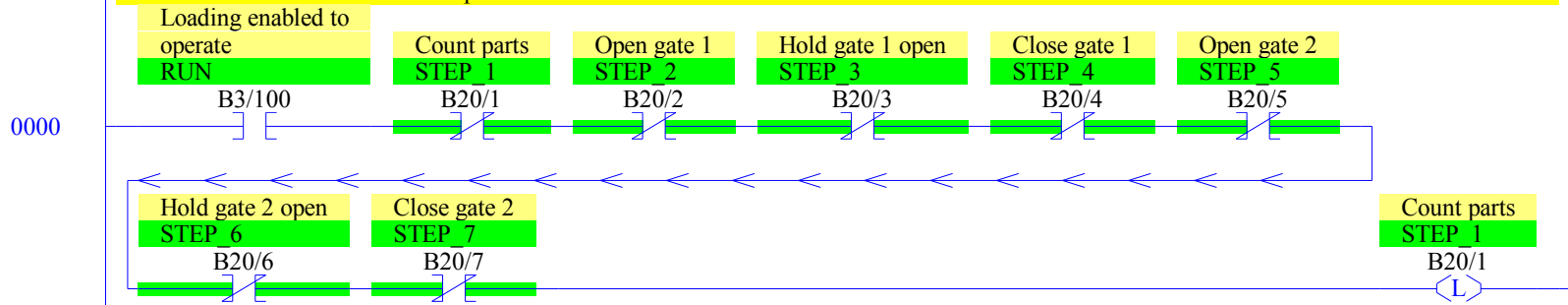


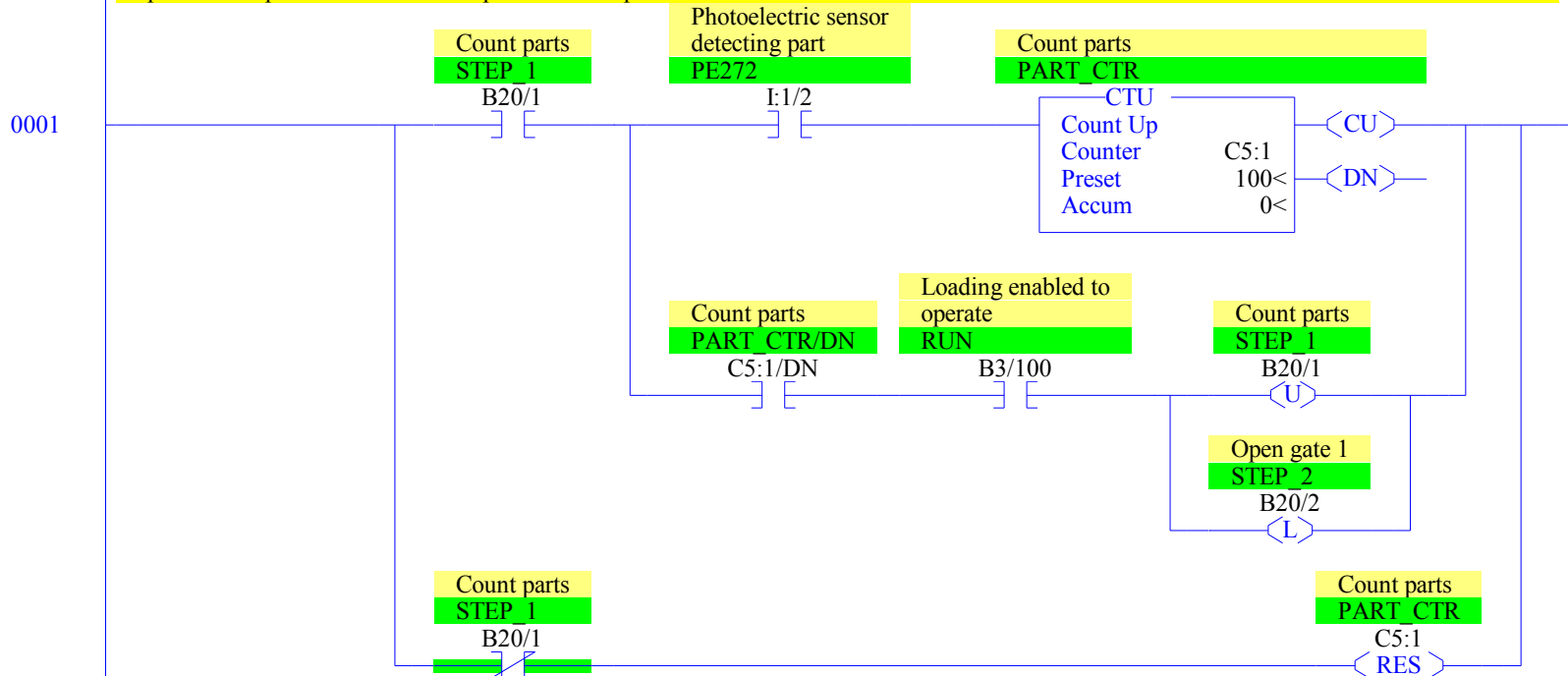
Example 6.3 Tub Loader Control with Simulation

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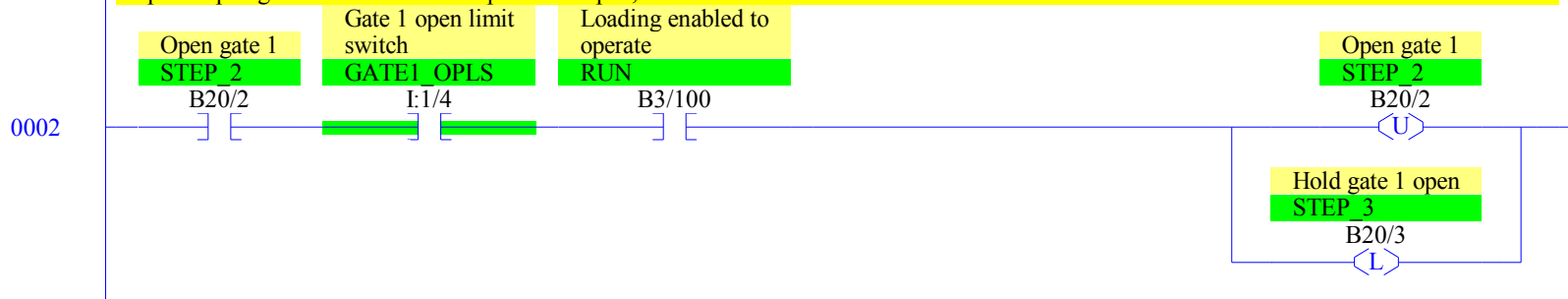
Generate transition out of initial step



Step 1 - Count parts. Transition to step 2 when 100 parts counted.



Step 2 - Open gate 1. Transition to step 3 when open,\.



0003

Step 3 - Hold gate 1 open for 3 secs after tub passes. Transition to step 4 when done.

Hold gate 1 open

STEP 3

B20/3

I:1/3

B3/100

Proximity sensor

detecting tub

TUB_PROX

I:1/3

B3/100

Loading enabled to

operate

RUN

Gate 1 hold

open timer

G1_HOLD_TMR

RTO

Retentive Timer On

Timer

Time Base

Preset

Accum

T4:1

0.01

300<

0<

Gate 1 hold

open timer

G1_HOLD_TMR/DN

T4:1/DN

Hold gate 1 open

STEP 3

B20/3

B20/3

Close gate 1

STEP 4

B20/4

B20/4

Gate 1 hold

open timer

G1_HOLD_TMR

T4:1

RES

Step 4 - Close gate 1. Transition to step 5 when closed.

Close gate 1

STEP 4

B20/4

B20/4

Gate 1 closed limit

switch

GATE1_CLLS

I:1/5

B3/100

Loading enabled to

operate

RUN

Close gate 1

STEP 4

B20/4

Open gate 2

STEP 5

B20/5

B20/5

Gate 2 open limit

switch

GATE2_OPLS

I:1/6

B3/100

Loading enabled to

operate

RUN

Open gate 2

STEP 5

B20/5

Hold gate 2 open

STEP 6

B20/6

B20/6

Step 5 - Open gate 2. Transition to step 6 when open.\.

Open gate 2

STEP 5

B20/5

B20/5

Gate 2 open limit

switch

GATE2_OPLS

I:1/6

B3/100

Loading enabled to

operate

RUN

Open gate 2

STEP 5

B20/5

Hold gate 2 open

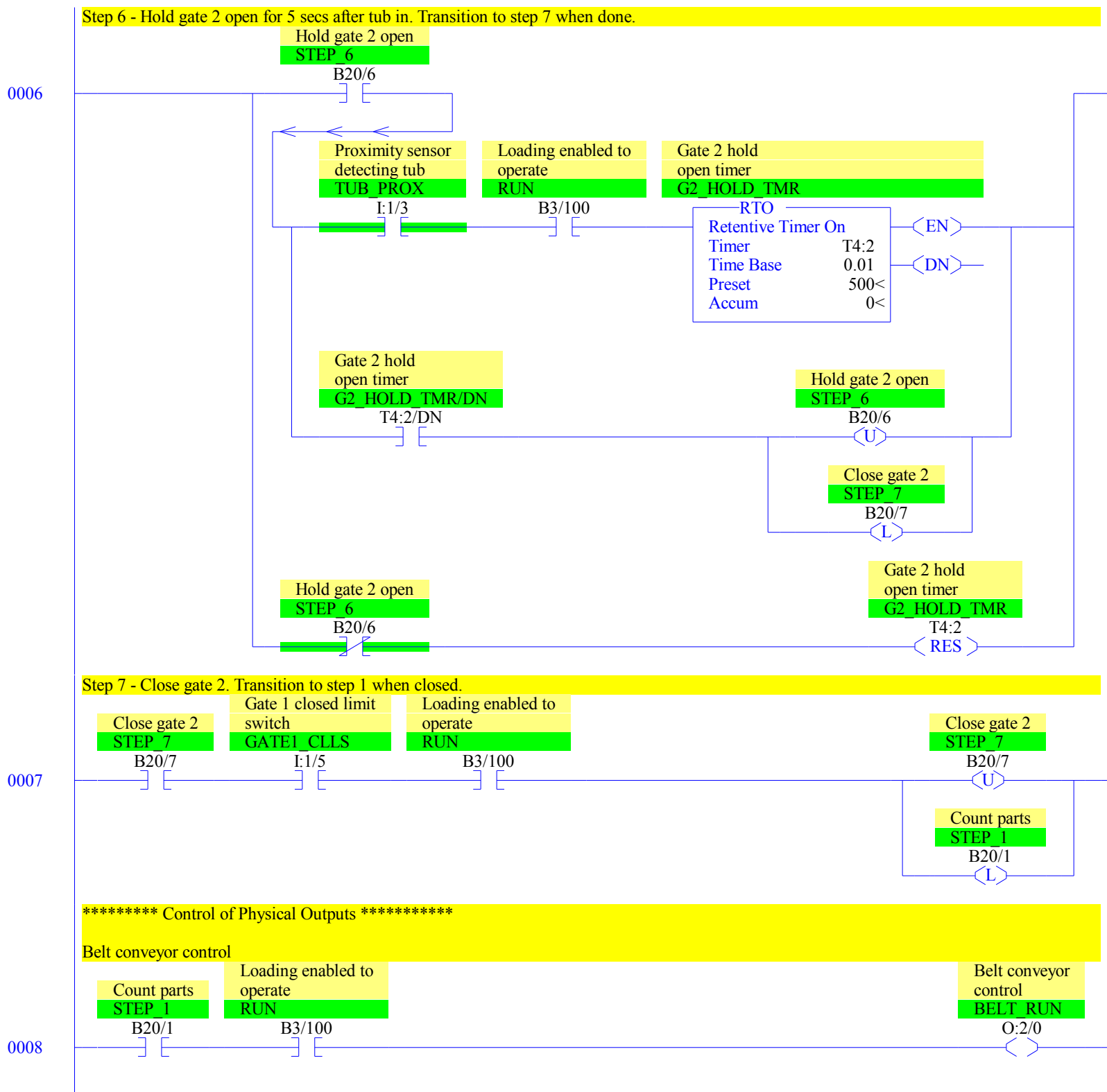
STEP 6

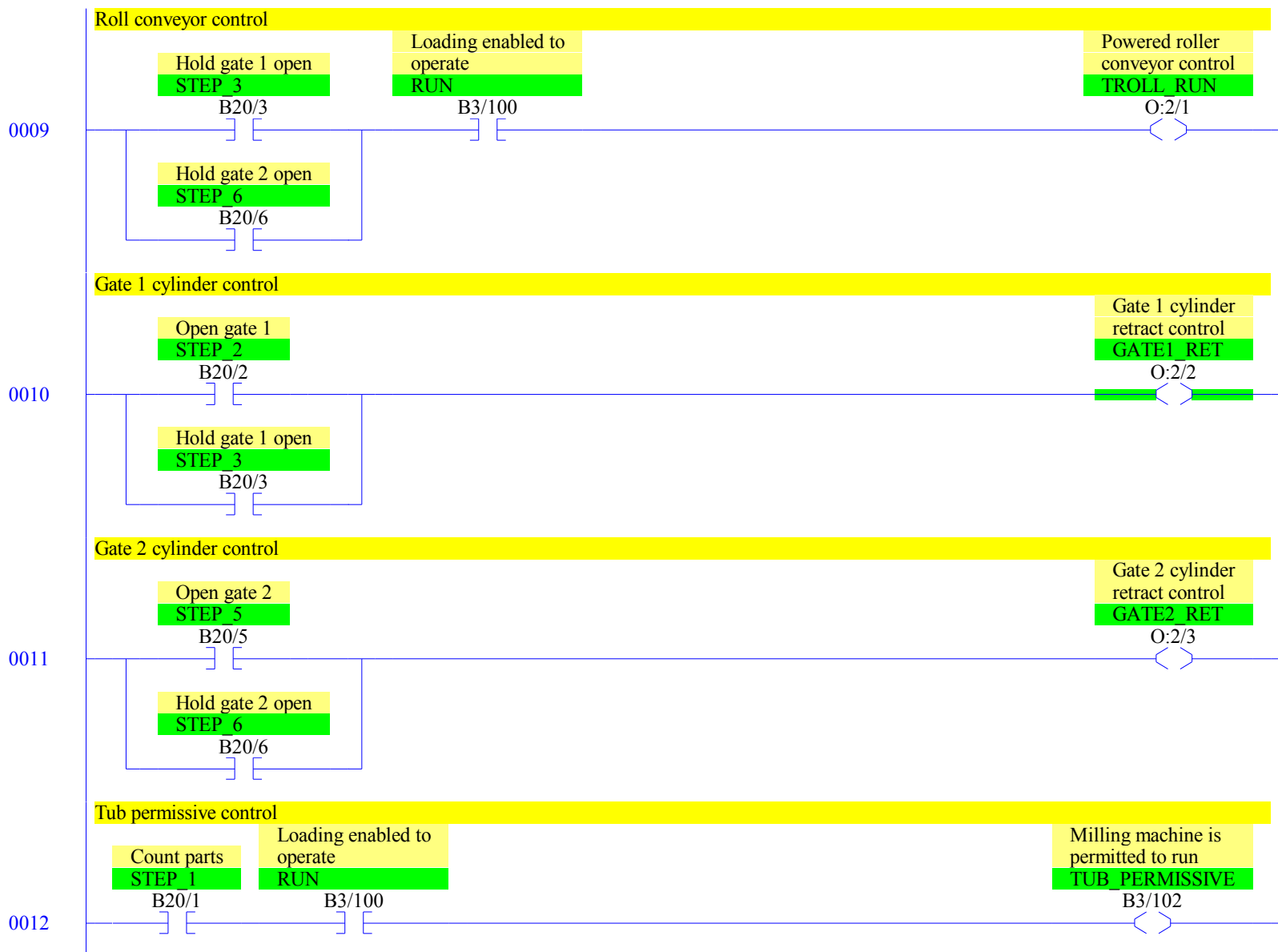
B20/6

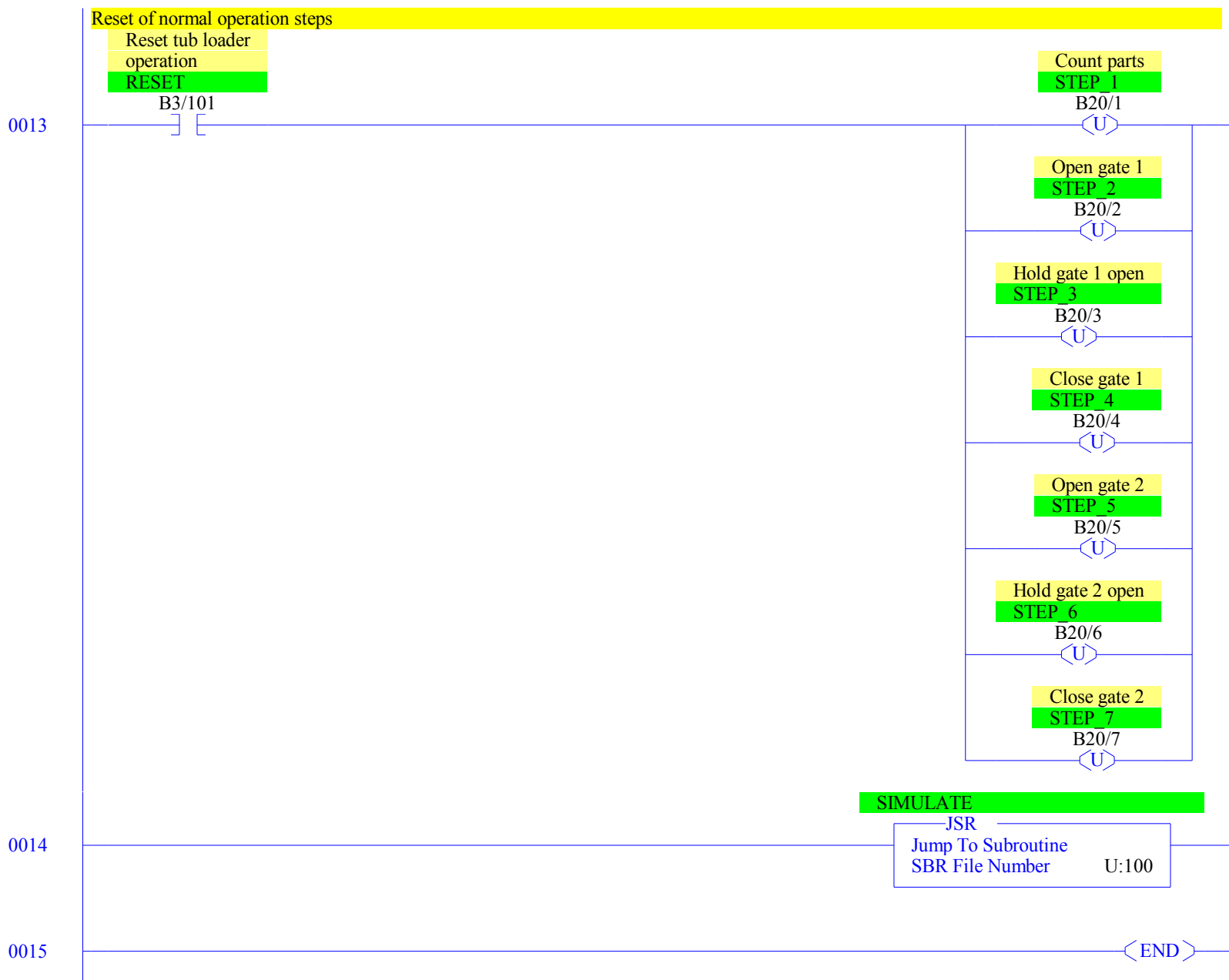
B20/6

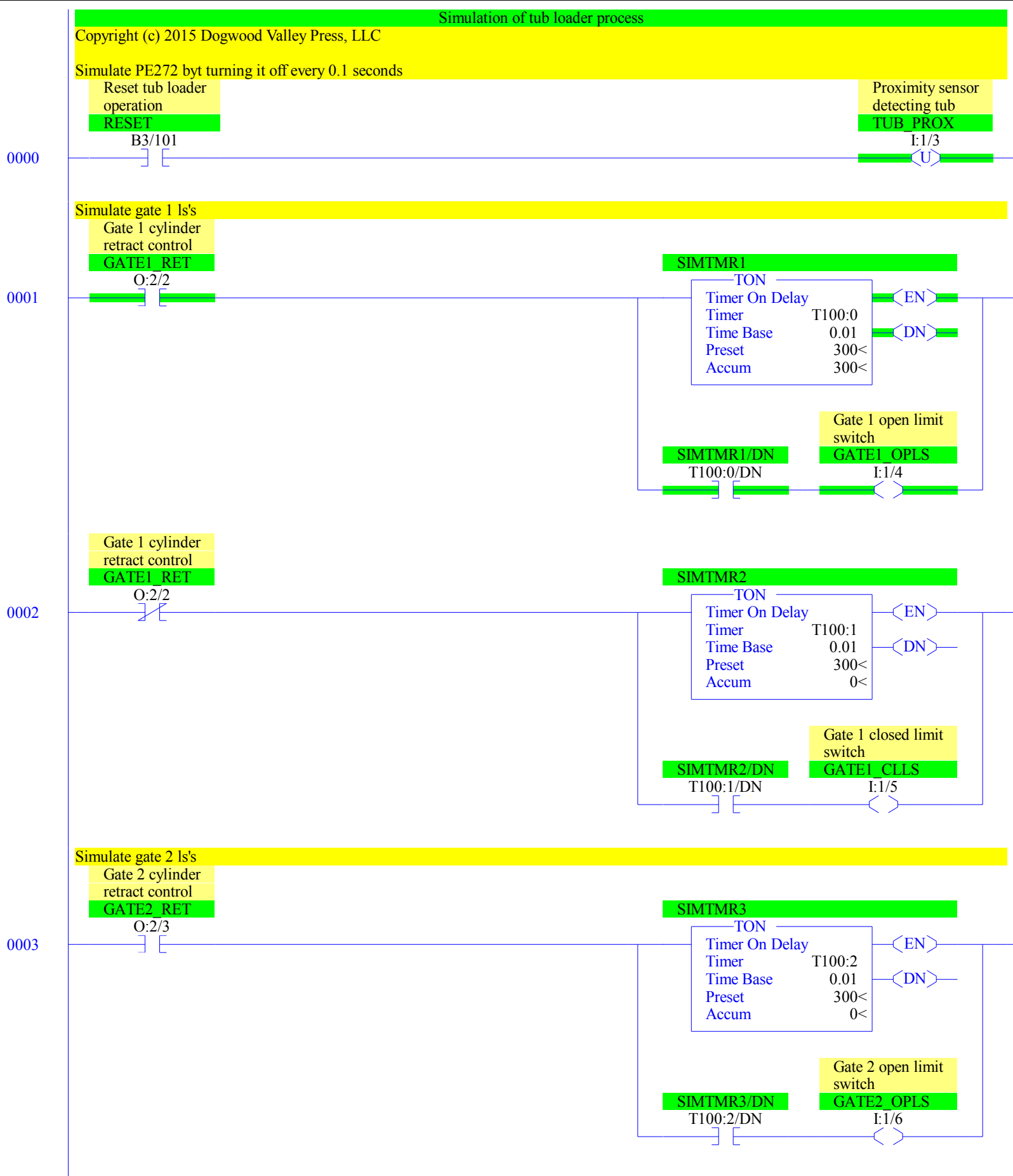
0004

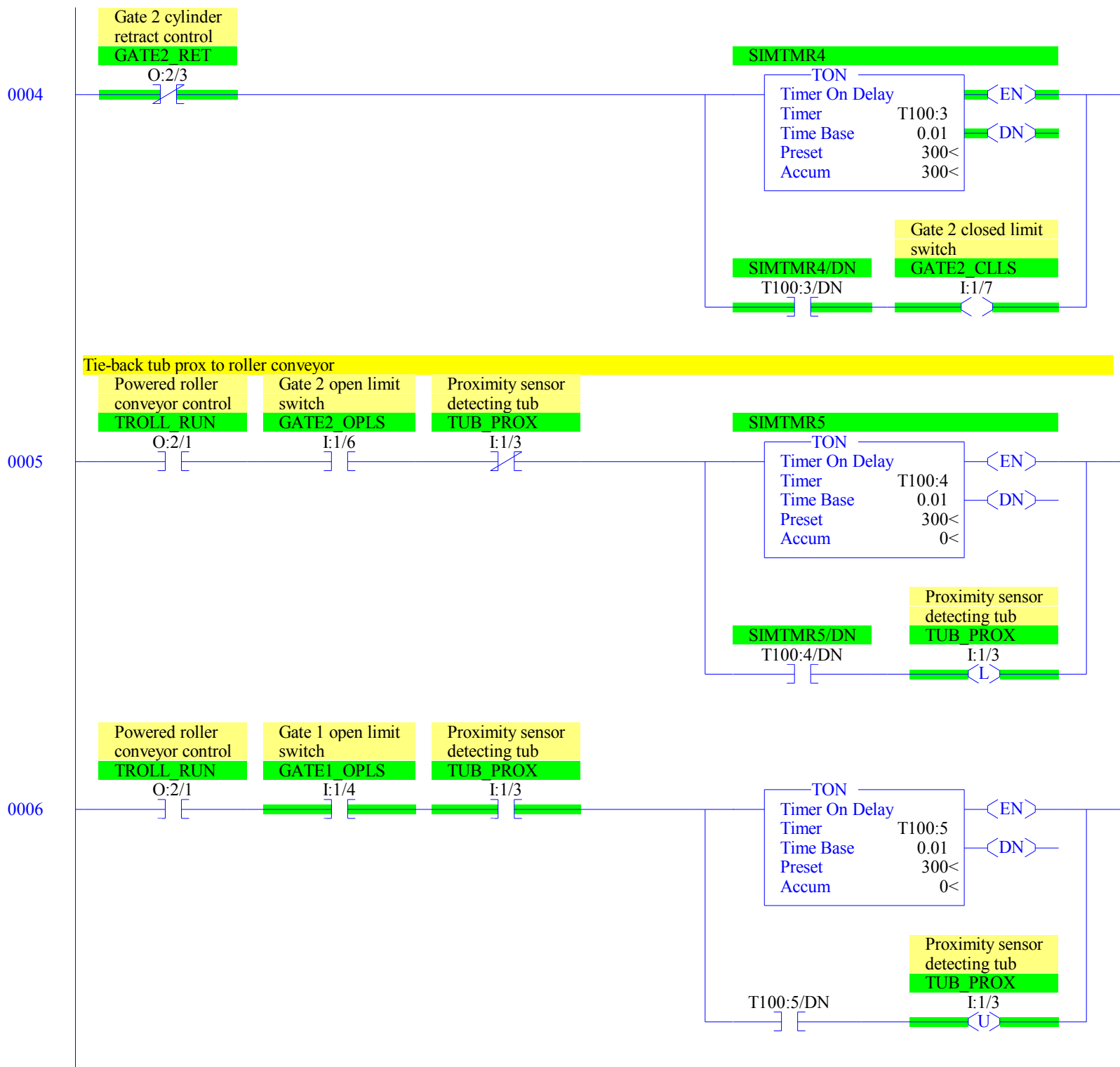
0005

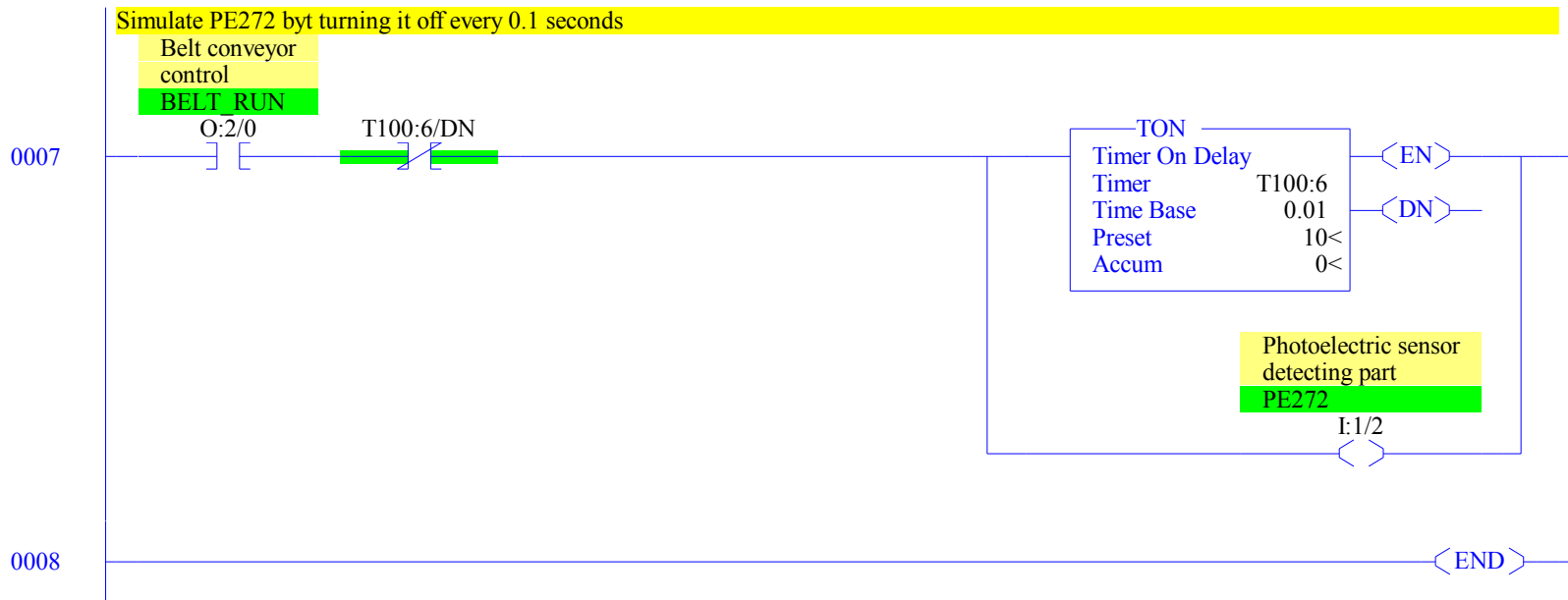












RSLogix 500 Cross Reference Report - Sorted by Address

O:2/0	- {BELT_RUN} Belt conveyor control OTE - File #2 - 8 XIC - File #100 SIMULATE - 7
O:2/1	- {TROLL_RUN} Powered roller conveyor control OTE - File #2 - 9 XIC - File #100 SIMULATE - 5, 6
O:2/2	- {GATE1_RET} Gate 1 cylinder retract control OTE - File #2 - 10 XIC - File #100 SIMULATE - 1 XIO - File #100 SIMULATE - 2
O:2/3	- {GATE2_RET} Gate 2 cylinder retract control OTE - File #2 - 11 XIC - File #100 SIMULATE - 3 XIO - File #100 SIMULATE - 4
I:1/2	- {PE272} Photoelectric sensor detecting part OTE - File #100 SIMULATE - 7 XIC - File #2 - 1
I:1/3	- {TUB_PROX} Proximity sensor detecting tub OTL - File #100 SIMULATE - 5 OTU - File #100 SIMULATE - 0, 6 XIC - File #2 - 6 File #100 SIMULATE - 6 XIO - File #2 - 3 File #100 SIMULATE - 5
I:1/4	- {GATE1_OPLS} Gate 1 open limit switch OTE - File #100 SIMULATE - 1 XIC - File #2 - 2 File #100 SIMULATE - 6
I:1/5	- {GATE1_CLLS} Gate 1 closed limit switch OTE - File #100 SIMULATE - 2 XIC - File #2 - 4, 7
I:1/6	- {GATE2_OPLS} Gate 2 open limit switch OTE - File #100 SIMULATE - 3 XIC - File #2 - 5 File #100 SIMULATE - 5
I:1/7	- {GATE2_CLLS} Gate 2 closed limit switch OTE - File #100 SIMULATE - 4
B3/100	- {RUN} Loading enabled to operate XIC - File #2 - 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 12
B3/101	- {RESET} Reset tub loader operation XIC - File #2 - 13 File #100 SIMULATE - 0
B3/102	- {TUB_PERMISSIVE} Milling machine is permitted to run OTE - File #2 - 12
T4:1	- {G1_HOLD_TMR} Gate 1 hold open timer RTO - File #2 - 3 RES - File #2 - 3
T4:1/DN	- XIC - File #2 - 3
T4:2	- {G2_HOLD_TMR} Gate 2 hold open timer RTO - File #2 - 6 RES - File #2 - 6
T4:2/DN	- XIC - File #2 - 6
C5:1	- {PART_CTR} Count parts CTU - File #2 - 1 RES - File #2 - 1
C5:1/DN	- XIC - File #2 - 1
B20/1	- {STEP_1} Count parts OTL - File #2 - 0, 7 OTU - File #2 - 1, 13 XIC - File #2 - 1, 8, 12 XIO - File #2 - 0, 1
B20/2	- {STEP_2} Open gate 1 OTL - File #2 - 1 OTU - File #2 - 2, 13 XIC - File #2 - 2, 10 XIO - File #2 - 0

RSLogix 500 Cross Reference Report - Sorted by Address

```

B20/3      - {STEP_3} Hold gate 1 open
            OTL - File #2 - 2
            OTU - File #2 - 3, 13
            XIC - File #2 - 3, 9, 10
            XIO - File #2 - 0, 3
B20/4      - {STEP_4} Close gate 1
            OTL - File #2 - 3
            OTU - File #2 - 4, 13
            XIC - File #2 - 4
            XIO - File #2 - 0
B20/5      - {STEP_5} Open gate 2
            OTL - File #2 - 4
            OTU - File #2 - 5, 13
            XIC - File #2 - 5, 11
            XIO - File #2 - 0
B20/6      - {STEP_6} Hold gate 2 open
            OTL - File #2 - 5
            OTU - File #2 - 6, 13
            XIC - File #2 - 6, 9, 11
            XIO - File #2 - 0, 6
B20/7      - {STEP_7} Close gate 2
            OTL - File #2 - 6
            OTU - File #2 - 7, 13
            XIC - File #2 - 7
            XIO - File #2 - 0
T100:0     - {SIMTMR1}
            TON - File #100 SIMULATE - 1
T100:0/DN  - XIC - File #100 SIMULATE - 1
T100:1     - {SIMTMR2}
            TON - File #100 SIMULATE - 2
T100:1/DN  - XIC - File #100 SIMULATE - 2
T100:2     - {SIMTMR3}
            TON - File #100 SIMULATE - 3
T100:2/DN  - XIC - File #100 SIMULATE - 3
T100:3     - {SIMTMR4}
            TON - File #100 SIMULATE - 4
T100:3/DN  - XIC - File #100 SIMULATE - 4
T100:4     - {SIMTMR5}
            TON - File #100 SIMULATE - 5
T100:4/DN  - XIC - File #100 SIMULATE - 5
T100:5     - TON - File #100 SIMULATE - 6
T100:5/DN  - XIC - File #100 SIMULATE - 6
T100:6     - TON - File #100 SIMULATE - 7
T100:6/DN  - XIO - File #100 SIMULATE - 7
U:100      - {SIMULATE}
            JSR - File #2 - 14

```