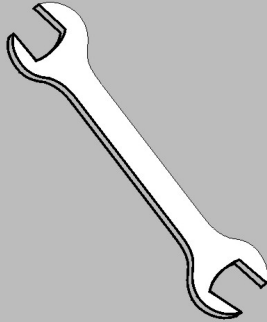


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Kit Instruction— KTAVGA0001



STOP!

To ensure this kit can be successfully applied, you need to be sure that all of the components and data required are in your possession.

The necessary components are:

1. new processor board
2. software for the processor board compatible with your system
3. a new monitor
4. a new video display board (which plugs into the processor board)
5. the necessary programming data from the system
6. the necessary data taken from the previous processor board so that the new processor board can be programmed after installation

If these elements are not in your possession, do not begin the installation of this retrofit kit. It may be necessary to collect data from the system before dismantling the old components so that the system can be returned to production.

If you have any questions related to this data or the retrofit, please call MILNOR Tech Support before disabling the system and beginning the retrofit on the following pages.

Thanks for your close attention!

Gary Lazarre
MILNOR Customer Service

GLL/das

CGA to VGA Monitor Conversion for the Miltron

To complete this conversion the processor board must be upgraded to a 186 processor board. New software must be installed and the controls programmed. The approximate time to complete this retrofit is one person working 5 man hours to installed the hardware. In addition, it will take approximately 2 man hours to program the new software. It will take

longer to program the new software for a complex Continuous Batch Washer. Prior

to beginning the conversion, it is necessary to familiarize yourself with all safety precautions in the Continuous Batch Washer and Miltron manuals; please observe all safety precautions. It is also imperative that these instructions are read prior to beginning the retrofit. While working on the Miltron, tag and lockout the power. Also, inventory the parts received with the kit.

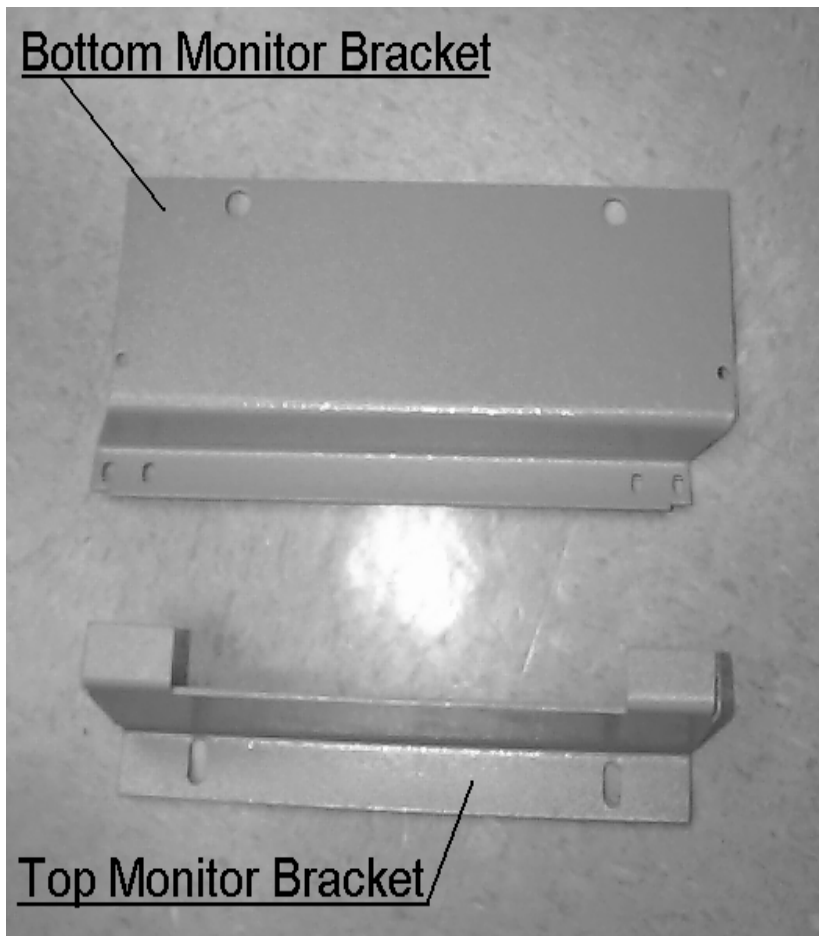


Figure 1

volt r on hand tools.

Tools required for this retrofit are: a drill, wire cutters, crimping tool, digital

Step one, print copies of all the display pages. These display pages will be used to program the new software. Figure one shows the top and the bottom monitor brackets uninstalled.

Step two, disconnect the video cable and the power cord on the CGA monitor and remove it

from the console. When removing the video cable, cut the rubber grommet to make removal easier. Save the cut rubber grommet because it will be used when installing the new monitor. Remove the old brackets. Next, place the new monitor and bottom monitor bracket into the Miltron console. Move the monitor and bottom monitor bracket until the monitor is lined up in the frame of the front of the console. Once the monitor and the bottom monitor bracket is lined up, mark with a pencil where the bracket assembly is to be installed. Refer to figure two. Remove the monitor and the bottom monitor bracket from the console. **WARNING: DO NOT SKIP THIS NEXT STEP!!!** Cover all the electronic boards in the bottom section of the Miltron console with card board or other nonconducting material to prevent metal shavings from coming in contact with the electronic boards. **DO NOT USE PLASTIC** to cover the electronic boards because it can create a static discharge. Next, using the number five drill bit supplied in the kit drill the holes for the bottom monitor bracket through the bottom of the upper section of the console. Refer to figure two. Then repeat the process for the top monitor bracket Refer to figure three. Remove the bottom monitor bracket and clean up the metal shavings in the console. Use the self tapping screws to secure the brackets to the console. When removing the material used to cover up the electronic boards in the bottom section of the Miltron

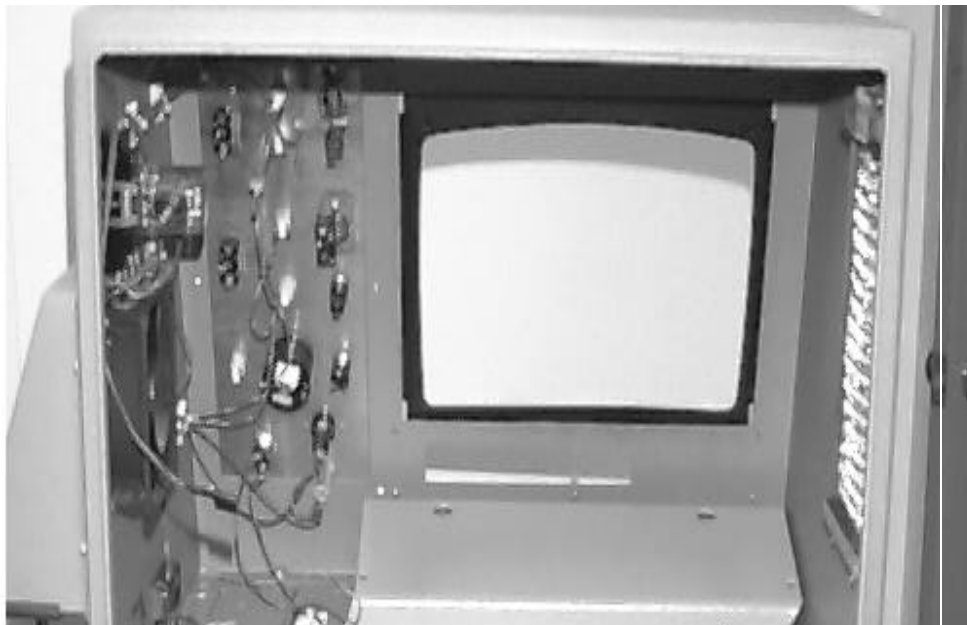
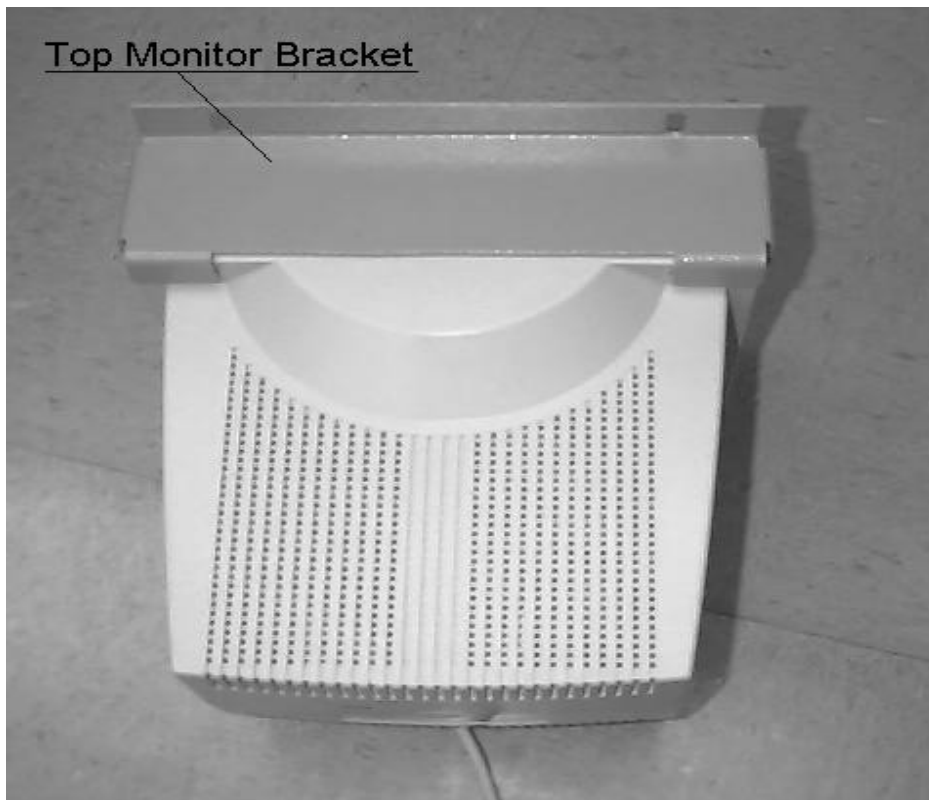


Figure 2



console, make sure that the metal shaving do not get on the electronic boards. Now install the monitor using the newly installed brackets. Put the cut rubber grommet around the video cable. Insert the video cable through the hole in the console and reinstall the cut rubber grommet. Put the self-adhesive foam rubber on the console door so that when the door is closed the foam presses against the monitor so that the monitor fits securely.

Step three, label all of the connectors, except the 34 pin connector, on the processor

Figure 3
board. Then remove the processor board. Next, install the new software in the new 186-processor board (08BSPEX). Refer to figure four number 2 (processor board), which is a photo with the new processor installed. When installing the software make sure that the notch in the software lines up with the notch on the software receptacle on the processor board. Refer to figure four number 3 (software). Mount the new processor board where the old processor board was. Install the bracket on the video card. Insert the video card in the processor board. Refer to figure four number 4 (video card). Mark the holes that need to be drilled to mount the video card bracket. **WARNING DO NOT SKIP THIS NEXT STEP!!!**

Cover all the electronic in the bottom of the Miltron console with card board or other nonconducting material to prevent metal shavings from coming in contact with the electronic boards. **DO NOT USE PLASTIC** to cover the electronic boards because it can create a static discharge. Then using the number 17 drill bit supplied drill the holes to mount the video card. When removing the material used to cover up the electronic boards in the bottom section of the Miltron console make sure that the metal shaving do not get on the electronic boards.

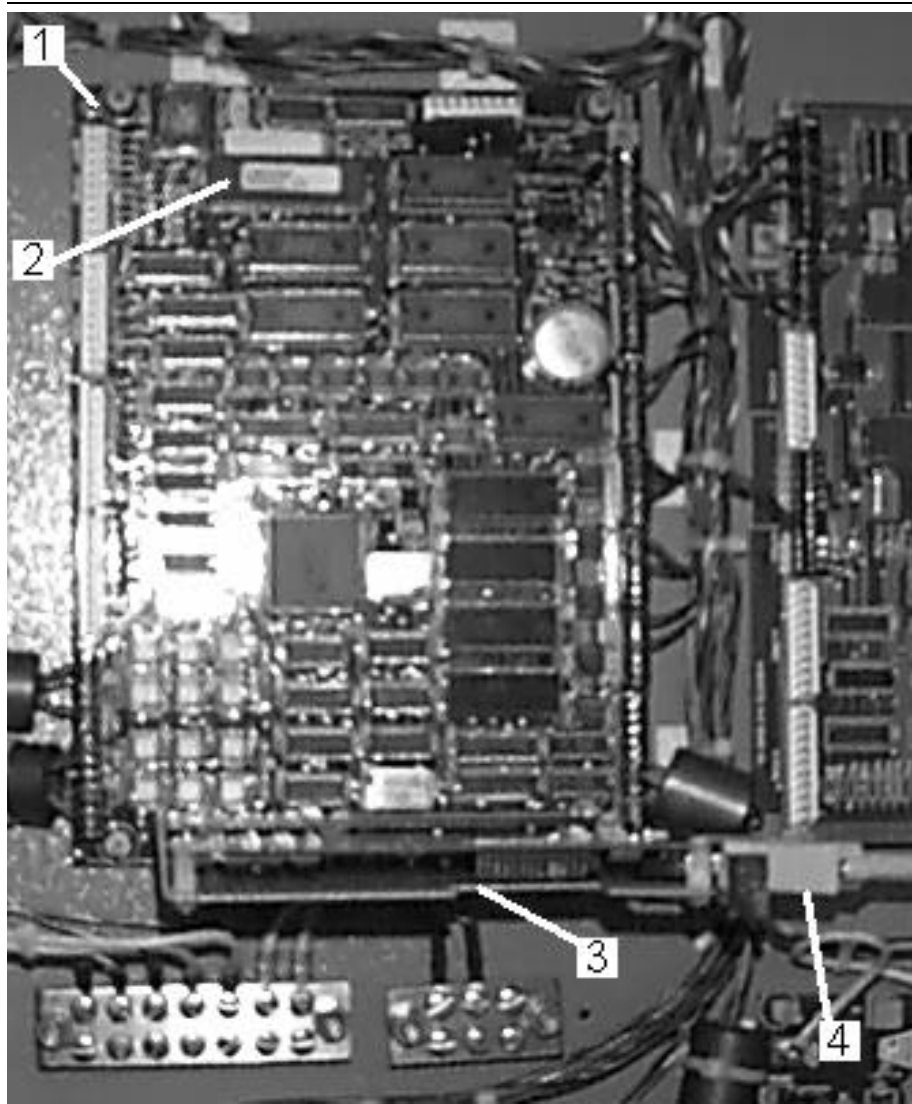


Figure 4

Install the video card and the bracket. Connect the video cable from the monitor to the video card. Refer to figure four number 5 (video cable). Number 1 in figure four is where the interface board and old video card mounted. Remove the interface board. MTA1 power, on the interface board is no longer necessary and should be taped up with electrical tape.

Step four, label the wires that go to 1MTA-38 and 1MTA-39. Rewire both of these connectors using the following chart. In addition, refer to schematics W8CBWMC\94517B and W8CBWSE\94517B included in these instructions.

OLD PROCESSOR BOARD	NEW PROCESSOR BOARD	
MTA38-2	MTA38-1	SIGNAL CANCEL
MTA38-3	MTA38-2	PROGRAM KEY
MTA38-6	MTA38-5	TUNNEL IN HOLD
MTA38-7	MTA38-6	TUNNEL POWER
MTA39-1	MTA39-3	LOAD END CLOCKWISE LEFT
MTA39-6	MTA39-8	LOAD END COUNTER-CLOCKWISE RT
MTA39-3	MTA39-5	DISCHARGE SAFETY RIGHT
MTA39-2	MTA39-4	DISCHARGE SAFETY LEFT

Then add +12VDC (blue\orange, V2, wire) to MTA39-2. In addition, if the CBW **DOES NOT** have a steam pressure or air pressure switch that makes an input on module one, input\output board number one, on 1MTA4-3, this input must be grounded. If the input is not grounded the CBW will not transfer and the error message "STEAM PRESSURE LOW or AIR PRESSURE LOW" will appear on the Miltron screen. Also, if the CBW **DOES NOT** have alignment proximity switches (Welded CBWs only, software versions 93018 and 94018 or later) that make an input on the processor board on MTA39-7, this input must be grounded. If the input is not grounded the CBW will not transfer and the error message "MODULES NOT ALIGNED" will appear on the Miltron screen.

Step five, if Milnor CBW Programmer or a flash memory box is to be used to download information to the Miltron the down load connector must be wired to 1MTA29-3&1 on the processor board. Refer to schematic W8CBWMBA\94517B lines 10 through 12.

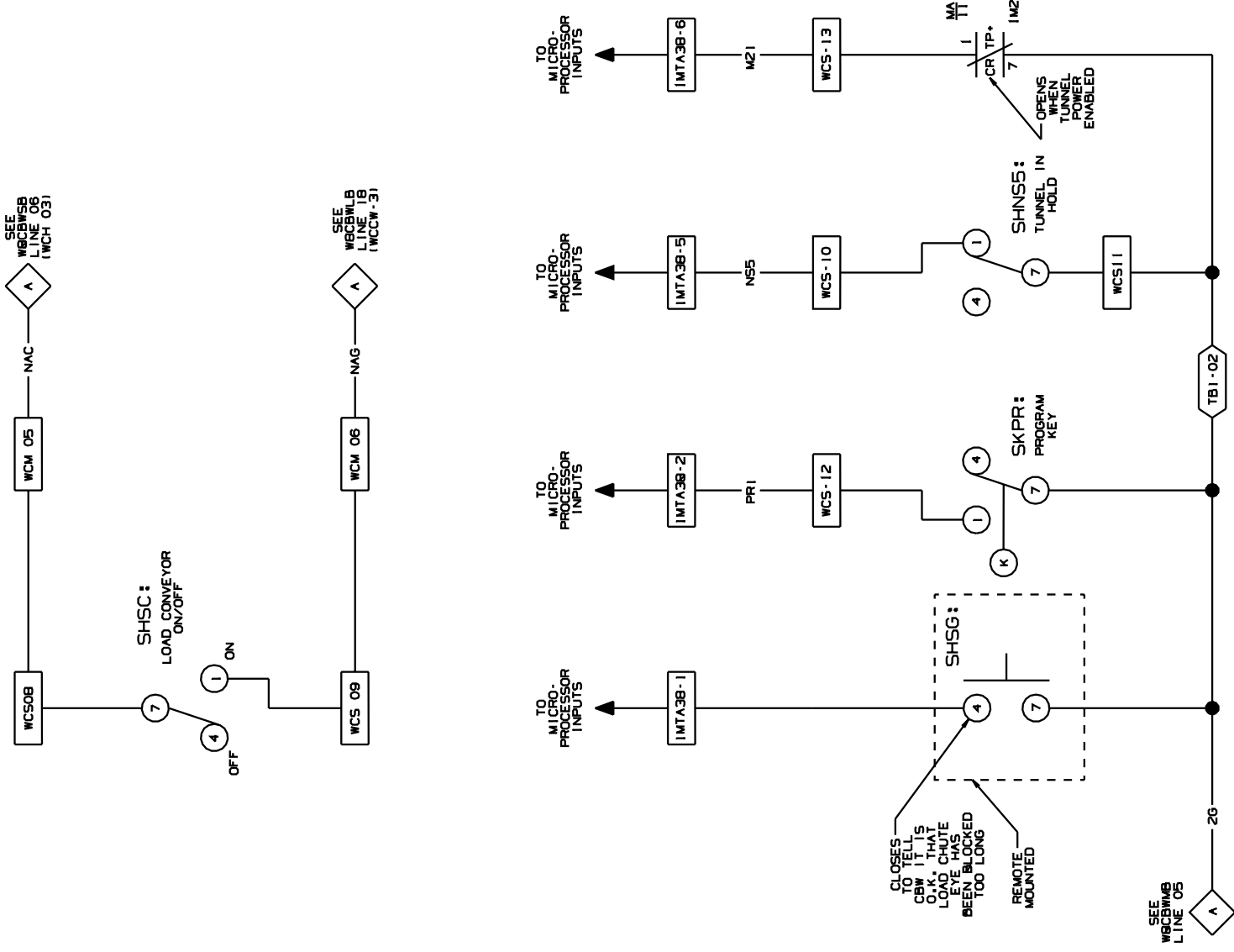
Finally, after rewiring MTA38 and MTA39, plug all of the MTA connectors in their appropriate places. Then turn on the Miltron and reprogram. After reprogramming the Miltron, test the CBW. If you should have any questions, please call Milnor Technical Support at (504) 467-9591 extension 276.

W8CBWMC

CBW SYSTEMS: MARK 8 SCHEMATIC: MICROPROCESSOR INPUTS

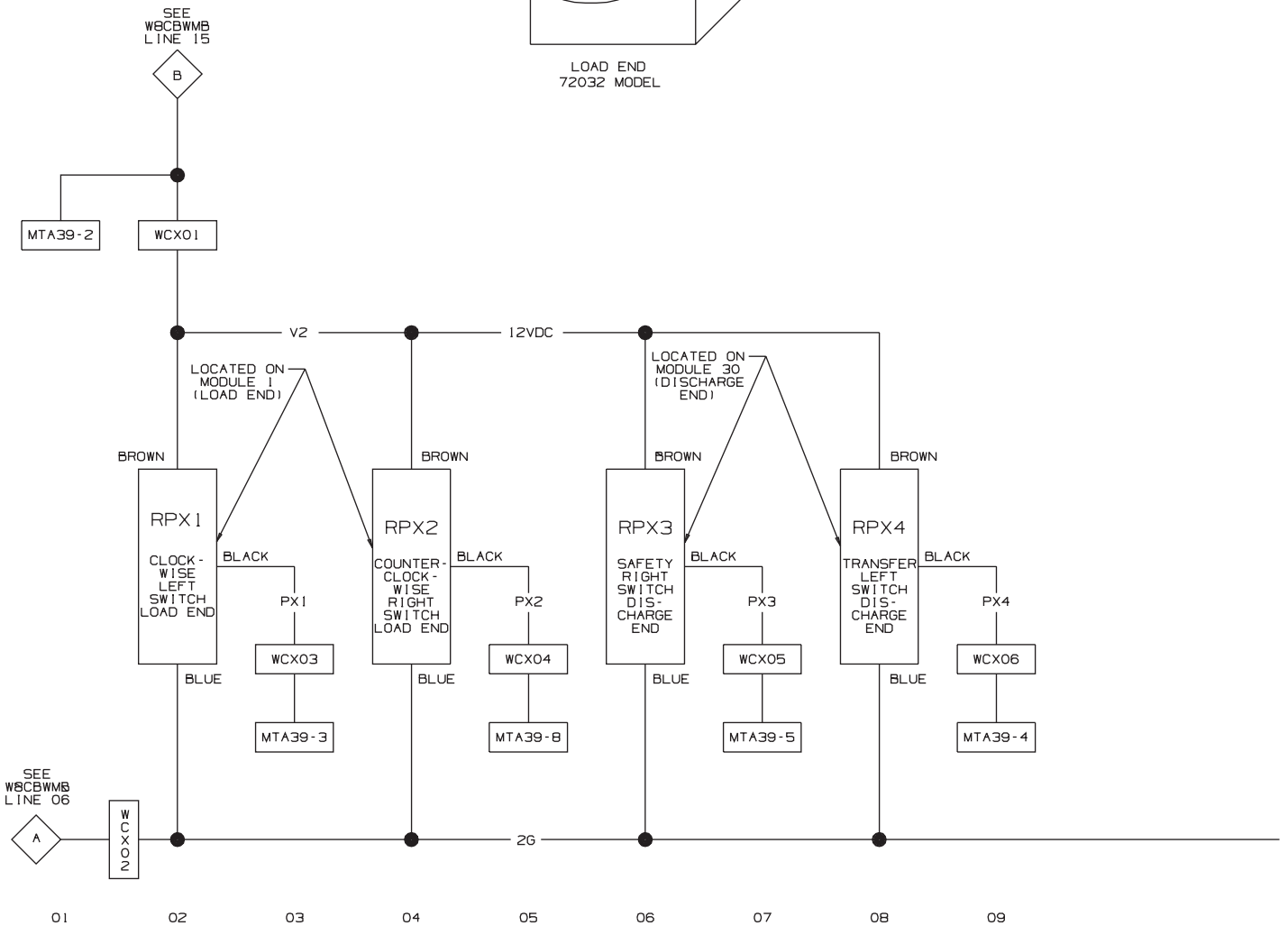
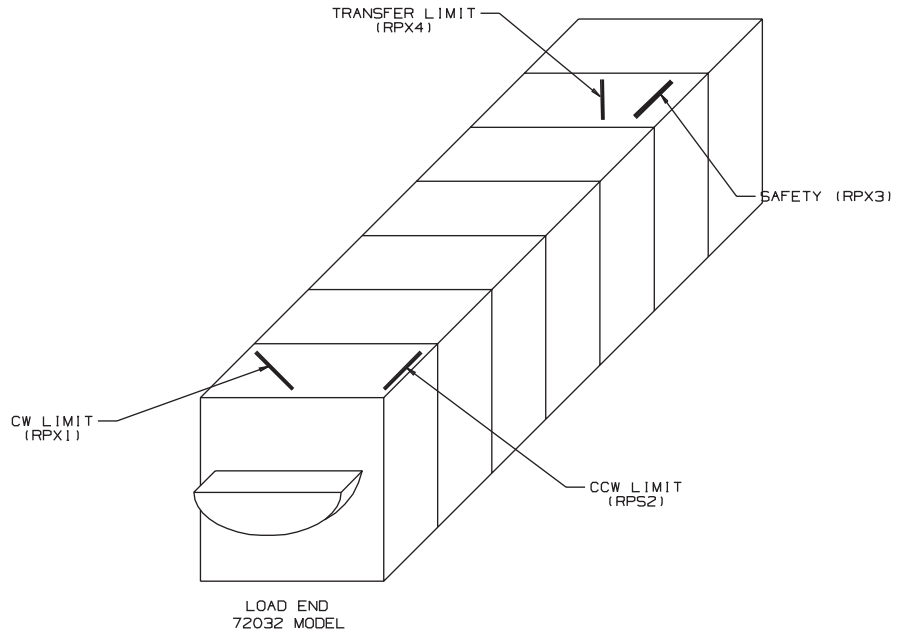
PELLERIN MILNOR CORPORATION

W8CBWMC
94517B



NOTE: CONNECTIONS SHOWN FOR IMTA3B ARE FOR MACHINES WITH 186 PROCESSOR BOARD. AFTER 943211, FOR MACHINES WITH 8088 PROCESSOR BOARD, IMTA1 BECOMES 3B-2, BECOMES 3B-5, BECOMES 3B-6, AND 3B-6 BECOMES 3B-7.

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14

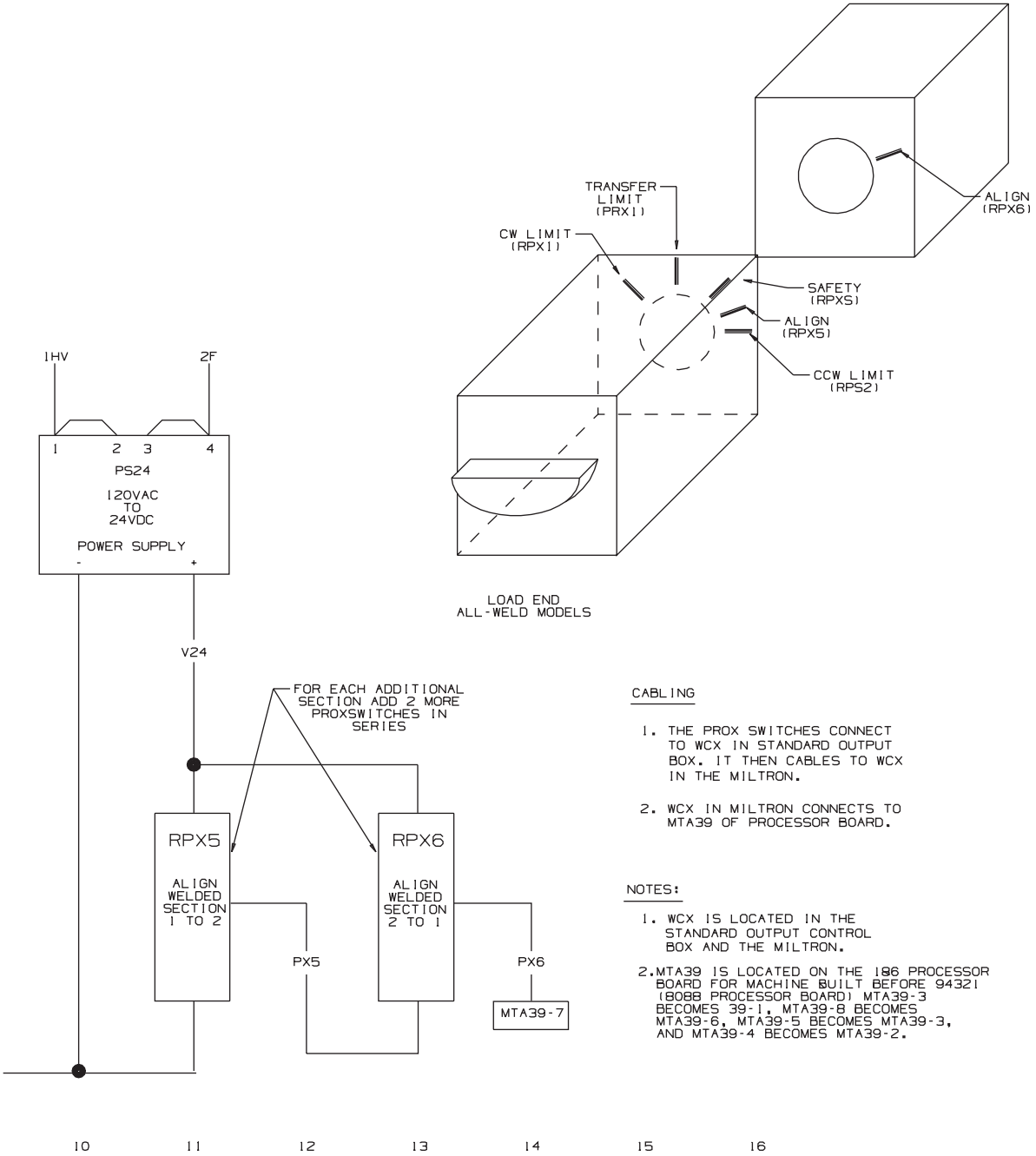


WBCBWISE

CBW SYSTEMS: MARK 8

SCHEMATIC: PROXIMITY SWITCHES

PELLERIN MILNOR CORPORATION



CABLING

1. THE PROX SWITCHES CONNECT TO WCX IN STANDARD OUTPUT BOX. IT THEN CABLES TO WCX IN THE MILTRON.
2. WCX IN MILTRON CONNECTS TO MTA39 OF PROCESSOR BOARD.

NOTES:

1. WCX IS LOCATED IN THE STANDARD OUTPUT CONTROL BOX AND THE MILTRON.
2. MTA39 IS LOCATED ON THE 186 PROCESSOR BOARD FOR MACHINE BUILT BEFORE 94321 (8088 PROCESSOR BOARD) MTA39-3 BECOMES 39-1, MTA39-8 BECOMES MTA39-6, MTA39-5 BECOMES MTA39-3, AND MTA39-4 BECOMES MTA39-2.