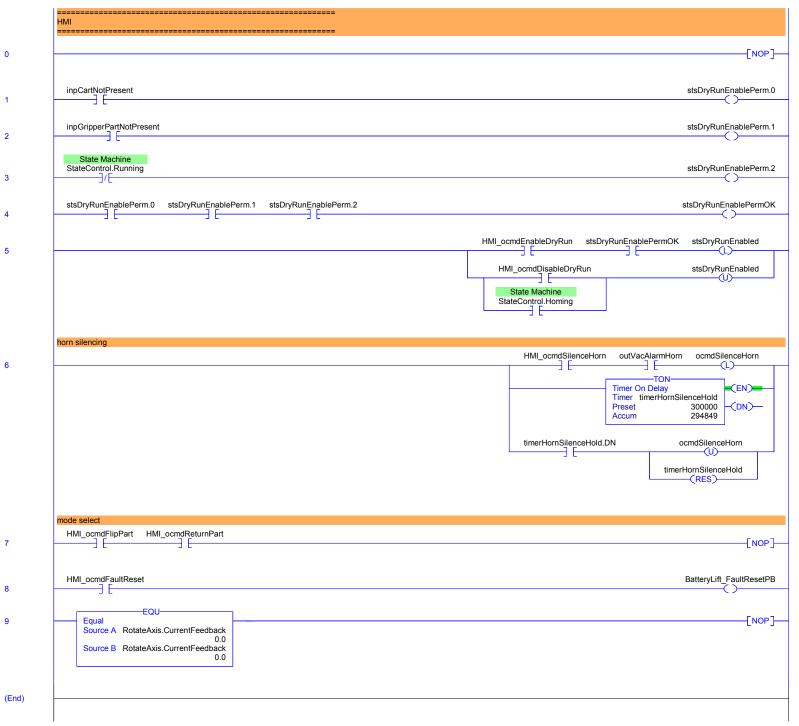
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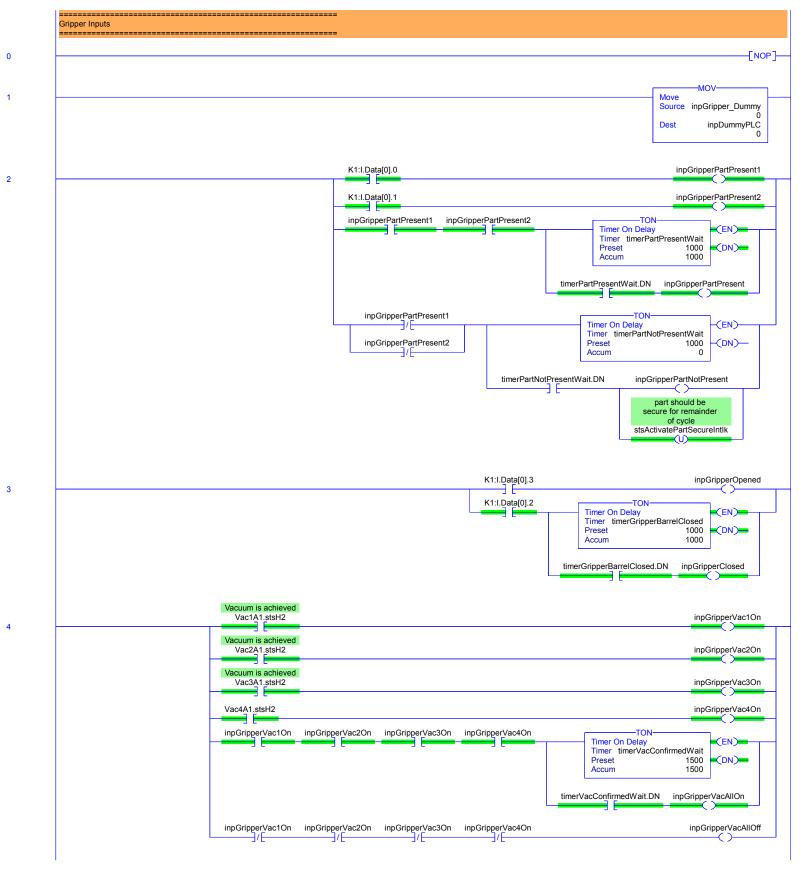


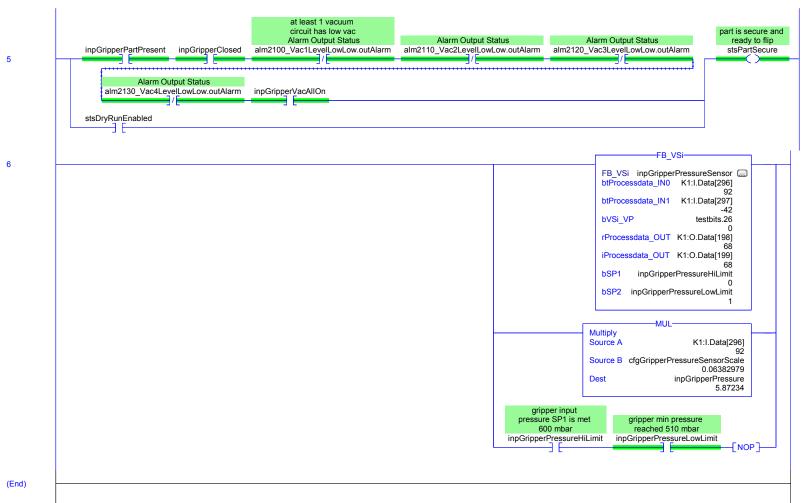
BatteryLift:ProgramTask:BatteryLift

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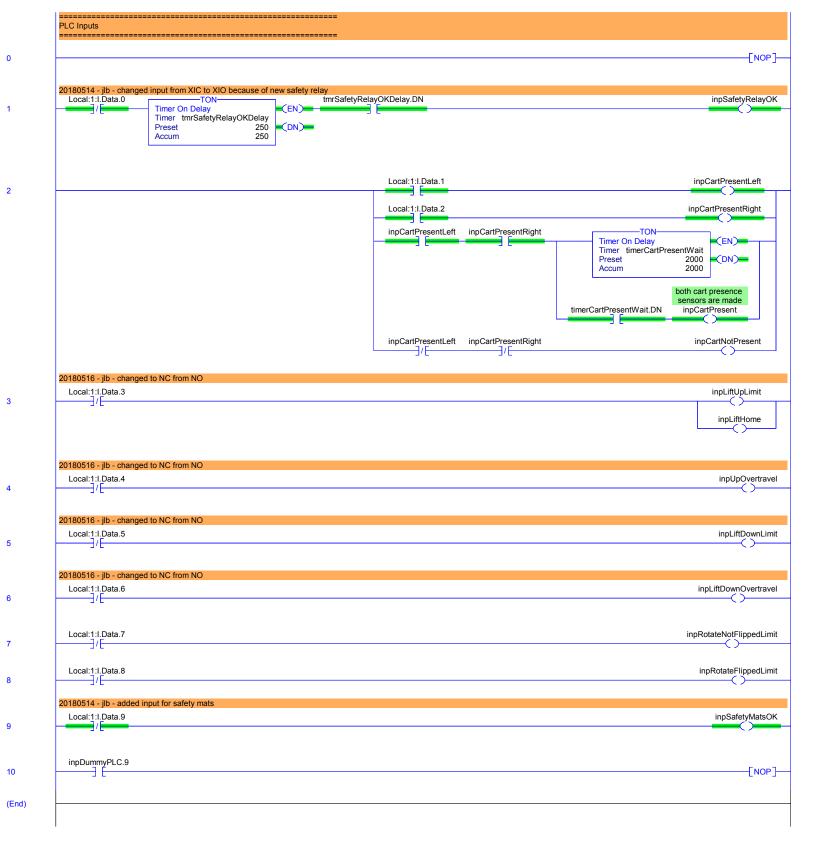


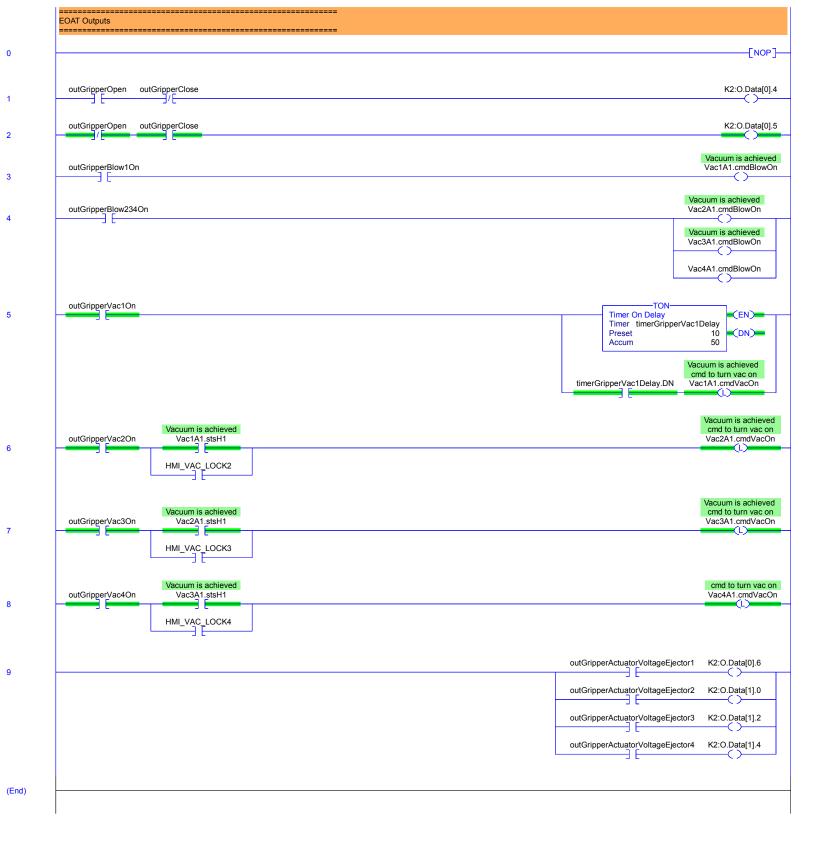


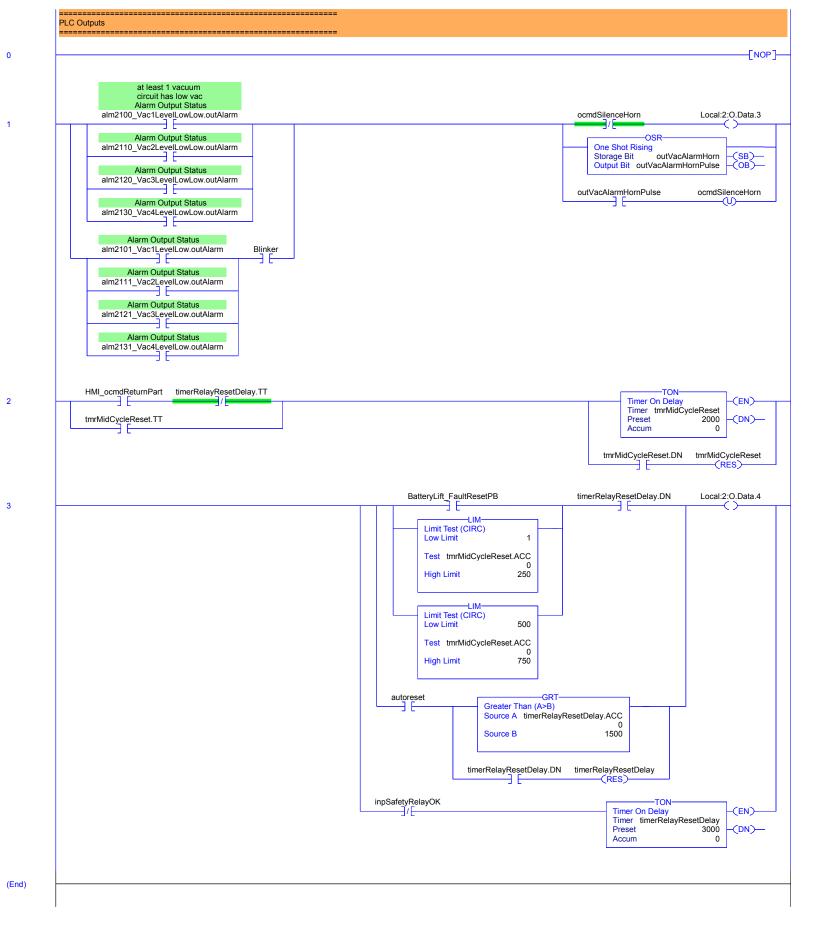




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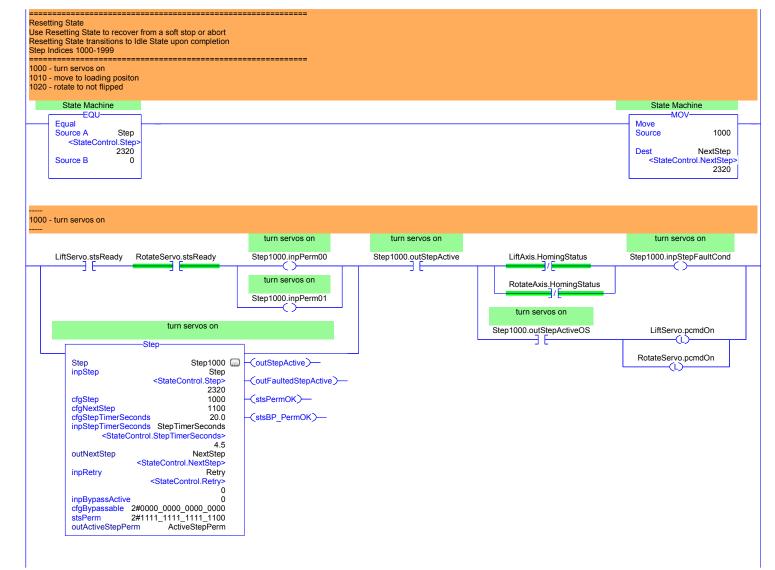




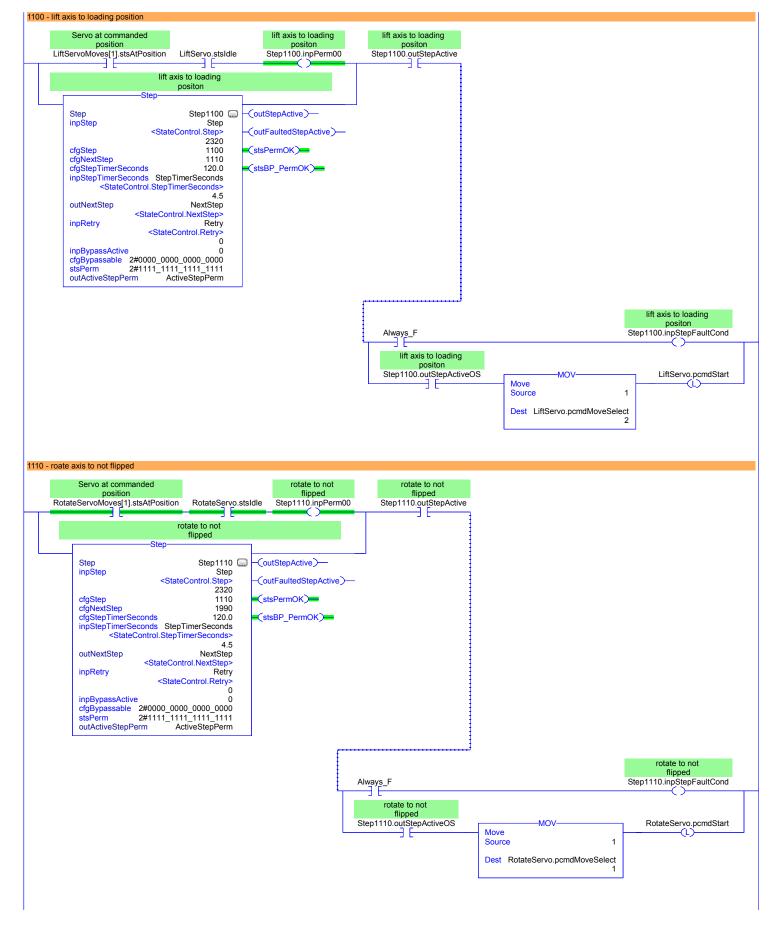


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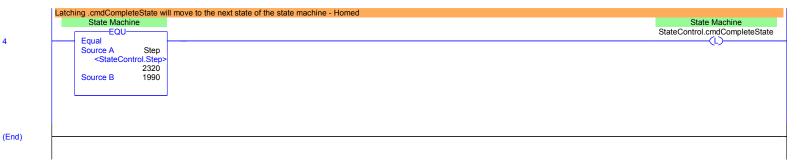


Seq\_1000\_Homing - Ladder Diagram
BatteryLift:ProgramTask:BatteryLift
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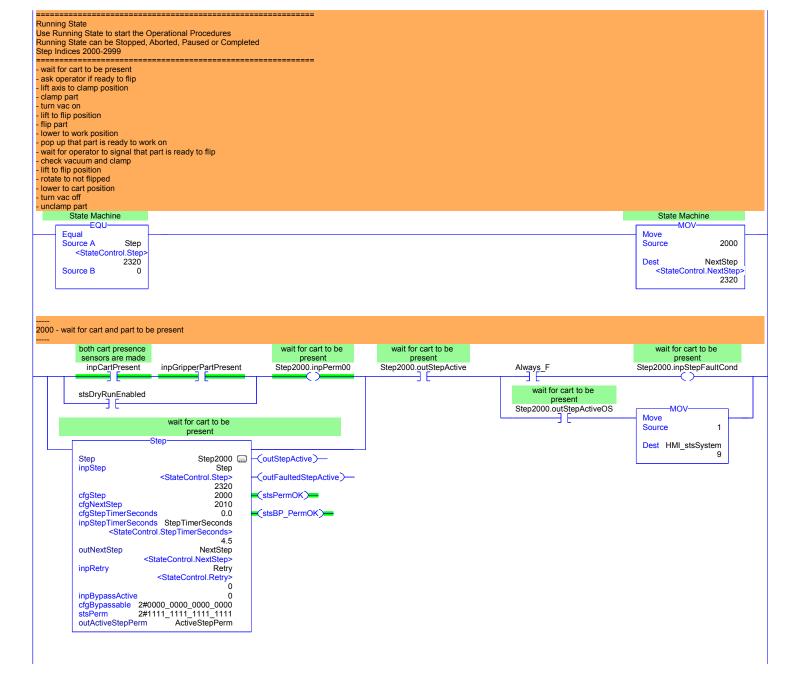
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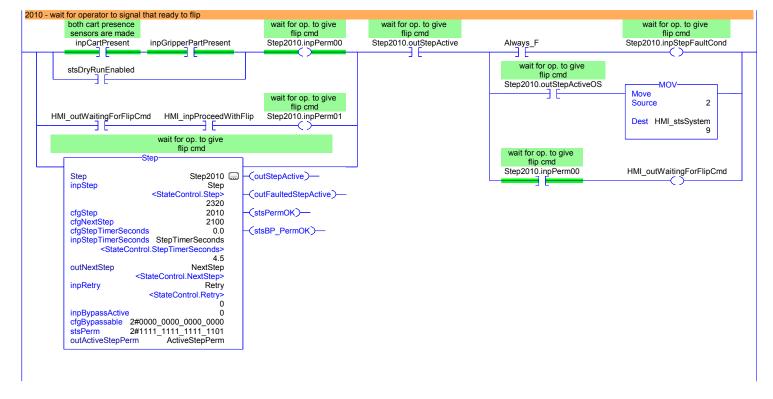
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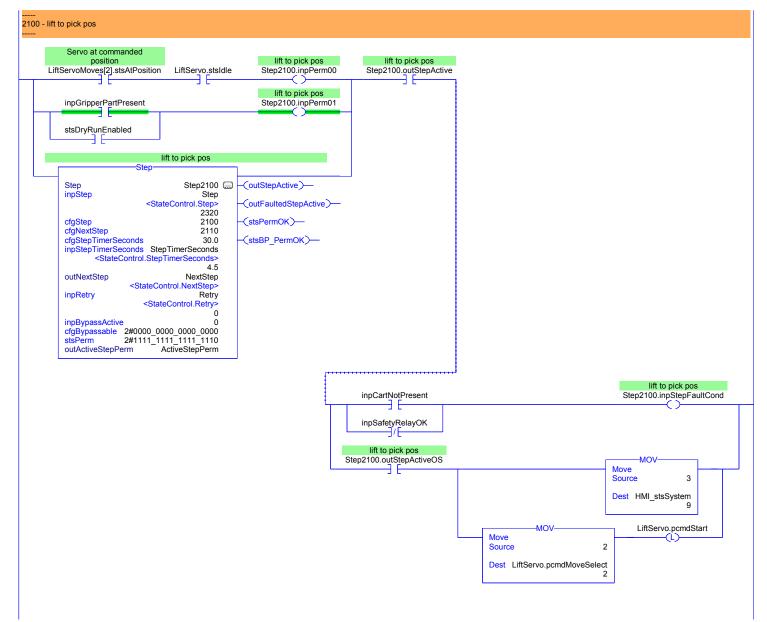
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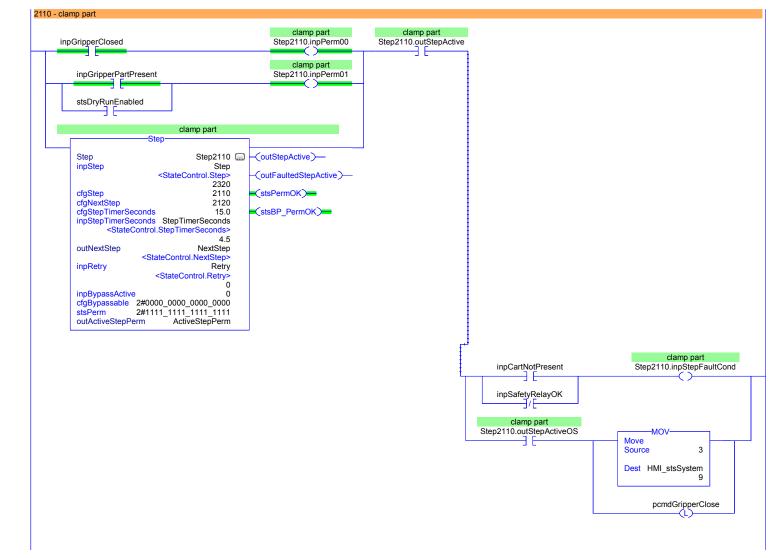


Total number of rungs in routine: 17

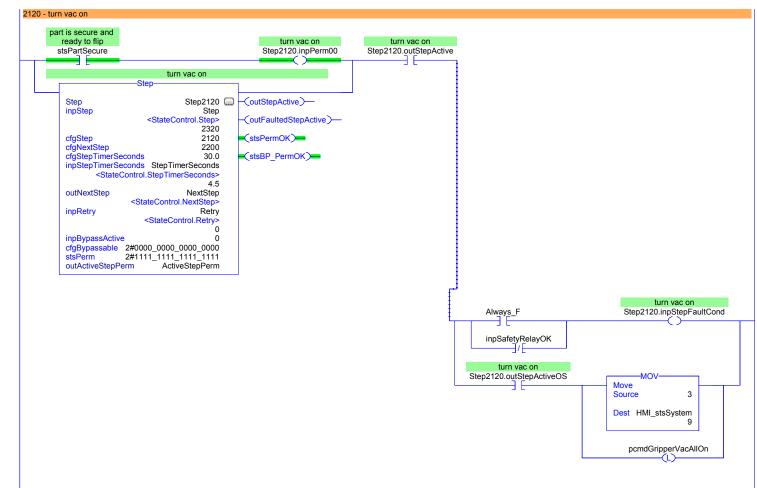




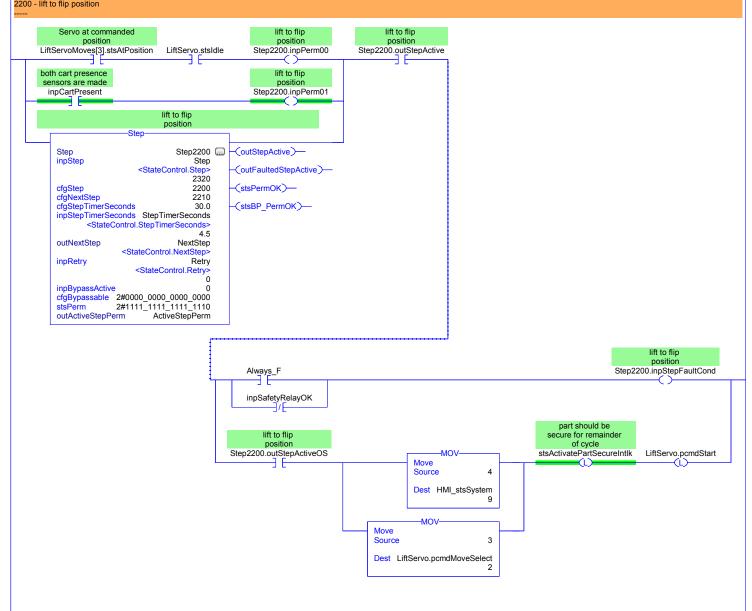


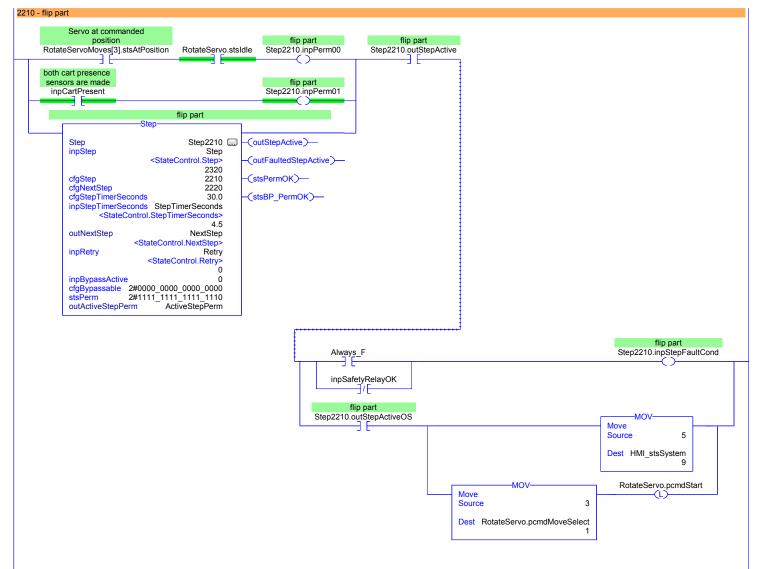


Total number of rungs in routine: 17



2200 - lift to flip position Servo at commanded position position





Accum

0

Total number of rungs in routine: 17

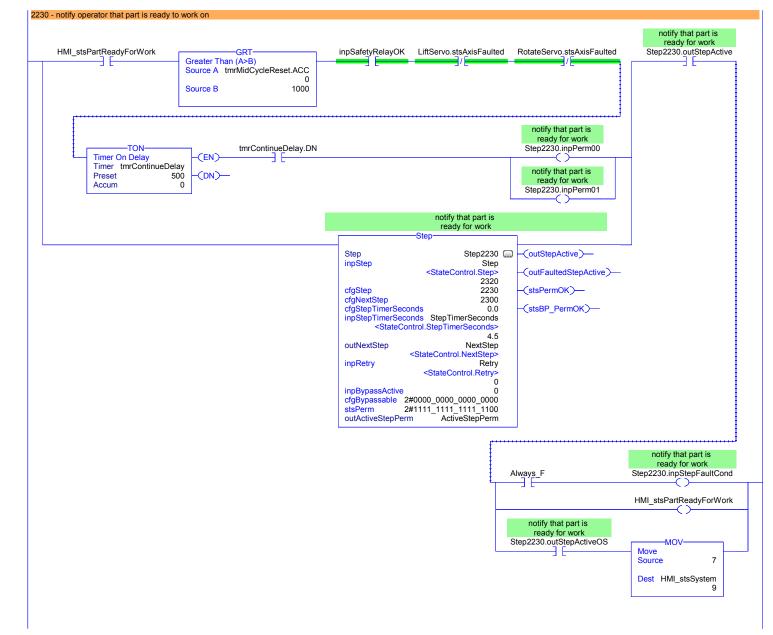
2220 - lower part to work position lower part to work position lower part to work position timerPartReadyWait.DN Step2220.inpPerm00 Step2220.outStepActive both cart presence lower part to work sensors are made inpCartPresent Step2220.inpPerm01 lower part to work position Step2220 🛄 Step Step inpStep -(outStepActive)-<StateControl.Step> (outFaultedStepActive)— 2320 cfgStep 2220 (stsPermOK)— 
 cfgStep
 2230

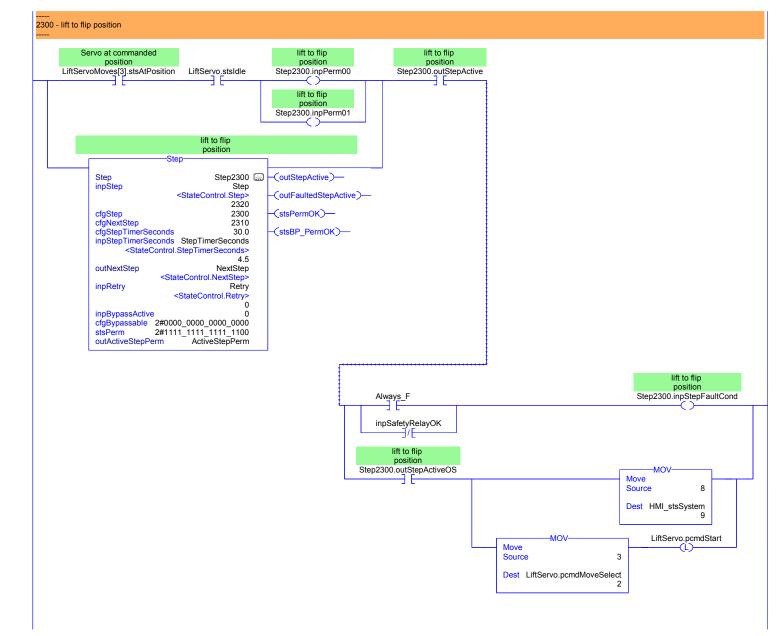
 cfgNextStep
 2230

 cfgStepTimerSeconds
 120.0

 inpStepTimerSeconds
 StepTimerSeconds

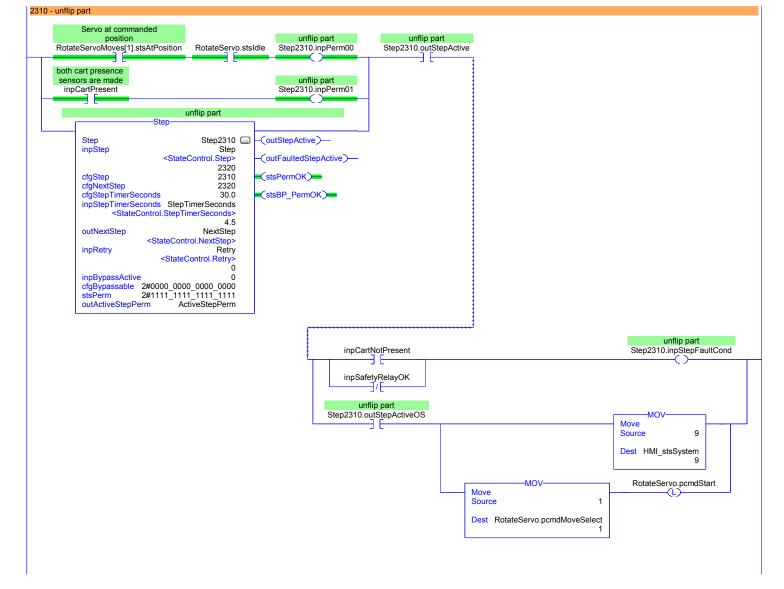
 <StateControl.StepTimerSeconds</td>
 4.5
 (stsBP\_PermOK) outNextStep NextStep <StateControl.NextStep> inpRetry Retry <StateControl.Retry> lower part to work position inpCartNotPresent Step2220.inpStepFaultCond inpSafetyRelayOK lower part to work position Step2220.outStepActiveOS Move Source 6 Dest HMI\_stsSystem LiftServo.pcmdStart MOV Move Source Dest LiftServo.pcmdMoveSelect 2 Servo at commanded position LiftServoMoves[4].stsAtPosition LiftServo.stsIdle -TON Timer On Delay (EN) Timer timerPartReadyWait Preset 1000 (DN)-



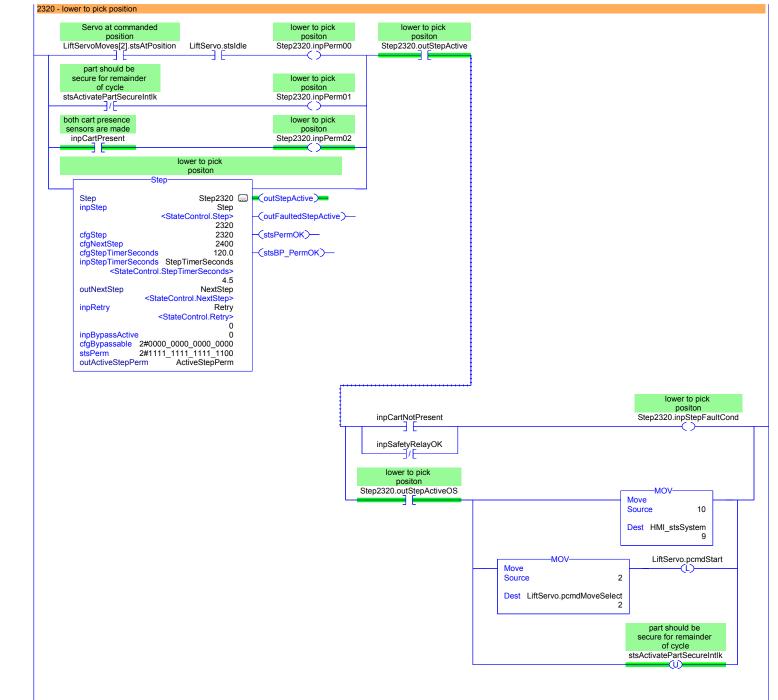


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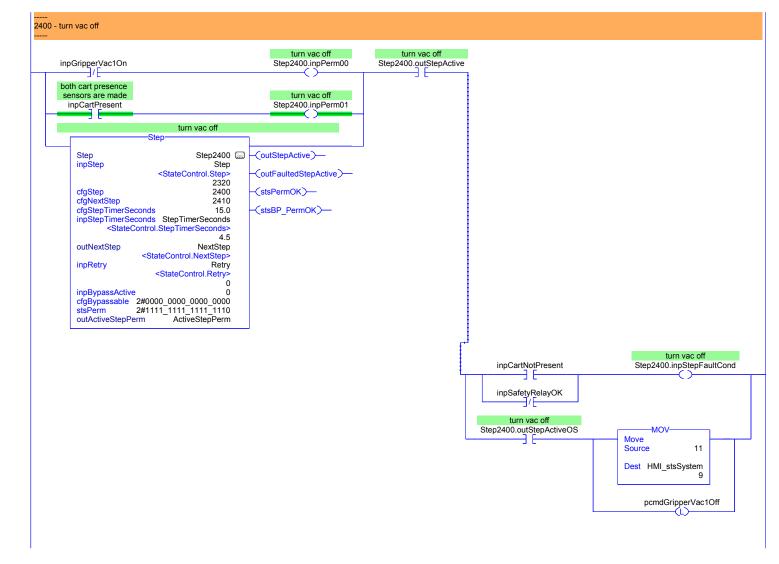
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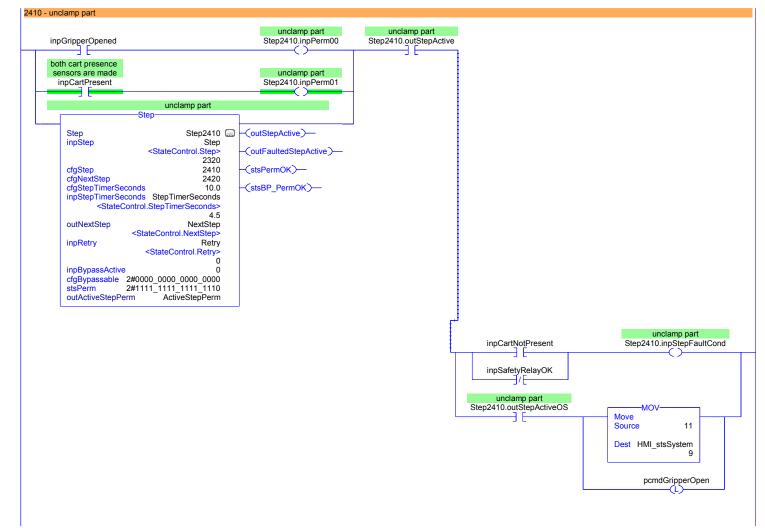


Logix Designer



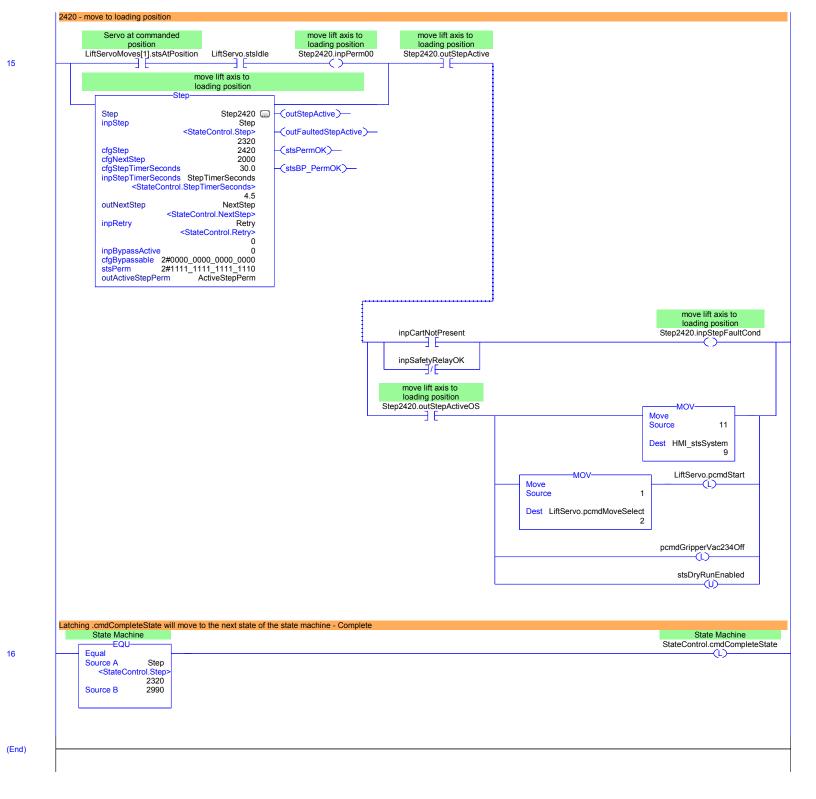
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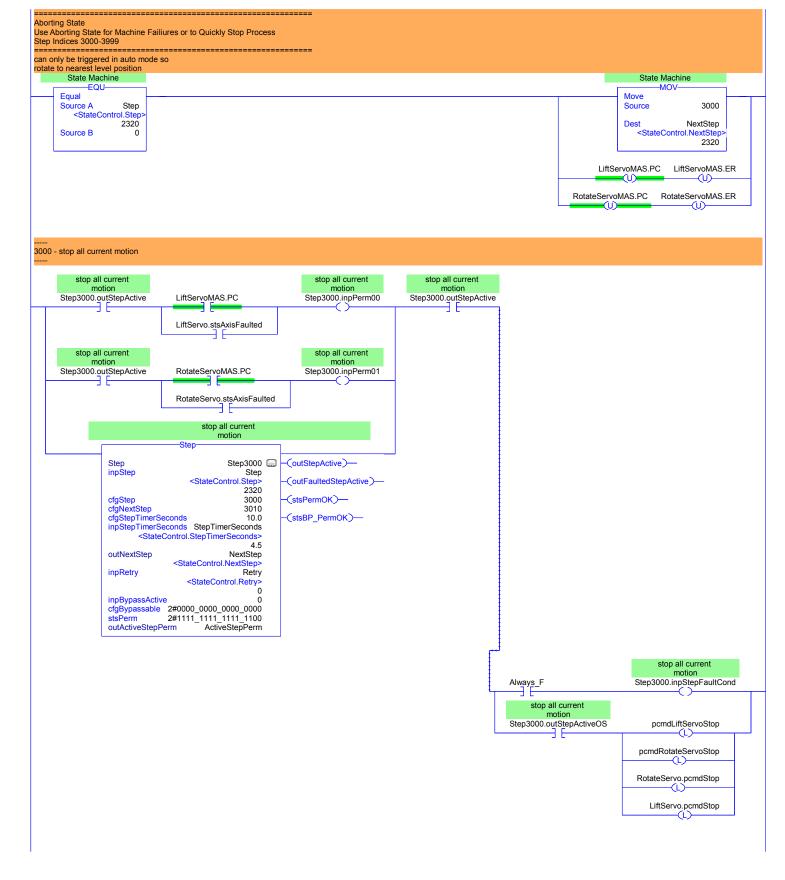
Logix Designer

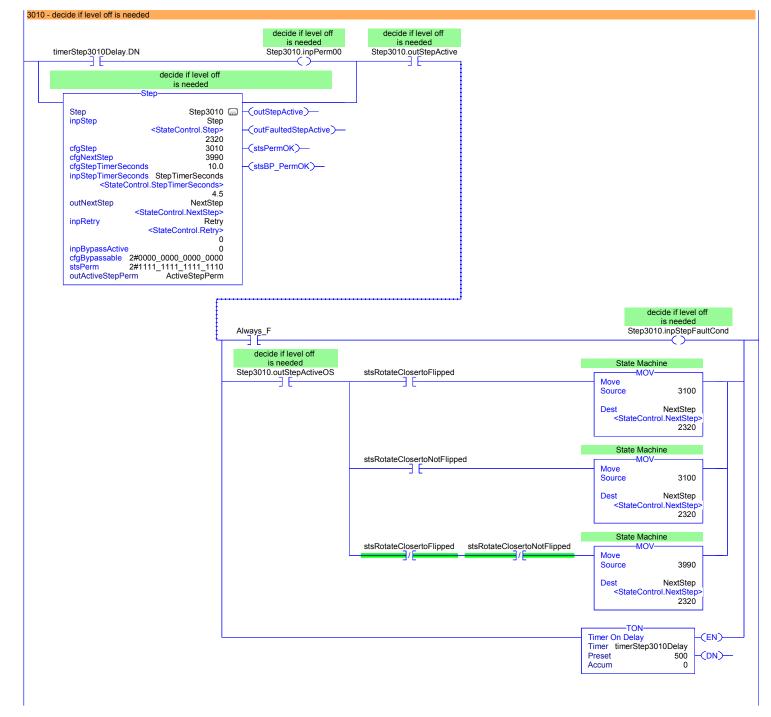
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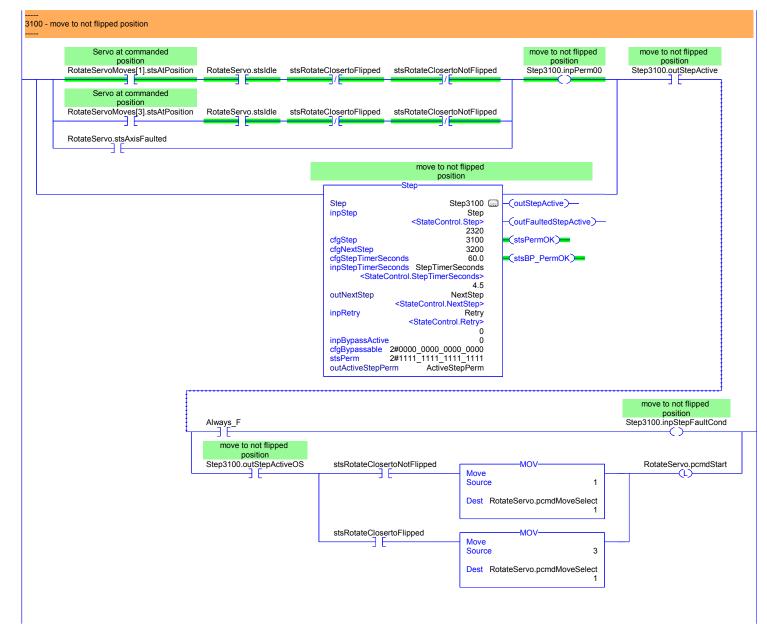


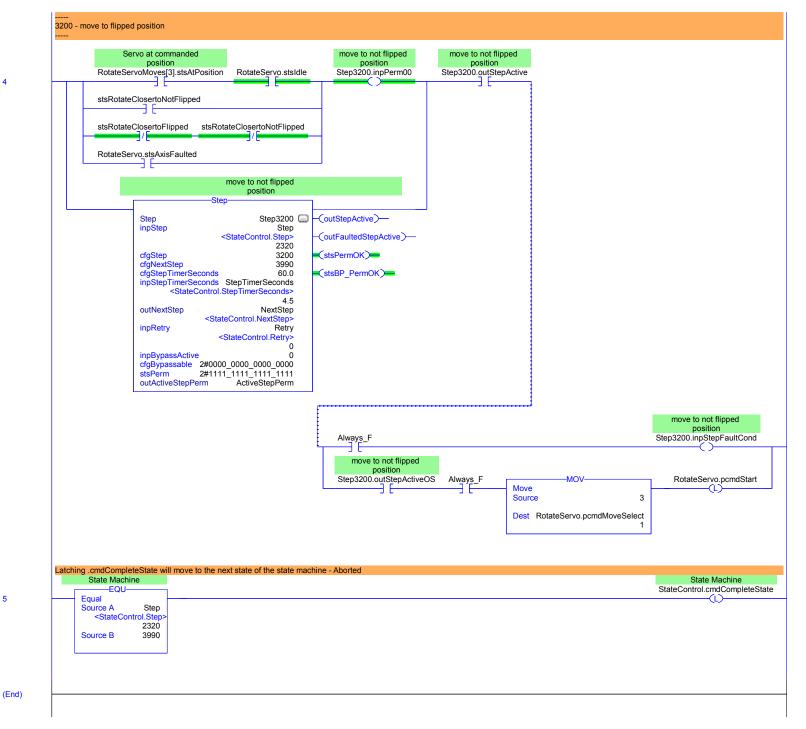
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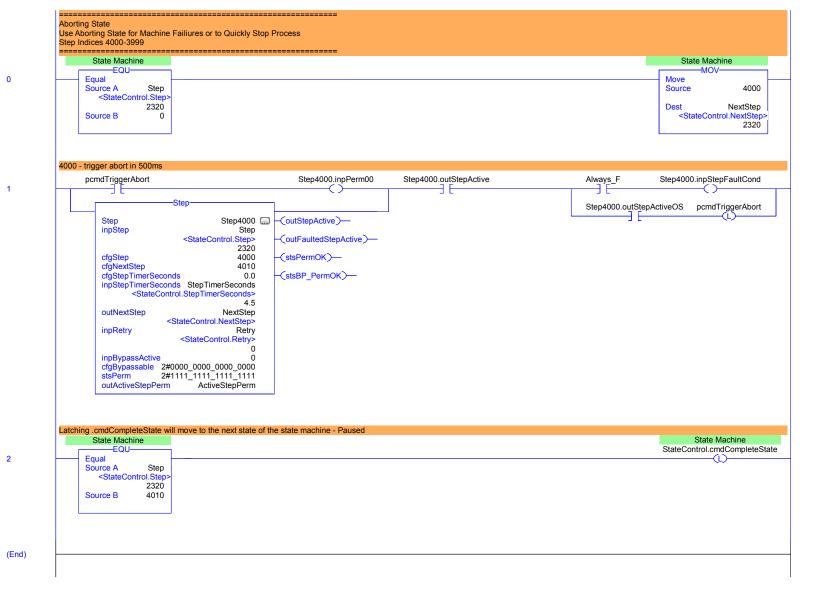








Total number of rungs in routine: 3 Z:\Shared\JLB Lib\JLB Prj\Portfolio\Battery Flipping Machine\BatteryLifter.ACD

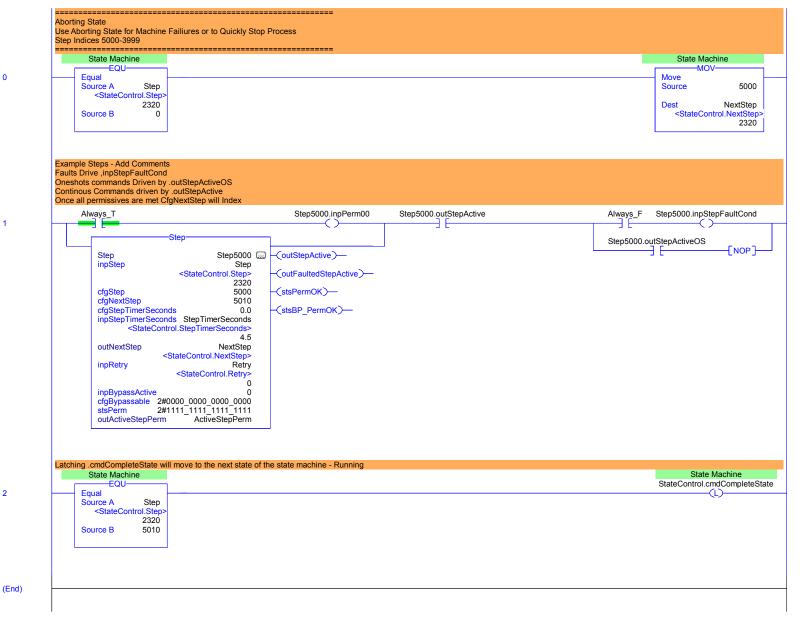


0

1

2

Total number of rungs in routine: 3 Z:\Shared\JLB Lib\JLB Prj\Portfolio\Battery Flipping Machine\BatteryLifter.ACD



BatteryLift	
Controller Organizer Listing	1
ProgramTask	
BatteryLift	
Alarms	
Ladder Diagram	5
CD_Actuator_GripperBarrel	
Ladder Diagram	12
CD_GripperVac	
Ladder Diagram	14
CD_Servo_Lift	
Ladder Diagram	
CD_Servo_Rotate	
Ladder Diagram	
Constants	
Ladder Diagram	
Main	
Ladder Diagram	
MapHMI	
Ladder Diagram	33
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Ladder Diagram	34
MapInputs_PLC	
Ladder Diagram	36
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Ladder Diagram	37
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Sea 5000 Proceeding	