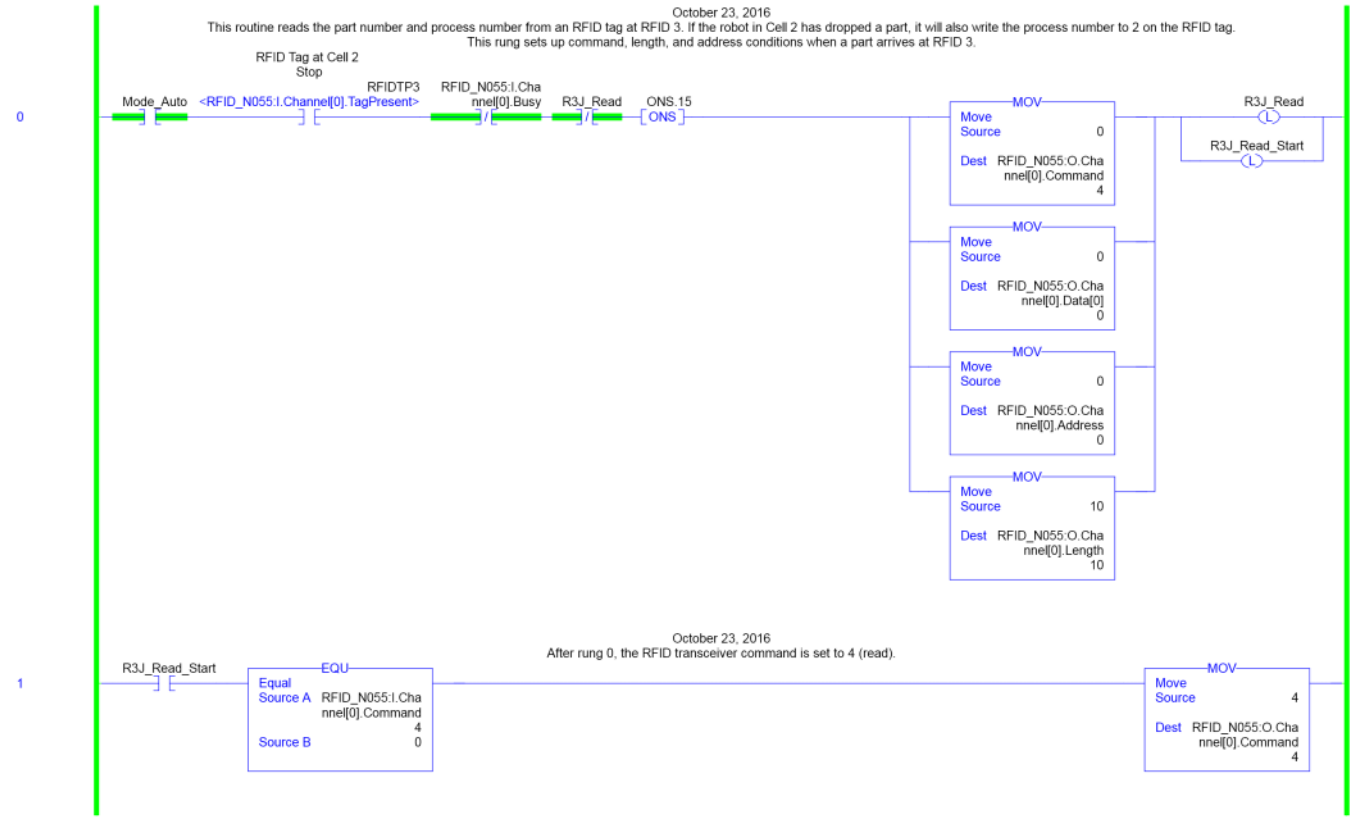
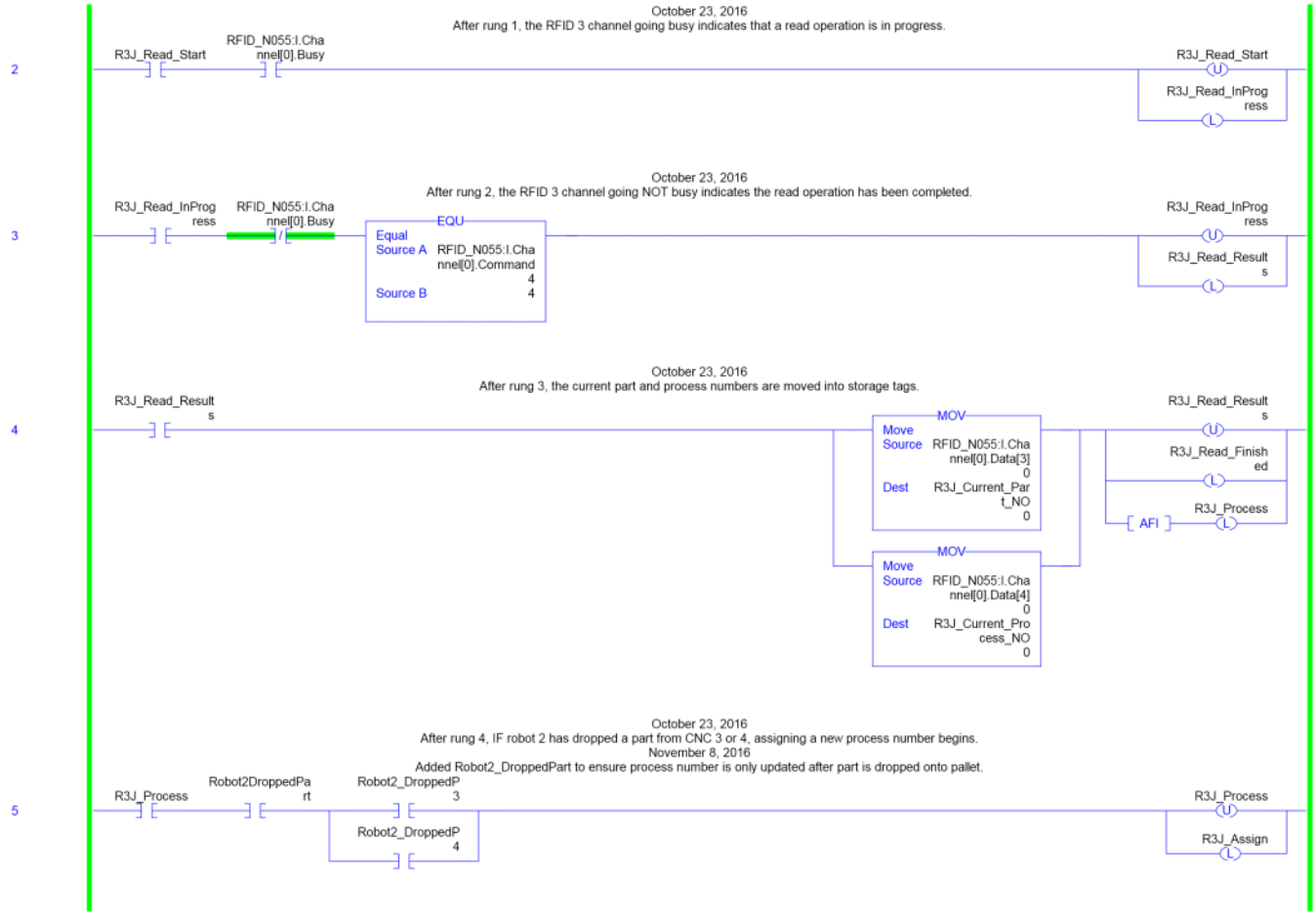
RFID_3_JW

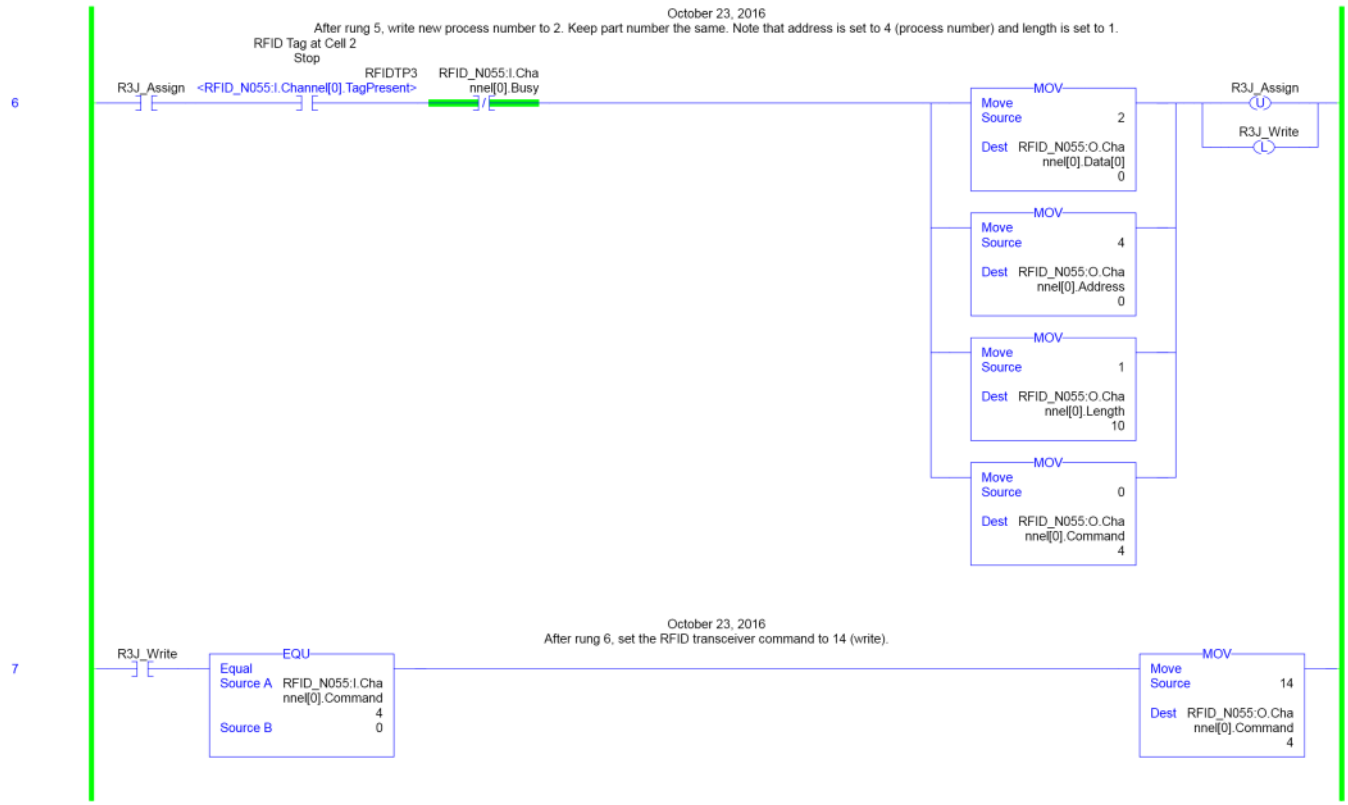
Sunday, April 09, 2017
5:53 PM

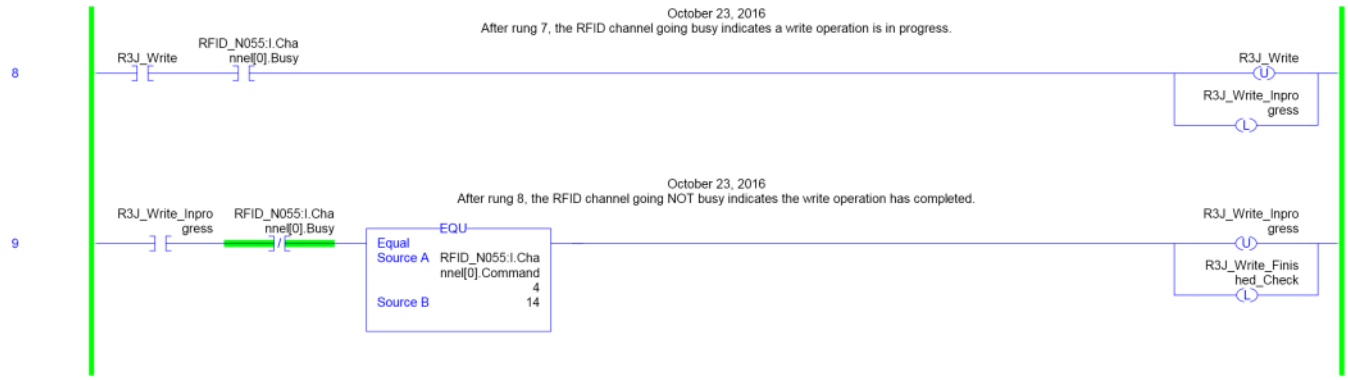
RFID_3_JW - Ladder Diagram **Page 1**
AdvManLab:MainTask:MainProgram 4/9/2017 5:59:19 PM
Total number of rungs in routine: 19 C:\Users\VRMILLING\Documents\control_team_manuals\Logic W2017\AdvManLabCurrent.ACD

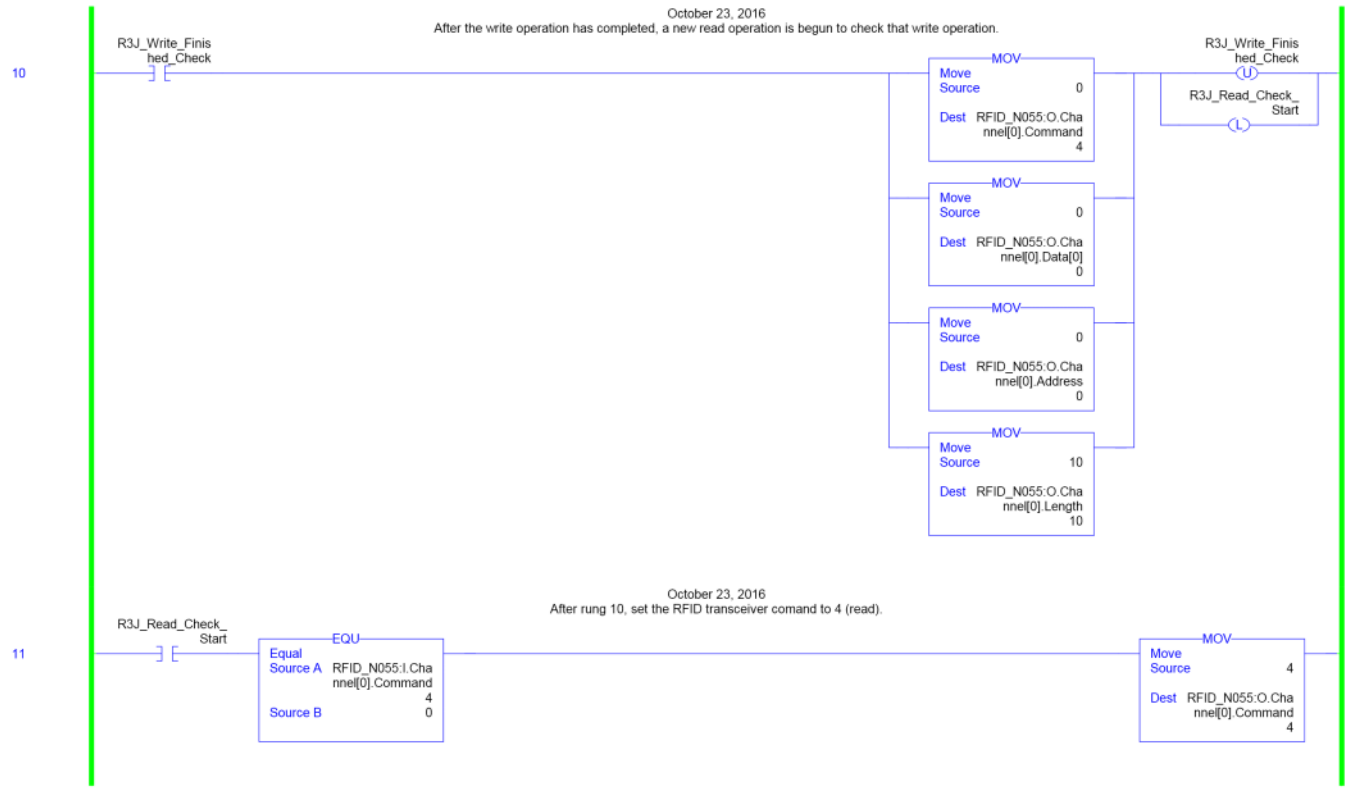


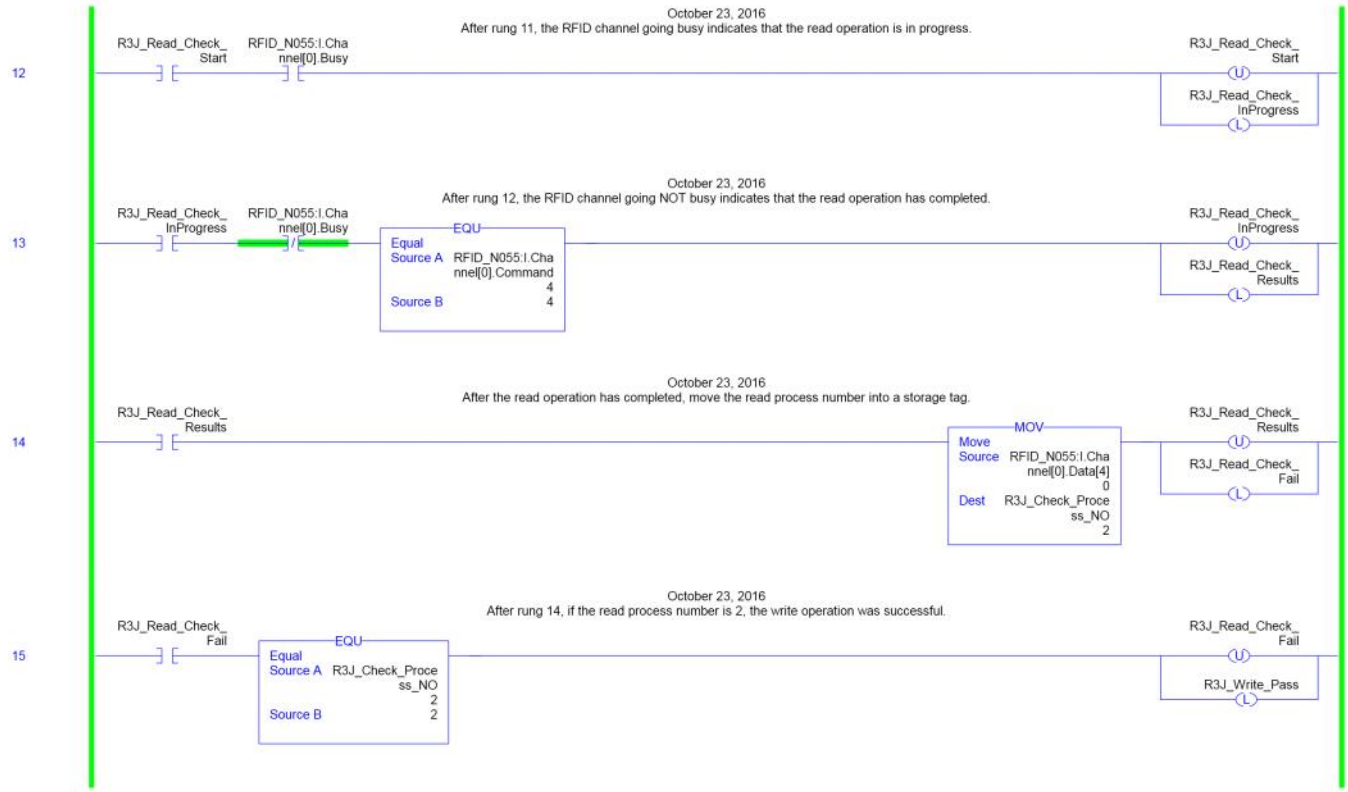
Logix Designer

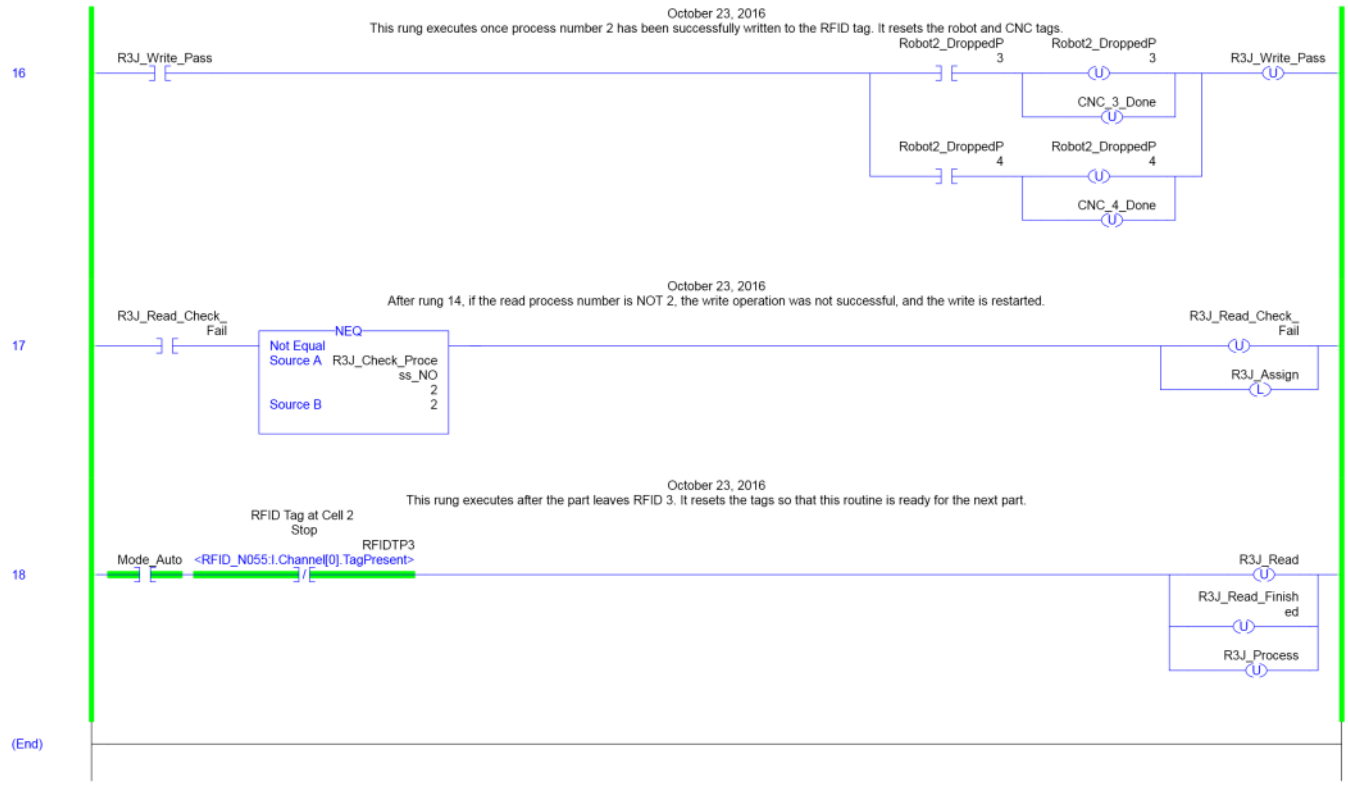

October 23, 2016
After rung 1, the RFID 3 channel going busy indicates that a read operation is in progress.
2
R3J_Read_Start
RFID_N055:I.Channel[0].Busy
R3J_Read_Start
R3J_Read_InProgress
October 23, 2016
After rung 2, the RFID 3 channel going NOT busy indicates the read operation has been completed.
3
R3J_Read_InProgress
RFID_N055:I.Channel[0].Busy
EQU
Equal
Source A RFID_N055:I.Channel[0].Command
4
Source B 4
R3J_Read_InProgress
R3J_Read_Results
October 23, 2016
After rung 3, the current part and process numbers are moved into storage tags.
4
R3J_Read_Results
MOV
Move
Source RFID_N055:I.Channel[0].Data[3]
0
Dest R3J_Current_Part_NO
0
MOV
Move
Source RFID_N055:I.Channel[0].Data[4]
0
Dest R3J_Current_Process_NO
0
R3J_Read_Results
R3J_Read_Finished
AFI
R3J_Process
October 23, 2016
After rung 4, IF robot 2 has dropped a part from CNC 3 or 4, assigning a new process number begins.
November 8, 2016
Added Robot2_DroppedPart to ensure process number is only updated after part is dropped onto pallet.
5
R3J_Process
Robot2DroppedPart
Robot2_DroppedP3
Robot2_DroppedP4
R3J_Process
R3J_Assign


October 23, 2016
After rung 5, write new process number to 2. Keep part number the same. Note that address is set to 4 (process number) and length is set to 1.
RFID Tag at Cell 2
Stop
6
R3J_Assign
<RFID_N055:I.Channel[0].TagPresent>
RFIDTP3
RFID_N055:I.Channel[0].Busy
MOV
Move
Source 2
Dest RFID_N055:O.Channel[0].Data[0] 0
MOV
Move
Source 4
Dest RFID_N055:O.Channel[0].Address 0
MOV
Move
Source 1
Dest RFID_N055:O.Channel[0].Length 10
MOV
Move
Source 0
Dest RFID_N055:O.Channel[0].Command 4
R3J_Assign
R3J_Write
October 23, 2016
After rung 6, set the RFID transceiver command to 14 (write).
7
R3J_Write
EQU
Equal
Source A RFID_N055:I.Channel[0].Command 4
Source B 0
MOV
Move
Source 14
Dest RFID_N055:O.Channel[0].Command 4


October 23, 2016
After rung 7, the RFID channel going busy indicates a write operation is in progress.
8
R3J_Write
RFID_N055:I.Channel[0].Busy
R3J_Write
U
R3J_Write_Inprogress
L
October 23, 2016
After rung 8, the RFID channel going NOT busy indicates the write operation has completed.
9
R3J_Write_Inprogress
RFID_N055:I.Channel[0].Busy
EQU
Equal
Source A
RFID_N055:I.Channel[0].Command
4
Source B
14
R3J_Write_Inprogress
U
R3J_Write_Finished_Check
L


October 23, 2016
After the write operation has completed, a new read operation is begun to check that write operation.
10
R3J_Write_Finished_Check
MOV
Move Source 0
Dest RFID_N055:O.Channel[0].Command 4
MOV
Move Source 0
Dest RFID_N055:O.Channel[0].Data[0] 0
MOV
Move Source 0
Dest RFID_N055:O.Channel[0].Address 0
MOV
Move Source 10
Dest RFID_N055:O.Channel[0].Length 10
R3J_Write_Finished_Check
U
R3J_Read_Check_Start
L
October 23, 2016
After rung 10, set the RFID transceiver comand to 4 (read).
11
R3J_Read_Check_Start
EQU
Equal
Source A RFID_N055:I.Channel[0].Command 4
Source B 0
MOV
Move Source 4
Dest RFID_N055:O.Channel[0].Command 4


October 23, 2016
After rung 11, the RFID channel going busy indicates that the read operation is in progress.
12
R3J_Read_Check_ Start
RFID_N055:I.Channel[0].Busy
R3J_Read_Check_ Start
U
R3J_Read_Check_ InProgress
L
October 23, 2016
After rung 12, the RFID channel going NOT busy indicates that the read operation has completed.
13
R3J_Read_Check_ InProgress
RFID_N055:I.Channel[0].Busy
EQU
Equal
Source A RFID_N055:I.Channel[0].Command 4
Source B 4
R3J_Read_Check_ InProgress
U
R3J_Read_Check_ Results
L
October 23, 2016
After the read operation has completed, move the read process number into a storage tag.
14
R3J_Read_Check_ Results
MOV
Move
Source RFID_N055:I.Channel[0].Data[4] 0
Dest R3J_Check_Process_NO 2
R3J_Read_Check_ Results
U
R3J_Read_Check_ Fail
L
October 23, 2016
After rung 14, if the read process number is 2, the write operation was successful.
15
R3J_Read_Check_ Fail
EQU
Equal
Source A R3J_Check_Process_NO 2
Source B 2
R3J_Read_Check_ Fail
U
R3J_Write_Pass
L


October 23, 2016
This rung executes once process number 2 has been successfully written to the RFID tag. It resets the robot and CNC tags.
16
R3J_Write_Pass
Robot2_DroppedP 3
Robot2_DroppedP 3
R3J_Write_Pass
CNC_3_Done
Robot2_DroppedP 4
Robot2_DroppedP 4
CNC_4_Done
October 23, 2016
After rung 14, if the read process number is NOT 2, the write operation was not successful, and the write is restarted.
17
R3J_Read_Check_ Fail
NEQ
Not Equal
Source A R3J_Check_Proce ss_NO 2
Source B 2
R3J_Read_Check_ Fail
R3J_Assign
October 23, 2016
This rung executes after the part leaves RFID 3. It resets the tags so that this routine is ready for the next part.
RFID Tag at Cell 2 Stop
18
Mode_Auto
<RFID_N055:I.Channel[0].TagPresent>
RFIDTP3
R3J_Read
R3J_Read_Finish ed
R3J_Process
(End)