

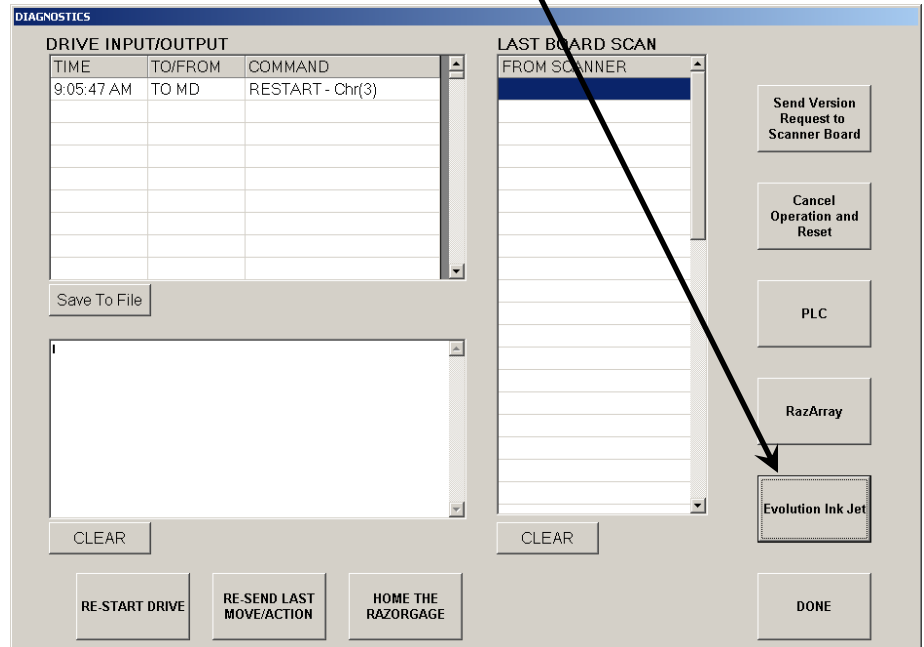
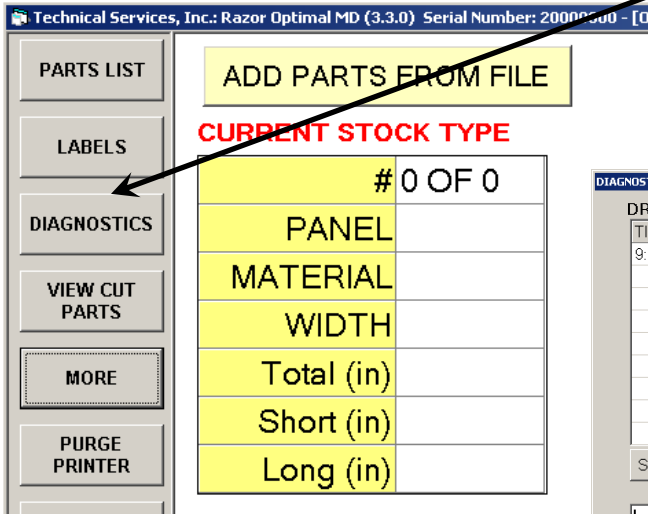
RazorGage Inkjet Printer

Changing the Character Aspect Ratio & Spacing

RazorOptimal Software

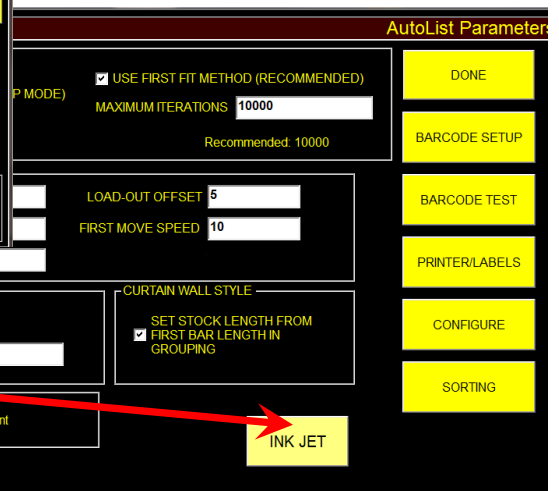
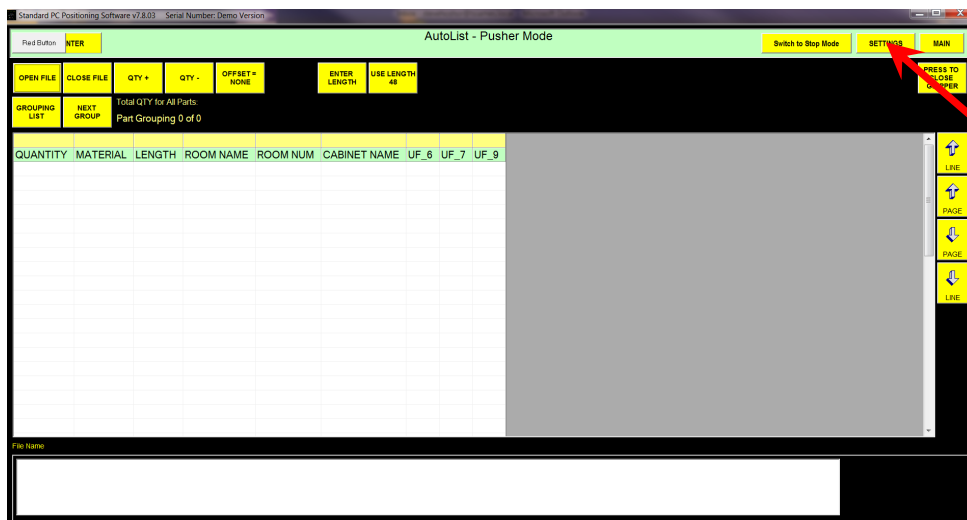
From the Main Screen Press Diagnostics

From the Diagnostics Screen press Evolution Inkjet



Autolist Software

From the Autolist Screen press SETTINGS



From the Autolist Parameters Screen press INK JET

RazorOptimal Software

On the Evolution Inkjet diagnostics screen change **Encoder Divider** to change the aspect ratio of the characters printed and **Intercharacter Spacing** to change the spacing between characters. See examples on the following page to determine the values you prefer.

The screenshot shows the RazorOptimal Software interface. It features several buttons at the top: 'Check Head Status', 'Get Control Flags', 'Check Cartridge', 'Download and Print Enable', 'Full Reset', and 'Cartridge State'. Below these are 'Cancel Print' and 'PURGE' buttons. In the center, there are two input fields: 'Encoder Divider' with the value '1' and 'Intercharacter spaces' with the value '5'. To the right of these fields are buttons for 'Get Parameters from Printer' and 'Save Parameters to DB'. At the bottom left, there are two checked checkboxes: 'Direction Right to Left' and 'Print Image Inverted', with an 'Update Direction or Print Image' button to their right.

Autolist Software

The screenshot shows the Autolist Software interface, titled 'Evolution Printer'. On the left, there is a text input area with 'TEXT 123' and '123 TEXT', a 'Clear' button, and a scrollable area showing four print preview examples. Each example shows a line of text followed by a series of numbers: 'OUT: ~)05~ 27 41 48 53 4', 'OUT: ~)05~ 27 41 48 53 4', 'OUT: ~)05~ 27 41 48 53 4', and 'OUT: ~d01~ 27 100 48 49 4'. At the bottom of this area is a 'CLOSE' button. On the right, there are buttons for 'Check Head Status', 'Get Control Flags', 'Check Cartridge', 'Download and Print Enable', 'Full Reset', and 'Cartridge State'. Below these are 'Cancel Print' and 'PURGE' buttons. In the center, there are two input fields: 'Encoder Divider (0-7)' with the value '1' and 'Intercharacter spaces (1-25)' with the value '5'. To the right of these fields are buttons for 'Read Parameters from Printer' and 'Update Parameters'. At the bottom left, there are two checked checkboxes: 'Direction Right to Left' and 'Print Image Inverted', with an 'Update Direction or Print Image' button to their right.

3/4 MAPLE SOLID
RATIO 7-20

3/4 MAPLE SOLID BOTTOM RAIL 6
RATIO 5-1

3/4 MAPLE SOLID BOTTOM RAIL 6
RATIO 15

3/4 MAPLE SOLID BOTTOM RAIL
RATIO 5-5

3/4 MAPLE SOLID BOTTOM RAIL 6
RATIO 2-2

3/4 MAPLE SOLID BOTTOM RAIL 6
RATIO 2-5

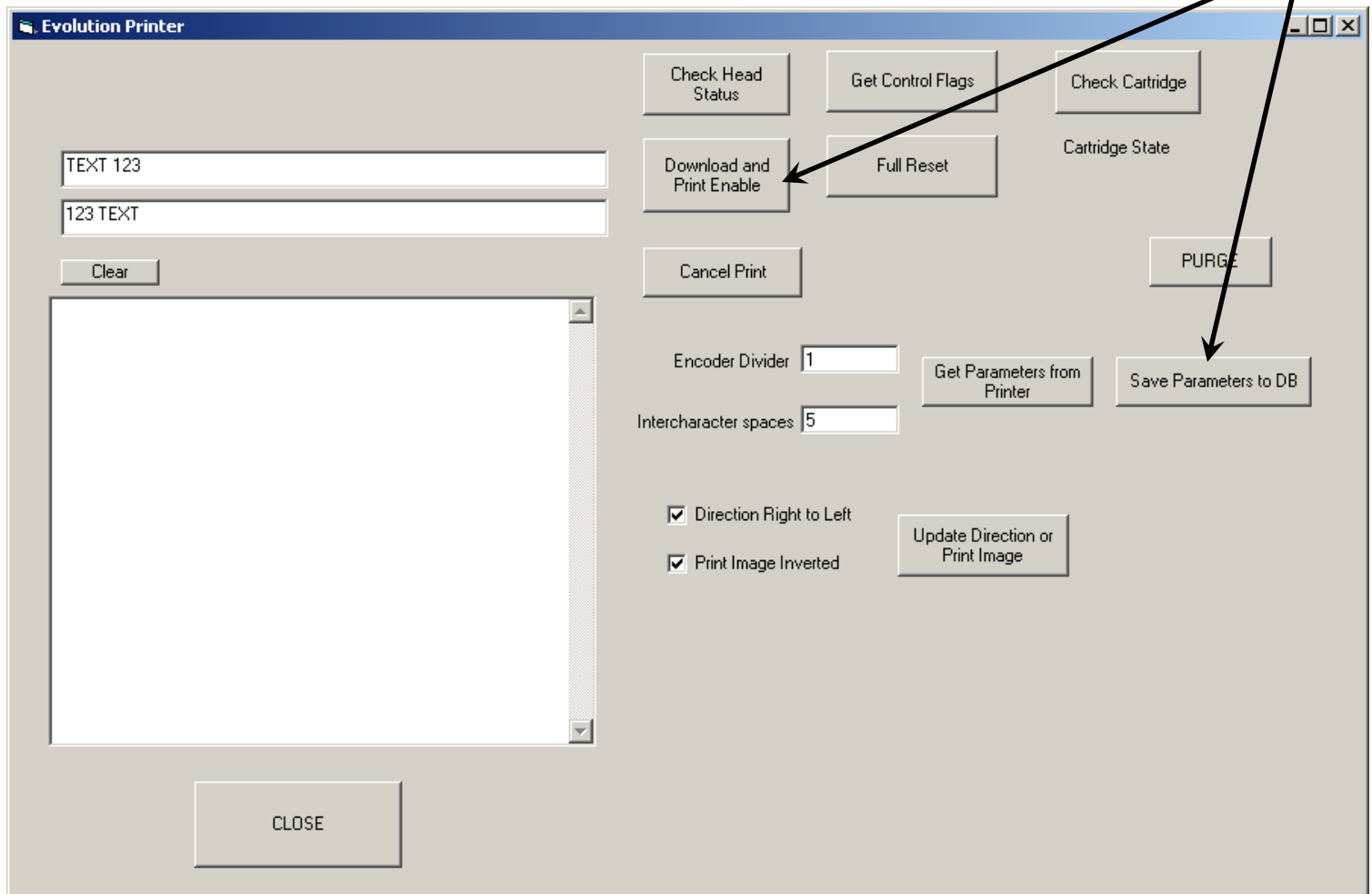
3/4 MAPLE SOLID BOTTOM RAIL 6
RATIO 3-10

RazorOptimal Software

After you set the values perform the following steps in order:

Click Save Parameters to DB

Click Download and Print Enable



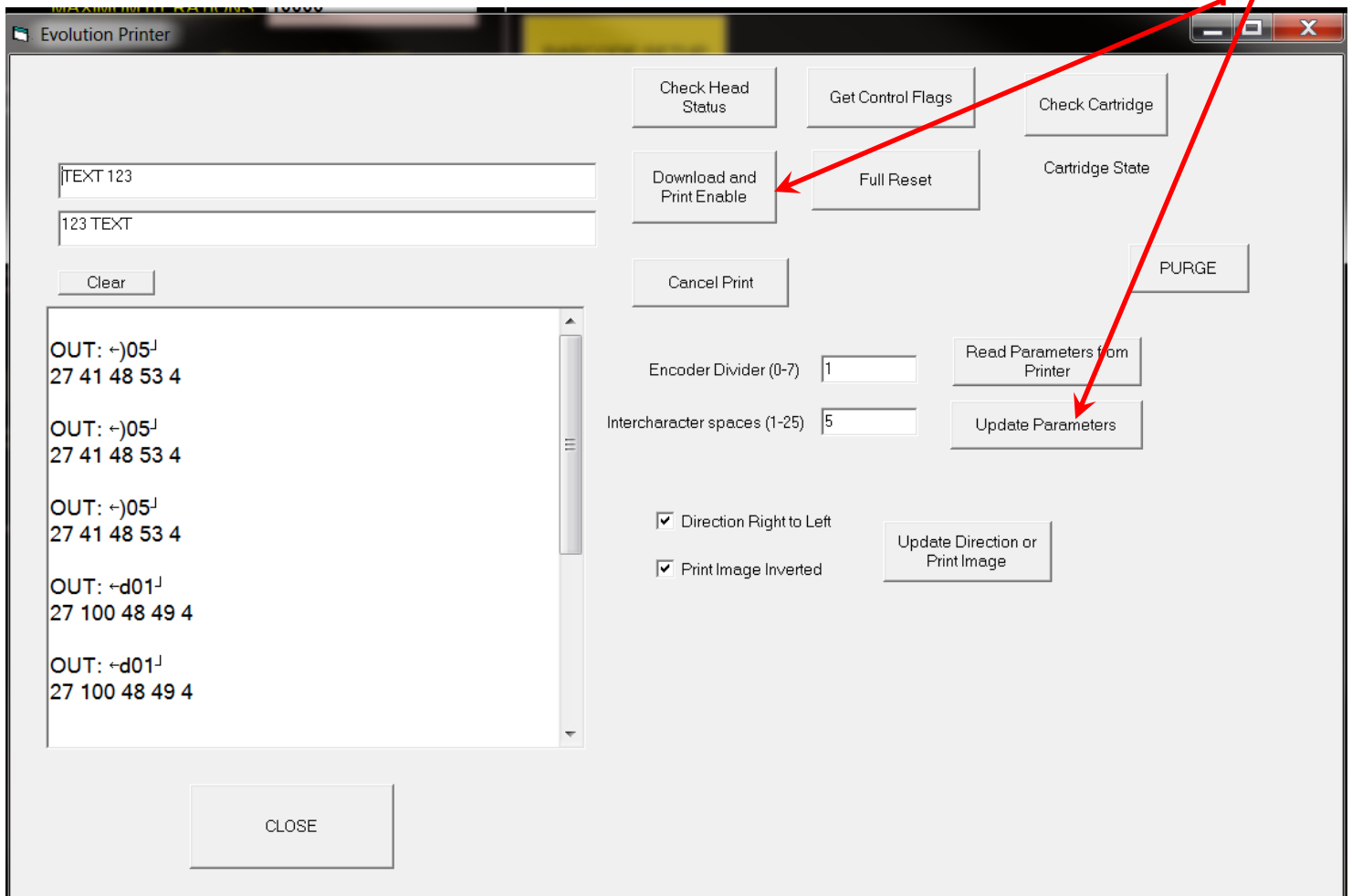
Click Close, then close the Main Diagnostics Screen, then RESTART the RazorOptimal Software. Then the settings will take effect.

Autolist Software

After you set the values perform the following steps in order:

Click UPDATE PARAMETERS

Click Download and Print Enable

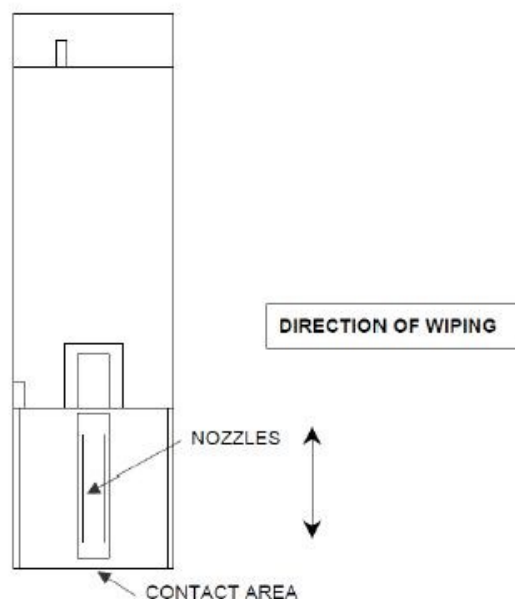


Click Close, then close the Autolist Parameters Screen by clicking DONE, then close the Autolist Screen and close the RazorGage Software. RESTART the RazorGage Software and the settings will take effect.

Maintaining and Cleaning Ink Cartridges

Maintain the bold, highly legible print that your inkjet printer is capable of by ensuring that the nozzle face of the ink cartridge is clean. Saw dust, ink spay and contaminants in the air can build up on the nozzle face during normal operation. The gap between the print head and material should be minimal (about 3/32") and the dust collection system must be adequate. Any build up of contaminants near the nozzles can degrade the print quality and cause fuzzy print, missing lines or complete loss of print. The solution to this problem is simply wiping the face of the ink cartridge.

Remove the cartridge. We recommend that a soft lint-free wipe be used to wipe the nozzle face. Wiping should be in the long (vertical direction) of the nozzles with the cartridge pointing down. The wipe may be wetted with ink from the nozzle area. DO NOT use any cleaners, solvents, etc. to clean the nozzle area. DO NOT apply excessive force as this may scratch the nozzle area.



During periods of inactivity cartridges should be placed in a Cover for Cartridge. This device holds the cartridge securely in place and seals the nozzle face from air and contaminants:



Ink Cartridge Cover RGX00585 - \$11.25

If the nozzle clog is persistent then the use of our Cleaning Kit may be necessary to draw ink from the nozzles.



Cleaning Kit RGX00584 - \$29.25

Insert the ink cartridge into the tray and securely snap into place. Place the tip of the syringe into the front of the tray. While holding the syringe securely in place gently draw back on the syringe plunger until ink flows into the syringe. Normally, it is not necessary to evacuate more than 0.1 cc of ink at a time as indicated below. Following ink withdrawal remove the syringe carefully. Remove the ink cartridge from the tray. Remove any remaining ink from the nozzle face with a lint free wipe.

Should the processes suggested above fail to clear the print quality problem, you may have either an air bubble in the ink near the nozzle or there could be a failure in the printer itself.

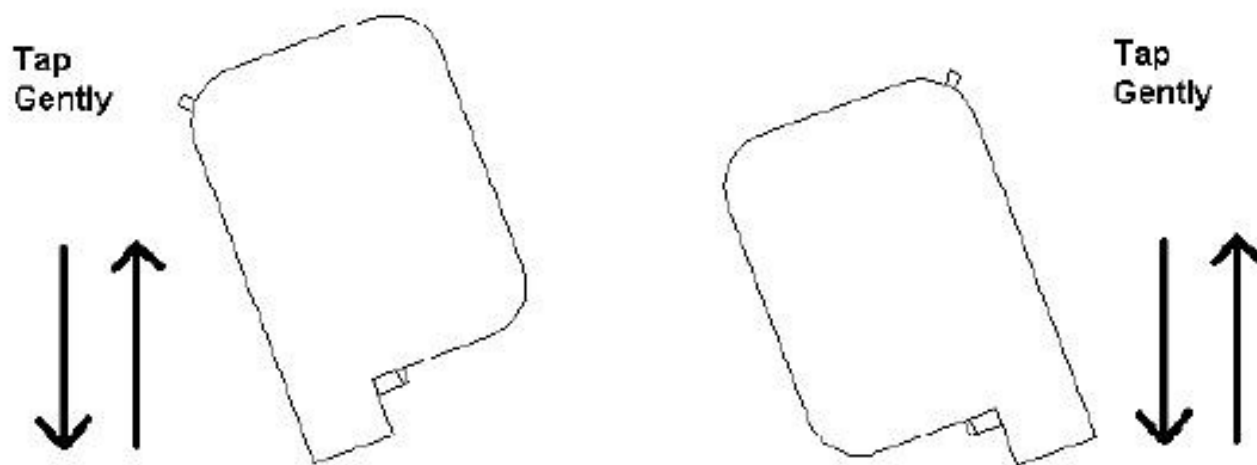
The print sample depicted below illustrates an air bubble trapped in the nose of the ink cartridge. Notice that the area not printed is tapered rather than a continuous band of unprinted information as in the case of a blown primitive.

Air in Cartridge

1234567890A B C D E F G
<<<< Print Direction

Blown Primitive

280463 02/05



The air bubble can usually be broken and displaced by gently tapping the cartridge nose on a hard surface. Tilt the cartridge approximately 30 to 45 degrees and tap gently. Tap both corners of the cartridge nose.

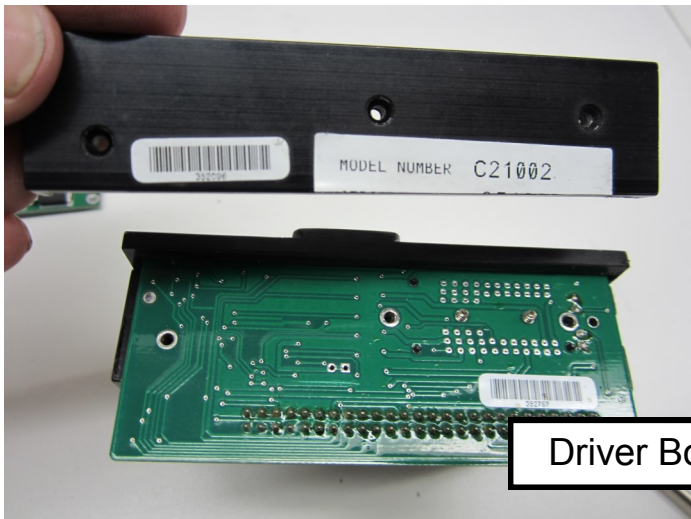
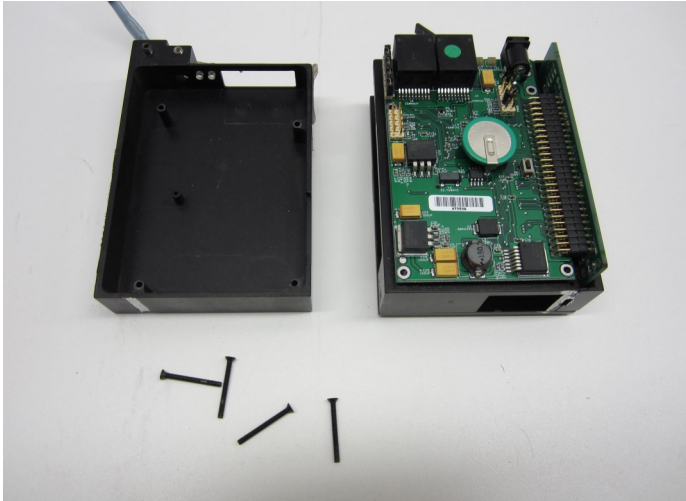
If the printer seems to be unresponsive watch the green LED on the printer to make sure it blinks when the RazorGage software starts up or when a board gets cut and a label should be printing. It should also blink when you press the Purge button from the RazorGage software. If you don't see the LED blink then be sure to check the communication cable (looks like an Ethernet cable) and the power cable. **MAKE SURE BOTH CABLES ARE PLUGGED IN AT BOTH ENDS.** The power cable plug at the printer needs to be secured with the small set screw coming in from the side of the power receptacle. If the printer is still not responsive try doing a hard reset. To do so, first close the RazorGage program. Disconnect the power cable from the top of the printer – it should be held in with a set-screw. Insert a standard paper clip into the hole on the female dovetail side of the printer, and while holding the paper clip in place (a light click will be felt) re-apply the power connector. This operation will reset the print carriage assembly to the factory default settings and will clear any current message. Next, startup the RazorGage software.

If there are problems with the printed label here are some tips:

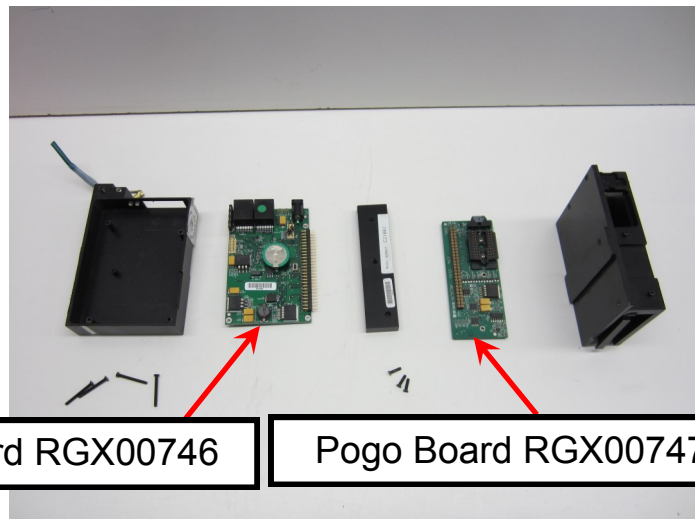
1. Wipe the printhead from top to bottom to get two black lines this could take a couple of times.
2. Do not use anything except a dry and if possible lint free cloth.
3. Use the cleaning tool. This is very inexpensive and will save a lot of headaches.
3. If you are using 4600 or 4700 ink you must install clip supplied when not using. If extra's clips are needed order (Part # RGX00585 - \$11.25) . Again saving a lot of headaches.
4. Sometimes it is hard to tell the difference between full or empty cartridges. If you have a scale the 4500, 4600, and 4700 full cartridge weighs 112 grams. Empty 77 grams.
5. The pogo board controls the cartridge. The gold pins have to make contact and be clean from water ink etc. Try running a pencil eraser across the pins and see if you can remove contaminants. Maybe a pin is stuck down this might fix that problem as well.

If you find that your print is missing multiple dots causing a line through your print and it continues with a new cartridge this could be the pogo board. Its called a blown primitive. The pogo board will have to be replaced.

The pogo board is indicated in the pictures below. The part number is RGX00747 and the price is \$165.38. If the printer is completely dead then the driver board may need to be replaced. The driver board is part number RGX00746 and the price is \$335. See the pictures below showing how to access the driver board and the pogo board.



Driver Board RGX00746



Pogo Board RGX00747

All parts shown are available on the online RazorGage Store. Go to www.razorgage.com, click Replacement Parts, then click the picture to enter the store.

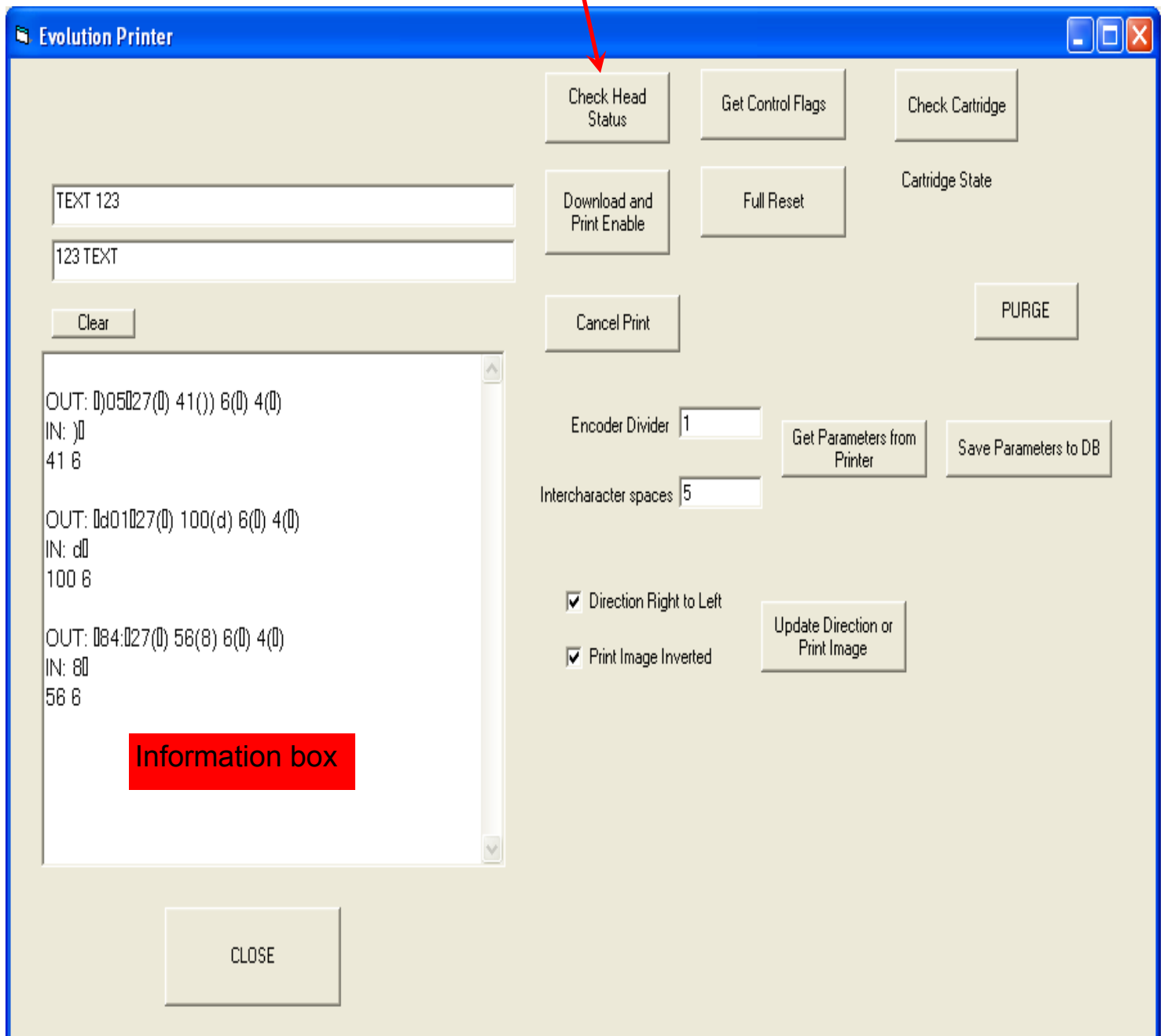
We recommend purchasing ink from:

A & M Sales
Milwaukee, WI
www.amsalesinc.net
800-382-6108

The 4500 ink cartridge is the one most commonly used with RazorGage equipment. If you are printing on hard, non-porous surfaces such as plastic or metal you may want the 4600 cartridge.

For printers after mid 2012

If you push the Check Head Status Button. In the information box, You should see 3 Lines of information, if you do, it means the Cat 5 cable is working.



For printers before Mid 2012

If you push the Check Head Status Button. In the information box, you should see 5 lines of information, if you do , the Cat 5 cable is working correctly. If you see less than 5 there is a problem communicating.

Evolution Printer

Check Head Status

Get Control Flags

Check Cartridge

Cartridge State

Download and Print Enable

Full Reset

Cancel Print

PURGE

Encoder Divider 1

Intercharacter spaces 5

Get Parameters from Printer

Save Parameters to DB

☒ Direction Right to Left

☒ Print Image Inverted

Update Direction or Print Image

OUT: R00
27 82 1 4
27(0) 82(R) 48(0) 48(0) 4(0)
MI: R00
82 48 48

Information box

CLOSE

If your printer driver board or pogo board is requiring replacement often, it could be that the MOVE TO RUN START SPEED is set too high. This parameter controls the speed of the first move the positioner makes when it is pushing the board under the printer. If the MOVE TO RUN START SPEED is set too high then the printer gets jostled violently when the board is pushed under the canted roller wheel. If you slow down that first move then the board goes gently under the wheel and greatly reduces the likelihood of printer breakdowns. To modify this parameter follow the instructions below:

From the Main Screen press the MORE button

Then press the PARAMETERS button.

Modify the MOVE TO RUN START parameter. 10 is usually a good number to start with.

Razor Optimal (v3.3.5) Serial Number: 20130013 - [OPERATION]

PARTS LIST

LABELS

DIAGNOSTICS

VIEW CUT PARTS

MORE

PURGE PRINTER

ADD PARTS FROM FILE

CURRENT STOCK TYPE

#	1 OF 2
PANEL	NO
MATERIAL	Pg/Mdf 4/4
WIDTH	2.37
Total (ft)	39.50
Short (in)	6.18
Long (in)	27.93

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LIST TYPES

☐ SINGLE STEP

MOVE TO RUN START

SCAN WAIT

GO

QUEUE BOARD

Other Operations

Parameters for machine operation

Parameters

Labels Displayed

Display Labels

Define how parts are grouped

Part Grouping

Units for Display of Total, Short, Long

Sum Units

Enter or select operator, supplier

Operator/Supplier

Set Part Units: Inches or mm

Units

PARAMETERS

POSITION

MOTION

SAW

PANELS

FIT

SCAN

PARTS

ENCODER

COM

DONE

CANCEL

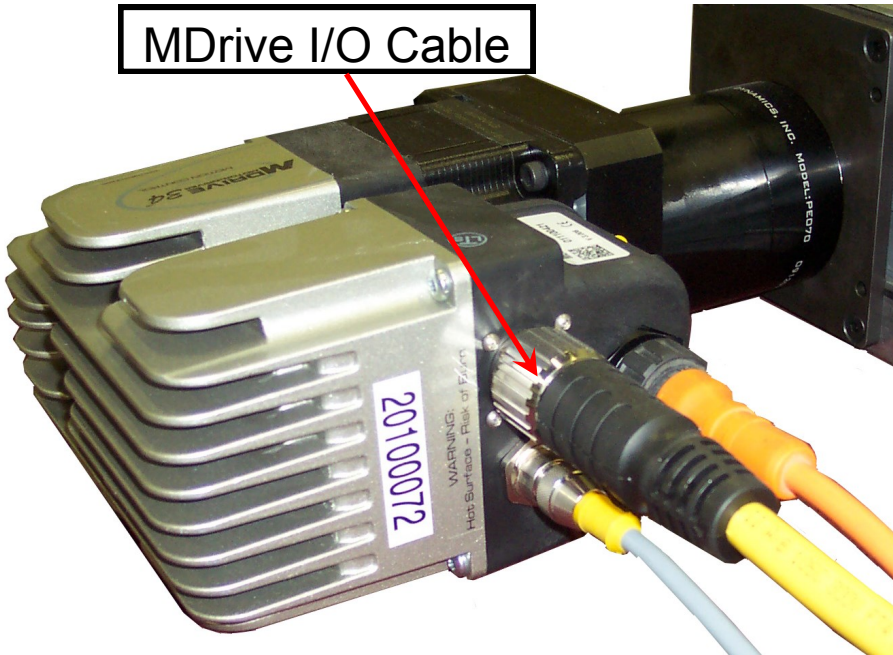
MOTION

SPEED	50	INCHES/SEC
ACCEL	90	INCHES/SEC
DECEL	90	INCHES/SEC
MOVE TO RUN START SPEED	10	INCHES/SEC
RUN CURRENT	100	Percent (20 - 100)

RazorOptimal - Printer Purges but won't print..

If the printer purges alright but will not print, first click the LABELS button on the main screen of the RazorOptimal and check to see if the PRINT LABELS checkbox is checked. If it is checked, run a board and watch the green LED on the printer body. If it stays on most of the time and blinks off for each new board then the printer may not be getting encoder counts from the motor.. Follow the steps below to troubleshoot this problem.

MDrive I/O Cable



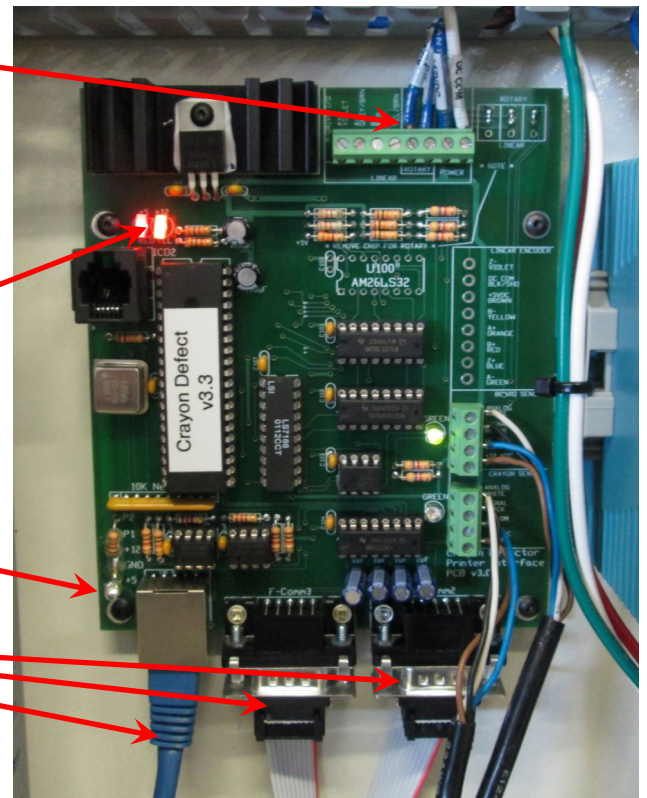
The MDrive I/O cable has a threaded ring that tightens the cable to the mating connector on the MDrive. This is a very robust connector and sometimes it seems like the ring is tight when it actually needs to be tightened more. In this condition, intermittent I/O related problems can occur. To make sure it is tight, wiggle the cable with one hand and continually

Working with each wire individually, loosen the screw terminal, remove the wire and re-insert making sure that the terminal will be tightening on the copper and not on the insulation. Then retighten the terminal screw.

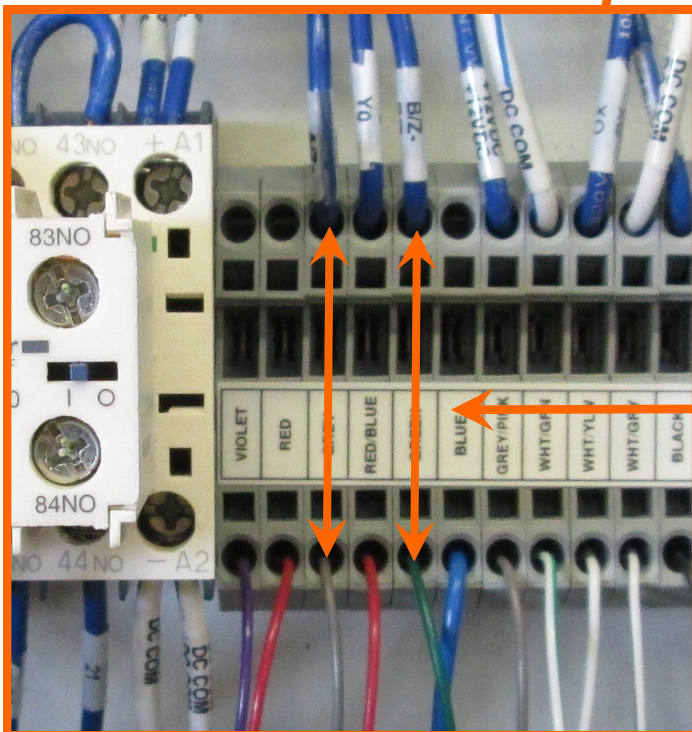
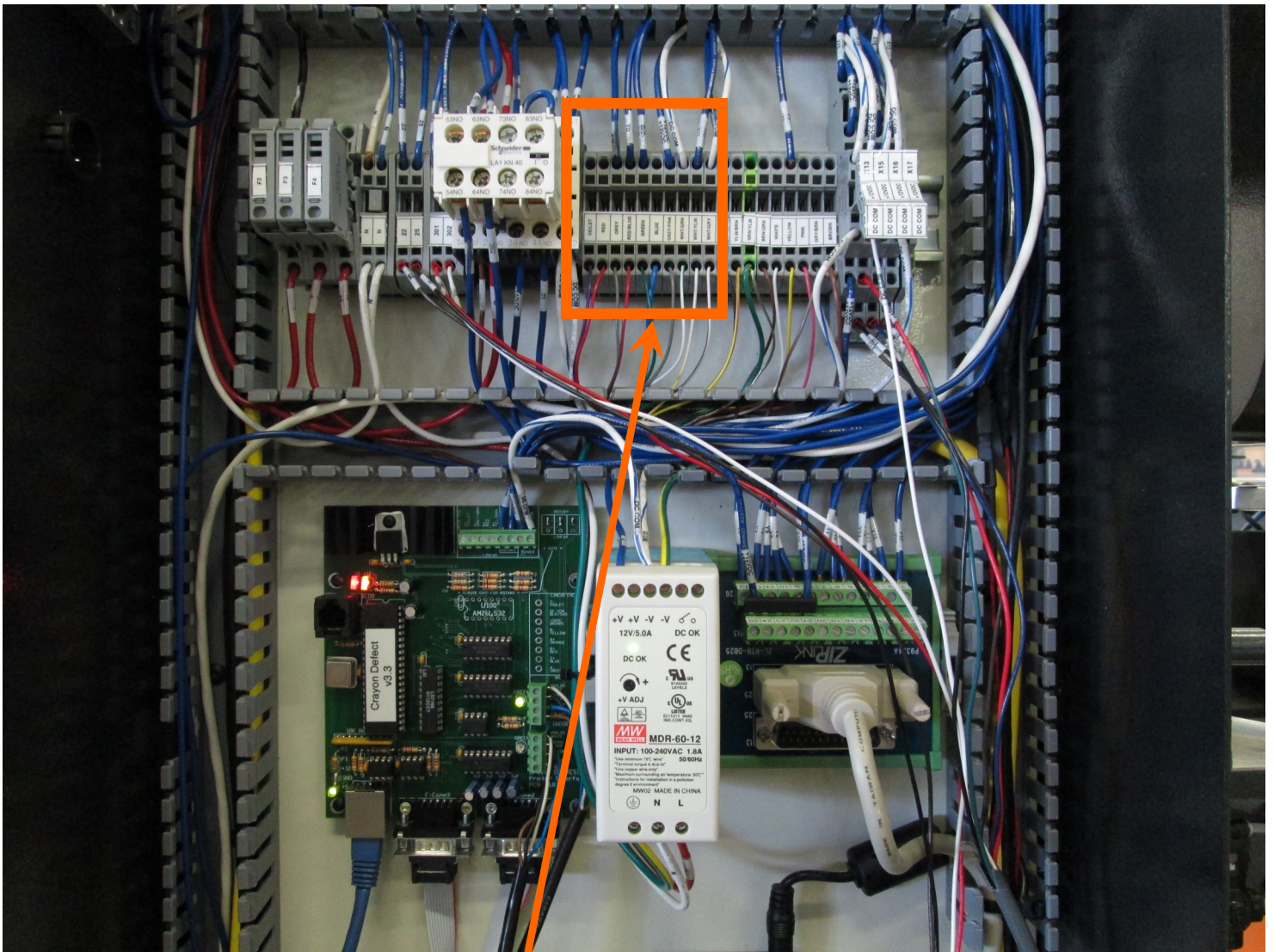
Make sure these two LEDs are on. They indicate that the card has the two power sources it requires.

This LED should be flashing.

Make sure these three cables are plugged in securely.



Continued on next page....



Inspect the wires indicated at left. If none of them are obviously loose, remove each wire individually and re-insert making sure that the terminals clamp on the copper wire and not on the insulation. To remove the wire, insert a small narrow screwdriver into the square hole above or below the wire entry point. Remove the screwdriver to re-clamp the wire. See picture below.

