RAZORGAGE POSITIONERS • SOFTWARE • SYSTEMS

Crayon Defecting Pusher Drop Location Diagnosis

When the carriage goes back to the load position the defects are detected by 1a circuit board in the enclosure we call the Crayon Board that captures the encoder counts coming from the motor and also monitors the two sensors on the carriage. Whenever one of those sensors changes state the crayon board records the encoder position. When the carriage goes past the end of the board the little yellow switch will change state as it's light beam drops off the end of the board. The crayon board then says that's the end of the board and it reports that to the PC software. The PC software then causes the motor on the positioner to stop. It then calculates where the end of the board is relative to where the carriage ended up and makes a move to position the end of the pusher about ¼" behind the board. The encoder counts that the crayon board monitors come from the MDrive. That's the motor that moves the pusher. It's the one with all the aluminum fins on the back. As it moves it sends encoder counts out of the big 19 pin cable that's plugged into it. The conductors in that cable that pertain to the encoder are wired to the crayon board. That's how the crayon board gets those counts. If the behavior has it could point to a floating connection between the MDrive and the board. Here are places to check.





A DANGER

Hazardous voltage.

Contact may cause electric shock or burn. Turn off and lock-out system power before servicing. These items are inside the tower enclosure. That's the one the touch screen monitor is attached to. Disconnect power to it before opening it. Then check these connections to ensure that the wires are tight and that the terminal isn't closed on the insulation instead of the copper conductors inside.





If all those connections look good we can adjust the pusher length parameter. When calculating how far to move back after scanning, the software has to take into account the length of the pusher from the "heel" to the pusher face. From the MAIN SCREEN press MORE, then PARAMETERS, then SCAN. You will see the screen below. Adjust the parameter labeled PUSHER LENGTH to make the pusher come back to the proper distance from the end of the board.



PARTS LIST	SETTINGS SCREEN	DONE CANCEL
	POSITION	-SCAN
LABELS	MOTION	SCAN START POSITION (FROM LOW LIMIT) 9.5 INCHES
DIAGNOSTICS	SAW	SCAN SPEED 45 INCHES
	DANELS	SCAN ACCEL 90
PARTS		SCAN DECEL 25
MORE	FIT	PUSHER LENGTH 13.7 INCHES
	SCAN	CRAY <mark>ON MARK OFFSET</mark>
PURGE	PARTS	SENSOR DIFFERENCE 1 INCHES
	ENCODER	BOARD SENSOR RERF 0.125 INCHES
		SCAN UNITS © ENCODER © INCHES
		AFTER SCAN IS DONE: One to Run Start, Then Pusher Down C Rusher Down Then Mayor to Run Start
	REPORTS	
EVIT	SCRIBE	MINIMUM TRIM AT START 0.75 INCHES
SOFTWARE	SPACE BALL	
	RAZ-ARRAY	
	POCKET HOLE DRILLS	