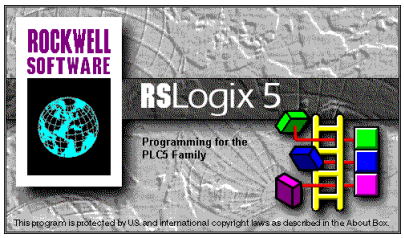
MOTOR CONTROL CENTRE



Processor Information

Processor Type: PLC5/15 B G 6912

Processor Name: MCC

Total Memory Used: 4521 WORDS

Program Files: 5

Data Files: 21

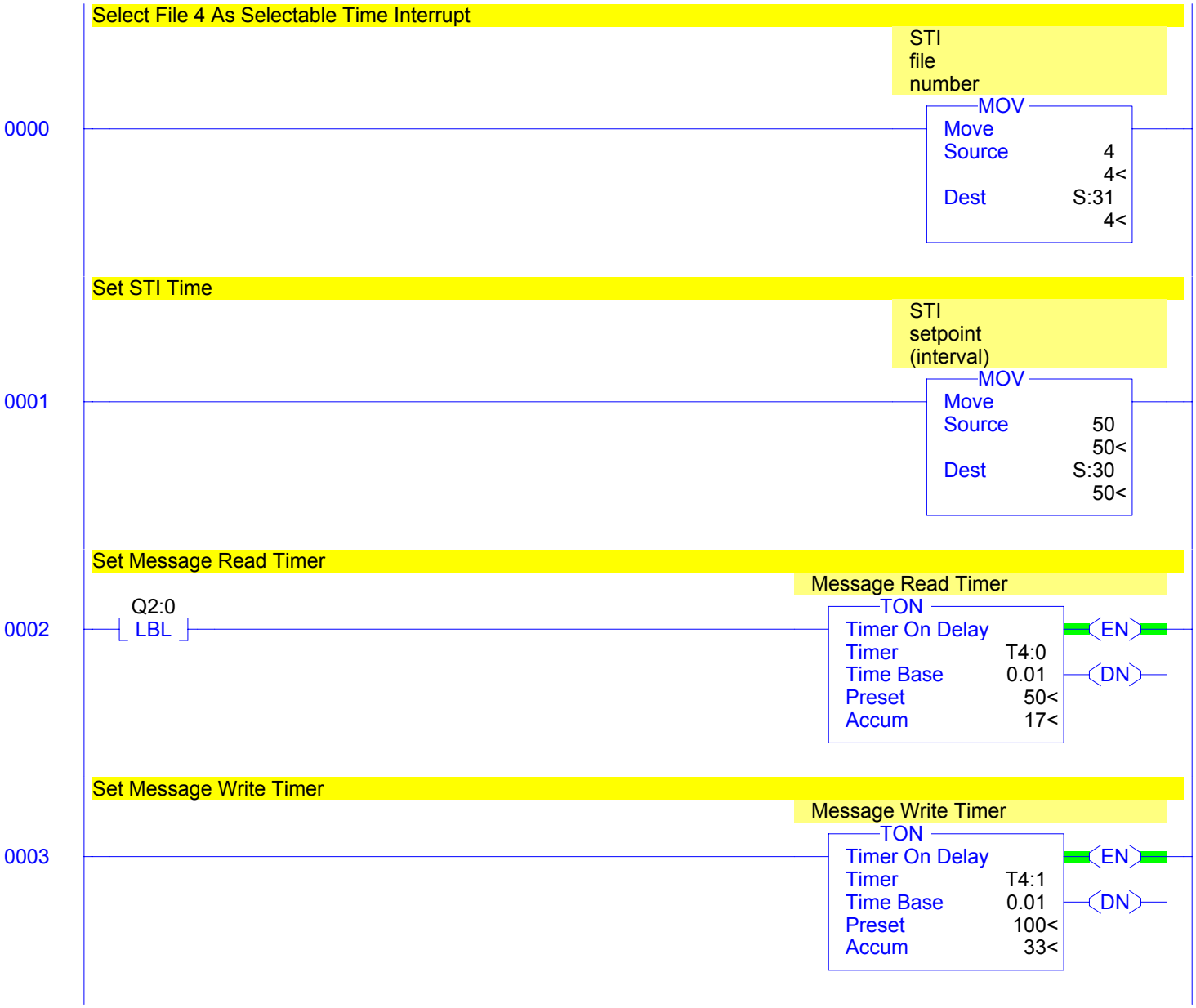
MCC

Chassis_1

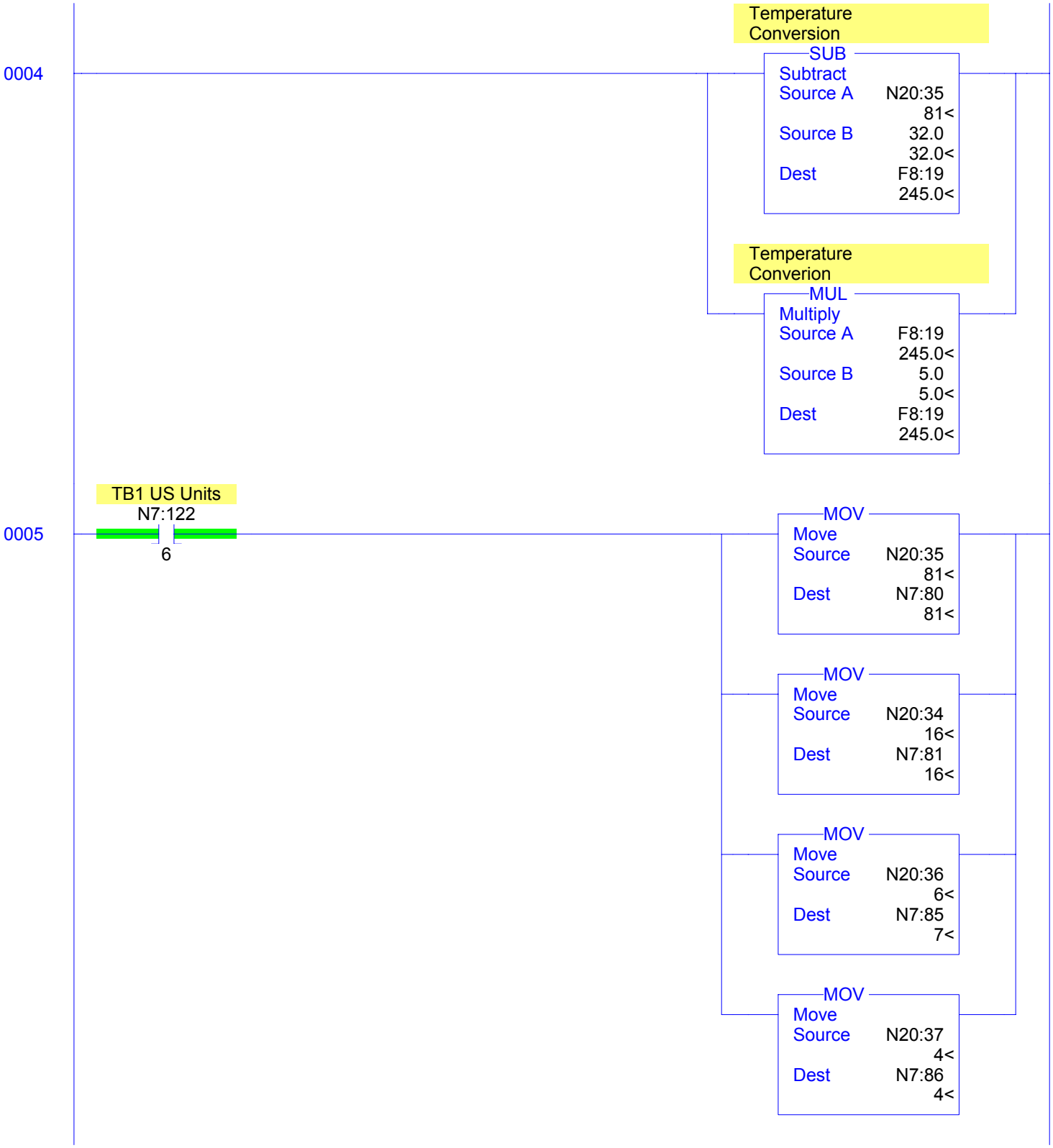
Rack: 0
Size: 8 Slot Chassis
Addressing Mode: 1 Slot

Slot	Module Type	Module Description
0	1771-IBD	10-30v DC 16pt Input
1	1771-OBD	10-60v DC 16pt Output
2	1771-IBD	10-30v DC 16pt Input
3	1771-OAD	120v AC 16pt Output
4		
5	1771-OFE	12 Bit Analog Output
6	1771-IFE	12 Bit Analog Input (or IFE/A)
7	1771-OFE	12 Bit Analog Output

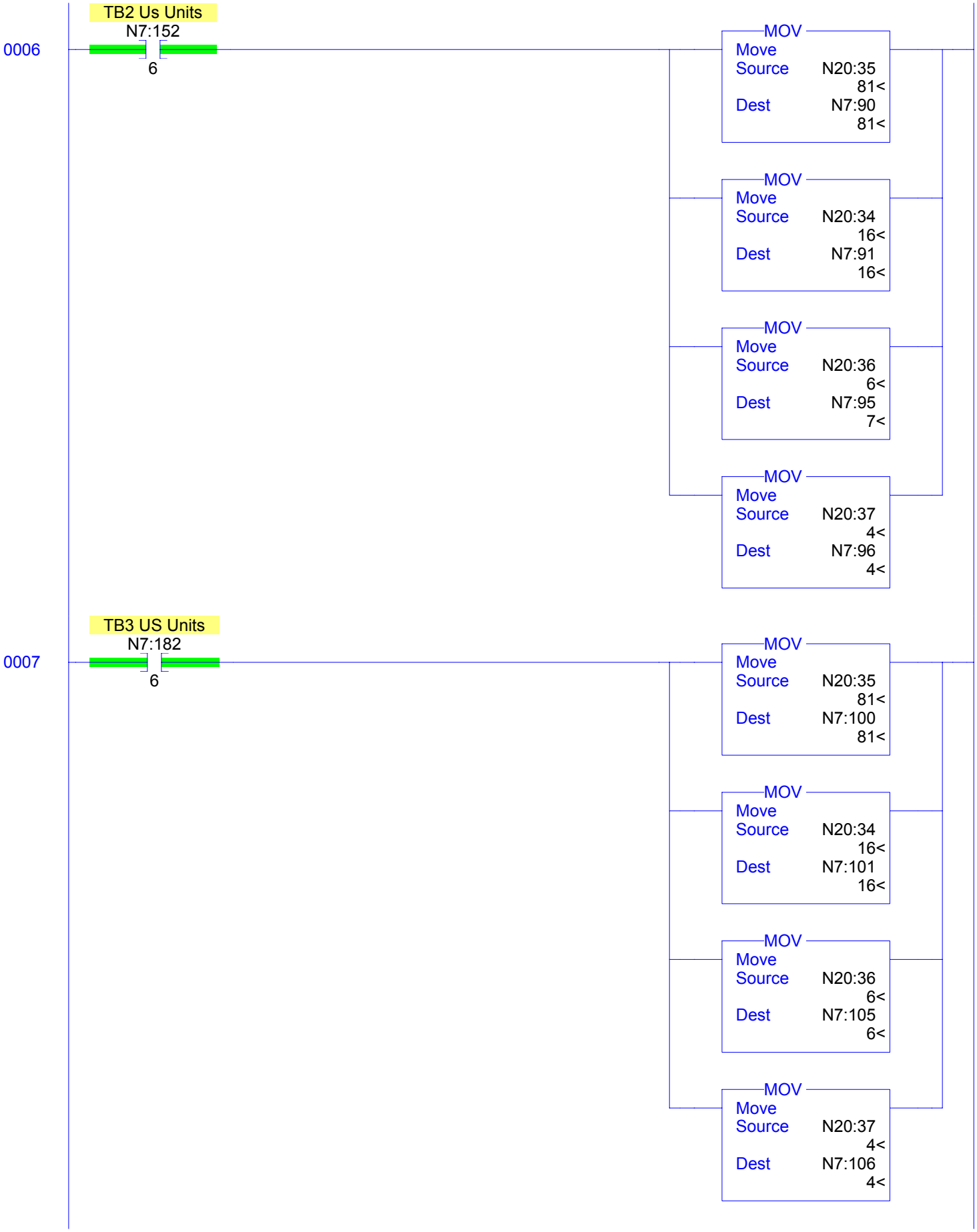
LAD 2 - MAIN --- Total Rungs in File = 22



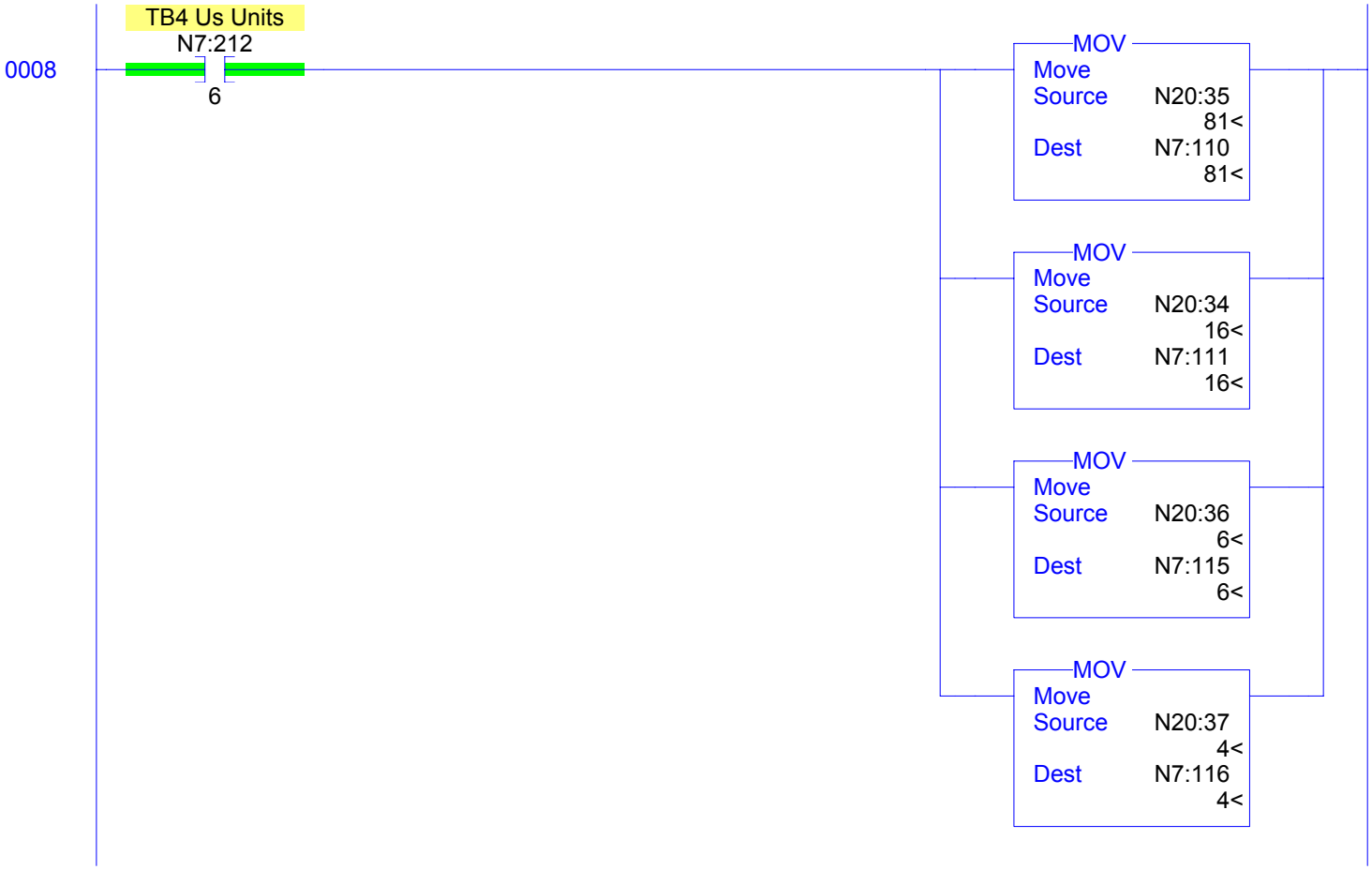
LAD 2 - MAIN --- Total Rungs in File = 22



LAD 2 - MAIN --- Total Rungs in File = 22



LAD 2 - MAIN --- Total Rungs in File = 22



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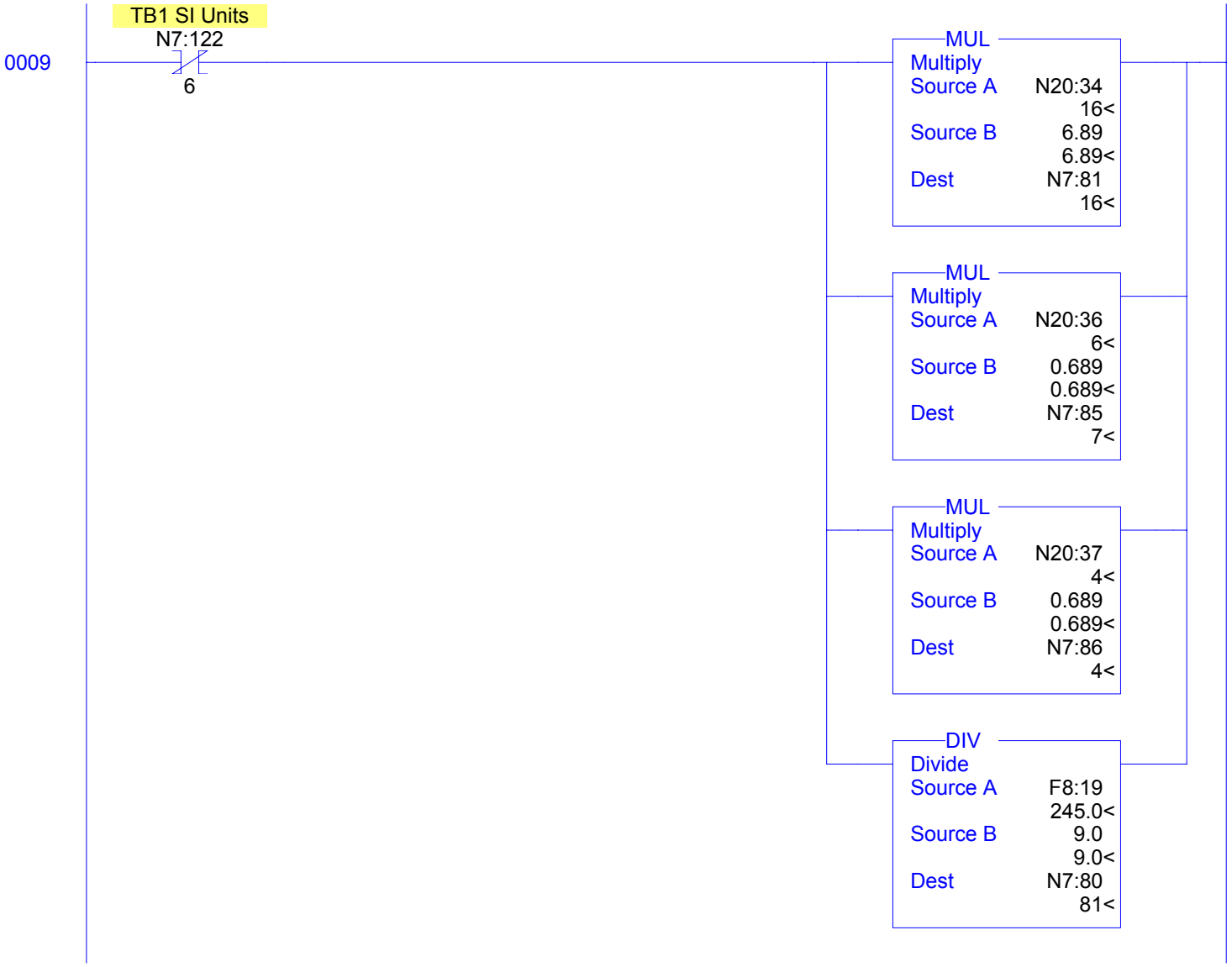
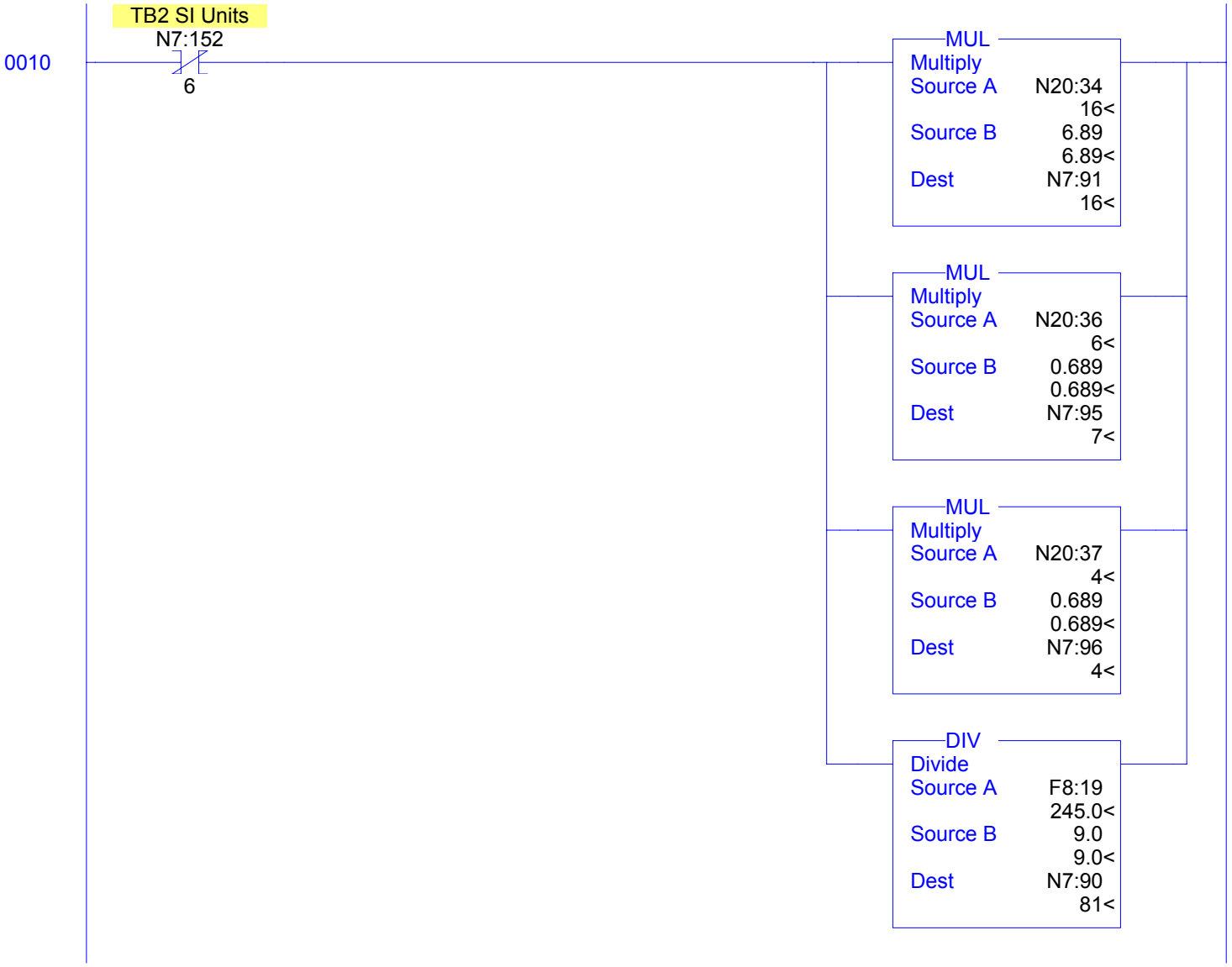
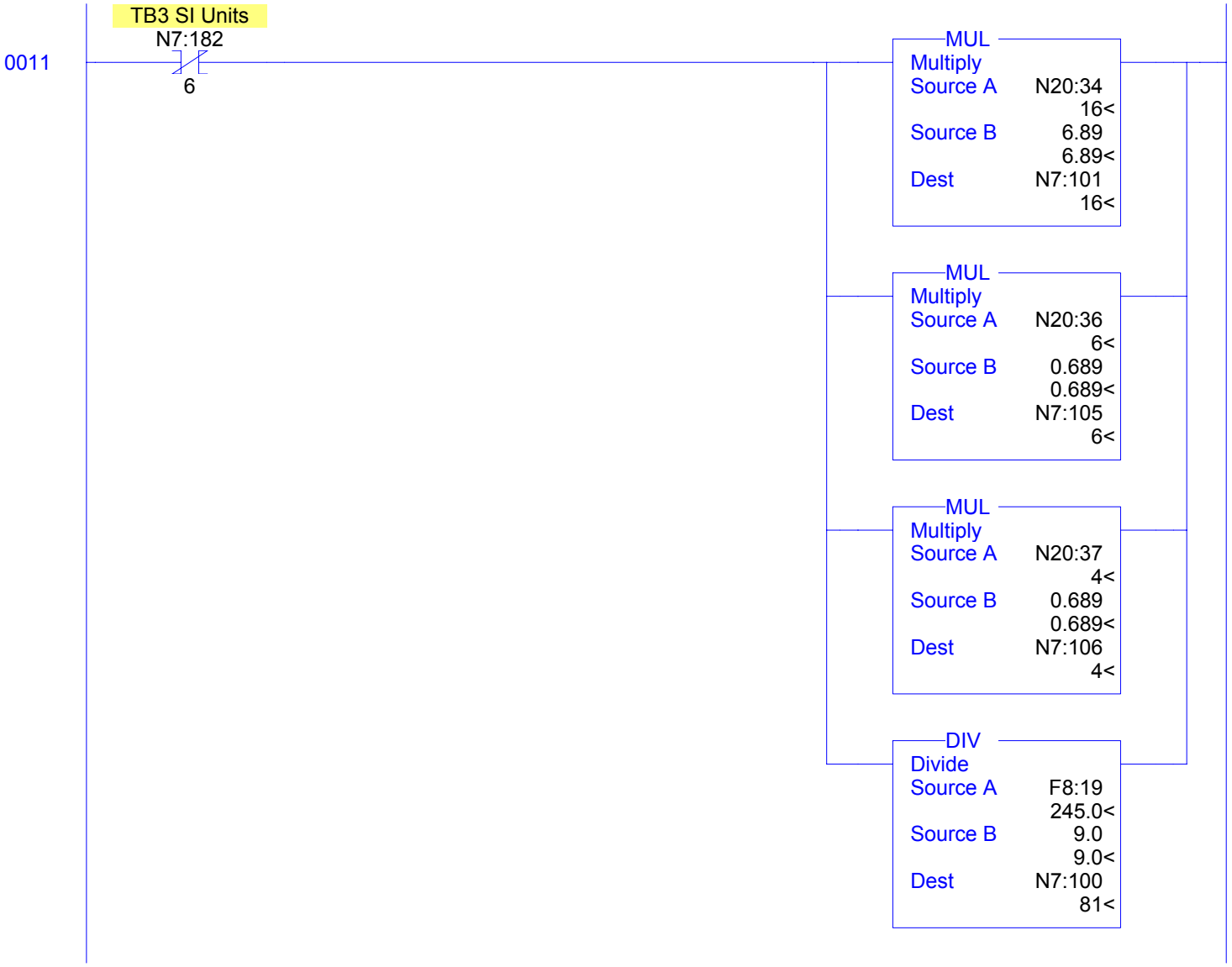


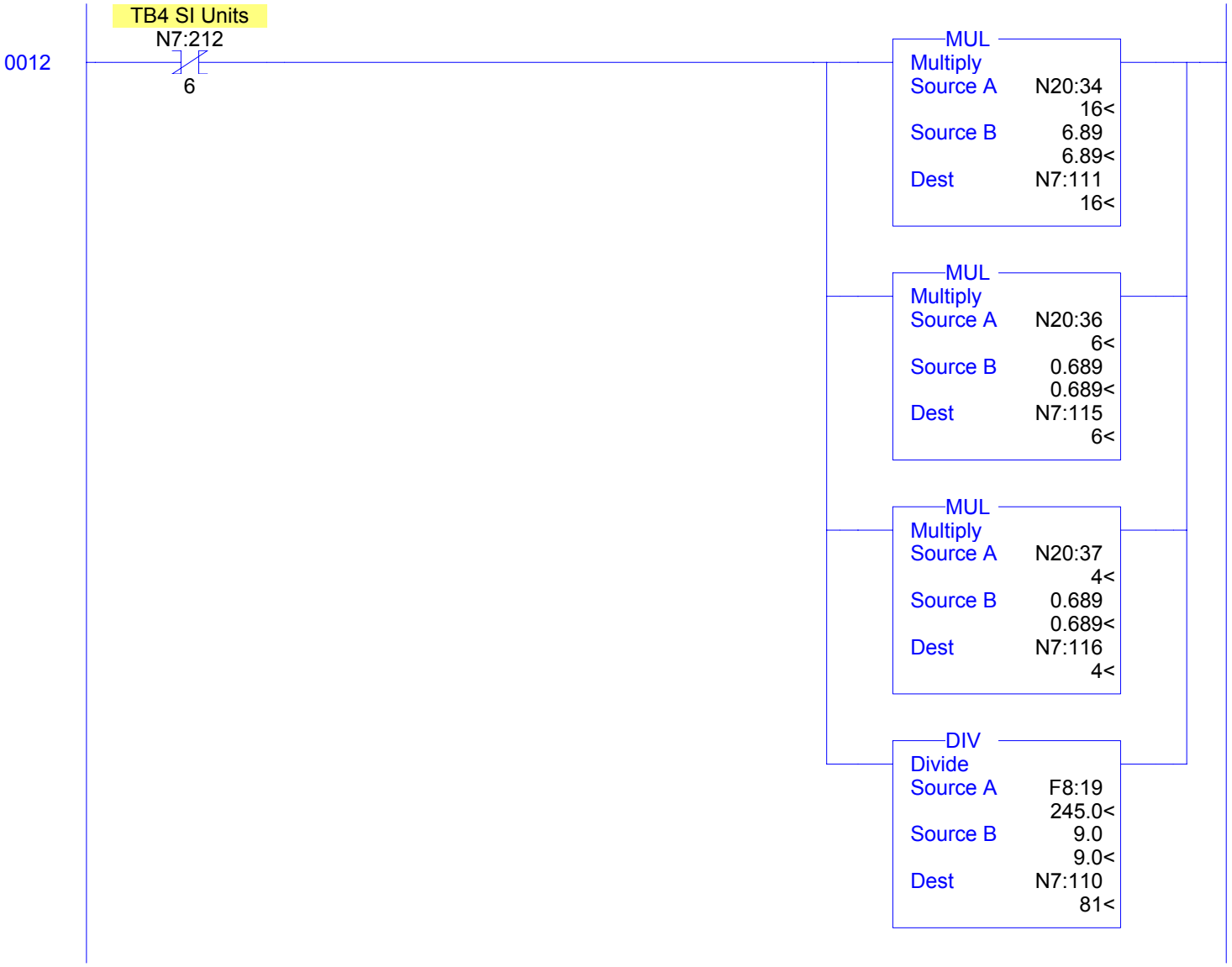
LAD 2 - MAIN --- Total Rungs in File = 22



LAD 2 - MAIN --- Total Rungs in File = 22

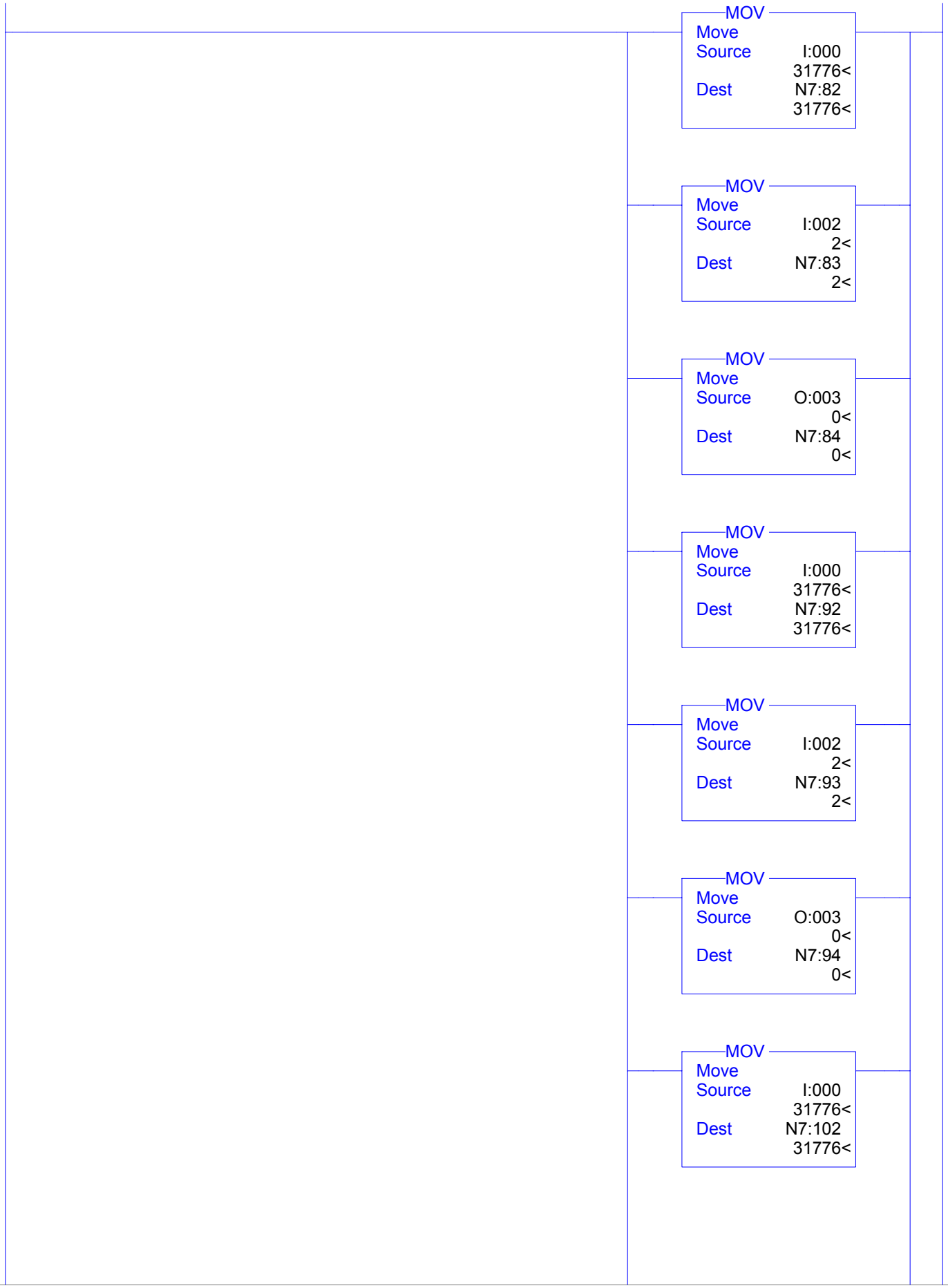


LAD 2 - MAIN --- Total Rungs in File = 22



LAD 2 - MAIN --- Total Rungs in File = 22

0013



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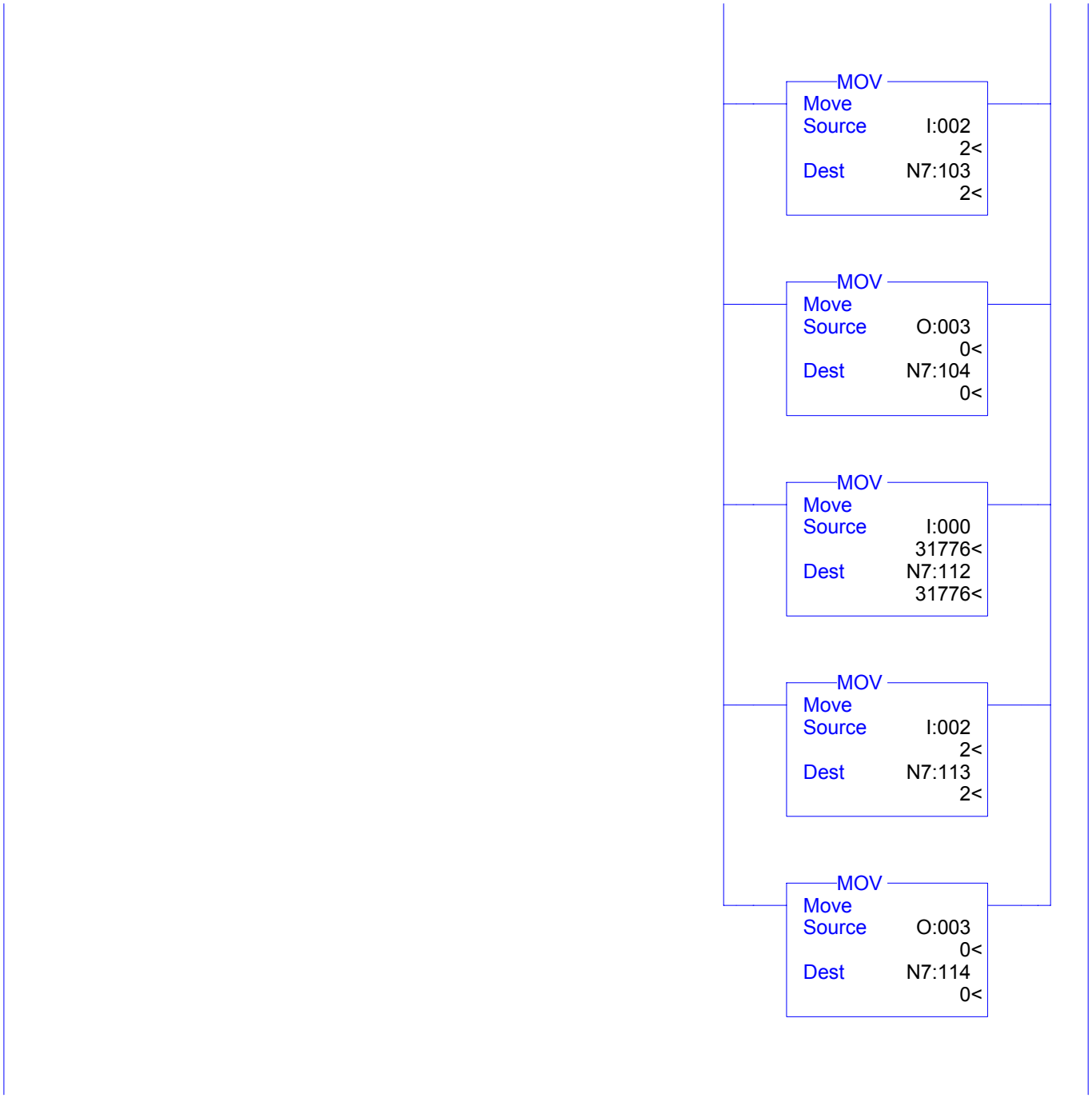

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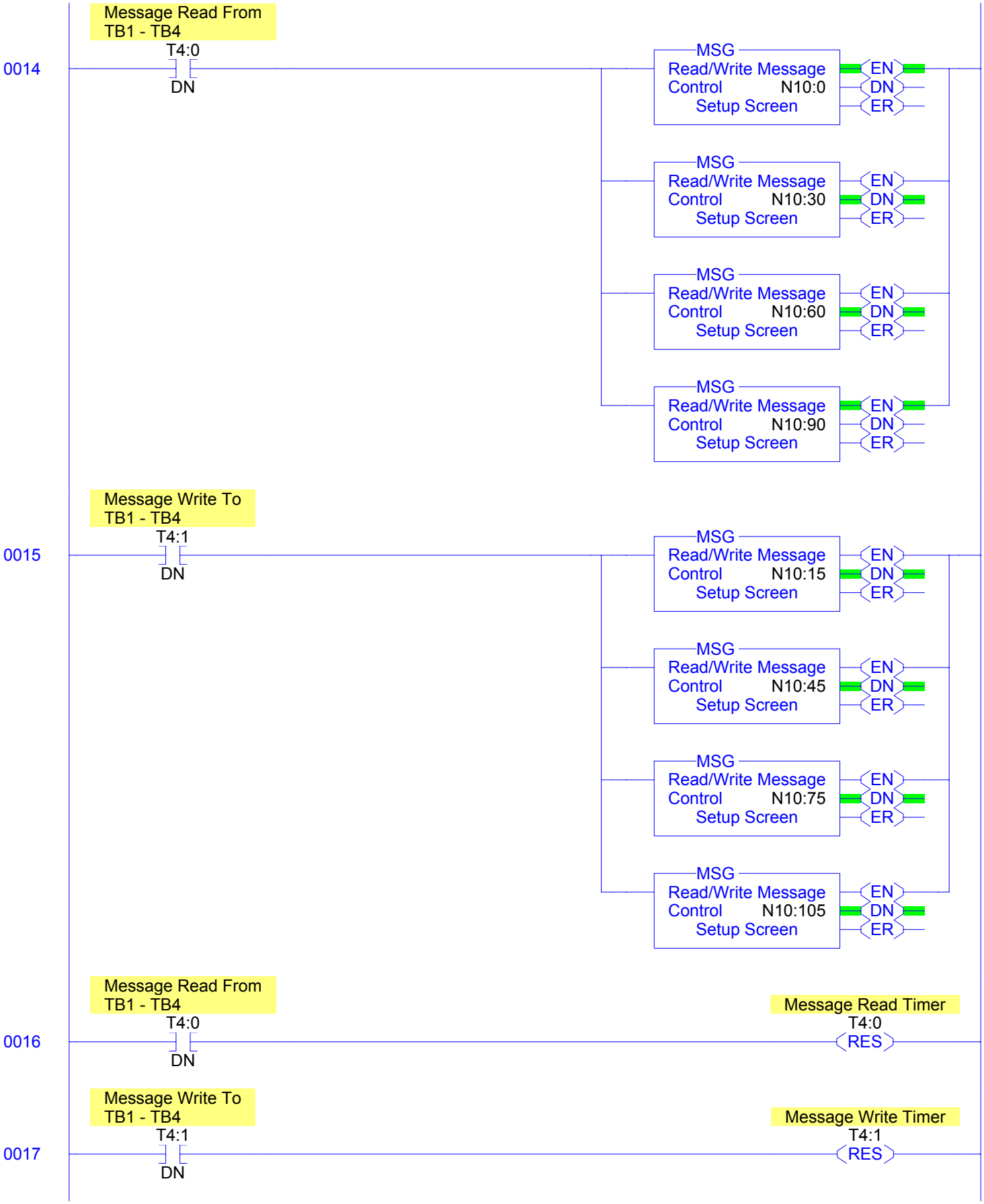
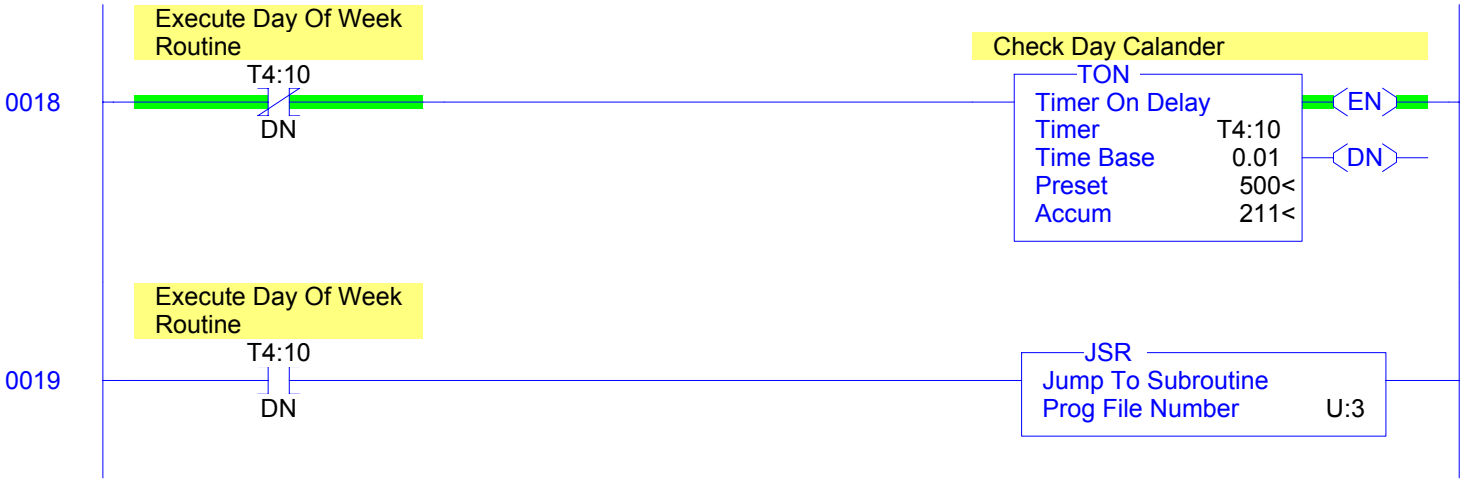
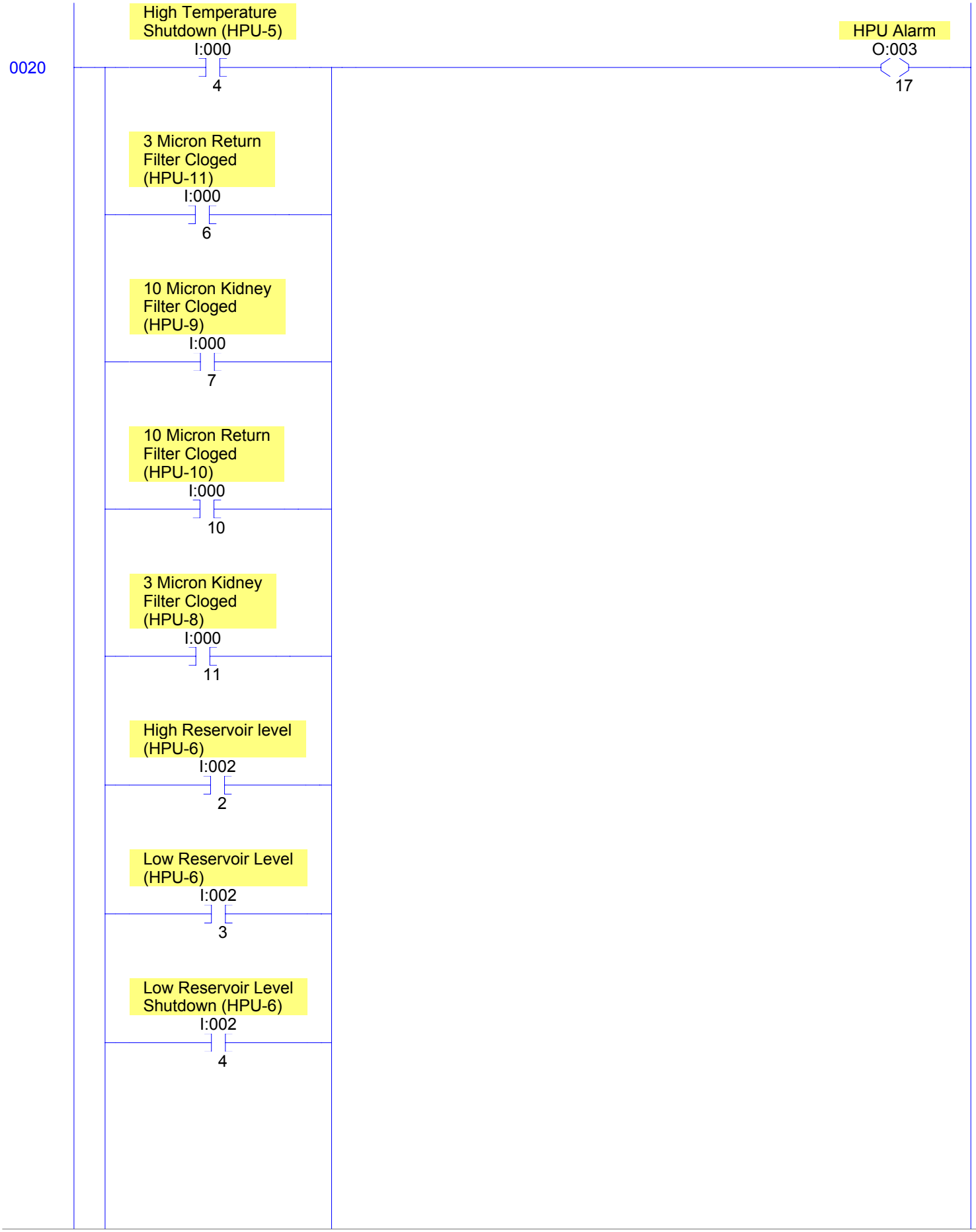


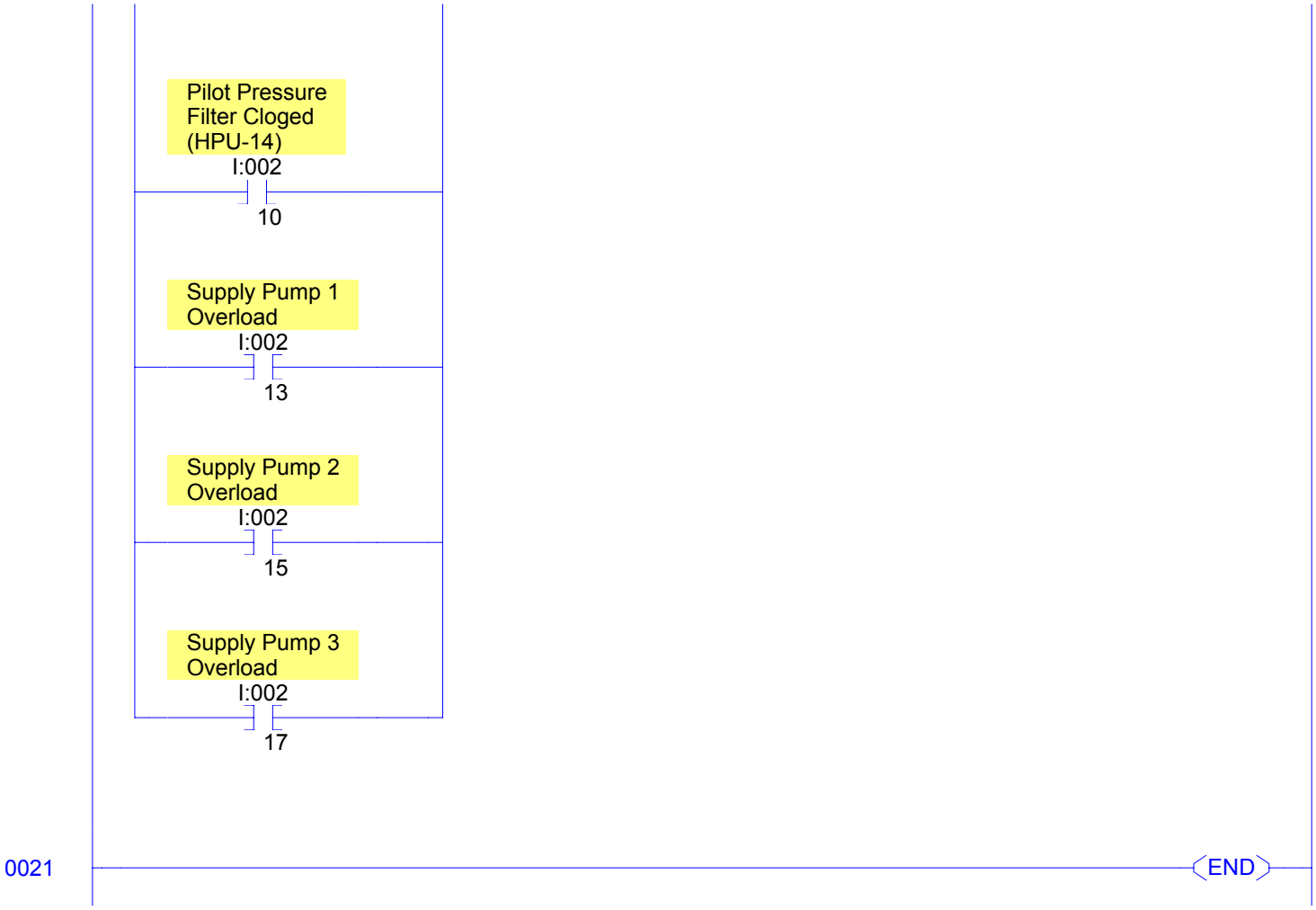
LAD 2 - MAIN --- Total Rungs in File = 22



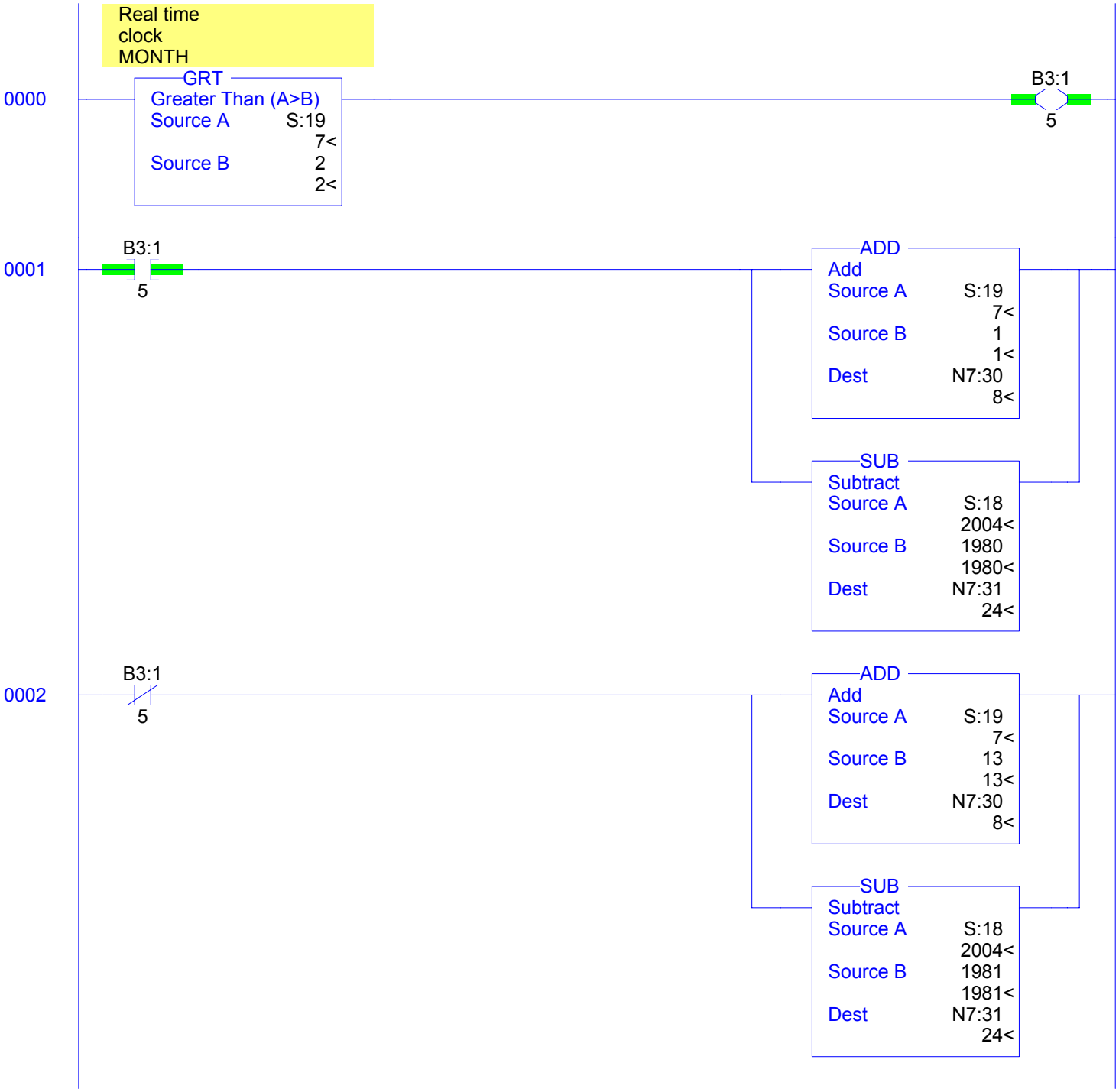
LAD 2 - MAIN --- Total Rungs in File = 22



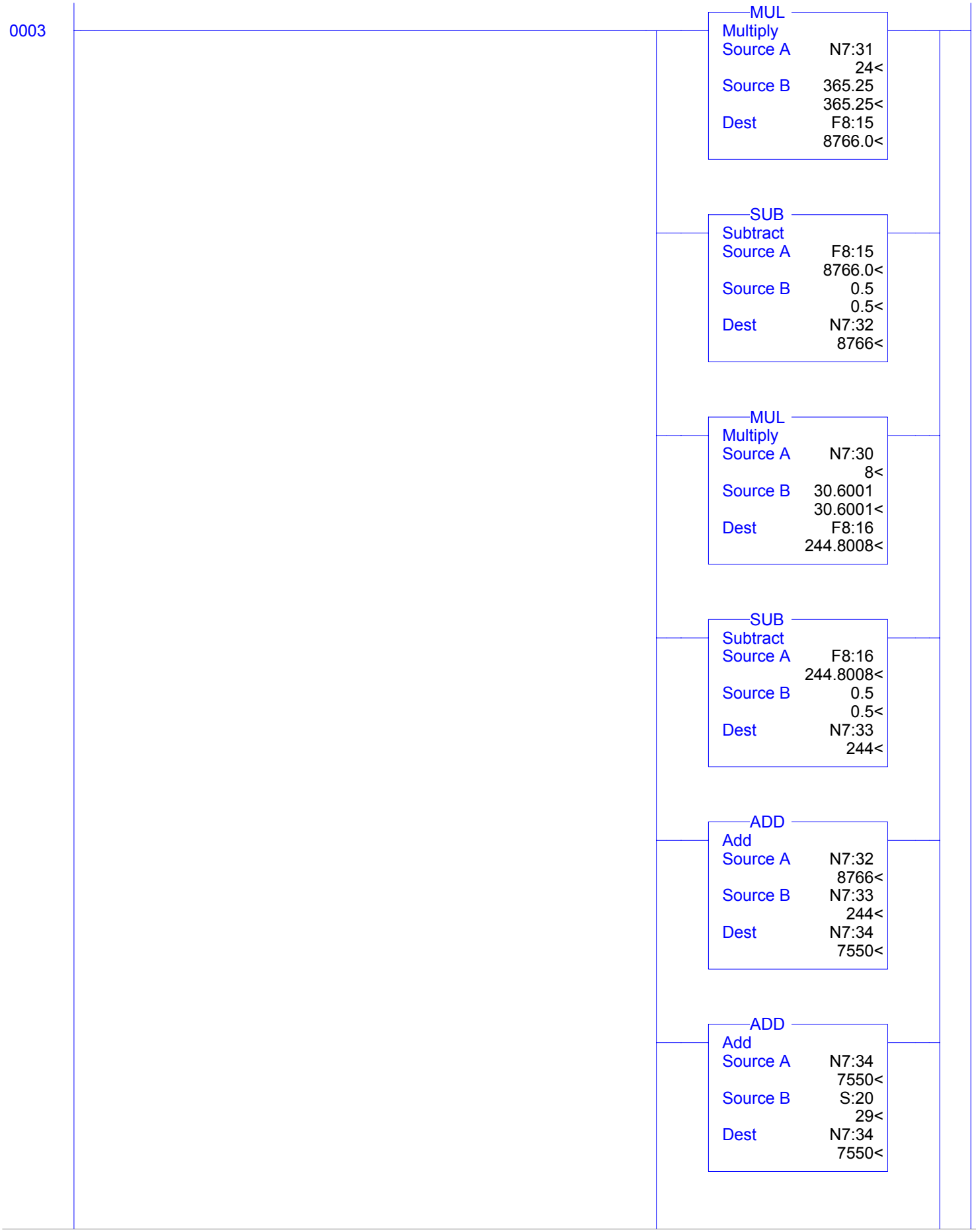
LAD 2 - MAIN --- Total Rungs in File = 22



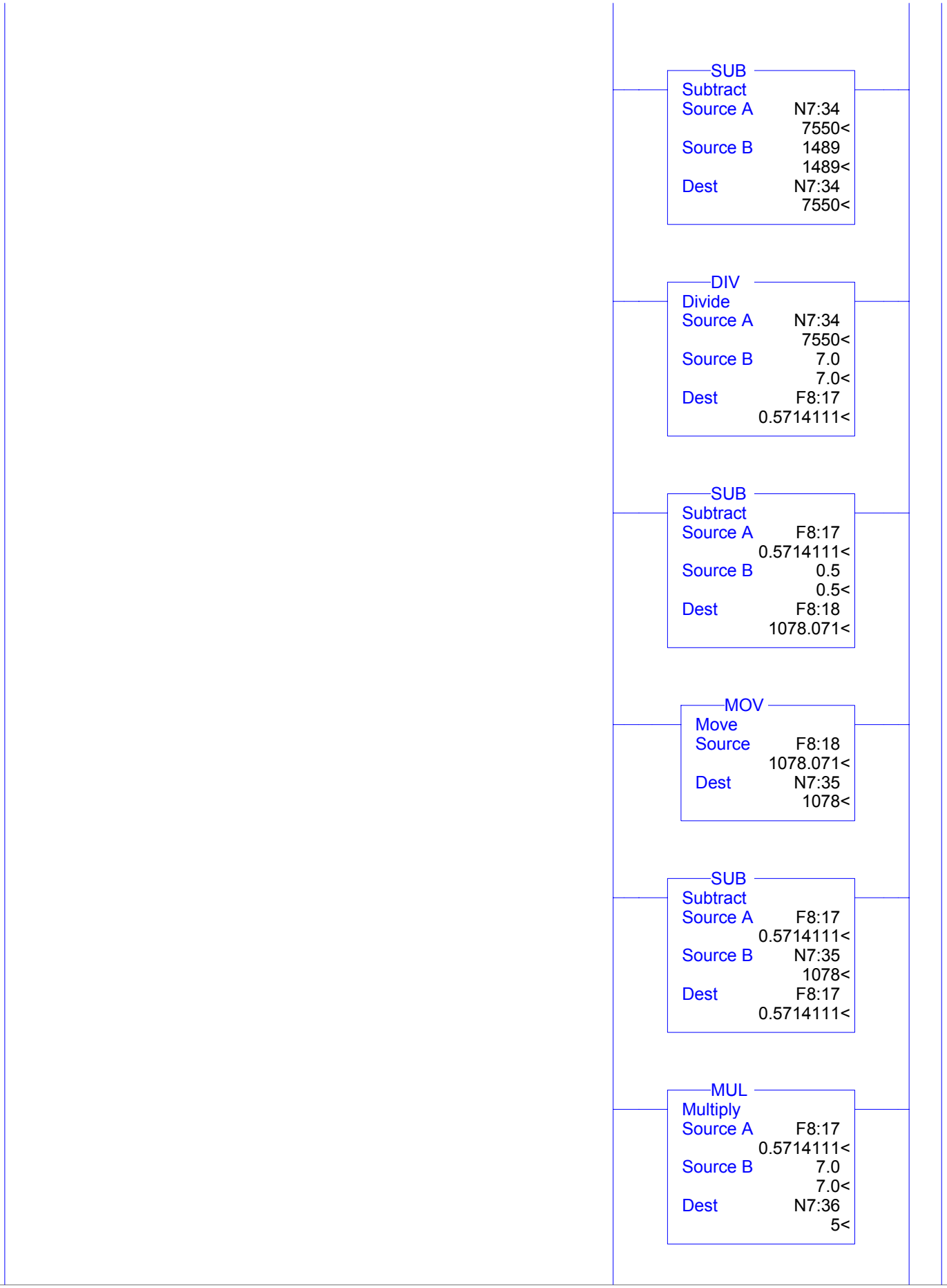
LAD 3 - DATE_TIME --- Total Rungs in File = 6



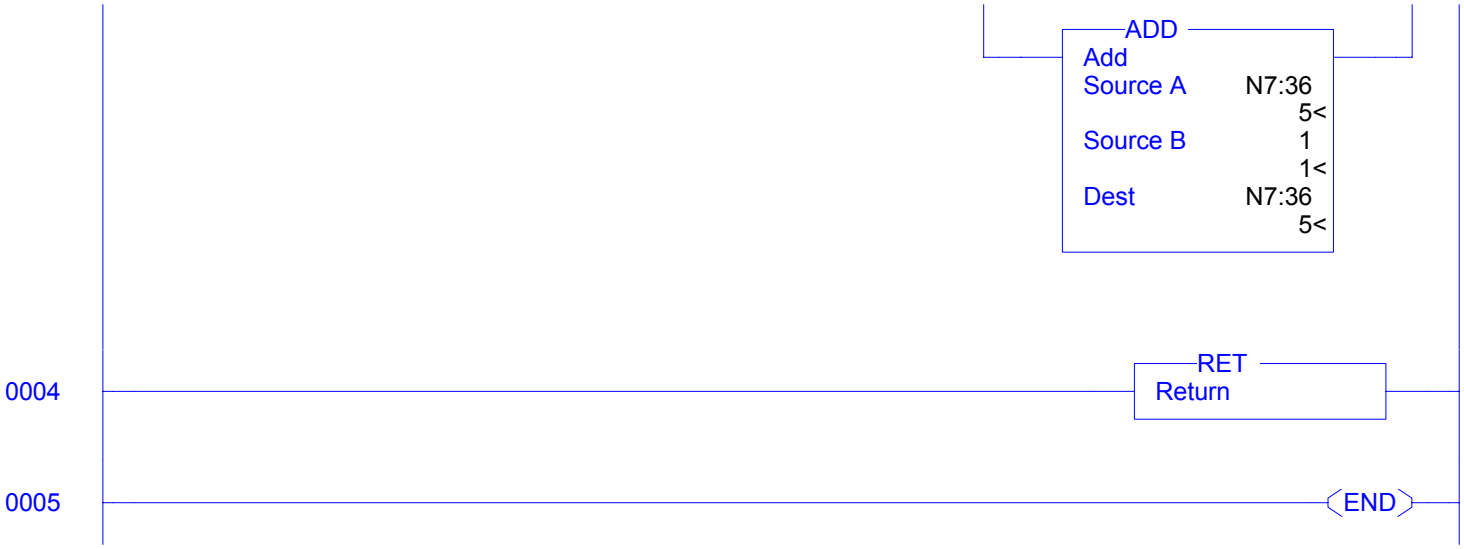
LAD 3 - DATE_TIME --- Total Rungs in File = 6



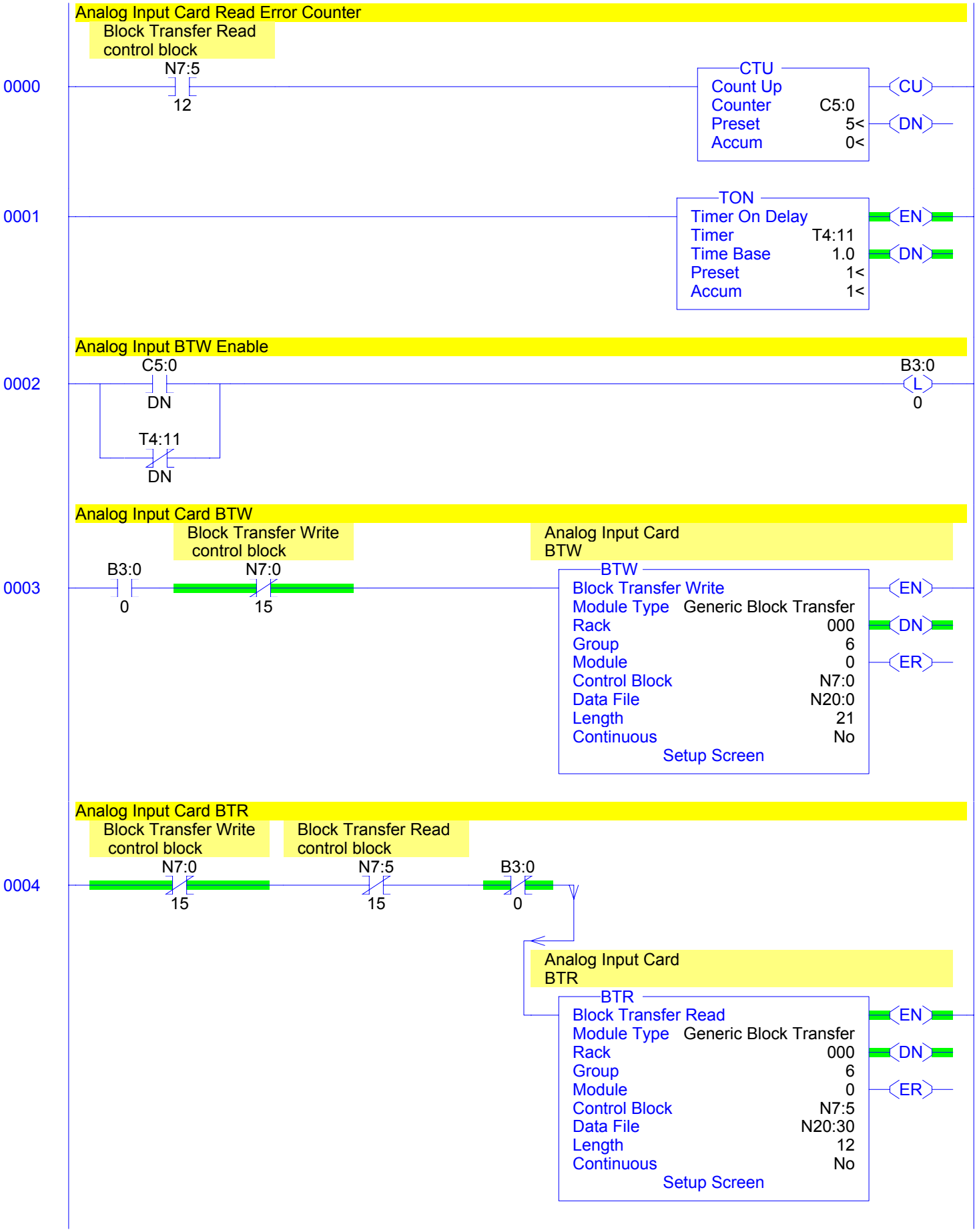
LAD 3 - DATE_TIME --- Total Rungs in File = 6



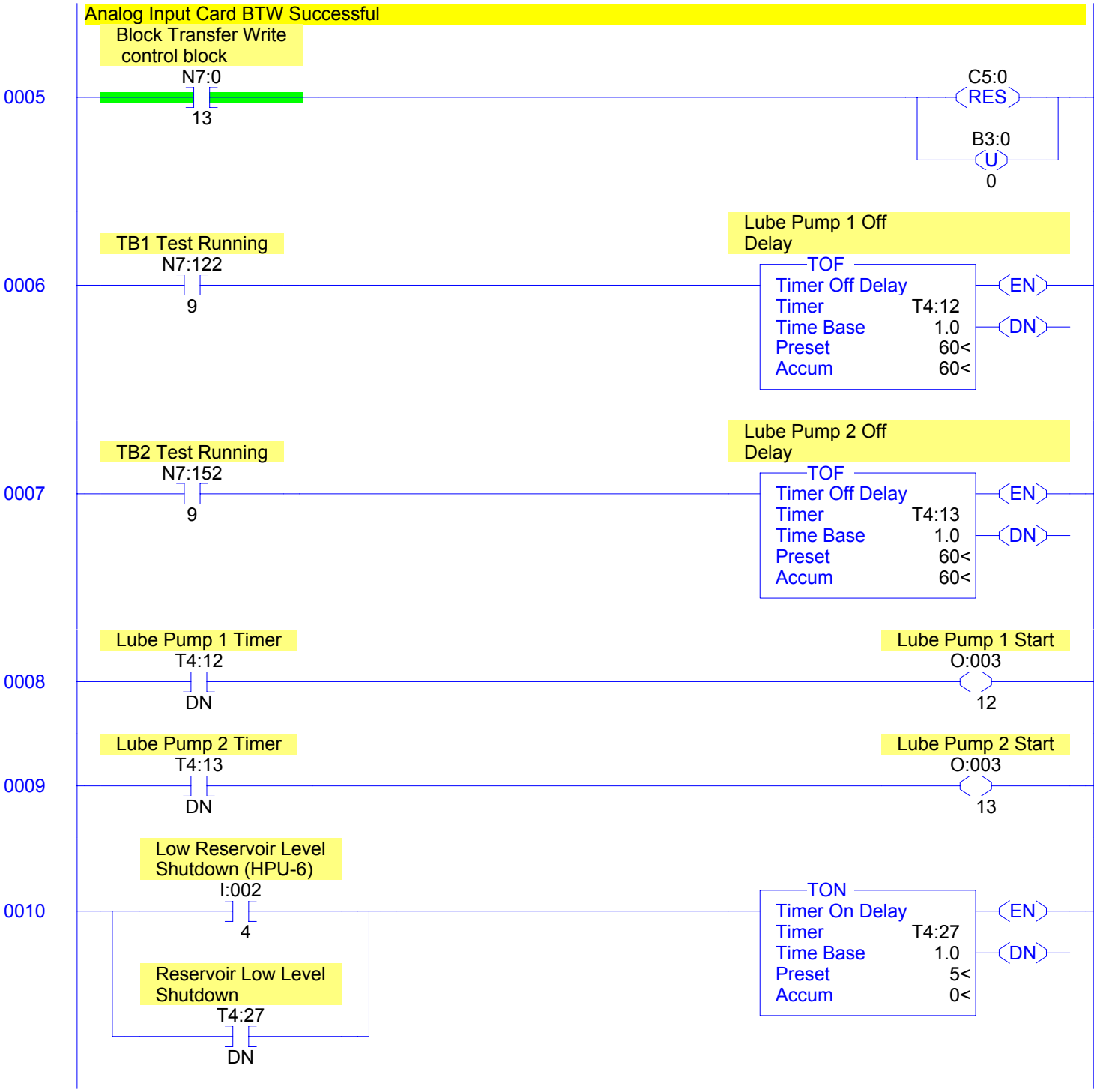
LAD 3 - DATE_TIME --- Total Rungs in File = 6



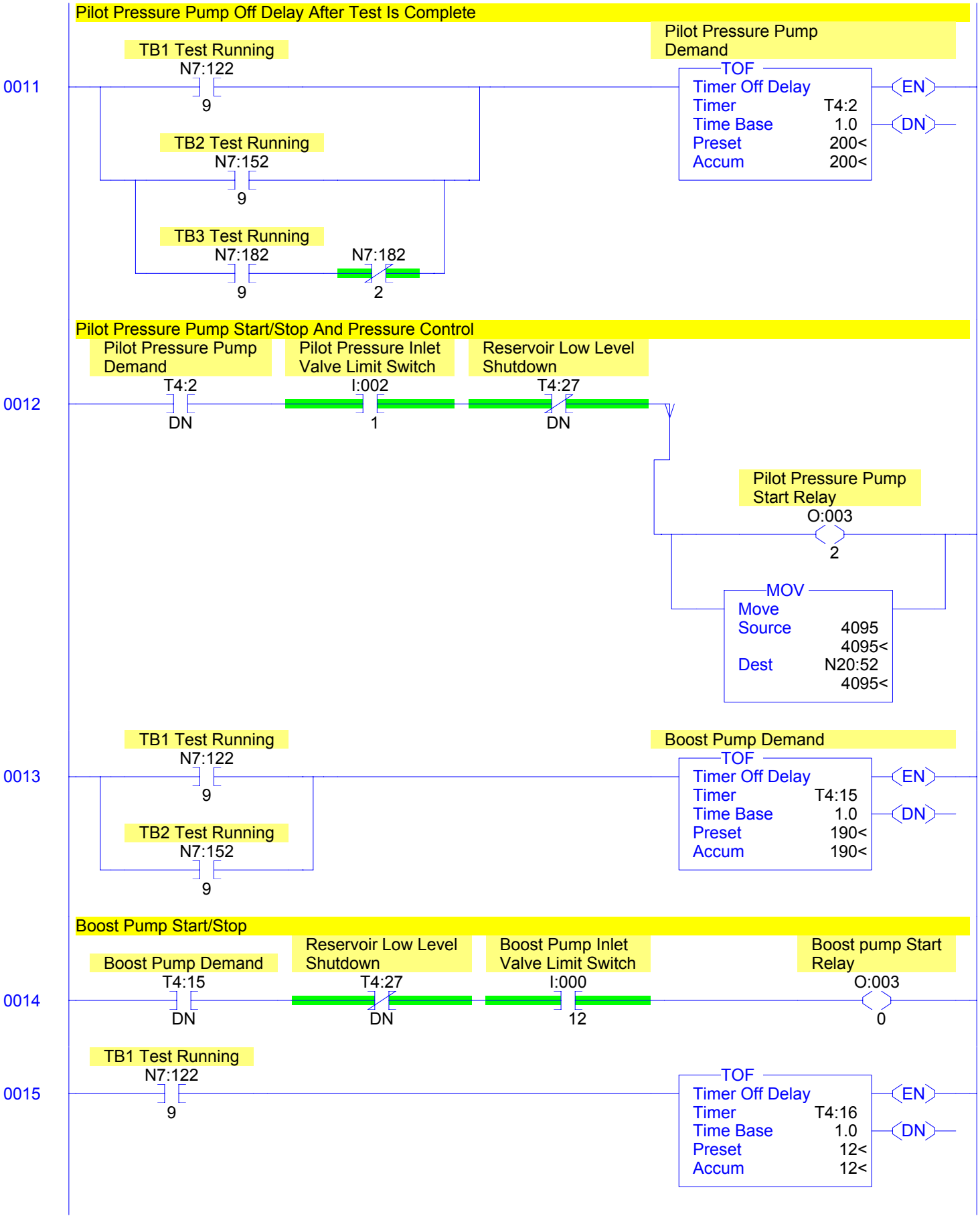
LAD 4 - STI --- Total Rungs in File = 120



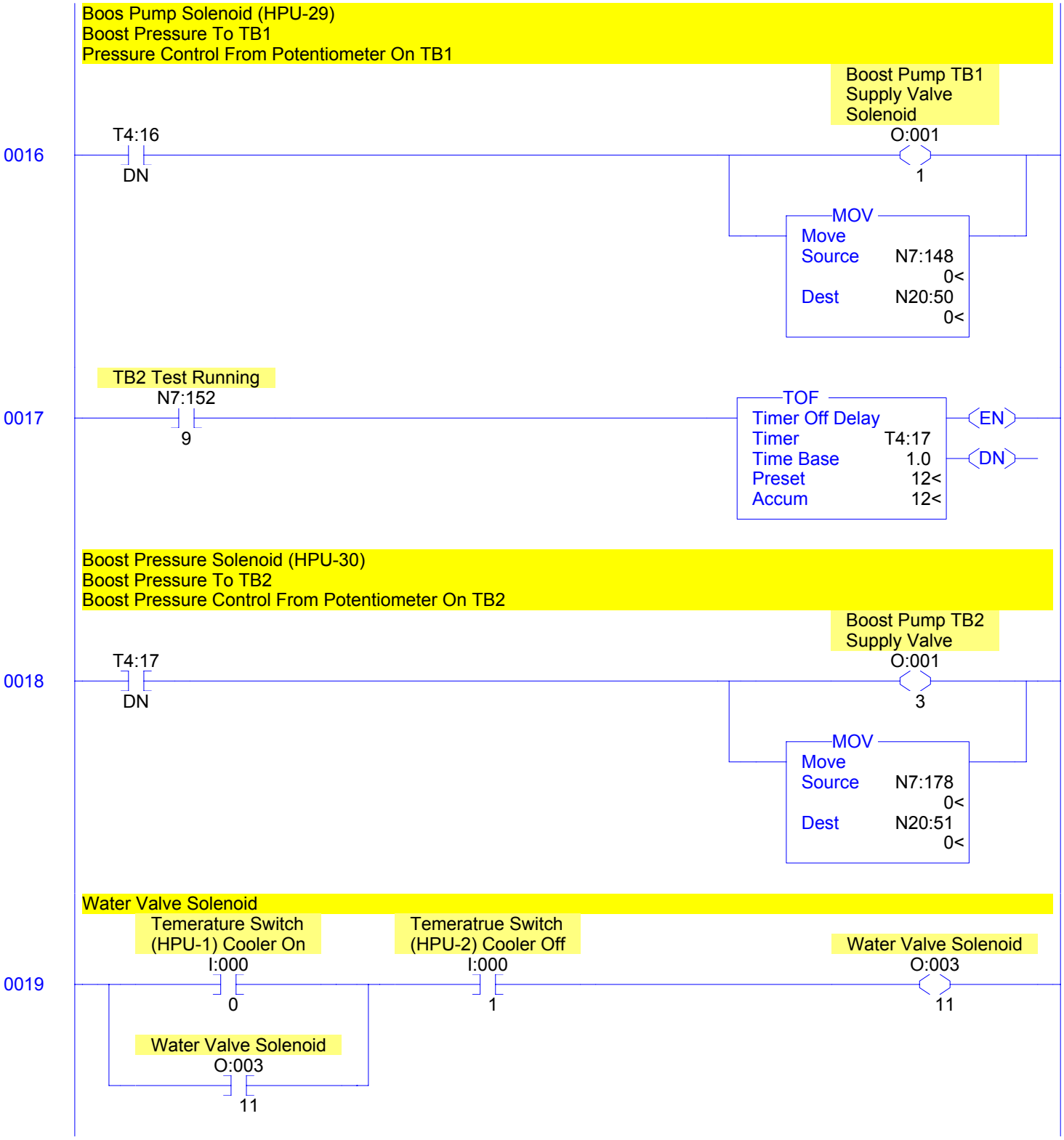
LAD 4 - STI --- Total Rungs in File = 120



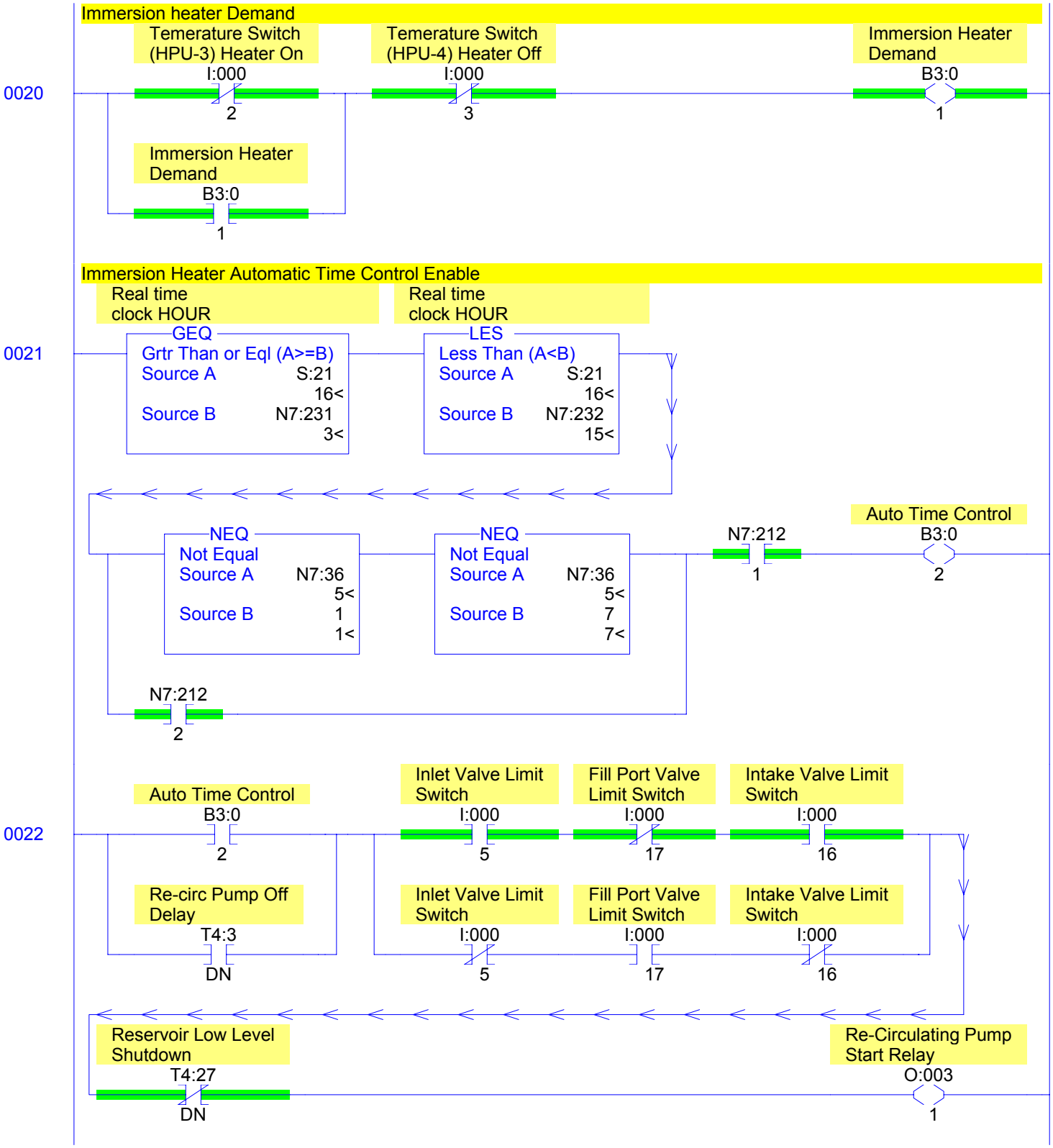
LAD 4 - STI --- Total Rungs in File = 120



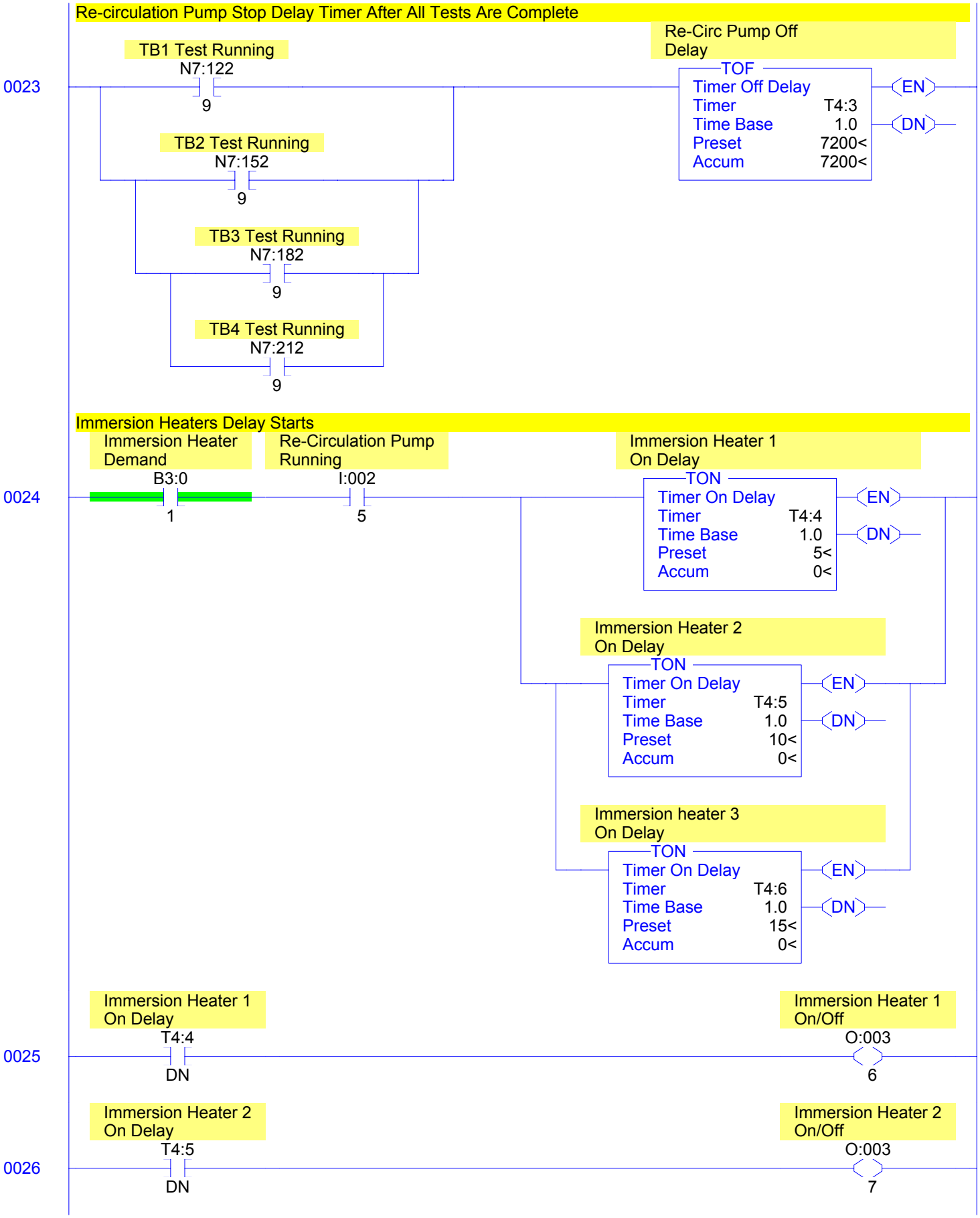
LAD 4 - STI --- Total Rungs in File = 120



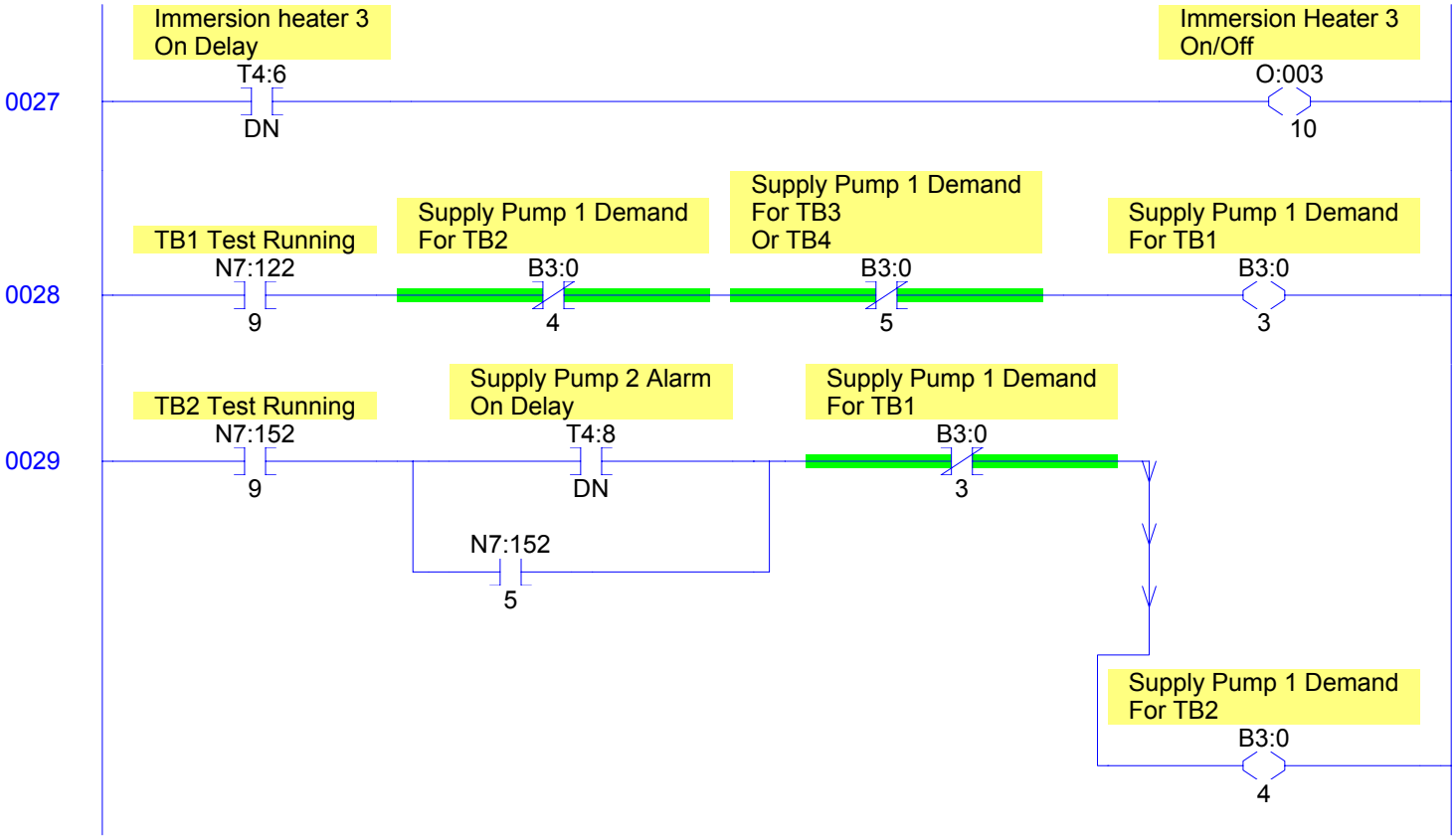
LAD 4 - STI --- Total Rungs in File = 120



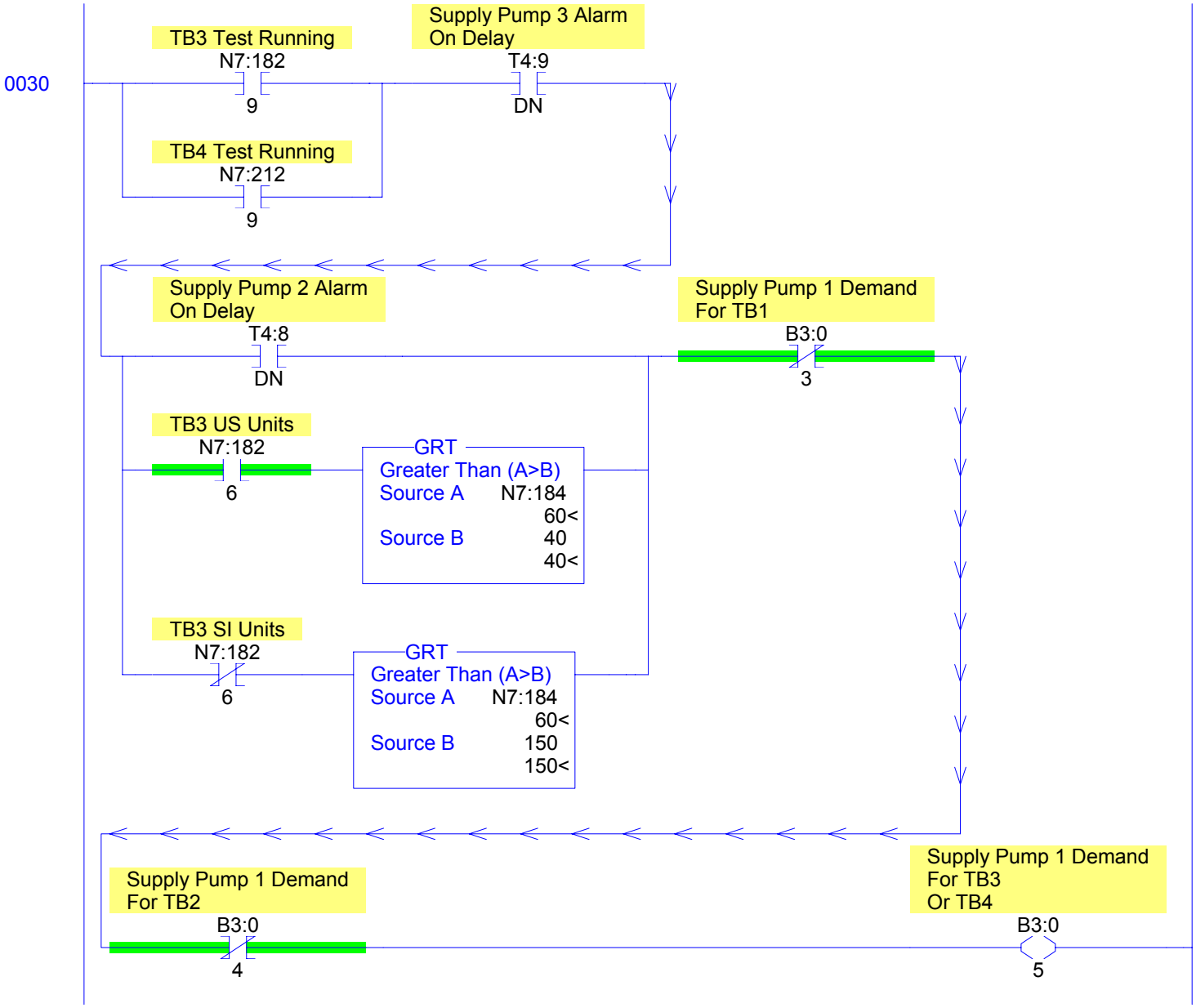
LAD 4 - STI --- Total Rungs in File = 120



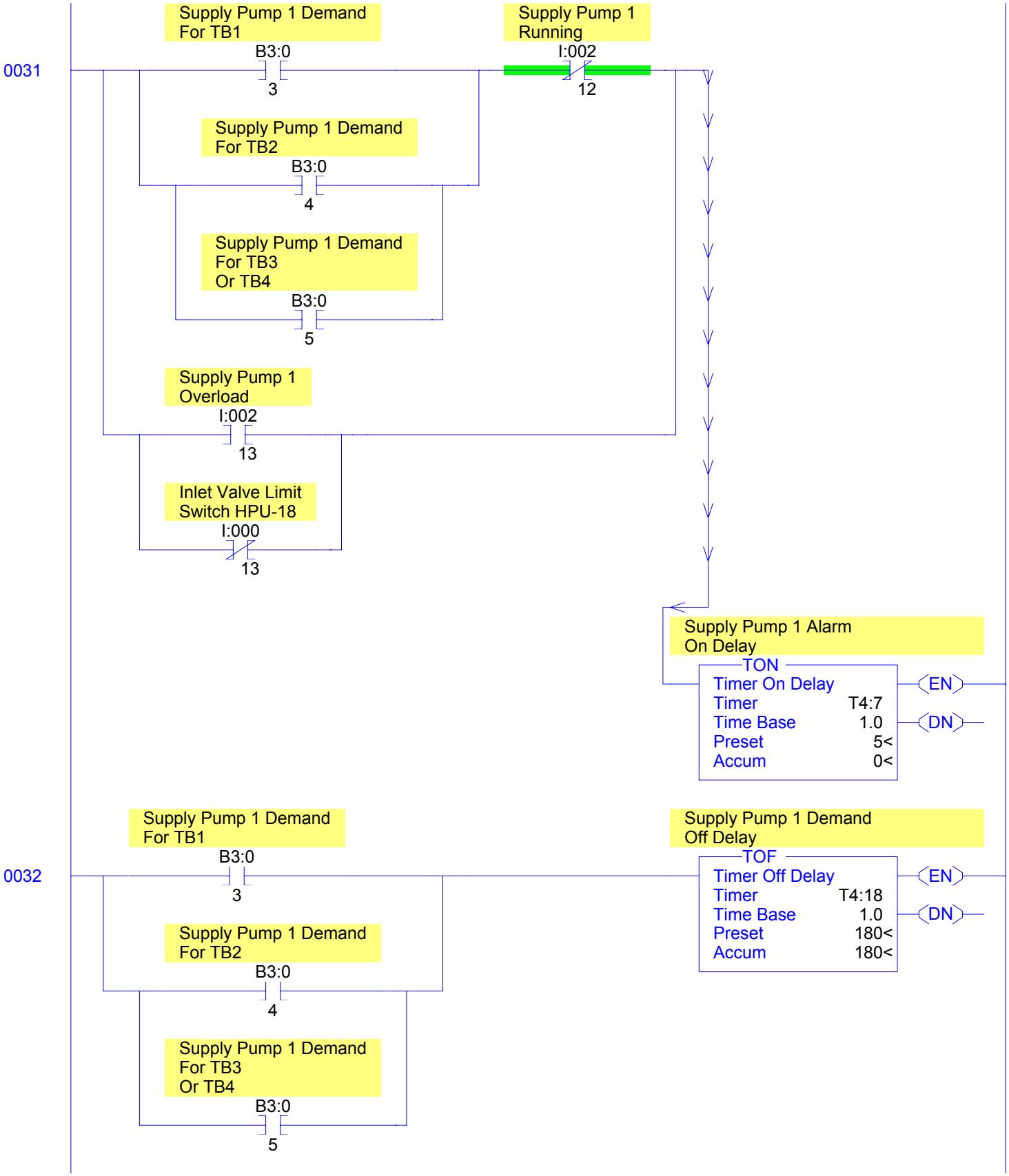
LAD 4 - STI --- Total Rungs in File = 120



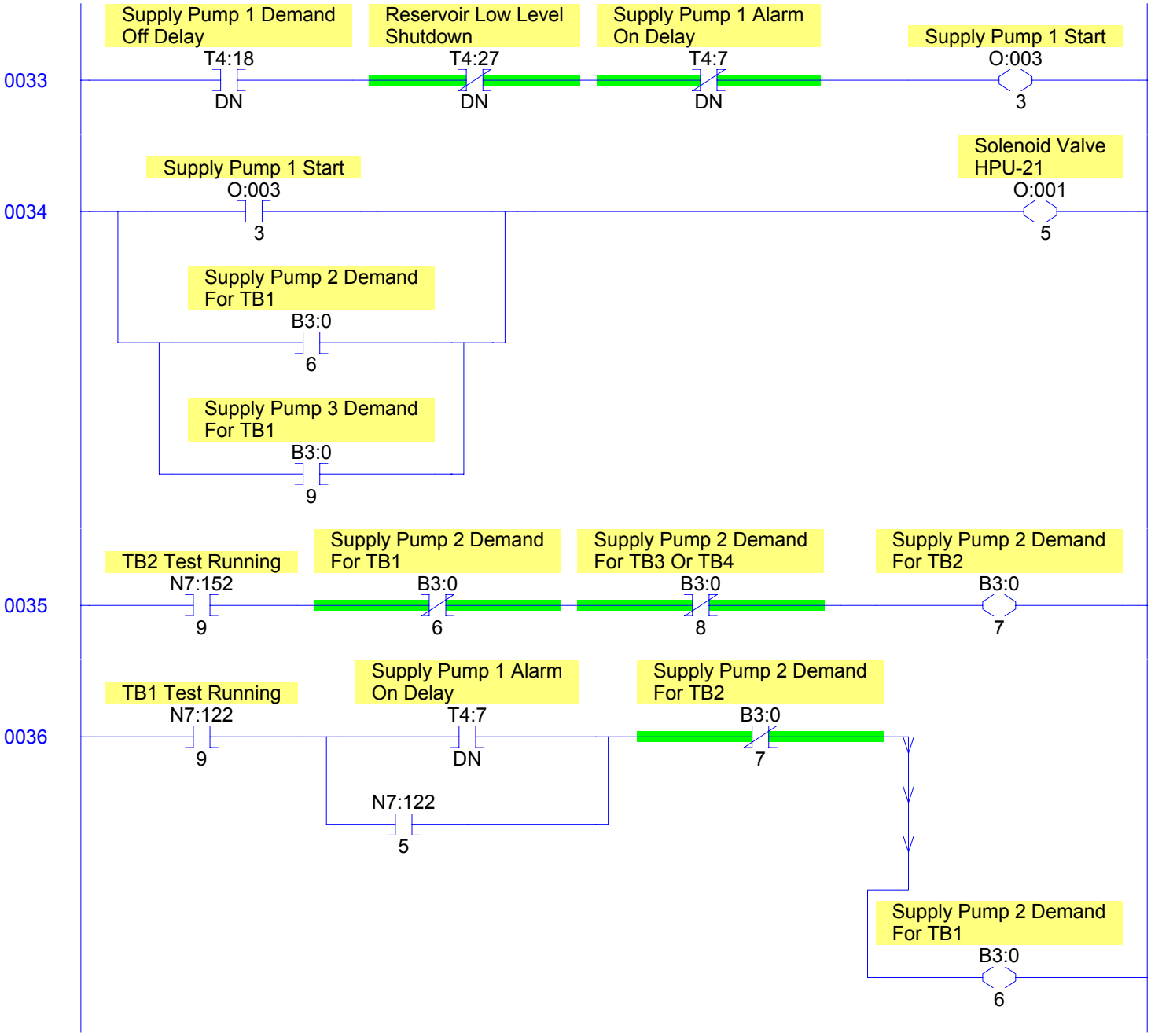
LAD 4 - STI --- Total Rungs in File = 120



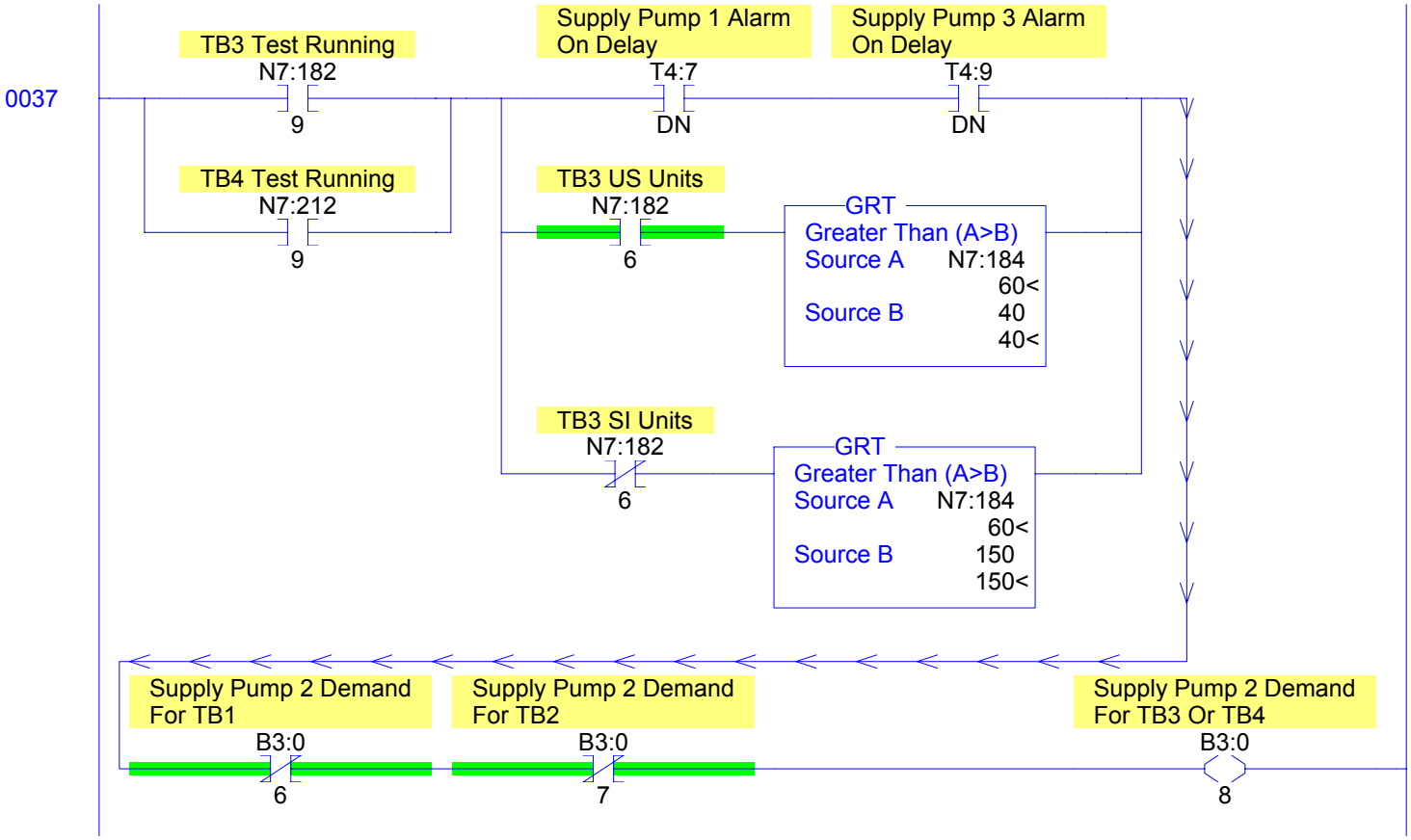
LAD 4 - STI --- Total Rungs in File = 120



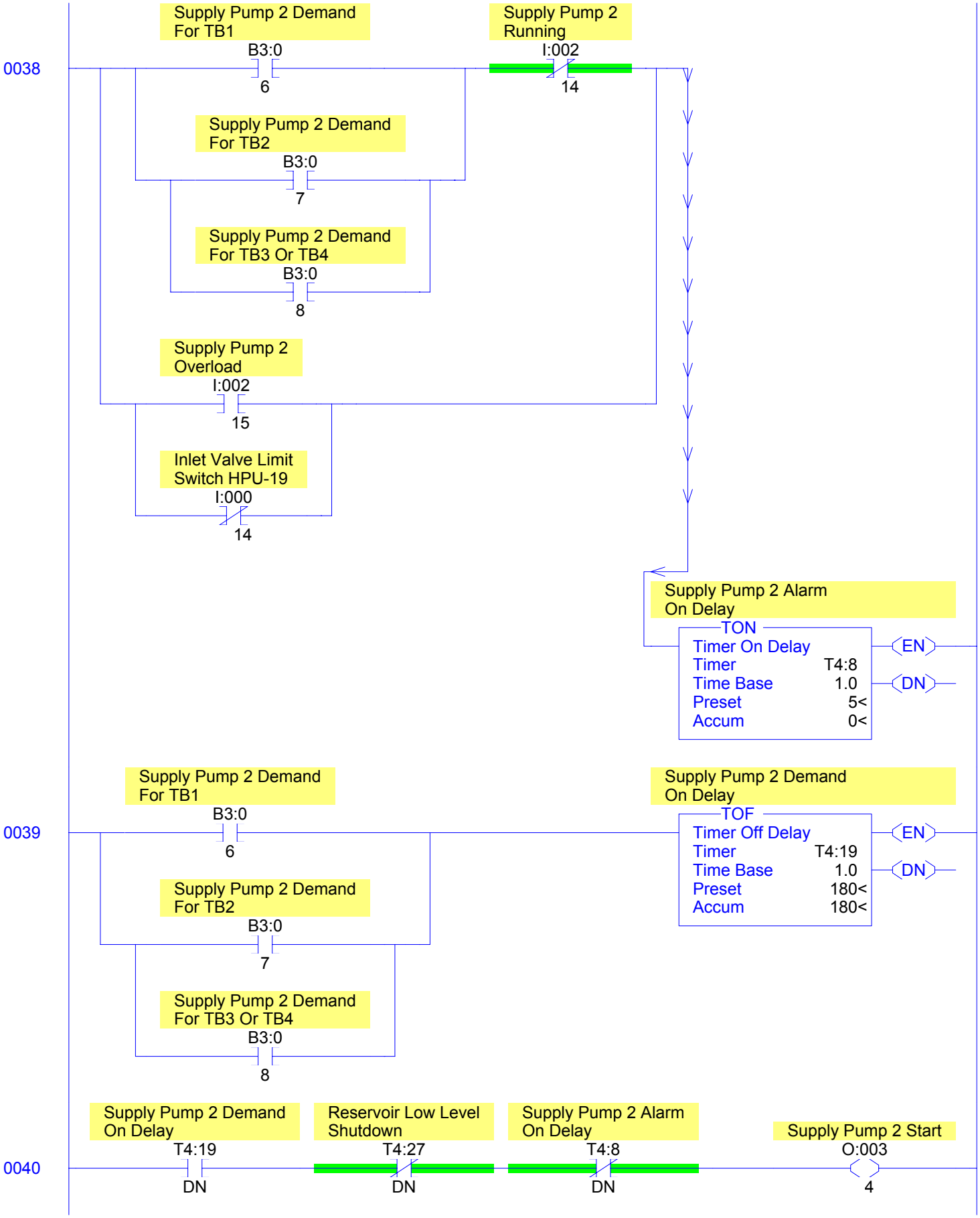
LAD 4 - STI --- Total Rungs in File = 120



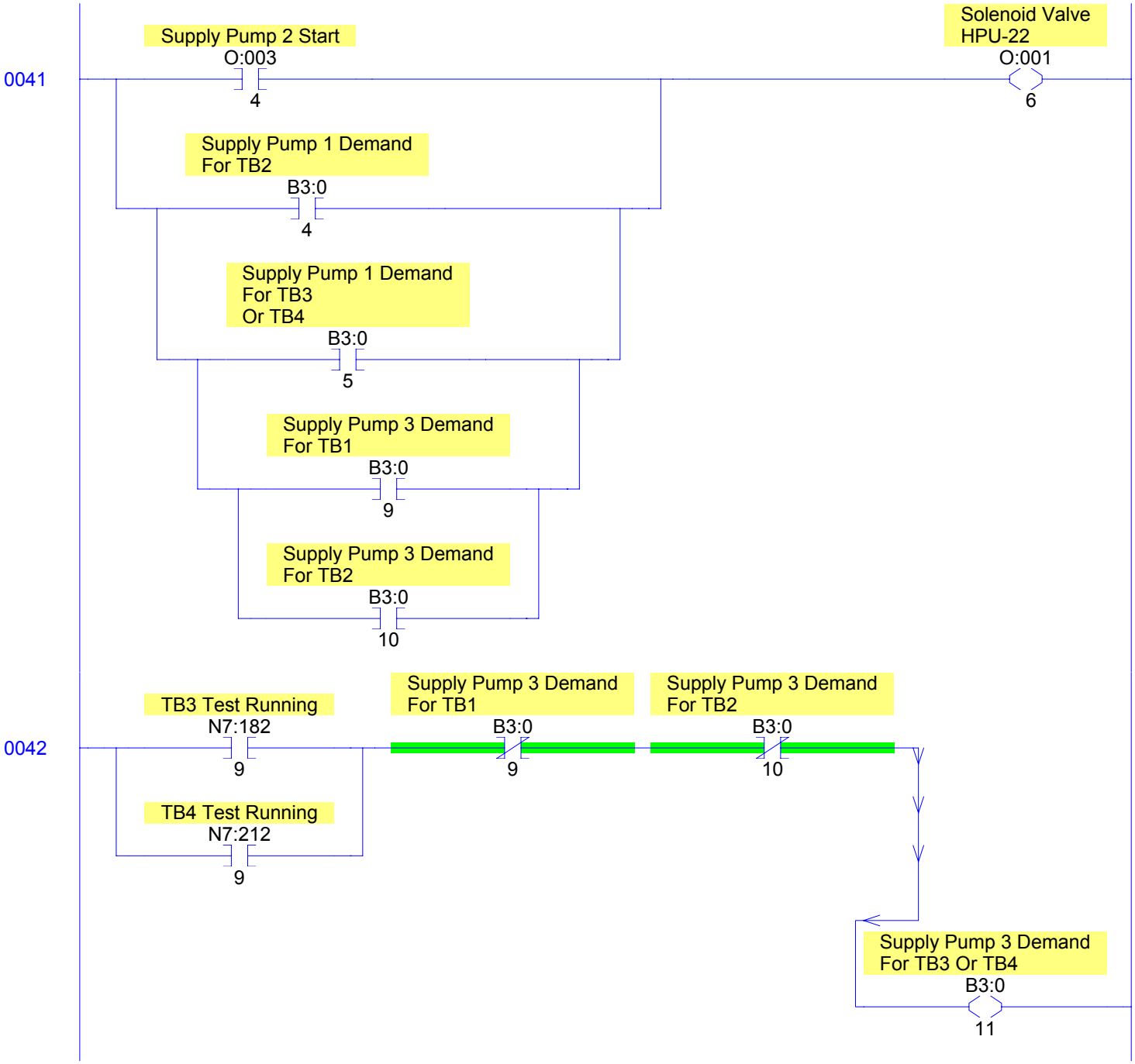
LAD 4 - STI --- Total Rungs in File = 120



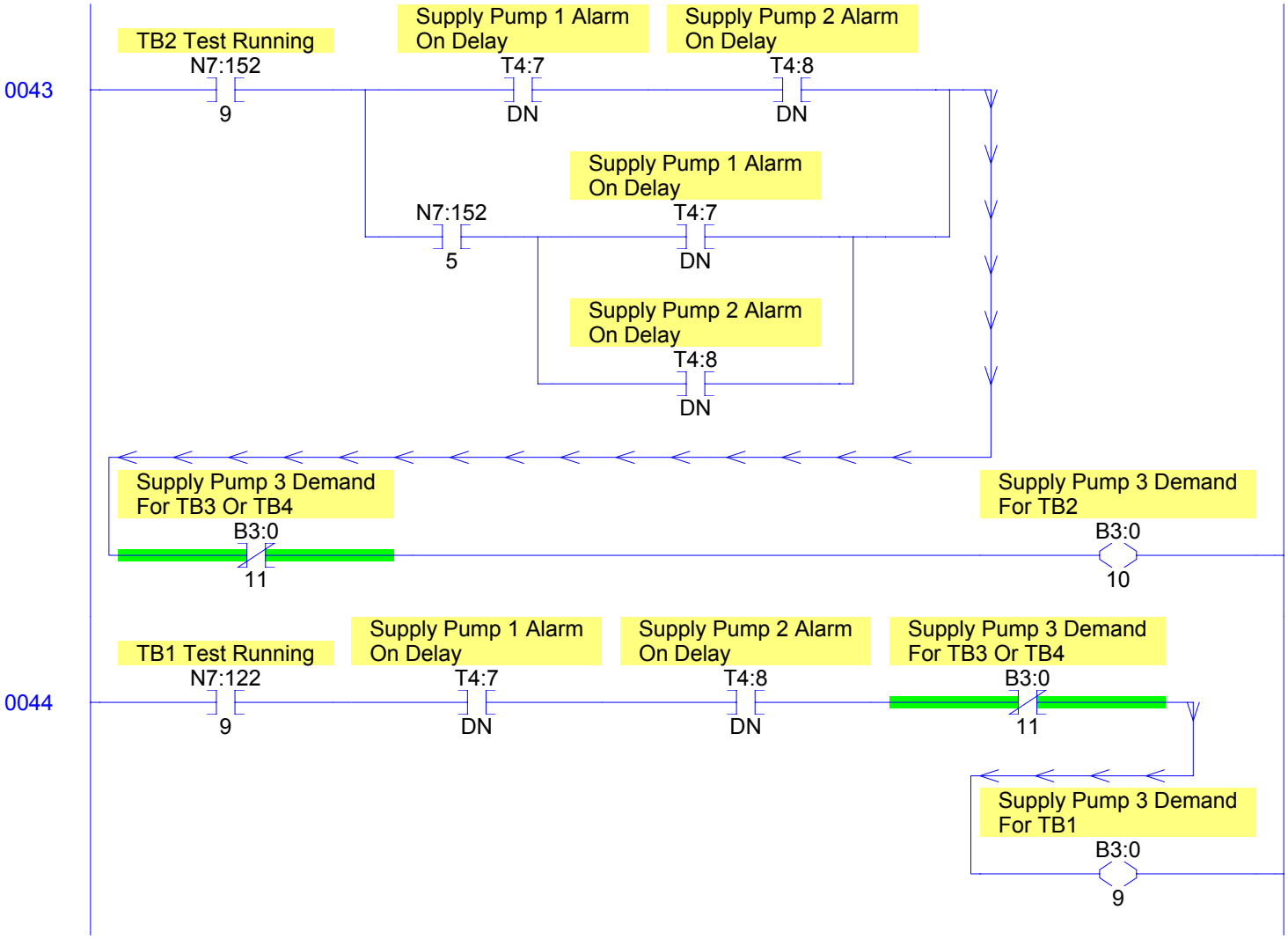
LAD 4 - STI --- Total Rungs in File = 120



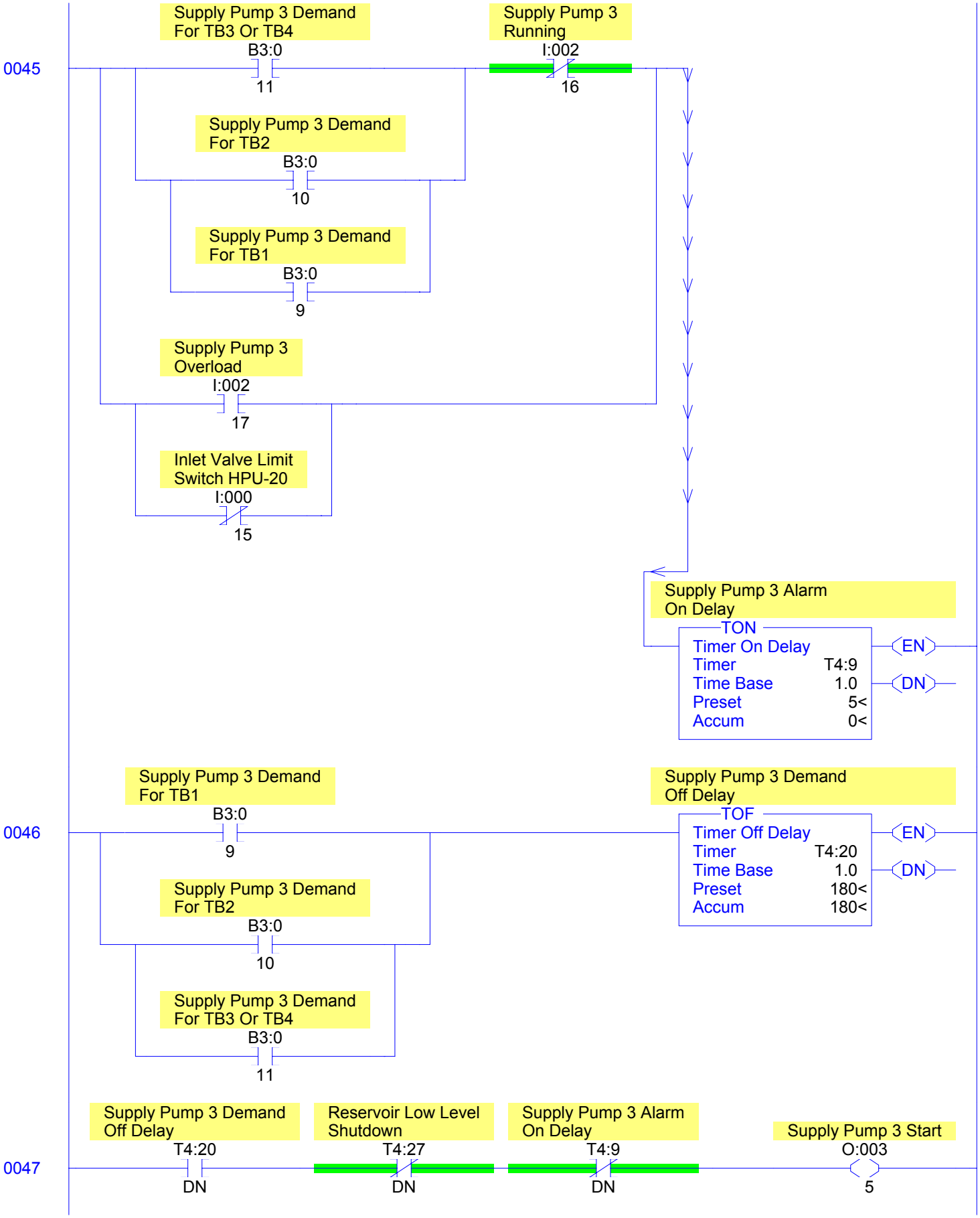
LAD 4 - STI --- Total Rungs in File = 120



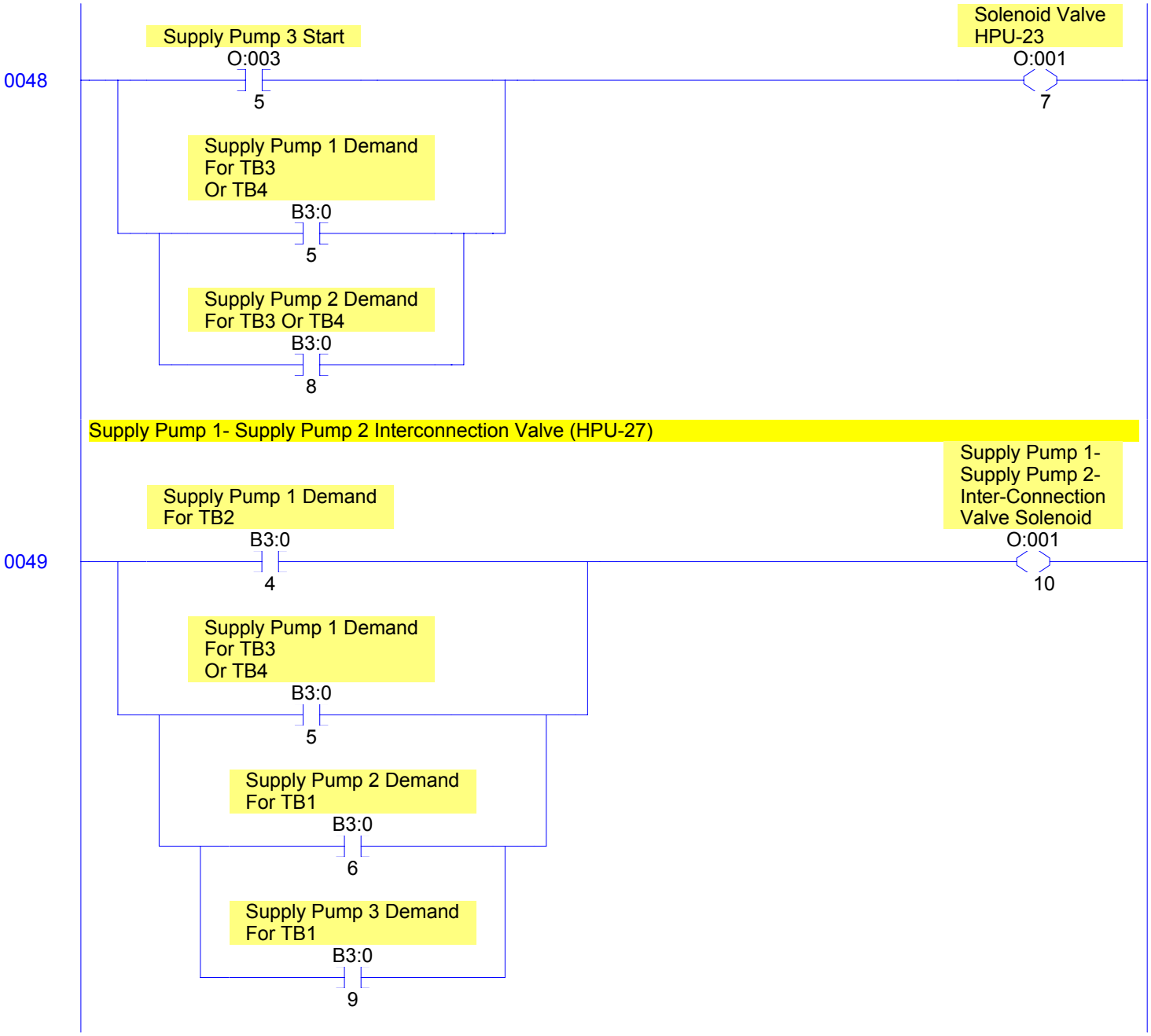
LAD 4 - STI --- Total Rungs in File = 120



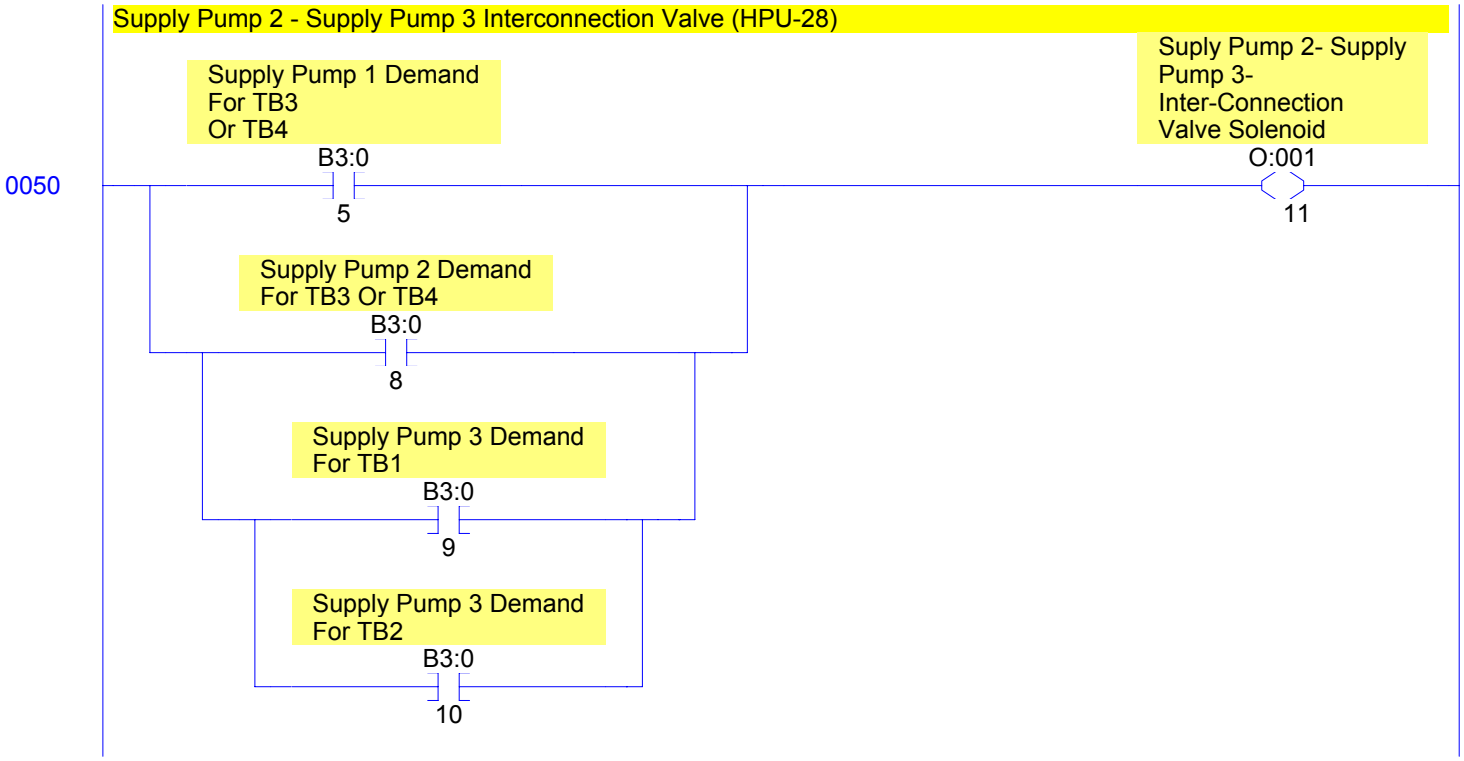
LAD 4 - STI --- Total Rungs in File = 120



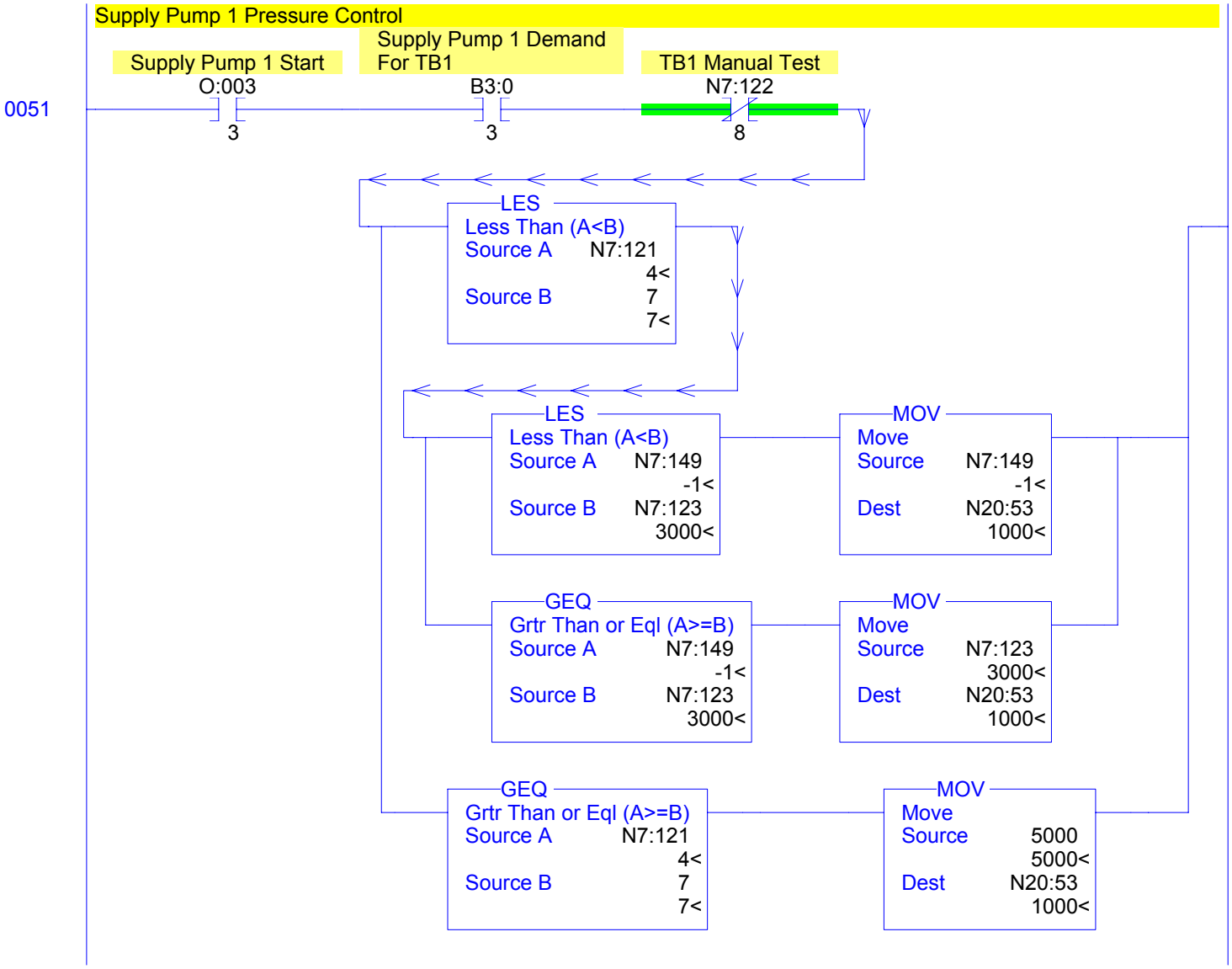
LAD 4 - STI --- Total Rungs in File = 120

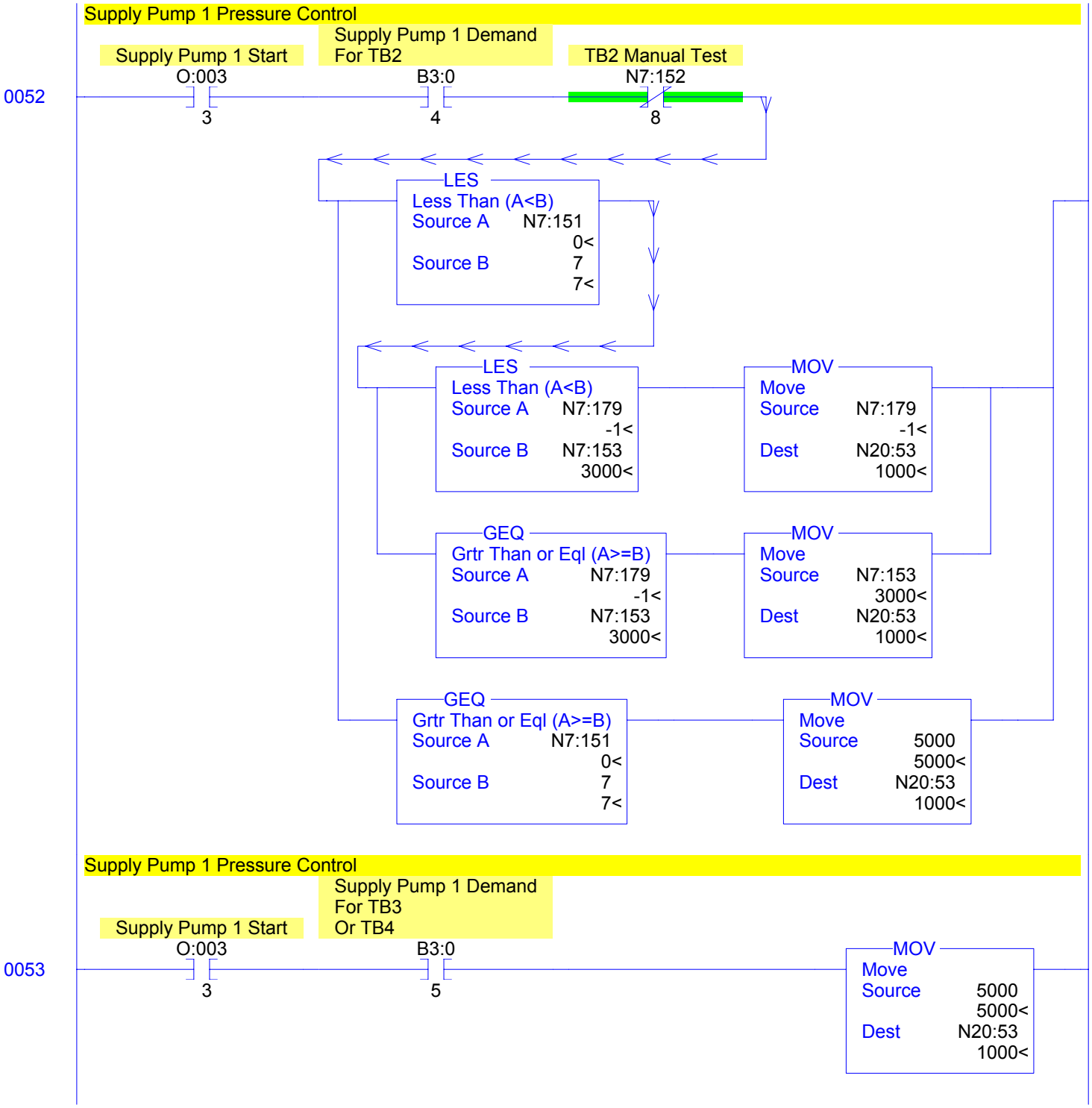


LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120




Supply Pump 1 Pressure Control
Supply Pump 1 Start
O:003
3
Supply Pump 1 Demand
For TB2
B3:0
4
TB2 Manual Test
N7:152
8
0052
LES
Less Than (A<B)
Source A N7:151
0<
Source B 7
7<
LES
Less Than (A<B)
Source A N7:179
-1<
Source B N7:153
3000<
MOV
Move
Source N7:179
-1<
Dest N20:53
1000<
GEQ
Grtr Than or Eql (A>=B)
Source A N7:179
-1<
Source B N7:153
3000<
MOV
Move
Source N7:153
3000<
Dest N20:53
1000<
GEQ
Grtr Than or Eql (A>=B)
Source A N7:151
0<
Source B 7
7<
MOV
Move
Source 5000
5000<
Dest N20:53
1000<
Supply Pump 1 Pressure Control
Supply Pump 1 Start
O:003
3
Supply Pump 1 Demand
For TB3
Or TB4
B3:0
5
0053
MOV
Move
Source 5000
5000<
Dest N20:53
1000<

LAD 4 - STI --- Total Rungs in File = 120

Supply Pump 1 Pressure Control

0054

Supply Pump 1 Demand Off Delay — T4:18 EN

Supply Pump 2 Demand For TB1 — B3:0 6

Supply Pump 3 Demand For TB1 — B3:0 9

MOV
Move
Source 0
0<
Dest N20:53
1000<

Supply Pump 2 Pressure Control

0055

Supply Pump 2 Start — O:003 4

Supply Pump 2 Demand For TB1 — B3:0 6

TB1 Manual Test — N7:122 8

LES
Less Than (A<B)
Source A N7:151
0<
Source B 7
7<

LES
Less Than (A<B)
Source A N7:149
-1<
Source B N7:123
3000<

MOV
Move
Source N7:149
-1<
Dest N20:70
1000<

GEQ
Grtr Than or Eql (A>=B)
Source A N7:149
-1<
Source B N7:123
3000<

MOV
Move
Source N7:123
3000<
Dest N20:70
1000<

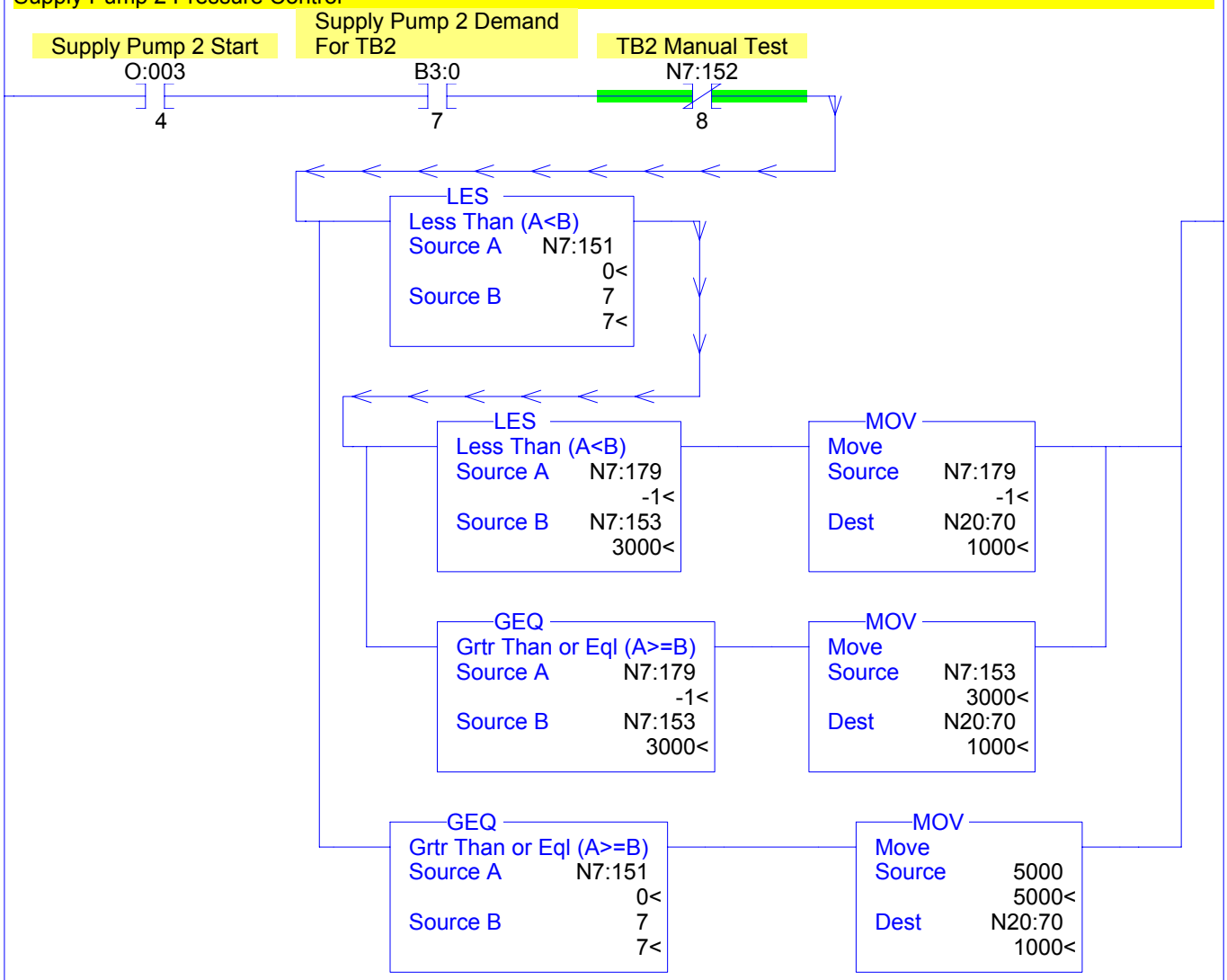
GEQ
Grtr Than or Eql (A>=B)
Source A N7:121
4<
Source B 7
7<

MOV
Move
Source 5000
5000<
Dest N20:70
1000<

LAD 4 - STI --- Total Rungs in File = 120

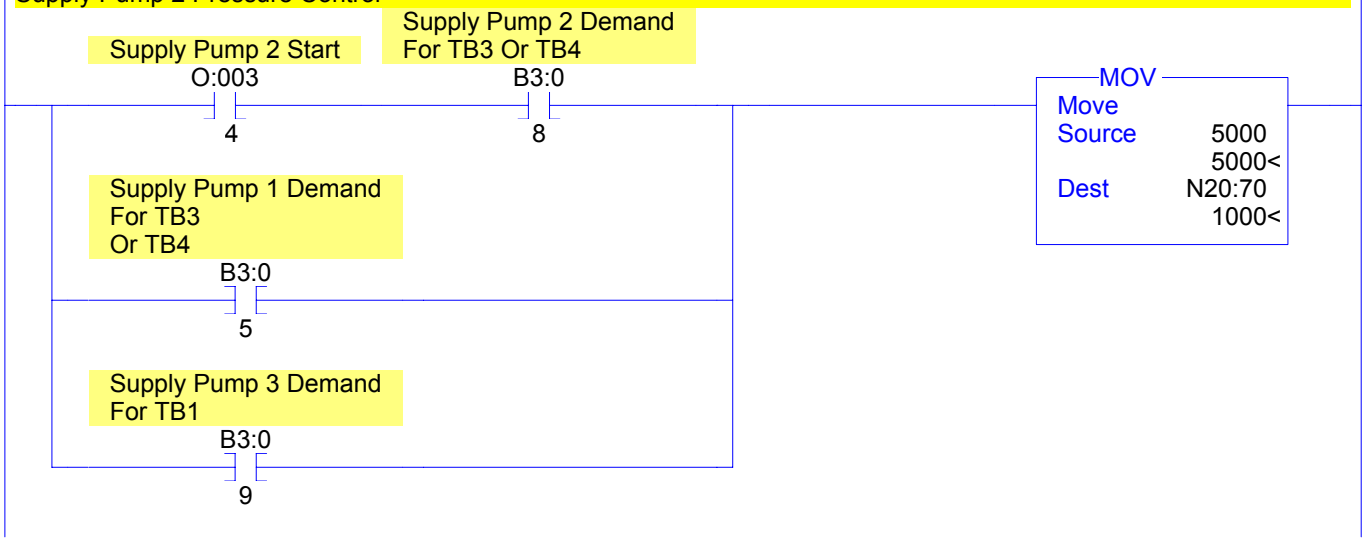
Supply Pump 2 Pressure Control

0056

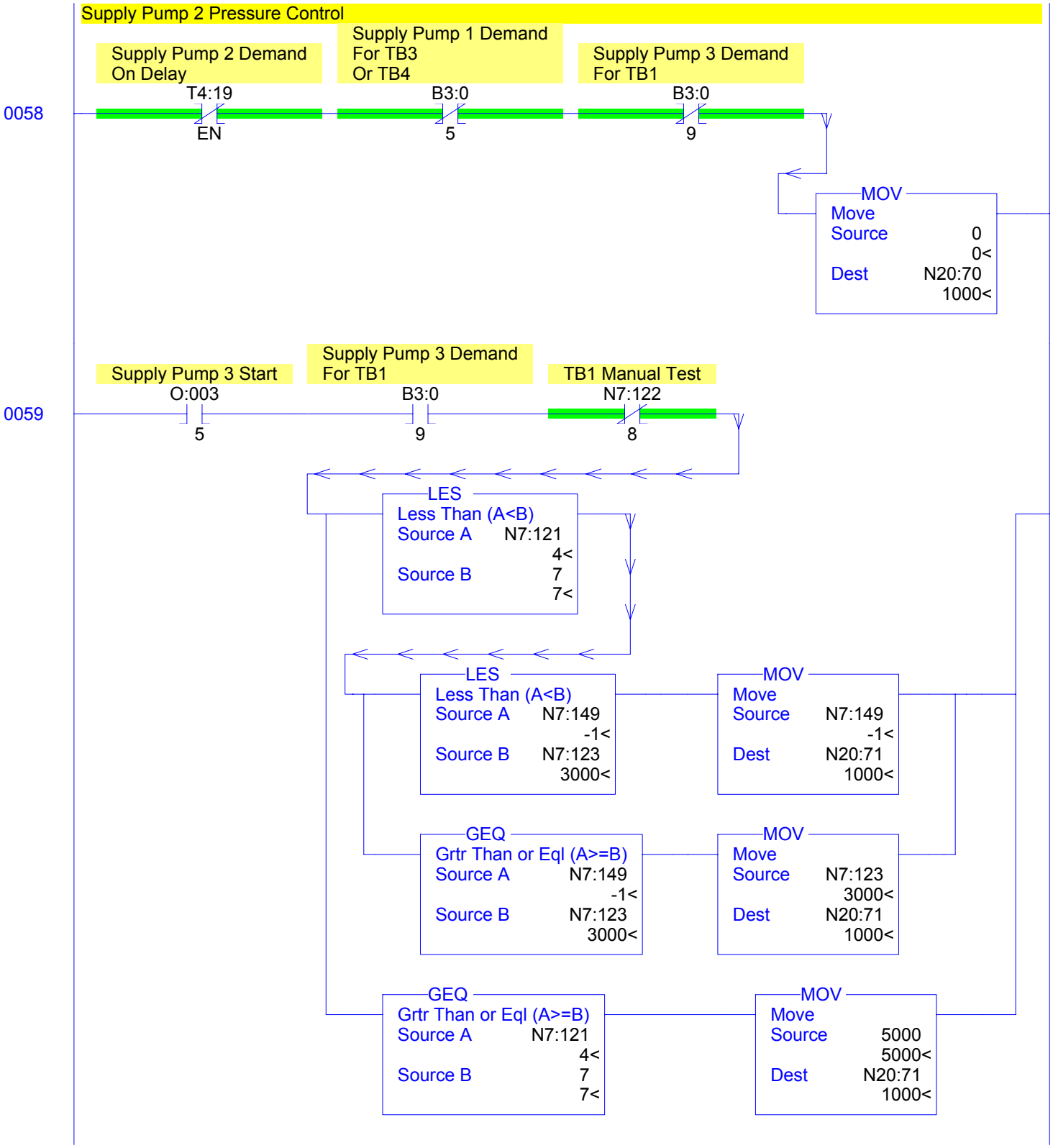


Supply Pump 2 Pressure Control

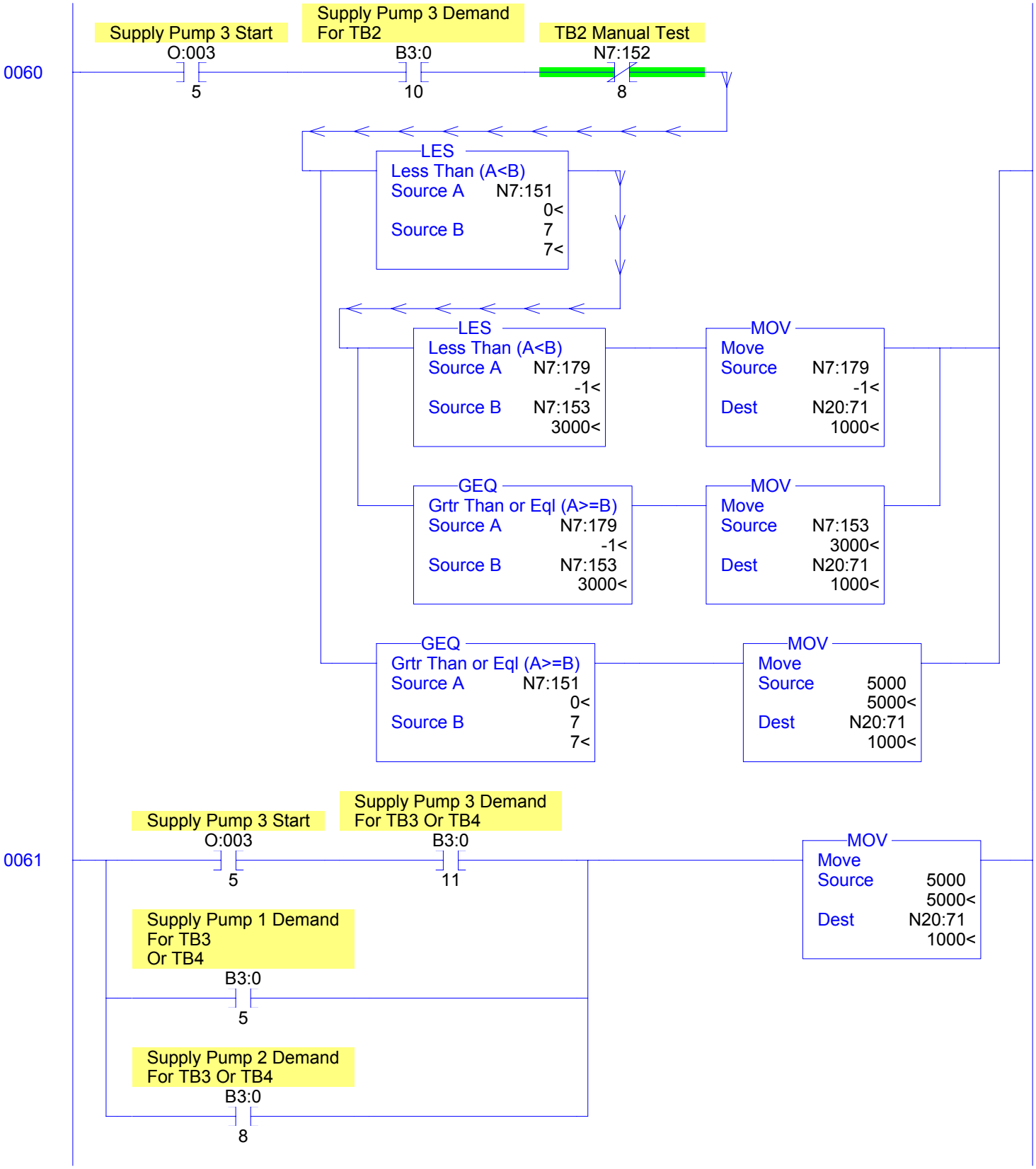
0057



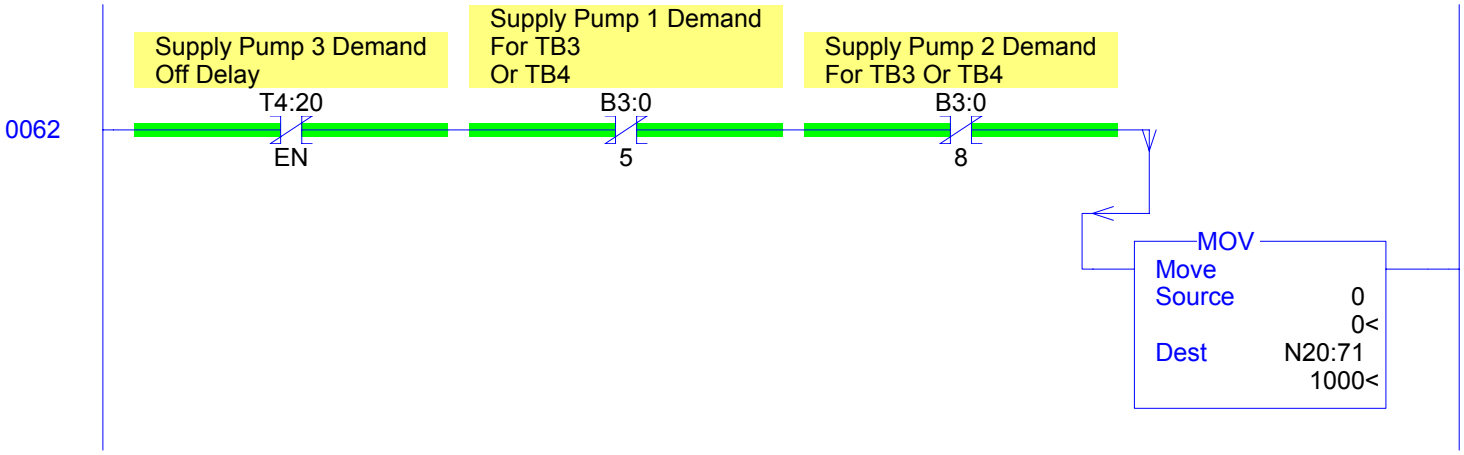
LAD 4 - STI --- Total Rungs in File = 120



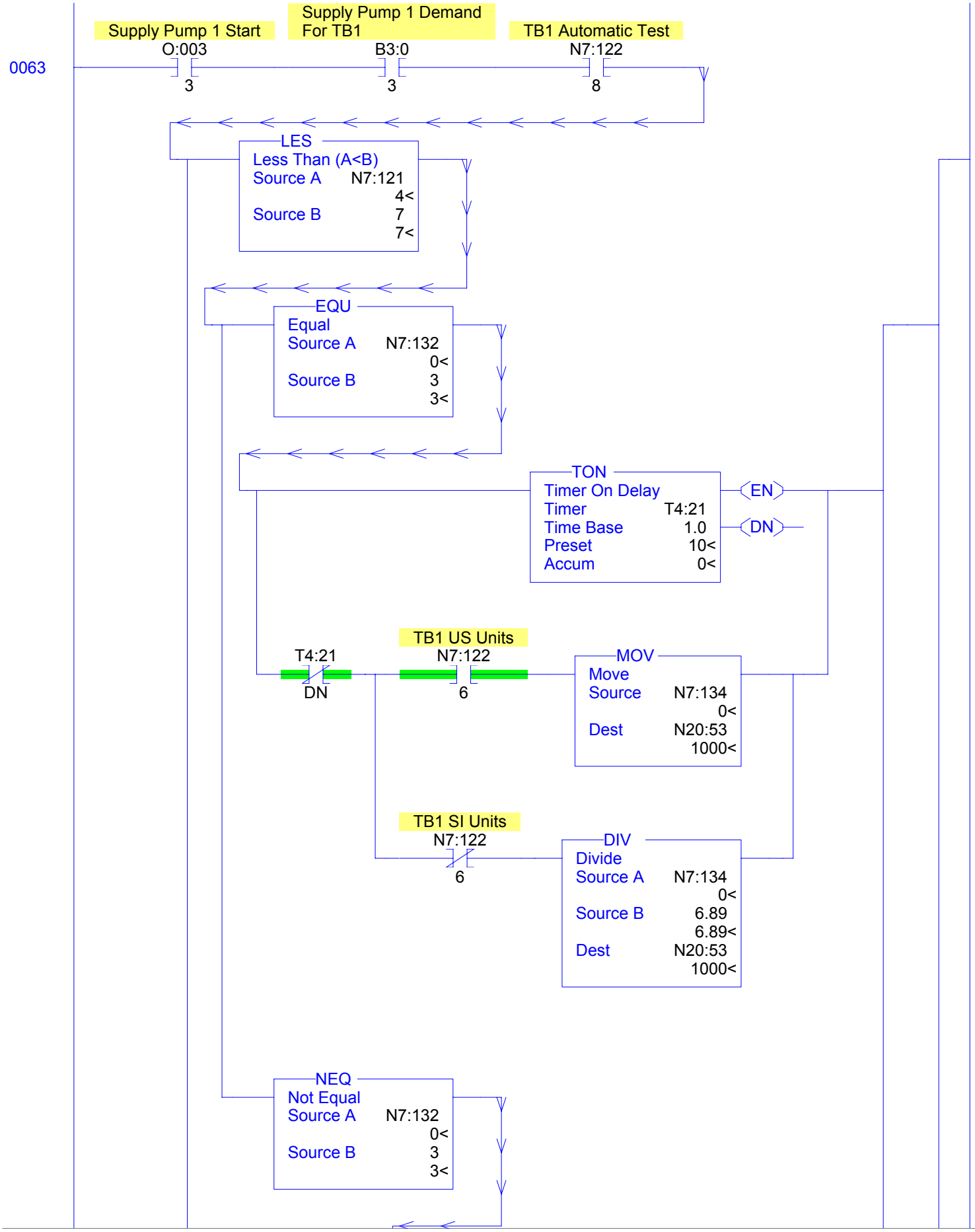
LAD 4 - STI --- Total Rungs in File = 120



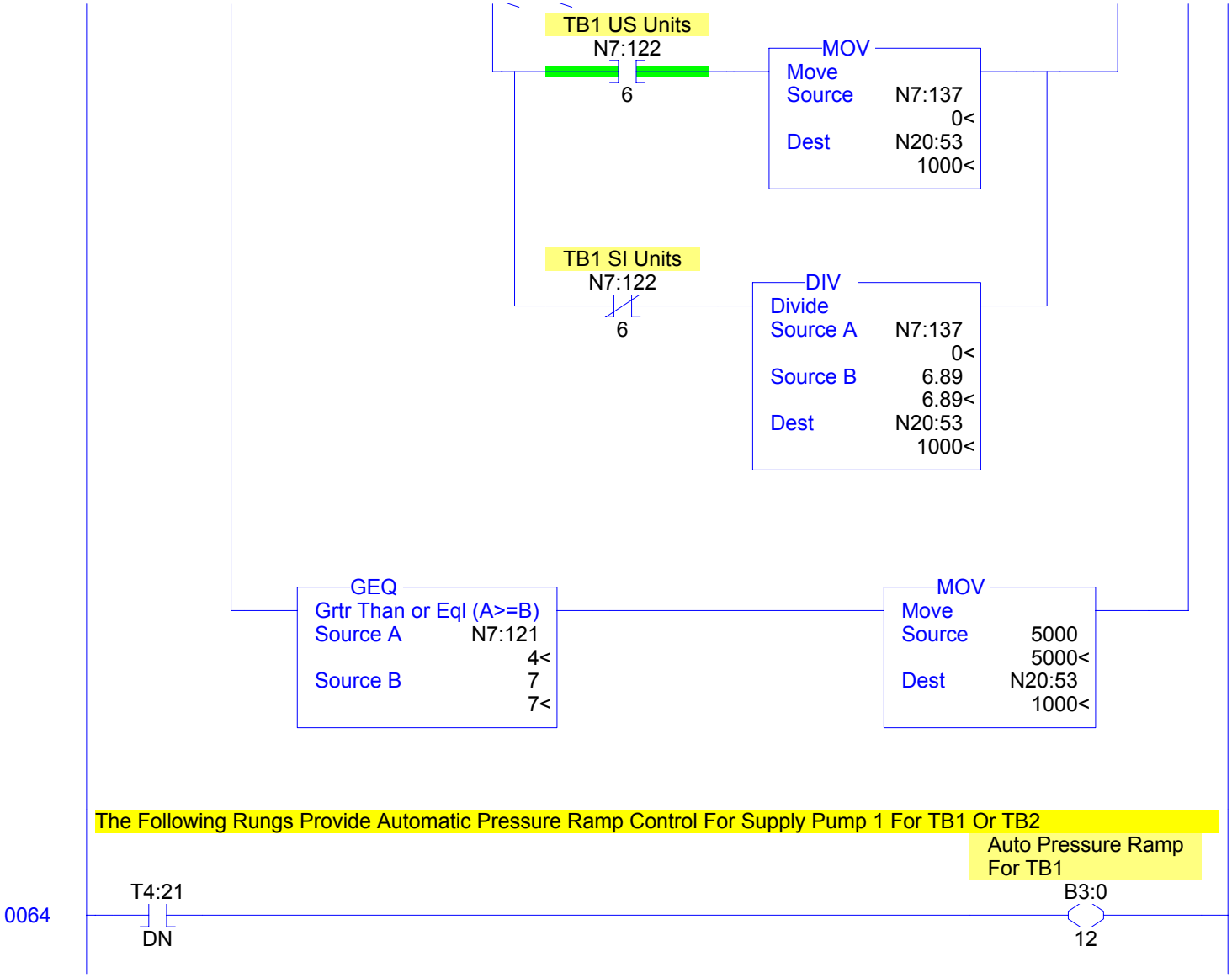
LAD 4 - STI --- Total Rungs in File = 120



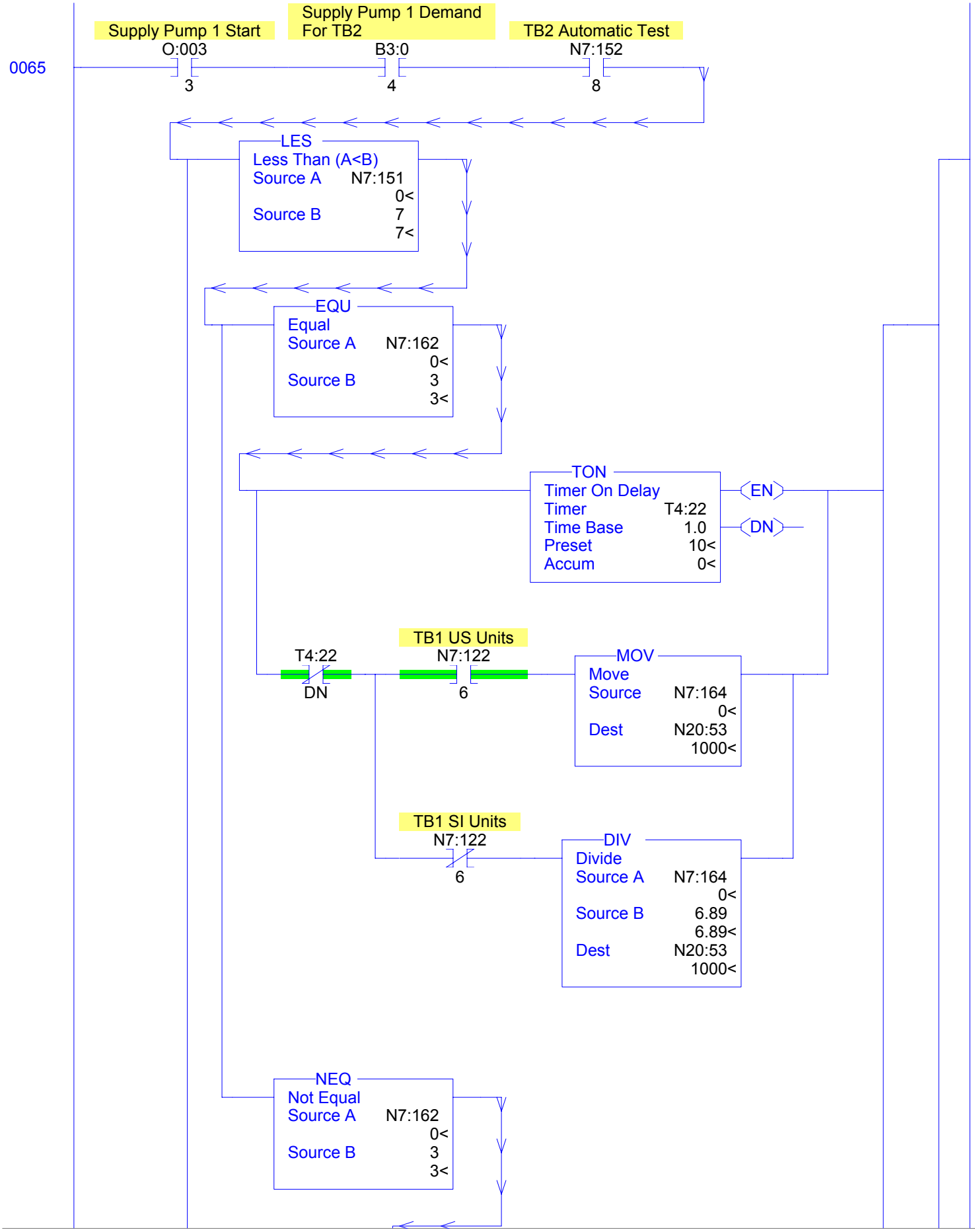
LAD 4 - STI --- Total Rungs in File = 120



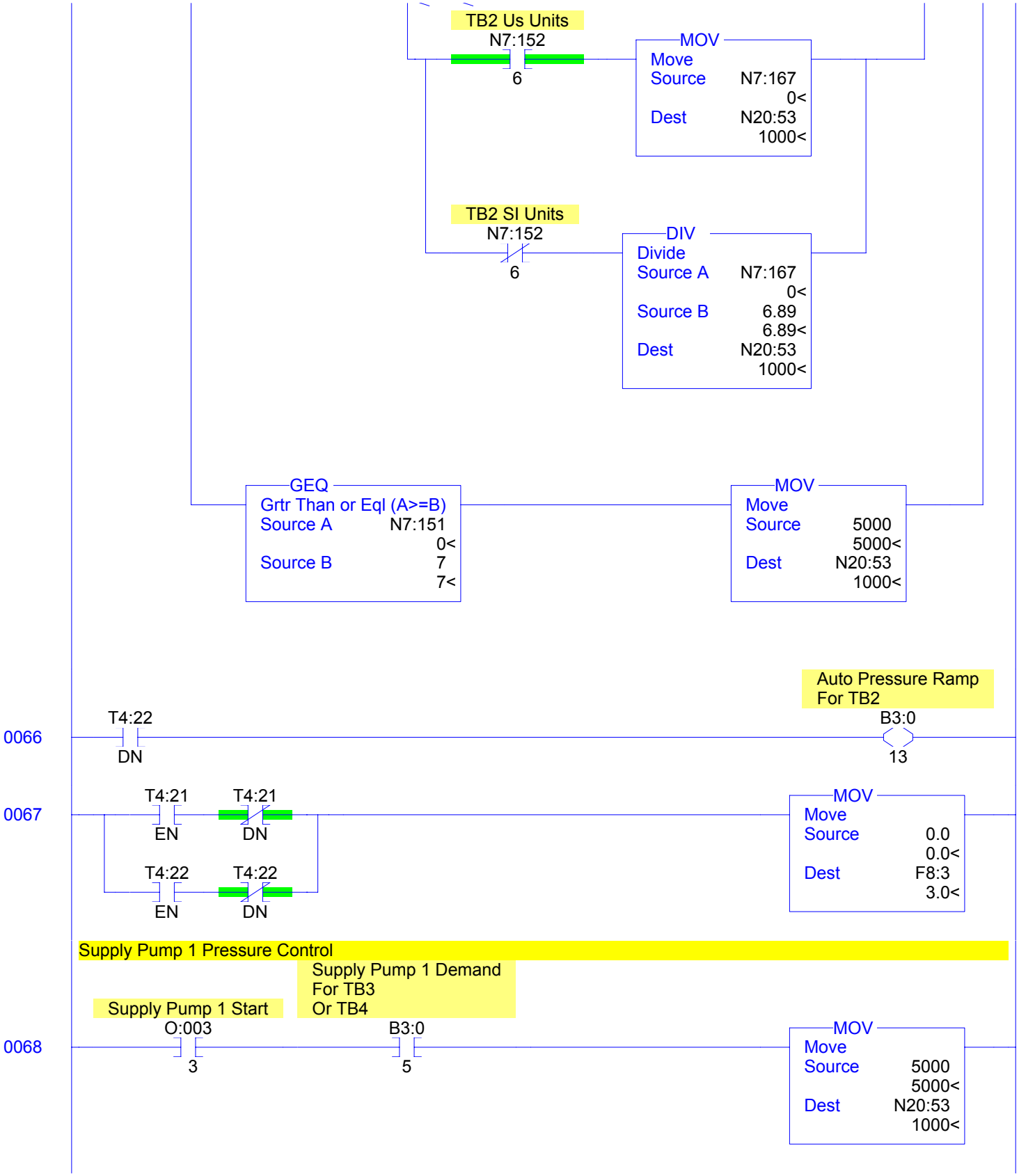
LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120

Subtract Pressure Minimum From Presure Maximum
Multiply Duration Of Cycle By 10.0

0069

Auto Pressure Ramp
For TB1

B3:0
12

SUB
Subtract
Source A N7:133
0<
Source B N7:134
0<
Dest F8:0
600.0<

MUL
Multiply
Source A N7:131
0<
Source B 10.0
10.0<
Dest F8:1
400.0<

Subtract Pressure Minimum From Pressure Maximum
Multiply Duration Of Cycle By 10.0

0070

Auto Pressure Ramp
For TB2

B3:0
13

SUB
Subtract
Source A N7:163
0<
Source B N7:164
0<
Dest F8:0
600.0<

MUL
Multiply
Source A N7:161
0<
Source B 10.0
10.0<
Dest F8:1
400.0<

Divide Above Results To Get Increment Or Decrement Per 50 Milliseconds

0071

Auto Pressure Ramp
For TB1

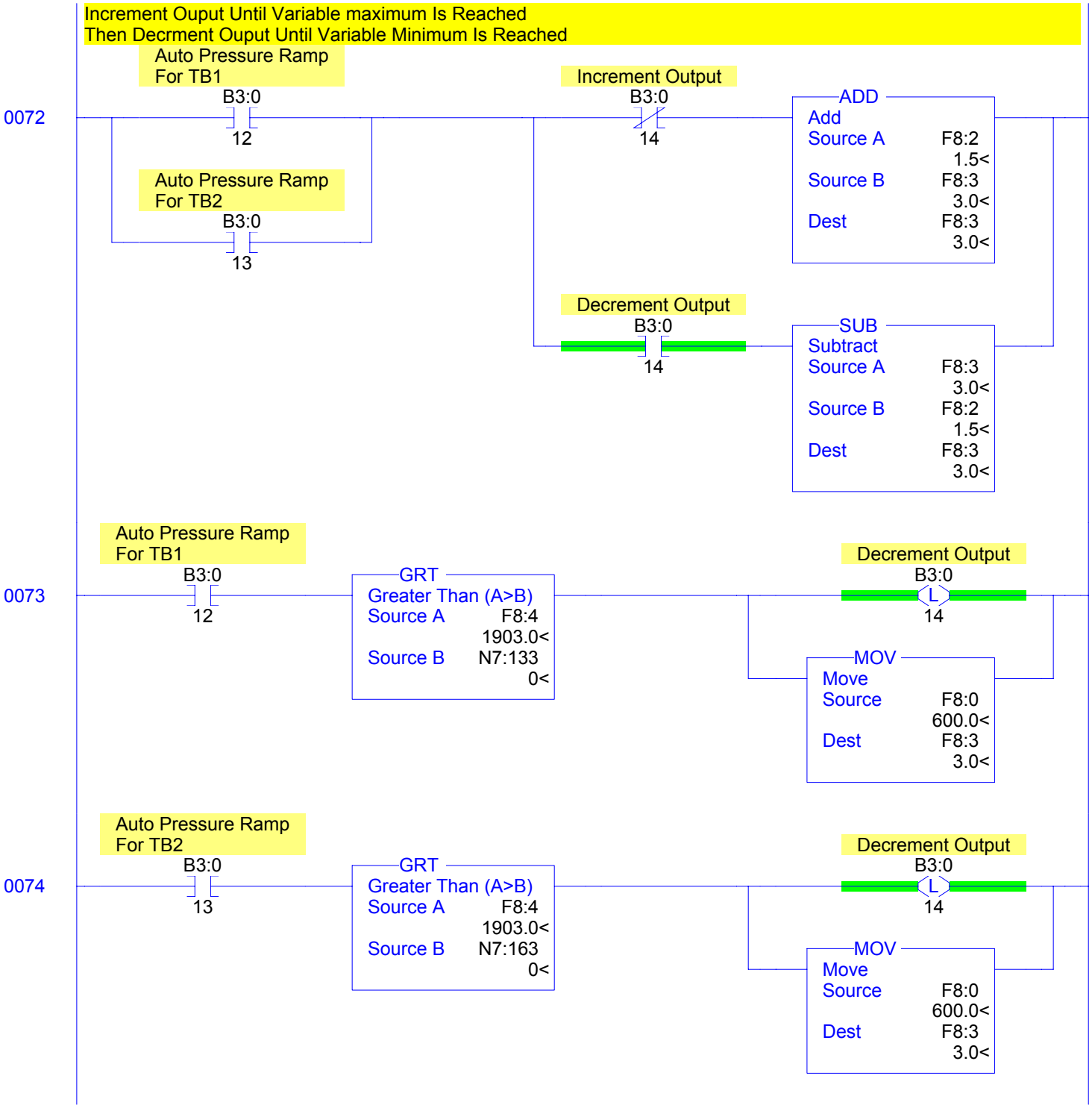
B3:0
12

Auto Pressure Ramp
For TB2

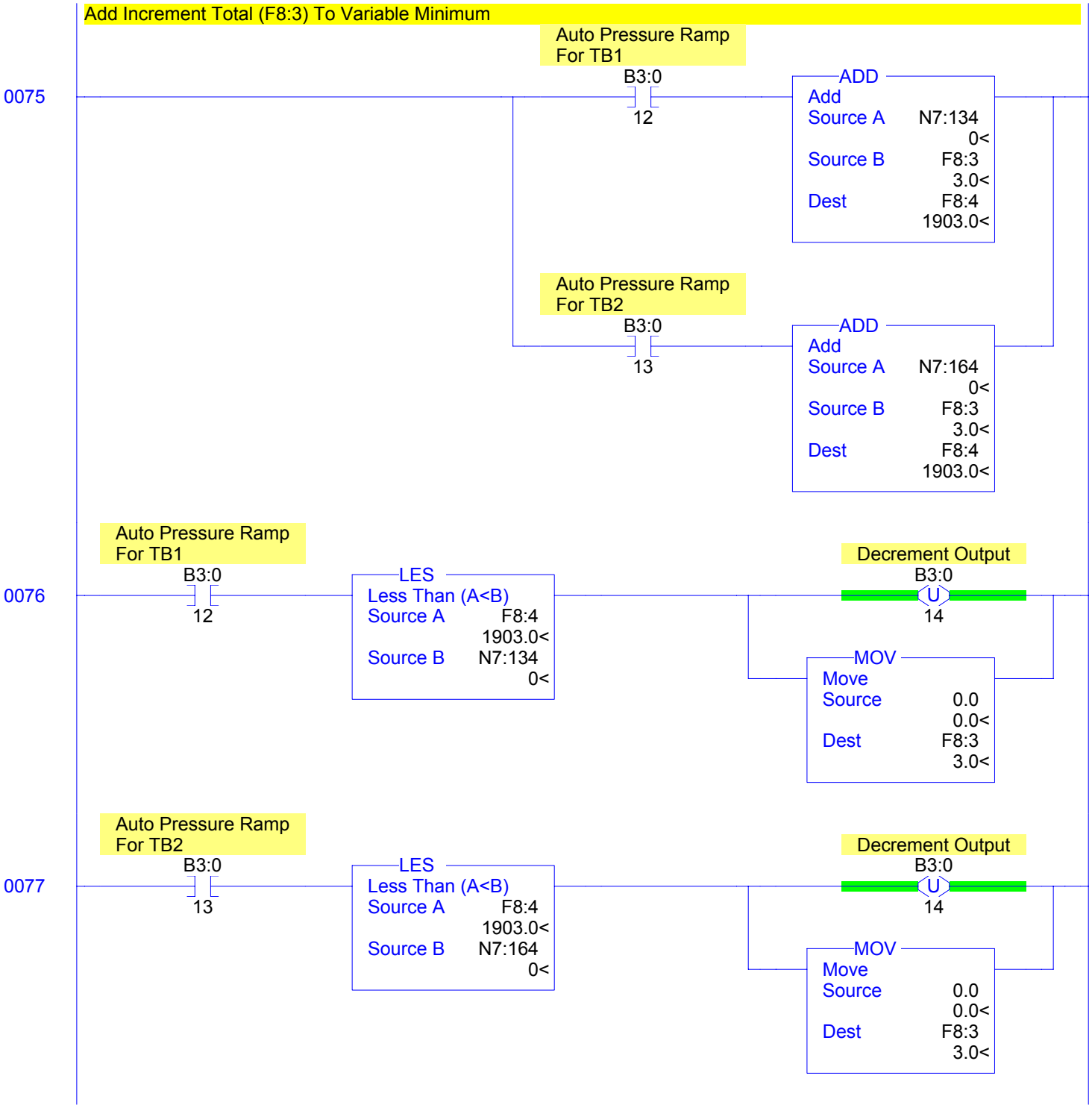
B3:0
13

DIV
Divide
Source A F8:0
600.0<
Source B F8:1
400.0<
Dest F8:2
1.5<

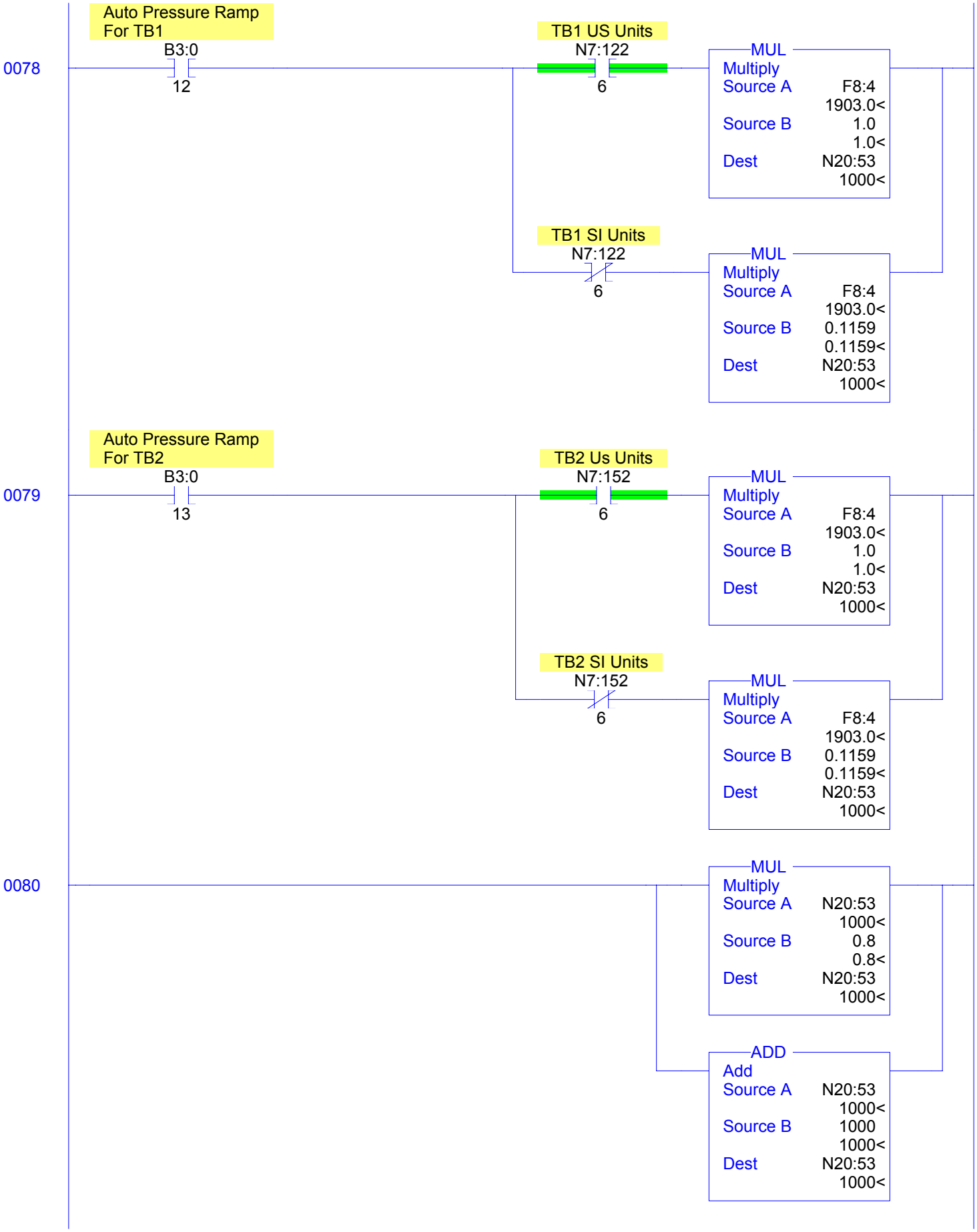
LAD 4 - STI --- Total Rungs in File = 120



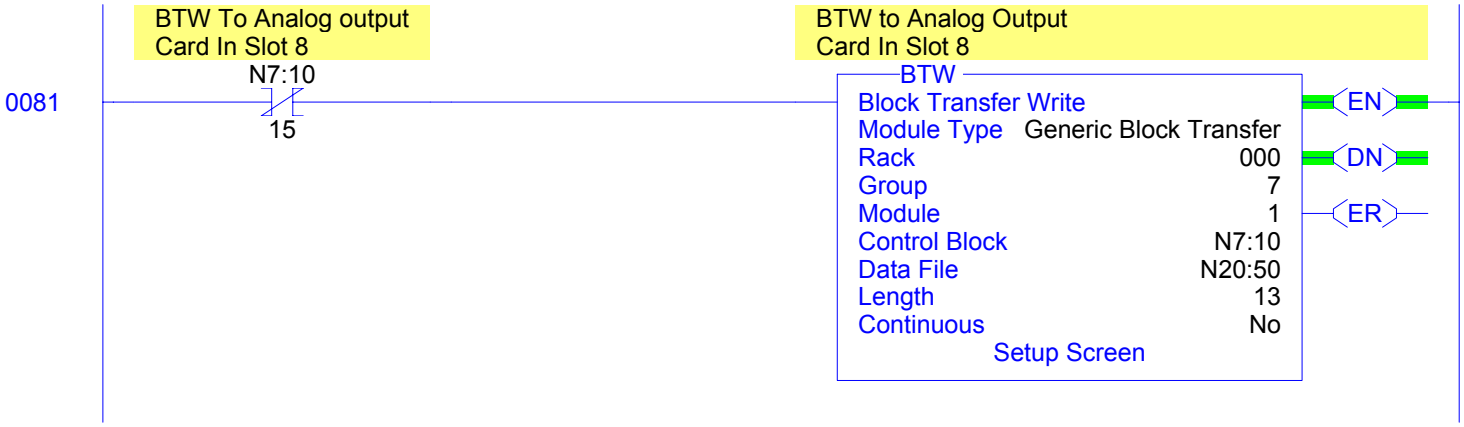
LAD 4 - STI --- Total Rungs in File = 120



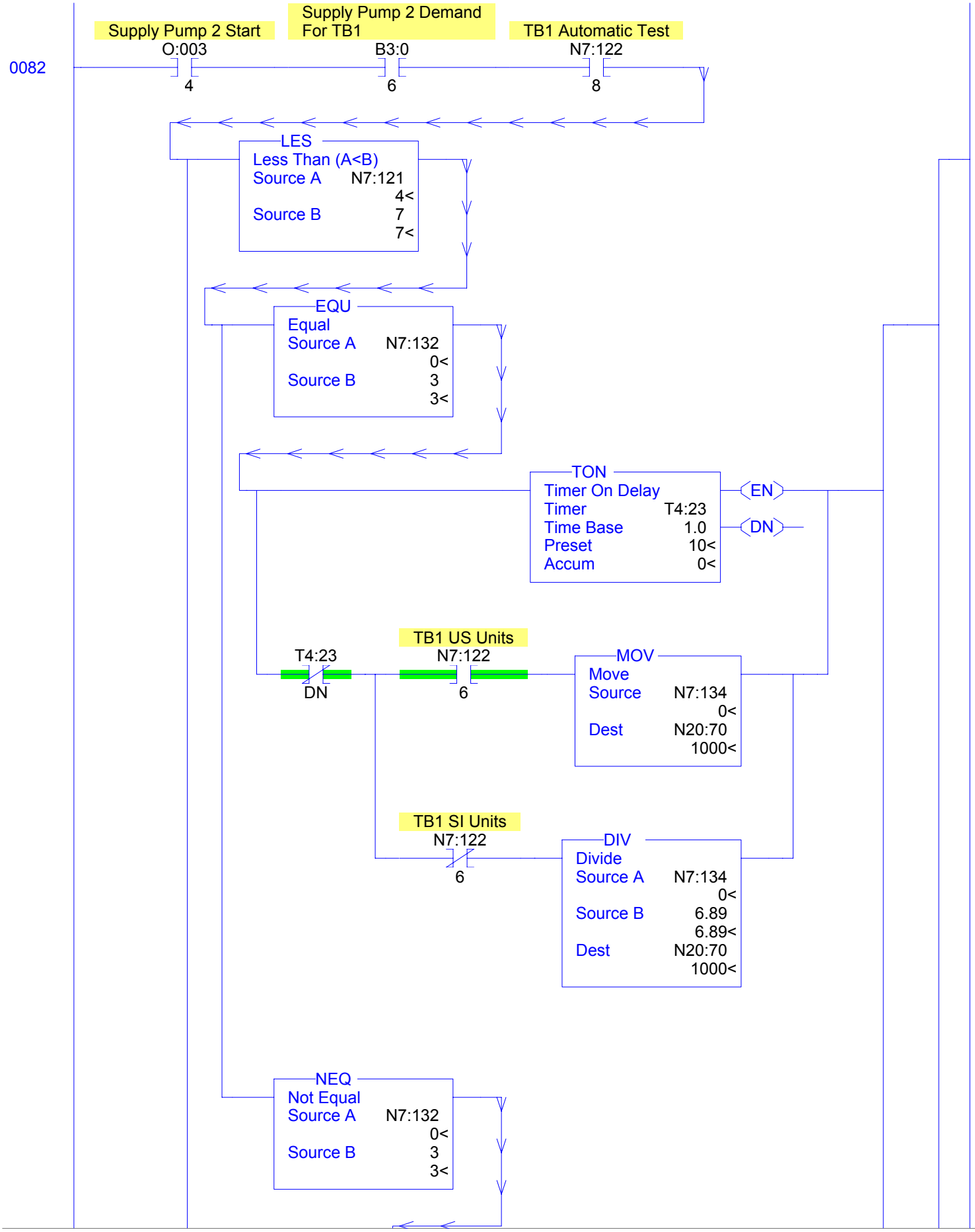
LAD 4 - STI --- Total Rungs in File = 120



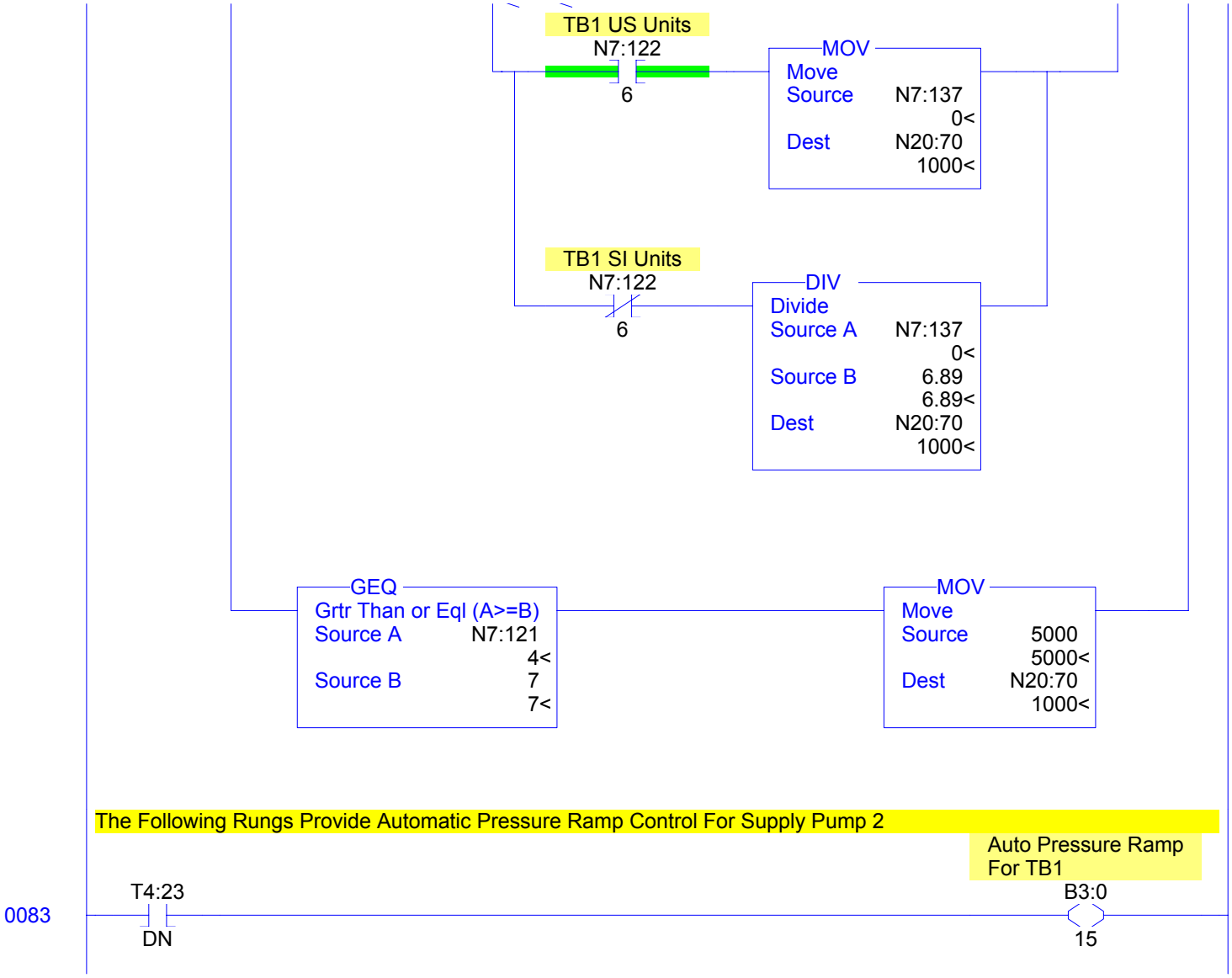
LAD 4 - STI --- Total Rungs in File = 120



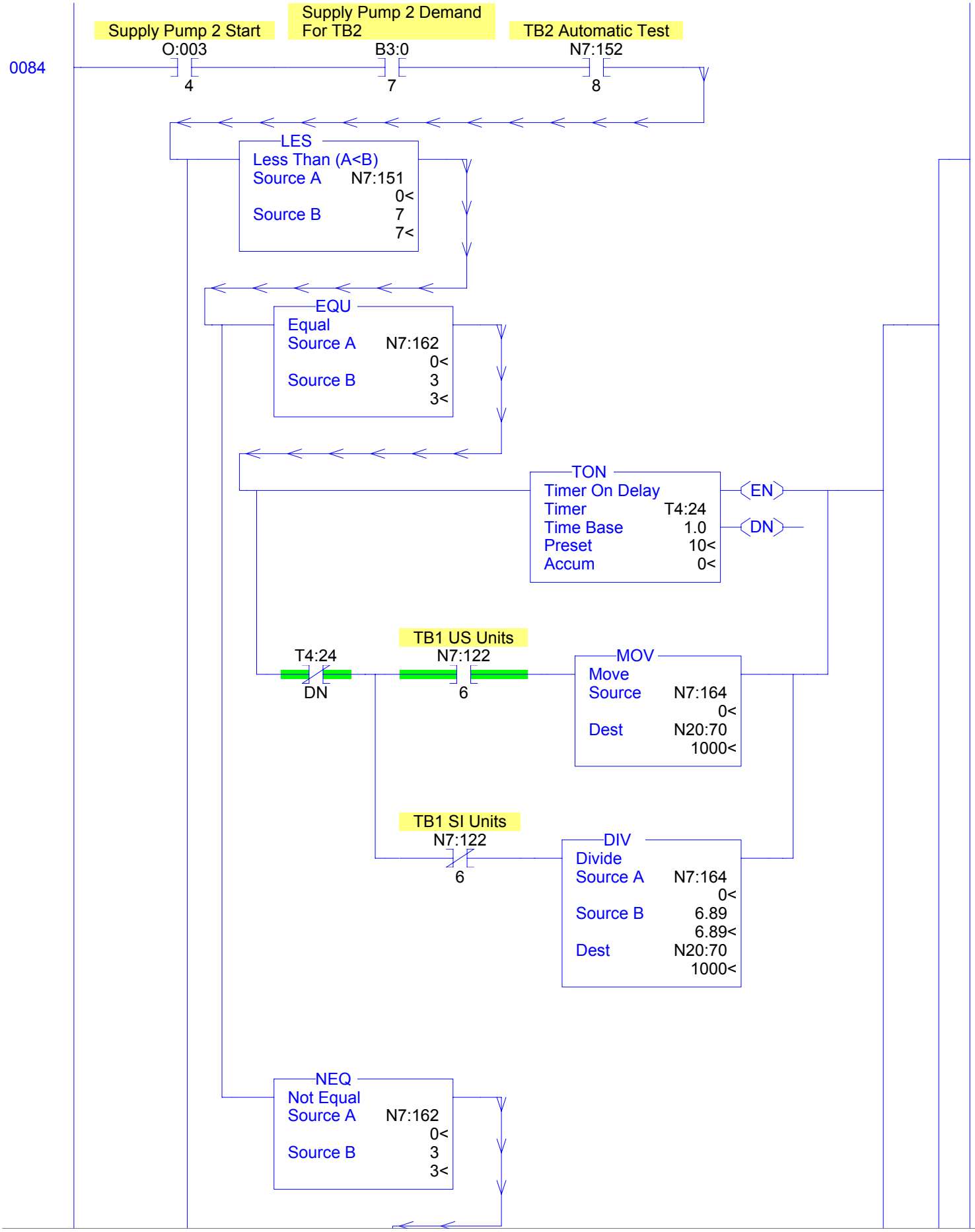
LAD 4 - STI --- Total Rungs in File = 120



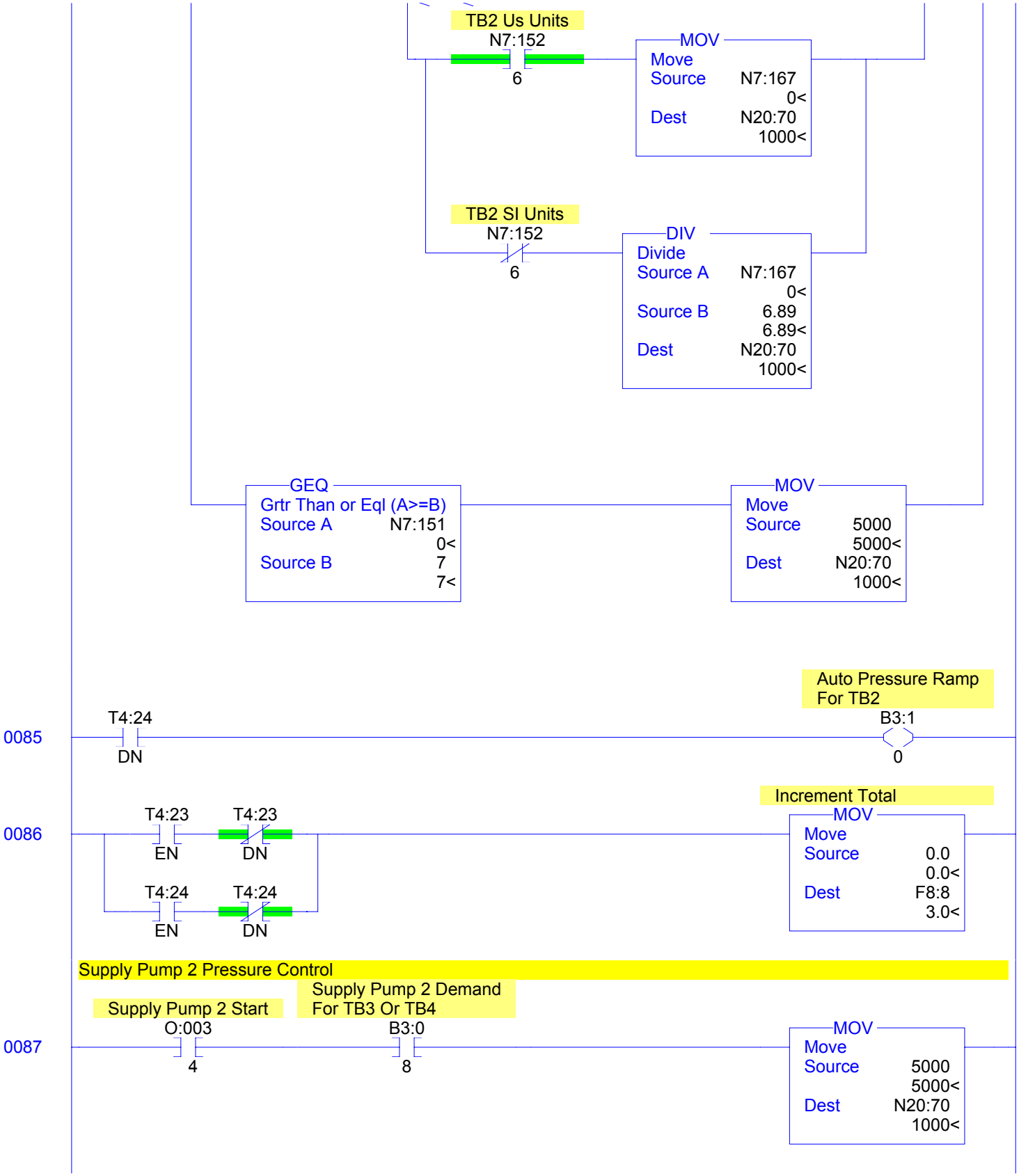
LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120

Subtract Pressure Minimum From Pressure Maximum
Multiply Duration Of Cycle By 10.0
Auto Pressure Ramp
For TB1

0088

B3:0
15

SUB
Subtract
Source A N7:133
0<
Source B N7:134
0<
Dest F8:5
600.0<

MUL
Multiply
Source A N7:131
0<
Source B 10.0
10.0<
Dest F8:6
400.0<

Subtract Pressure Minimum From Pressure Maximum
MItiply Duration Of Cycle By 10.0
Auto Pressure Ramp
For TB2

0089

B3:1
0

SUB
Subtract
Source A N7:163
0<
Source B N7:164
0<
Dest F8:5
600.0<

MUL
Multiply
Source A N7:161
0<
Source B 10.0
10.0<
Dest F8:6
400.0<

Divide Above Result To Get Increment Or Decrement Per 50 Millisecdonds
Auto Pressure Ramp
For TB1

0090

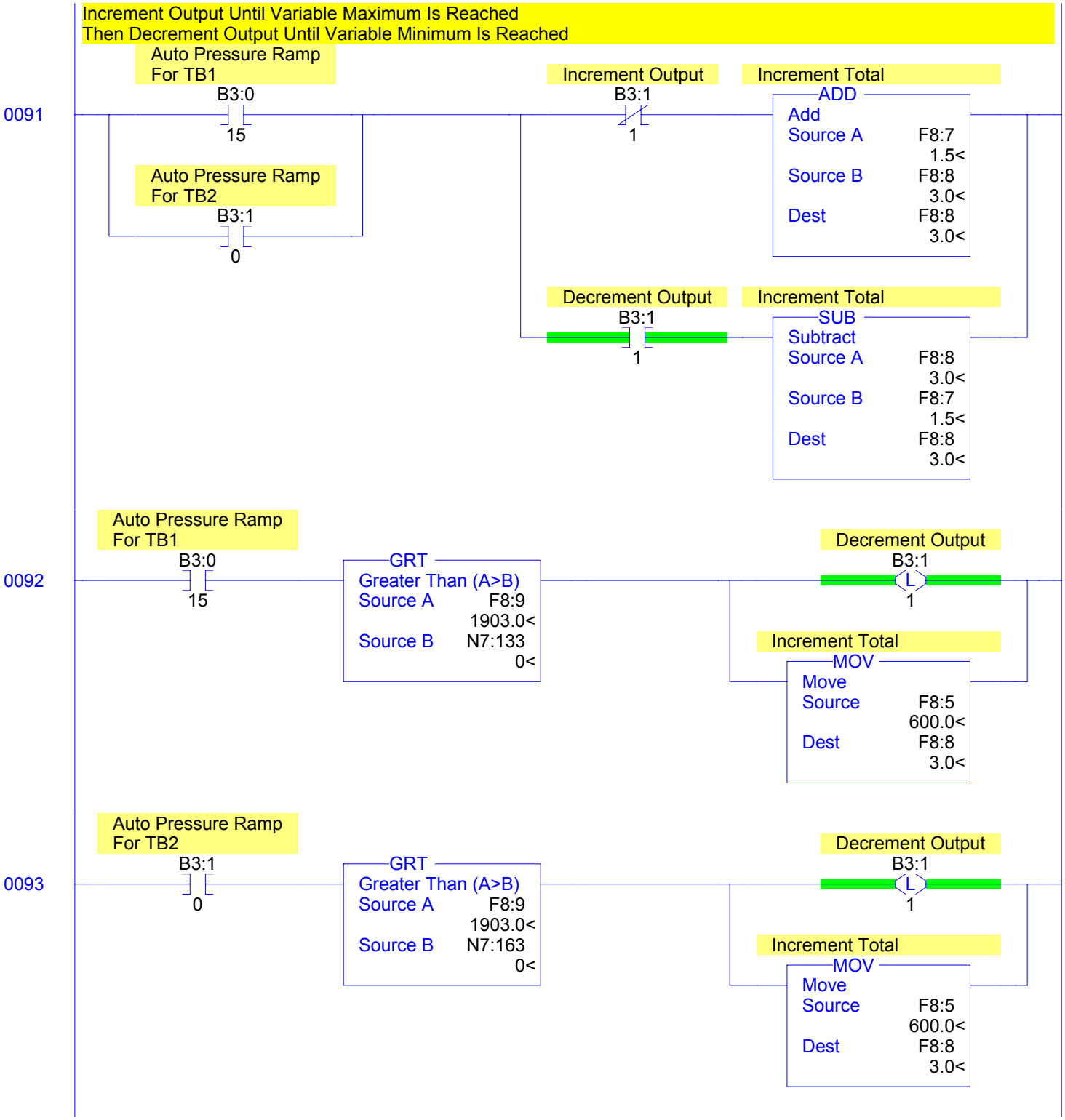
B3:0
15

Auto Pressure Ramp
For TB2

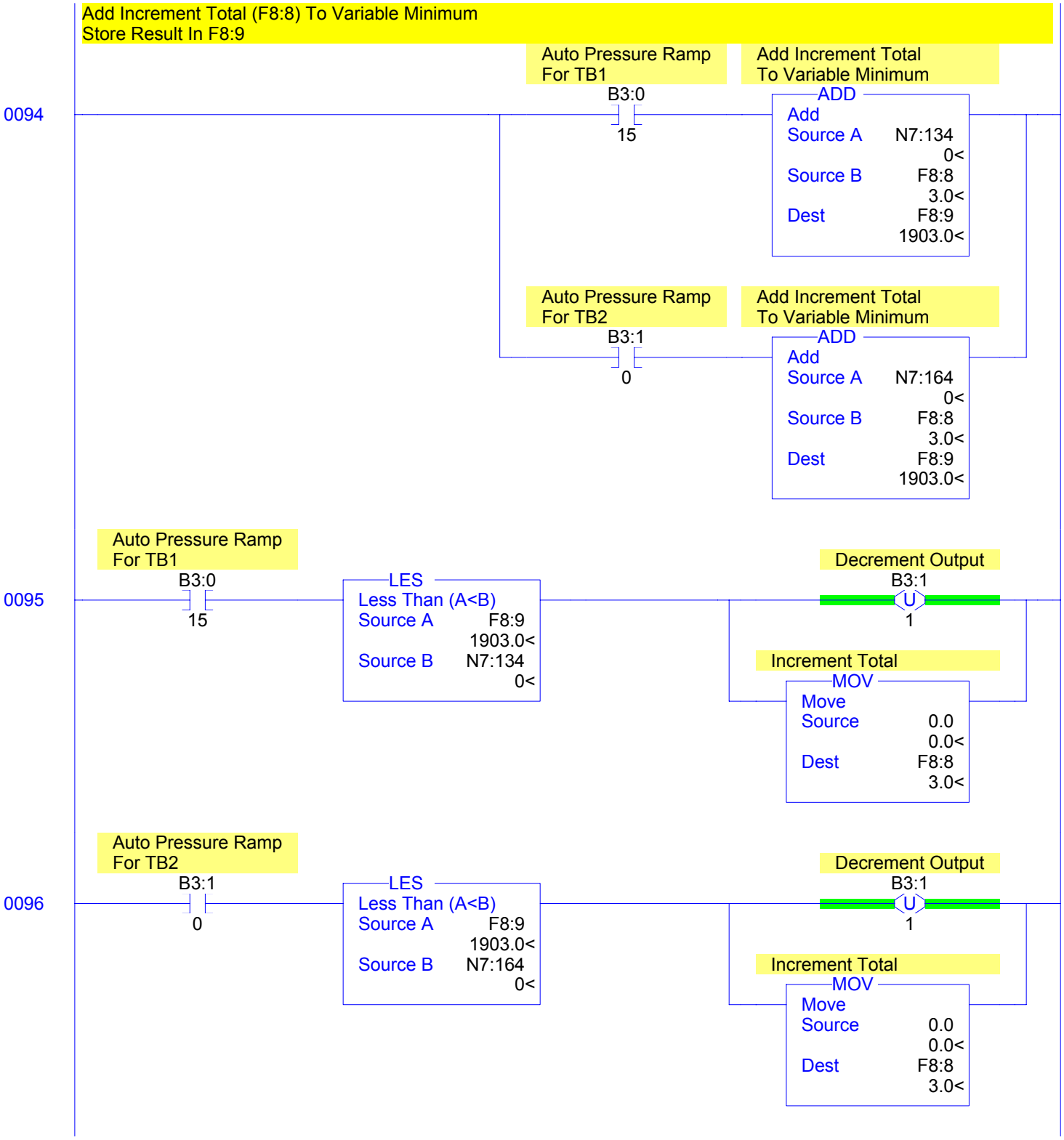
B3:1
0

DIV
Divide
Source A F8:5
600.0<
Source B F8:6
400.0<
Dest F8:7
1.5<

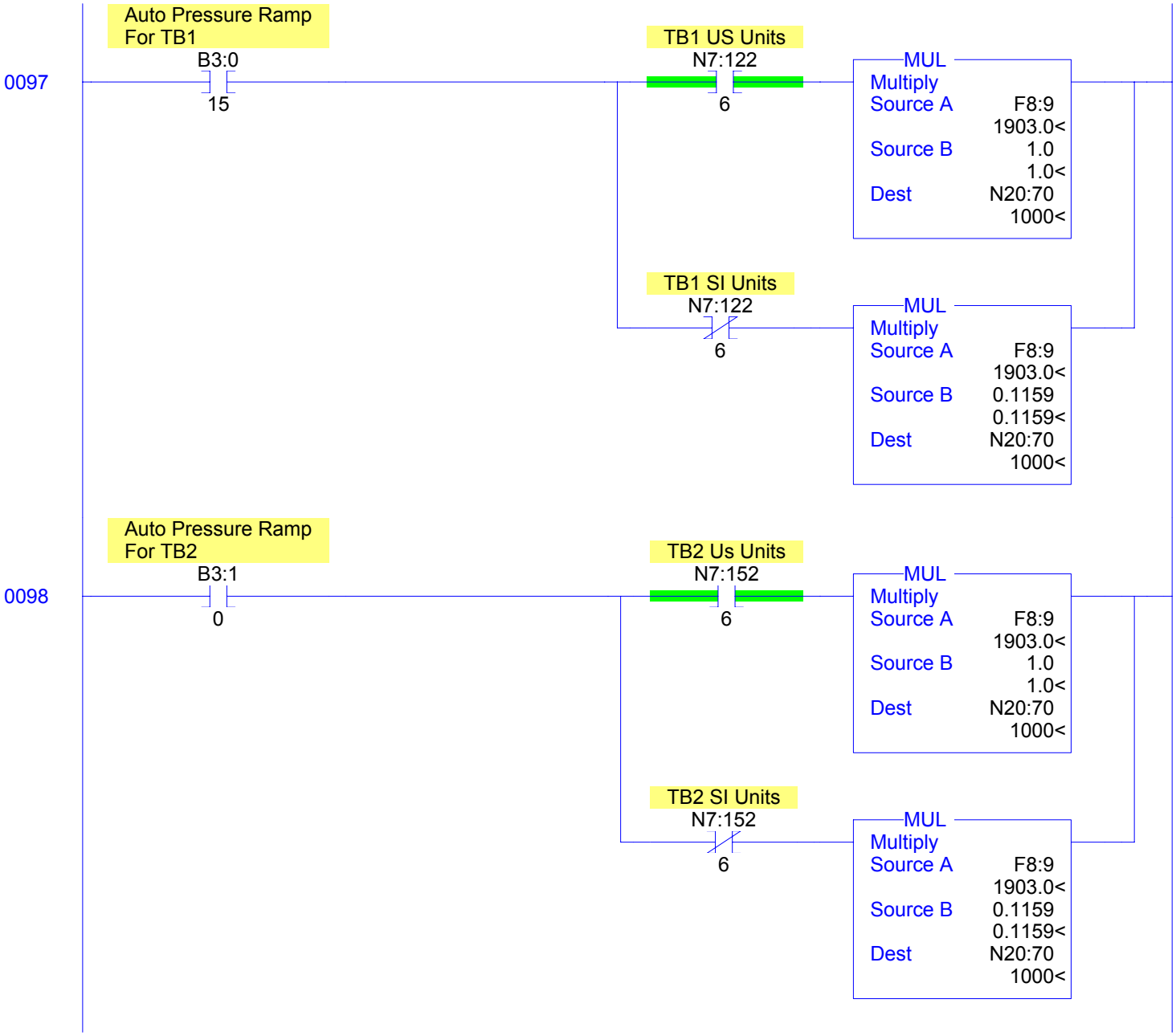
LAD 4 - STI --- Total Rungs in File = 120



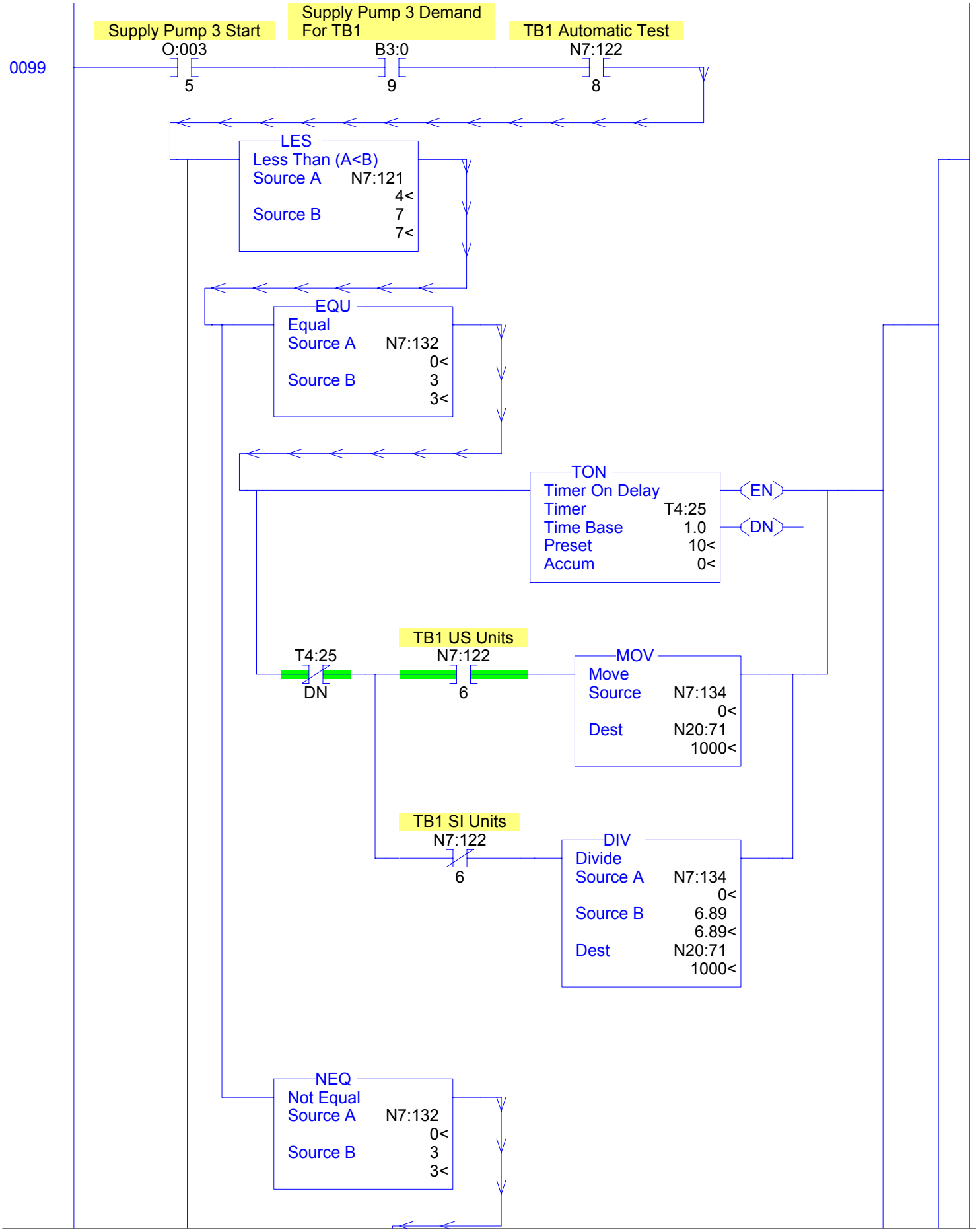
LAD 4 - STI --- Total Rungs in File = 120



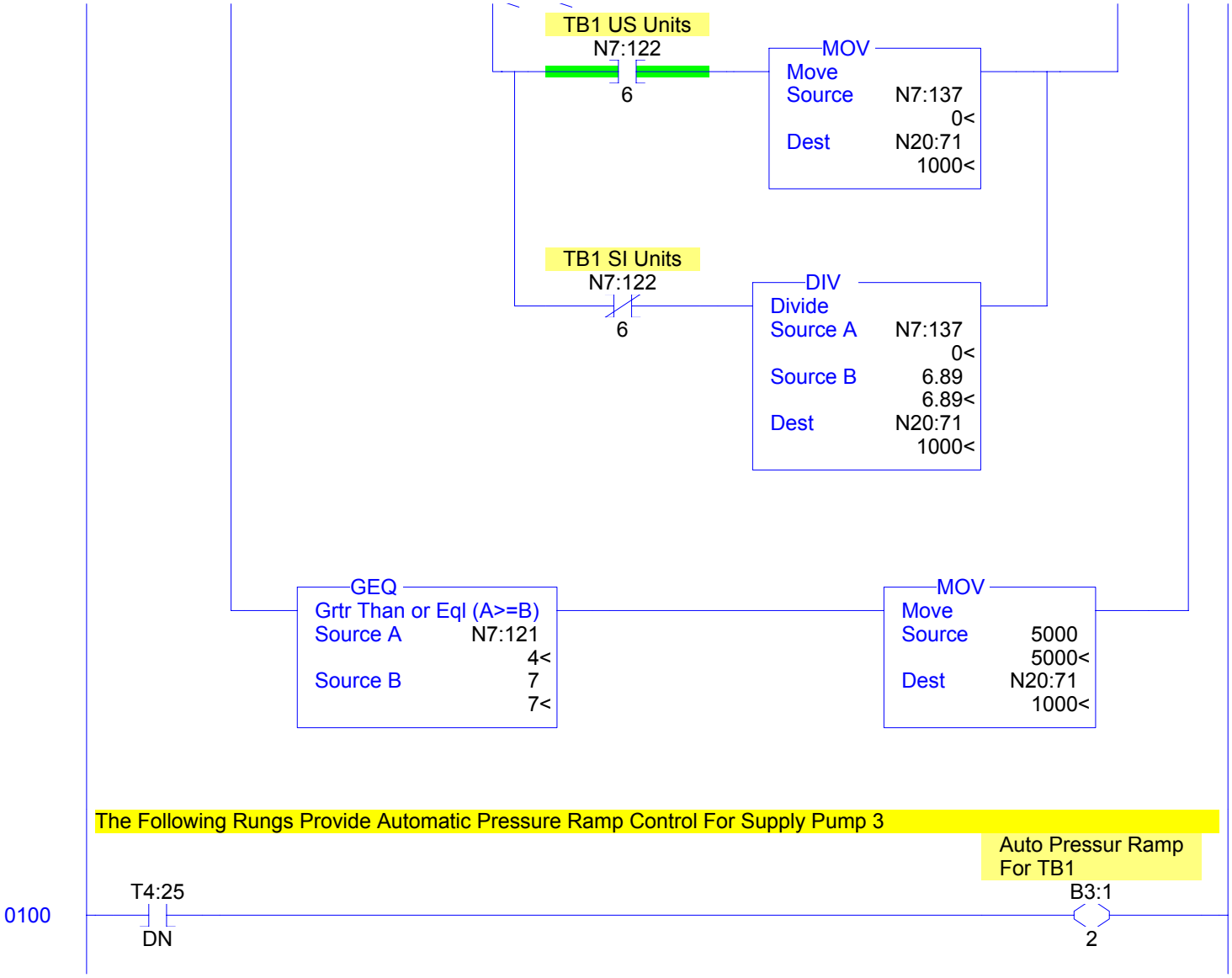
LAD 4 - STI --- Total Rungs in File = 120



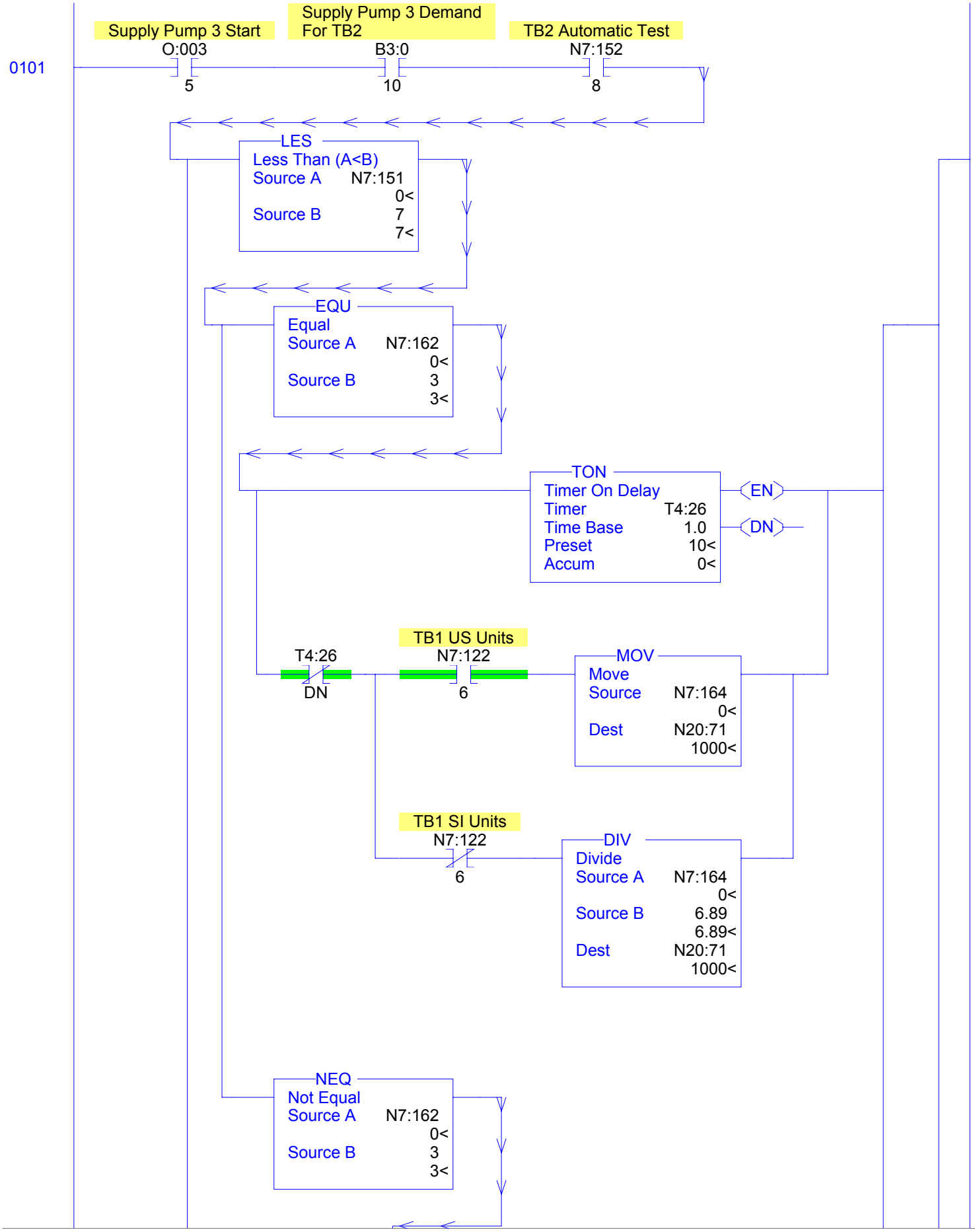
LAD 4 - STI --- Total Rungs in File = 120



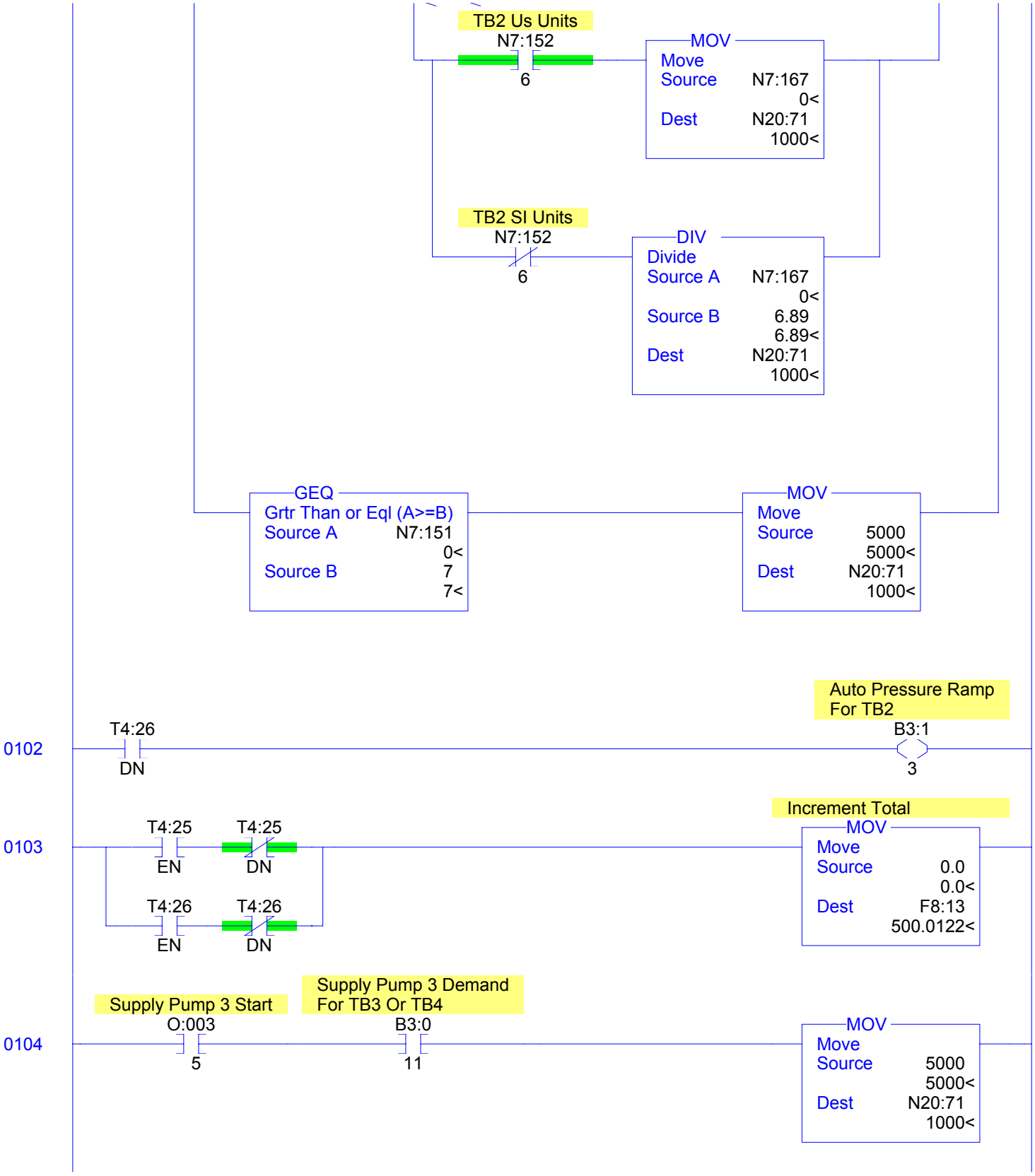
LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120

Subtract Pressure Minimum From Pressure Maximum
Multiply Duration Of cycle By6 10.0
Auto Pressur Ramp
For TB1

0105

B3:1
2

SUB
Subtract
Source A N7:133
0<
Source B N7:134
0<
Dest F8:10
1000.0<

MUL
Multiply
Source A N7:131
0<
Source B 10.0
10.0<
Dest F8:11
1800.0<

Subtract Pressure Minimum From Pressure Maximum
Multiply Duration Of Cycle By 10.0
Auto Pressure Ramp
For TB2

0106

B3:1
3

SUB
Subtract
Source A N7:163
0<
Source B N7:164
0<
Dest F8:10
1000.0<

MUL
Multiply
Source A N7:161
0<
Source B 10.0
10.0<
Dest F8:11
1800.0<

Divide Above Results To Get Increment Or Decremetn Per 50 Milliseconds
Auto Pressur Ramp
For TB1

0107

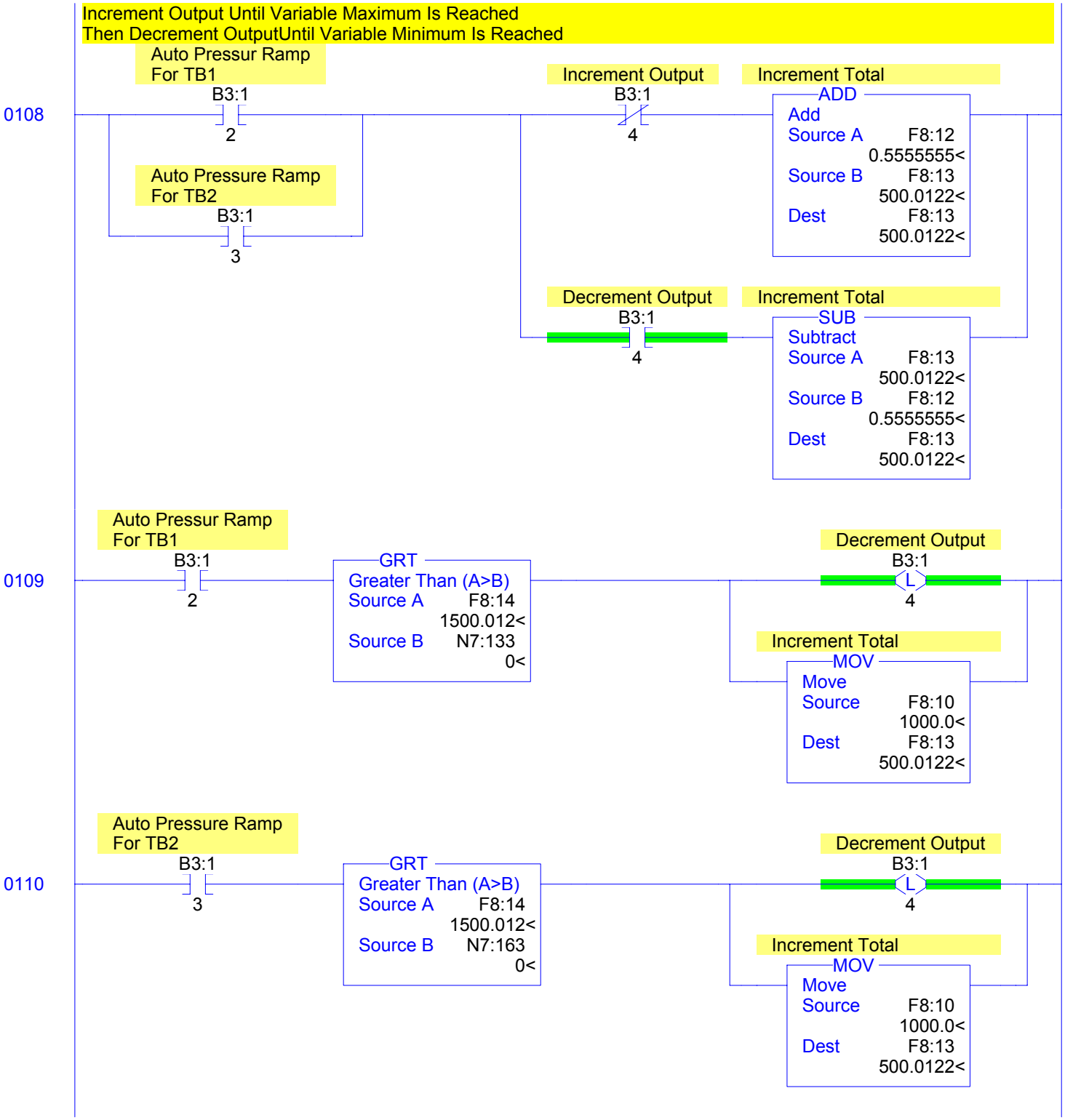
B3:1
2

Auto Pressure Ramp
For TB2

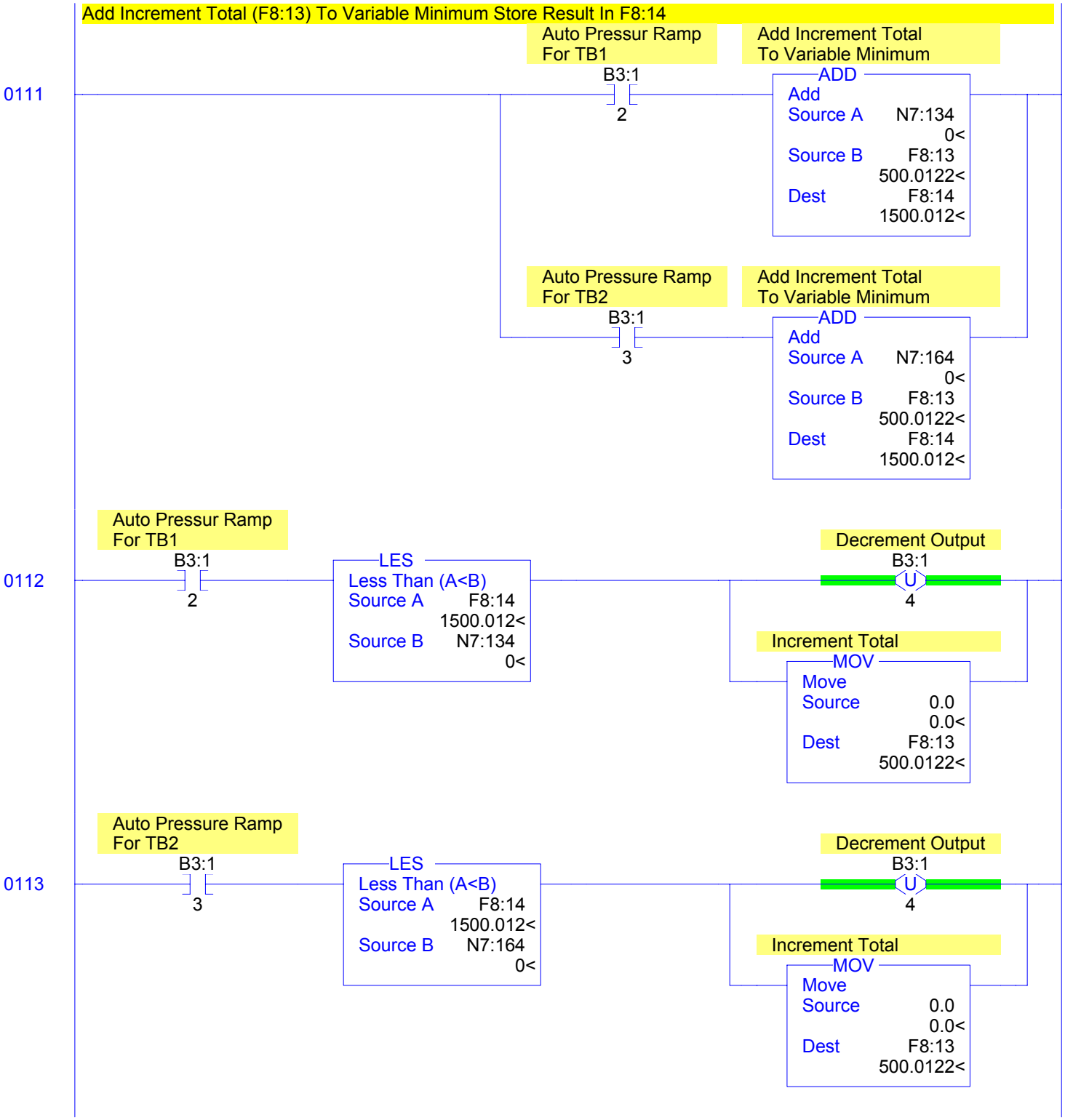
B3:1
3

DIV
Divide
Source A F8:10
1000.0<
Source B F8:11
1800.0<
Dest F8:12
0.5555555<

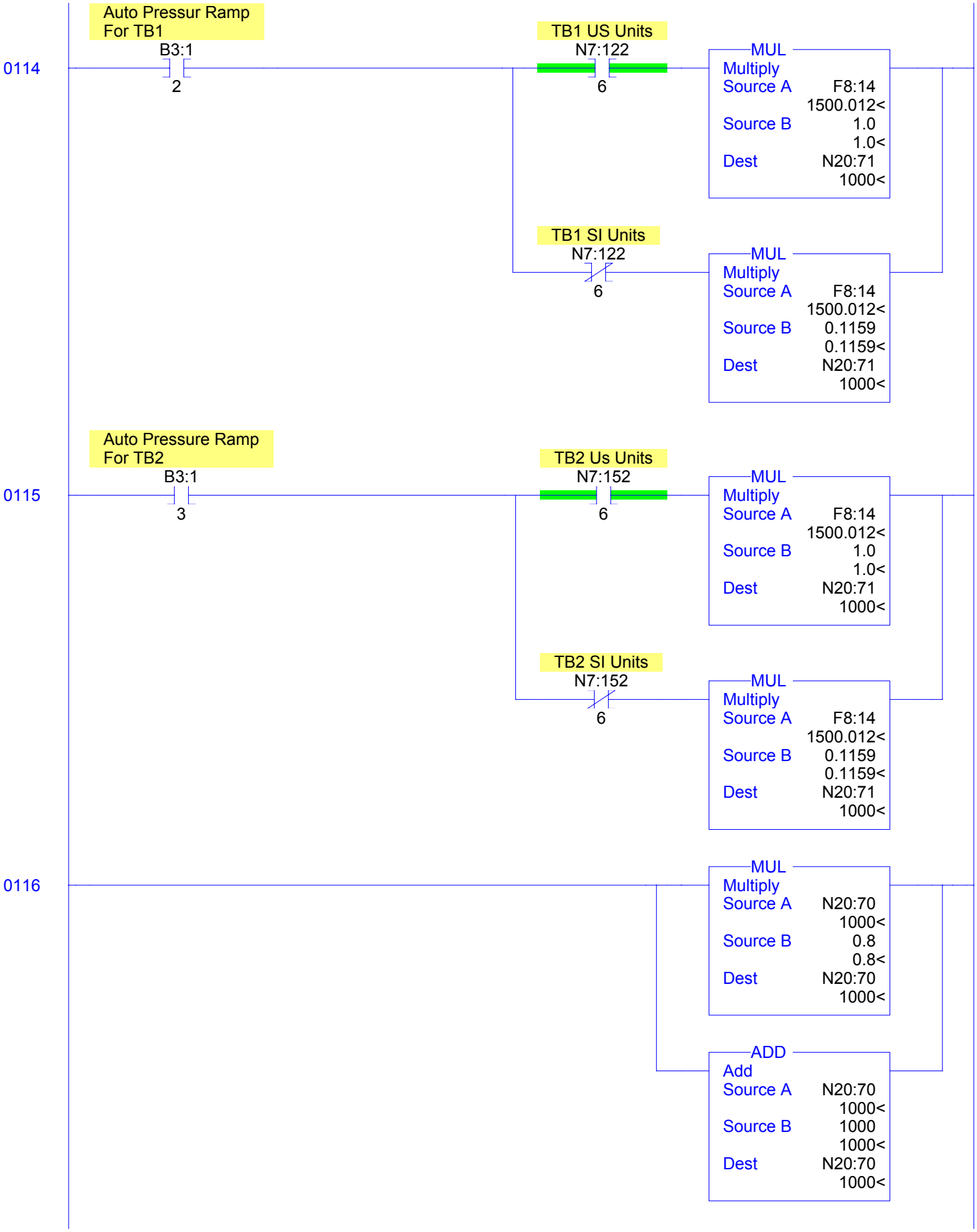
LAD 4 - STI --- Total Rungs in File = 120



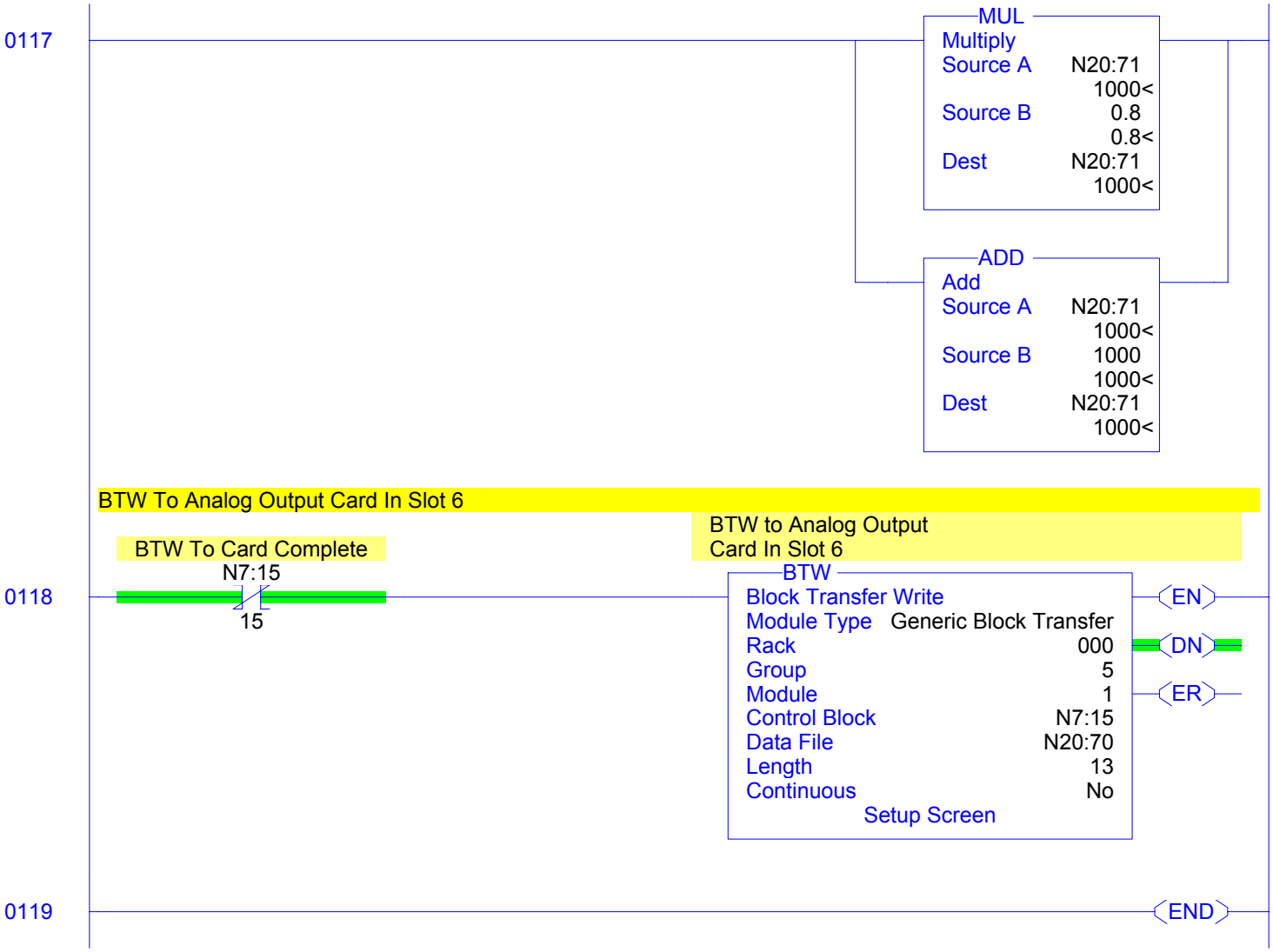
LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120



LAD 4 - STI --- Total Rungs in File = 120



File T4

Offset	EN	TT	DN	BASE	PRE	ACC	(Symbol) Description
T4:0	1	1	0	.01 sec	50	17	Message Read Timer
T4:1	1	1	0	.01 sec	100	33	Message Write Timer
T4:2	0	0	0	1.0 sec	200	200	Pilot Pressure Pump Demand
T4:3	0	0	0	1.0 sec	7200	7200	Re-Circ Pump Off Delay
T4:4	0	0	0	1.0 sec	5	0	Immersion Heater 1 On Delay
T4:5	0	0	0	1.0 sec	10	0	Immersion Heater 2 On Delay
T4:6	0	0	0	1.0 sec	15	0	Immersion heater 3 On Delay
T4:7	0	0	0	1.0 sec	5	0	Supply Pump 1 Alarm On Delay
T4:8	0	0	0	1.0 sec	5	0	Supply Pump 2 Alarm On Delay
T4:9	0	0	0	1.0 sec	5	0	Supply Pump 3 Alarm On Delay
T4:10	1	1	0	.01 sec	500	211	Check Day Calander
T4:11	1	0	1	1.0 sec	1	1	
T4:12	0	0	0	1.0 sec	60	60	Lube Pump 1 Off Delay
T4:13	0	0	0	1.0 sec	60	60	Lube Pump 2 Off Delay
T4:14	1	1	0	.01 sec	200	142	
T4:15	0	0	0	1.0 sec	190	190	Boost Pump Demand
T4:16	0	0	0	1.0 sec	12	12	
T4:17	0	0	0	1.0 sec	12	12	
T4:18	0	0	0	1.0 sec	180	180	Supply Pump 1 Demand Off Delay
T4:19	0	0	0	1.0 sec	180	180	Supply Pump 2 Demand On Delay
T4:20	0	0	0	1.0 sec	180	180	Supply Pump 3 Demand Off Delay
T4:21	0	0	0	1.0 sec	10	0	
T4:22	0	0	0	1.0 sec	10	0	
T4:23	0	0	0	1.0 sec	10	0	
T4:24	0	0	0	1.0 sec	10	0	
T4:25	0	0	0	1.0 sec	10	0	
T4:26	0	0	0	1.0 sec	10	0	
T4:27	0	0	0	1.0 sec	5	0	

File C5

Offset	CU	CD	DN	OV	UN	PRE	ACC	(Symbol)	Description
C5:0	0	0	0	0	0	5	0		

File F8

Offset	0	1	2	3	4
F8:0	600	400	1.5	3	1903
F8:5	600	400	1.5	3	1903
F8:10	1000	1800	0.5555555	500.0122	1500.012
F8:15	8766	244.8008	0.5714111	1078.071	245
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

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	

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Cod
B3:0/1			Immersion Heater Demand		
B3:0/2			Auto Time Control		
B3:0/3			Supply Pump 1 Demand For TB1		
B3:0/4			Supply Pump 1 Demand For TB2		
B3:0/5			Supply Pump 1 Demand For TB3 Or TB4		
B3:0/6			Supply Pump 2 Demand For TB1		
B3:0/7			Supply Pump 2 Demand For TB2		
B3:0/8			Supply Pump 2 Demand For TB3 Or TB4		
B3:0/9			Supply Pump 3 Demand For TB1		
B3:0/10			Supply Pump 3 Demand For TB2		
B3:0/11			Supply Pump 3 Demand For TB3 Or TB4		
B3:0/12			Auto Pressure Ramp For TB1		
B3:0/13			Auto Pressure Ramp For TB2		
B3:0/14			Decrement Output		
B3:0/15			Auto Pressure Ramp For TB1		
B3:1/0			Auto Pressure Ramp For TB2		
B3:1/1			Decrement Output		
B3:1/2			Auto Pressur Ramp For TB1		
B3:1/3			Auto Pressure Ramp For TB2		
B3:1/4			Decrement Output		
F8:8			Increment Total		
F8:9					
F8:13			Increment Total		
F8:14					
F8:19			Temperature		
I:000/0			Temerature Switch (HPU-1) Cooler On		
I:000/1			Temeratrue Switch (HPU-2) Cooler Off		
I:000/2			Temerature Switch (HPU-3) Heater On		
I:000/3			Temerature Switch (HPU-4) Heater Off		
I:000/4			High Temperature Shutdown (HPU-5)		
I:000/5			Inlet Valve Limit Switch		
I:000/6			3 Micron Return Filter Cloged (HPU-11)		
I:000/7			10 Micron Kidney Filter Cloged (HPU-9)		
I:000/10			10 Micron Return Filter Cloged (HPU-10)		
I:000/11			3 Micron Kidney Filter Cloged (HPU-8)		
I:000/12			Boost Pump Inlet Valve Limit Switch		
I:000/13			Inlet Valve Limit Switch HPU-18		
I:000/14			Inlet Valve Limit Switch HPU-19		
I:000/15			Inlet Valve Limit Switch HPU-20		
I:000/16			Intake Valve Limit Switch		
I:000/17			Fill Port Valve Limit Switch		
I:002/0			Boost Pump Running		
I:002/1			Pilot Pressure Inlet Valve Limit Switch		
I:002/2			High Reservoir level (HPU-6)		
I:002/3			Low Reservoir Level (HPU-6)		
I:002/4			Low Reservoir Level Shutdown (HPU-6)		
I:002/5			Re-Circulation Pump Running		
I:002/7			Pilot Pressure Pump Running		
I:002/10			Pilot Pressure Filter Cloged (HPU-14)		
I:002/11			Pilot Pressure Switch		
I:002/12			Supply Pump 1 Running		
I:002/13			Supply Pump 1 Overload		
I:002/14			Supply Pump 2 Running		
I:002/15			Supply Pump 2 Overload		
I:002/16			Supply Pump 3 Running		
I:002/17			Supply Pump 3 Overload		
N7:0			Block Transfer Write control block		
N7:5			Block Transfer Read control block		
N7:10			BTW to Analog Output Card In Slot 8		
N7:10/15			BTW To Analog output Card In Slot 8		
N7:15					
N7:15/15			BTW To Card Complete		
N7:122/6			TB1 US Units		
N7:122/8			TB1 Automatic Test		
N7:122/9			TB1 Test Running		
N7:152/6			TB2 Us Units		
N7:152/8			TB2 Automatic Test		
N7:152/9			TB2 Test Running		
N7:182/6			TB3 US Units		
N7:182/9			TB3 Test Running		
N7:212/6			TB4 Us Units		
N7:212/9			TB4 Test Running		
N20:0			Write data block		
N20:30			Read data block		
N20:30/0			Power up bit		
N20:34			Pilot Press		
N20:35			Hyd. Temp		
N20:36			HP1 Press.		
N20:37			Hp2 Press.		
O:001/1			Boost Pump TB1 Supply Valve Solenoid		

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Cod
O:001/3			Boost Pump TB2 Supply Valve		
O:001/5			Solenoid Valve HPU-21		
O:001/6			Solenoid Valve HPU-22		
O:001/7			Solenoid Valve HPU-23		
O:001/10			Supply Pump 1- Supply Pump 2- Inter-Connection Valve Solenoid		
O:001/11			Suply Pump 2- Supply Pump 3- Inter-Connection Valve Solenoid		
O:003/0			Boost pump Start Relay		
O:003/1			Re-Circulating Pump Start Relay		
O:003/2			Pilot Pressure Pump Start Relay		
O:003/3			Supply Pump 1 Start		
O:003/4			Supply Pump 2 Start		
O:003/5			Supply Pump 3 Start		
O:003/6			Immersion Heater 1 On/Off		
O:003/7			Immersion Heater 2 On/Off		
O:003/10			Immersion Heater 3 On/Off		
O:003/11			Water Valve Solenoid		
O:003/12			Lube Pump 1 Start		
O:003/13			Lube Pump 2 Start		
O:003/17			HPU Alarm		
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		
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		

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Cod
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		
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		

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Cod
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		
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		

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Cod
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			Message Read Timer		
T4:0/DN			Reset Message Read Timer		
T4:1			Message Write Timer		
T4:1/DN			Reset Message Write Timer		
T4:2			Pilot Pressure Pump Demand		
T4:3			Re-Circ Pump Off Delay		
T4:3/DN			Re-circ Pump Off Delay		
T4:4			Immersion Heater 1 On Delay		
T4:5			Immersion Heater 2 On Delay		
T4:6			Immersion heater 3 On Delay		
T4:7			Supply Pump 1 Alarm On Delay		
T4:8			Supply Pump 2 Alarm On Delay		
T4:8/DN			Supply Pump 2 Alarm On Delay		
T4:9			Supply Pump 3 Alarm On Delay		
T4:9/DN			Supply Pump 3 Alarm On Delay		
T4:10			Check Day Calander		
T4:10/DN			Execute Day Of Week Routine		
T4:12			Lube Pump 1 Off Delay		
T4:12/DN			Lube Pump 1 Timer		
T4:13			Lube Pump 2 Off Delay		
T4:13/DN			Lube Pump 2 Timer		
T4:15			Boost Pump Demand		
T4:18			Supply Pump 1 Demand Off Delay		
T4:19			Supply Pump 2 Demand On Delay		
T4:20			Supply Pump 3 Demand Off Delay		
T4:27/DN			Reservoir Low Level Shutdown		

Instruction Comment Database

Address	Instruction	Description
B3:0/14	XIO	Increment Output
B3:1/1	XIO	Increment Output
B3:1/4	XIO	Increment Output
F8:9	ADD	Add Increment Total To Variable Minimum
F8:14	ADD	Add Increment Total To Variable Minimum
F8:19	MUL	Temperature Converion
F8:19	SUB	Temperature Conversion
N7:0	BTW	Analog Input Card BTW
N7:5	BTR	Analog Input Card BTR
N7:15	BTW	BTW to Analog Output Card In Slot 6
N7:122/6	XIO	TB1 SI Units
N7:122/8	XIO	TB1 Manual Test
N7:152/6	XIO	TB2 SI Units
N7:152/8	XIO	TB2 Manual Test
N7:182/6	XIO	TB3 SI Units
N7:212/6	XIO	TB4 SI Units
T4:0/DN	XIC	Message Read From TB1 - TB4
T4:1/DN	XIC	Message Write To TB1 - TB4