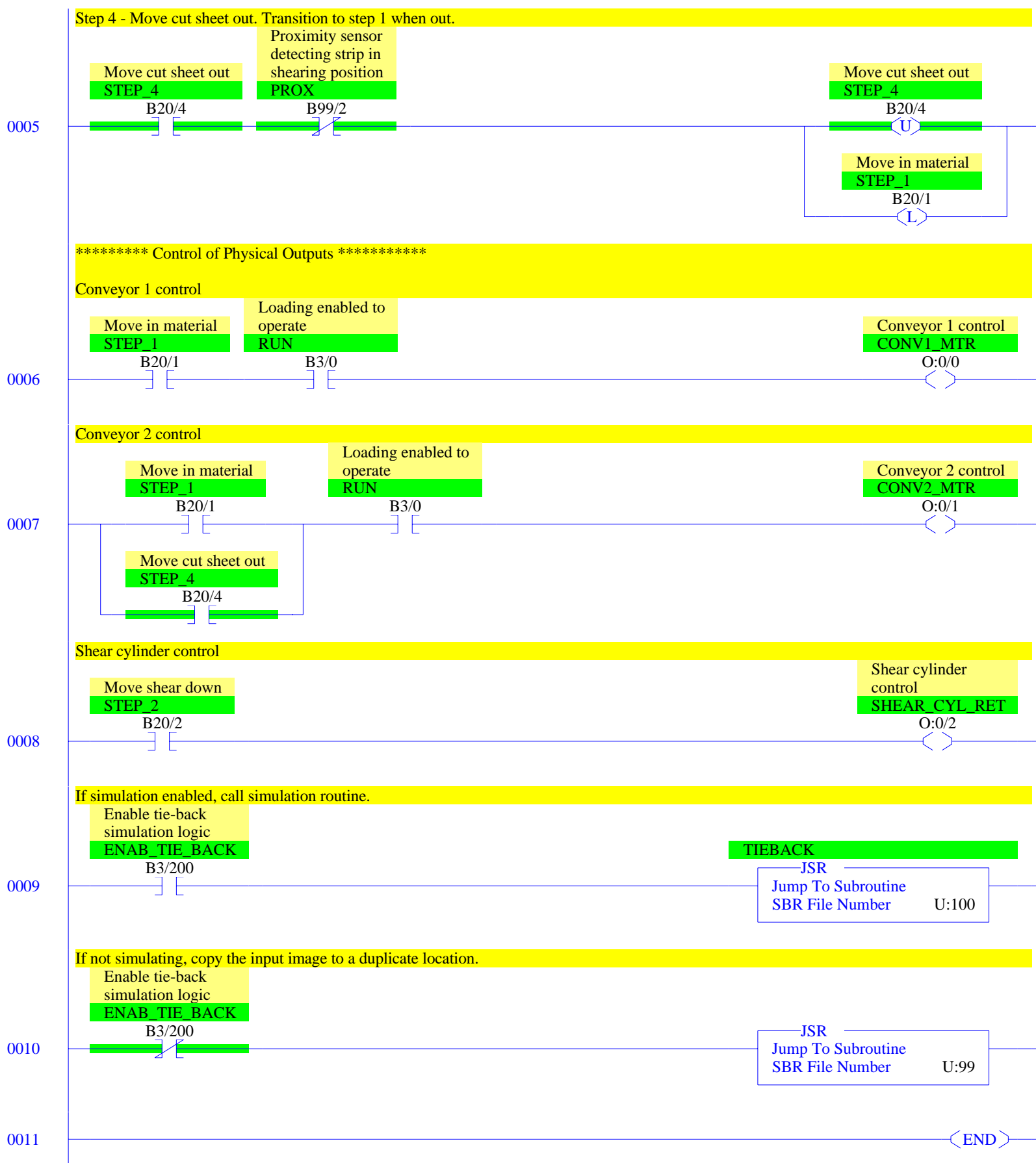


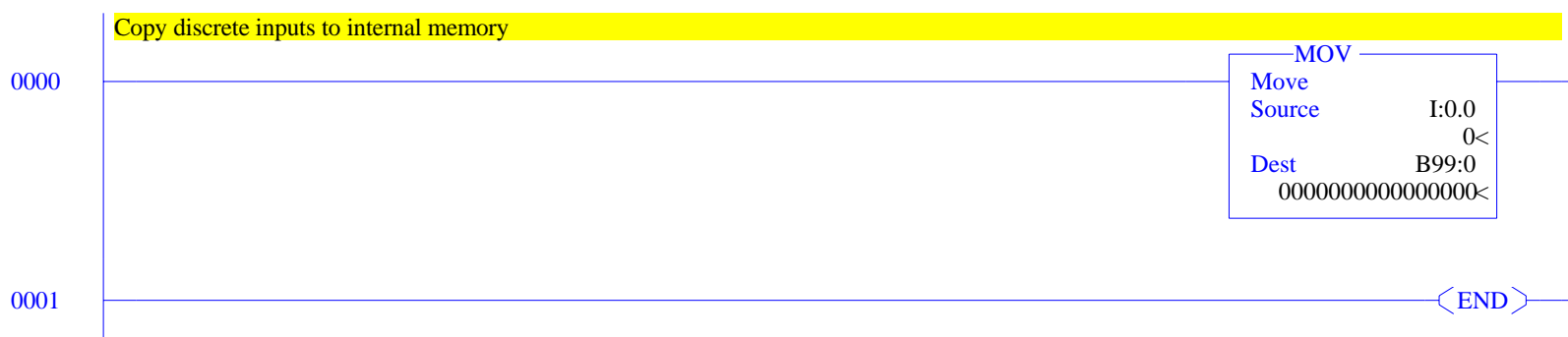
Example 15.1 Metal Shear Control With Simulation

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Start/stop/pause







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Tie-back 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<

Accum

0<

EN

DN

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<

Accum

300<

EN

DN

Limit switch
detecting blade up

TIETMR_SHEAR_OFF/DN

T100:1/DN

UP_LS

B99/4

Tie-back logic for proximity sensor.

Conveyor 1 control

CONV1_MTR

O:0/0

Conveyor 2 control

CONV2_MTR

O:0/1

TIETMR_PROX_ON

TON

Timer On Delay

Timer

T100:2

Time Base

0.01

Preset

300<

Accum

0<

EN

DN

Proximity sensor
detecting strip in
shearing position

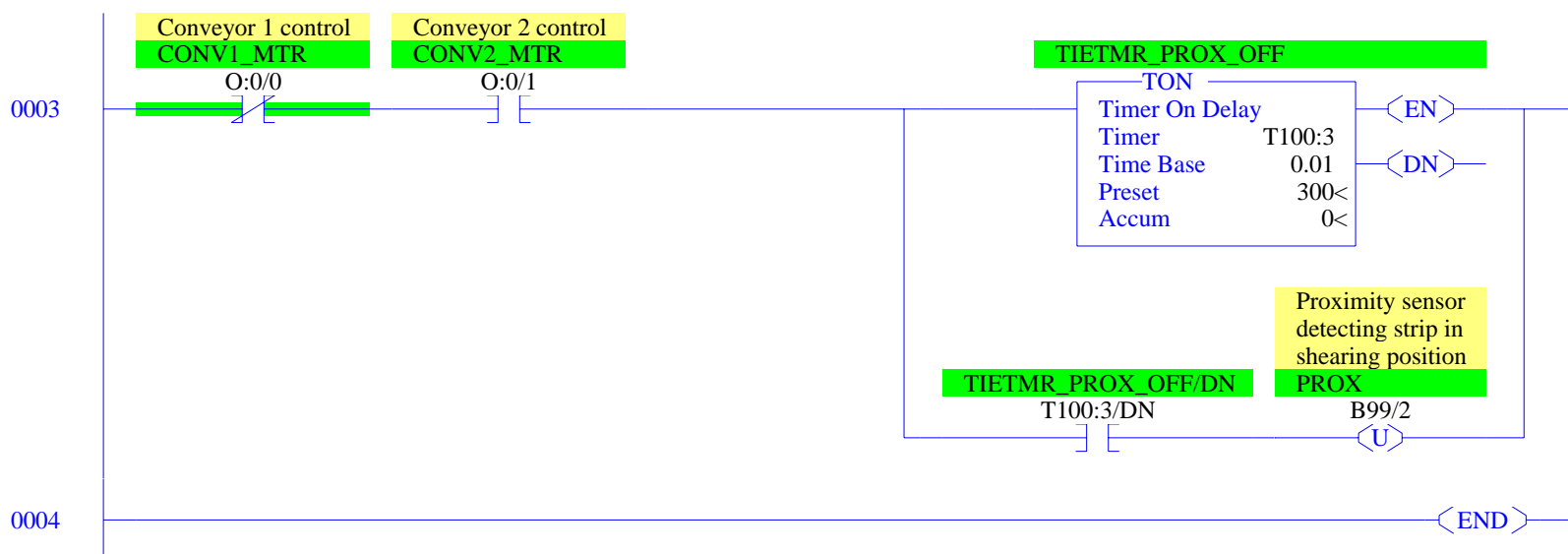
TIETMR_PROX_ON/DN

T100:2/DN

PROX

B99/2

L



RSLogix 500 Cross Reference Report - Sorted by Address

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

RSLogix 500 Cross Reference Report - Sorted by Address

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