ALLEN DATAGRAPH

Technical Support Bulletin:
Field Adjustment For 536 Motors Too Hot

Last Updated April 26, 2005

Applicability: This change required for all 536 and i-TECH 536 Rubber cutters manufactured prior to 4-22-5. Serial numbers I504517 and less and all serial numbers starting with letter "P".

Abstract: Due to change in the manufacturing process of 3M rubber the motors on the 536 will overheat when used for long continuous periods. The new rubber can be identified by having the rubber out to the edges of the media instead of the clear plastic backing along the edge. If the motors are damaged due to the overheating condition the cutter will have to be returned to the factory for repair. This procedure modifies the tuning on the 536 to allow using the new rubber from 3M.

Tools Required:

- Small flat blade screw driver or pot adjustment tool (pot tweaker).
- Phillips screw driver
- Medium weight springs that came with machine
- Multi-meter with Ω (ohm) setting (optional)

Turn off Power.

If you have the stronger springs installed in your cutter you need to change them to the medium weight springs when cutting rubber. The web page on our tech support site http://allendatagraph.com/TechSupport/i-TECH/PinchWheels.pdf shows the recommended springs to use based on the media you are using in your machine.

Remove electronic chassis cover by removing the 5 Phillip screws on front side of machine below platen. The cover is 38.5 inches wide by 5 inches tall with a screw in each corner and one in the bottom middle. Locate the xp and xvel pots (variable resistors/potentiometers) on the servo control board (SCB PL-00-05-427). This board is the top board of the 2-board stack on the right side of the electronic box. Pots are small blue boxes on the front of the board on the left end of the board. They have a small screw on the front surface of the pot. The “xvel” and “xp” labels are written in white ink in front of the pots.

Change the xvel pot on the scb to change the resistance from 1.23K to 2K ohms. You can do this without an ohmmeter by turning the pot 2 turns counter-clockwise from its present position. See Appendix for how to set with multimeter.

Turn on power, put pinch wheels down with no media, and joystick to center of y travel. Run diagnostic 51 using appropriate procedure below. Diagnostic takes about 30 seconds to run.

> **24 button 3 digit display machine** instructions: Press function 3, 5, 1, enter, wait for 8 to appear, and press enter again. Motors will move left and right and forward and backward.
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> **16 button 4 digit display machine** instructions: Press select, right arrow till "dia" is displayed, up arrow until 51 is displayed, select, wait for 8 to appear and press select again. Motors will move left and right and forward and backward.

Power off machine, wait 5 seconds, power up machine. Keep pinch wheels down with no media (rubber) in machine. Now run diagnostic 17 and adjust xp pot for correct velocity. Use appropriate procedure below.

> **24 button 3 digit display machine** instructions: Press function 3, 1, 7, enter, wait for 0 to appear. Press 3 button. The value 300 will be displayed for a short period. Grit wheel motor will start to run and the speed the grit wheel is turning is displayed in the 3-digit display. Adjust the speed of the grit roller with the xp pot turning screw counter clockwise to slow down speed and clockwise to increase speed until display reads 242.
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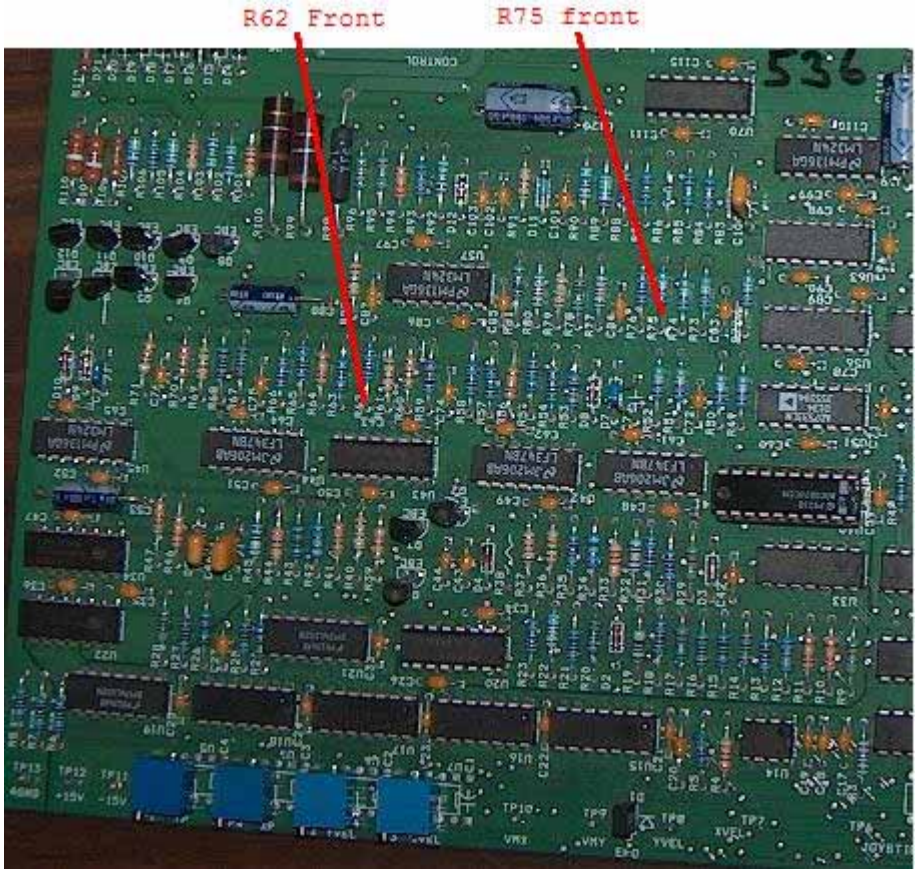
> **16 button 4 digit display machine** instructions: Press select, right arrow till "dia" is displayed, up arrow until 17 is displayed, press select, wait for 0 to appear and Speed up 3 times. The value 300 will be displayed for a short period. Grit wheel motor will start to run and the speed the grit wheel is turning is displayed in the 4-digit display. Adjust the speed of the grit roller with the xp pot turning screw counter clockwise to slow down speed and clockwise to increase speed until display reads 121.

Tuning upgrade is complete and machine is ready to use. Note do not perform this procedure of turning pot 2 turns on a 536 more than once.

Appendix: How to set xvel pot with multi-meter to 2K:

Remove two screws on board bracket that hold boards in place. Remove cables from top board. Remove board from machine and place on table. Determine revision of board by looking at the rev number after the PL-00-05-427 rev x on the front edge of the board. Connect multi-meter to locations shown in the picture. Set meter to Ω ohms. Adjust XVEL pot until meter reads 2.0K Ω or 2000 Ω (ohms).

Rev 1 board hook up.



Rev 3 board hook up