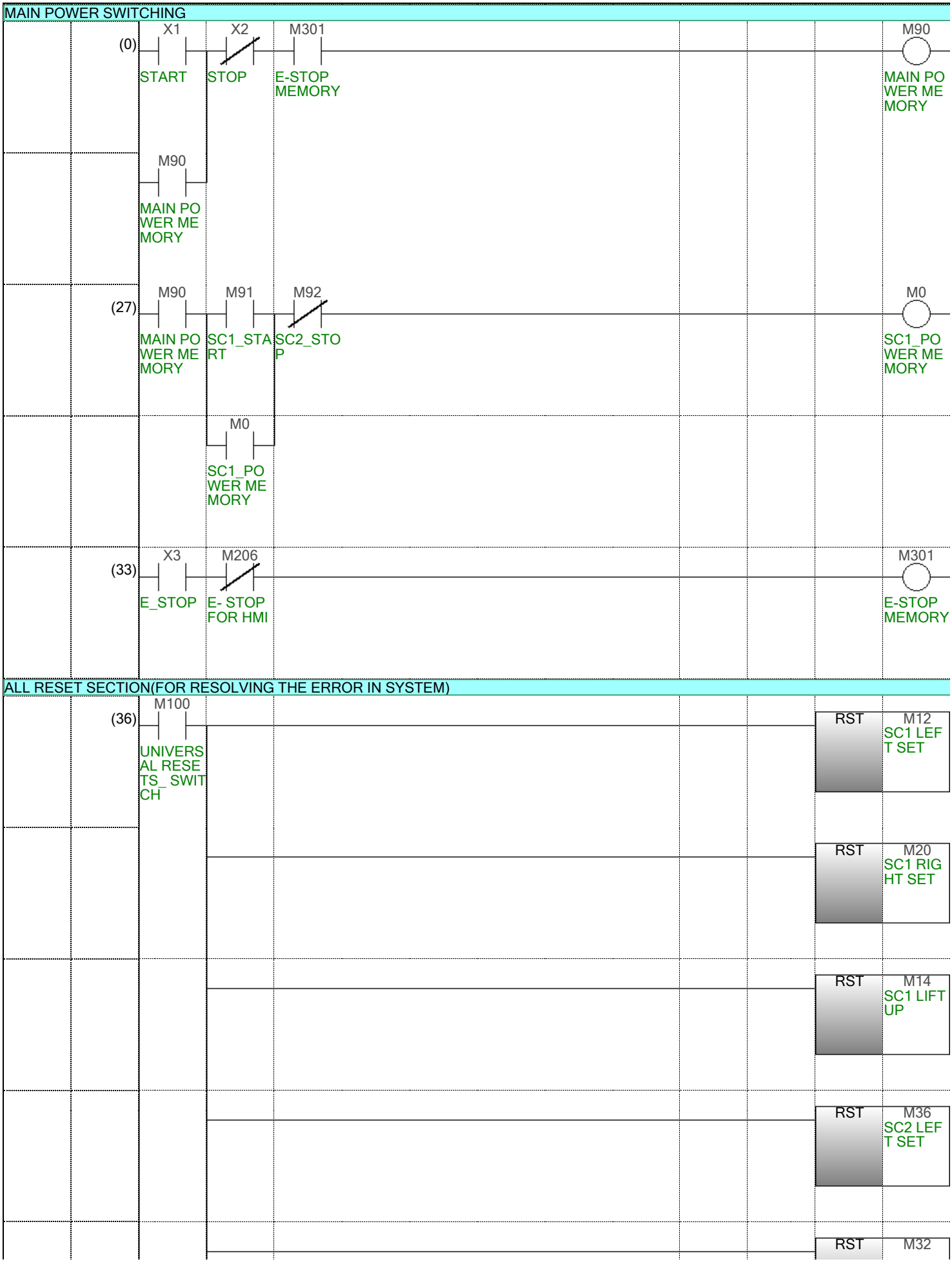
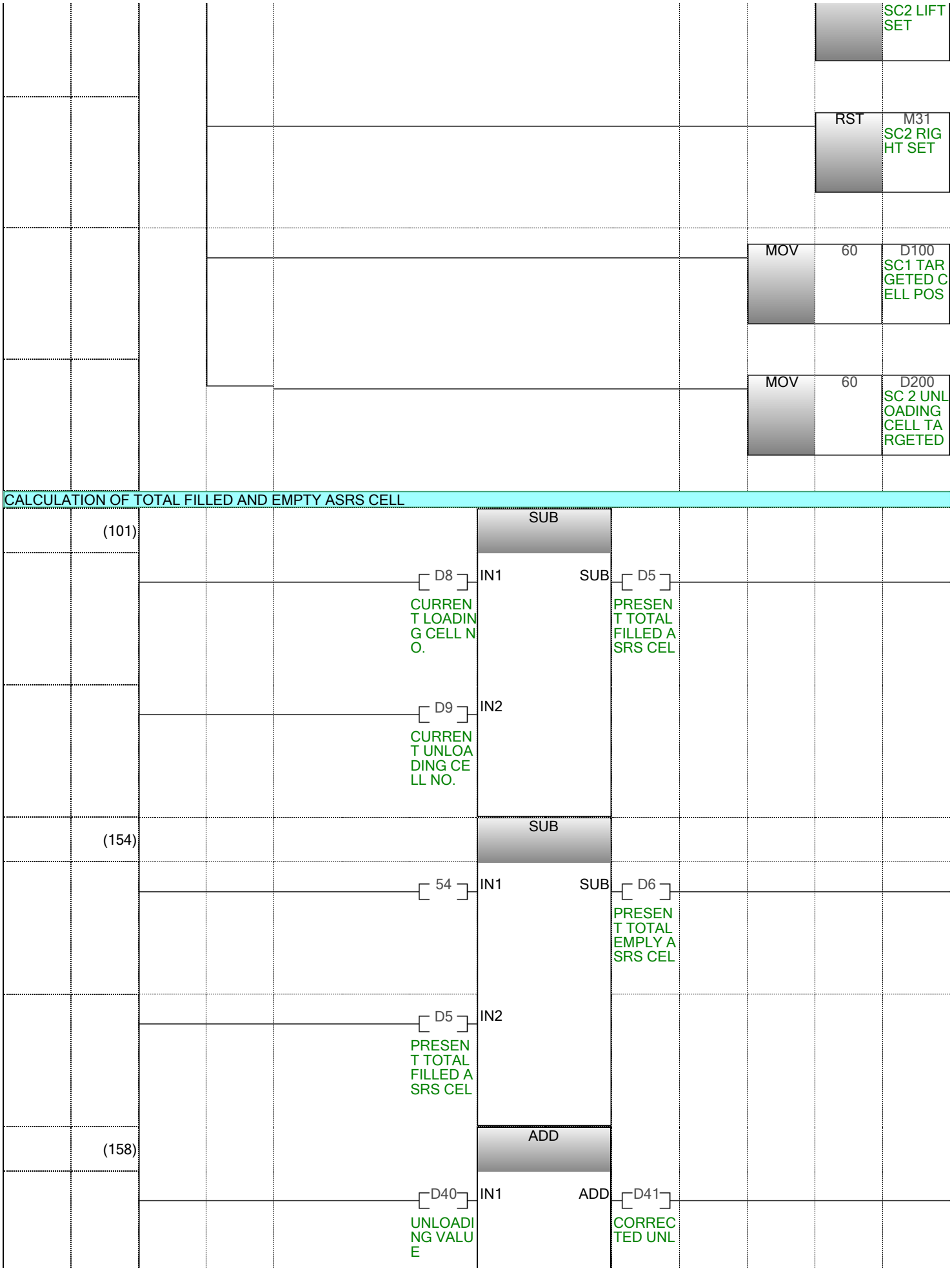
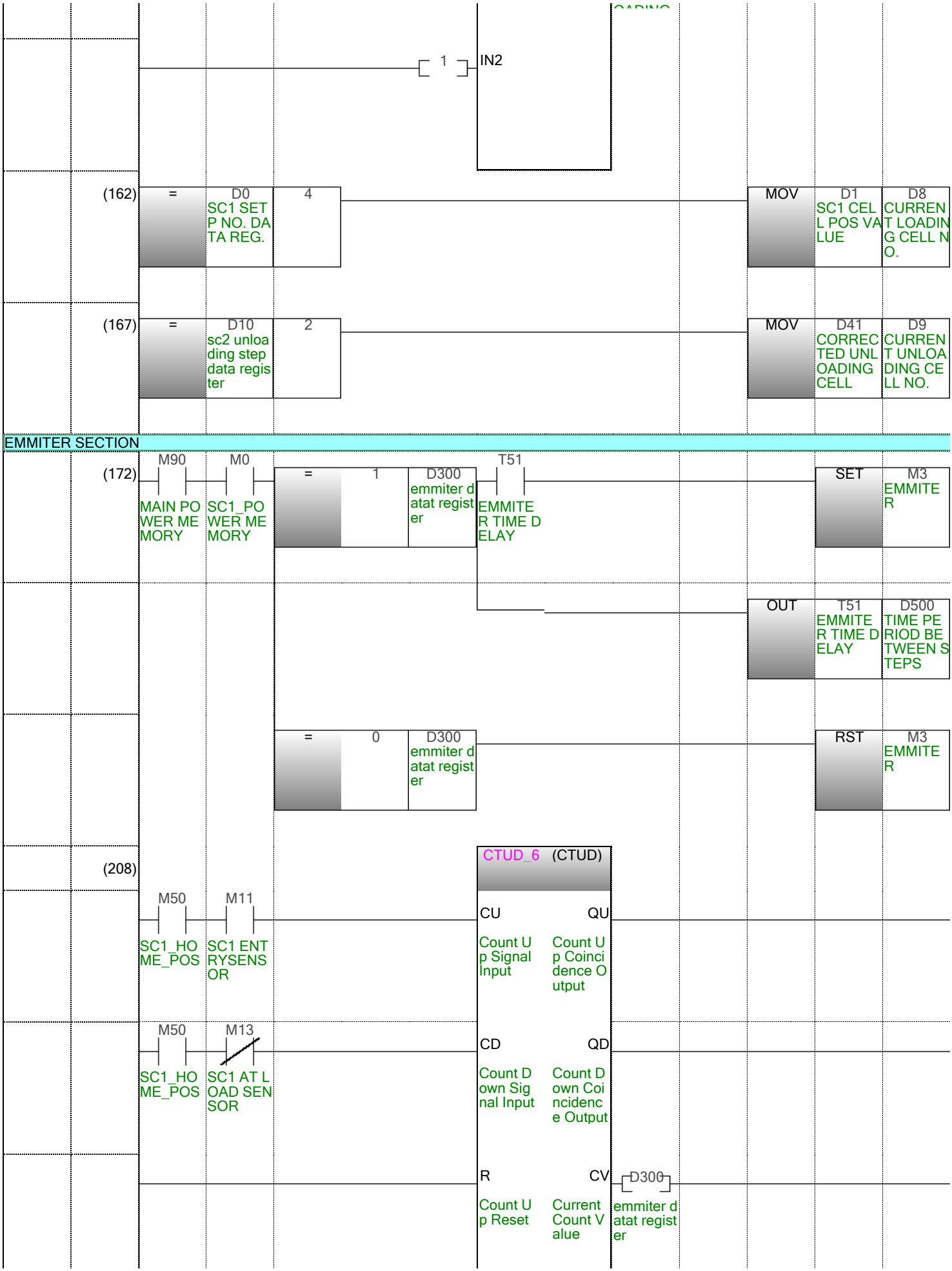
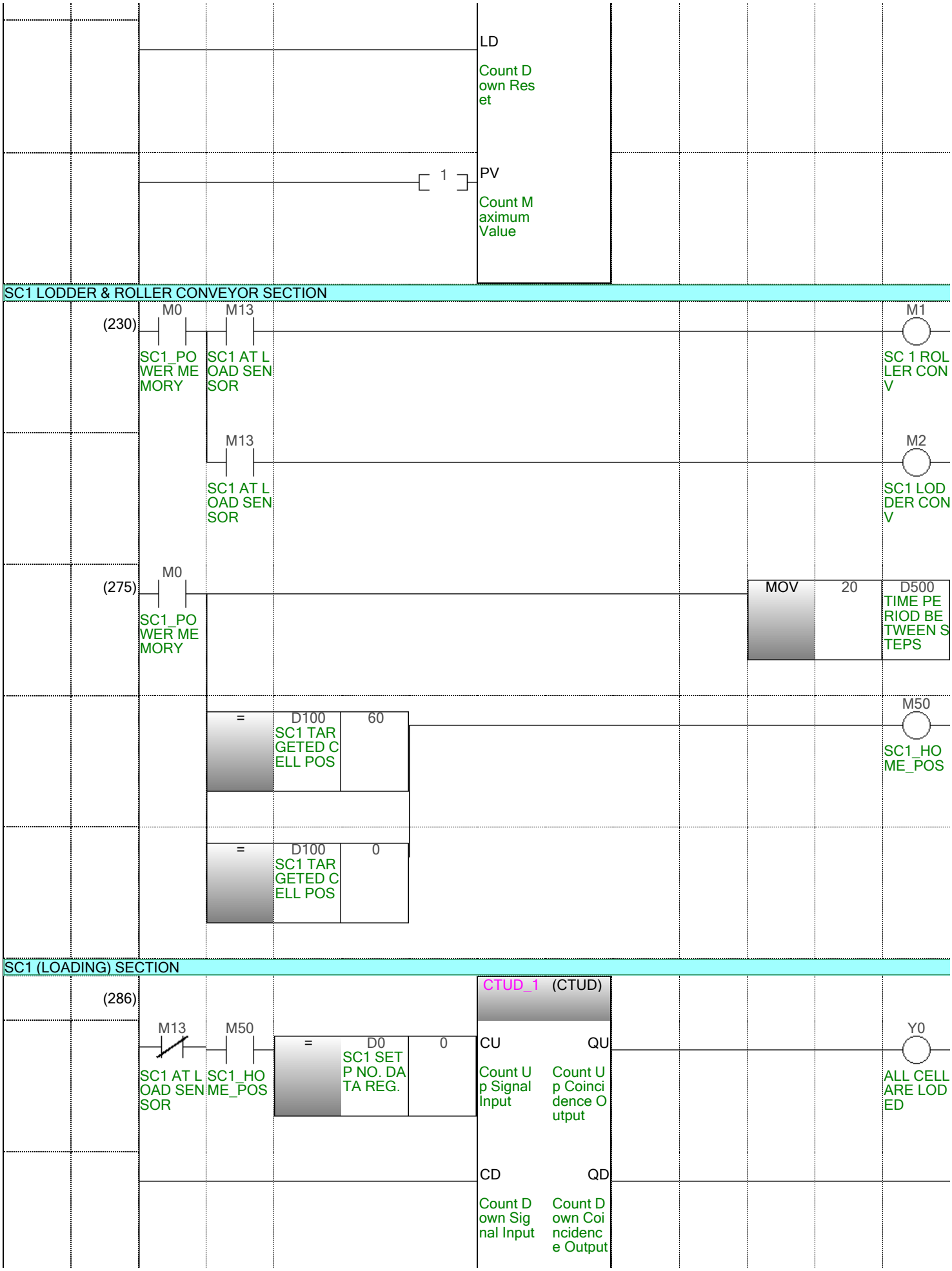
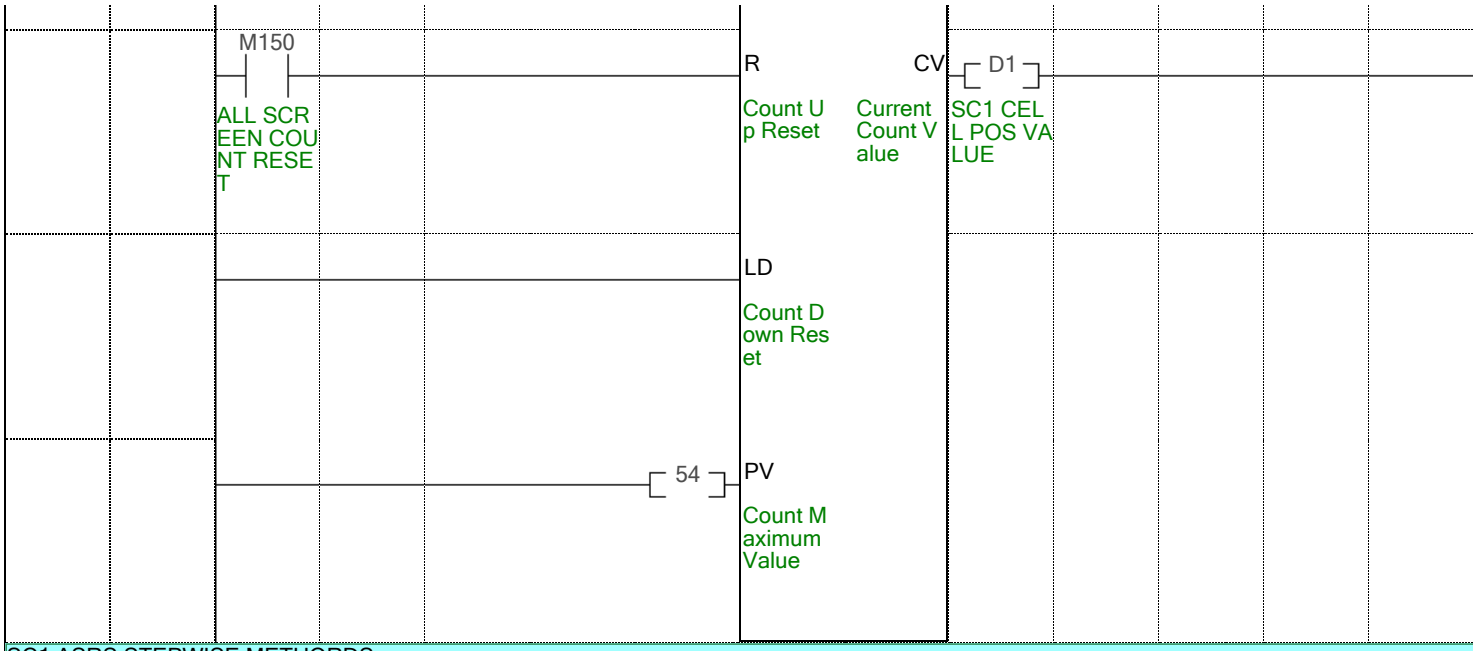

MAIN POWER SWITCHING
(0)
X1
START
X2
STOP
M301
E-STOP MEMORY
M90
MAIN POWER MEMORY
M90
MAIN POWER MEMORY
(27)
M90
MAIN POWER MEMORY
M91
SC1_START
M92
SC2_STOP
M0
SC1_POWER MEMORY
M0
SC1_POWER MEMORY
(33)
X3
E_STOP
M206
E- STOP FOR HMI
M301
E-STOP MEMORY
ALL RESET SECTION(FOR RESOLVING THE ERROR IN SYSTEM)
(36)
M100
UNIVERSAL RESETS_ SWITCH
RST
M12
SC1 LEFT SET
RST
M20
SC1 RIGHT SET
RST
M14
SC1 LIFT UP
RST
M36
SC2 LEFT SET
RST
M32


SC2 LIFT SET
RST
M31
SC2 RIGHT SET
MOV
60
D100
SC1 TARGETED CELL POS
MOV
60
D200
SC 2 UNLOADING CELL TARGETED
CALCULATION OF TOTAL FILLED AND EMPTY ASRS CELL
(101)
SUB
D8
IN1
SUB
D5
CURRENT LOADING CELL NO.
PRESENT TOTAL FILLED ASRS CEL
D9
IN2
CURRENT UNLOADING CELL NO.
(154)
SUB
54
IN1
SUB
D6
PRESENT TOTAL EMPLY ASRS CEL
D5
IN2
PRESENT TOTAL FILLED ASRS CEL
(158)
ADD
D40
IN1
ADD
D41
UNLOADING VALUE
CORRECTED UNL

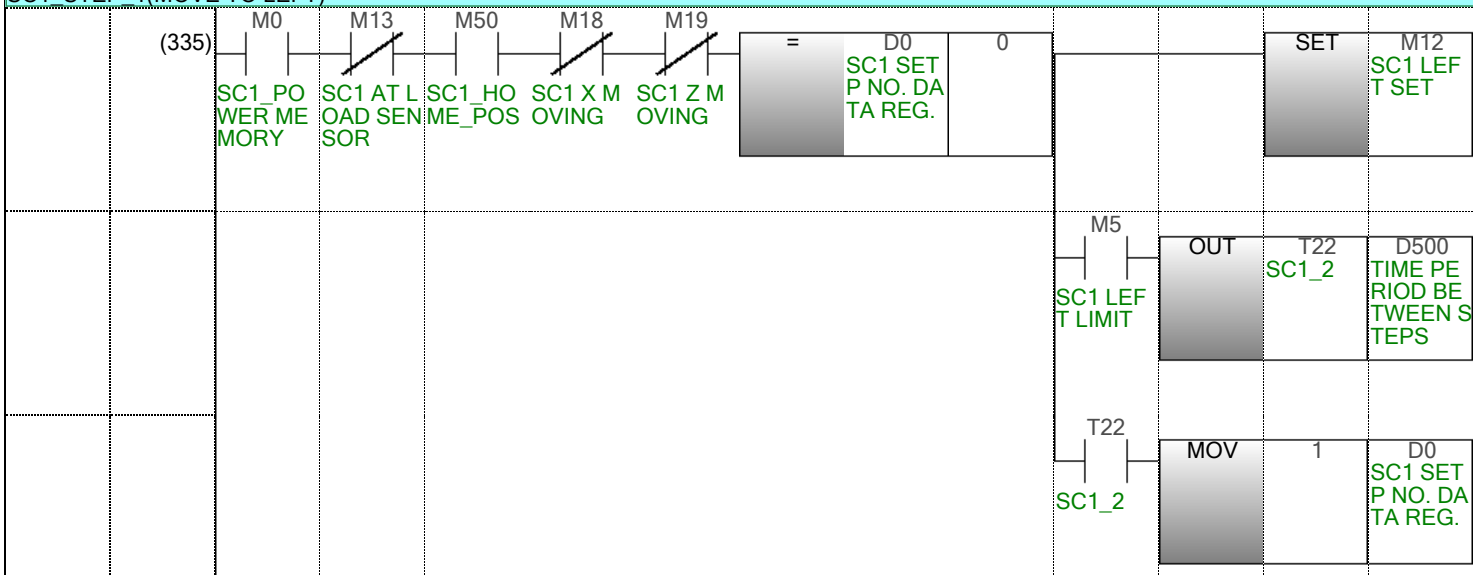

1
IN2
(162)
=
D0
SC1 SET P NO. DATA REG.
4
MOV
D1
SC1 CELL POS VALUE
D8
CURRENT LOADING CELL NO.
(167)
=
D10
sc2 unloading step data register
2
MOV
D41
CORRECTED UNLOADING CELL
D9
CURRENT UNLOADING CELL NO.
EMMITER SECTION
(172)
M90
MAIN POWER MEMORY
M0
SC1_POWER MEMORY
=
1
D300
emmiter datat register
T51
EMMITER TIME DELAY
SET
M3
EMMITER
OUT
T51
EMMITER TIME DELAY
D500
TIME PERIOD BETWEEN STEPS
=
0
D300
emmiter datat register
RST
M3
EMMITER
(208)
CTUD_6
(CTUD)
M50
SC1_HOME_POS
M11
SC1 ENTRYSENSOR
CU
Count Up Signal Input
QU
Count Up Coincidence Output
M50
SC1_HOME_POS
M13
SC1 AT LOAD SENSOR
CD
Count Down Signal Input
QD
Count Down Coincidence Output
R
Count Up Reset
CV
Current Count Value
D300
emmiter datat register


LD
Count Down Reset
1
PV
Count Maximum Value
SC1 LODDER & ROLLER CONVEYOR SECTION
(230)
M0
SC1_POWER MEMORY
M13
SC1 AT LOAD SENSOR
M1
SC 1 ROLLER CONV
M13
SC1 AT LOAD SENSOR
M2
SC1 LODDER CONV
(275)
M0
SC1_POWER MEMORY
MOV
20
D500
TIME PERIOD BETWEEN STEPS
=
D100
SC1 TARGETED CELL POS
60
M50
SC1_HOME_POS
=
D100
SC1 TARGETED CELL POS
0
SC1 (LOADING) SECTION
(286)
M13
SC1 AT LOAD SENSOR
M50
SC1_HOME_POS
=
D0
SC1 SETP NO. DATA REG.
0
CTUD_1
(CTUD)
CU
Count Up Signal Input
QU
Count Up Coincidence Output
CD
Count Down Signal Input
QD
Count Down Coincidence Output
Y0
ALL CELL ARE LODED

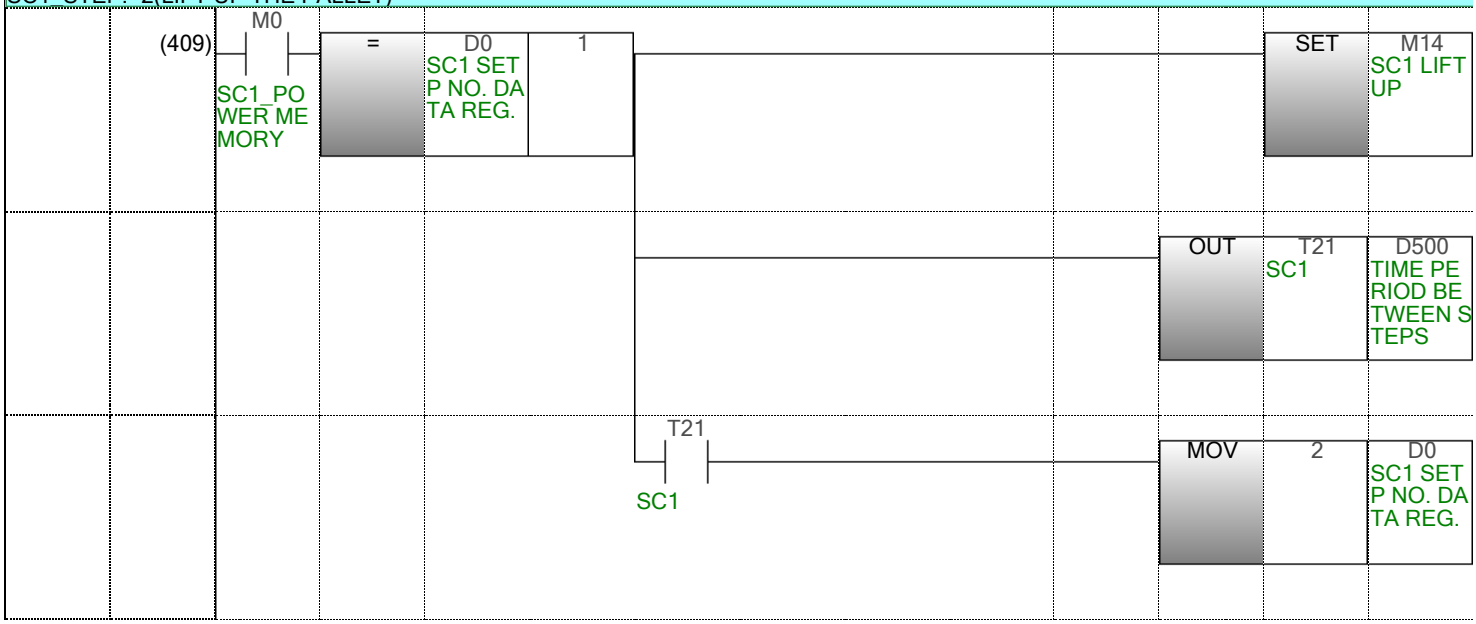


SC1 ASRS STEPWISE METHORDS

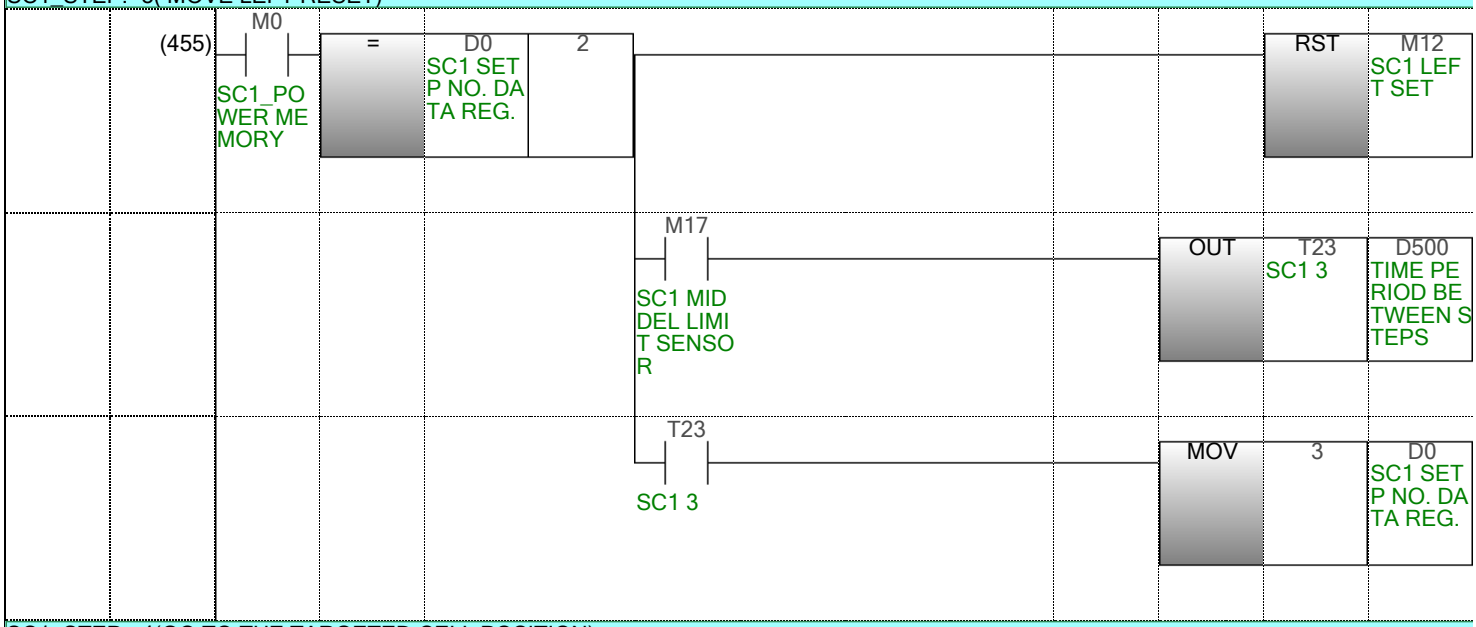
SC1_STEP_1(MOVE TO LEFT)



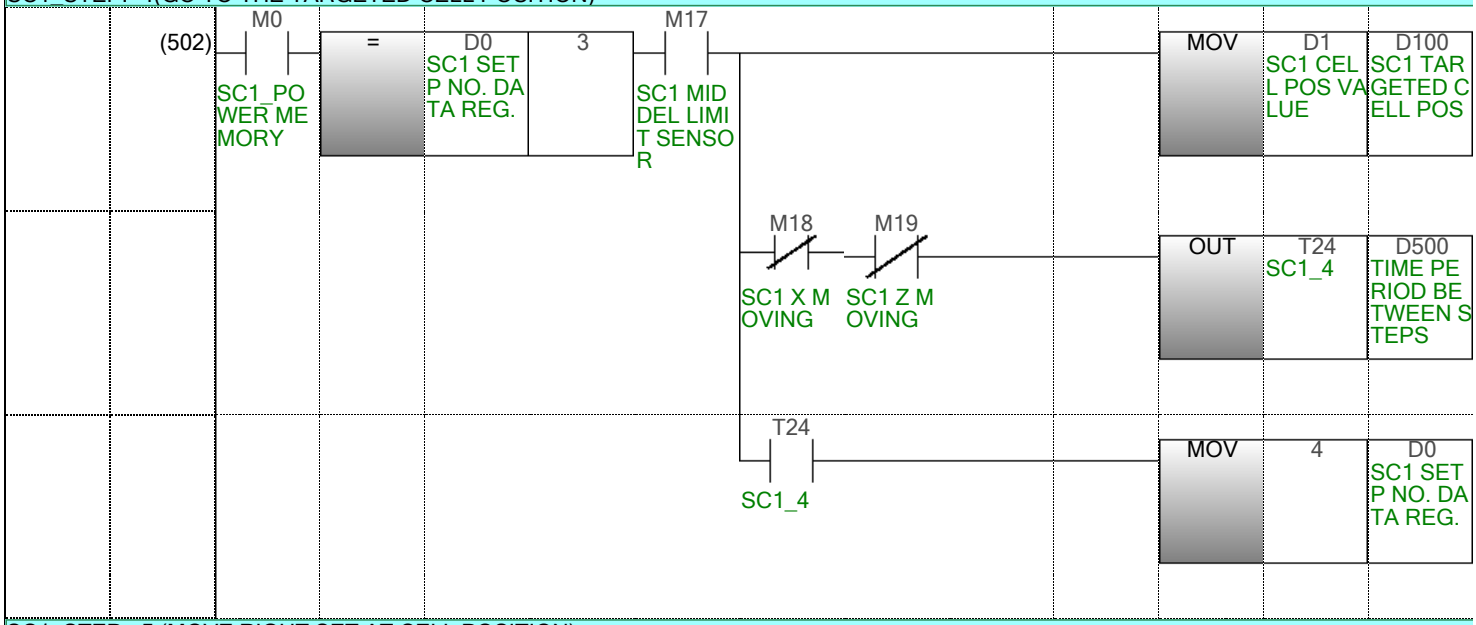
SC1_STEP:- 2(LIFT UP THE PALLET)



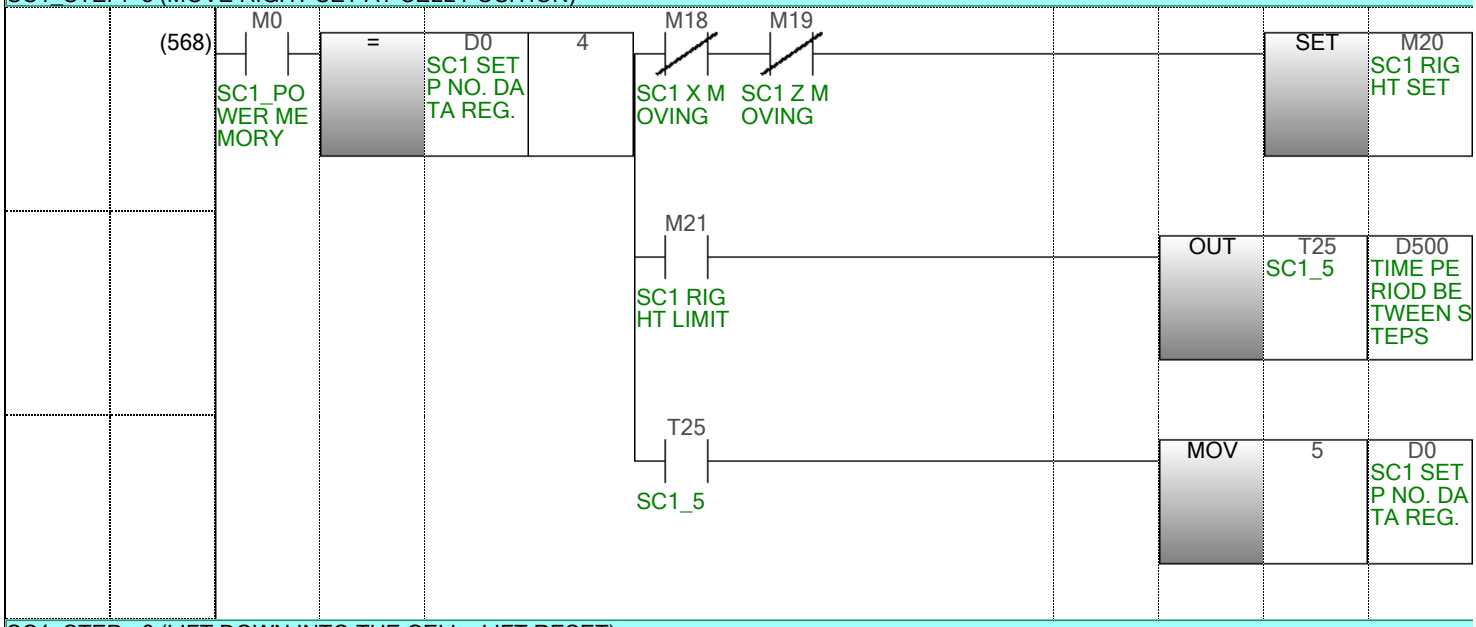
SC1_STEP:- 3(MOVE LEFT RESET)



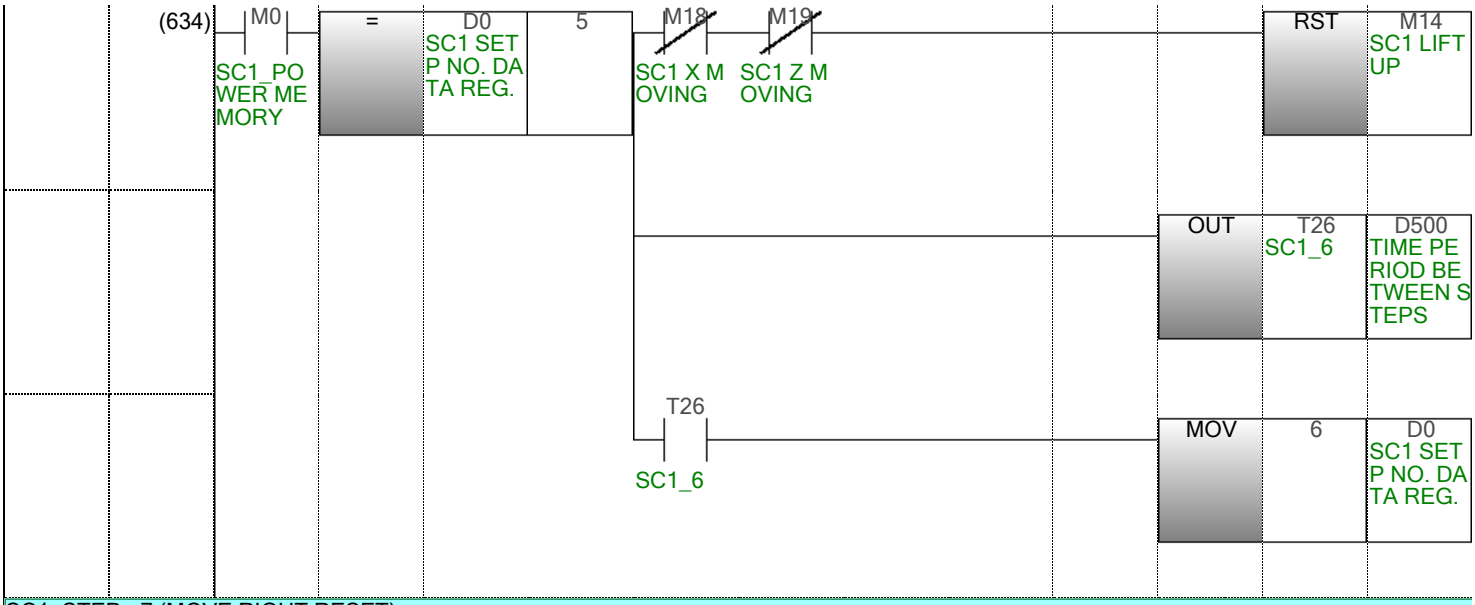
SC1_STEP:- 4(GO TO THE TARGETED CELL POSITION)



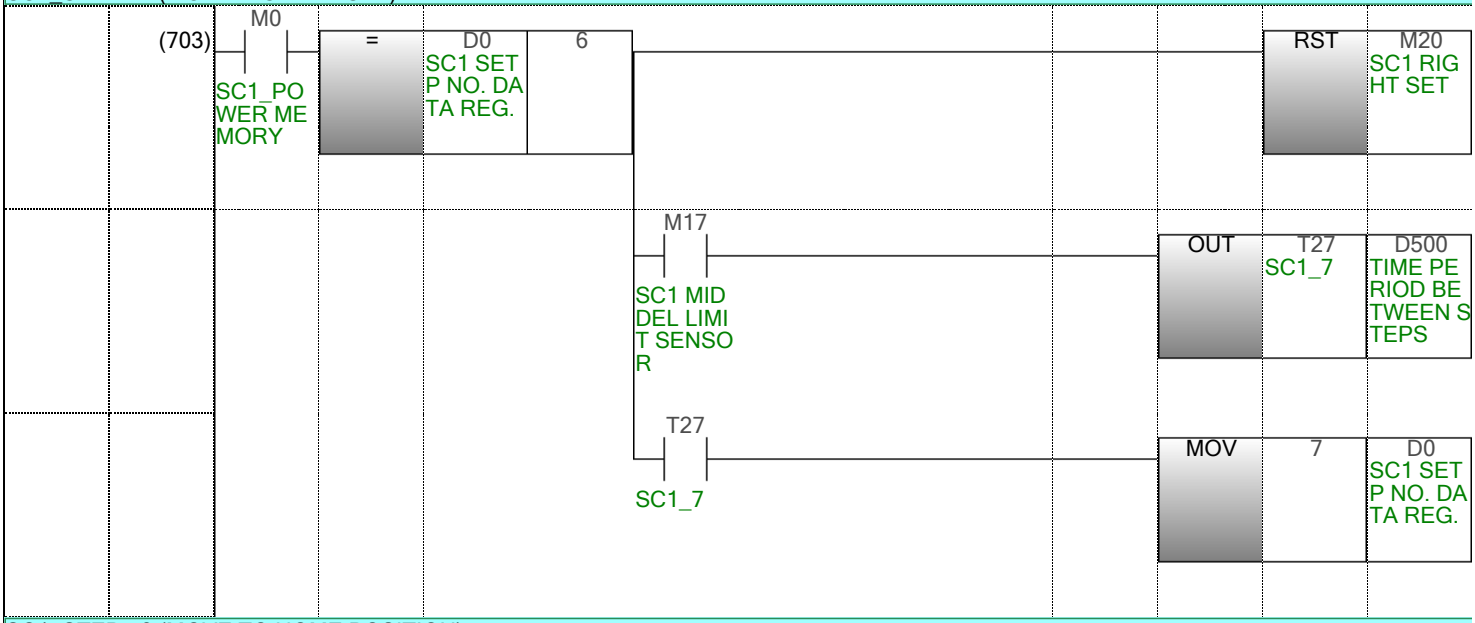
SC1_STEP:- 5 (MOVE RIGHT SET AT CELL POSITION)



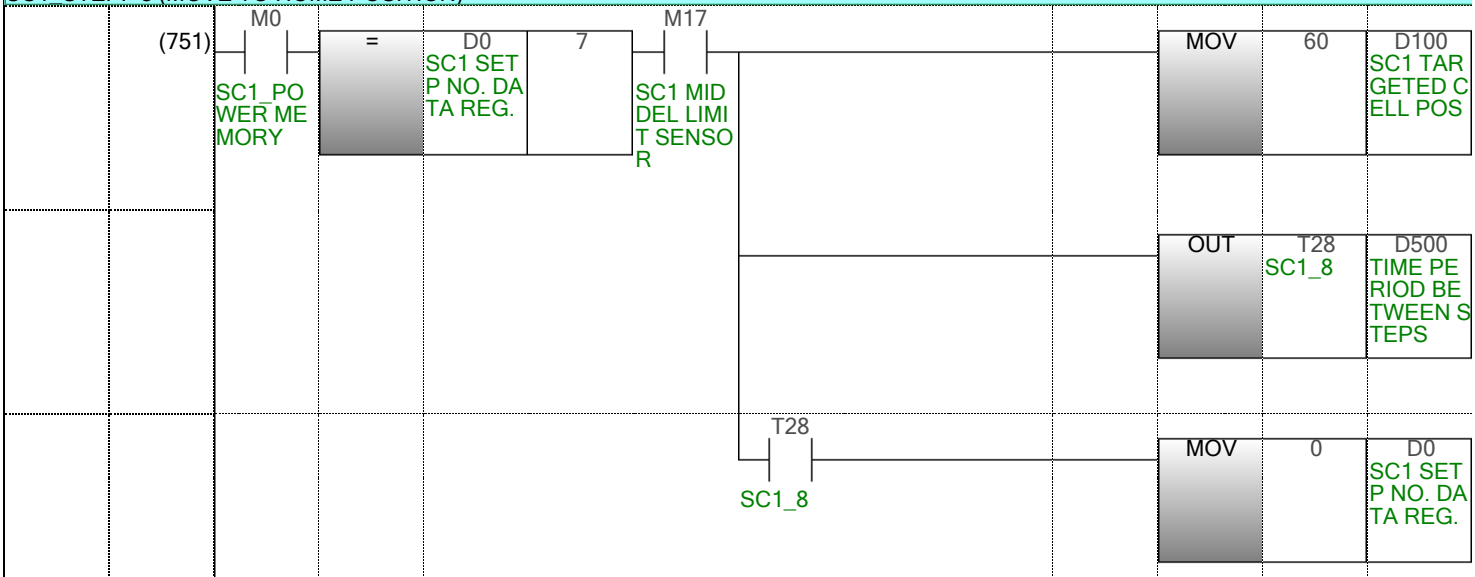
SC1_STEP:- 6 (LIFT DOWN INTO THE CELL...LIFT RESET)



SC1_STEP:- 7 (MOVE RIGHT RESET)

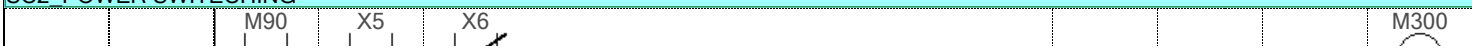


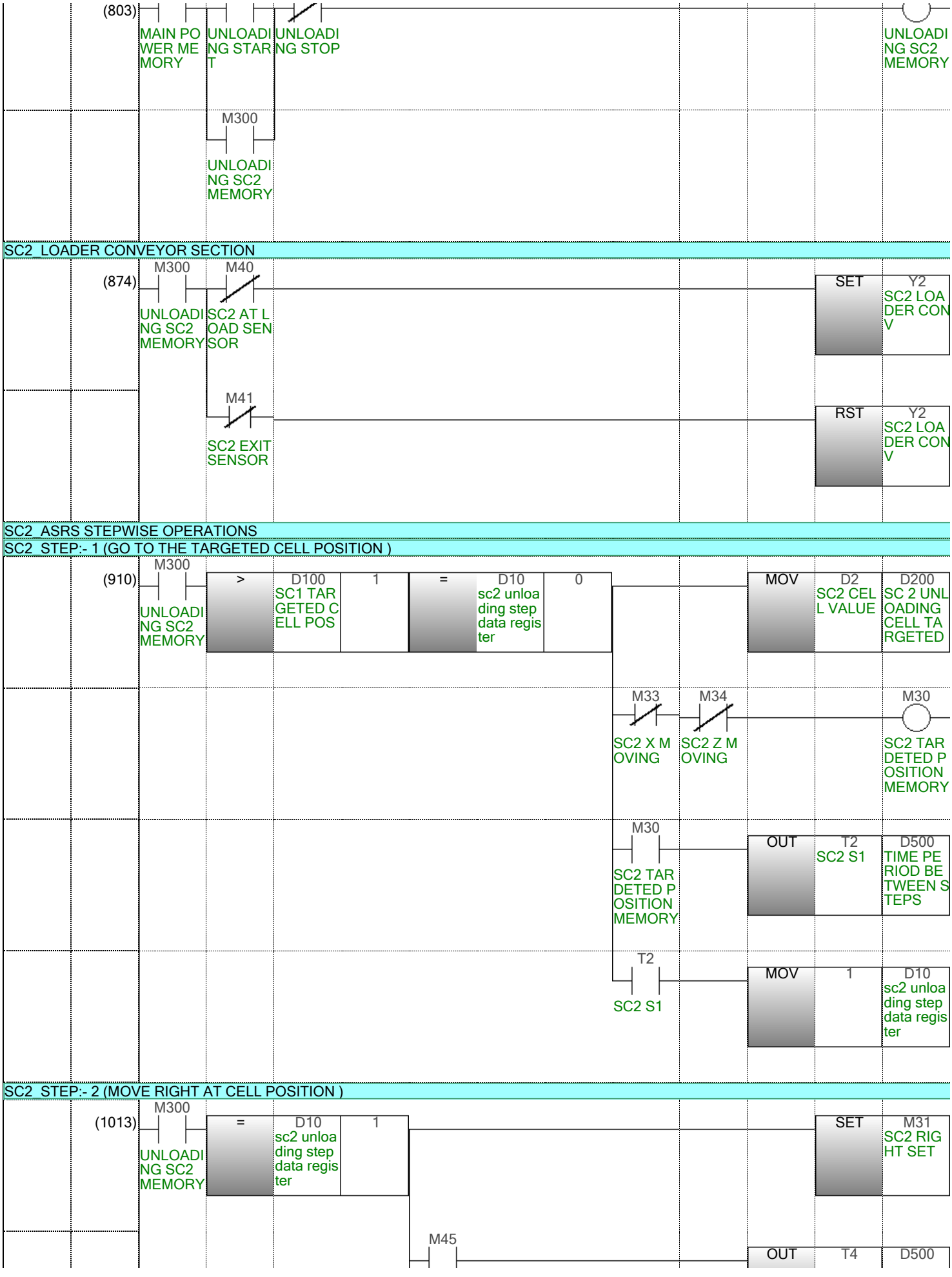
SC1_STEP:- 8 (MOVE TO HOME POSITION)

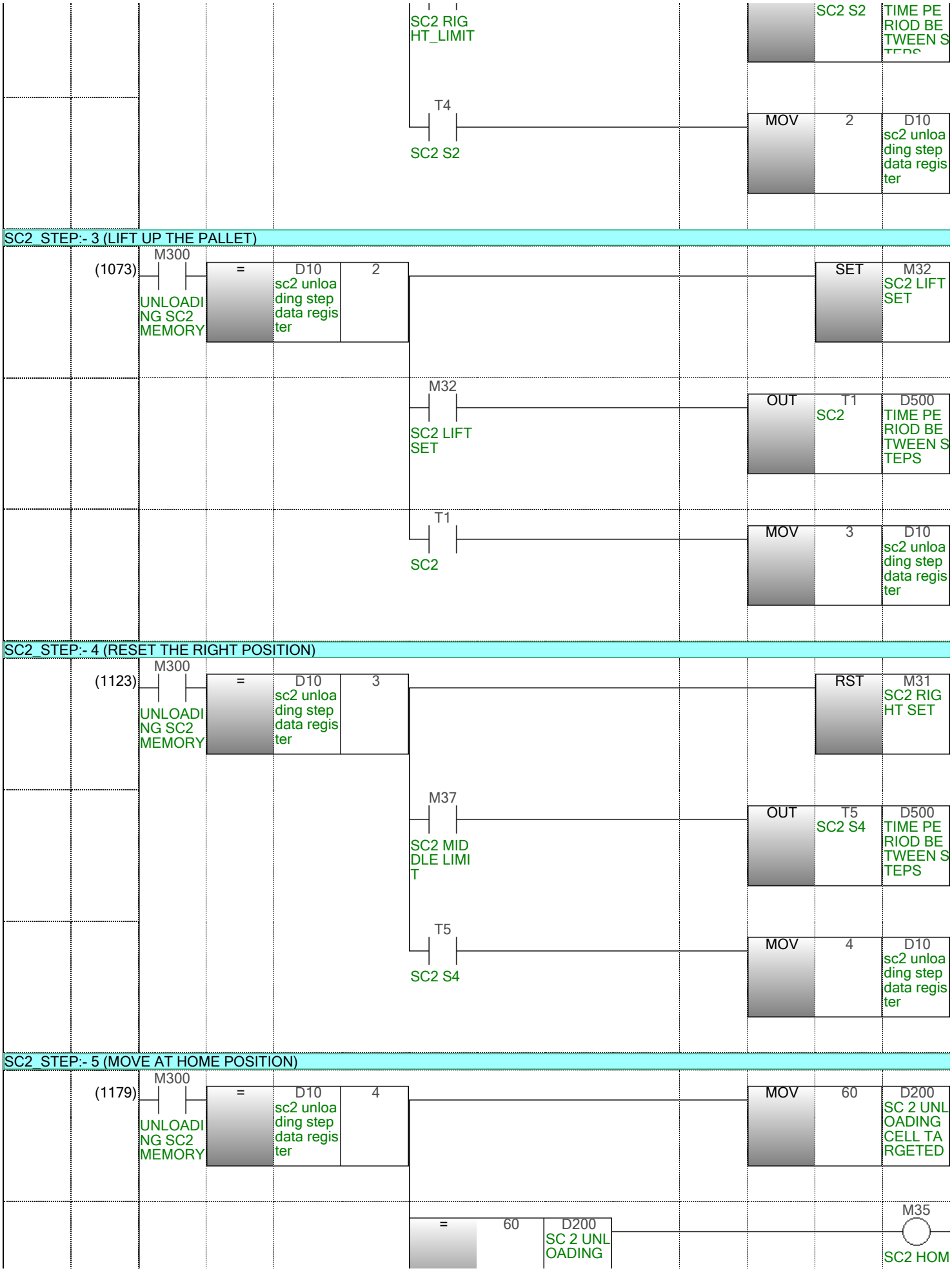


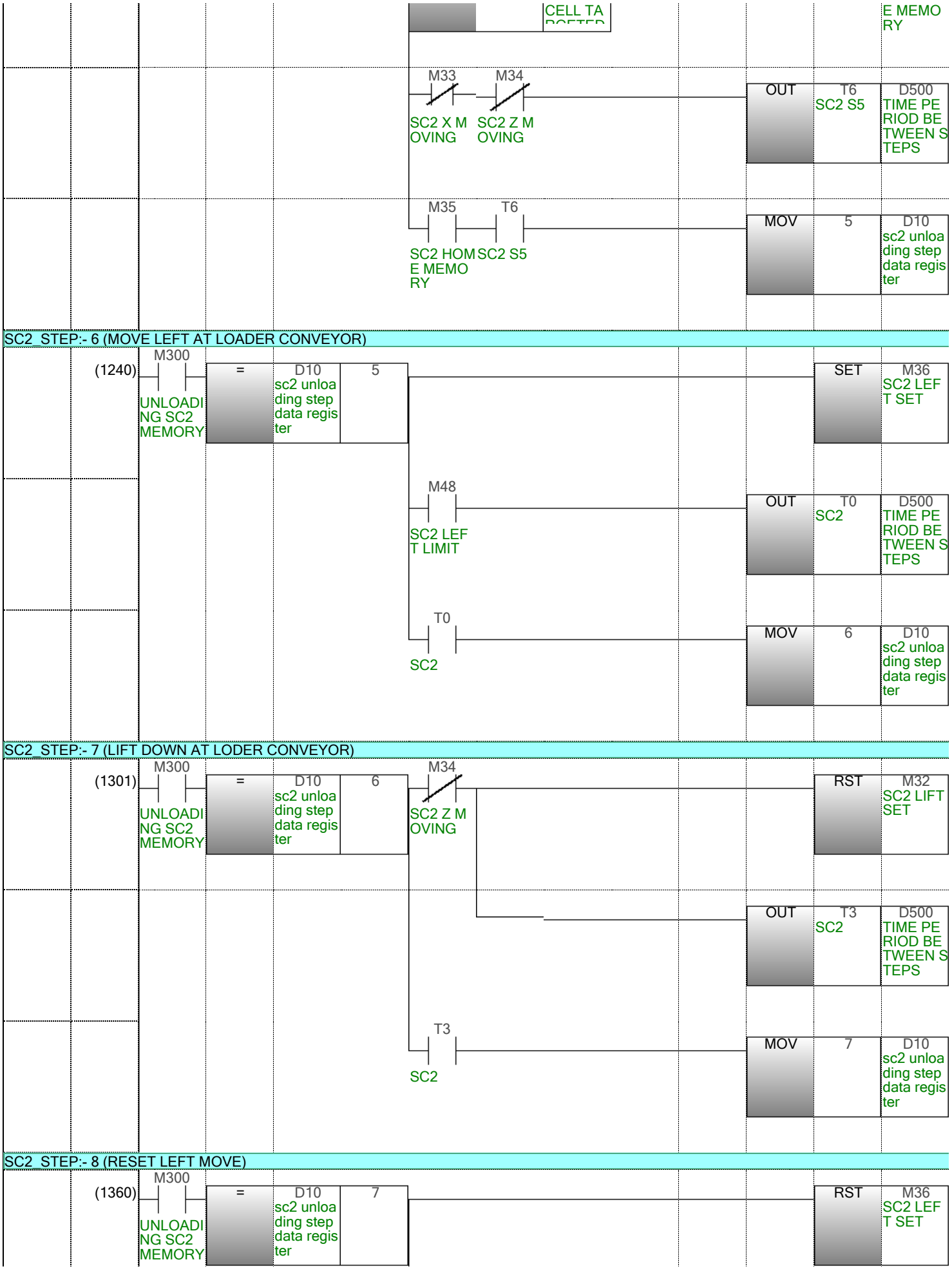
UNLOADING STACER CRANE 2 (SC2) SECTION

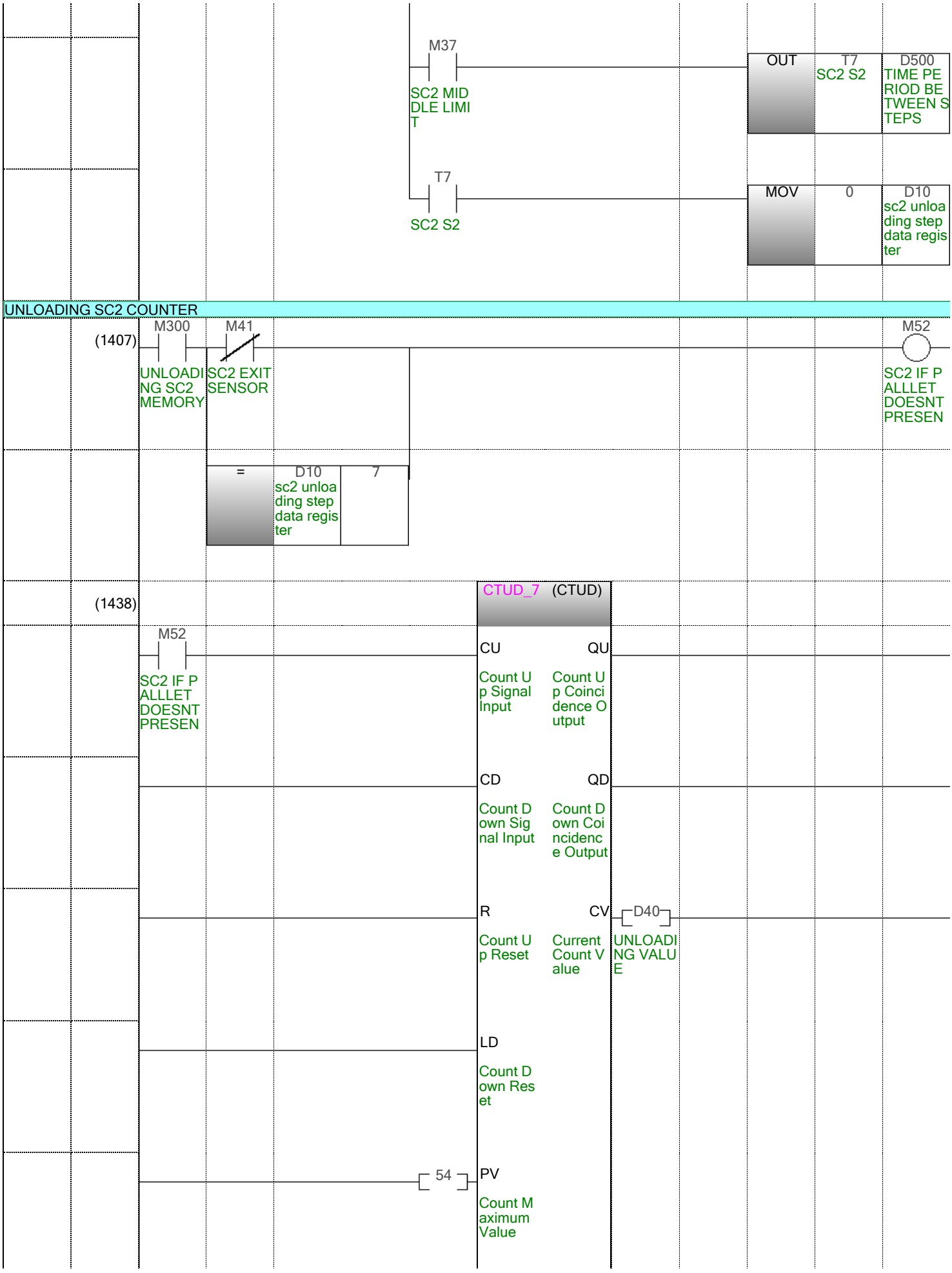
SC2_POWER SWITECHING




(803)
MAIN POWER MEMORY
UNLOADING START
UNLOADING STOP
UNLOADING SC2 MEMORY
M300
UNLOADING SC2 MEMORY
SC2_LOADER CONVEYOR SECTION
(874)
M300
UNLOADING SC2 MEMORY
M40
SC2 AT LOAD SENSOR
SET
Y2
SC2 LOADER CONV
M41
SC2 EXIT SENSOR
RST
Y2
SC2 LOADER CONV
SC2_ASRS STEPWISE OPERATIONS
SC2_STEP:- 1 (GO TO THE TARGETED CELL POSITION)
(910)
M300
UNLOADING SC2 MEMORY
>
D100
SC1 TARGETED CELL POS
1
=
D10
sc2 unloading step data register
0
MOV
D2
SC2 CELL VALUE
D200
SC 2 UNLOADING CELL TARGETED
M33
SC2 X MOVING
M34
SC2 Z MOVING
M30
SC2 TARDETED POSITION MEMORY
M30
SC2 TARDETED POSITION MEMORY
OUT
T2
SC2 S1
D500
TIME PERIOD BETWEEN STEPS
T2
SC2 S1
MOV
1
D10
sc2 unloading step data register
SC2_STEP:- 2 (MOVE RIGHT AT CELL POSITION)
(1013)
M300
UNLOADING SC2 MEMORY
=
D10
sc2 unloading step data register
1
SET
M31
SC2 RIGHT SET
M45
OUT
T4
D500


SC2 RIG HT_LIMIT
SC2 S2
TIME PE RIOD BE TWEEN S
T4
SC2 S2
MOV
2
D10 sc2 unloa ding step data regis ter
SC2_STEP:- 3 (LIFT UP THE PALLET)
(1073)
M300
UNLOADI NG SC2 MEMORY
=
D10 sc2 unloa ding step data regis ter
2
SET
M32 SC2 LIFT SET
M32
SC2 LIFT SET
OUT
T1 SC2
D500 TIME PE RIOD BE TWEEN S TEPS
T1
SC2
MOV
3
D10 sc2 unloa ding step data regis ter
SC2_STEP:- 4 (RESET THE RIGHT POSITION)
(1123)
M300
UNLOADI NG SC2 MEMORY
=
D10 sc2 unloa ding step data regis ter
3
RST
M31 SC2 RIG HT SET
M37
SC2 MID DLE LIMI T
OUT
T5 SC2 S4
D500 TIME PE RIOD BE TWEEN S TEPS
T5
SC2 S4
MOV
4
D10 sc2 unloa ding step data regis ter
SC2_STEP:- 5 (MOVE AT HOME POSITION)
(1179)
M300
UNLOADI NG SC2 MEMORY
=
D10 sc2 unloa ding step data regis ter
4
MOV
60
D200 SC 2 UNL OADING CELL TA RGETED
=
60
D200 SC 2 UNL OADING
M35
SC2 HOM


CELL TA
E MEMO
RY
M33
M34
SC2 X M
OVING
SC2 Z M
OVING
OUT
T6
SC2 S5
D500
TIME PE
RIOD BE
TWEEN S
TEPS
M35
T6
SC2 HOM
E MEMO
RY
SC2 S5
MOV
5
D10
sc2 unloa
ding step
data regis
ter
SC2_STEP:- 6 (MOVE LEFT AT LOADER CONVEYOR)
(1240)
M300
UNLOADI
NG SC2
MEMORY
=
D10
sc2 unloa
ding step
data regis
ter
5
SET
M36
SC2 LEF
T SET
M48
SC2 LEF
T LIMIT
OUT
T0
SC2
D500
TIME PE
RIOD BE
TWEEN S
TEPS
T0
SC2
MOV
6
D10
sc2 unloa
ding step
data regis
ter
SC2_STEP:- 7 (LIFT DOWN AT LODER CONVEYOR)
(1301)
M300
UNLOADI
NG SC2
MEMORY
=
D10
sc2 unloa
ding step
data regis
ter
6
M34
SC2 Z M
OVING
RST
M32
SC2 LIFT
SET
OUT
T3
SC2
D500
TIME PE
RIOD BE
TWEEN S
TEPS
T3
SC2
MOV
7
D10
sc2 unloa
ding step
data regis
ter
SC2_STEP:- 8 (RESET LEFT MOVE)
(1360)
M300
UNLOADI
NG SC2
MEMORY
=
D10
sc2 unloa
ding step
data regis
ter
7
RST
M36
SC2 LEF
T SET


M37
SC2 MIDDLE LIMIT
OUT
T7
SC2 S2
D500
TIME PERIOD BETWEEN STEPS
T7
SC2 S2
MOV
0
D10
sc2 unloading step data register
UNLOADING SC2 COUNTER
(1407)
M300
UNLOADING SC2 MEMORY
M41
SC2 EXIT SENSOR
M52
SC2 IF PALLLET DOESNT PRESEN
=
D10
sc2 unloading step data register
7
(1438)
CTUD_7
(CTUD)
M52
SC2 IF PALLLET DOESNT PRESEN
CU
Count Up Signal Input
QU
Count Up Coincidence Output
CD
Count Down Signal Input
QD
Count Down Coincidence Output
R
Count Up Reset
CV
Current Count Value
D40
UNLOADING VALUE
LD
Count Down Reset
54
PV
Count Maximum Value

AUTOMATIC STORAGE & RETRAVAL SYSTEM (ASRS) LOADING & UNLOADING DATALOG

1ST ASRS ROW DATA LOG

(1456) = D100 SC1 TARGETED CELL POS 1 — SET M101 ASRS_CELL_1

(1555) = D40 UNLOADING VALUE 0 — MOV 9 D2 SC2 CELL VALUE

(1560) = D40 UNLOADING VALUE 1 — RST M101 ASRS_CELL_1

MOV 8 D2 SC2 CELL VALUE

(1566) = D100 SC1 TARGETED CELL POS 2 — SET M102 ASRS_CELL_2

(1570) = D40 UNLOADING VALUE 2 — RST M102 ASRS_CELL_2

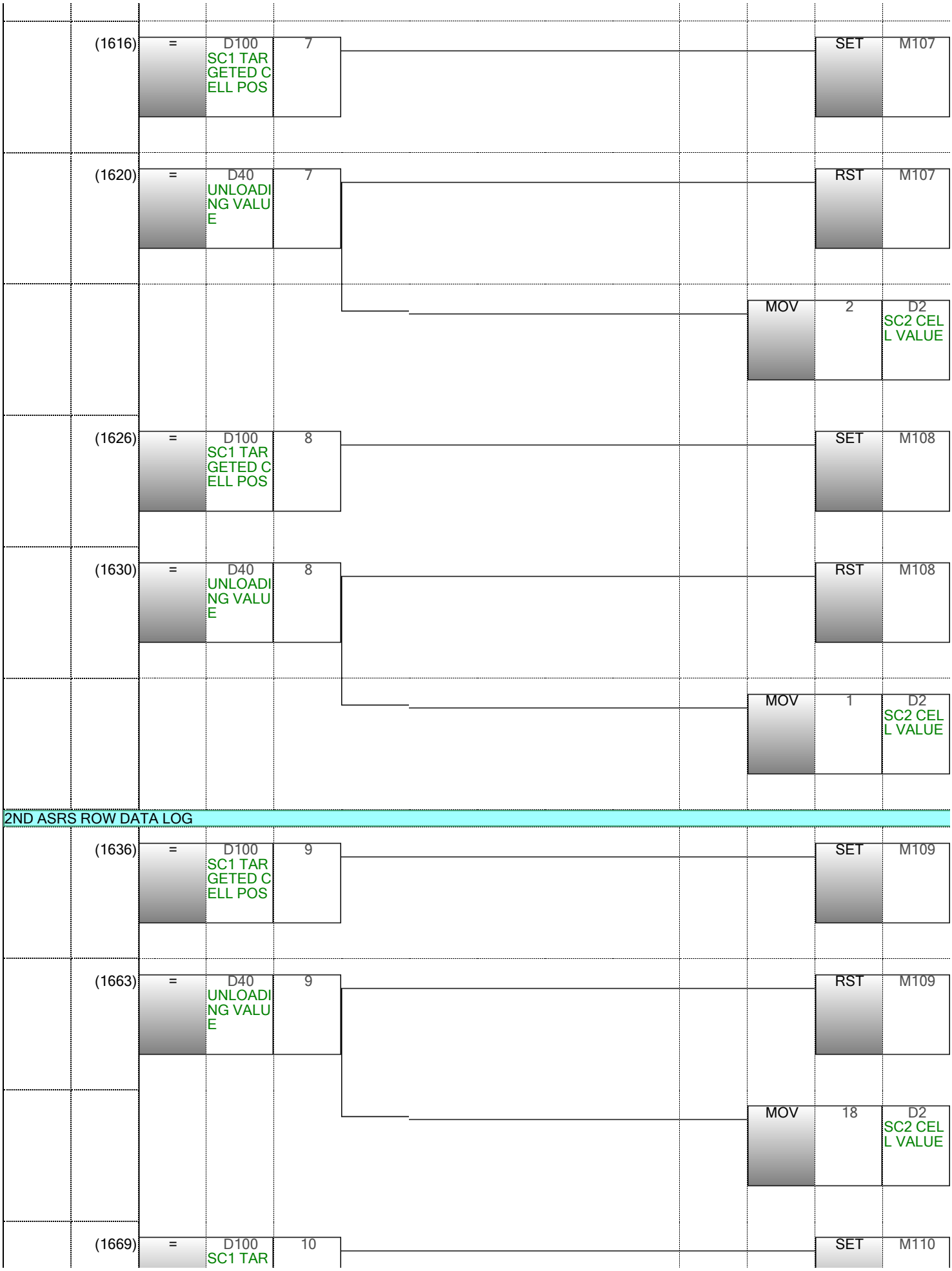
MOV 7 D2 SC2 CELL VALUE

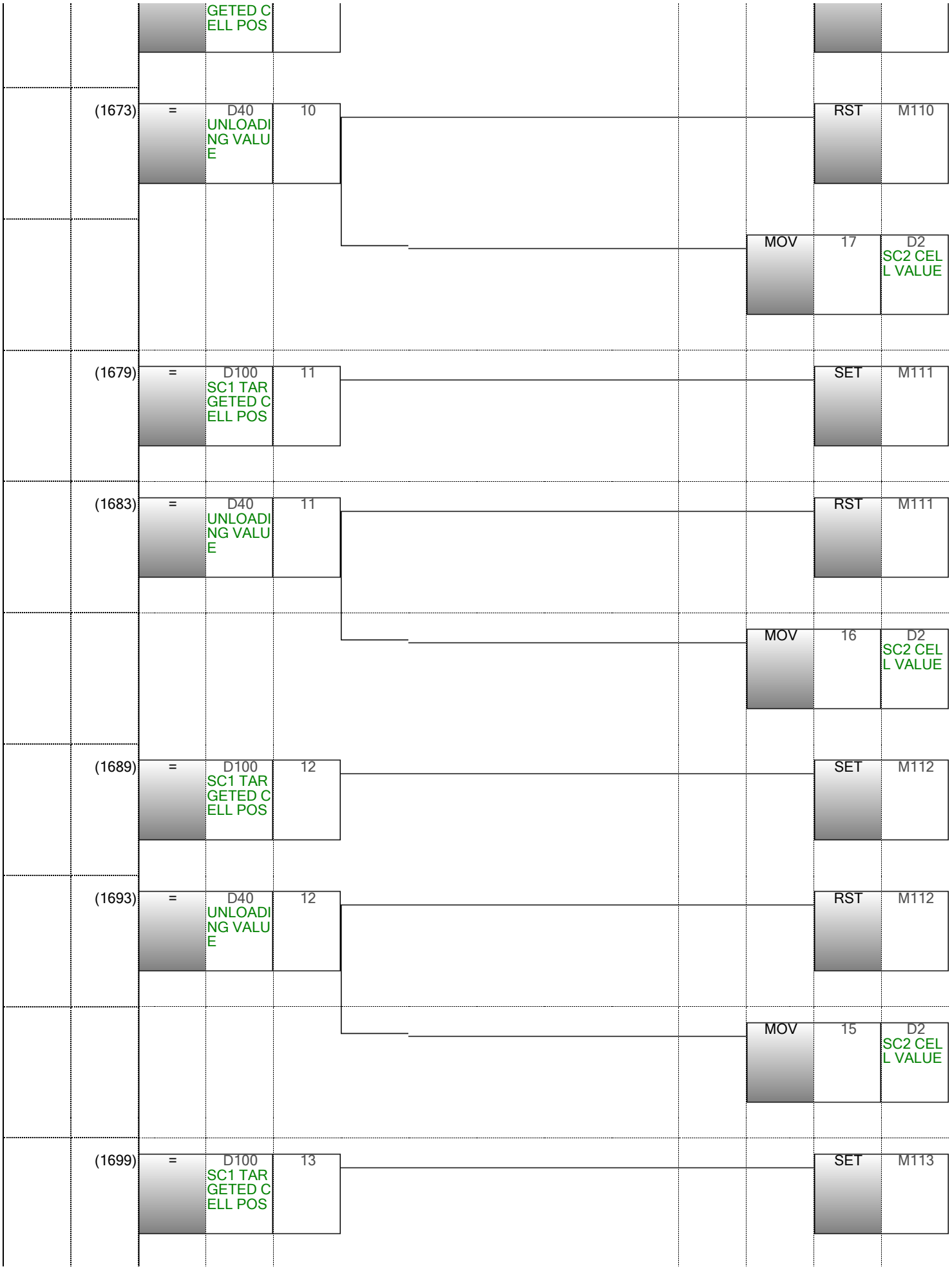
(1576) = D100 SC1 TARGETED CELL POS 3 — SET M103

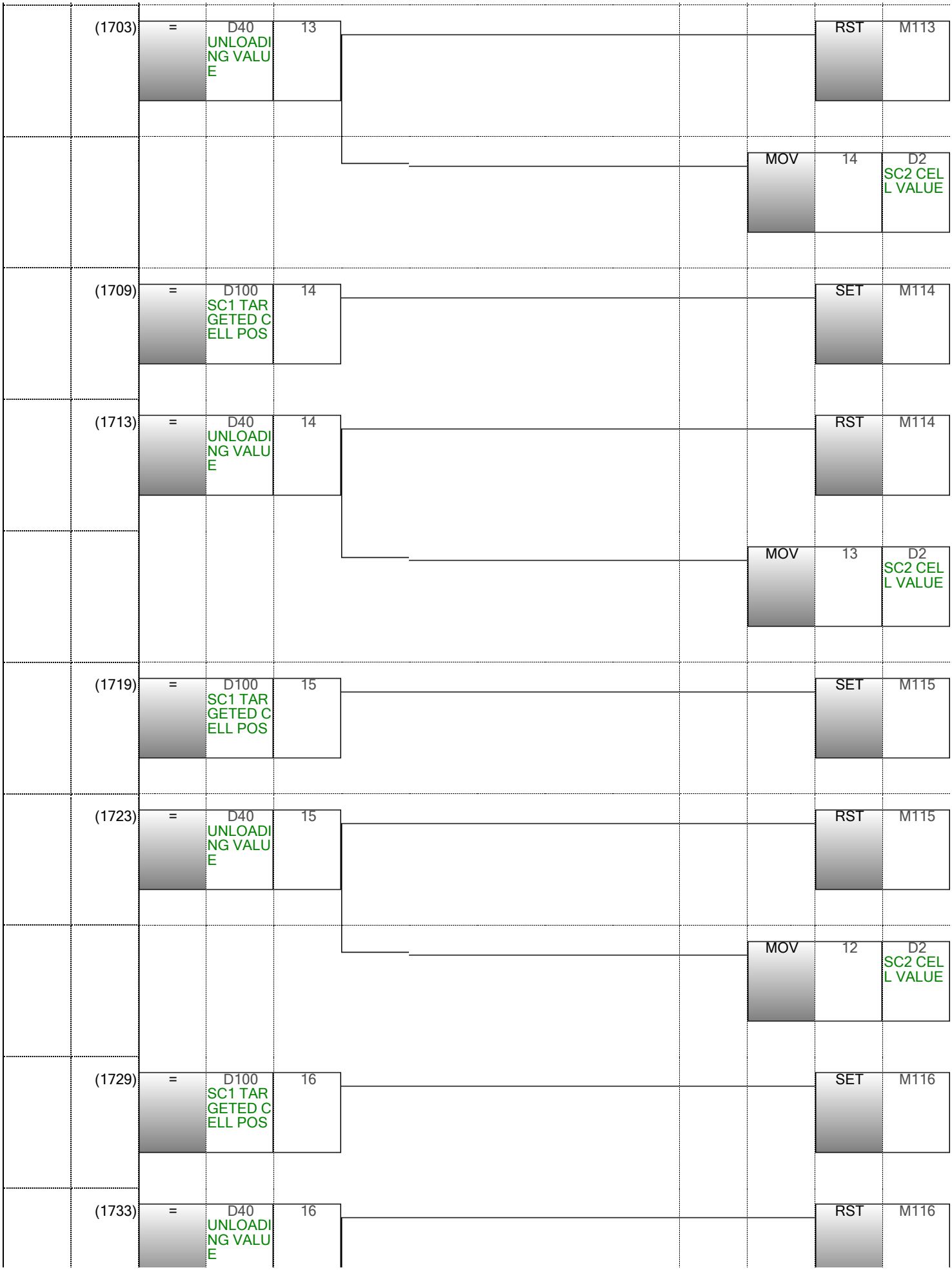
(1580) = D40 UNLOADING VALUE 3 — RST M103

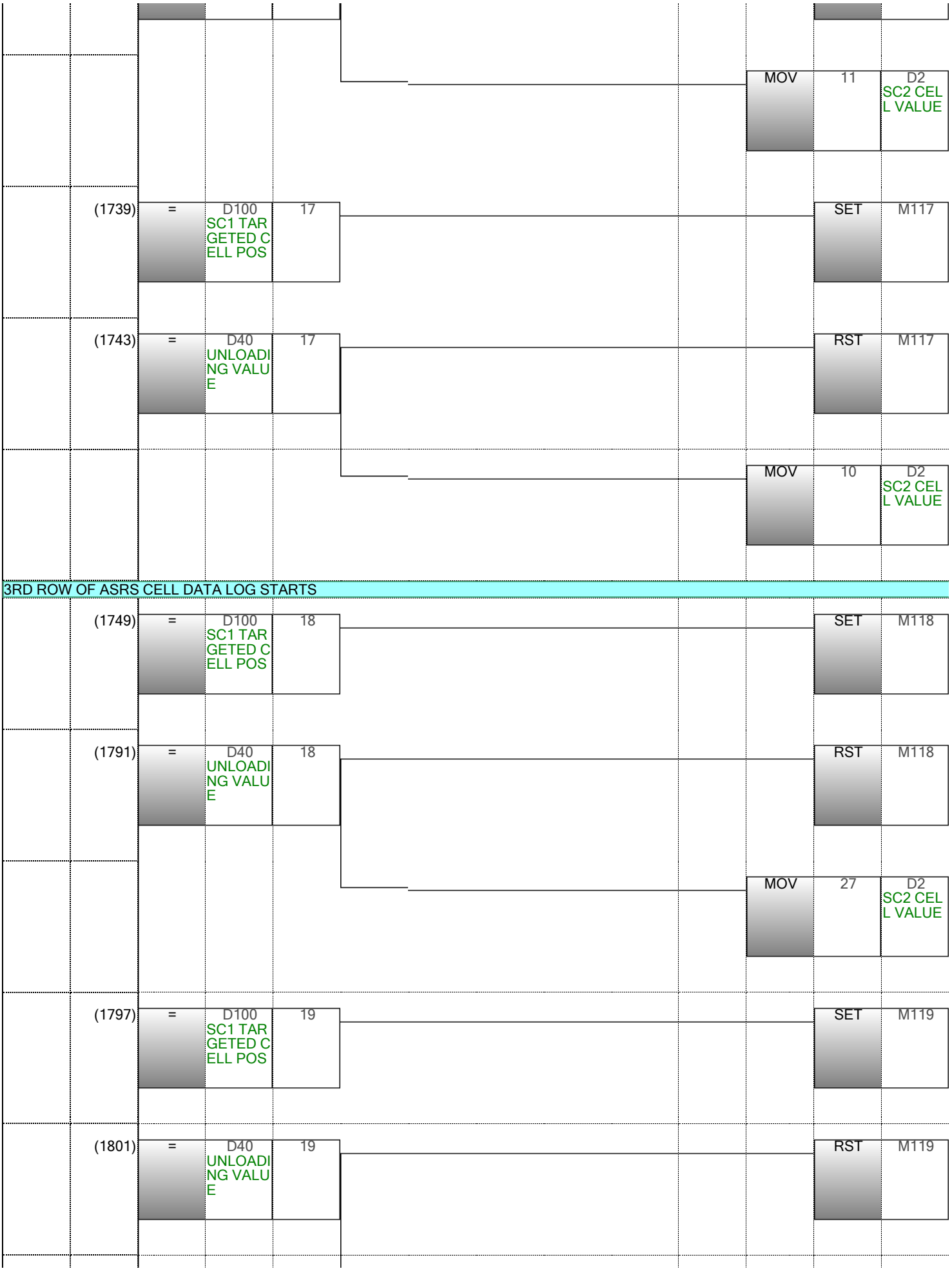
MOV 6 D2

SC2 CEL L VALUE
(1586)
=
D100 SC1 TAR GETED C ELL POS
4
SET
M104
(1590)
=
D40 UNLOADI NG VALU E
4
RST
M104
MOV
5
D2 SC2 CEL L VALUE
(1596)
=
D100 SC1 TAR GETED C ELL POS
5
SET
M105
(1600)
=
D40 UNLOADI NG VALU E
5
RST
M105
MOV
4
D2 SC2 CEL L VALUE
(1606)
=
D100 SC1 TAR GETED C ELL POS
6
SET
M106
(1610)
=
D40 UNLOADI NG VALU E
6
RST
M106
MOV
3
D2 SC2 CEL L VALUE

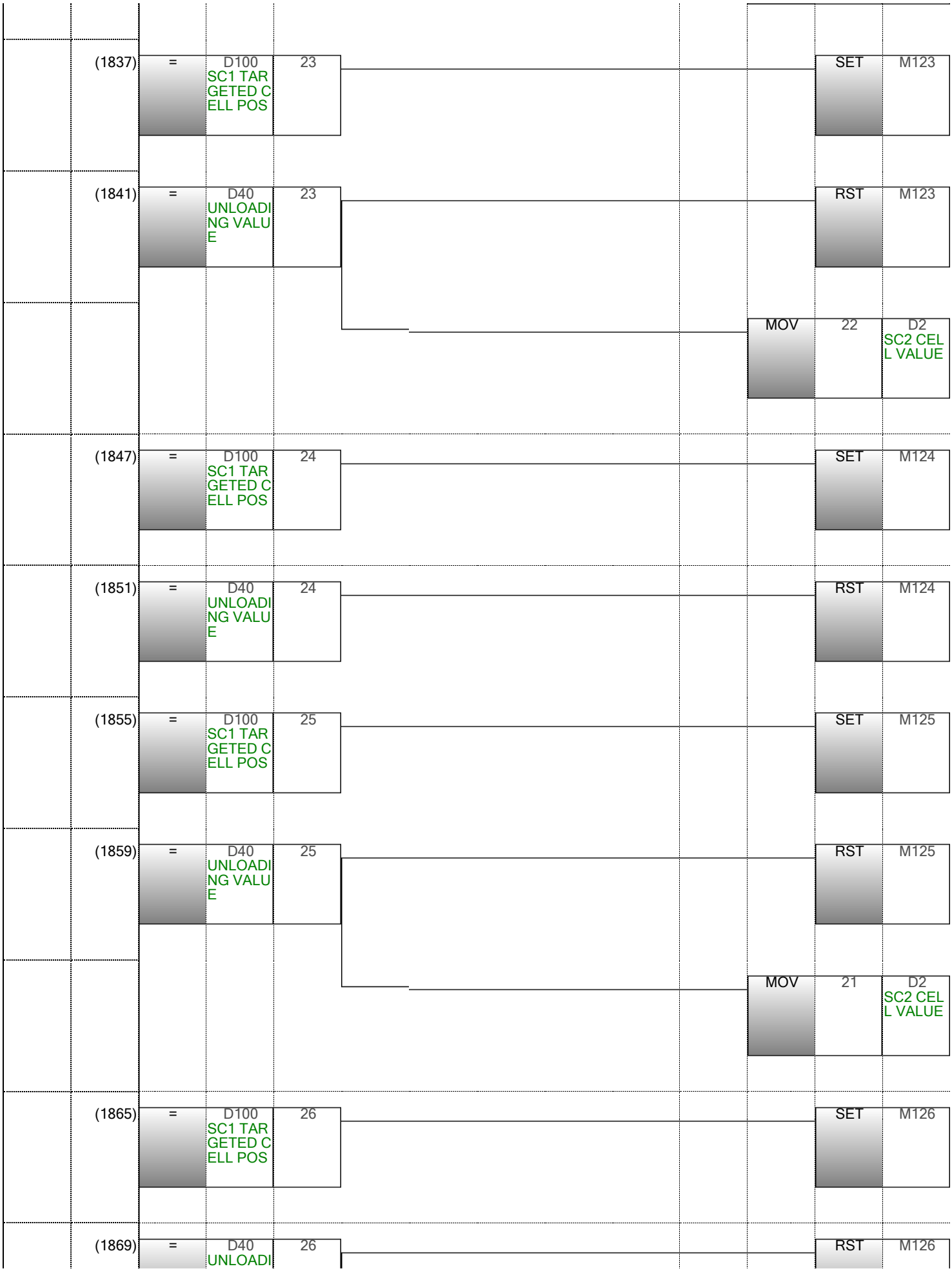

(1616)
= D100 SC1 TARGETED CELL POS 7
SET M107
(1620)
= D40 UNLOADING VALUE 7
RST M107
MOV 2 D2 SC2 CELL VALUE
(1626)
= D100 SC1 TARGETED CELL POS 8
SET M108
(1630)
= D40 UNLOADING VALUE 8
RST M108
MOV 1 D2 SC2 CELL VALUE
2ND ASRS ROW DATA LOG
(1636)
= D100 SC1 TARGETED CELL POS 9
SET M109
(1663)
= D40 UNLOADING VALUE 9
RST M109
MOV 18 D2 SC2 CELL VALUE
(1669)
= D100 SC1 TAR 10
SET M110

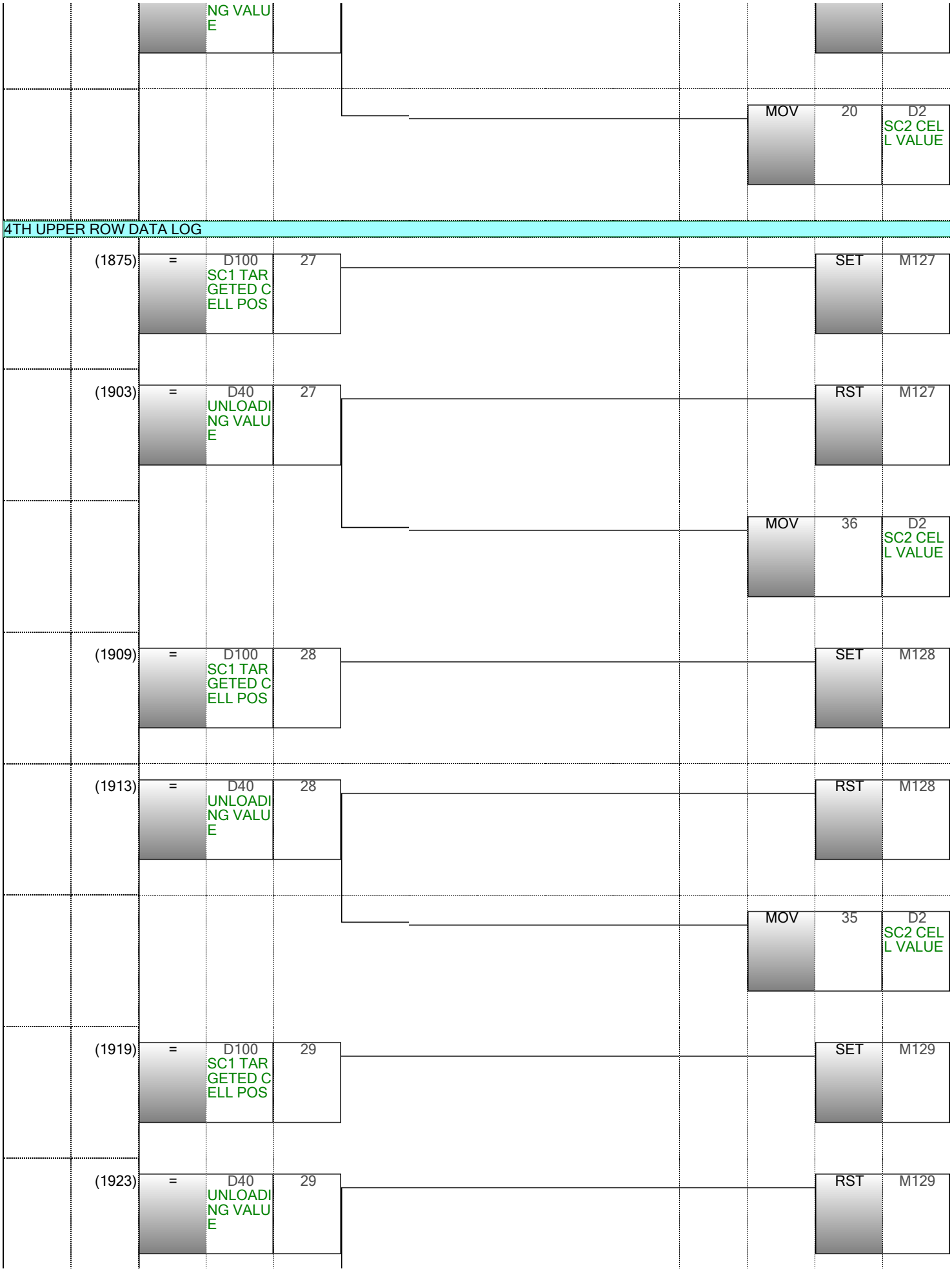

GETED C
ELL POS
(1673)
=
D40
UNLOADI
NG VALU
E
10
RST
M110
MOV
17
D2
SC2 CEL
L VALUE
(1679)
=
D100
SC1 TAR
GETED C
ELL POS
11
SET
M111
(1683)
=
D40
UNLOADI
NG VALU
E
11
RST
M111
MOV
16
D2
SC2 CEL
L VALUE
(1689)
=
D100
SC1 TAR
GETED C
ELL POS
12
SET
M112
(1693)
=
D40
UNLOADI
NG VALU
E
12
RST
M112
MOV
15
D2
SC2 CEL
L VALUE
(1699)
=
D100
SC1 TAR
GETED C
ELL POS
13
SET
M113

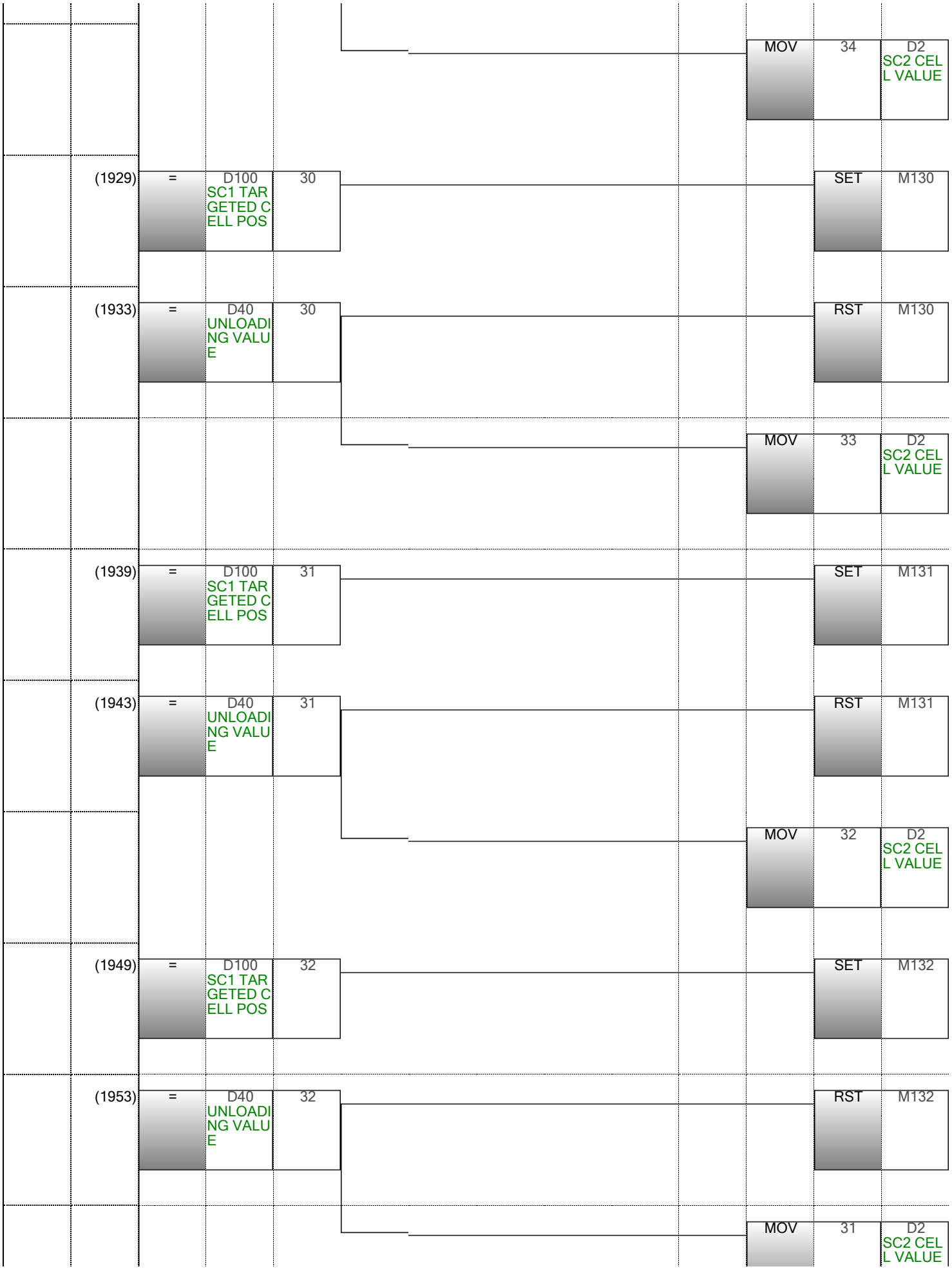

(1703)
=
D40
UNLOADING VALUE
13
RST
M113
MOV
14
D2
SC2 CELL VALUE
(1709)
=
D100
SC1 TARGETED CELL POS
14
SET
M114
(1713)
=
D40
UNLOADING VALUE
14
RST
M114
MOV
13
D2
SC2 CELL VALUE
(1719)
=
D100
SC1 TARGETED CELL POS
15
SET
M115
(1723)
=
D40
UNLOADING VALUE
15
RST
M115
MOV
12
D2
SC2 CELL VALUE
(1729)
=
D100
SC1 TARGETED CELL POS
16
SET
M116
(1733)
=
D40
UNLOADING VALUE
16
RST
M116

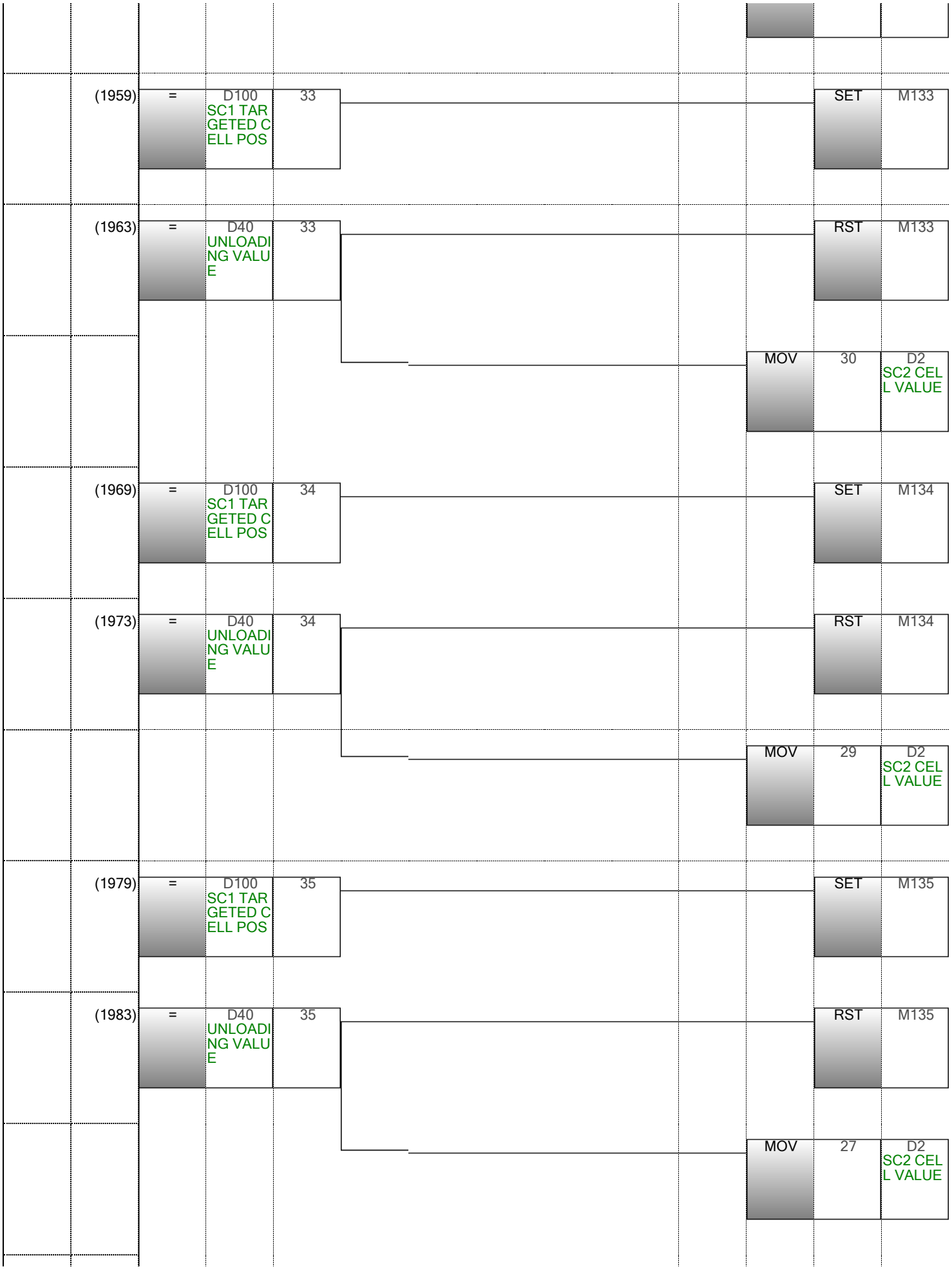

MOV 11 D2 SC2 CELL VALUE
(1739) = D100 SC1 TARGETED CELL POS 17 SET M117
(1743) = D40 UNLOADING VALUE 17 RST M117
MOV 10 D2 SC2 CELL VALUE
3RD ROW OF ASRS CELL DATA LOG STARTS
(1749) = D100 SC1 TARGETED CELL POS 18 SET M118
(1791) = D40 UNLOADING VALUE 18 RST M118
MOV 27 D2 SC2 CELL VALUE
(1797) = D100 SC1 TARGETED CELL POS 19 SET M119
(1801) = D40 UNLOADING VALUE 19 RST M119

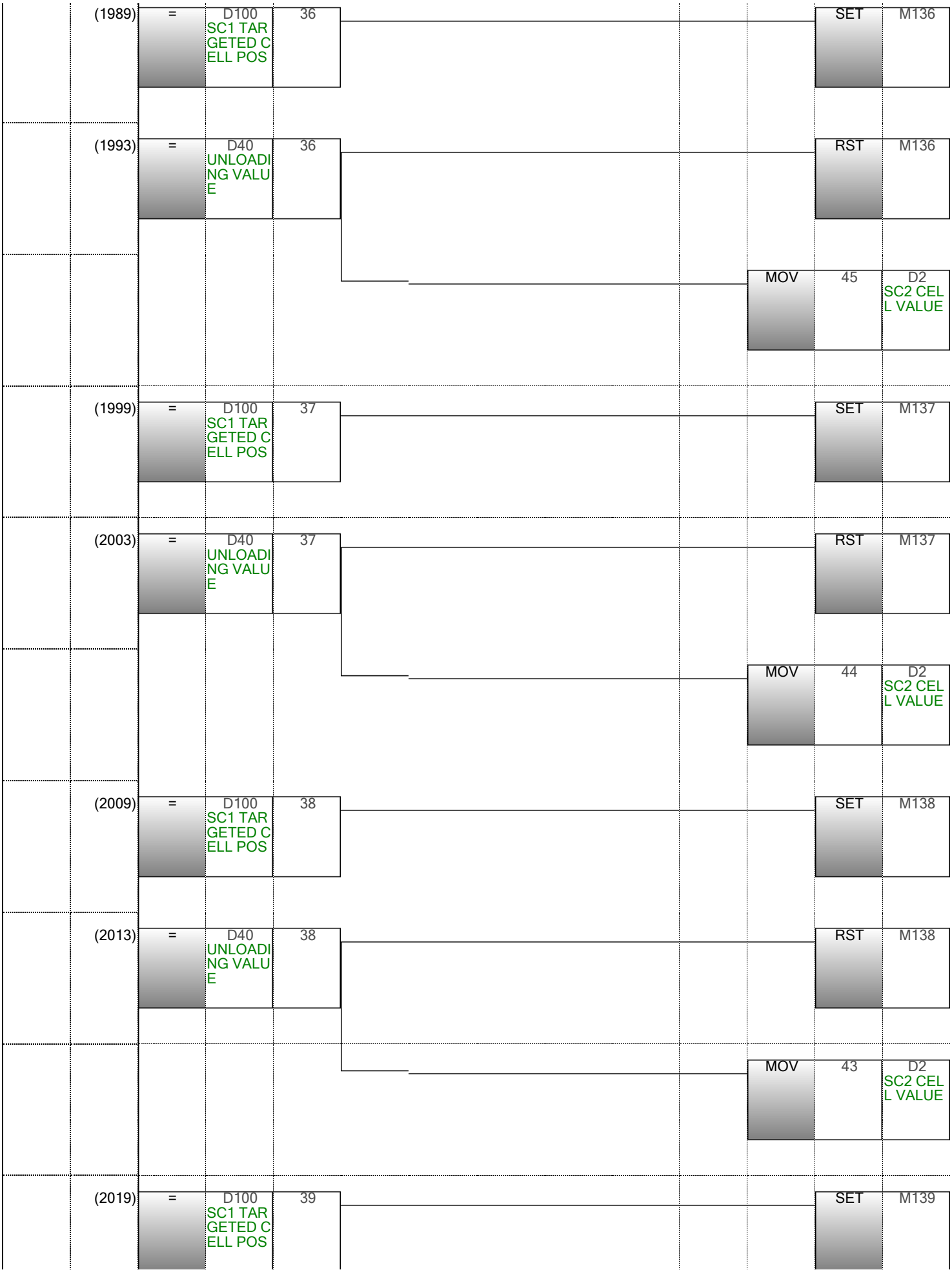
MOV 26 D2 SC2 CELL VALUE
(1807) = D100 SC1 TARGETED CELL POS 20
SET M120
(1811) = D40 UNLOADING VALUE 20
RST M120
MOV 25 D2 SC2 CELL VALUE
(1817) = D100 SC1 TARGETED CELL POS 21
SET M121
(1821) = D40 UNLOADING VALUE 21
RST M121
MOV 24 D2 SC2 CELL VALUE
(1827) = D100 SC1 TARGETED CELL POS 22
SET M122
(1831) = D40 UNLOADING VALUE 22
RST M122
MOV 23 D2 SC2 CELL VALUE

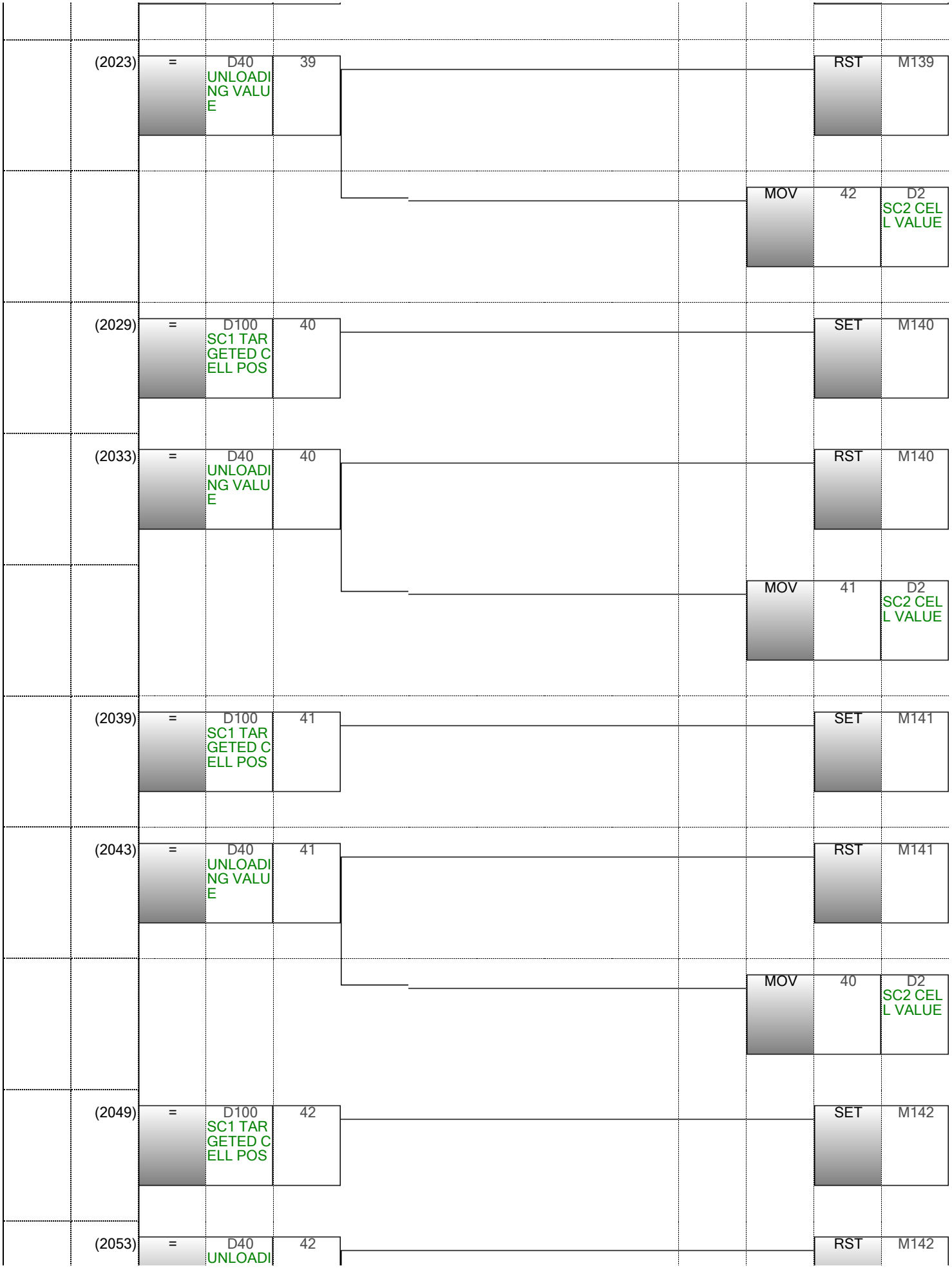

(1837)
=
D100
SC1 TARGETED CELL POS
23
SET
M123
(1841)
=
D40
UNLOADING VALUE
23
RST
M123
MOV
22
D2
SC2 CELL VALUE
(1847)
=
D100
SC1 TARGETED CELL POS
24
SET
M124
(1851)
=
D40
UNLOADING VALUE
24
RST
M124
(1855)
=
D100
SC1 TARGETED CELL POS
25
SET
M125
(1859)
=
D40
UNLOADING VALUE
25
RST
M125
MOV
21
D2
SC2 CELL VALUE
(1865)
=
D100
SC1 TARGETED CELL POS
26
SET
M126
(1869)
=
D40
UNLOADI
26
RST
M126

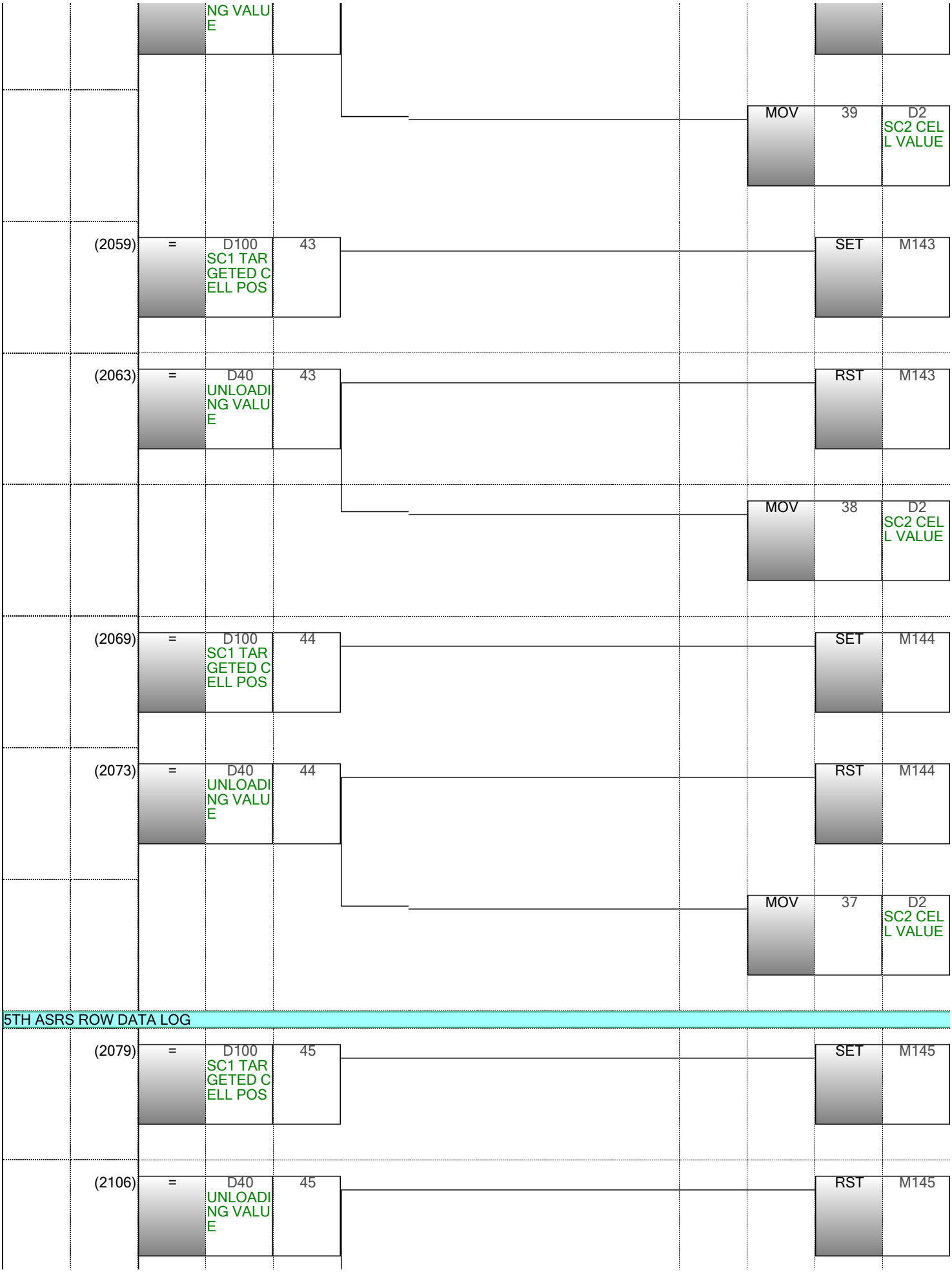

NG VALU
E
MOV
20
D2
SC2 CEL
L VALUE
4TH UPPER ROW DATA LOG
(1875)
=
D100
SC1 TAR
GETED C
ELL POS
27
SET
M127
(1903)
=
D40
UNLOADI
NG VALU
E
27
RST
M127
MOV
36
D2
SC2 CEL
L VALUE
(1909)
=
D100
SC1 TAR
GETED C
ELL POS
28
SET
M128
(1913)
=
D40
UNLOADI
NG VALU
E
28
RST
M128
MOV
35
D2
SC2 CEL
L VALUE
(1919)
=
D100
SC1 TAR
GETED C
ELL POS
29
SET
M129
(1923)
=
D40
UNLOADI
NG VALU
E
29
RST
M129

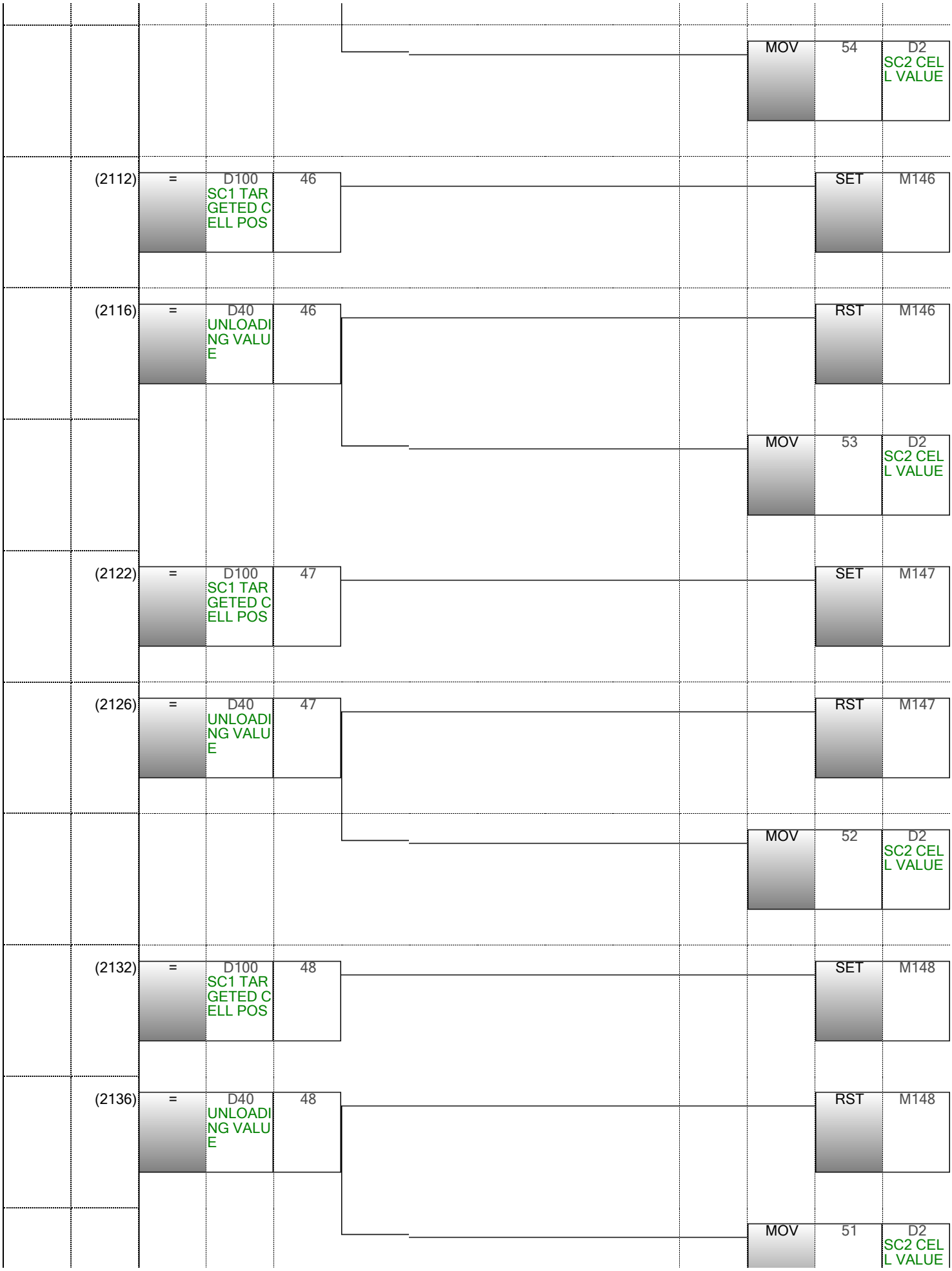

MOV 34 D2 SC2 CELL VALUE
(1929) = D100 SC1 TARGETED CELL POS 30 SET M130
(1933) = D40 UNLOADING VALUE 30 RST M130
MOV 33 D2 SC2 CELL VALUE
(1939) = D100 SC1 TARGETED CELL POS 31 SET M131
(1943) = D40 UNLOADING VALUE 31 RST M131
MOV 32 D2 SC2 CELL VALUE
(1949) = D100 SC1 TARGETED CELL POS 32 SET M132
(1953) = D40 UNLOADING VALUE 32 RST M132
MOV 31 D2 SC2 CELL VALUE

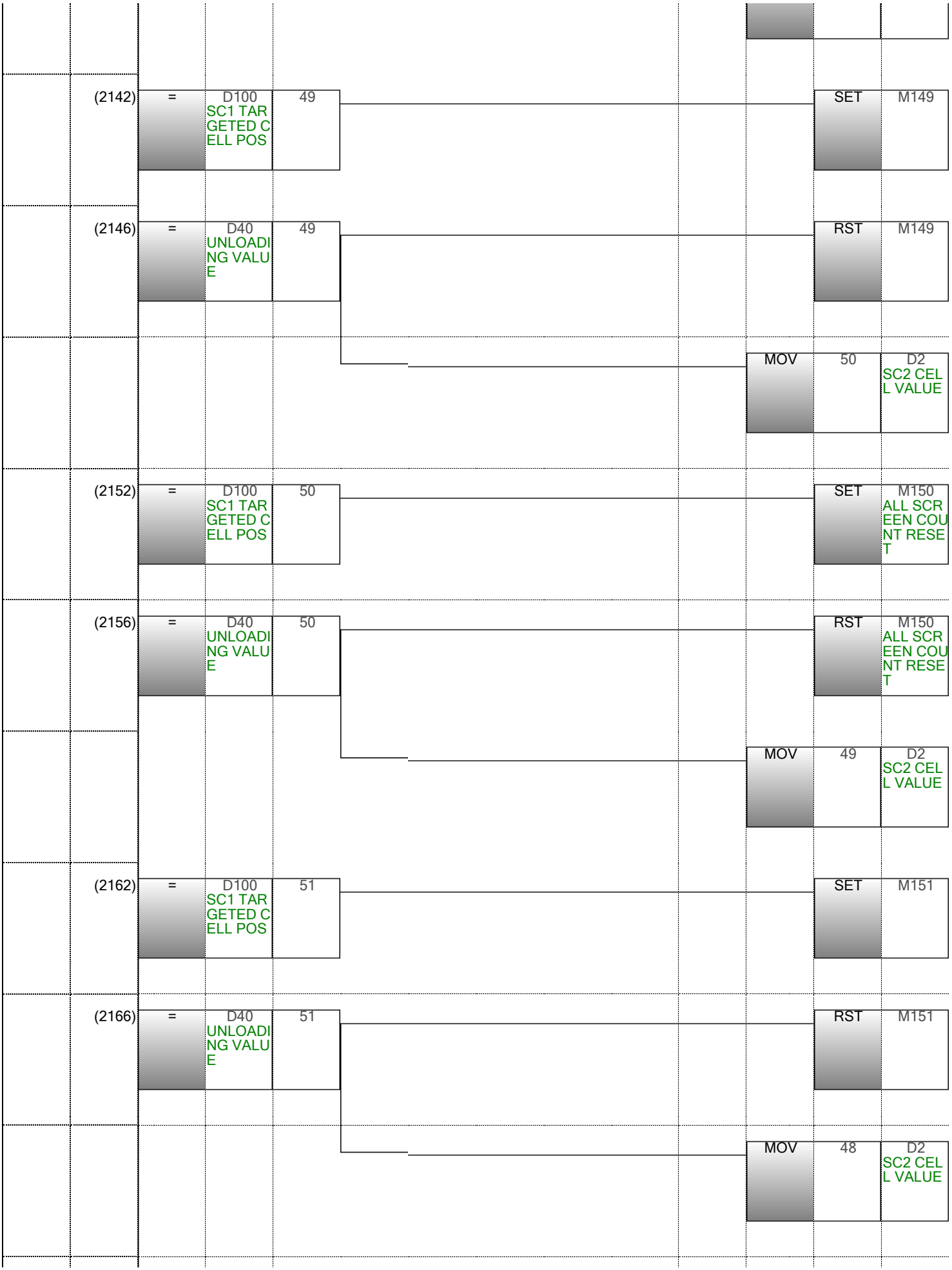

(1959)
=
D100
SC1 TARGETED CELL POS
33
SET
M133
(1963)
=
D40
UNLOADING VALUE
33
RST
M133
MOV
30
D2
SC2 CELL VALUE
(1969)
=
D100
SC1 TARGETED CELL POS
34
SET
M134
(1973)
=
D40
UNLOADING VALUE
34
RST
M134
MOV
29
D2
SC2 CELL VALUE
(1979)
=
D100
SC1 TARGETED CELL POS
35
SET
M135
(1983)
=
D40
UNLOADING VALUE
35
RST
M135
MOV
27
D2
SC2 CELL VALUE


(1989)
= D100 SC1 TARGETED CELL POS 36
SET M136
(1993)
= D40 UNLOADING VALUE 36
RST M136
MOV 45 D2 SC2 CELL VALUE
(1999)
= D100 SC1 TARGETED CELL POS 37
SET M137
(2003)
= D40 UNLOADING VALUE 37
RST M137
MOV 44 D2 SC2 CELL VALUE
(2009)
= D100 SC1 TARGETED CELL POS 38
SET M138
(2013)
= D40 UNLOADING VALUE 38
RST M138
MOV 43 D2 SC2 CELL VALUE
(2019)
= D100 SC1 TARGETED CELL POS 39
SET M139


(2023)
=
D40
UNLOADING VALUE
39
RST
M139
MOV
42
D2
SC2 CELL VALUE
(2029)
=
D100
SC1 TARGETED CELL POS
40
SET
M140
(2033)
=
D40
UNLOADING VALUE
40
RST
M140
MOV
41
D2
SC2 CELL VALUE
(2039)
=
D100
SC1 TARGETED CELL POS
41
SET
M141
(2043)
=
D40
UNLOADING VALUE
41
RST
M141
MOV
40
D2
SC2 CELL VALUE
(2049)
=
D100
SC1 TARGETED CELL POS
42
SET
M142
(2053)
=
D40
UNLOADI
42
RST
M142


NG VALU
E
MOV
39
D2
SC2 CEL
L VALUE
(2059)
=
D100
SC1 TAR
GETED C
ELL POS
43
SET
M143
(2063)
=
D40
UNLOADI
NG VALU
E
43
RST
M143
MOV
38
D2
SC2 CEL
L VALUE
(2069)
=
D100
SC1 TAR
GETED C
ELL POS
44
SET
M144
(2073)
=
D40
UNLOADI
NG VALU
E
44
RST
M144
MOV
37
D2
SC2 CEL
L VALUE
5TH ASRS ROW DATA LOG
(2079)
=
D100
SC1 TAR
GETED C
ELL POS
45
SET
M145
(2106)
=
D40
UNLOADI
NG VALU
E
45
RST
M145


MOV 54 D2 SC2 CELL VALUE
(2112) = D100 SC1 TARGETED CELL POS 46 SET M146
(2116) = D40 UNLOADING VALUE 46 RST M146
MOV 53 D2 SC2 CELL VALUE
(2122) = D100 SC1 TARGETED CELL POS 47 SET M147
(2126) = D40 UNLOADING VALUE 47 RST M147
MOV 52 D2 SC2 CELL VALUE
(2132) = D100 SC1 TARGETED CELL POS 48 SET M148
(2136) = D40 UNLOADING VALUE 48 RST M148
MOV 51 D2 SC2 CELL VALUE


(2142)
= D100 SC1 TARGETED CELL POS 49
SET M149
(2146)
= D40 UNLOADING VALUE 49
RST M149
MOV 50 D2 SC2 CELL VALUE
(2152)
= D100 SC1 TARGETED CELL POS 50
SET M150 ALL SCREEN COUNT RESET
(2156)
= D40 UNLOADING VALUE 50
RST M150 ALL SCREEN COUNT RESET
MOV 49 D2 SC2 CELL VALUE
(2162)
= D100 SC1 TARGETED CELL POS 51
SET M151
(2166)
= D40 UNLOADING VALUE 51
RST M151
MOV 48 D2 SC2 CELL VALUE

(2172)
=
D100
SC1 TARGETED CELL POS
52
SET
M152
(2176)
=
D40
UNLOADING VALUE
52
RST
M152
MOV
47
D2
SC2 CELL VALUE
(2182)
=
D100
SC1 TARGETED CELL POS
53
SET
M153
(2186)
=
D40
UNLOADING VALUE
53
RST
M153
MOV
46
D2
SC2 CELL VALUE
(2192)
=
D100
SC1 TARGETED CELL POS
54
SET
M154
(2196)
=
D40
UNLOADING VALUE
54
RST
M154
MOV
60
D2
SC2 CELL VALUE
(2206)
END