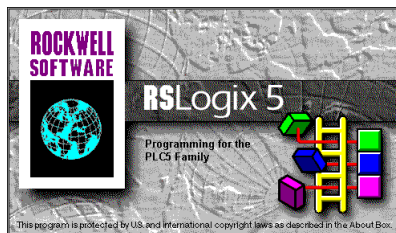


## TEST BENCH THREE



## Test Bench Three

### Processor Information

---

Processor Type: PLC5/15                      B              H              11008

Processor Name: TB3

Total Memory Used: 6970 WORDS

Program Files: 12

Data Files: 61

## Test Bench Three

### I/O Configuration Overview

---

#### TB3

##### Chassis 1

Rack: 0  
Size: 8 Slot Chassis  
Addressing Mode: 1 Slot

| <u>Slot</u> | <u>Module Type</u> | <u>Module Description</u>      |
|-------------|--------------------|--------------------------------|
| 0           | 1771-IBD           | 10-30v DC 16pt Input           |
| 1           | 1771-OBDO          | 10-60v DC 16pt Output          |
| 2           | 1771-IFE           | 12 Bit Analog Input (or IFE/A) |
| 3           |                    |                                |
| 4           | 1771-IFE           | 12 Bit Analog Input (or IFE/A) |
| 5           | 1771-OFE           | 12 Bit Analog Output           |
| 6           | 1771-IFE           | 12 Bit Analog Input (or IFE/A) |
| 7           | 1771-OFE           | 12 Bit Analog Output           |

## Test Bench Three

### Revision History

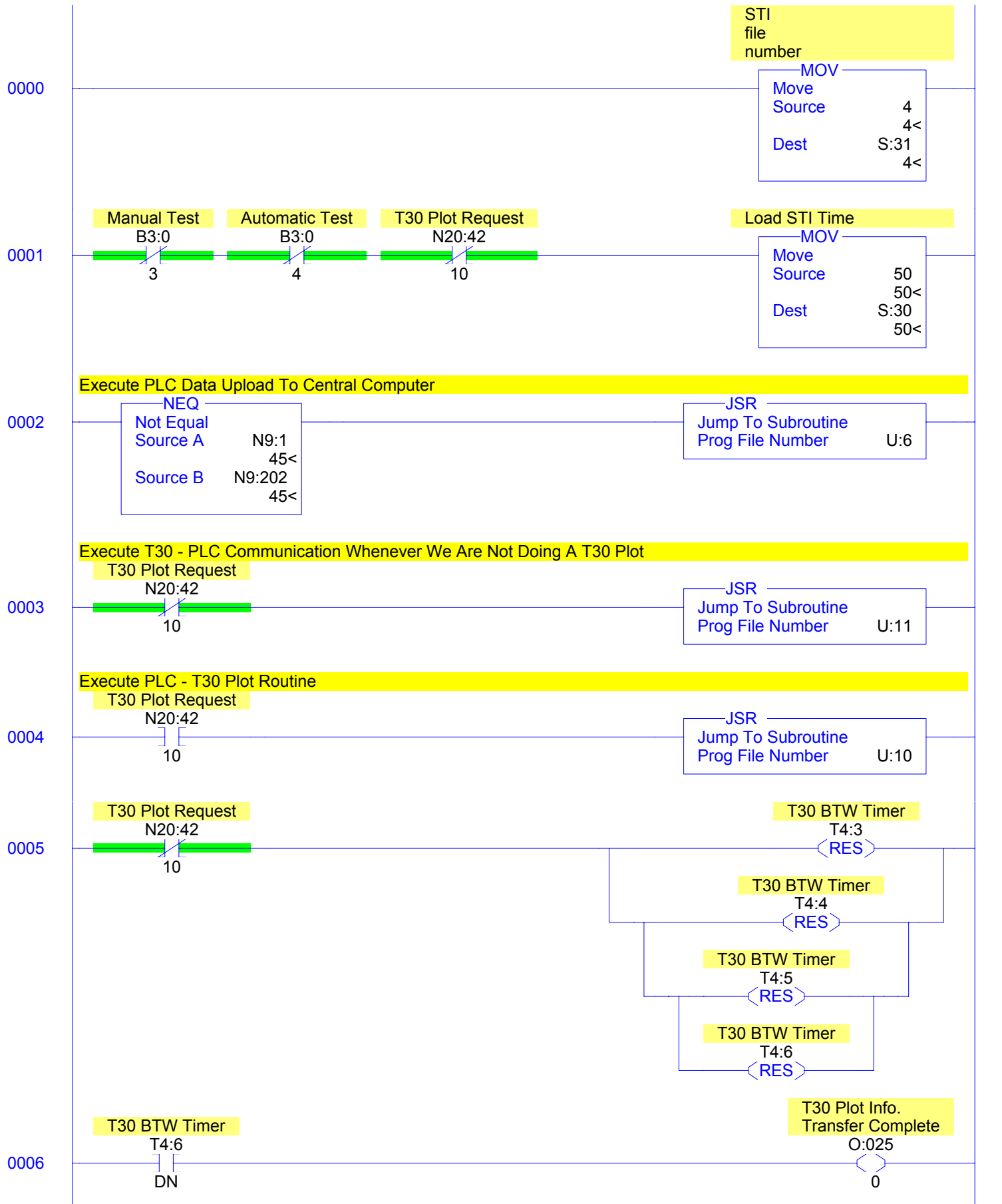
---

| Rev. | Rev. | Note |
|------|------|------|
|------|------|------|

|   |  |  |
|---|--|--|
| 0 |  | Added Discriptions<br>-Phil 28 July 2004 |
|---|--|--|

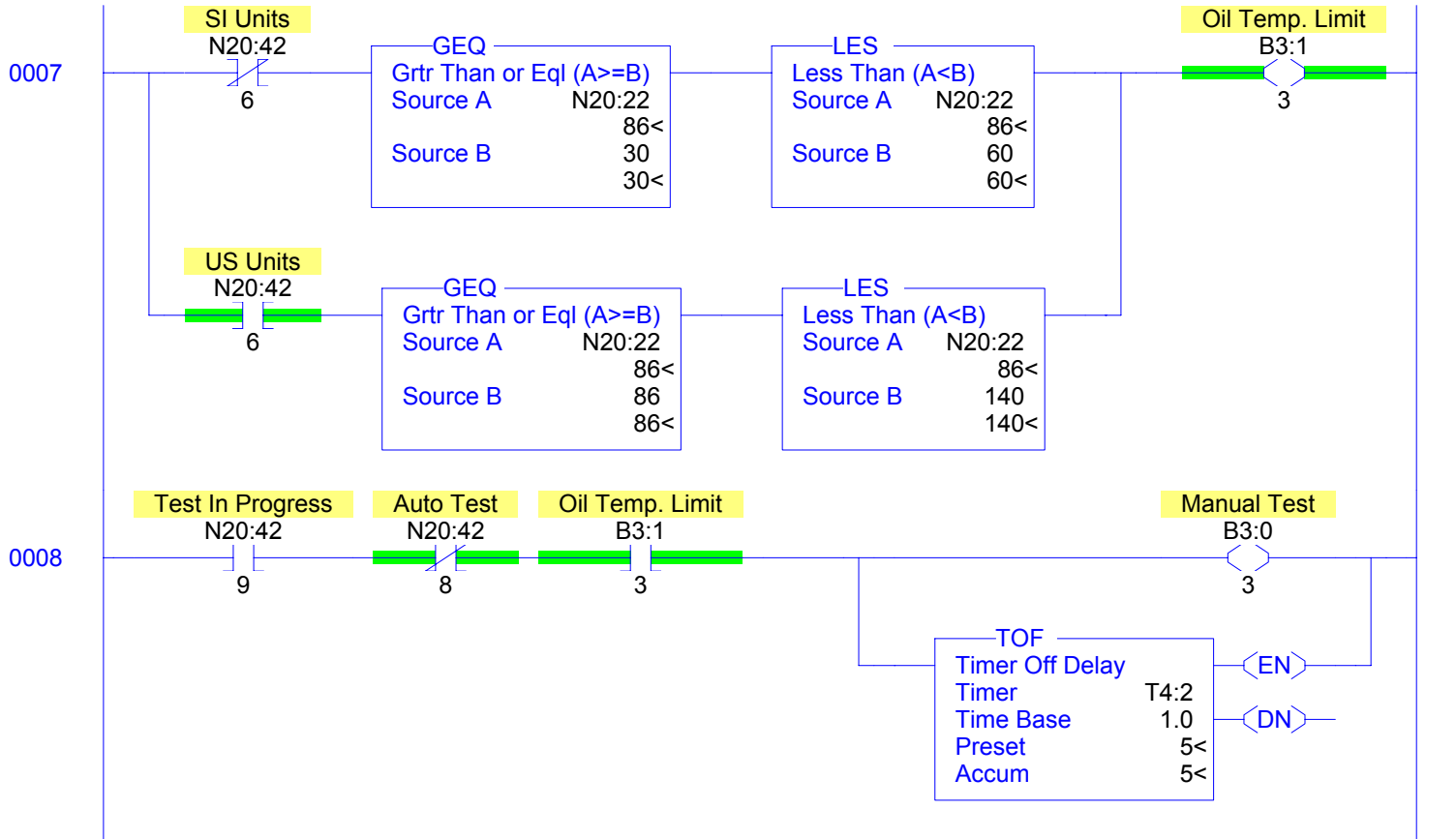
# Test Bench Three

LAD 2 - MAIN\_PROG --- Total Rungs in File = 30



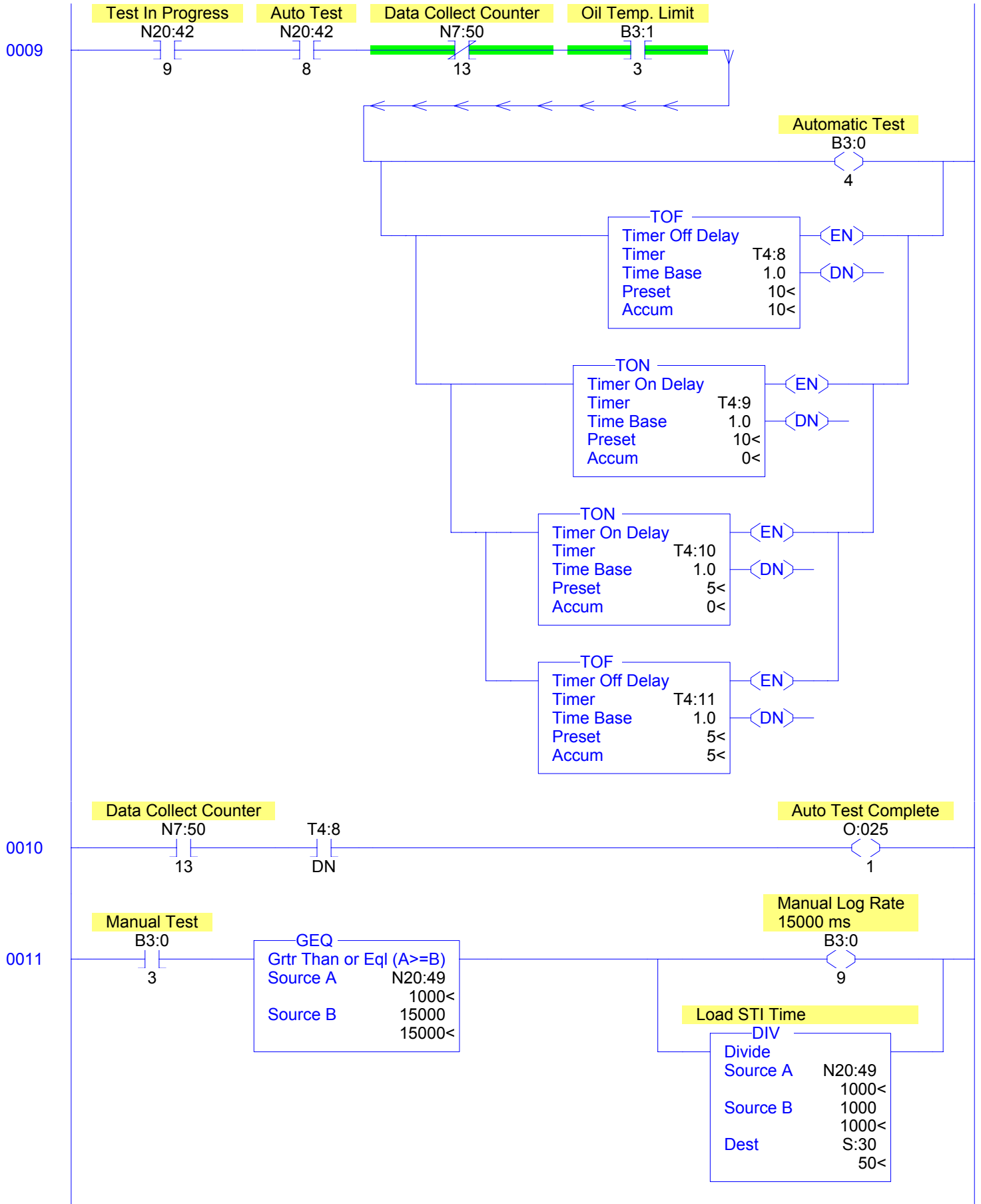
# Test Bench Three

LAD 2 - MAIN\_PROG --- Total Rungs in File = 30



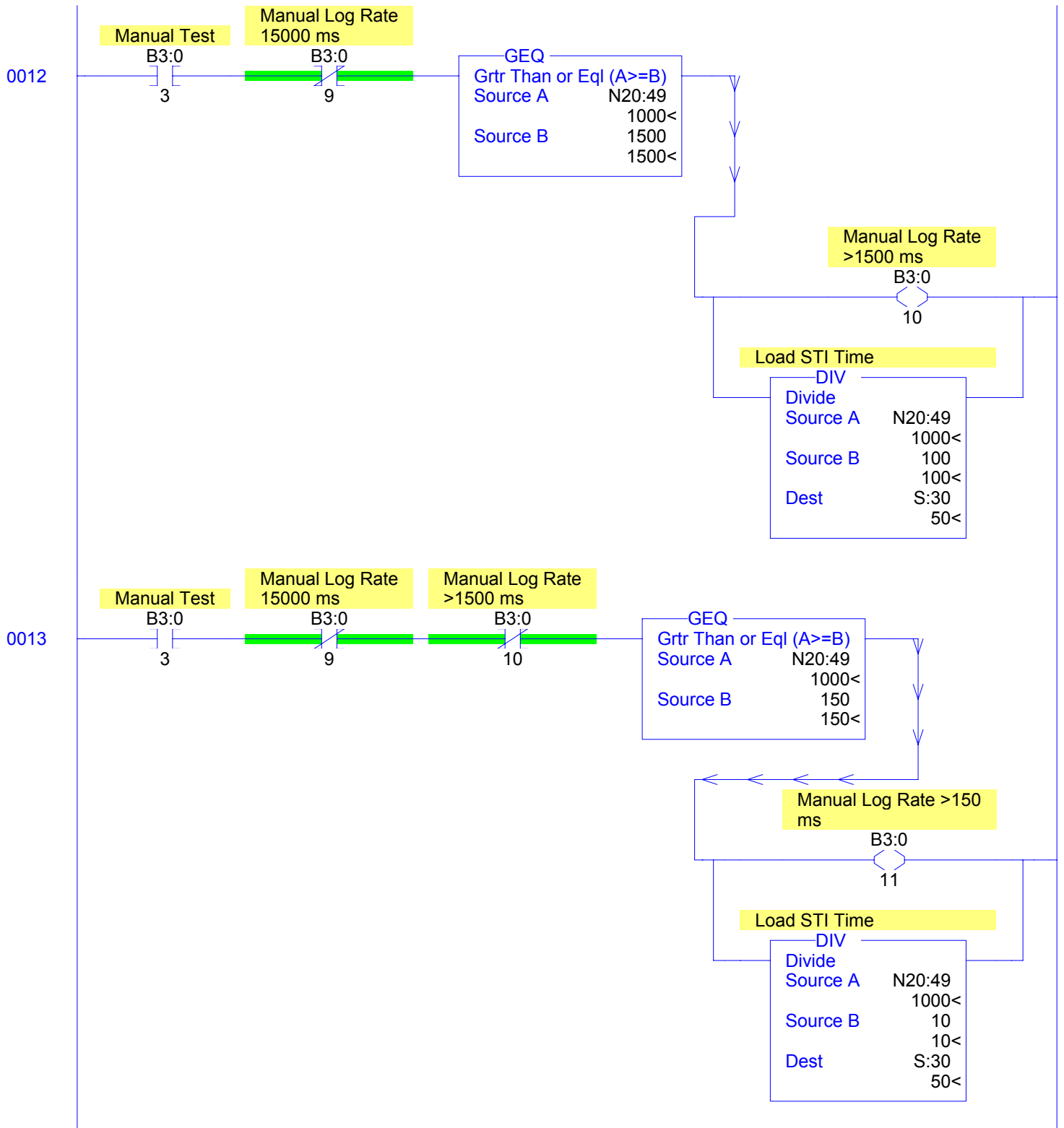
# Test Bench Three

LAD 2 - MAIN\_PROG --- Total Rungs in File = 30



# Test Bench Three

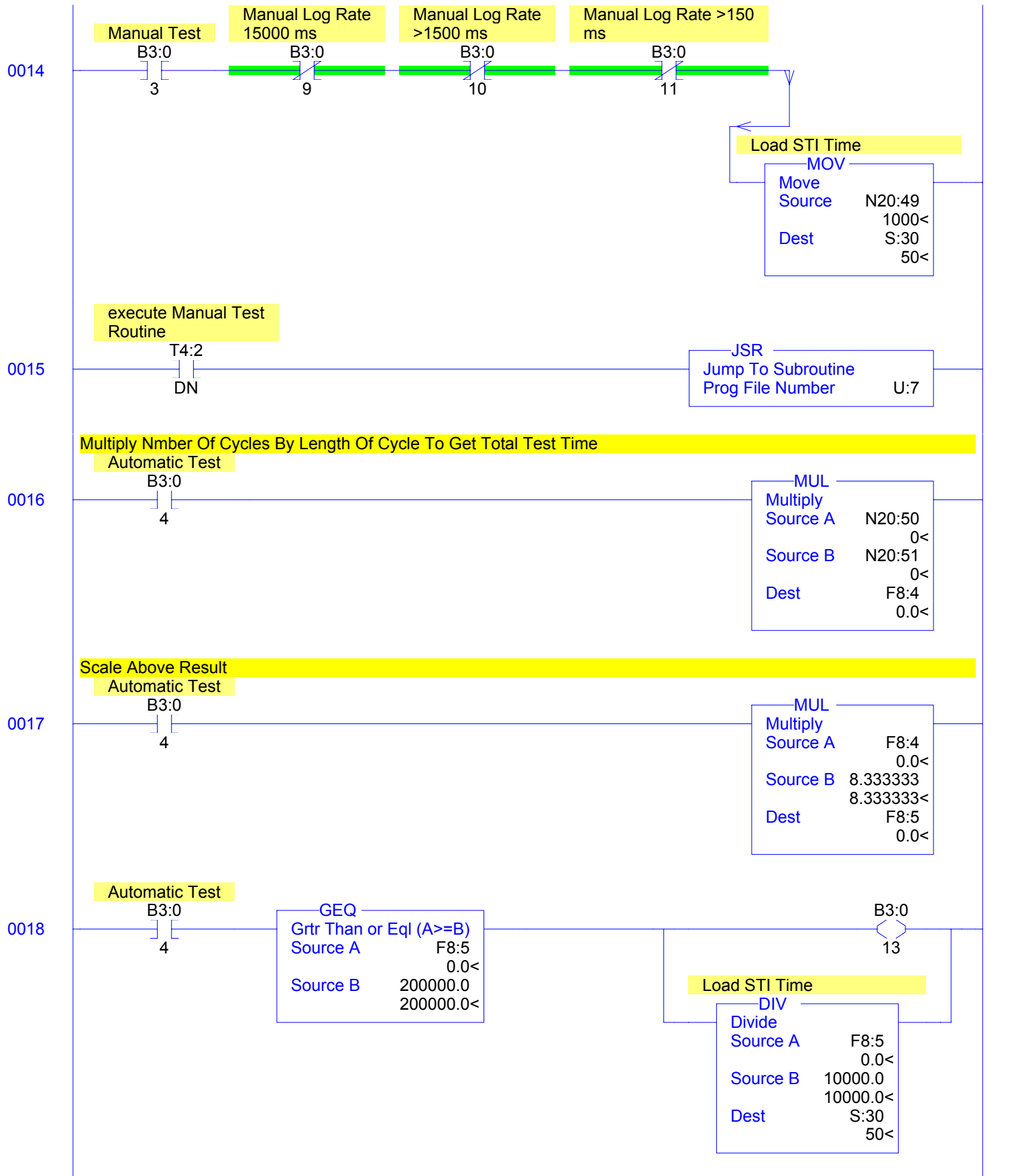
LAD 2 - MAIN\_PROG --- Total Rungs in File = 30





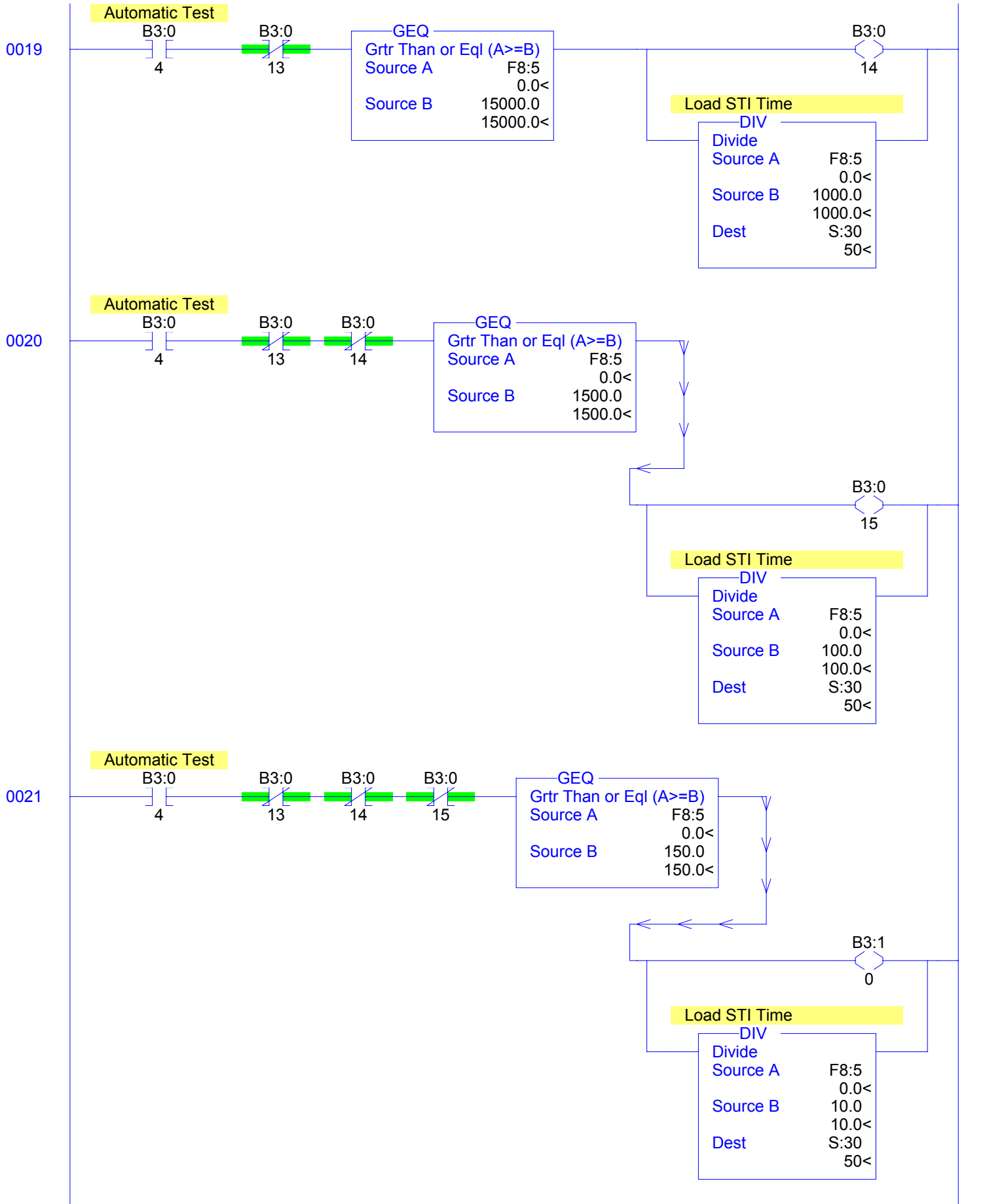
# Test Bench Three

LAD 2 - MAIN\_PROG --- Total Rungs in File = 30



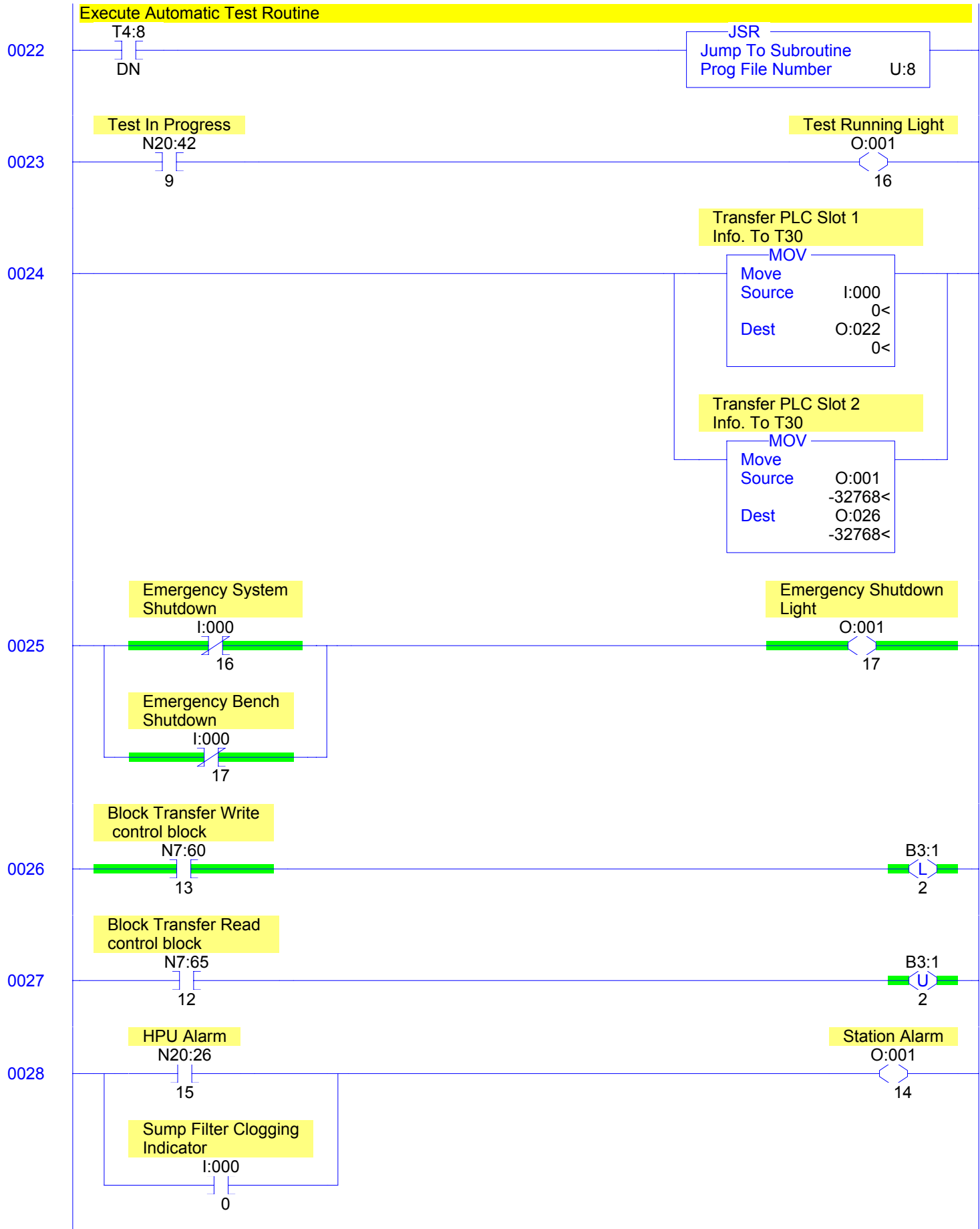
# Test Bench Three

LAD 2 - MAIN\_PROG --- Total Rungs in File = 30



# Test Bench Three

LAD 2 - MAIN\_PROG --- Total Rungs in File = 30



# Test Bench Three

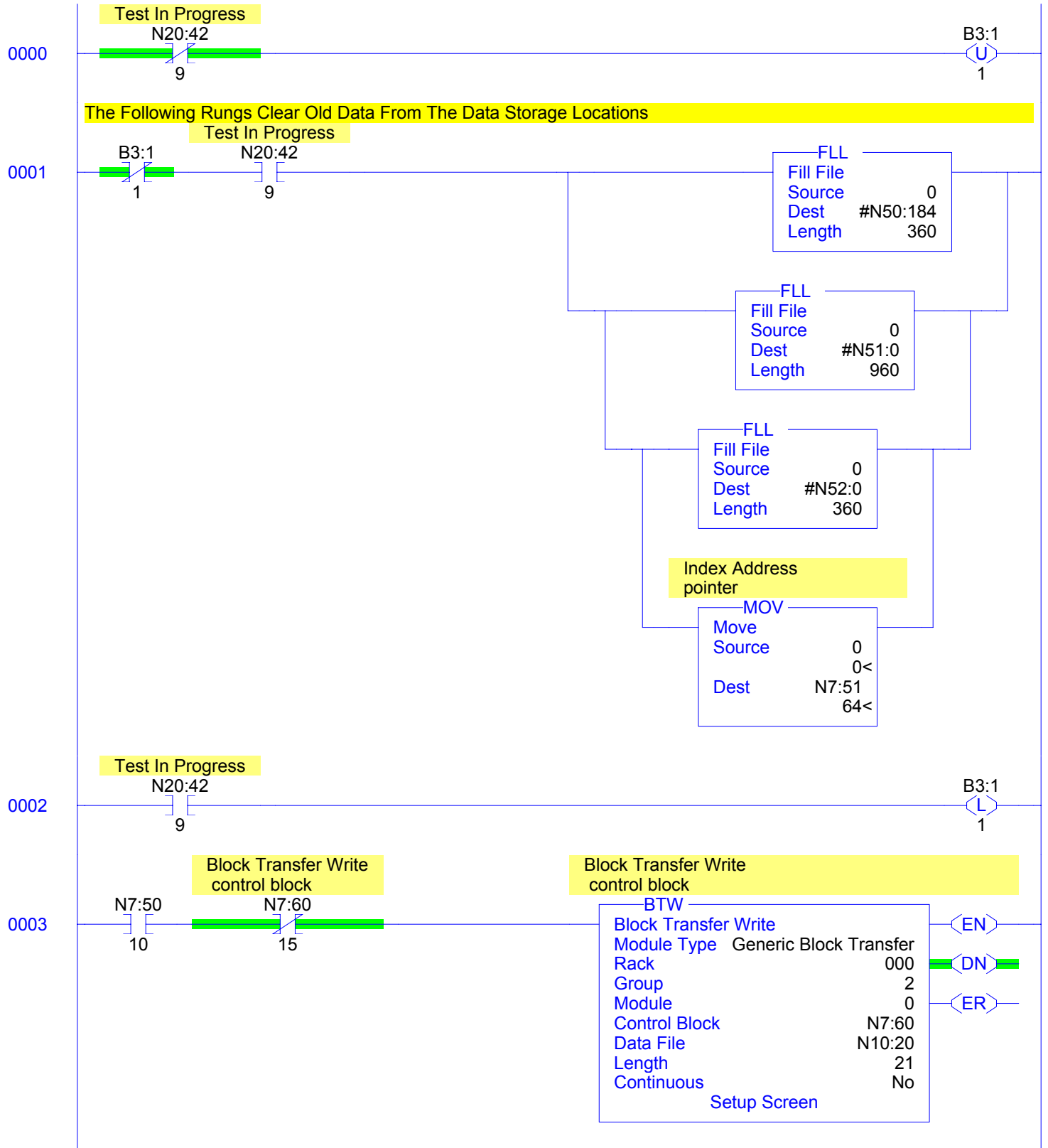
LAD 2 - MAIN\_PROG --- Total Rungs in File = 30

0029

<END>

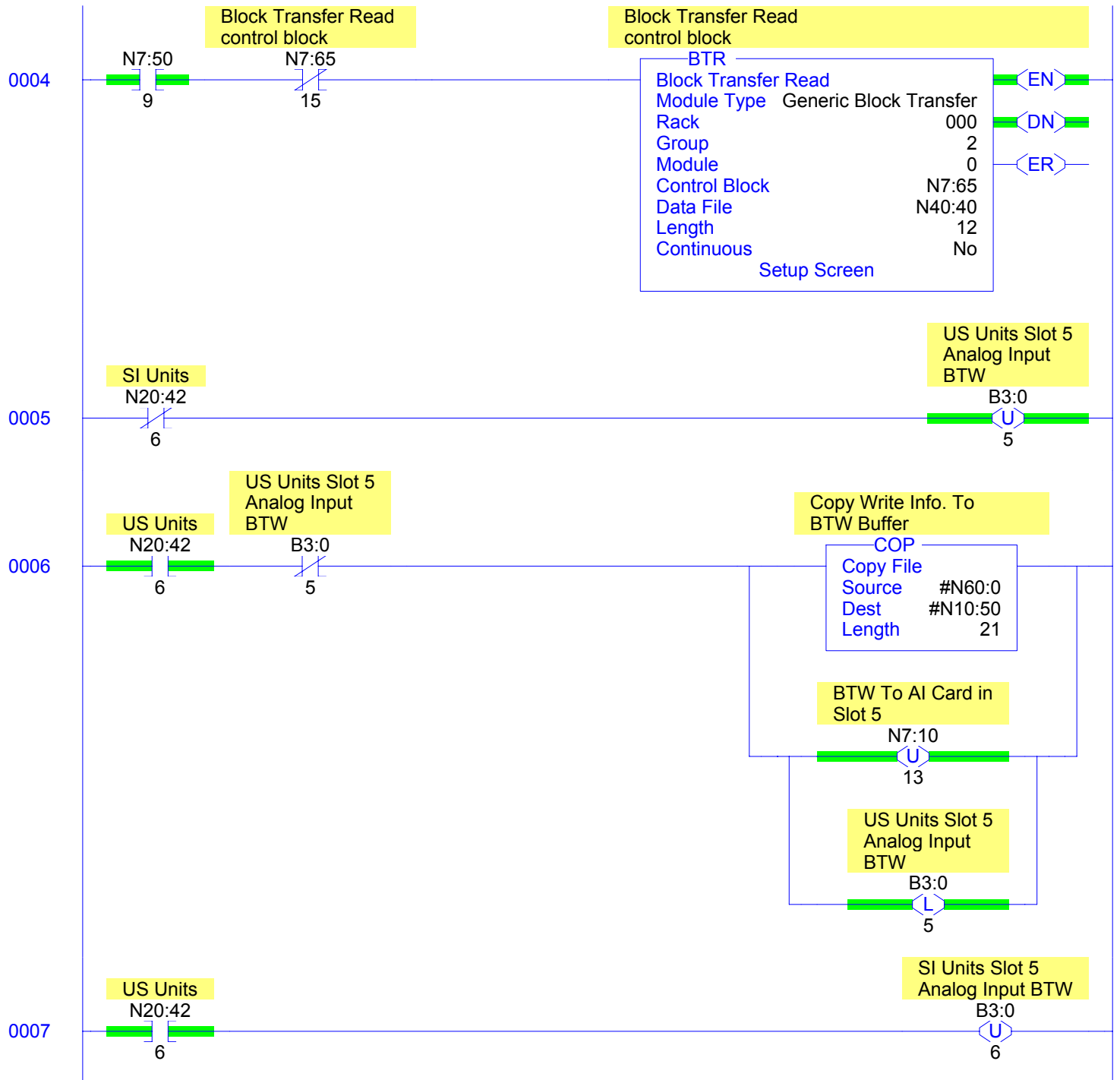
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



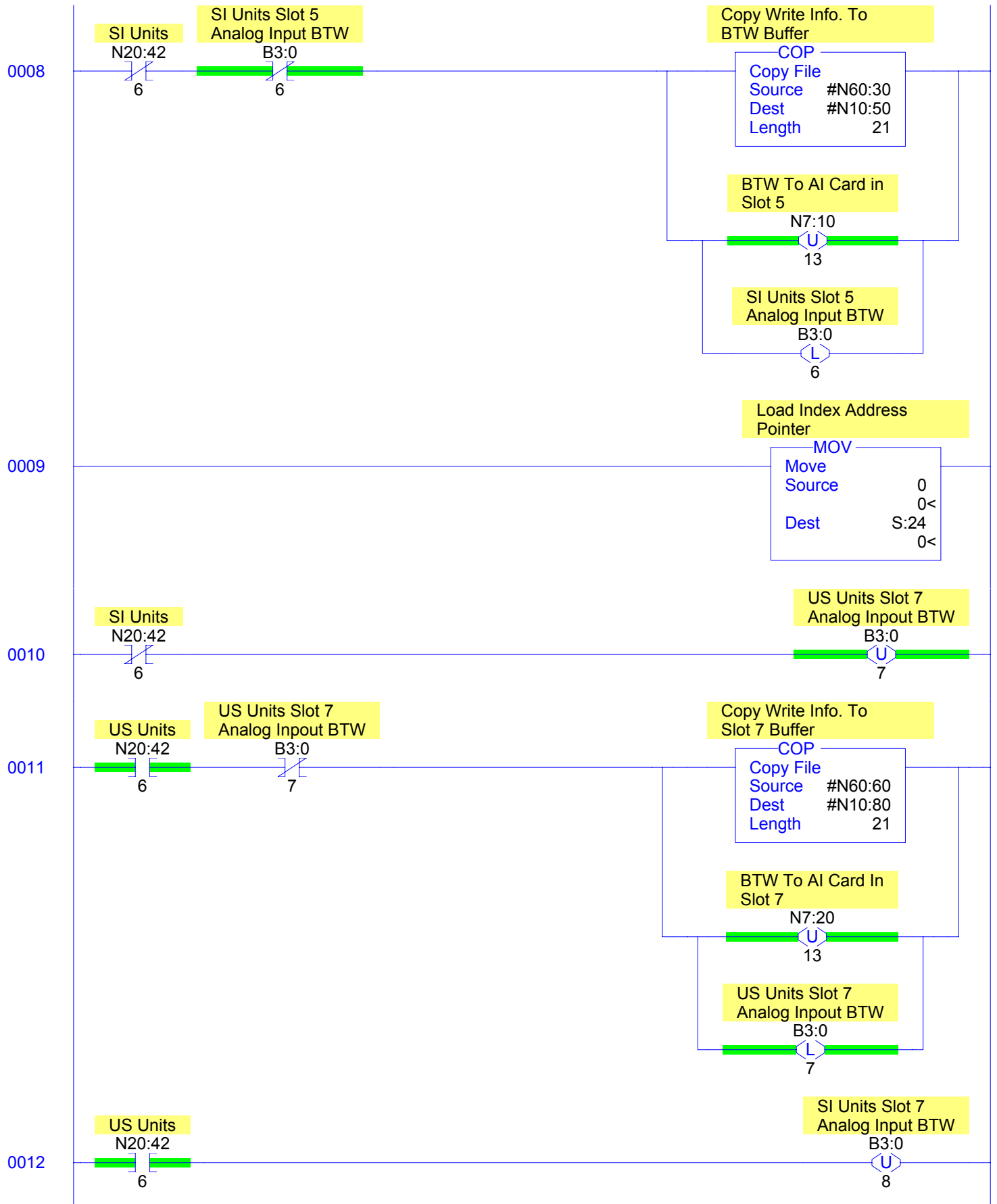
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



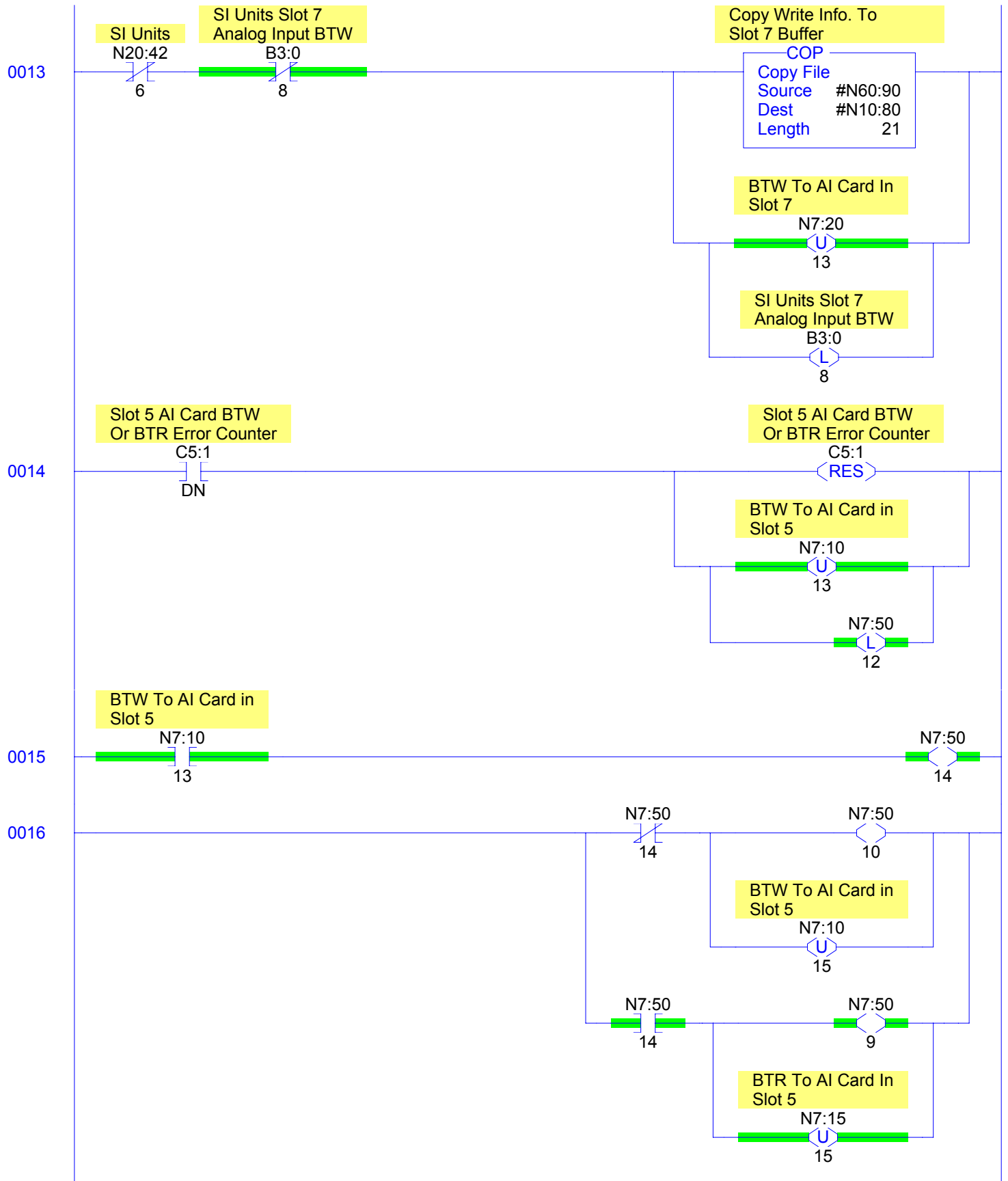
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



# Test Bench Three

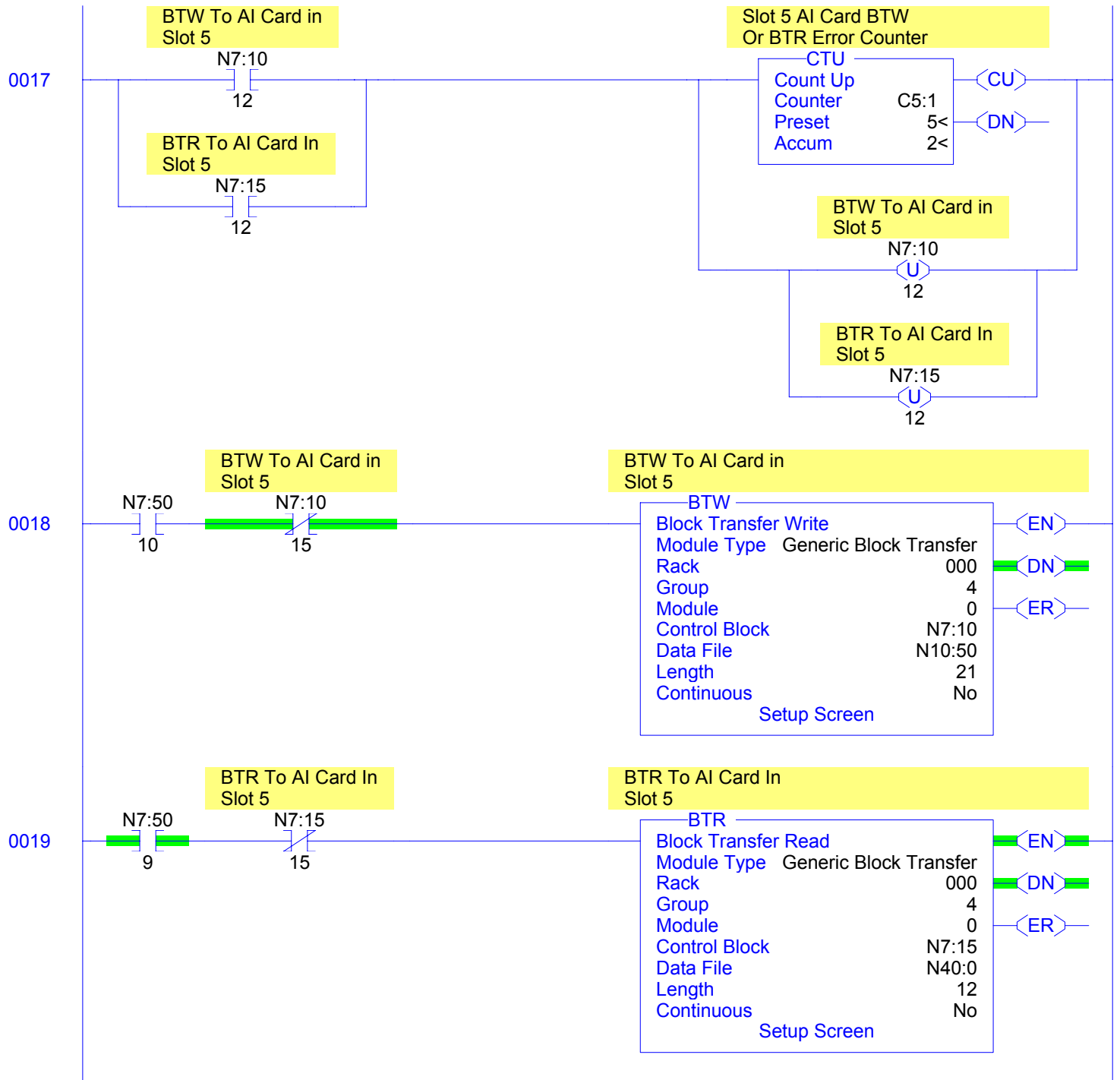
LAD 4 - ANALOG\_INT --- Total Rungs in File = 57





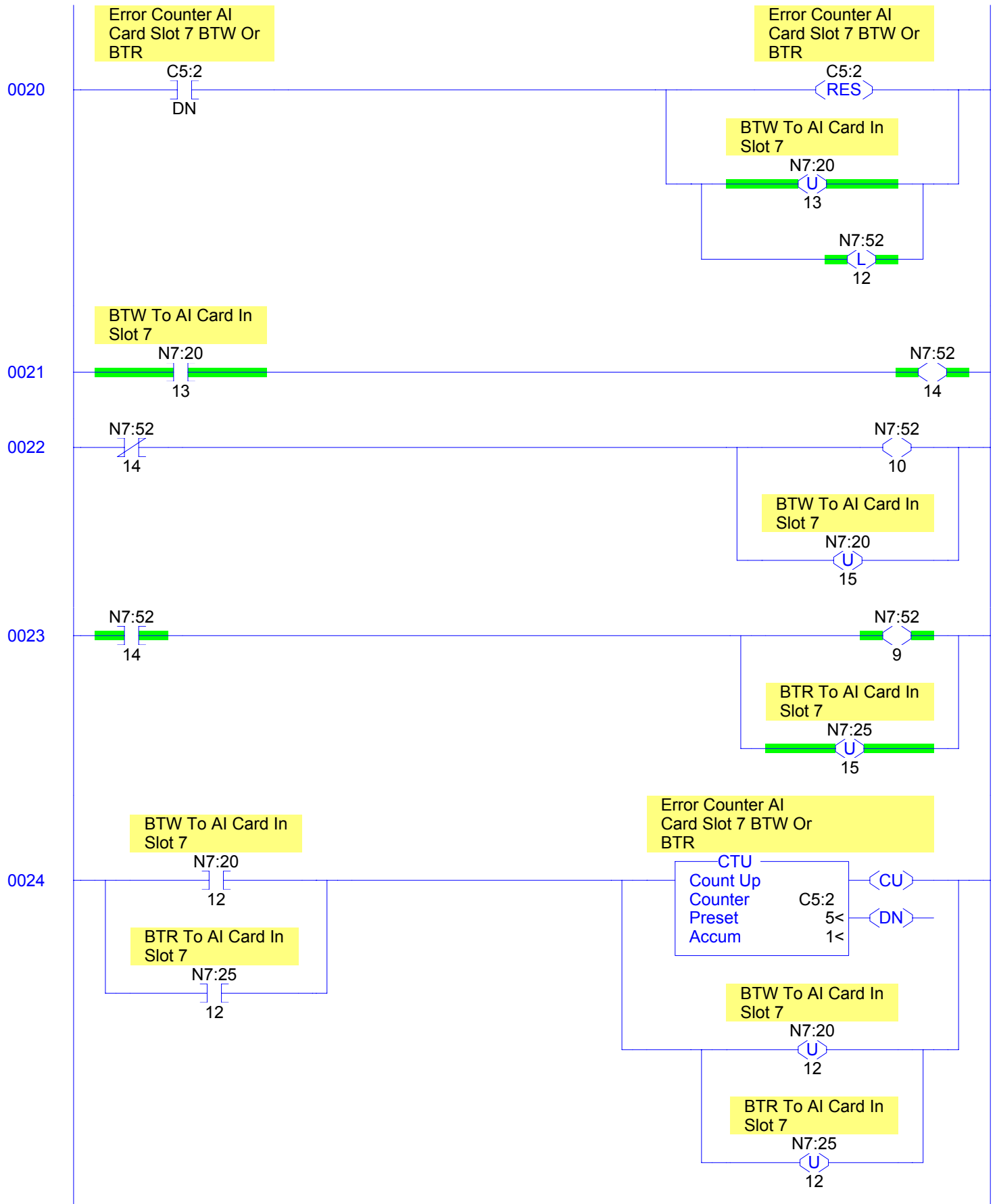
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



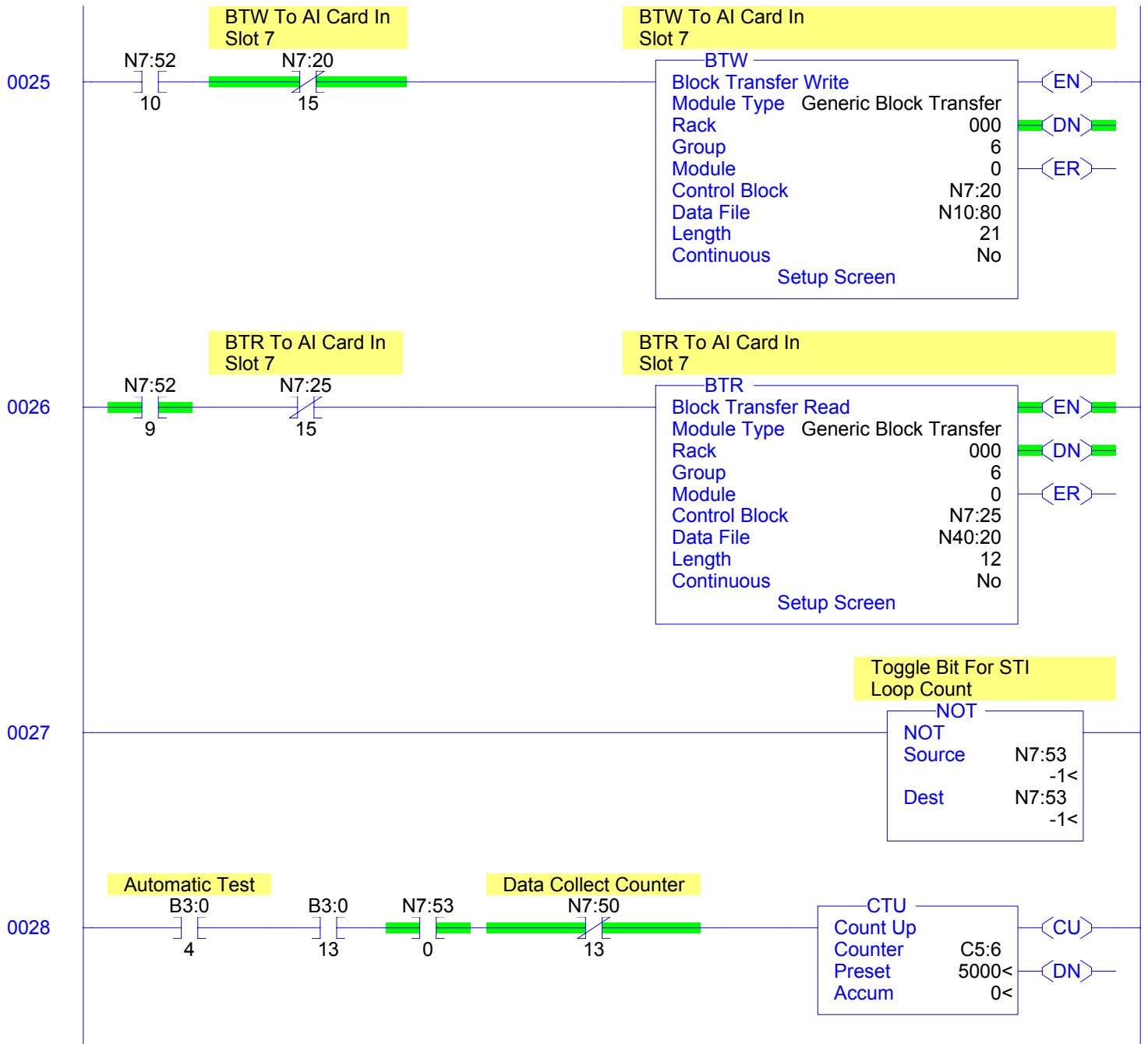
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



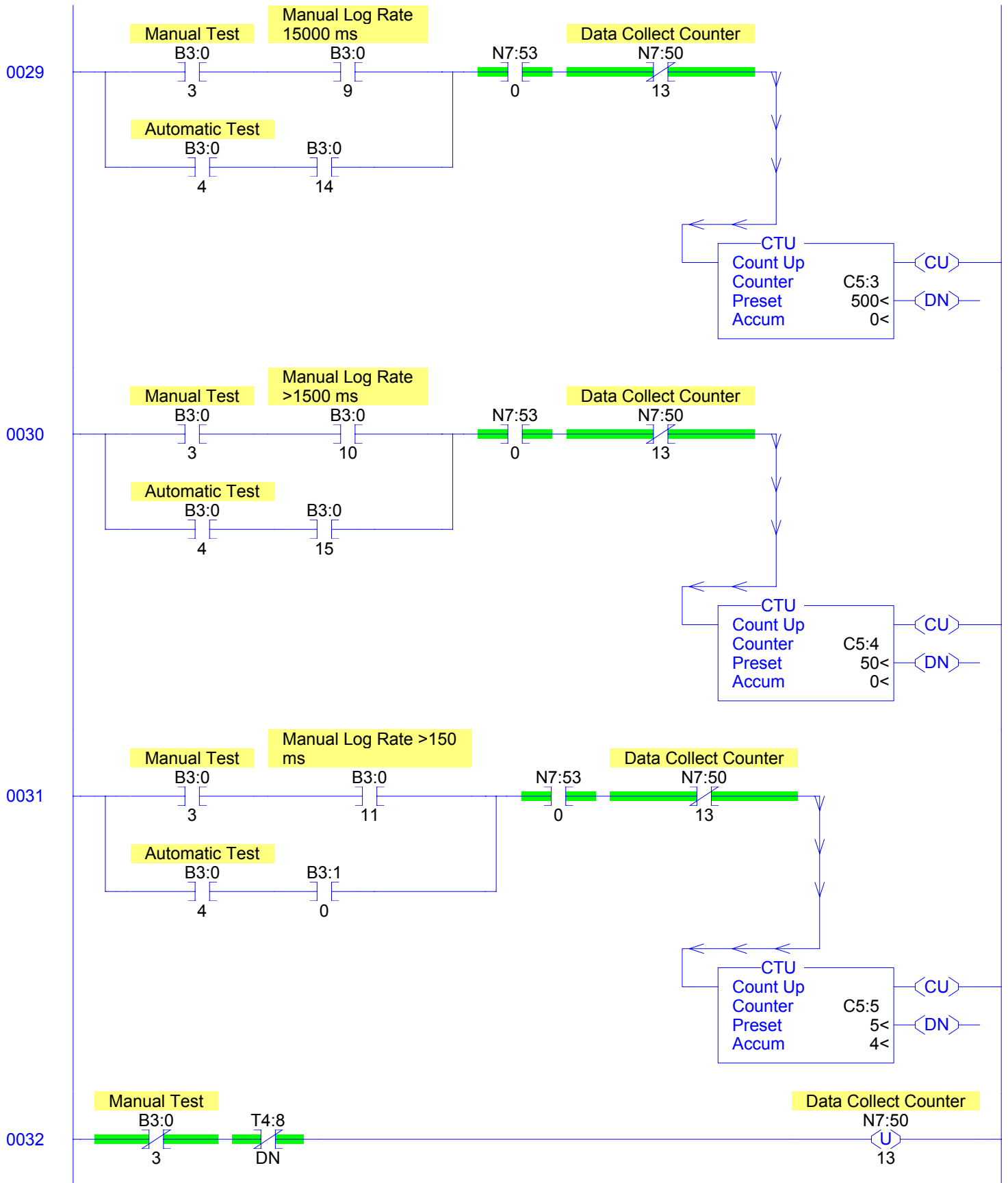
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



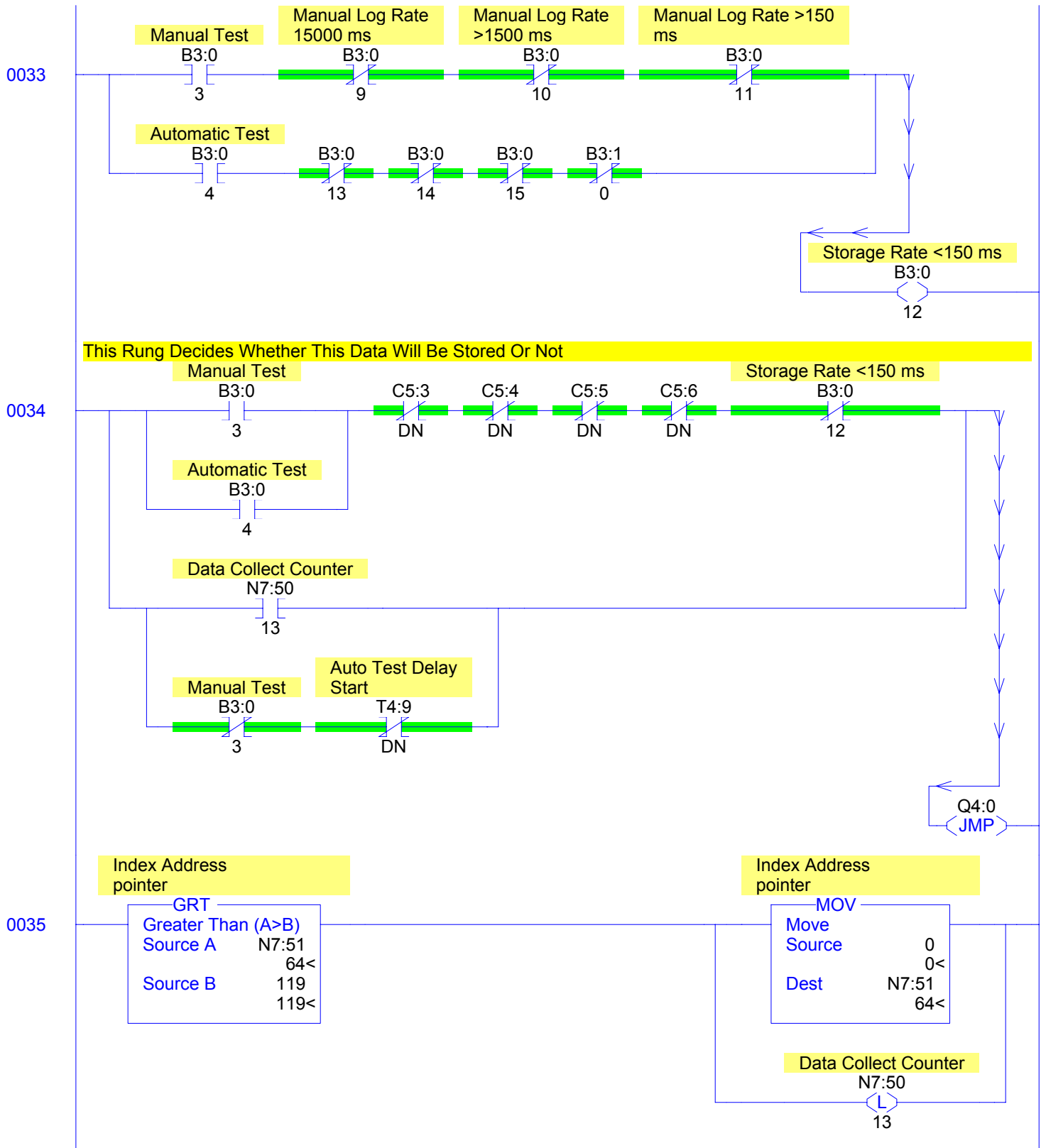
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57

0036

Load Index Address  
Pointer

MOV

|        |       |
|--------|-------|
| Move   |       |
| Source | N7:51 |
|        | 64<   |
| Dest   | S:24  |
|        | 0<    |

# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57

this Rung Takes The Most Recent Data From The Analog Input Cards And Stores It in Reserved Memory Locations

0037

MOV  
Move  
Source N40:5  
0<  
Dest #N50:184  
0<

MOV  
Move  
Source N40:6  
2<  
Dest #N50:304  
1<

MOV  
Move  
Source N40:7  
0<  
Dest #N50:424  
0<

MOV  
Move  
Source N40:8  
0<  
Dest #N50:544  
0<

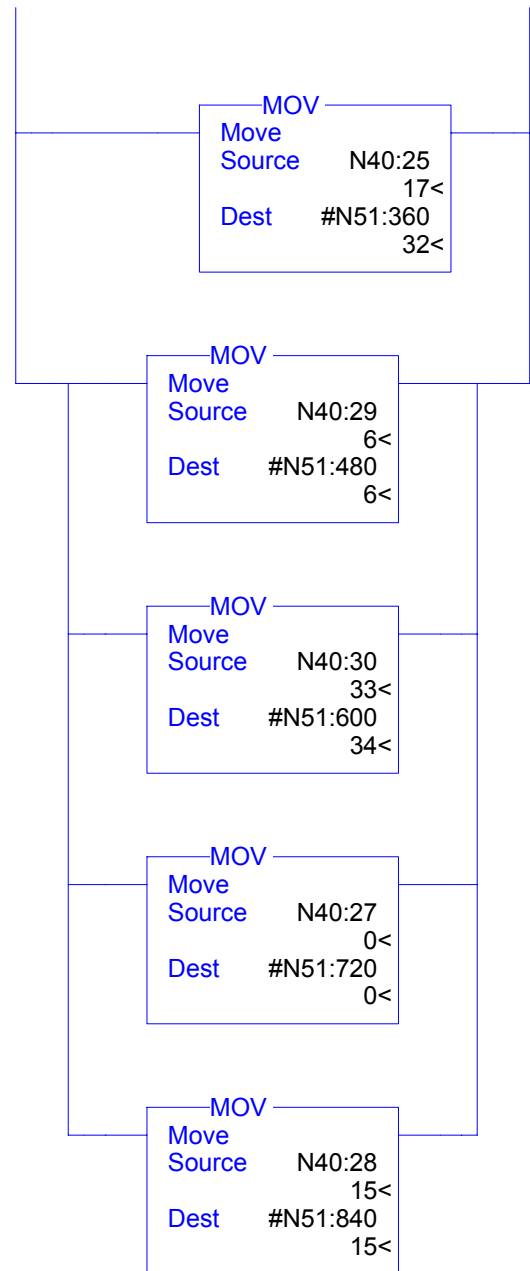
MOV  
Move  
Source N40:9  
0<  
Dest #N51:0  
4<

MOV  
Move  
Source N40:10  
77<  
Dest #N51:120  
78<

MOV  
Move  
Source N40:24  
17<  
Dest #N51:240  
2126<

# Test Bench Three

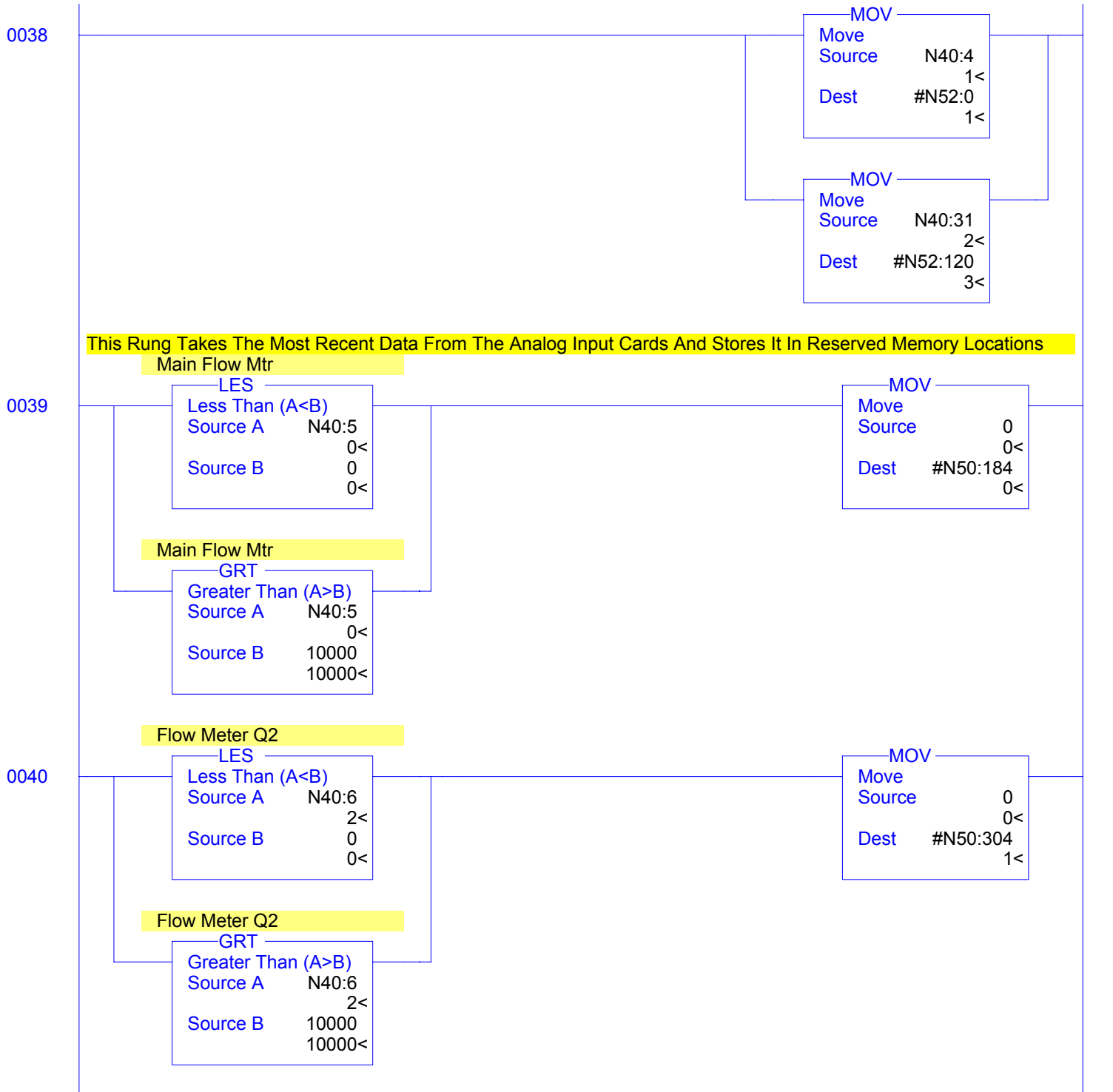
LAD 4 - ANALOG\_INT --- Total Rungs in File = 57





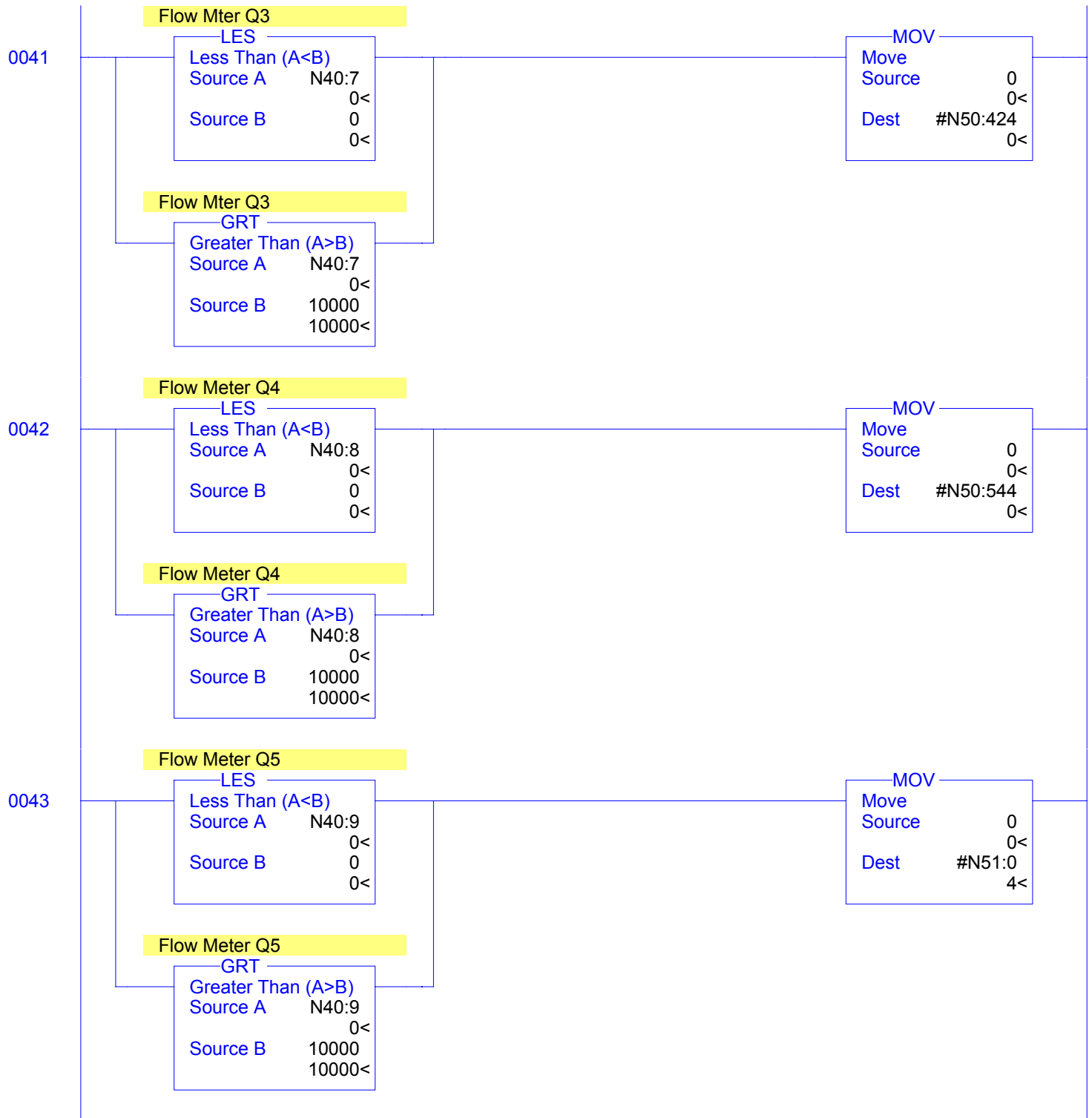
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



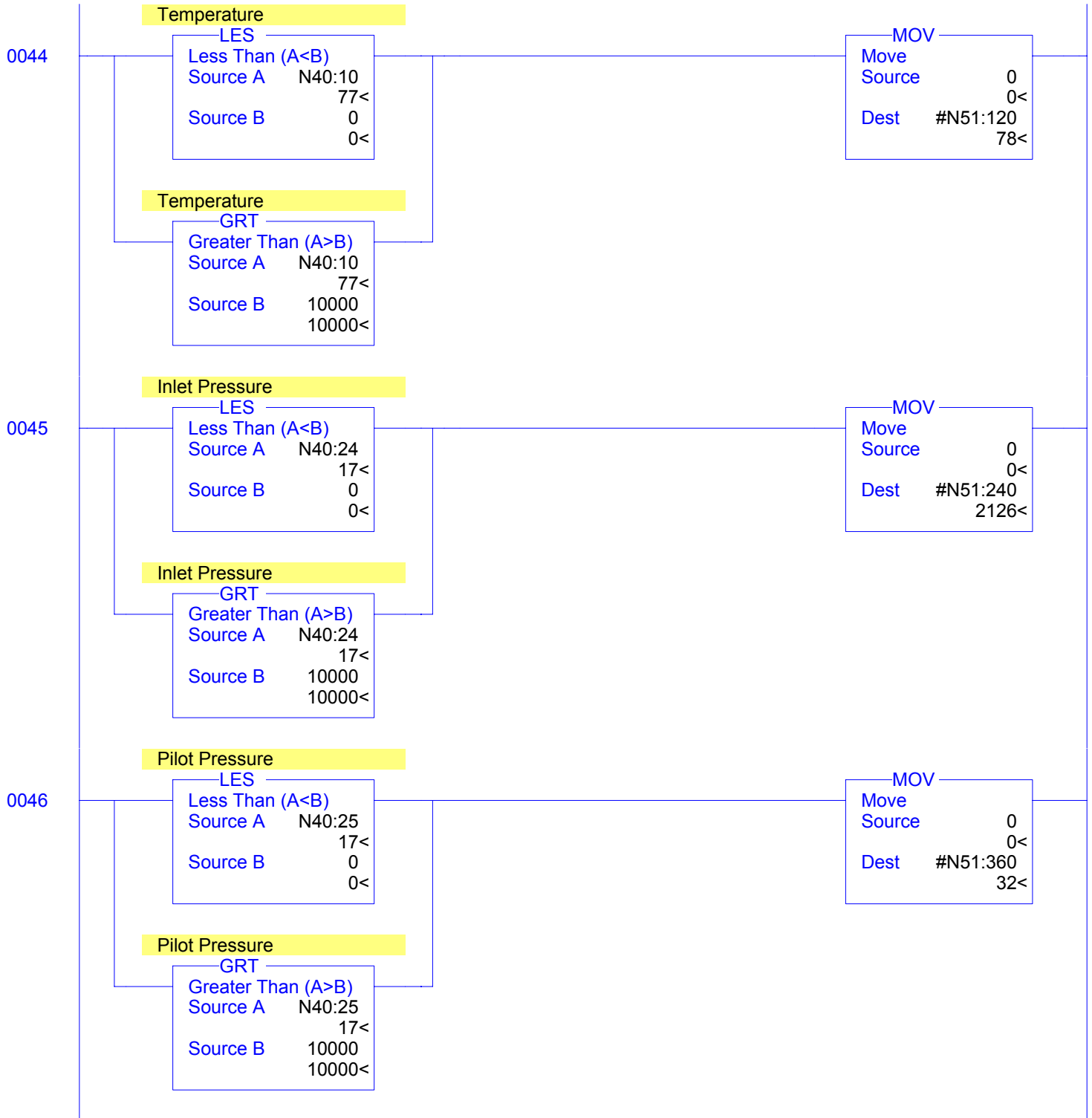
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



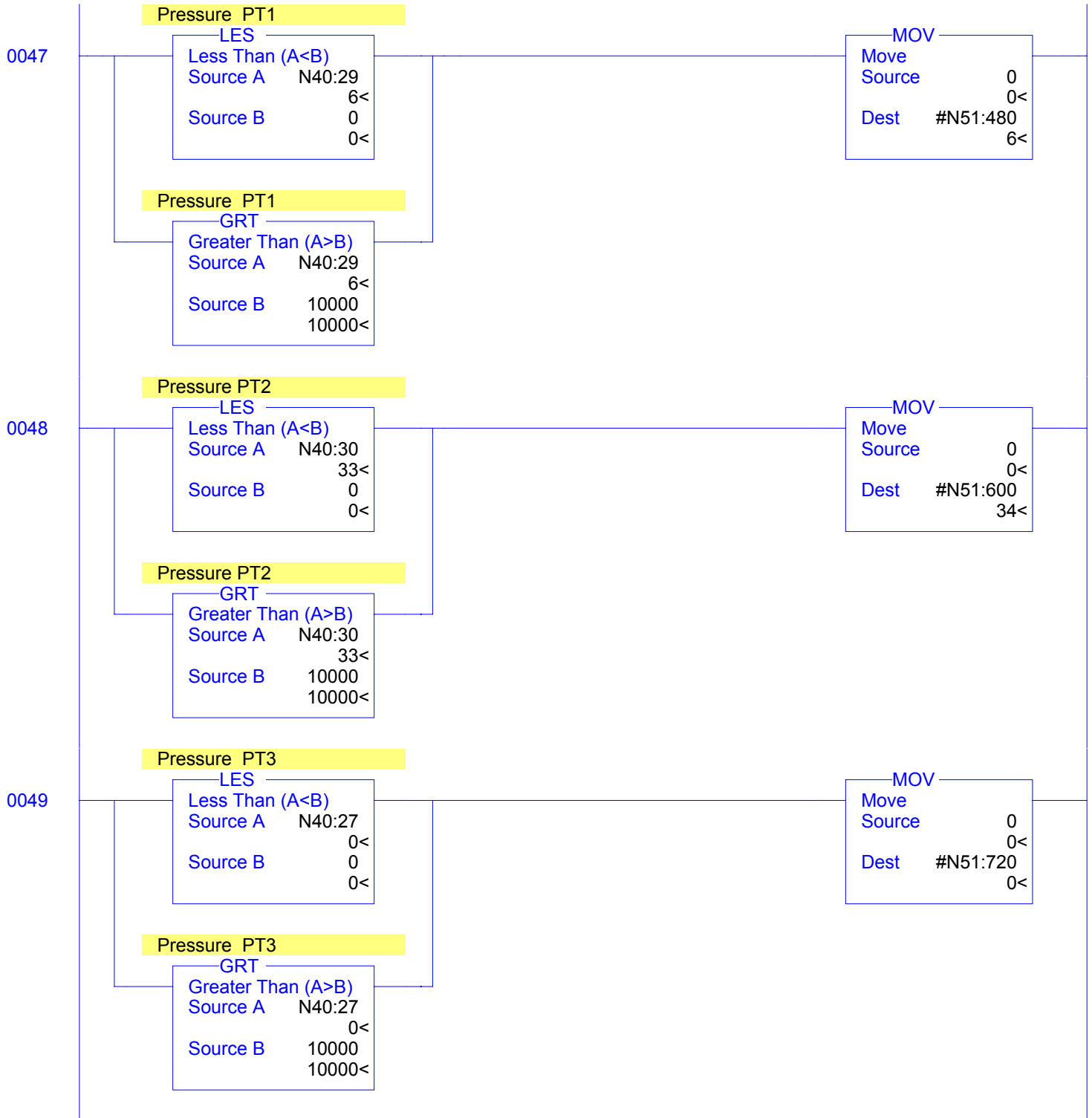
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



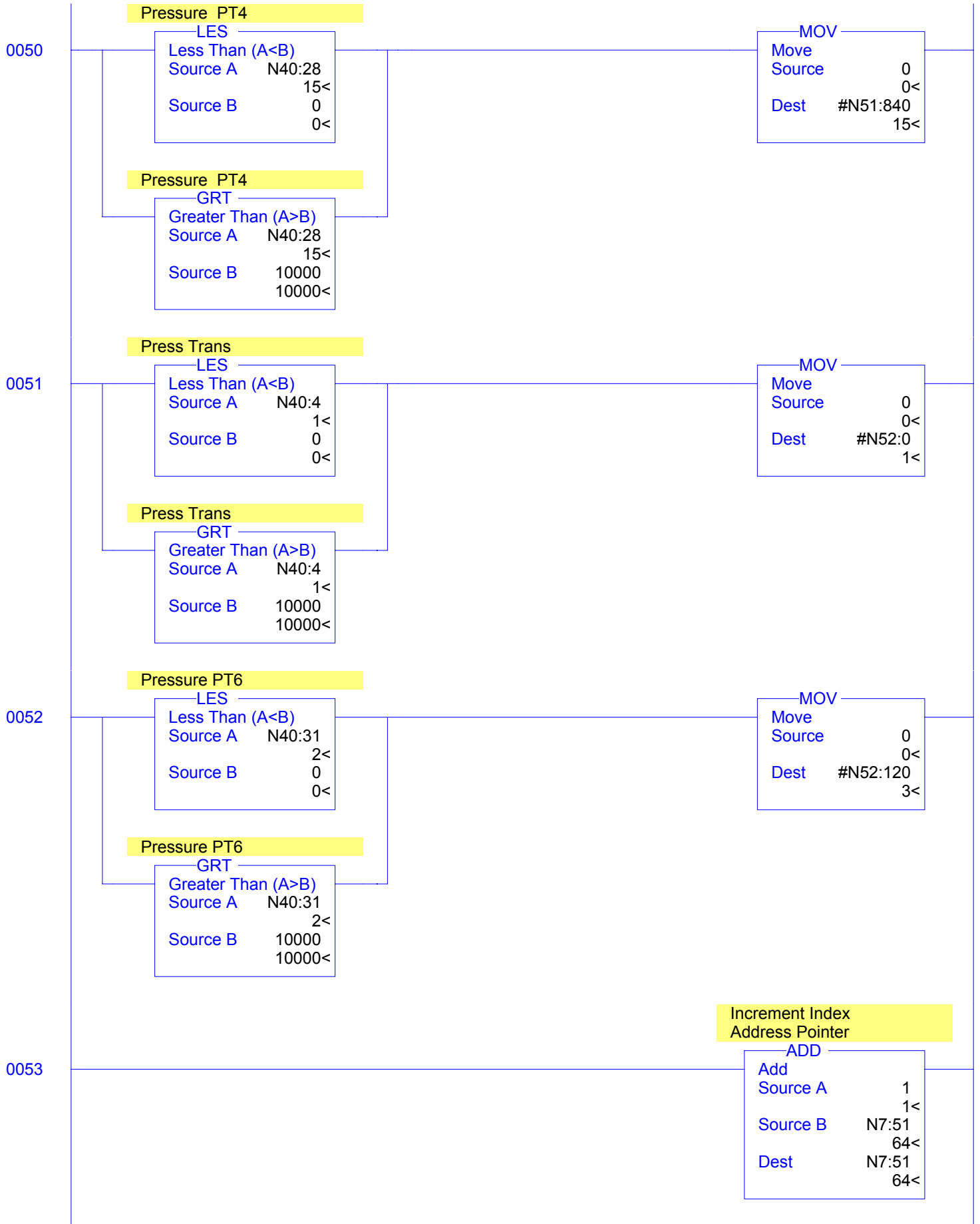
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



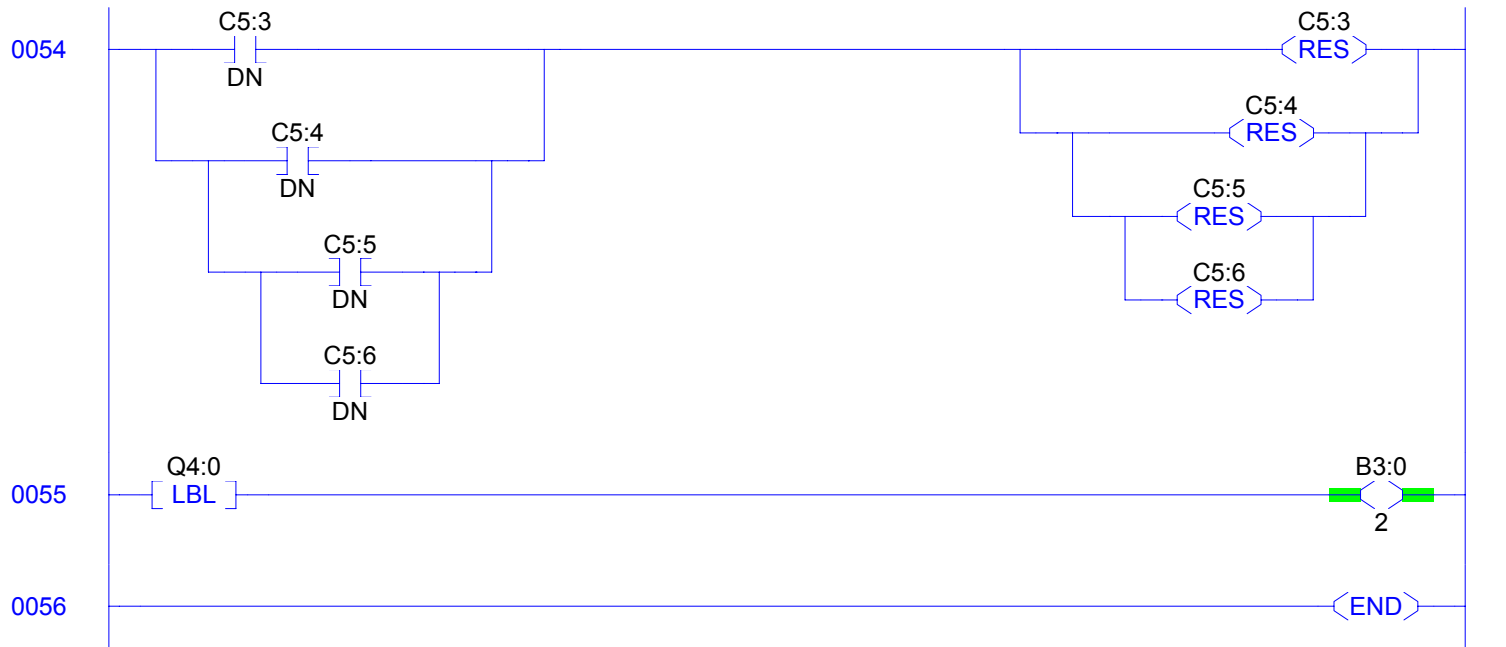
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



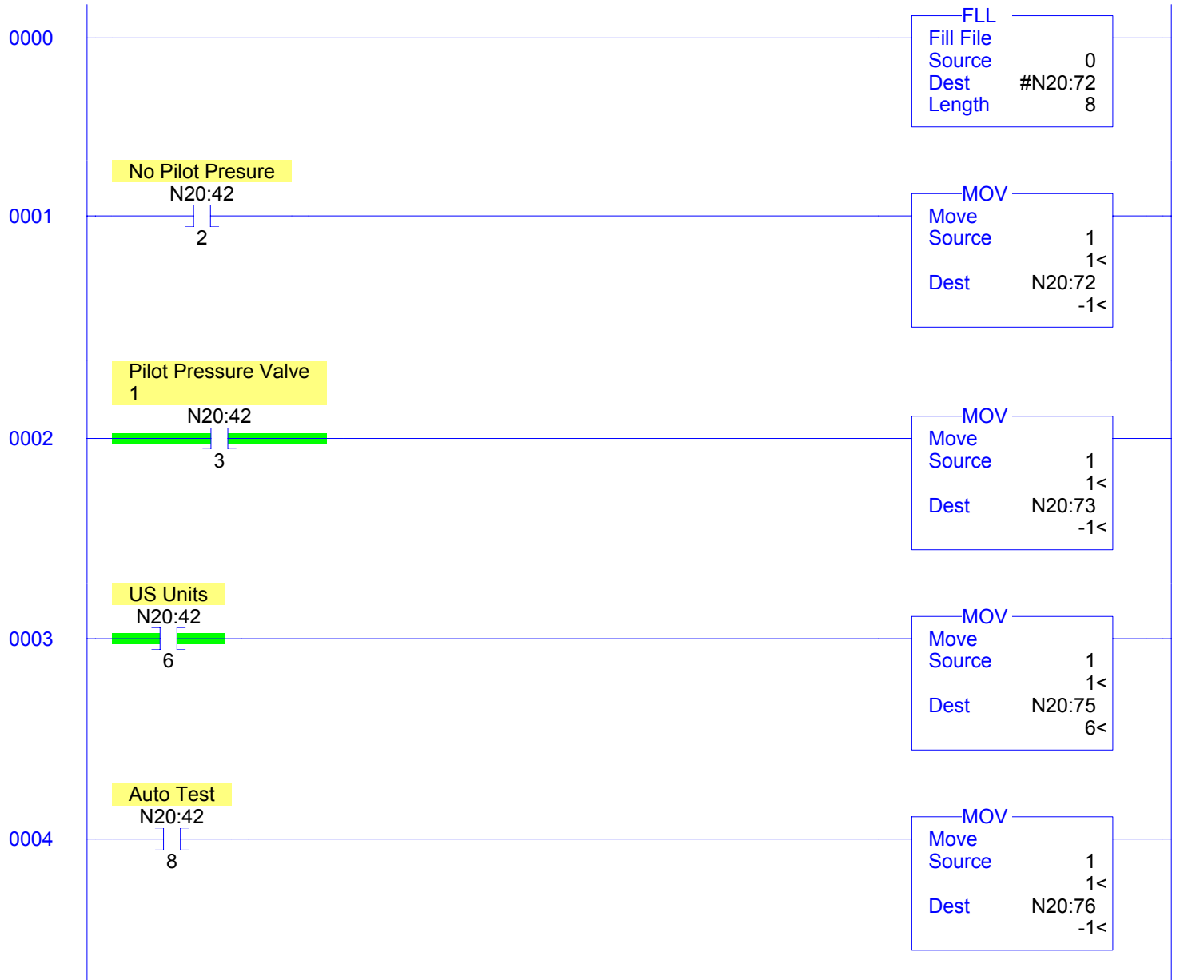
# Test Bench Three

LAD 4 - ANALOG\_INT --- Total Rungs in File = 57



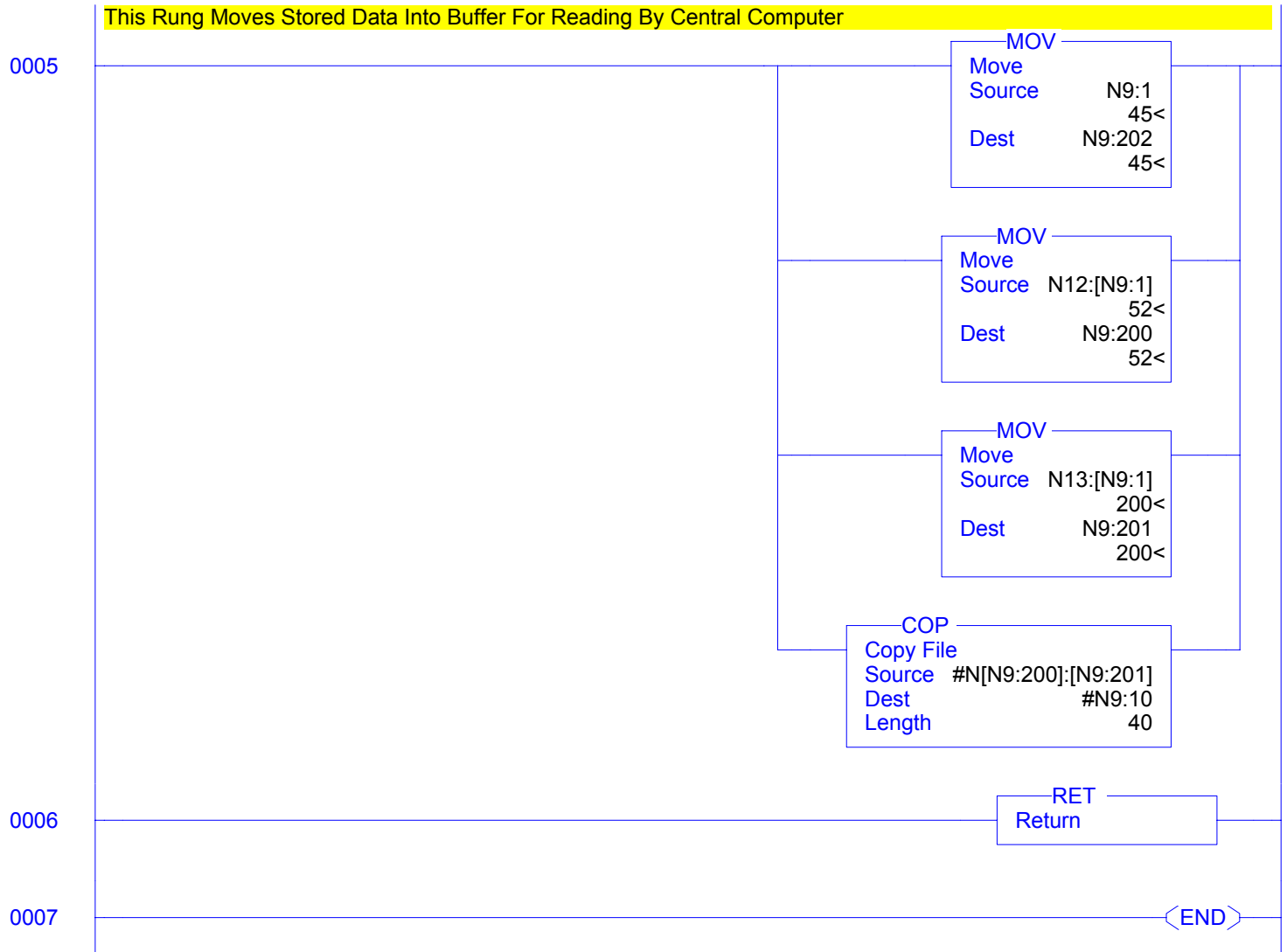
# Test Bench Three

LAD 6 - FASTUPLOAD --- Total Rungs in File = 8



# Test Bench Three

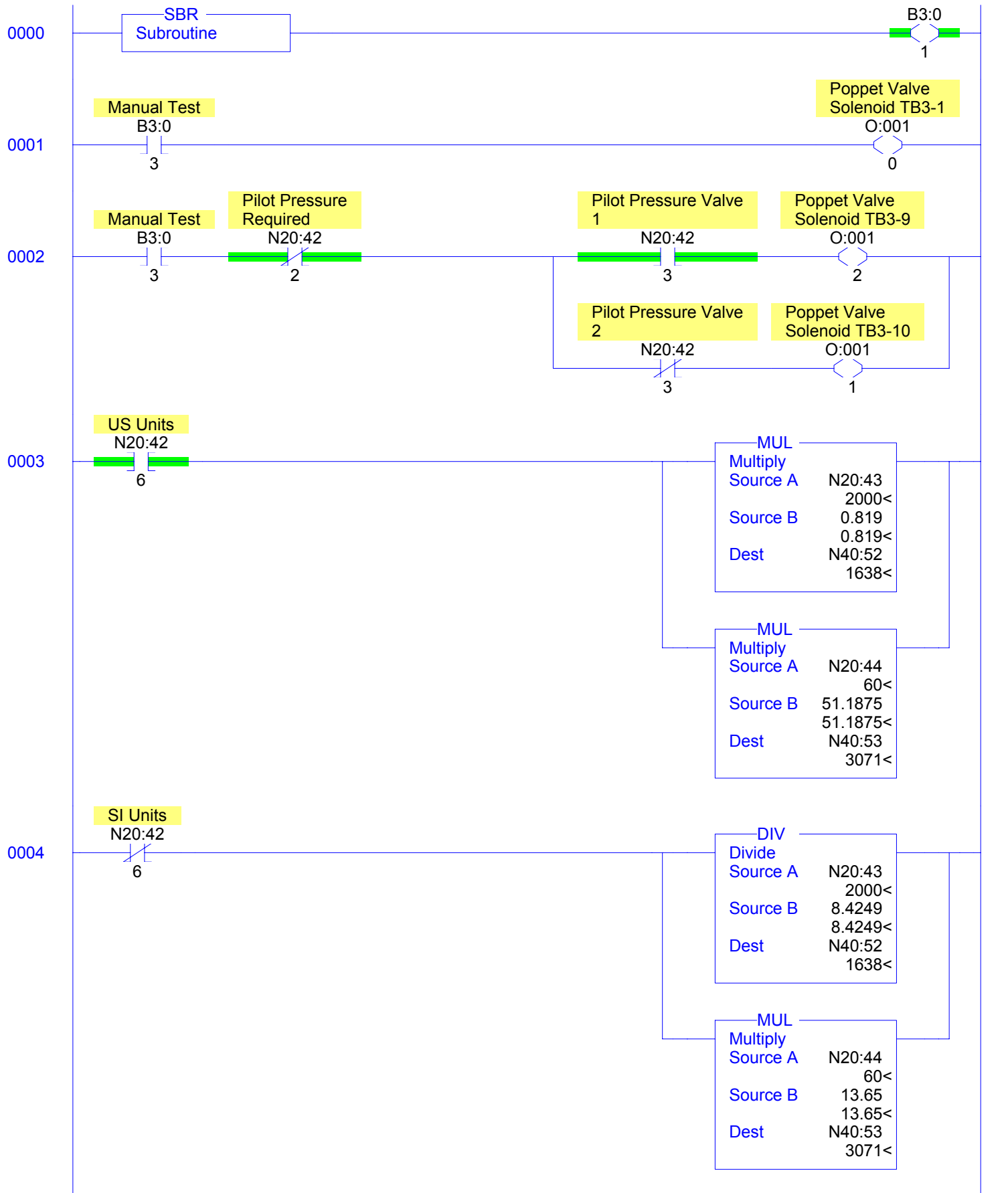
LAD 6 - FASTUPLOAD --- Total Rungs in File = 8





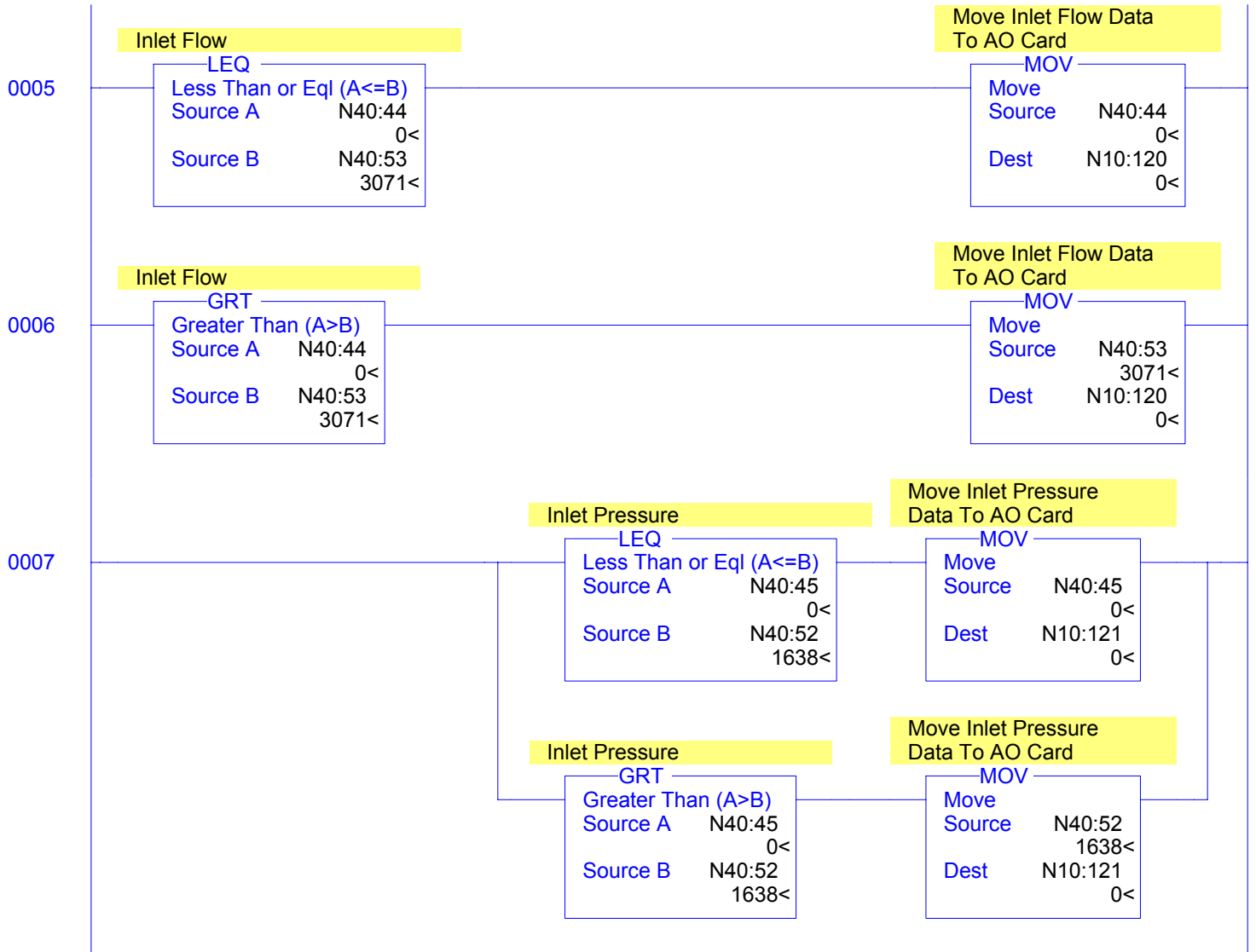
# Test Bench Three

LAD 7 - MAN\_TEST --- Total Rungs in File = 16



# Test Bench Three

LAD 7 - MAN\_TEST --- Total Rungs in File = 16



Test Bench Three

LAD 7 - MAN\_TEST --- Total Rungs in File = 16

0008

Move Pilot Pressure  
Data To AO Card

MOV  
Move  
Source N40:46  
0<  
Dest N10:122  
16<

Move Outlet Presure  
Data To AO Card

MOV  
Move  
Source N40:48  
-1<  
Dest N10:123  
-1<

Move Outlet Flow  
Data To AO Card

MOV  
Move  
Source N40:47  
0<  
Dest N10:140  
0<

Move AO Config.  
Info. To Buffer

MOV  
Move  
Source -32768  
-32768<  
Dest N10:124  
-32768<

0009

# Test Bench Three

LAD 7 - MAN\_TEST --- Total Rungs in File = 16

0010

MOV  
Move  
Source 0  
0<  
Dest N10:125  
0<

MOV  
Move  
Source 4095  
4095<  
Dest N10:126  
4095<

MOV  
Move  
Source 0  
0<  
Dest N10:127  
0<

MOV  
Move  
Source 4095  
4095<  
Dest N10:128  
4095<

MOV  
Move  
Source 0  
0<  
Dest N10:129  
0<

MOV  
Move  
Source 4095  
4095<  
Dest N10:130  
4095<

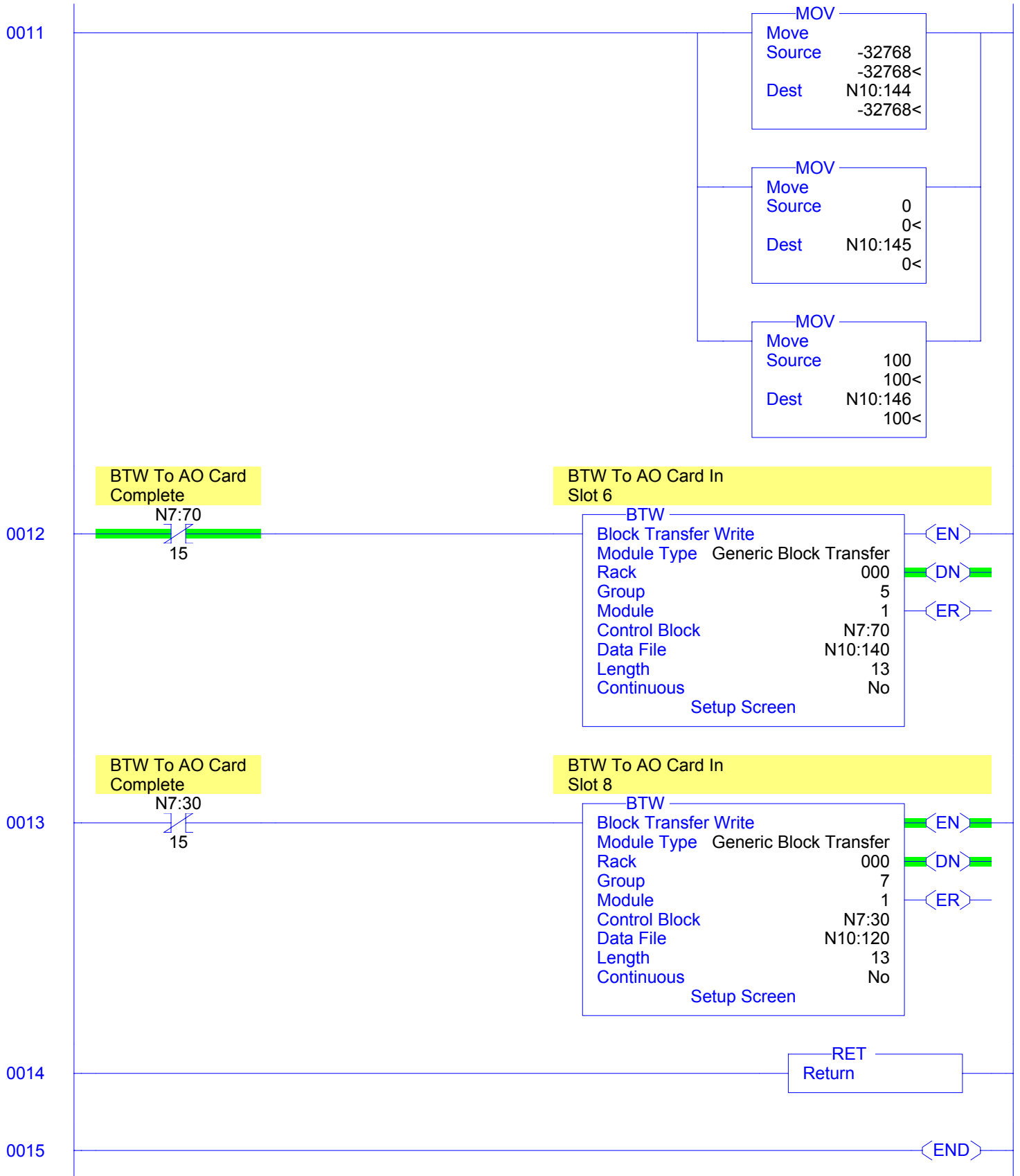
MOV  
Move  
Source 0  
0<  
Dest N10:131  
0<

Scale AO Card output  
Channel 4

MOV  
Move  
Source 4095  
4095<  
Dest N10:132  
4095<

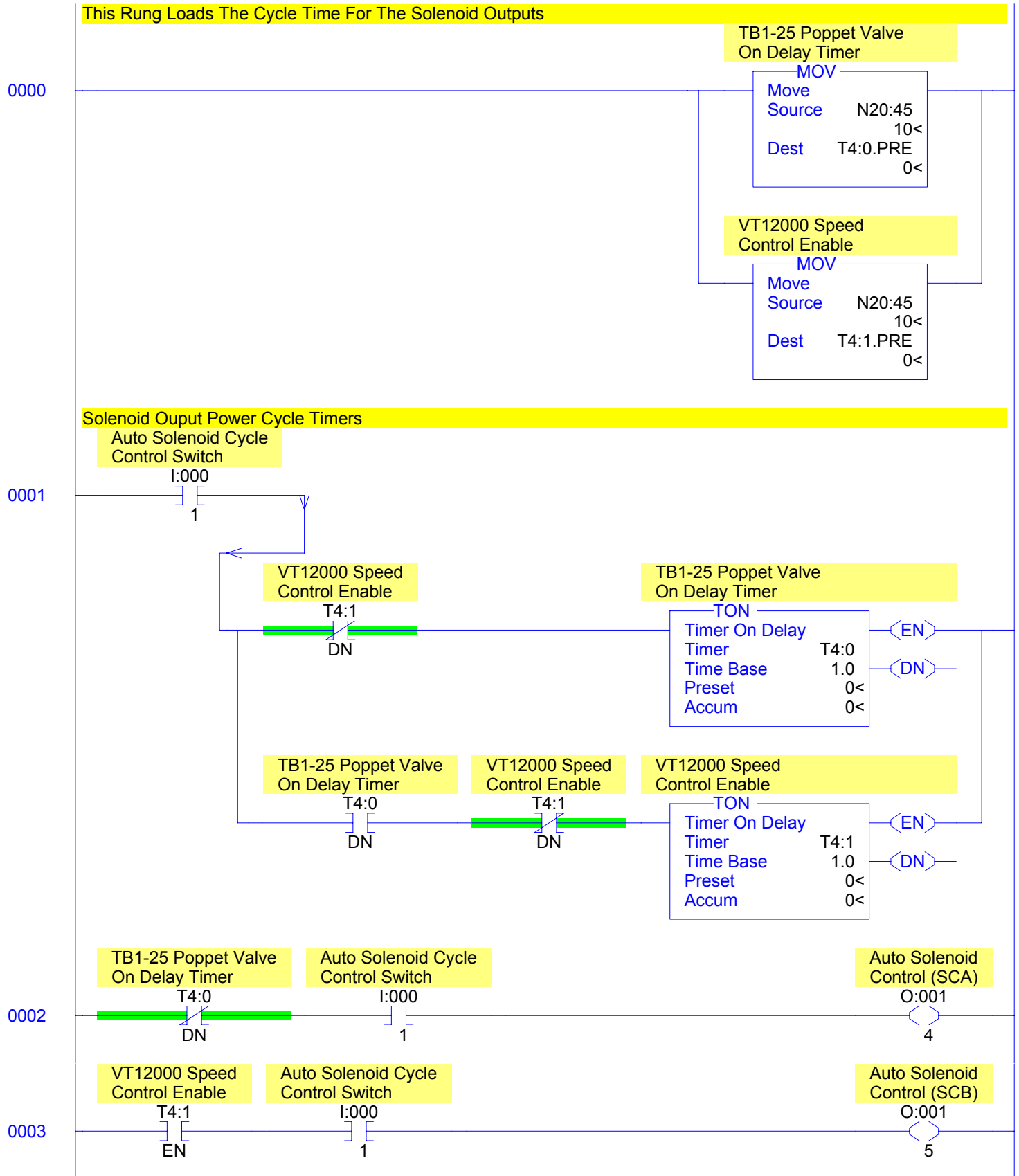
# Test Bench Three

LAD 7 - MAN\_TEST --- Total Rungs in File = 16



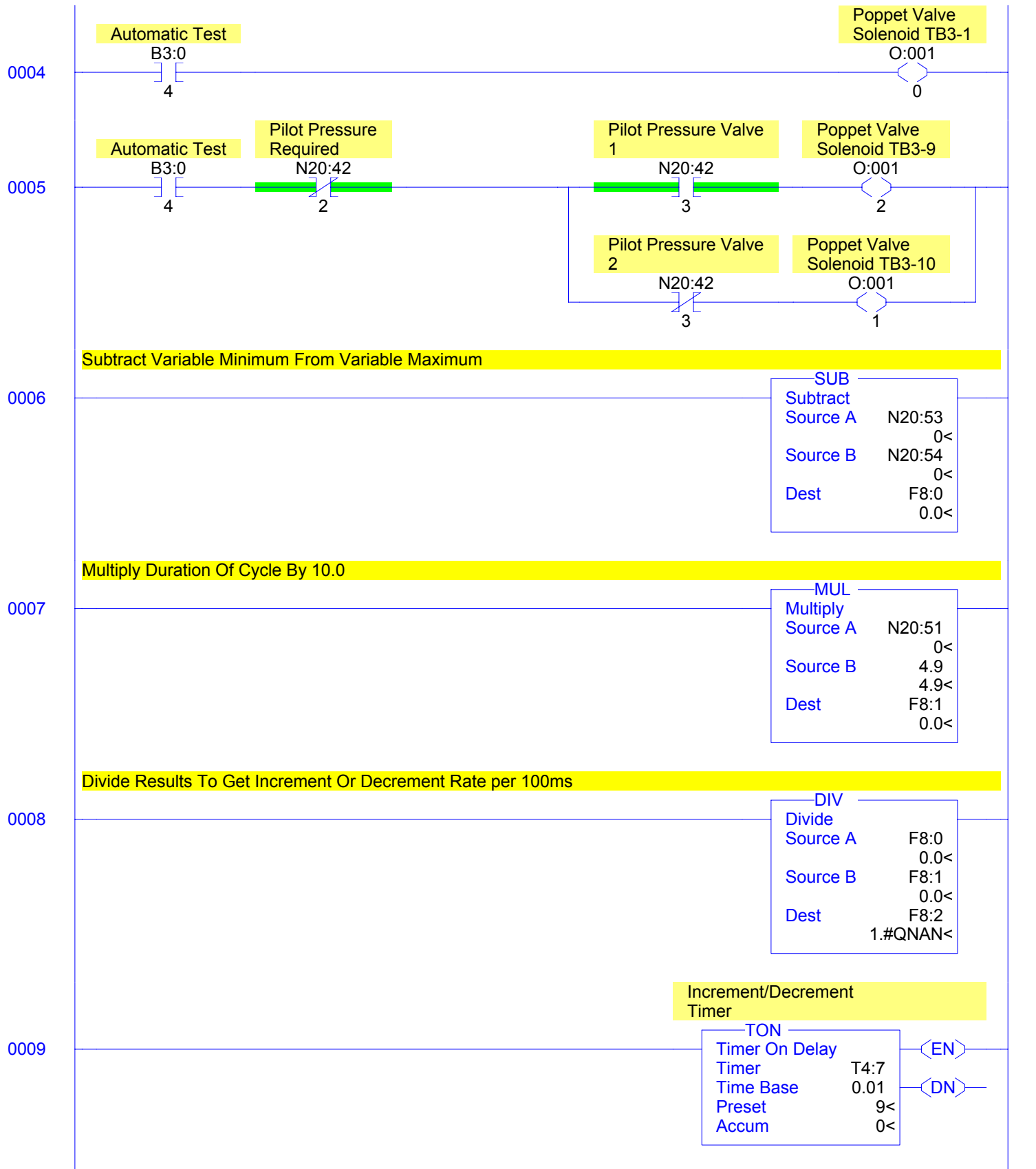
# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



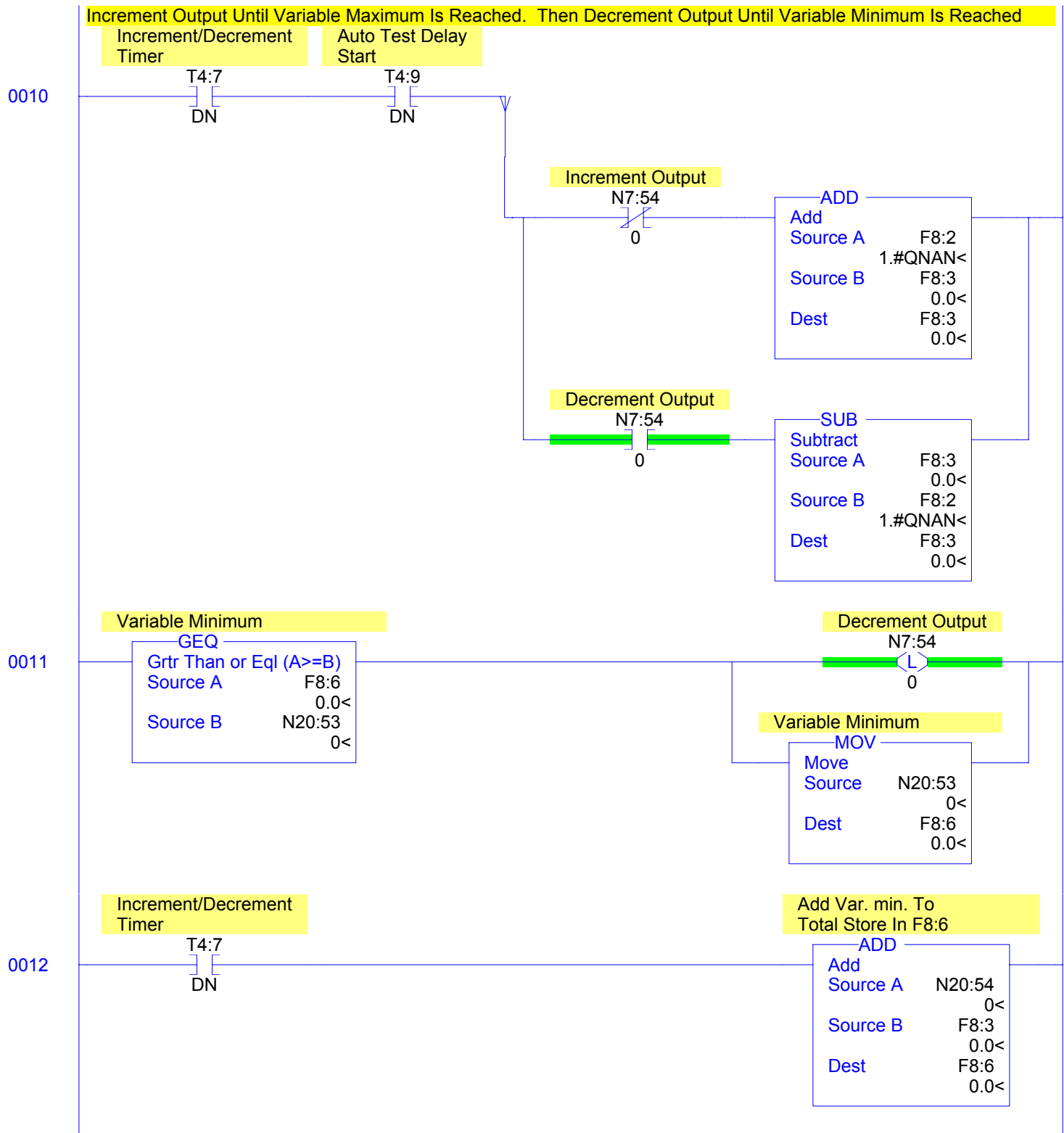
# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33





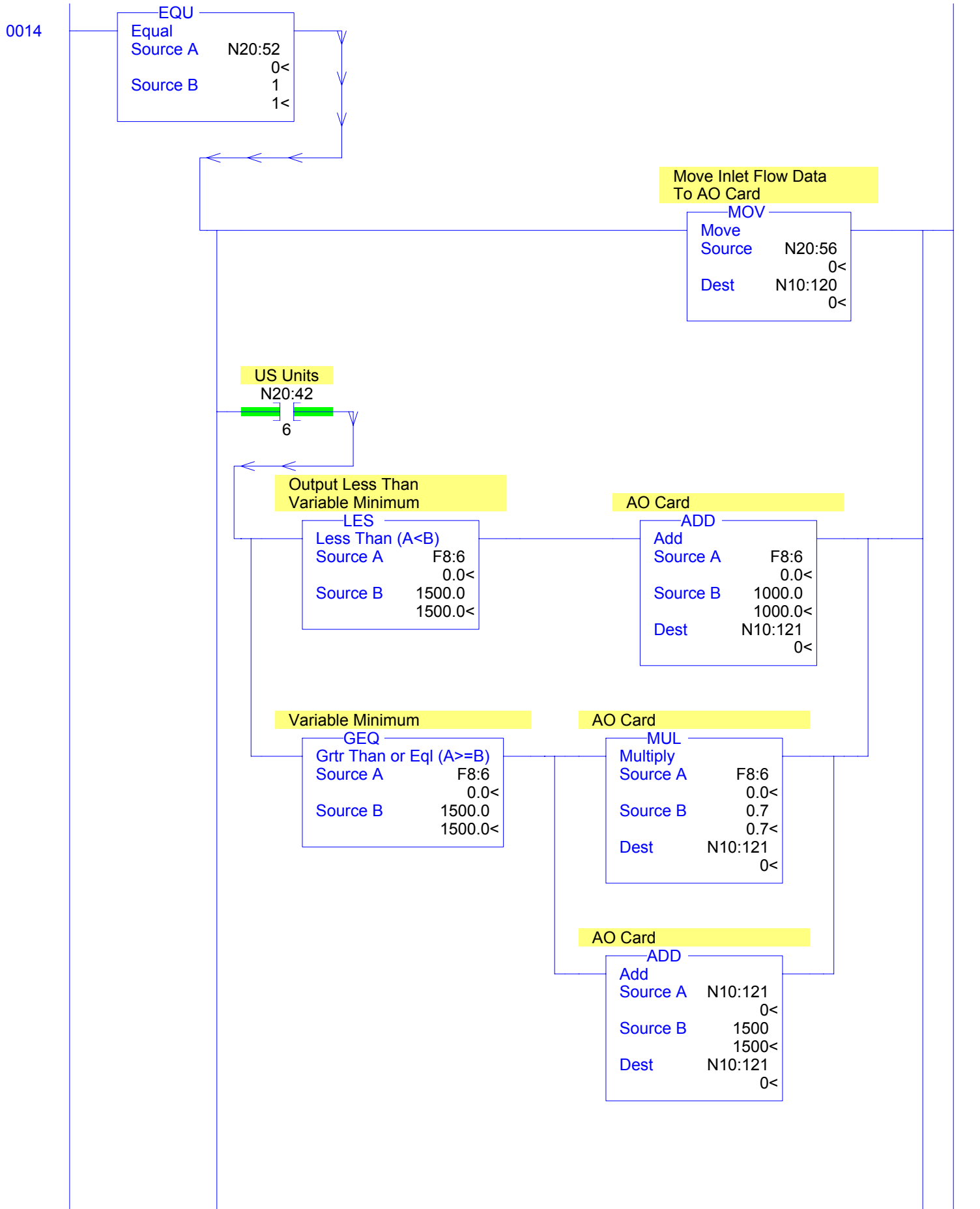
Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



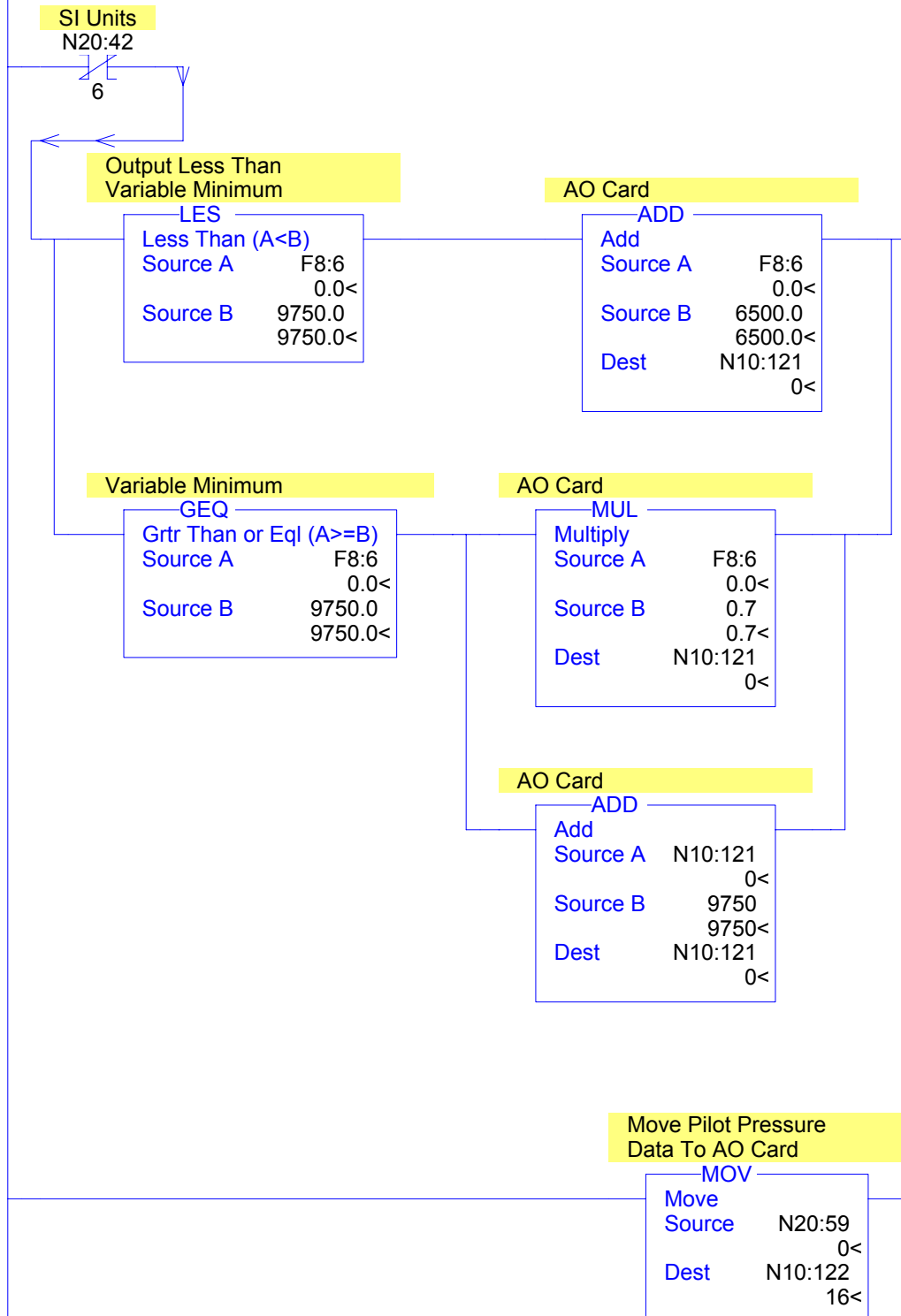
# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33

Move Outlet Presure  
Data To AO Card

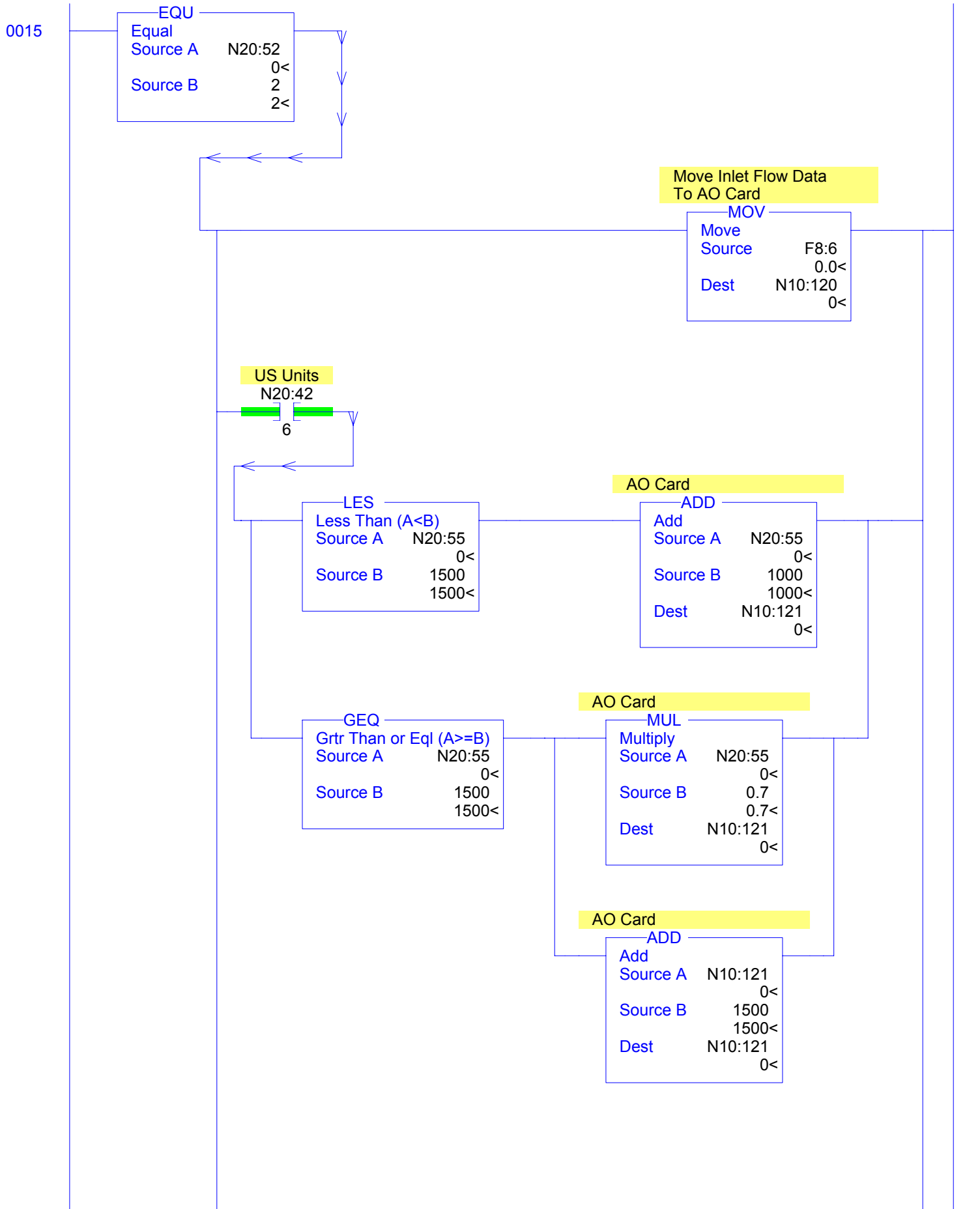
MOV  
Move  
Source N20:57  
0<  
Dest N10:123  
-1<

Move Outlet Flow  
Data To AO Card

MOV  
Move  
Source N20:58  
0<  
Dest N10:140  
0<

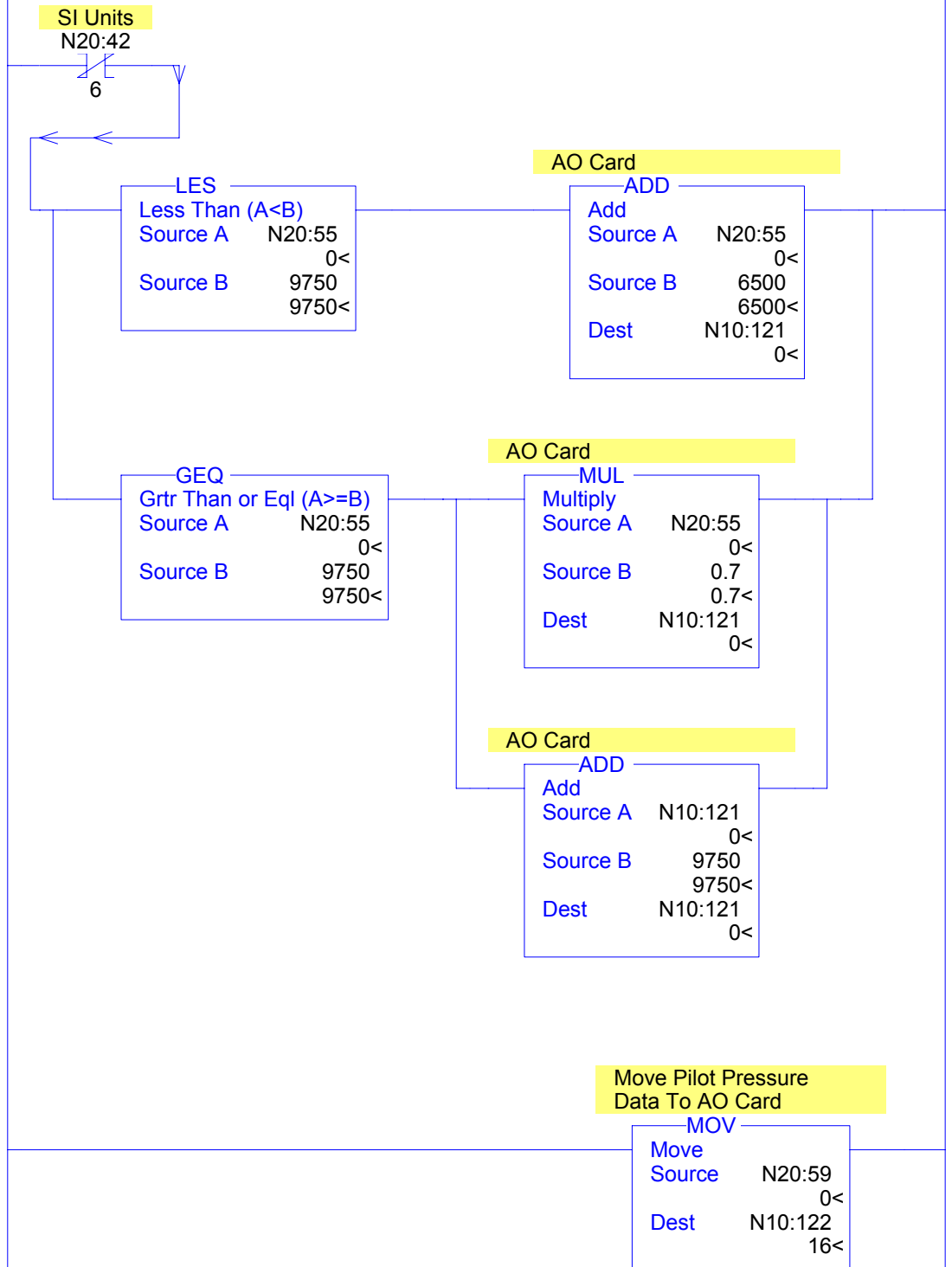
# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33

Move Outlet Presure  
Data To AO Card

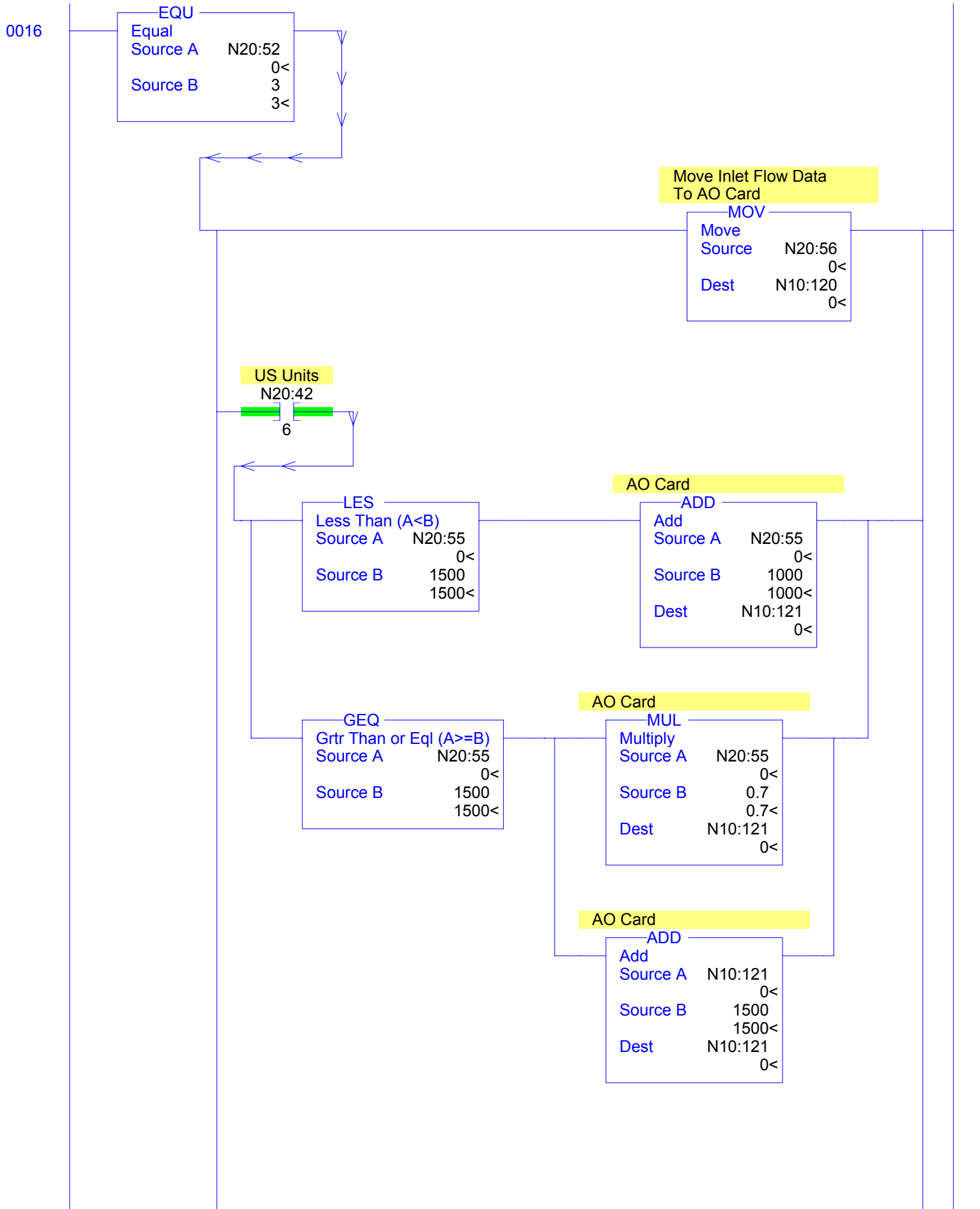
MOV  
Move  
Source N20:57  
0<  
Dest N10:123  
-1<

Move Outlet Flow  
Data To AO Card

MOV  
Move  
Source N20:58  
0<  
Dest N10:140  
0<

# Test Bench Three

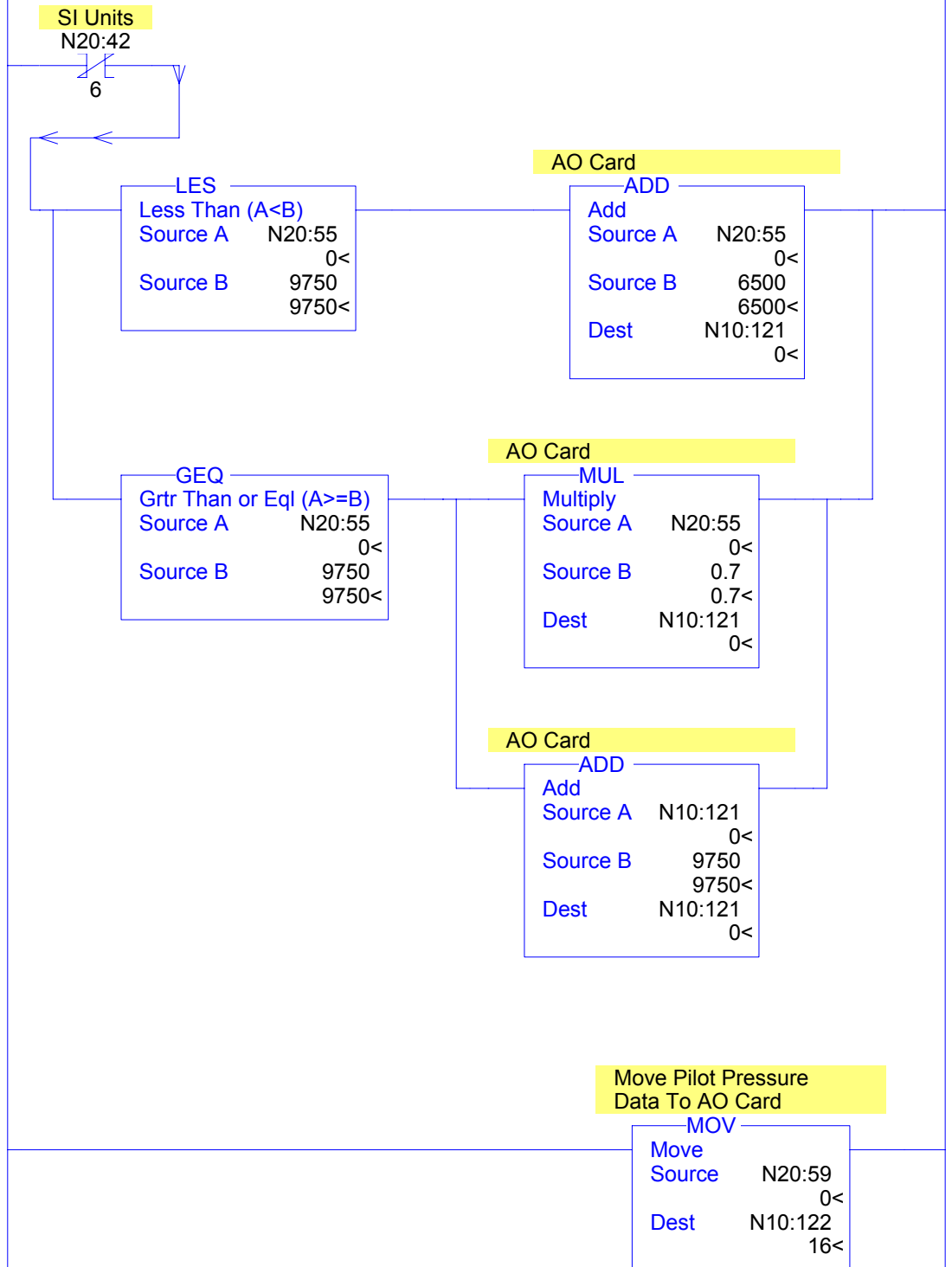
LAD 8 - AUTO\_TEST --- Total Rungs in File = 33





# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33

Move Outlet Presure  
Data To AO Card

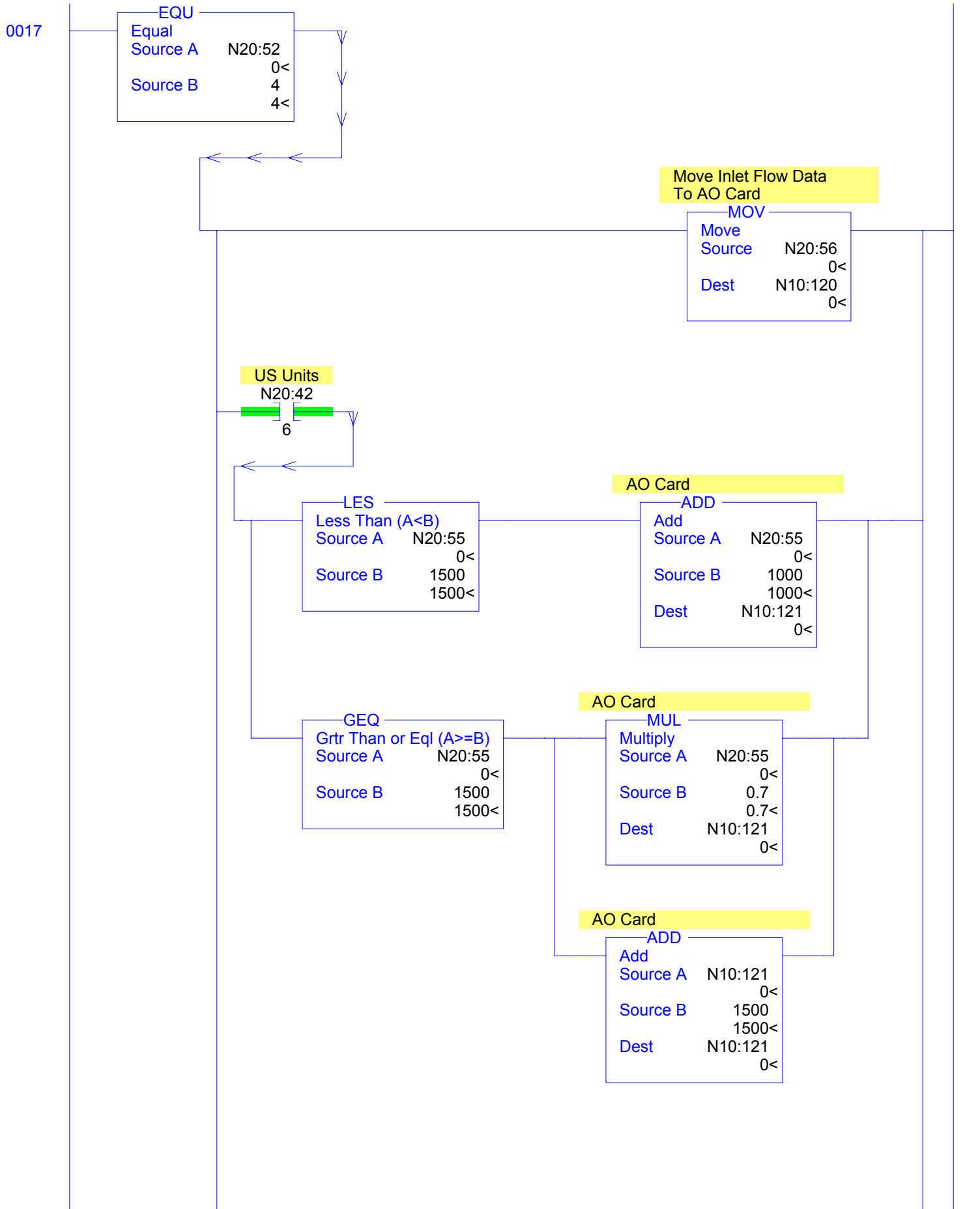
MOV  
Move  
Source F8:6  
0.0<  
Dest N10:123  
-1<

Move Outlet Flow  
Data To AO Card

MOV  
Move  
Source N20:58  
0<  
Dest N10:140  
0<

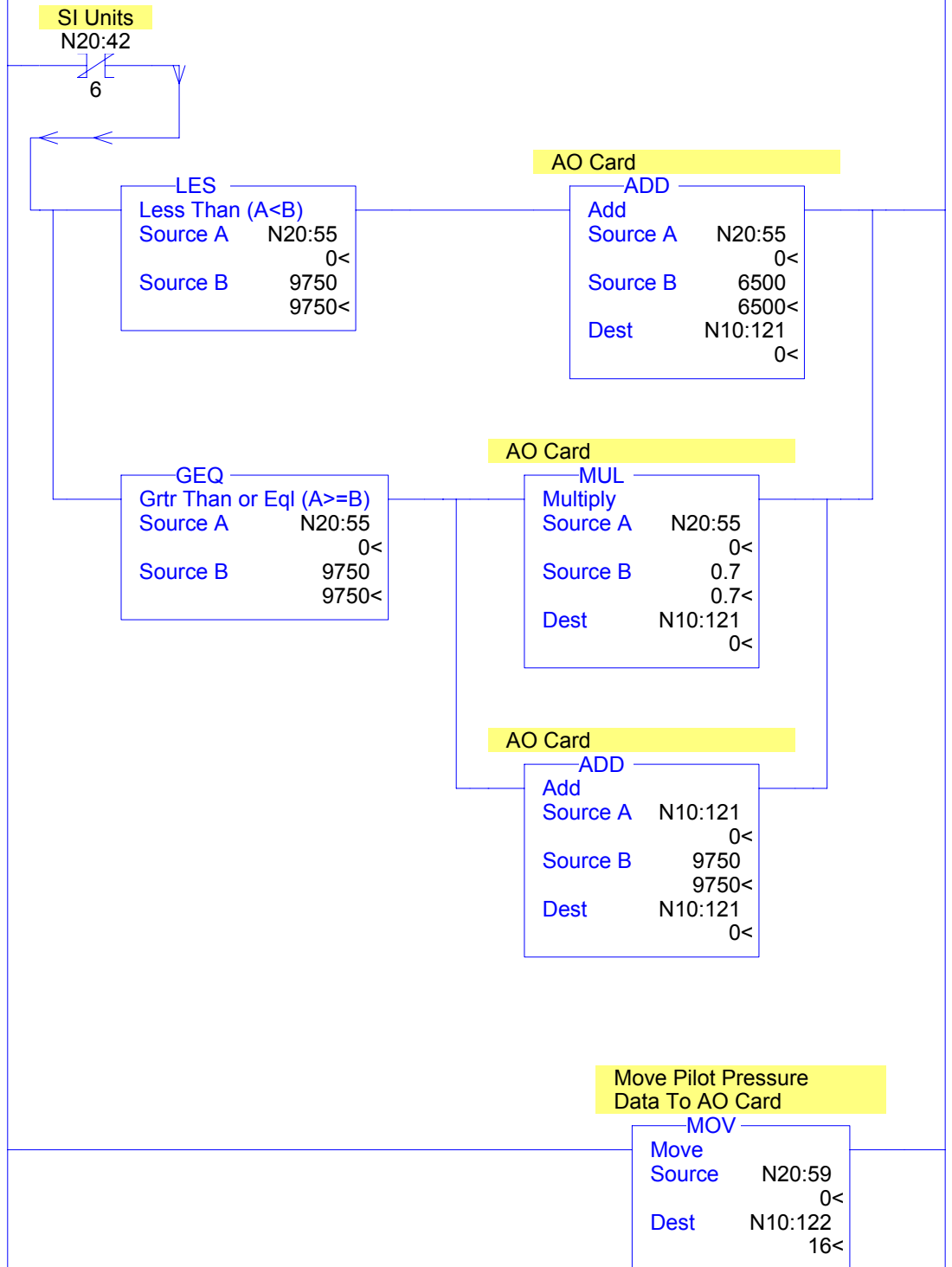
# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33

Move Outlet Presure  
Data To AO Card

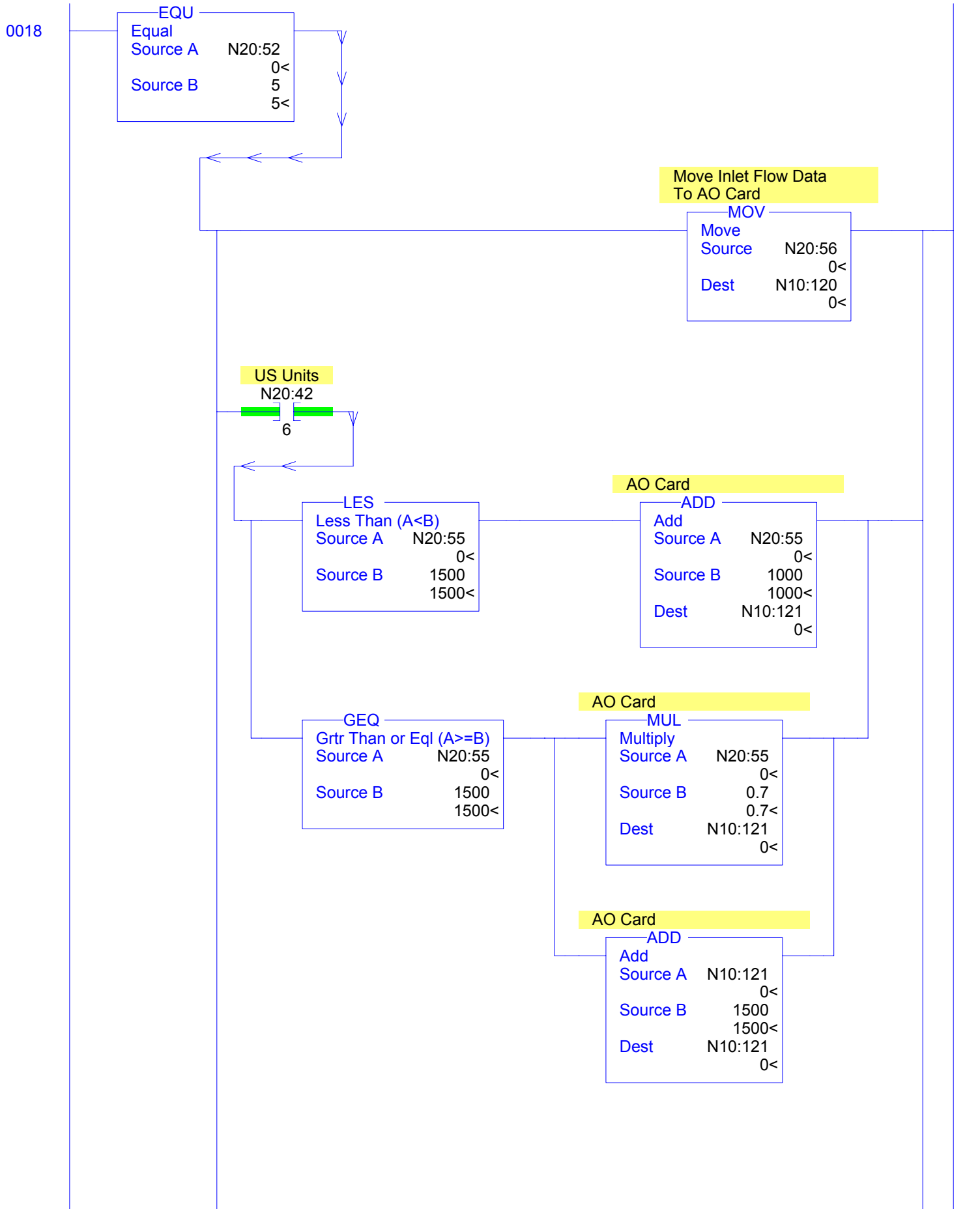
MOV  
Move  
Source     N20:57  
            0<  
Dest       N10:123  
            -1<

Move Outlet Flow  
Data To AO Card

MOV  
Move  
Source       F8:6  
            0.0<  
Dest        N10:140  
            0<

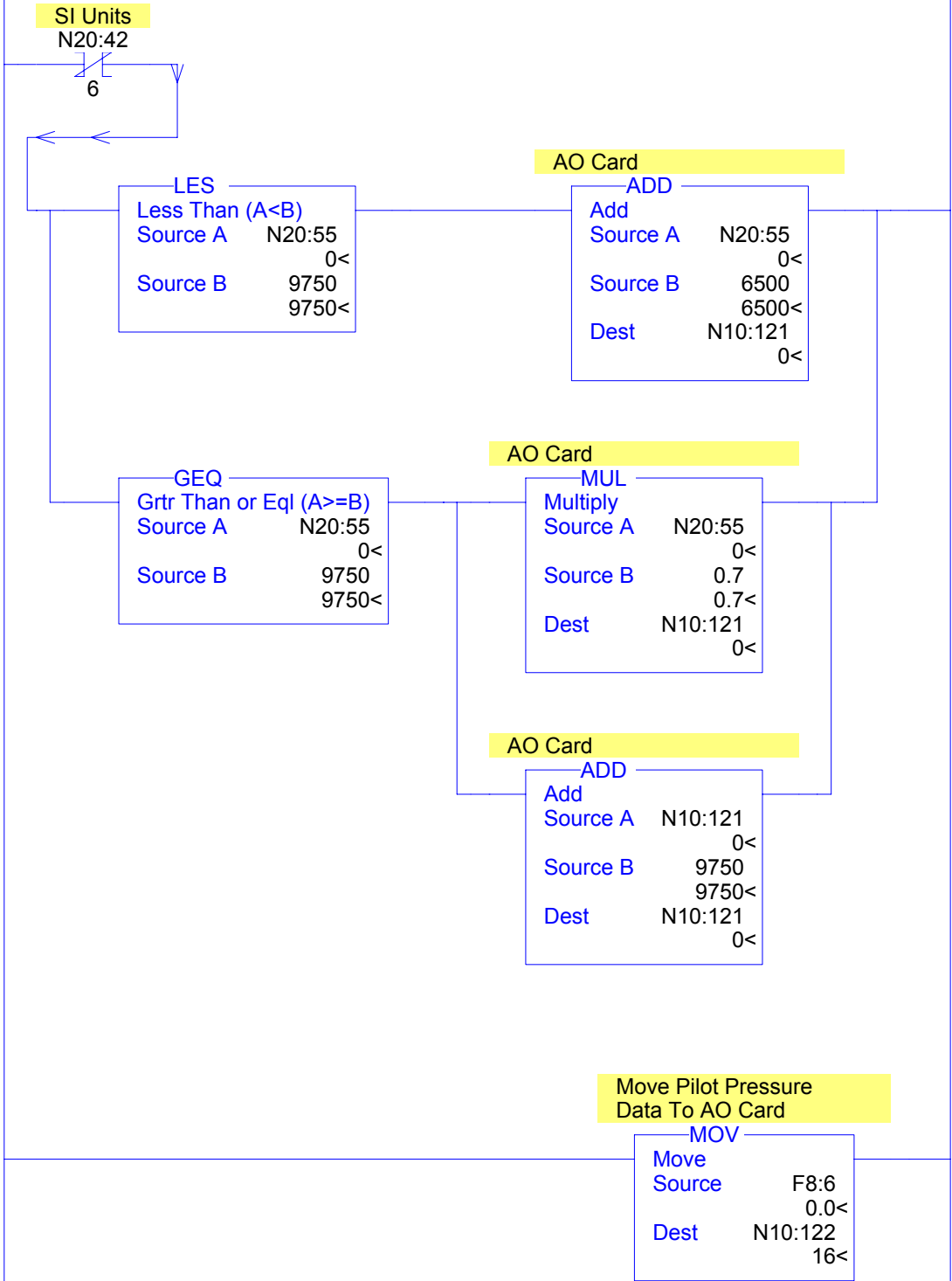
# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



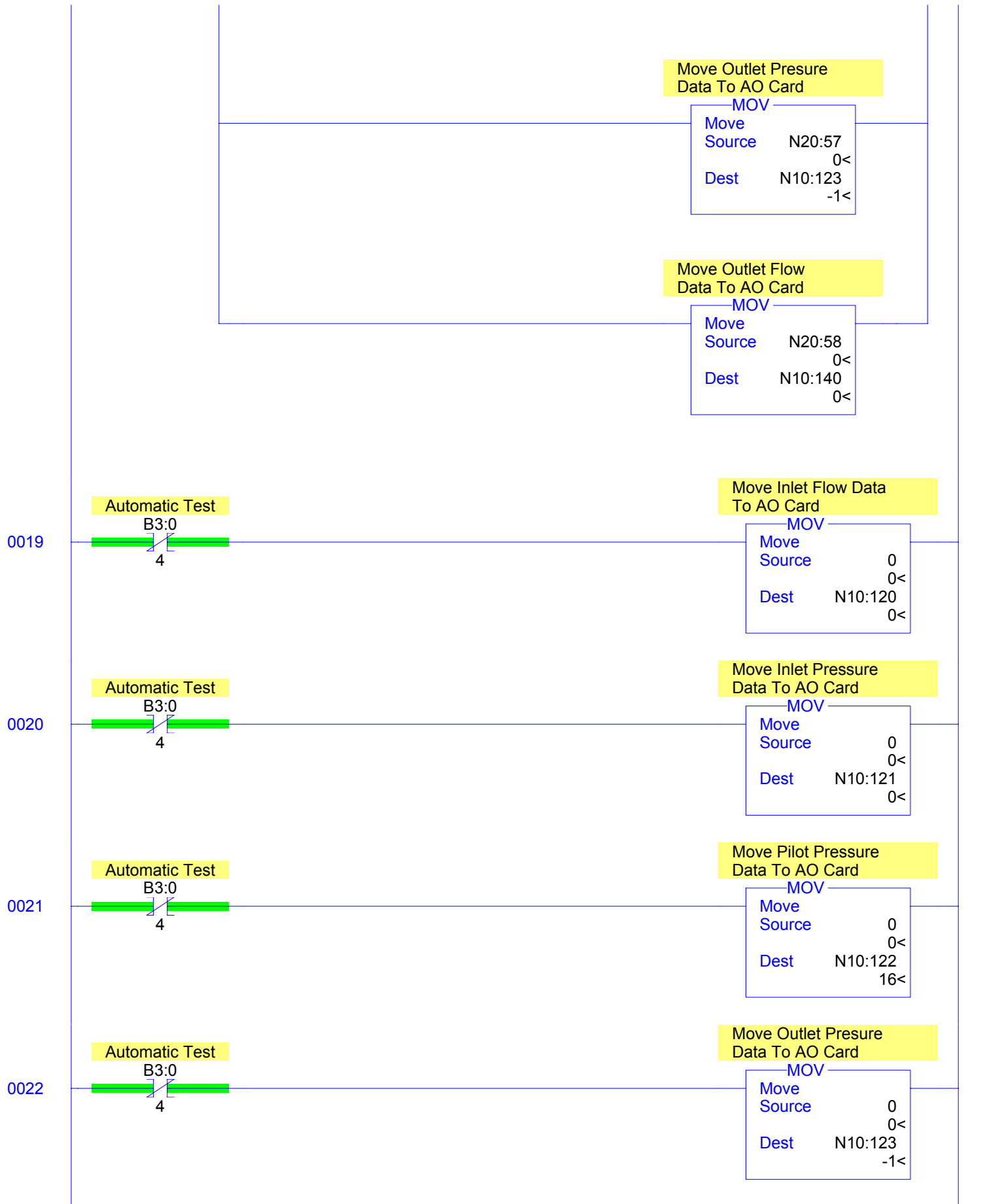
Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



# Test Bench Three

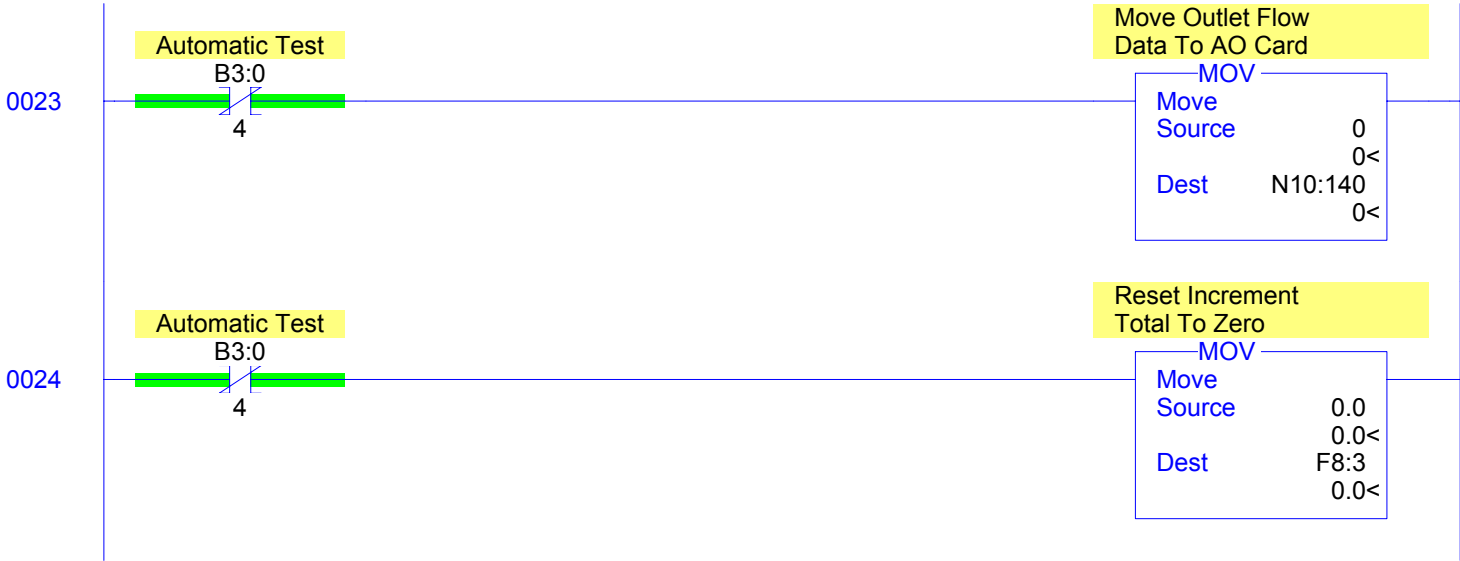
LAD 8 - AUTO\_TEST --- Total Rungs in File = 33





Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33

0025

Move AO Config.  
Info. To Buffer

MOV  
Move  
Source -32768  
-32768<  
Dest N10:124  
-32768<

MOV  
Move  
Source 0  
0<  
Dest N10:125  
0<

MOV  
Move  
Source 0  
0<  
Dest N10:127  
0<

MOV  
Move  
Source 0  
0<  
Dest N10:129  
0<

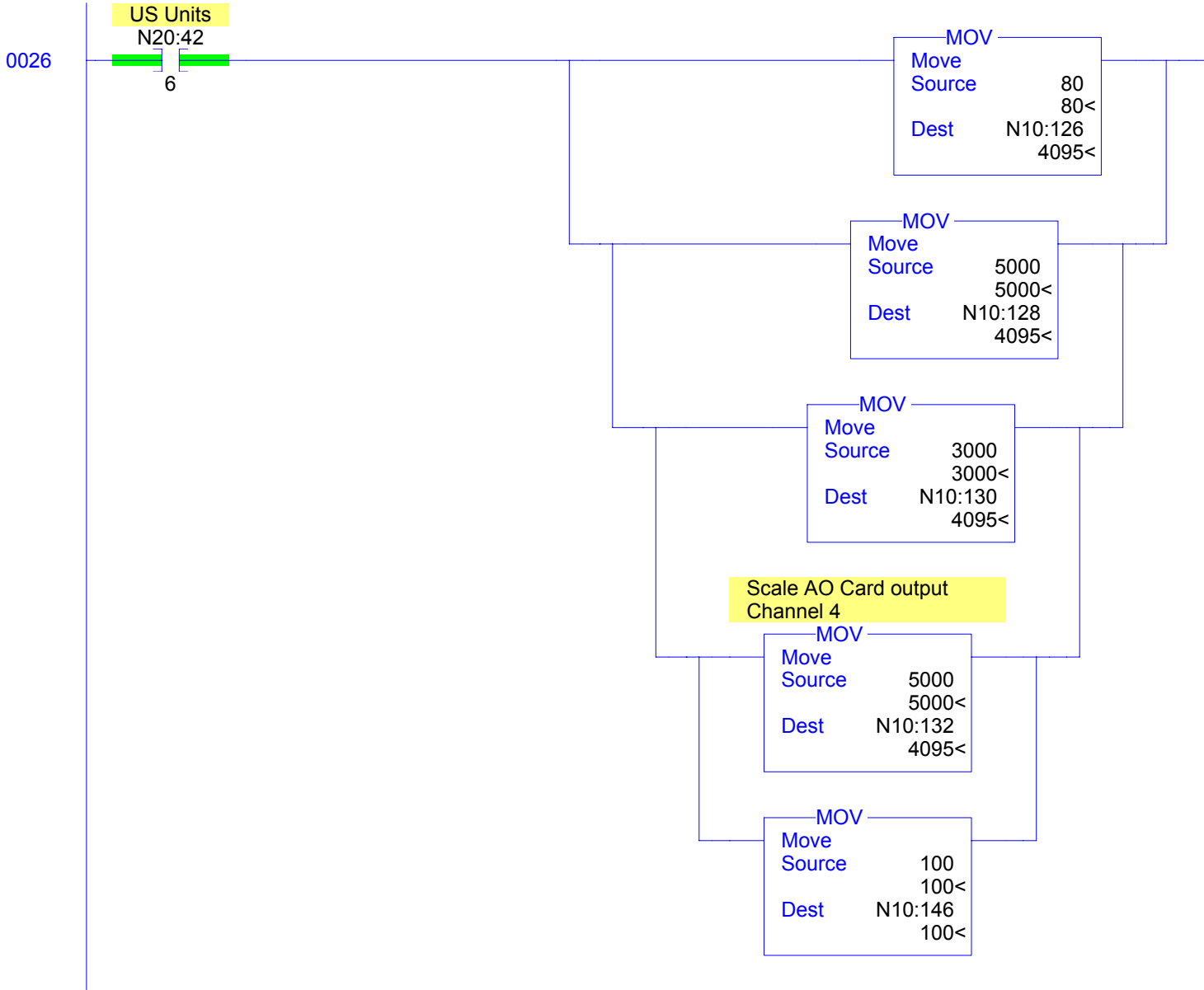
MOV  
Move  
Source 0  
0<  
Dest N10:131  
0<

MOV  
Move  
Source -32768  
-32768<  
Dest N10:144  
-32768<

MOV  
Move  
Source 0  
0<  
Dest N10:145  
0<

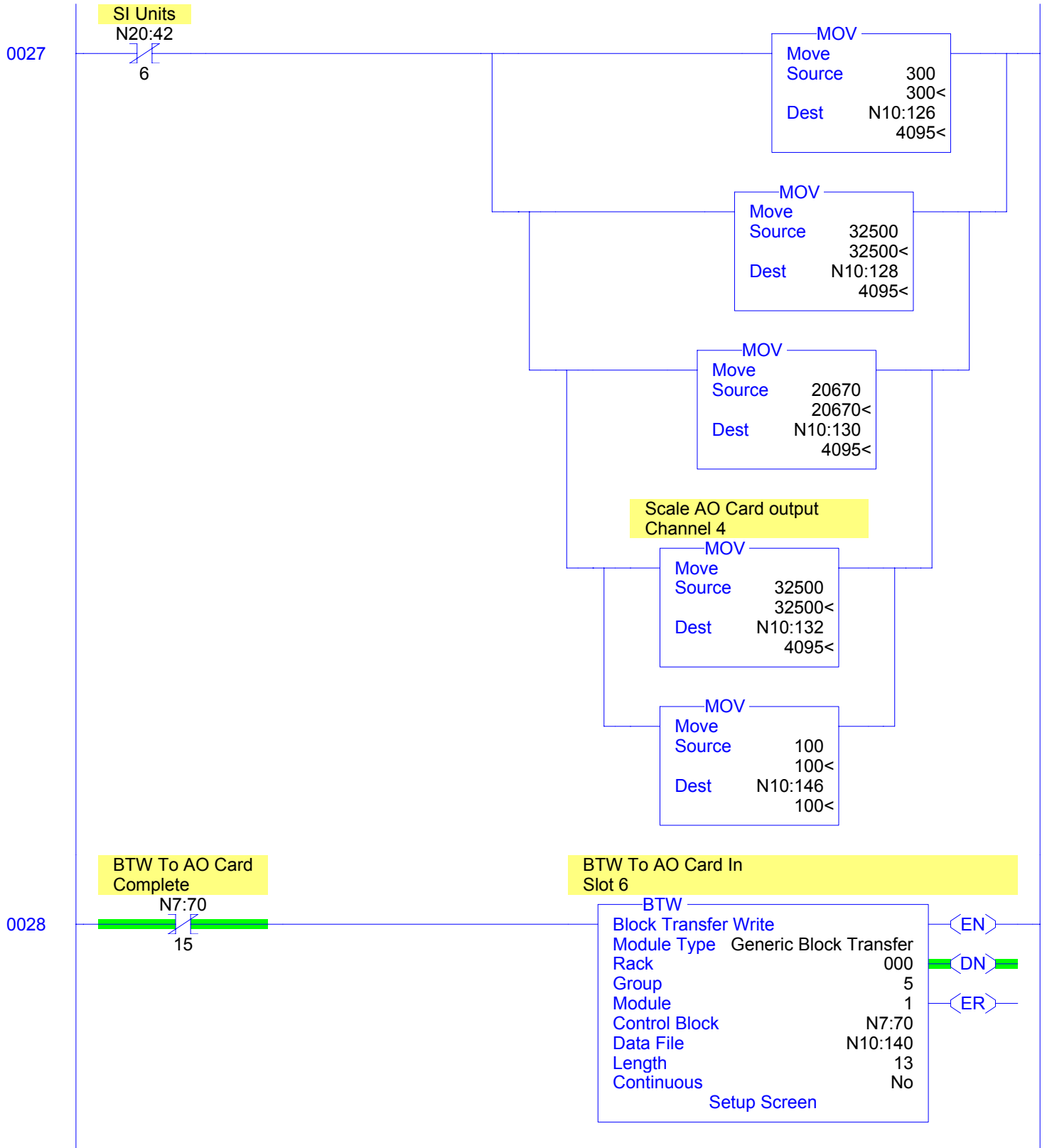
Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



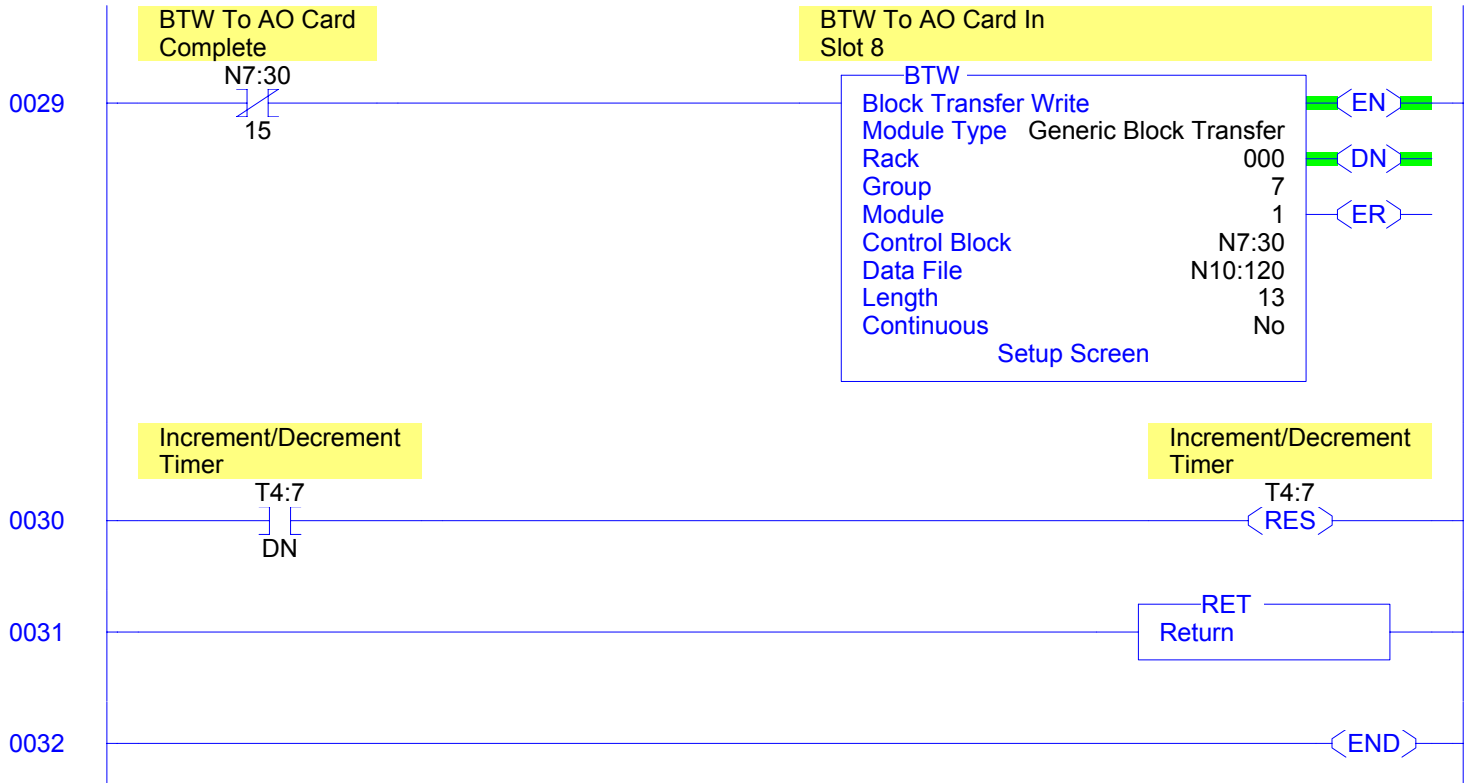
# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



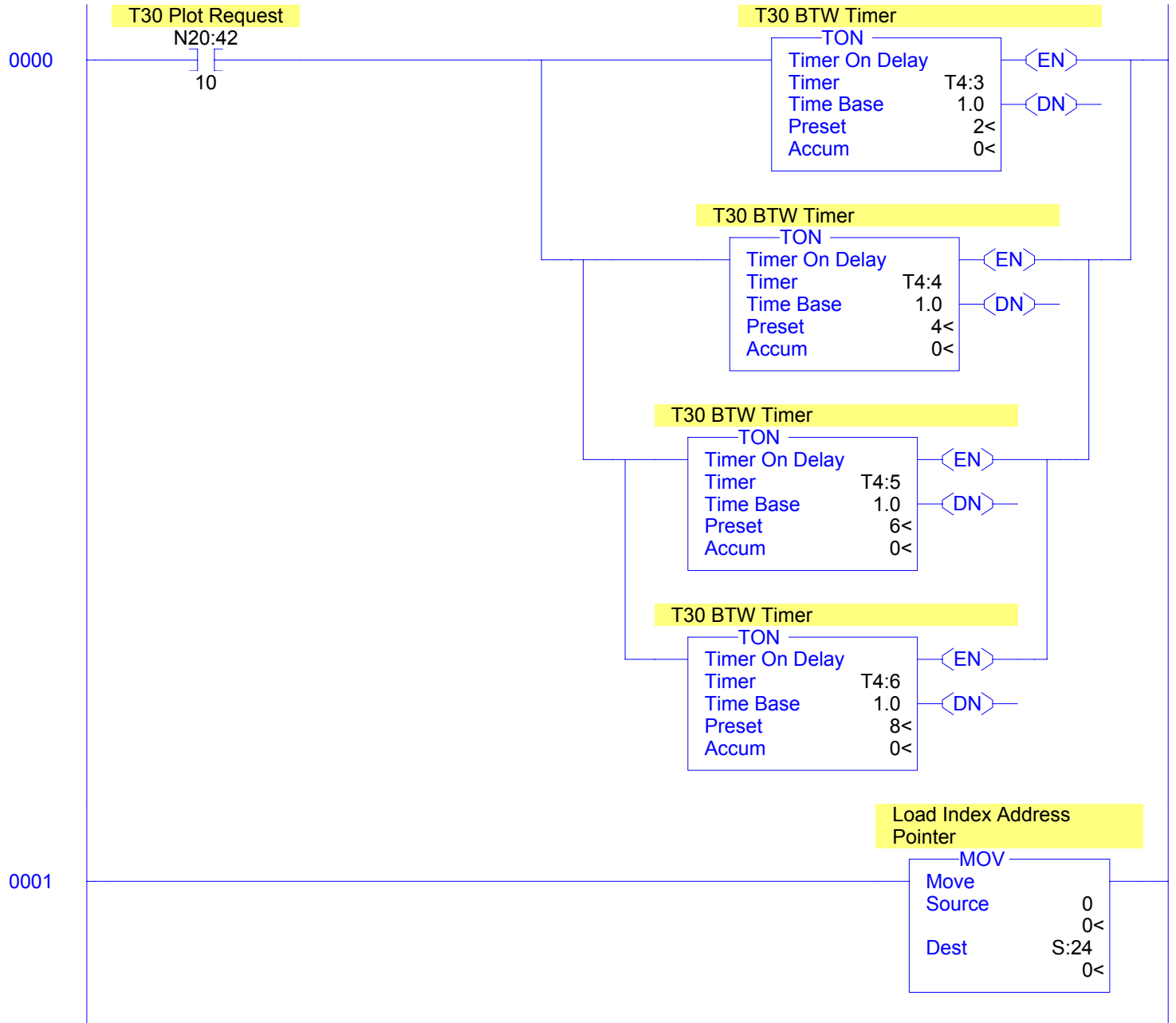
# Test Bench Three

LAD 8 - AUTO\_TEST --- Total Rungs in File = 33



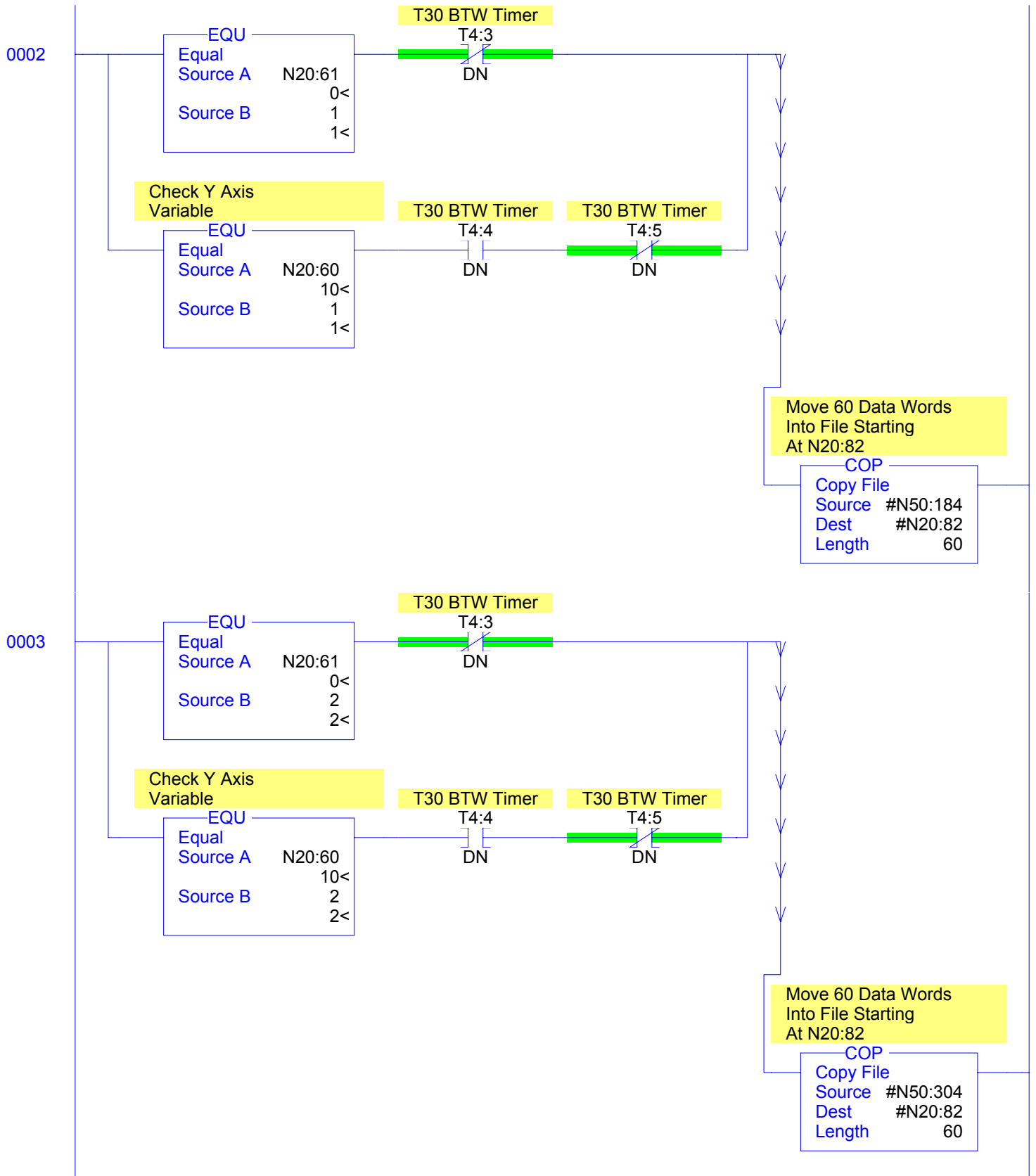
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



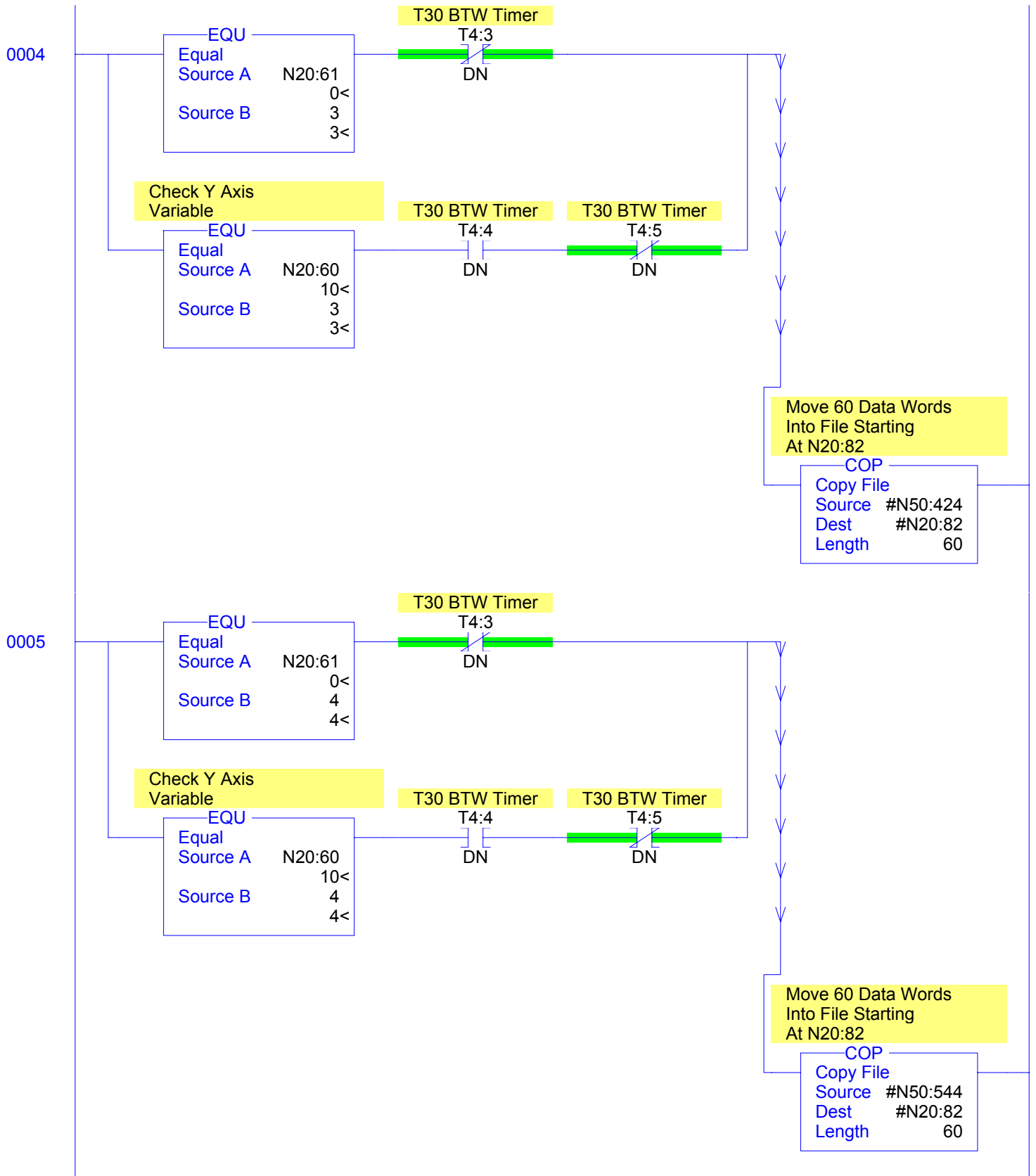
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



# Test Bench Three

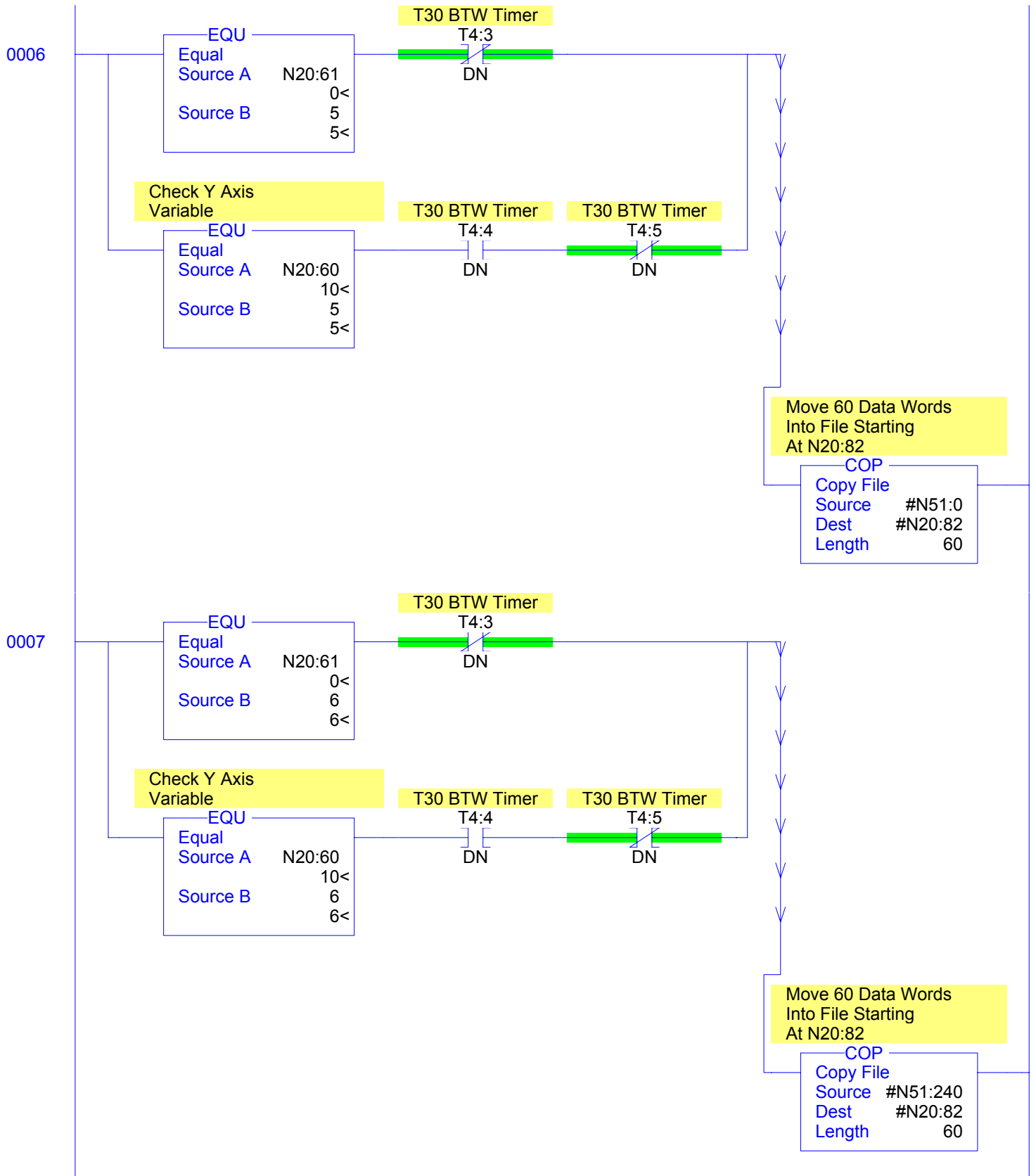
LAD 10 - T30\_PLOT --- Total Rungs in File = 39





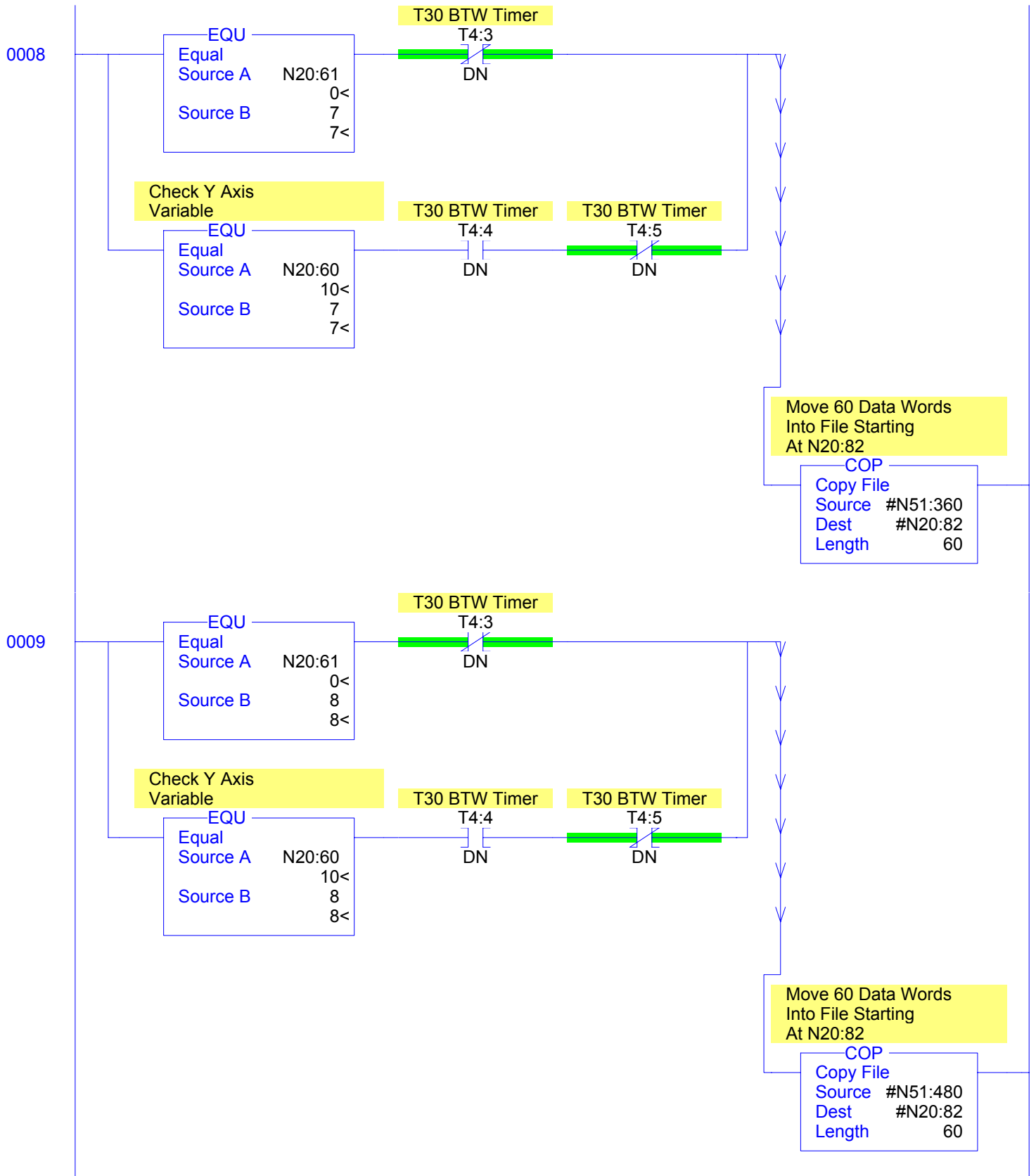
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



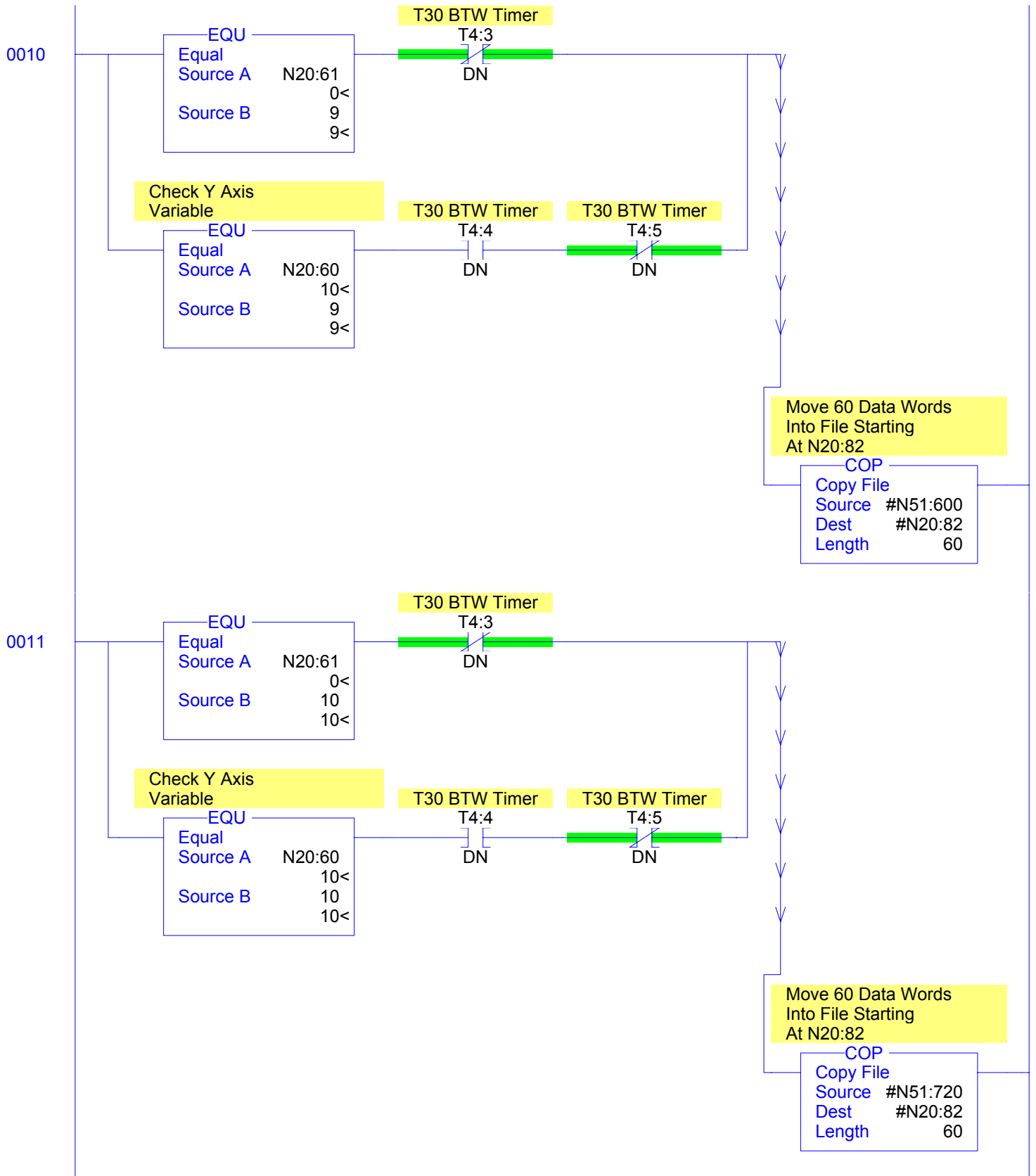
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



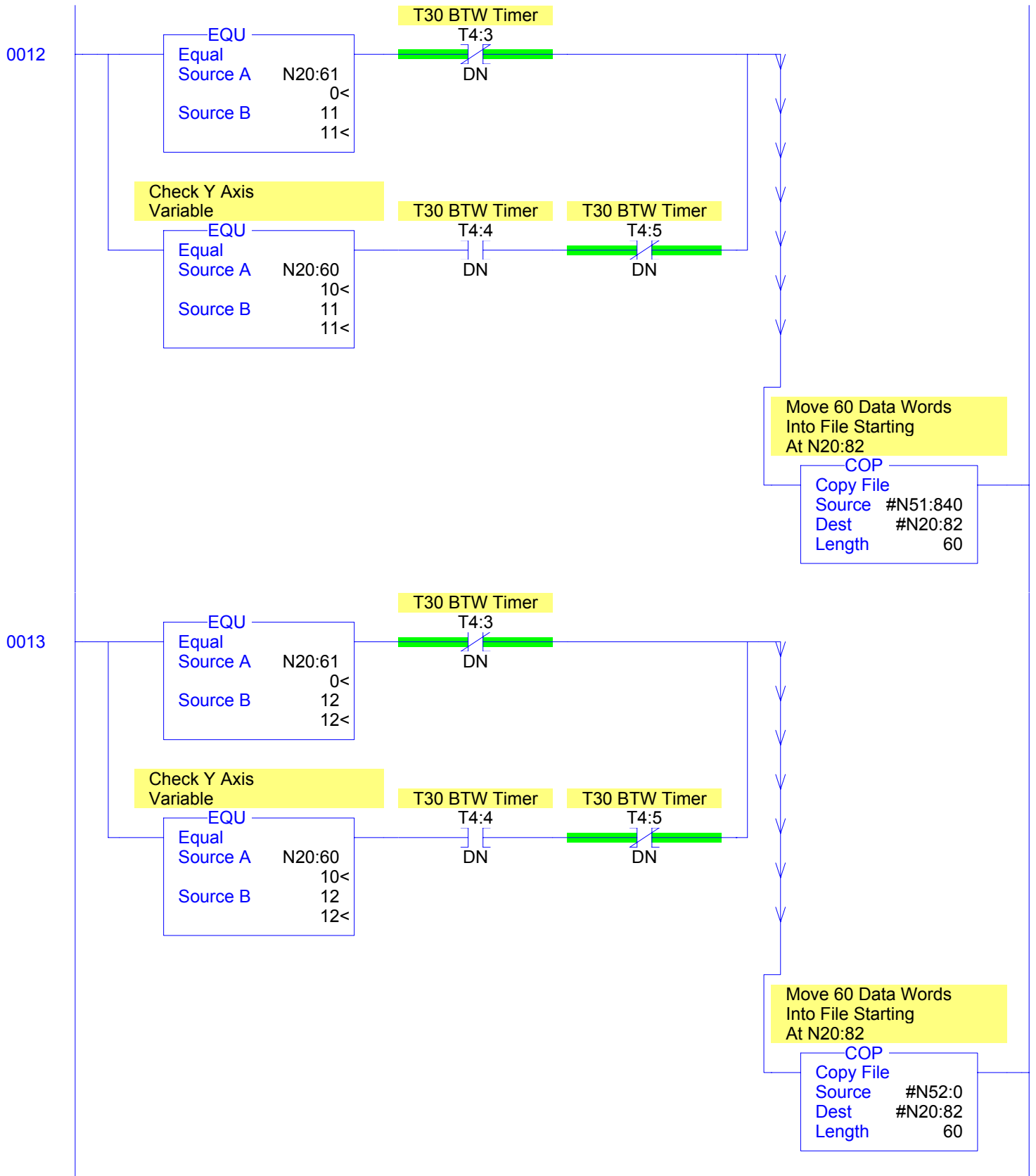
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



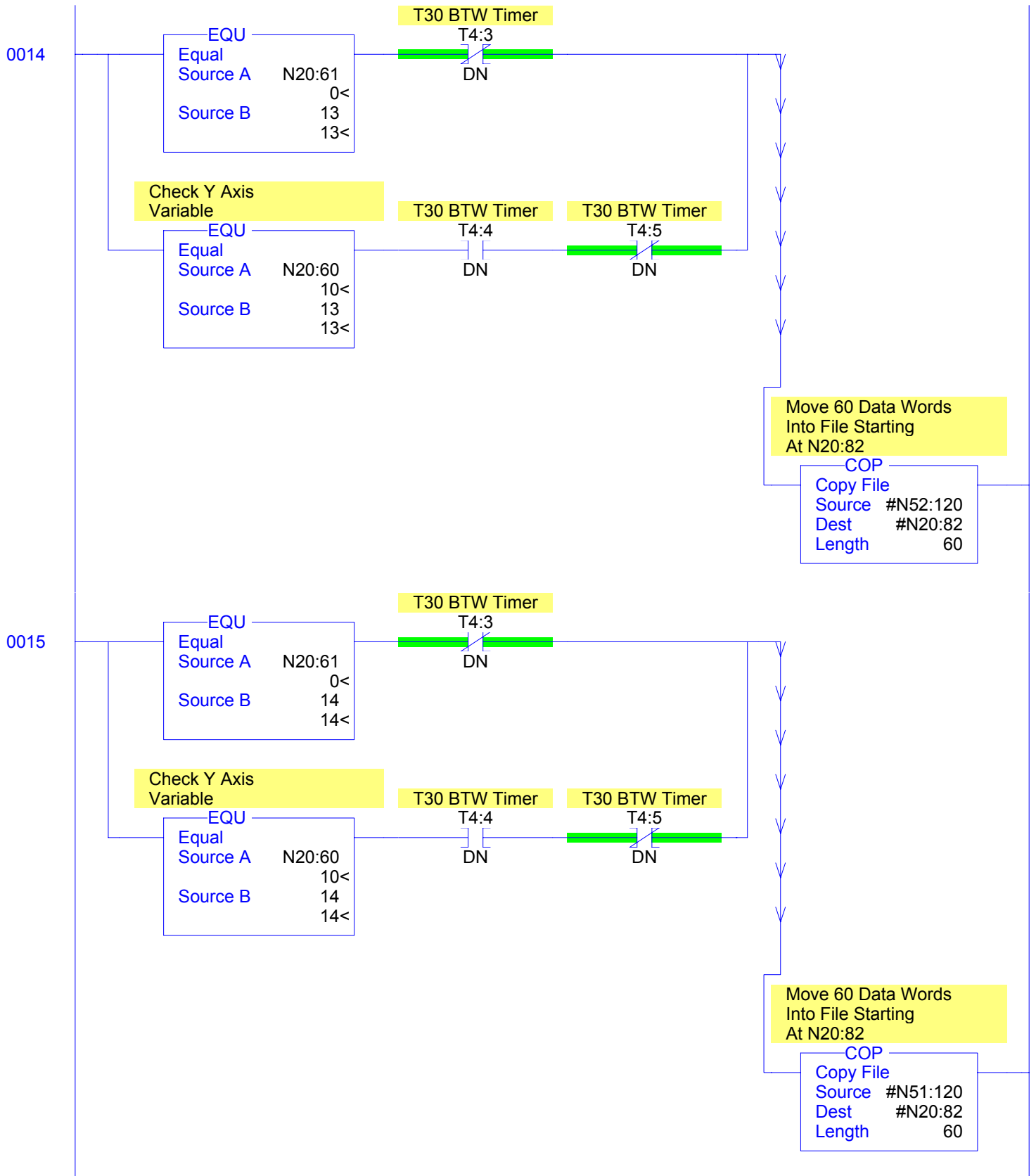
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



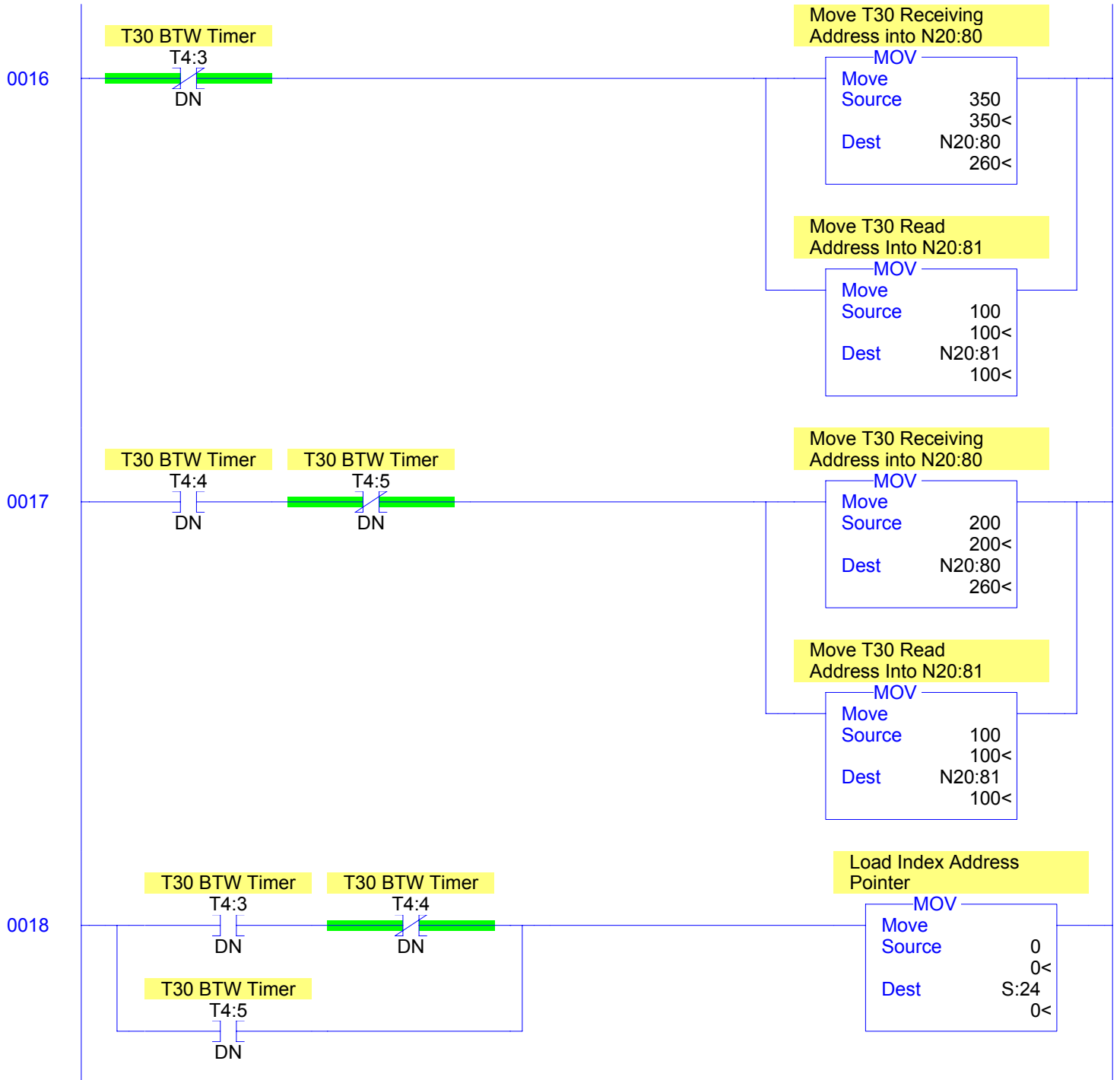
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



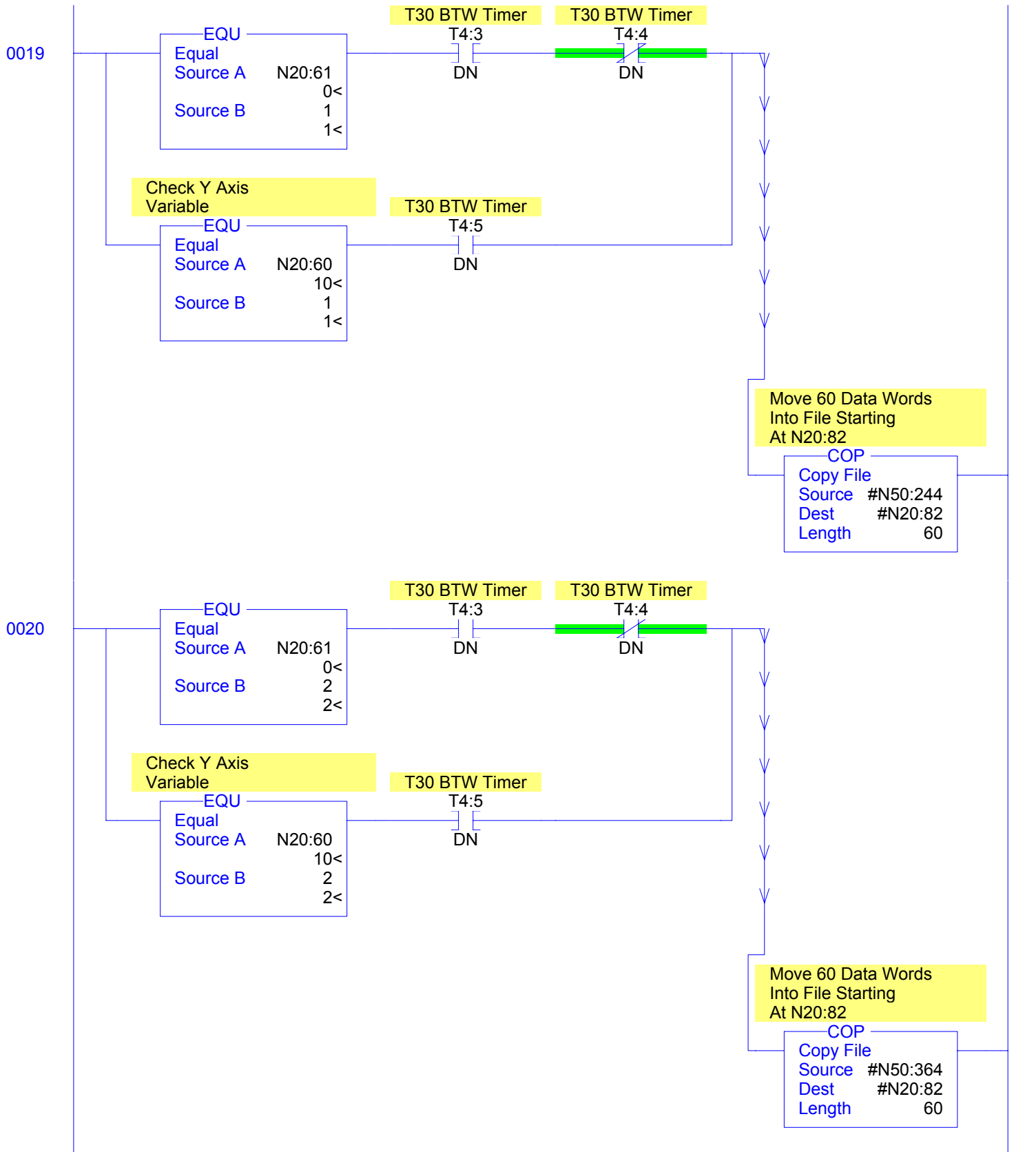
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



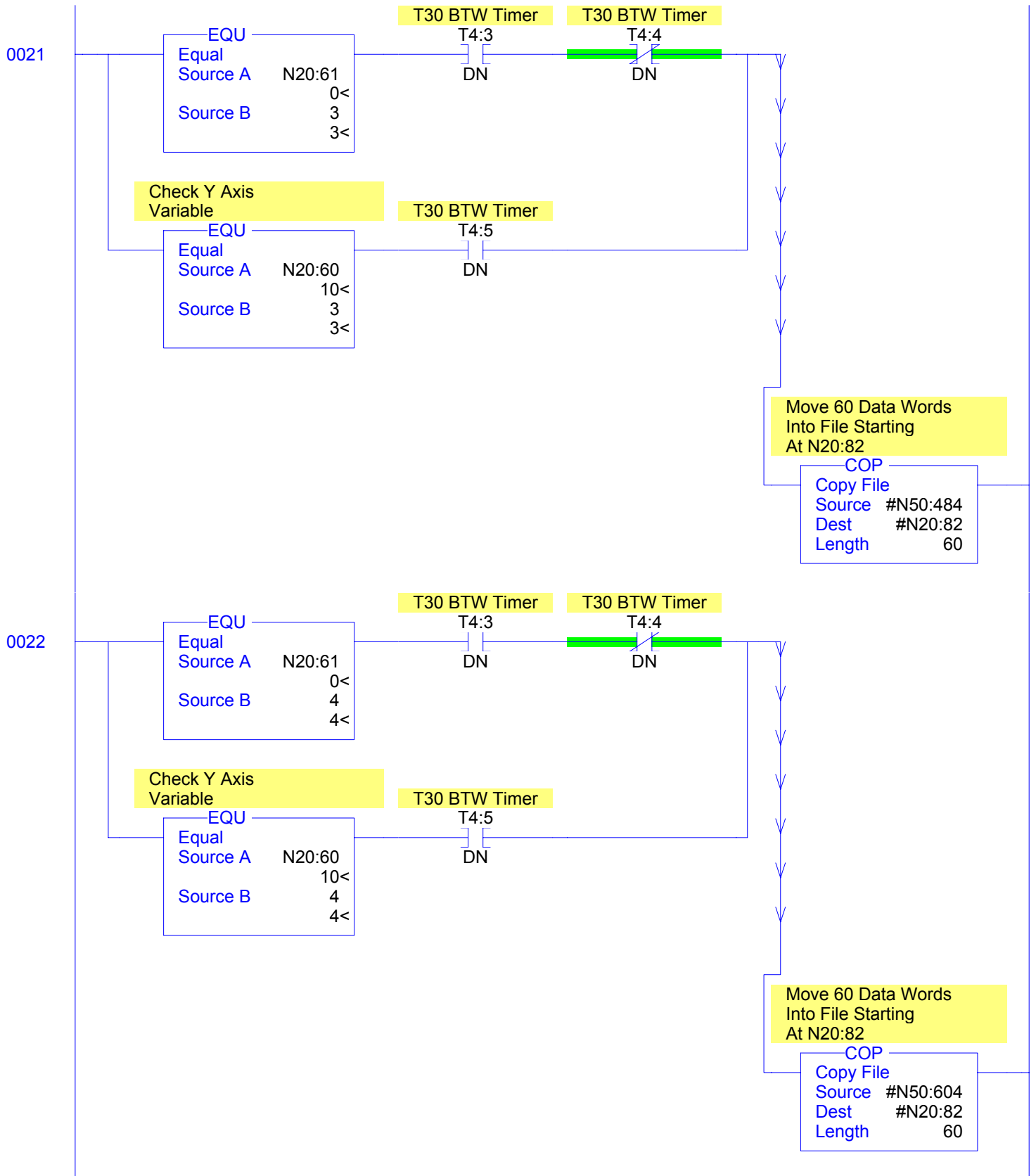
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



# Test Bench Three

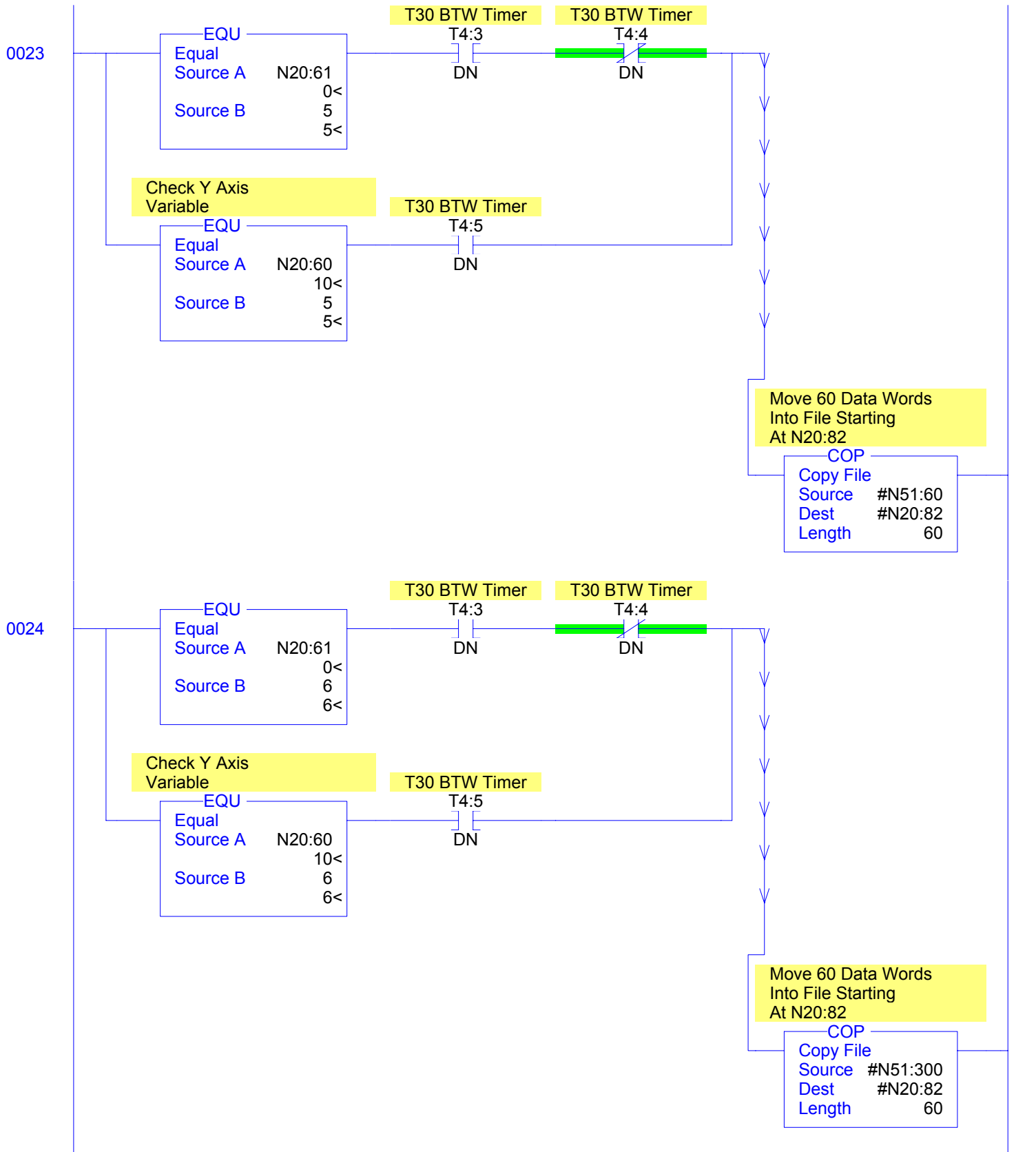
LAD 10 - T30\_PLOT --- Total Rungs in File = 39





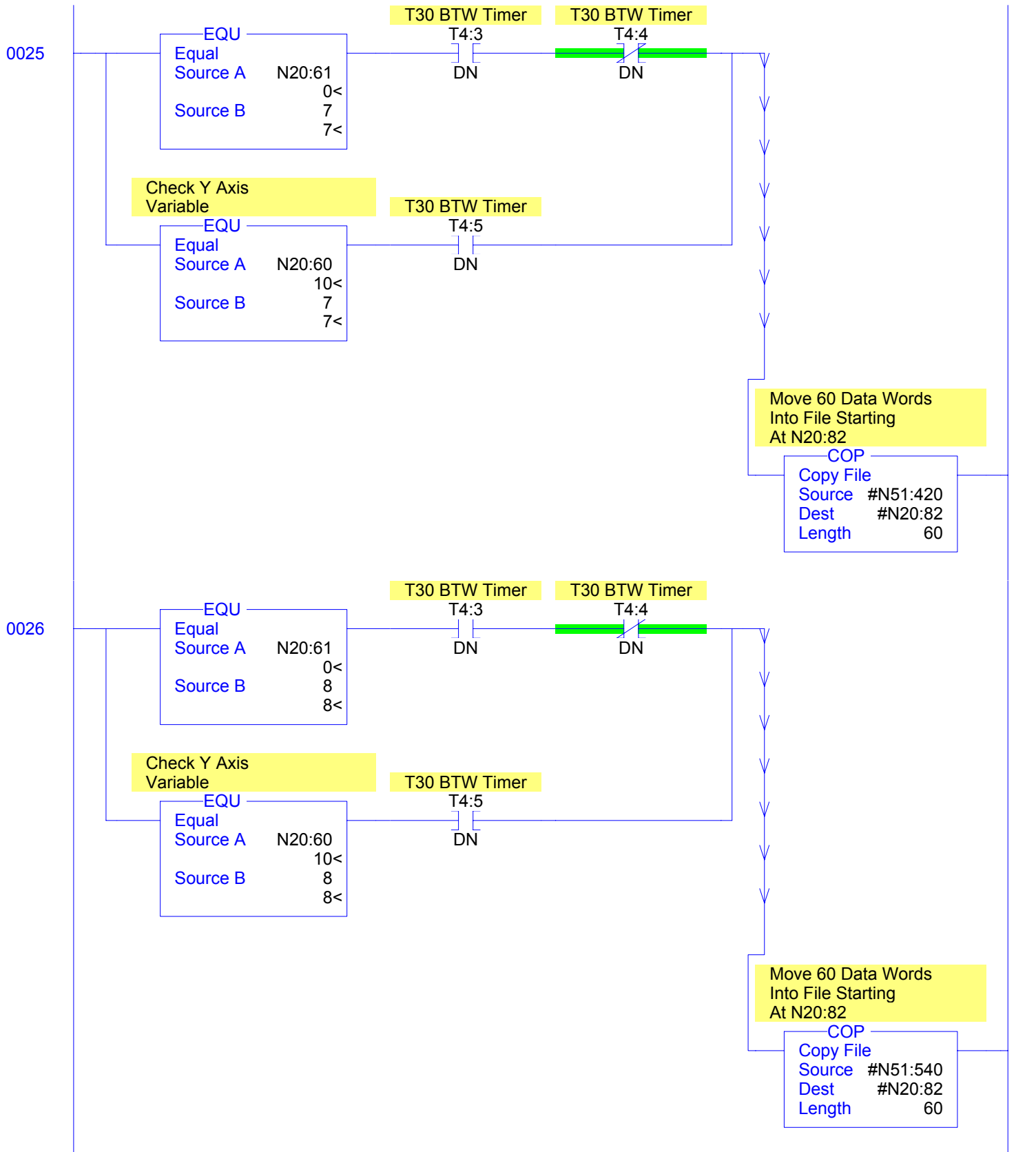
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



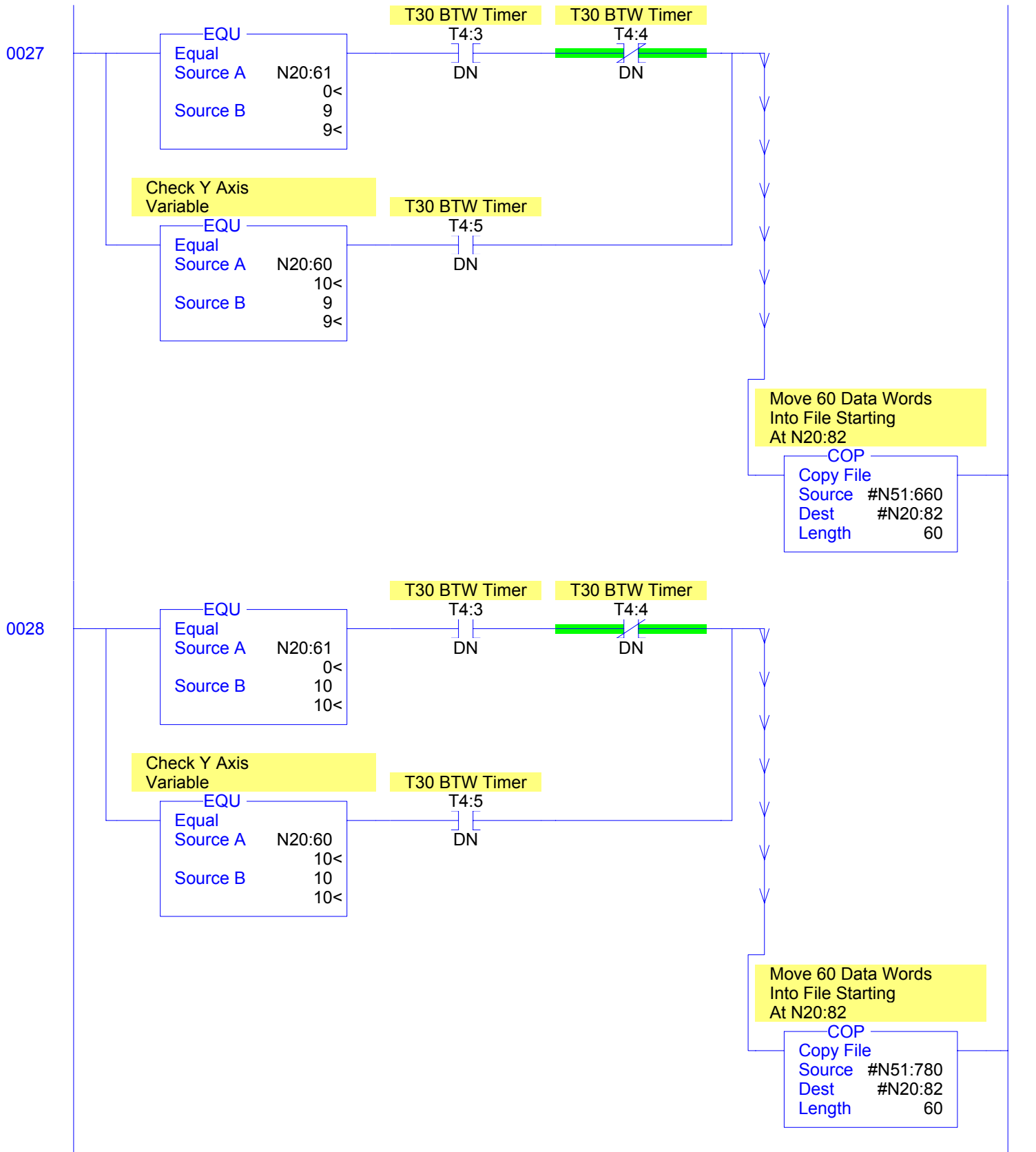
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



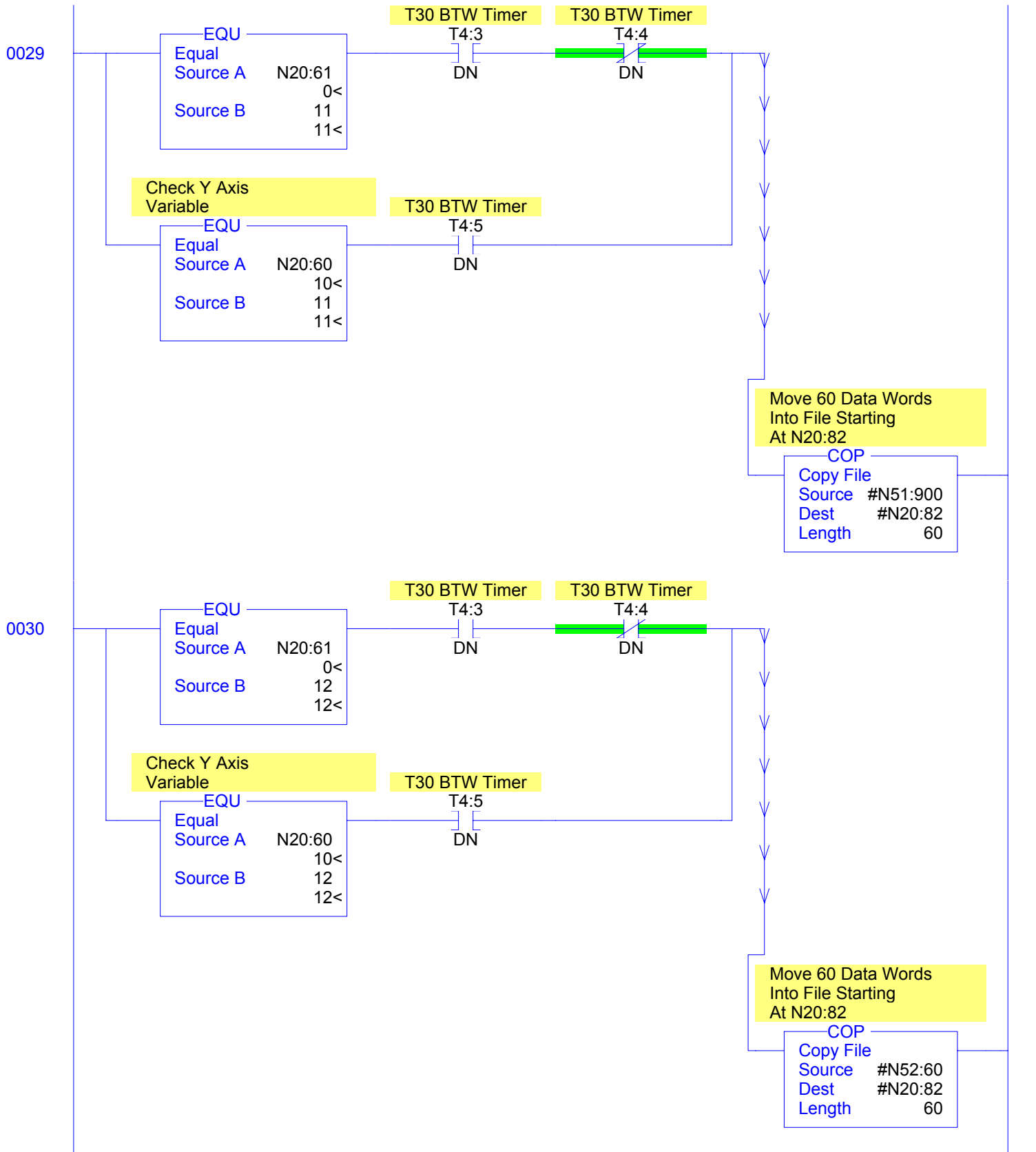
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



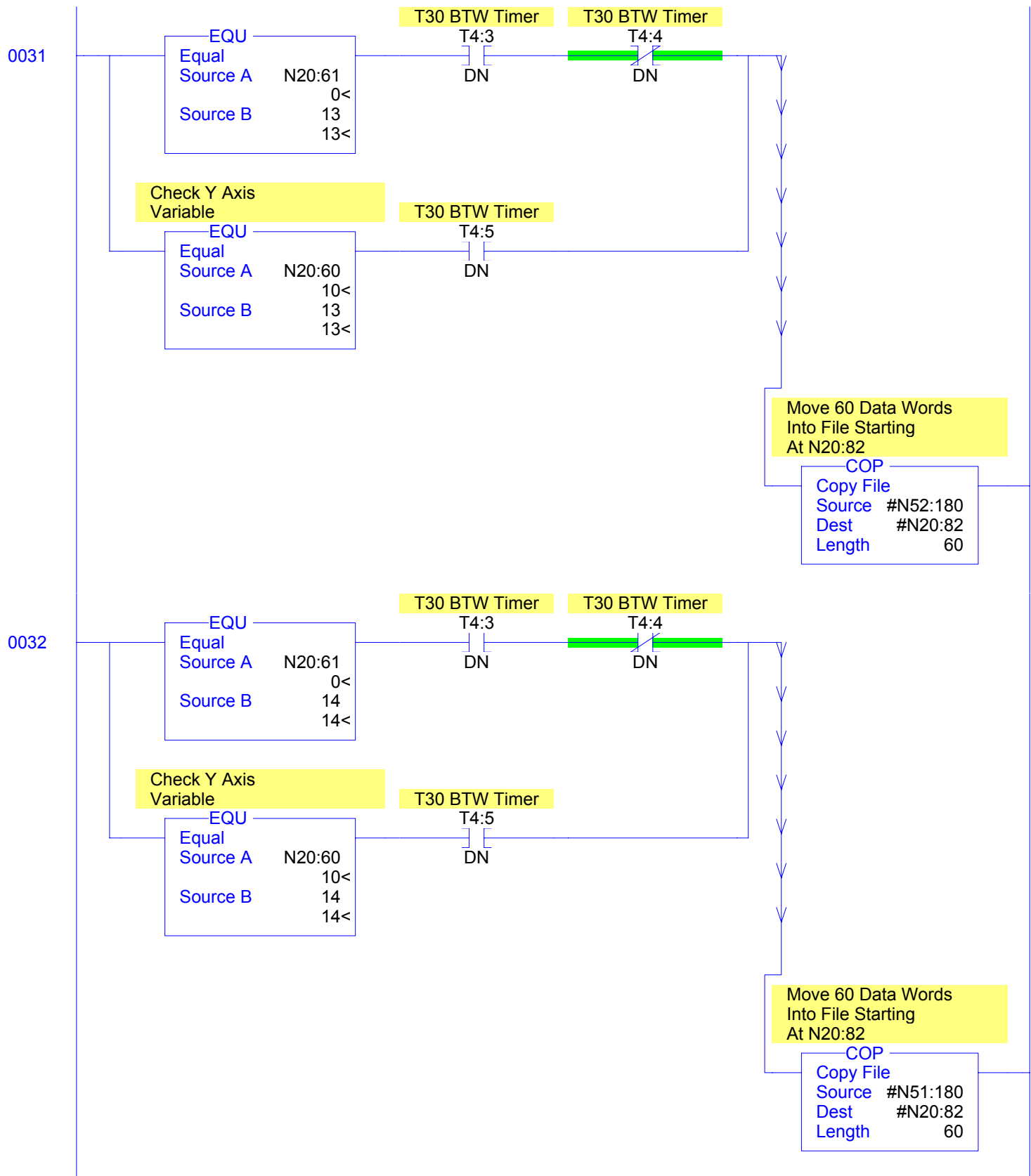
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



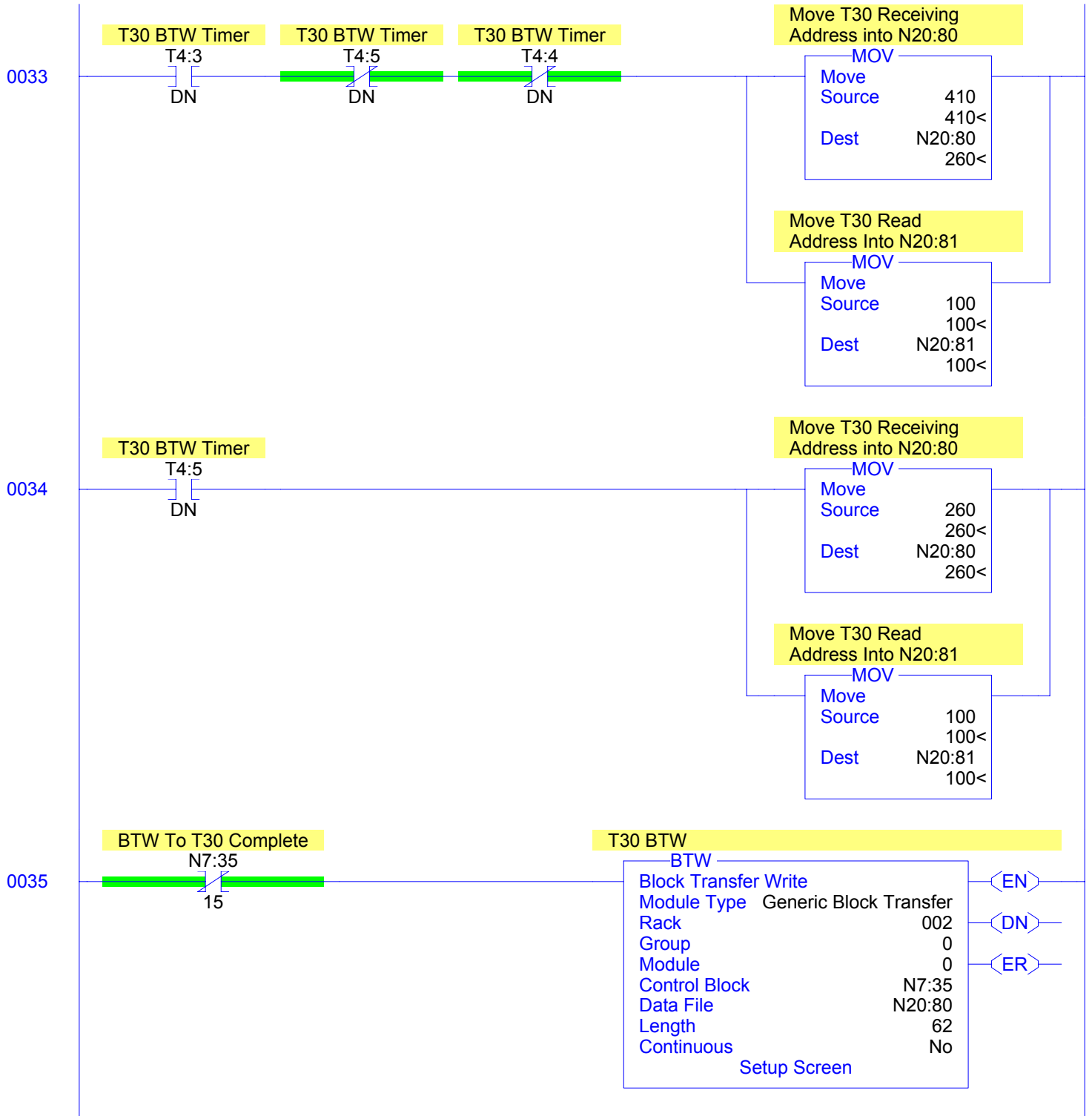
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



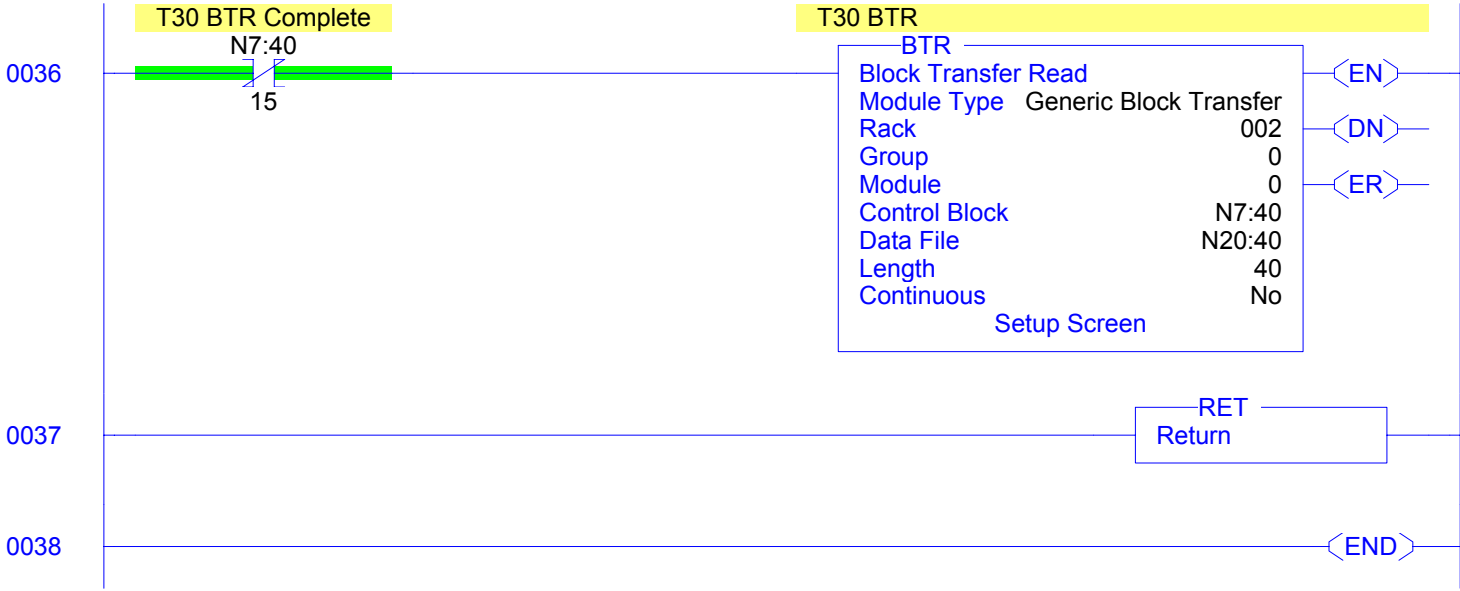
# Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



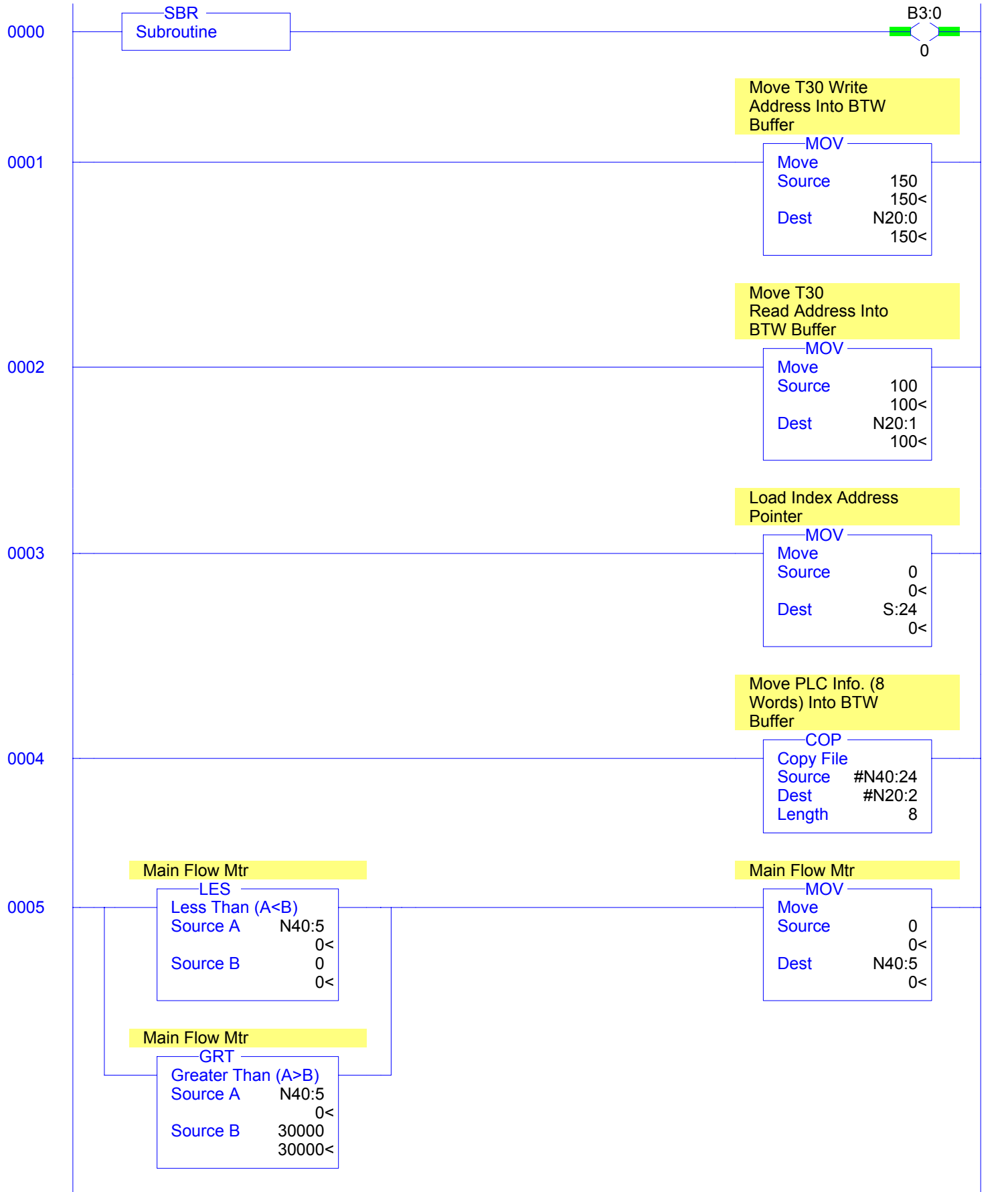
Test Bench Three

LAD 10 - T30\_PLOT --- Total Rungs in File = 39



# Test Bench Three

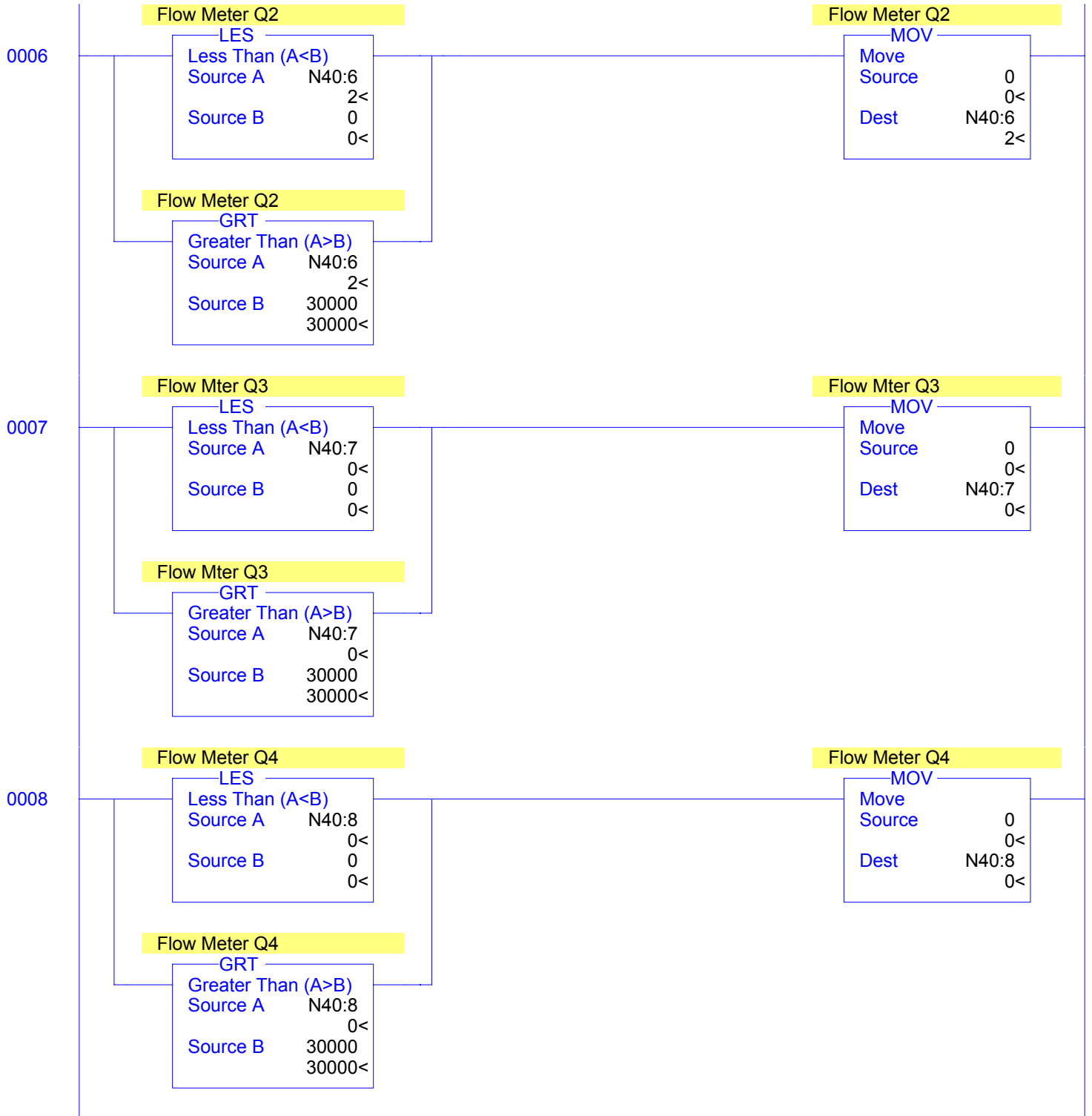
LAD 11 - T30\_BLK\_TR --- Total Rungs in File = 16





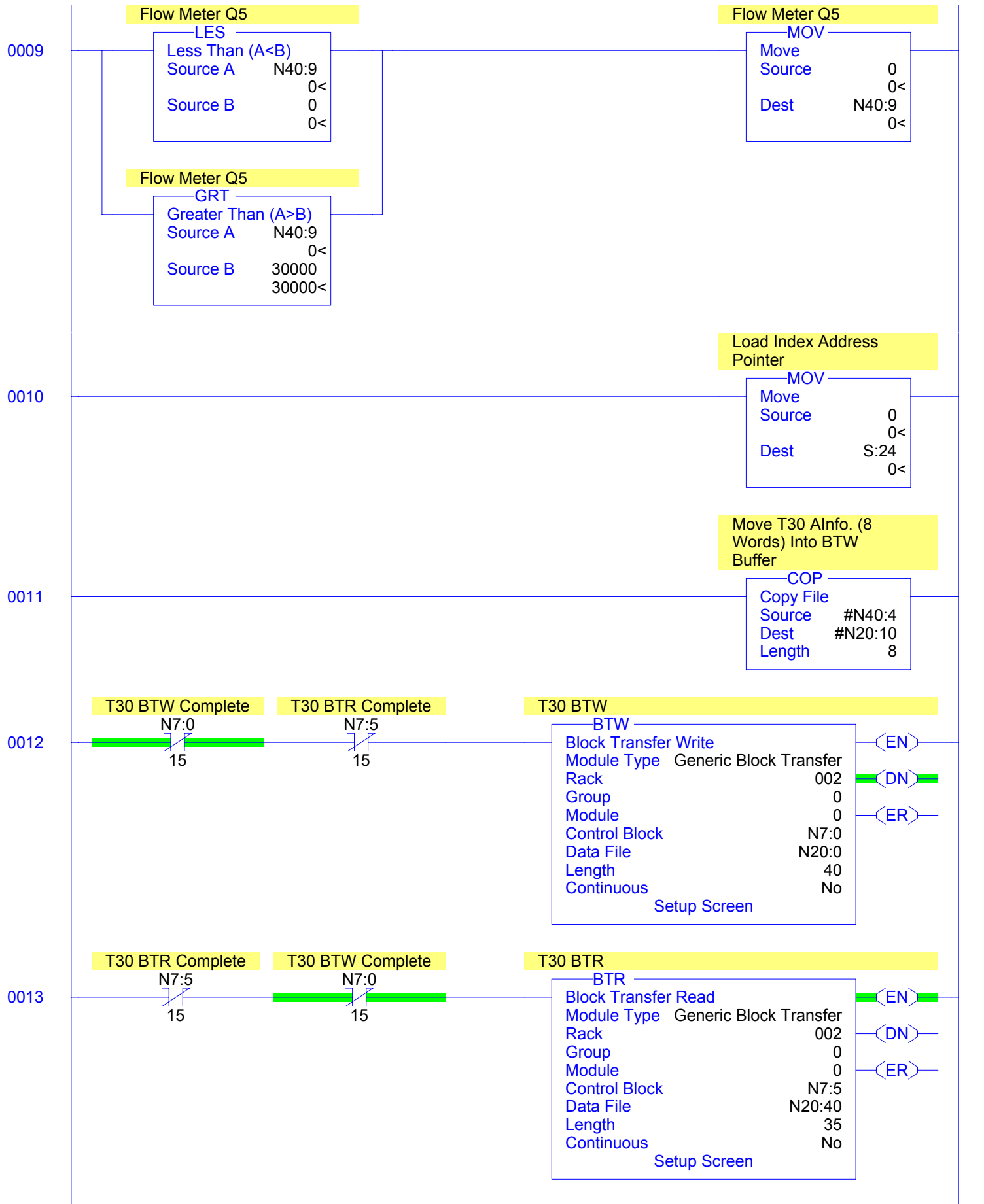
# Test Bench Three

LAD 11 - T30\_BLK\_TR --- Total Rungs in File = 16



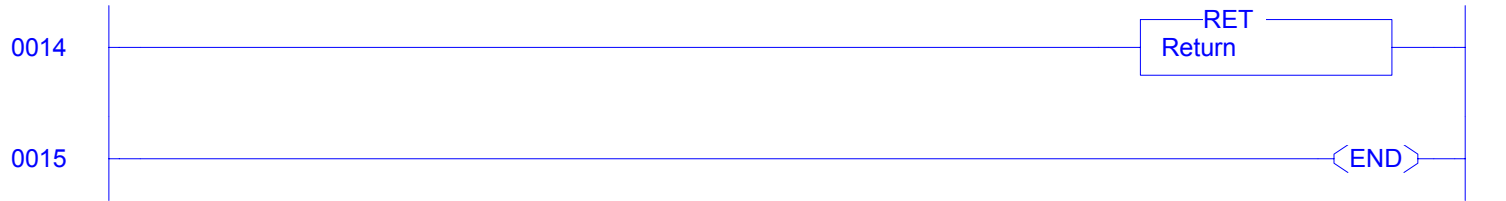
# Test Bench Three

LAD 11 - T30\_BLK\_TR --- Total Rungs in File = 16



### Test Bench Three

LAD 11 - T30\_BLK\_TR --- Total Rungs in File = 16



# Test Bench Three

File T4

| Offset | EN | TT | DN | BASE    | PRE  | ACC | (Symbol) Description               |
|--------|----|----|----|---------|------|-----|------------------------------------|
| T4:0   | 0  | 0  | 0  | 1.0 sec | 0    | 0   | TB1-25 Poppet Valve On Delay Timer |
| T4:1   | 0  | 0  | 0  | 1.0 sec | 0    | 0   | VT12000 Speed Control Enable       |
| T4:2   | 0  | 0  | 0  | 1.0 sec | 5    | 5   |                                    |
| T4:3   | 0  | 0  | 0  | 1.0 sec | 2    | 0   | T30 BTW Timer                      |
| T4:4   | 0  | 0  | 0  | 1.0 sec | 4    | 0   | T30 BTW Timer                      |
| T4:5   | 0  | 0  | 0  | 1.0 sec | 6    | 0   | T30 BTW Timer                      |
| T4:6   | 0  | 0  | 0  | 1.0 sec | 8    | 0   | T30 BTW Timer                      |
| T4:7   | 0  | 0  | 0  | .01 sec | 9    | 0   | Increment/Decrement Timer          |
| T4:8   | 0  | 0  | 0  | 1.0 sec | 10   | 10  |                                    |
| T4:9   | 0  | 0  | 0  | 1.0 sec | 10   | 0   |                                    |
| T4:10  | 0  | 0  | 0  | 1.0 sec | 5    | 0   |                                    |
| T4:11  | 0  | 0  | 0  | 1.0 sec | 5    | 5   |                                    |
| T4:12  | 0  | 0  | 0  | .01 sec | 0    | 0   |                                    |
| T4:13  | 0  | 0  | 0  | .01 sec | 0    | 0   |                                    |
| T4:14  | 0  | 0  | 0  | .01 sec | 0    | 0   |                                    |
| T4:15  | 0  | 0  | 0  | .01 sec | 0    | 0   |                                    |
| T4:16  | 0  | 0  | 0  | .01 sec | 0    | 0   |                                    |
| T4:17  | 0  | 0  | 0  | .01 sec | 0    | 0   |                                    |
| T4:18  | 0  | 0  | 0  | .01 sec | 0    | 0   |                                    |
| T4:19  | 0  | 0  | 0  | .01 sec | 0    | 0   |                                    |
| T4:20  | 0  | 0  | 0  | .01 sec | 4800 | 0   |                                    |
| T4:21  | 1  | 1  | 0  | .01 sec | 100  | 14  |                                    |

## Test Bench Three

File C5

---

| Offset | CU | CD | DN | OV | UN | PRE  | ACC | (Symbol)                                | Description |
|--------|----|----|----|----|----|------|-----|---|-------------|
| C5:0   | 0  | 0  | 0  | 0  | 0  | 999  | 67  |   |             |
| C5:1   | 0  | 0  | 0  | 0  | 0  | 5    | 2   | Slot 5 AI Card BTW Or BTR Error Counter |             |
| C5:2   | 0  | 0  | 0  | 0  | 0  | 5    | 1   | Error Counter AI Card Slot 7 BTW Or BTR |             |
| C5:3   | 0  | 0  | 0  | 0  | 0  | 500  | 0   |   |             |
| C5:4   | 0  | 0  | 0  | 0  | 0  | 50   | 0   |   |             |
| C5:5   | 0  | 0  | 0  | 0  | 0  | 5    | 4   |   |             |
| C5:6   | 0  | 0  | 0  | 0  | 0  | 5000 | 0   |   |             |

# Test Bench Three

File F8

| Offset | 0 | 1 | 2              | 3 | 4 |
|--------|---|---|----------------|---|---|
| F8:0   | 0 | 0 | 1.#QNAN        | 0 | 0 |
| F8:5   | 0 | 0 | 4 0.0007616146 |   | 0 |
| F8:10  | 0 | 0 | 0              | 2 | 0 |
| F8:15  | 0 | 0 | 0              | 0 | 0 |
| F8:20  | 0 | 0 | 0              | 0 | 0 |
| F8:25  | 0 | 0 | 0              | 0 | 0 |
| F8:30  | 0 | 0 | 0              | 0 | 0 |
| F8:35  | 0 | 0 | 0              | 0 | 0 |
| F8:40  | 0 | 0 | 0              | 0 | 0 |
| F8:45  | 0 | 0 | 0              | 0 | 0 |
| F8:50  | 0 | 0 | 0              | 0 | 0 |
| F8:55  | 0 | 0 | 0              | 0 | 0 |
| F8:60  | 0 | 0 | 0              | 0 | 0 |
| F8:65  | 0 | 0 | 0              | 0 | 0 |
| F8:70  | 0 | 0 | 0              | 0 | 0 |
| F8:75  | 0 | 0 | 0              | 0 | 0 |
| F8:80  | 0 | 0 | 0              | 0 | 0 |
| F8:85  | 0 | 0 | 0              | 0 | 0 |
| F8:90  | 0 | 0 | 0              | 0 | 0 |
| F8:95  | 0 | 0 | 0              | 0 | 0 |
| F8:100 | 0 | 0 | 0              | 0 | 0 |
| F8:105 | 0 | 0 | 0              | 0 | 0 |
| F8:110 | 0 | 0 | 0              | 0 | 0 |
| F8:115 | 0 | 0 | 0              | 0 | 0 |
| F8:120 | 0 | 0 | 0              | 0 | 0 |
| F8:125 | 0 | 0 | 0              | 0 | 0 |
| F8:130 | 0 | 0 | 0              | 0 | 0 |
| F8:135 | 0 | 0 | 0              | 0 | 0 |
| F8:140 | 0 | 0 | 0              | 0 | 0 |
| F8:145 | 0 | 0 | 0              | 0 | 0 |
| F8:150 | 0 | 0 | 0              | 0 | 0 |
| F8:155 | 0 | 0 | 0              | 0 | 0 |
| F8:160 | 0 | 0 | 0              | 0 | 0 |
| F8:165 | 0 | 0 | 0              | 0 | 0 |
| F8:170 | 0 | 0 | 0              | 0 | 0 |
| F8:175 | 0 | 0 | 0              | 0 | 0 |
| F8:180 | 0 | 0 | 0              | 0 | 0 |
| F8:185 | 0 | 0 | 0              | 0 | 0 |
| F8:190 | 0 | 0 | 0              | 0 | 0 |
| F8:195 | 0 | 0 | 0              | 0 | 0 |
| F8:200 | 0 | 0 | 0              | 0 | 0 |
| F8:205 | 0 | 0 | 0              | 0 | 0 |
| F8:210 | 0 | 0 | 0              | 0 | 0 |
| F8:215 | 0 | 0 | 0              | 0 | 0 |
| F8:220 | 0 | 0 | 0              | 0 | 0 |
| F8:225 | 0 | 0 | 0              | 0 | 0 |
| F8:230 | 0 | 0 | 0              | 0 | 0 |
| F8:235 | 0 | 0 | 0              | 0 | 0 |
| F8:240 | 0 | 0 | 0              | 0 | 0 |
| F8:245 | 0 | 0 | 0              | 0 | 0 |
| F8:250 | 0 | 0 | 0              | 0 | 0 |
| F8:255 | 0 | 0 | 0              | 0 | 0 |
| F8:260 | 0 | 0 | 0              | 0 | 0 |
| F8:265 | 0 | 0 | 0              | 0 | 0 |
| F8:270 | 0 | 0 | 0              | 0 | 0 |
| F8:275 | 0 | 0 | 0              | 0 | 0 |
| F8:280 | 0 | 0 | 0              | 0 | 0 |
| F8:285 | 0 | 0 | 0              | 0 | 0 |
| F8:290 | 0 | 0 | 0              | 0 | 0 |
| F8:295 | 0 | 0 | 0              | 0 | 0 |
| F8:300 | 0 | 0 | 0              | 0 | 0 |
| F8:305 | 0 | 0 | 0              | 0 | 0 |

# Test Bench Three

File F8

| Offset | 0 | 1 | 2 | 3 | 4 |
|--------|---|---|---|---|---|
| F8:310 | 0 | 0 | 0 | 0 | 0 |
| F8:315 | 0 | 0 | 0 | 0 | 0 |
| F8:320 | 0 | 0 | 0 | 0 | 0 |
| F8:325 | 0 | 0 | 0 | 0 | 0 |
| F8:330 | 0 | 0 | 0 | 0 | 0 |
| F8:335 | 0 | 0 | 0 | 0 | 0 |
| F8:340 | 0 | 0 | 0 | 0 | 0 |
| F8:345 | 0 | 0 | 0 | 0 | 0 |
| F8:350 | 0 | 0 | 0 | 0 | 0 |
| F8:355 | 0 | 0 | 0 | 0 | 0 |
| F8:360 | 0 | 0 | 0 | 0 | 0 |
| F8:365 | 0 | 0 | 0 | 0 | 0 |
| F8:370 | 0 | 0 | 0 | 0 | 0 |
| F8:375 | 0 | 0 | 0 | 0 | 0 |
| F8:380 | 0 | 0 | 0 | 0 | 0 |
| F8:385 | 0 | 0 | 0 | 0 | 0 |
| F8:390 | 0 | 0 | 0 | 0 | 0 |
| F8:395 | 0 | 0 | 0 | 0 | 0 |
| F8:400 | 0 | 0 | 0 | 0 | 0 |
| F8:405 | 0 | 0 | 0 | 0 | 0 |
| F8:410 | 0 | 0 | 0 | 0 | 0 |
| F8:415 | 0 | 0 | 0 | 0 | 0 |
| F8:420 | 0 | 0 | 0 | 0 | 0 |
| F8:425 | 0 | 0 | 0 | 0 | 0 |
| F8:430 | 0 | 0 | 0 | 0 | 0 |
| F8:435 | 0 | 0 | 0 | 0 | 0 |
| F8:440 | 0 | 0 | 0 | 0 | 0 |
| F8:445 | 0 | 0 | 0 | 0 | 0 |
| F8:450 | 0 | 0 | 0 | 0 | 0 |
| F8:455 | 0 | 0 | 0 | 0 | 0 |
| F8:460 | 0 | 0 | 0 | 0 | 0 |
| F8:465 | 0 | 0 | 0 | 0 | 0 |
| F8:470 | 0 | 0 | 0 | 0 | 0 |
| F8:475 | 0 | 0 | 0 | 0 | 0 |
| F8:480 | 0 | 0 | 0 | 0 | 0 |
| F8:485 | 0 | 0 | 0 | 0 | 0 |
| F8:490 | 0 | 0 | 0 | 0 | 0 |
| F8:495 | 0 | 0 | 0 | 0 | 0 |
| F8:500 | 0 | 0 | 0 | 0 | 0 |
| F8:505 | 0 | 0 | 0 | 0 | 0 |
| F8:510 | 0 | 0 | 0 | 0 | 0 |
| F8:515 | 0 | 0 | 0 | 0 | 0 |
| F8:520 | 0 | 0 | 0 | 0 | 0 |
| F8:525 | 0 | 0 | 0 | 0 | 0 |
| F8:530 | 0 | 0 | 0 | 0 | 0 |
| F8:535 | 0 | 0 | 0 | 0 | 0 |
| F8:540 | 0 | 0 | 0 | 0 | 0 |
| F8:545 | 0 | 0 | 0 | 0 | 0 |
| F8:550 | 0 | 0 | 0 | 0 | 0 |
| F8:555 | 0 | 0 | 0 | 0 | 0 |
| F8:560 | 0 | 0 | 0 | 0 | 0 |
| F8:565 | 0 | 0 | 0 | 0 | 0 |
| F8:570 | 0 | 0 | 0 | 0 | 0 |
| F8:575 | 0 | 0 | 0 | 0 | 0 |
| F8:580 | 0 | 0 | 0 | 0 | 0 |
| F8:585 | 0 | 0 | 0 | 0 | 0 |
| F8:590 | 0 | 0 | 0 | 0 | 0 |
| F8:595 | 0 | 0 | 0 | 0 | 0 |
| F8:600 | 0 | 0 | 0 | 0 | 0 |
| F8:605 | 0 | 0 | 0 | 0 | 0 |
| F8:610 | 0 | 0 | 0 | 0 | 0 |
| F8:615 | 0 | 0 | 0 | 0 | 0 |

# Test Bench Three

File F8

---

| Offset | 0 | 1 | 2 | 3 | 4 |
|--------|---|---|---|---|---|
| F8:620 | 0 | 0 | 0 | 0 | 0 |
| F8:625 | 0 | 0 | 0 | 0 | 0 |
| F8:630 | 0 | 0 | 0 | 0 | 0 |
| F8:635 | 0 | 0 | 0 | 0 | 0 |
| F8:640 | 0 | 0 | 0 | 0 | 0 |
| F8:645 | 0 | 0 | 0 | 0 | 0 |
| F8:650 | 0 | 0 | 0 | 0 | 0 |
| F8:655 | 0 | 0 |   |   |   |



# Test Bench Three

## Address/Symbol Database

| Address    | Symbol | Scope | Description                             | Sym Group | Dev. Code | ABV |
|------------|--------|-------|---|-----------|-----------|-----|
| B3:0/3     |        |       | Manual Test                             |           |           |     |
| B3:0/4     |        |       | Automatic Test                          |           |           |     |
| B3:0/5     |        |       | US Units Slot 5 Analog Input BTW        |           |           |     |
| B3:0/6     |        |       | SI Units Slot 5 Analog Input BTW        |           |           |     |
| B3:0/7     |        |       | US Units Slot 7 Analog Input BTW        |           |           |     |
| B3:0/8     |        |       | SI Units Slot 7 Analog Input BTW        |           |           |     |
| B3:0/9     |        |       | Manual Log Rate 15000 ms                |           |           |     |
| B3:0/10    |        |       | Manual Log Rate >1500 ms                |           |           |     |
| B3:0/11    |        |       | Manual Log Rate >150 ms                 |           |           |     |
| B3:0/12    |        |       | Storage Rate <150 ms                    |           |           |     |
| B3:1/3     |        |       | Oil Temp. Limit                         |           |           |     |
| C5:1       |        |       | Slot 5 AI Card BTW Or BTR Error Counter |           |           |     |
| C5:2       |        |       | Error Counter AI Card Slot 7 BTW Or BTR |           |           |     |
| F8:3       |        |       |   |           |           |     |
| F8:6       |        |       | Variable Minimum                        |           |           |     |
| I0001:0000 |        |       | PLC Slot 1 Info.                        |           |           |     |
| I:000/0    |        |       | Sump Filter Clogging Indicator          |           |           |     |
| I:000/1    |        |       | Auto Solenoid Cycle Control Switch      |           |           |     |
| I:000/16   |        |       | Emergency System Shutdown               |           |           |     |
| I:000/17   |        |       | Emergency Bench Shutdown                |           |           |     |
| N7:0       |        |       | T30 BTW                                 |           |           |     |
| N7:0/15    |        |       | T30 BTW Complete                        |           |           |     |
| N7:5       |        |       | T30 BTR                                 |           |           |     |
| N7:5/15    |        |       | T30 BTR Complete                        |           |           |     |
| N7:10      |        |       | BTW To AI Card in Slot 5                |           |           |     |
| N7:15      |        |       | BTR To AI Card In Slot 5                |           |           |     |
| N7:20      |        |       | BTW To AI Card In Slot 7                |           |           |     |
| N7:25      |        |       | BTR To AI Card In Slot 7                |           |           |     |
| N7:30      |        |       | BTW To AO Card In Slot 8                |           |           |     |
| N7:30/15   |        |       | BTW To AO Card Complete                 |           |           |     |
| N7:35      |        |       | T30 BTW                                 |           |           |     |
| N7:35/15   |        |       | BTW To T30 Complete                     |           |           |     |
| N7:40      |        |       | T30 BTR                                 |           |           |     |
| N7:40/15   |        |       | T30 BTR Complete                        |           |           |     |
| N7:50/13   |        |       | Data Collect Counter                    |           |           |     |
| N7:51      |        |       | Index Address pointer                   |           |           |     |
| N7:53      |        |       |   |           |           |     |
| N7:54/0    |        |       | Decrement Output                        |           |           |     |
| N7:60      |        |       | Block Transfer Write control block      |           |           |     |
| N7:65      |        |       | Block Transfer Read control block       |           |           |     |
| N7:70      |        |       | BTW To AO Card In Slot 6                |           |           |     |
| N7:70/15   |        |       | BTW To AO Card Complete                 |           |           |     |
| N10:20     |        |       | Write data block                        |           |           |     |
| N10:50     |        |       | BTW Buffer                              |           |           |     |
| N10:80     |        |       | Slot 7 Buffer                           |           |           |     |
| N10:120    |        |       | AO Card                                 |           |           |     |
| N10:121    |        |       | AO Card                                 |           |           |     |
| N10:122    |        |       | AO Card                                 |           |           |     |
| N10:123    |        |       | AO Card                                 |           |           |     |
| N10:124    |        |       |   |           |           |     |
| N10:132    |        |       |   |           |           |     |
| N10:140    |        |       | AO Card                                 |           |           |     |
| N20:0      |        |       | BTW Buffer                              |           |           |     |
| N20:1      |        |       | BTW Buffer                              |           |           |     |
| N20:2      |        |       | BTW Buffer                              |           |           |     |
| N20:10     |        |       | BTW Buffer                              |           |           |     |
| N20:26/15  |        |       | HPU Alarm                               |           |           |     |
| N20:42/2   |        |       | No Pilot Pressure                       |           |           |     |
| N20:42/3   |        |       | Pilot Pressure Valve 1                  |           |           |     |
| N20:42/6   |        |       | US Units                                |           |           |     |
| N20:42/8   |        |       | Auto Test                               |           |           |     |
| N20:42/9   |        |       | Test In Progress                        |           |           |     |
| N20:42/10  |        |       | T30 Plot Request                        |           |           |     |
| N20:60     |        |       | Y Axis Variable                         |           |           |     |
| N20:80     |        |       |   |           |           |     |
| N20:81     |        |       |   |           |           |     |
| N20:82     |        |       |   |           |           |     |
| N40:0      |        |       | Read data block                         |           |           |     |
| N40:0/0    |        |       | Power up bit                            |           |           |     |
| N40:4      |        |       | Press Trans                             |           |           |     |
| N40:5      |        |       | Main Flow Mtr                           |           |           |     |
| N40:6      |        |       | Flow Meter Q2                           |           |           |     |
| N40:7      |        |       | Flow Mter Q3                            |           |           |     |
| N40:8      |        |       | Flow Meter Q4                           |           |           |     |
| N40:9      |        |       | Flow Meter Q5                           |           |           |     |
| N40:10     |        |       | Temperature                             |           |           |     |
| N40:11     |        |       | Not Used                                |           |           |     |
| N40:20     |        |       | Read data block                         |           |           |     |
| N40:20/0   |        |       | Power up bit                            |           |           |     |
| N40:24     |        |       | Inlet Pressure                          |           |           |     |

# Test Bench Three

## Address/Symbol Database

| Address    | Symbol | Scope | Description                                   | Sym Group | Dev. Code | ABV |
|------------|--------|-------|---|-----------|-----------|-----|
| N40:25     |        |       | Pilot Pressure                                |           |           |     |
| N40:26     |        |       | Not Used                                      |           |           |     |
| N40:27     |        |       | Pressure PT3                                  |           |           |     |
| N40:28     |        |       | Pressure PT4                                  |           |           |     |
| N40:29     |        |       | Pressure PT1                                  |           |           |     |
| N40:30     |        |       | Pressure PT2                                  |           |           |     |
| N40:31     |        |       | Pressure PT6                                  |           |           |     |
| N40:40     |        |       | Read data block                               |           |           |     |
| N40:40/0   |        |       | Power up bit                                  |           |           |     |
| N40:44     |        |       | Inlet Flow                                    |           |           |     |
| N40:45     |        |       | Inlet Pressure                                |           |           |     |
| N40:46     |        |       | Pilot Pressure                                |           |           |     |
| N40:47     |        |       | Outlet Flow                                   |           |           |     |
| N40:48     |        |       | Outlet Pressue                                |           |           |     |
| O0000:0001 |        |       | PLC Slot 2 Info.                              |           |           |     |
| O:001/0    |        |       | Poppet Valve Solenoid TB3-1                   |           |           |     |
| O:001/1    |        |       | Poppet Valve Solenoid TB3-10                  |           |           |     |
| O:001/2    |        |       | Poppet Valve Solenoid TB3-9                   |           |           |     |
| O:001/4    |        |       | Auto Solenoid Control (SCA)                   |           |           |     |
| O:001/5    |        |       | Auto Solenoid Control (SCB)                   |           |           |     |
| O:001/14   |        |       | Station Alarm                                 |           |           |     |
| O:001/15   |        |       | System Alarm                                  |           |           |     |
| O:001/16   |        |       | Test Running Light                            |           |           |     |
| O:001/17   |        |       | Emergency Shutdown Light                      |           |           |     |
| O0000:0022 |        |       | Transfer PLC Slot 1 Info. To T30              |           |           |     |
| O:025/0    |        |       | T30 Plot Info. Transfer Complete              |           |           |     |
| O:025/1    |        |       | Auto Test Complete                            |           |           |     |
| O0000:0026 |        |       | Transfer PLC Slot 2 Info. To T30              |           |           |     |
| S:0/0      |        |       | Processor arithmetic carry flag               |           |           |     |
| S:0/1      |        |       | Processor arithmetic underflow/ overflow flag |           |           |     |
| S:0/2      |        |       | Processor arithmetic zero flag                |           |           |     |
| S:0/3      |        |       | Processor arithmetic sign flag                |           |           |     |
| S:1/0      |        |       | Bad RAM CHECKSUM at power up                  |           |           |     |
| S:1/1      |        |       | PLC-5 in RUN mode                             |           |           |     |
| S:1/2      |        |       | PLC-5 in TEST mode                            |           |           |     |
| S:1/3      |        |       | PLC-5 in PROG mode                            |           |           |     |
| S:1/4      |        |       | PLC-5 is burning an EEPROM                    |           |           |     |
| S:1/5      |        |       | Download- ing in progress                     |           |           |     |
| S:1/6      |        |       | Test edits enabled                            |           |           |     |
| S:1/7      |        |       | Mode switch in REMOTE                         |           |           |     |
| S:1/8      |        |       | Forces enabled                                |           |           |     |
| S:1/9      |        |       | Forces present                                |           |           |     |
| S:1/10     |        |       | EEPROM success- fully Burned                  |           |           |     |
| S:1/11     |        |       | Perform- ing online program- ming             |           |           |     |
| S:1/12     |        |       | Processor is in DEBUG mode                    |           |           |     |
| S:1/13     |        |       | User program CHECKSUM done                    |           |           |     |
| S:1/14     |        |       | Last scan of ladder or SFC step               |           |           |     |
| S:1/15     |        |       | First scan of ladder or SFC step              |           |           |     |
| S:7/0      |        |       | Rack 0 Faulted                                |           |           |     |
| S:7/1      |        |       | Rack 1 Faulted                                |           |           |     |
| S:7/2      |        |       | Rack 2 Faulted                                |           |           |     |
| S:7/3      |        |       | Rack 3 Faulted                                |           |           |     |
| S:7/4      |        |       | Rack 4 Faulted                                |           |           |     |
| S:7/5      |        |       | Rack 5 Faulted                                |           |           |     |
| S:7/6      |        |       | Rack 6 Faulted                                |           |           |     |
| S:7/7      |        |       | Rack 7 Faulted                                |           |           |     |
| S:7/8      |        |       | Block Xfer queue to rack 0 is full            |           |           |     |
| S:7/9      |        |       | Block Xfer queue to rack 1 is full            |           |           |     |
| S:7/10     |        |       | Block Xfer queue to rack 2 is full            |           |           |     |
| S:7/11     |        |       | Block Xfer queue to rack 3 is full            |           |           |     |
| S:7/12     |        |       | Block Xfer queue to rack 4 is full            |           |           |     |
| S:7/13     |        |       | Block Xfer queue to rack 5 is full            |           |           |     |
| S:7/14     |        |       | Block Xfer queue to rack 6 is full            |           |           |     |
| S:7/15     |        |       | Block Xfer queue to rack 7 is full            |           |           |     |
| S:8        |        |       | Last program scan time ladder & SFC           |           |           |     |
| S:9        |        |       | Maximum program scan time ladder & SFC        |           |           |     |
| S:10/0     |        |       | Battery is bad or missing                     |           |           |     |
| S:10/1     |        |       | DH+ active node table changed                 |           |           |     |
| S:10/2     |        |       | STI overlap                                   |           |           |     |
| S:10/3     |        |       | EEPROM trans- ferred                          |           |           |     |
| S:10/4     |        |       | Edits prevent SFC continuing                  |           |           |     |
| S:10/5     |        |       | Invalid I/O status file                       |           |           |     |
| S:10/6     |        |       | Memory cartridge battery low                  |           |           |     |
| S:10/7     |        |       | No more command blocks exist                  |           |           |     |
| S:10/9     |        |       | No MCP was configured to run                  |           |           |     |
| S:10/10    |        |       | MCP not allowed                               |           |           |     |
| S:10/11    |        |       | PII word number isn't in local rack           |           |           |     |
| S:10/12    |        |       | User PII routine overlap                      |           |           |     |
| S:10/13    |        |       | No command block exists to get PII            |           |           |     |
| S:10/14    |        |       | Arithmetic overflow occurred                  |           |           |     |

## Test Bench Three

### Address/Symbol Database

| Address | Symbol | Scope | Description                                | Sym Group | Dev. Code | ABV |
|---------|--------|-------|--|-----------|-----------|-----|
| S:10/15 |        |       | SFC lingering action overlap               |           |           |     |
| S:11/0  |        |       | Bad program file                           |           |           |     |
| S:11/1  |        |       | Bad address in ladder program              |           |           |     |
| S:11/2  |        |       | Programmer error                           |           |           |     |
| S:11/3  |        |       | SFC Fault                                  |           |           |     |
| S:11/4  |        |       | Program assembly error                     |           |           |     |
| S:11/5  |        |       | Powerup protection fault                   |           |           |     |
| S:11/6  |        |       | Error not defined                          |           |           |     |
| S:11/7  |        |       | User generated fault                       |           |           |     |
| S:11/8  |        |       | Watchdog timer fault                       |           |           |     |
| S:11/9  |        |       | Bad system config- uration                 |           |           |     |
| S:11/10 |        |       | Hardware Error                             |           |           |     |
| S:11/11 |        |       | MCP file does not exist or is not ladder   |           |           |     |
| S:11/12 |        |       | PII file does not exist or is not ladder   |           |           |     |
| S:11/13 |        |       | STI file does not exist or is not ladder   |           |           |     |
| S:11/14 |        |       | Fault file does not exist or is not ladder |           |           |     |
| S:11/15 |        |       | Non ladder file                            |           |           |     |
| S:12    |        |       | Fault Code                                 |           |           |     |
| S:13    |        |       | Program file where fault occurred          |           |           |     |
| S:14    |        |       | Rung number where fault occurred           |           |           |     |
| S:16    |        |       | I/O status file                            |           |           |     |
| S:17/0  |        |       | Queue full between local and remote I/O    |           |           |     |
| S:17/1  |        |       | Queue full servicing channel 1A            |           |           |     |
| S:17/2  |        |       | Queue full servicing channel 1B            |           |           |     |
| S:17/3  |        |       | Queue full servicing channel 2A            |           |           |     |
| S:17/4  |        |       | Queue full servicing channel 2B            |           |           |     |
| S:17/5  |        |       | No modem on serial port                    |           |           |     |
| S:17/6  |        |       | Remote I/O is greater than image size      |           |           |     |
| S:17/8  |        |       | ASCII instruct- ion error                  |           |           |     |
| S:17/9  |        |       | Duplicate node address                     |           |           |     |
| S:18    |        |       | Real time clock YEAR                       |           |           |     |
| S:19    |        |       | Real time clock MONTH                      |           |           |     |
| S:20    |        |       | Real time clock DAY                        |           |           |     |
| S:21    |        |       | Real time clock HOUR                       |           |           |     |
| S:22    |        |       | Real time clock MINUTE                     |           |           |     |
| S:23    |        |       | Real time clock SECOND                     |           |           |     |
| S:24    |        |       | Indexed Addressing Offset                  |           |           |     |
| S:25    |        |       | Adapter Image File                         |           |           |     |
| S:26/0  |        |       | SFC Restart/ Continue                      |           |           |     |
| S:26/1  |        |       | Start-up protect- ion after power loss     |           |           |     |
| S:26/2  |        |       | Local rack is 1 if set or 0 if bit = 0     |           |           |     |
| S:26/3  |        |       | Complement Rack Mode                       |           |           |     |
| S:27/0  |        |       | Rack 0 Inhibit                             |           |           |     |
| S:27/1  |        |       | Rack 1 Inhibit                             |           |           |     |
| S:27/2  |        |       | Rack 2 Inhibit                             |           |           |     |
| S:27/3  |        |       | Rack 3 Inhibit                             |           |           |     |
| S:27/4  |        |       | Rack 4 Inhibit                             |           |           |     |
| S:27/5  |        |       | Rack 5 Inhibit                             |           |           |     |
| S:27/6  |        |       | Rack 6 Inhibit                             |           |           |     |
| S:27/7  |        |       | Rack 7 Inhibit                             |           |           |     |
| S:27/8  |        |       | Rack 0 Reset                               |           |           |     |
| S:27/9  |        |       | Rack 1 Reset                               |           |           |     |
| S:27/10 |        |       | Rack 2 Reset                               |           |           |     |
| S:27/11 |        |       | Rack 3 Reset                               |           |           |     |
| S:27/12 |        |       | Rack 4 Reset                               |           |           |     |
| S:27/13 |        |       | Rack 5 Reset                               |           |           |     |
| S:27/14 |        |       | Rack 6 Reset                               |           |           |     |
| S:27/15 |        |       | Rack 7 Reset                               |           |           |     |
| S:28    |        |       | Watchdog Timer Setpoint                    |           |           |     |
| S:29    |        |       | Fault routine file number                  |           |           |     |
| S:30    |        |       | STI setpoint (interval)                    |           |           |     |
| S:31    |        |       | STI file number                            |           |           |     |
| S:32/0  |        |       | Rack 10 Faulted                            |           |           |     |
| S:32/1  |        |       | Rack 11 Faulted                            |           |           |     |
| S:32/2  |        |       | Rack 12 Faulted                            |           |           |     |
| S:32/3  |        |       | Rack 13 Faulted                            |           |           |     |
| S:32/4  |        |       | Rack 14 Faulted                            |           |           |     |
| S:32/5  |        |       | Rack 15 Faulted                            |           |           |     |
| S:32/6  |        |       | Rack 16 Faulted                            |           |           |     |
| S:32/7  |        |       | Rack 17 Faulted                            |           |           |     |
| S:32/8  |        |       | Block Xfer queue to rack 10 is full        |           |           |     |
| S:32/9  |        |       | Block Xfer queue to rack 11 is full        |           |           |     |
| S:32/10 |        |       | Block Xfer queue to rack 12 is full        |           |           |     |
| S:32/11 |        |       | Block Xfer queue to rack 13 is full        |           |           |     |
| S:32/12 |        |       | Block Xfer queue to rack 14 is full        |           |           |     |
| S:32/13 |        |       | Block Xfer queue to rack 15 is full        |           |           |     |
| S:32/14 |        |       | Block Xfer queue to rack 16 is full        |           |           |     |
| S:32/15 |        |       | Block Xfer queue to rack 17 is full        |           |           |     |
| S:33/0  |        |       | Rack 10 Inhibit                            |           |           |     |
| S:33/1  |        |       | Rack 11 Inhibit                            |           |           |     |

# Test Bench Three

## Address/Symbol Database

| Address | Symbol | Scope | Description                               | Sym Group | Dev. Code | ABV |
|---------|--------|-------|---|-----------|-----------|-----|
| S:33/2  |        |       | Rack 12 Inhibit                           |           |           |     |
| S:33/3  |        |       | Rack 13 Inhibit                           |           |           |     |
| S:33/4  |        |       | Rack 14 Inhibit                           |           |           |     |
| S:33/5  |        |       | Rack 15 Inhibit                           |           |           |     |
| S:33/6  |        |       | Rack 16 Inhibit                           |           |           |     |
| S:33/7  |        |       | Rack 17 Inhibit                           |           |           |     |
| S:33/8  |        |       | Rack 10 Reset                             |           |           |     |
| S:33/9  |        |       | Rack 11 Reset                             |           |           |     |
| S:33/10 |        |       | Rack 12 Reset                             |           |           |     |
| S:33/11 |        |       | Rack 13 Reset                             |           |           |     |
| S:33/12 |        |       | Rack 14 Reset                             |           |           |     |
| S:33/13 |        |       | Rack 15 Reset                             |           |           |     |
| S:33/14 |        |       | Rack 16 Reset                             |           |           |     |
| S:33/15 |        |       | Rack 17 Reset                             |           |           |     |
| S:34/0  |        |       | Rack 20 Faulted                           |           |           |     |
| S:34/1  |        |       | Rack 21 Faulted                           |           |           |     |
| S:34/2  |        |       | Rack 22 Faulted                           |           |           |     |
| S:34/3  |        |       | Rack 23 Faulted                           |           |           |     |
| S:34/4  |        |       | Rack 24 Faulted                           |           |           |     |
| S:34/5  |        |       | Rack 25 Faulted                           |           |           |     |
| S:34/6  |        |       | Rack 26 Faulted                           |           |           |     |
| S:34/7  |        |       | Rack 27 Faulted                           |           |           |     |
| S:34/8  |        |       | Block Xfer queue to rack 20 is full       |           |           |     |
| S:34/9  |        |       | Block Xfer queue to rack 21 is full       |           |           |     |
| S:34/10 |        |       | Block Xfer queue to rack 22 is full       |           |           |     |
| S:34/11 |        |       | Block Xfer queue to rack 23 is full       |           |           |     |
| S:34/12 |        |       | Block Xfer queue to rack 24 is full       |           |           |     |
| S:34/13 |        |       | Block Xfer queue to rack 25 is full       |           |           |     |
| S:34/14 |        |       | Block Xfer queue to rack 26 is full       |           |           |     |
| S:34/15 |        |       | Block Xfer queue to rack 27 is full       |           |           |     |
| S:35/0  |        |       | Rack 20 Inhibit                           |           |           |     |
| S:35/1  |        |       | Rack 21 Inhibit                           |           |           |     |
| S:35/2  |        |       | Rack 22 Inhibit                           |           |           |     |
| S:35/3  |        |       | Rack 23 Inhibit                           |           |           |     |
| S:35/4  |        |       | Rack 24 Inhibit                           |           |           |     |
| S:35/5  |        |       | Rack 25 Inhibit                           |           |           |     |
| S:35/6  |        |       | Rack 26 Inhibit                           |           |           |     |
| S:35/7  |        |       | Rack 27 Inhibit                           |           |           |     |
| S:35/8  |        |       | Rack 20 Reset                             |           |           |     |
| S:35/9  |        |       | Rack 21 Reset                             |           |           |     |
| S:35/10 |        |       | Rack 22 Reset                             |           |           |     |
| S:35/11 |        |       | Rack 23 Reset                             |           |           |     |
| S:35/12 |        |       | Rack 24 Reset                             |           |           |     |
| S:35/13 |        |       | Rack 25 Reset                             |           |           |     |
| S:35/14 |        |       | Rack 26 Reset                             |           |           |     |
| S:35/15 |        |       | Rack 27 Reset                             |           |           |     |
| S:46    |        |       | PII file number                           |           |           |     |
| S:47    |        |       | PII module group to examine               |           |           |     |
| S:48    |        |       | PII bit mask                              |           |           |     |
| S:48/0  |        |       | PII Module Bit 1=Monitor 0=Ignore         |           |           |     |
| S:49    |        |       | PII compare value                         |           |           |     |
| S:49/0  |        |       | PII Bit 1=false to true, 0= true to false |           |           |     |
| S:50    |        |       | PII down count                            |           |           |     |
| S:51    |        |       | PII return mask                           |           |           |     |
| S:52    |        |       | PII accum- ulator                         |           |           |     |
| S:53    |        |       | STI last scan time                        |           |           |     |
| S:54    |        |       | STI max scan time                         |           |           |     |
| S:55    |        |       | PII last scan time                        |           |           |     |
| S:56    |        |       | PII max scan time                         |           |           |     |
| S:79/0  |        |       | Main control program A disable bit        |           |           |     |
| S:79/1  |        |       | Main control program B disable bit        |           |           |     |
| S:79/2  |        |       | Main control program C disable bit        |           |           |     |
| S:79/3  |        |       | Main control program D disable bit        |           |           |     |
| S:79/4  |        |       | Main control program E disable bit        |           |           |     |
| S:79/5  |        |       | Main control program F disable bit        |           |           |     |
| S:79/6  |        |       | Main control program G disable bit        |           |           |     |
| S:79/7  |        |       | Main control program H disable bit        |           |           |     |
| S:79/8  |        |       | Main control program I disable bit        |           |           |     |
| S:79/9  |        |       | Main control program J disable bit        |           |           |     |
| S:79/10 |        |       | Main control program K disable bit        |           |           |     |
| S:79/11 |        |       | Main control program L disable bit        |           |           |     |
| S:79/12 |        |       | Main control program M disable bit        |           |           |     |
| S:79/13 |        |       | Main control program N disable bit        |           |           |     |
| S:79/14 |        |       | Main control program O disable bit        |           |           |     |
| S:79/15 |        |       | Main control program P disable bit        |           |           |     |
| S:80    |        |       | Main control program A file number        |           |           |     |
| S:81    |        |       | Program A scan time                       |           |           |     |
| S:82    |        |       | Program A maximum scan time               |           |           |     |
| S:83    |        |       | Main control program B file number        |           |           |     |
| S:84    |        |       | Program B scan time                       |           |           |     |

## Test Bench Three

### Address/Symbol Database

| Address | Symbol | Scope | Description                        | Sym Group | Dev. Code | ABV |
|---------|--------|-------|------------------------------------|-----------|-----------|-----|
| S:85    |        |       | Program B maximum scan time        |           |           |     |
| S:86    |        |       | Main control program C file number |           |           |     |
| S:87    |        |       | Program C scan time                |           |           |     |
| S:88    |        |       | Program C maximum scan time        |           |           |     |
| S:89    |        |       | Main control program D file number |           |           |     |
| S:90    |        |       | Program D scan time                |           |           |     |
| S:91    |        |       | Program D maximum scan time        |           |           |     |
| S:92    |        |       | Main control program E file number |           |           |     |
| S:93    |        |       | Program E scan time                |           |           |     |
| S:94    |        |       | Program E maximum scan time        |           |           |     |
| S:95    |        |       | Main control program F file number |           |           |     |
| S:96    |        |       | Program F scan time                |           |           |     |
| S:97    |        |       | Program F maximum scan time        |           |           |     |
| S:98    |        |       | Main control program G file number |           |           |     |
| S:99    |        |       | Program G scan time                |           |           |     |
| S:100   |        |       | Program G maximum scan time        |           |           |     |
| S:101   |        |       | Main control program H file number |           |           |     |
| S:102   |        |       | Program H scan time                |           |           |     |
| S:103   |        |       | Program H maximum scan time        |           |           |     |
| S:104   |        |       | Main control program I file number |           |           |     |
| S:105   |        |       | Program I scan time                |           |           |     |
| S:106   |        |       | Program I maximum scan time        |           |           |     |
| S:107   |        |       | Main control program J file number |           |           |     |
| S:108   |        |       | Program J scan time                |           |           |     |
| S:109   |        |       | Program J maximum scan time        |           |           |     |
| S:110   |        |       | Main control program K file number |           |           |     |
| S:111   |        |       | Program K scan time                |           |           |     |
| S:112   |        |       | Program K maximum scan time        |           |           |     |
| S:113   |        |       | Main control program L file number |           |           |     |
| S:114   |        |       | Program L scan time                |           |           |     |
| S:115   |        |       | Program L maximum scan time        |           |           |     |
| S:116   |        |       | Main control program M file number |           |           |     |
| S:117   |        |       | Program M scan time                |           |           |     |
| S:118   |        |       | Program M maximum scan time        |           |           |     |
| S:119   |        |       | Main control program N file number |           |           |     |
| S:120   |        |       | Program N scan time                |           |           |     |
| S:121   |        |       | Program N maximum scan time        |           |           |     |
| S:122   |        |       | Main control program O file number |           |           |     |
| S:123   |        |       | Program O scan time                |           |           |     |
| S:124   |        |       | Program O maximum scan time        |           |           |     |
| S:125   |        |       | Main control program P file number |           |           |     |
| S:126   |        |       | Program P scan time                |           |           |     |
| S:127   |        |       | Program P maximum scan time        |           |           |     |
| T4:0    |        |       | TB1-25 Poppet Valve On Delay Timer |           |           |     |
| T4:1    |        |       | VT12000 Speed Control Enable       |           |           |     |
| T4:1/DN |        |       |                                    |           |           |     |
| T4:2/DN |        |       | execute Manual Test Routine        |           |           |     |
| T4:3    |        |       | T30 BTW Timer                      |           |           |     |
| T4:4    |        |       | T30 BTW Timer                      |           |           |     |
| T4:5    |        |       | T30 BTW Timer                      |           |           |     |
| T4:6    |        |       | T30 BTW Timer                      |           |           |     |
| T4:7    |        |       | Increment/Decrement Timer          |           |           |     |
| T4:9/DN |        |       | Auto Test Delay Start              |           |           |     |

## Test Bench Three

### Instruction Comment Database

| Address  | Instruction | Description                                     |
|----------|-------------|---|
| F8:3     | MOV         | Reset Increment Total To Zero                   |
| F8:6     | ADD         | Add Var. min. To Total Store In F8:6            |
| F8:6     | LES         | Output Less Than Variable Minimum               |
| N7:51    | ADD         | Increment Index Address Pointer                 |
| N7:53    | NOT         | Toggle Bit For STI Loop Count                   |
| N7:54/0  | XIO         | Increment Output                                |
| N10:50   | COP         | Copy Write Info. To BTW Buffer                  |
| N10:80   | COP         | Copy Write Info. To Slot 7 Buffer               |
| N10:120  | MOV         | Move Inlet Flow Data To AO Card                 |
| N10:121  | MOV         | Move Inlet Pressure Data To AO Card             |
| N10:122  | MOV         | Move Pilot Pressure Data To AO Card             |
| N10:123  | MOV         | Move Outlet Pressure Data To AO Card            |
| N10:124  | MOV         | Move AO Config. Info. To Buffer                 |
| N10:132  | MOV         | Scale AO Card output Channel 4                  |
| N10:140  | MOV         | Move Outlet Flow Data To AO Card                |
| N20:0    | MOV         | Move T30 Write Address Into BTW Buffer          |
| N20:1    | MOV         | Move T30 Read Address Into BTW Buffer           |
| N20:2    | COP         | Move PLC Info. (8 Words) Into BTW Buffer        |
| N20:10   | COP         | Move T30 AInfo. (8 Words) Into BTW Buffer       |
| N20:42/2 | XIO         | Pilot Pressure Required                         |
| N20:42/3 | XIO         | Pilot Pressure Valve 2                          |
| N20:42/6 | XIO         | SI Units  |
| N20:60   | EQU         | Check Y Axis Variable                           |
| N20:80   | MOV         | Move T30 Receiving Address into N20:80          |
| N20:81   | MOV         | Move T30 Read Address Into N20:81               |
| N20:82   | COP         | Move 60 Data Words Into File Starting At N20:82 |
| S:24     | MOV         | Load Index Address Pointer                      |
| S:30     | MOV         | Load STI Time                                   |
| S:30     | DIV         | Load STI Time                                   |
| T4:1/DN  | XIO         | VT12000 Speed Control Enable                    |