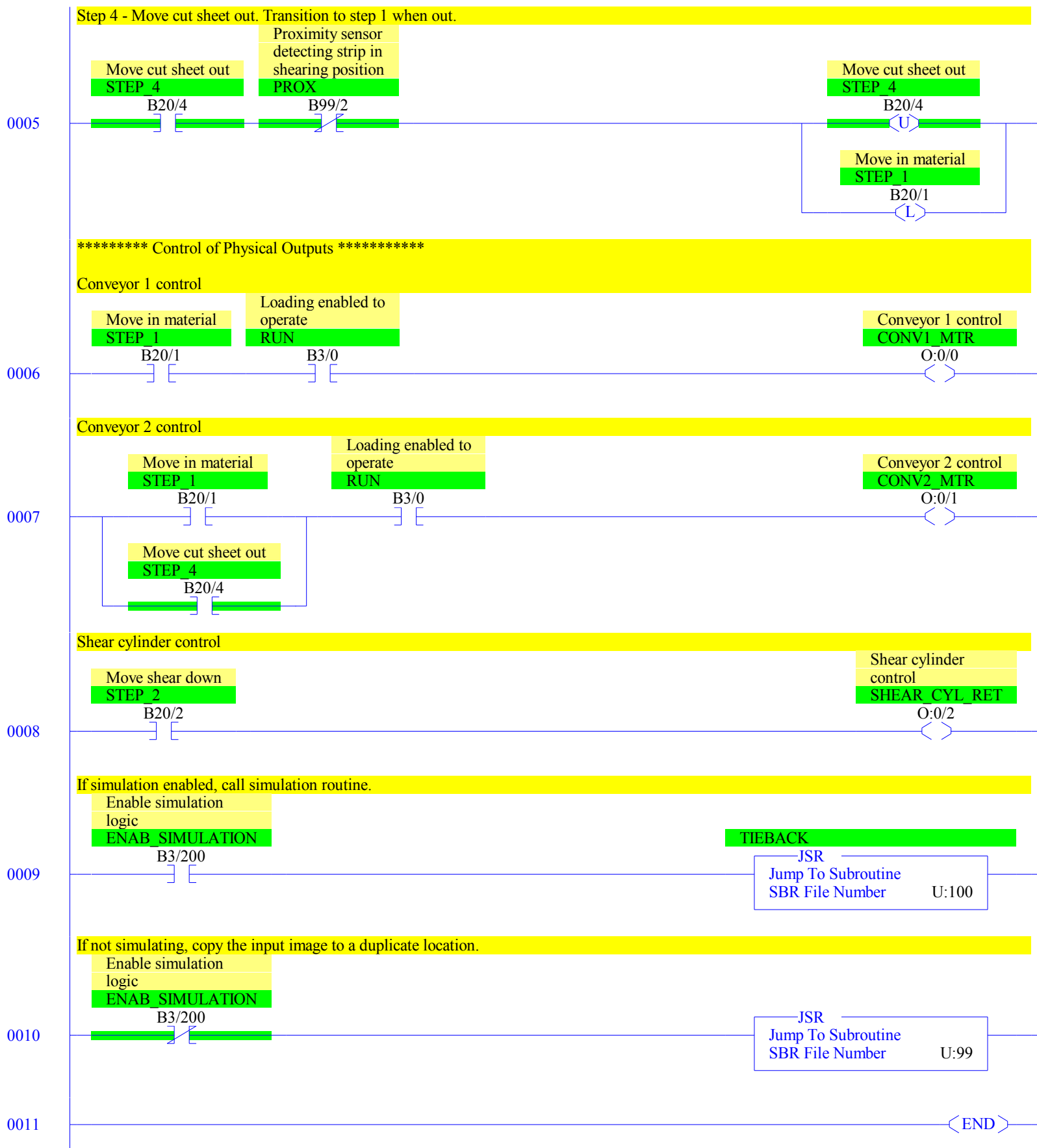


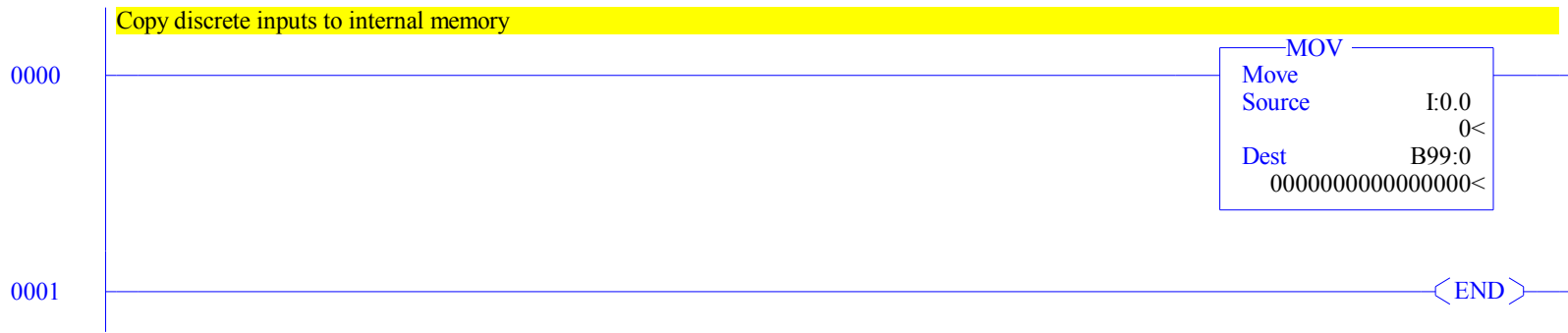
## Example 21.5 Metal Shear Control With Simulation

Copyright (c) 2015 Dogwood Valley Press, LLC

Start/stop/pause







Copyright (c) 2013 Dogwood Valley Press, LLC

Simulation logic for shear limit switches.

Shear cylinder  
control

SHEAR\_CYL\_RET

O:0/2

TIETMR\_SHEAR\_ON

TON

Timer On Delay

Timer

T100:0

Time Base

0.01

Preset

300&lt;

Accum

0&lt;

&lt;EN&gt;

&lt;DN&gt;

Limit switch  
detecting blade down

TIETMR\_SHEAR\_ON/DN

T100:0/DN

DOWN\_LS

B99/3

Shear cylinder  
control

SHEAR\_CYL\_RET

O:0/2

TIETMR\_SHEAR\_OFF

TON

Timer On Delay

Timer

T100:1

Time Base

0.01

Preset

300&lt;

Accum

300&lt;

&lt;EN&gt;

&lt;DN&gt;

Limit switch  
detecting blade up

TIETMR\_SHEAR\_OFF/DN

T100:1/DN

UP\_LS

B99/4

Simulation logic for proximity sensor.

Conveyor 1 control

Conveyor 2 control

CONV1\_MTR

CONV2\_MTR

O:0/0

O:0/1

TIETMR\_PROX\_ON

TON

Timer On Delay

Timer

T100:2

Time Base

0.01

Preset

300&lt;

Accum

0&lt;

&lt;EN&gt;

&lt;DN&gt;

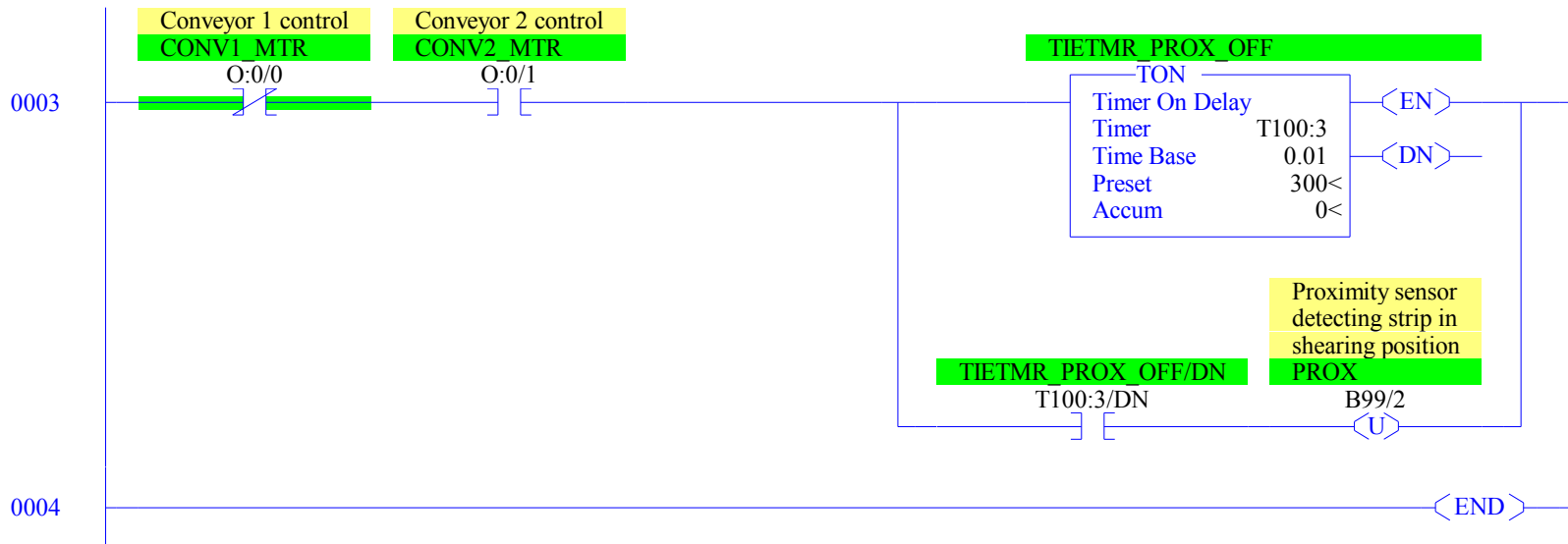
Proximity sensor  
detecting strip in  
shearing position

TIETMR\_PROX\_ON/DN

T100:2/DN

PROX

B99/2



## RSLogix 500 Cross Reference Report - Sorted by Address

|           |  |
|-----------|--|
| O:0/0     | - {CONV1_MTR} Conveyor 1 control<br>OTE - File #2 - 6<br>XIC - File #100 SIMULATE - 2<br>XIO - File #100 SIMULATE - 3  |
| O:0/1     | - {CONV2_MTR} Conveyor 2 control<br>OTE - File #2 - 7<br>XIC - File #100 SIMULATE - 2, 3   |
| O:0/2     | - {SHEAR_CYL_RET} Shear cylinder control<br>OTE - File #2 - 8<br>XIC - File #100 SIMULATE - 0<br>XIO - File #100 SIMULATE - 1  |
| I:0.0     | - MOV - File #99 DUPLIC INS - 0  |
| B3/0      | - {RUN} Loading enabled to operate<br>OTE - File #2 - 0<br>XIC - File #2 - 0, 1, 6, 7  |
| B3/200    | - {ENAB_SIMULATION} Enable simulation logic<br>XIC - File #2 - 9<br>XIO - File #2 - 10   |
| B20/1     | - {STEP_1} Move in material<br>OTL - File #2 - 1, 5<br>OTU - File #2 - 2<br>XIC - File #2 - 2, 6, 7<br>XIO - File #2 - 1   |
| B20/2     | - {STEP_2} Move shear down<br>OTL - File #2 - 2<br>OTU - File #2 - 3<br>XIC - File #2 - 3, 8<br>XIO - File #2 - 1  |
| B20/3     | - {STEP_3} Move shear up<br>OTL - File #2 - 3<br>OTU - File #2 - 4<br>XIC - File #2 - 4<br>XIO - File #2 - 1   |
| B20/4     | - {STEP_4} Move cut sheet out<br>OTL - File #2 - 4<br>OTU - File #2 - 5<br>XIC - File #2 - 5, 7<br>XIO - File #2 - 1   |
| B99:0     | - MOV - File #99 DUPLIC INS - 0  |
| B99/0     | - {START_PB} Start push button<br>XIC - File #2 - 0  |
| B99/1     | - {STOP_PB} Stop push button<br>XIC - File #2 - 0  |
| B99/2     | - {PROX} Proximity sensor detecting strip in shearing position<br>OTL - File #100 SIMULATE - 2<br>OTU - File #100 SIMULATE - 3<br>XIC - File #2 - 2<br>XIO - File #2 - 5 |
| B99/3     | - {DOWN_LS} Limit switch detecting blade down<br>OTE - File #100 SIMULATE - 0<br>XIC - File #2 - 3   |
| B99/4     | - {UP_LS} Limit switch detecting blade up<br>OTE - File #100 SIMULATE - 1<br>XIC - File #2 - 4   |
| T100:0    | - {TIETMR_SHEAR_ON}<br>TON - File #100 SIMULATE - 0  |
| T100:0/DN | - XIC - File #100 SIMULATE - 0   |
| T100:1    | - {TIETMR_SHEAR_OFF}<br>TON - File #100 SIMULATE - 1   |
| T100:1/DN | - XIC - File #100 SIMULATE - 1   |
| T100:2    | - {TIETMR_PROX_ON}<br>TON - File #100 SIMULATE - 2   |
| T100:2/DN | - XIC - File #100 SIMULATE - 2   |
| T100:3    | - {TIETMR_PROX_OFF}<br>TON - File #100 SIMULATE - 3  |
| T100:3/DN | - XIC - File #100 SIMULATE - 3   |

RSLogix 500 Cross Reference Report - Sorted by Address

---

|       |                      |
|-------|----------------------|
| U:99  | - JSR - File #2 - 10 |
| U:100 | - {TIEBACK}          |
|       | JSR - File #2 - 9    |