

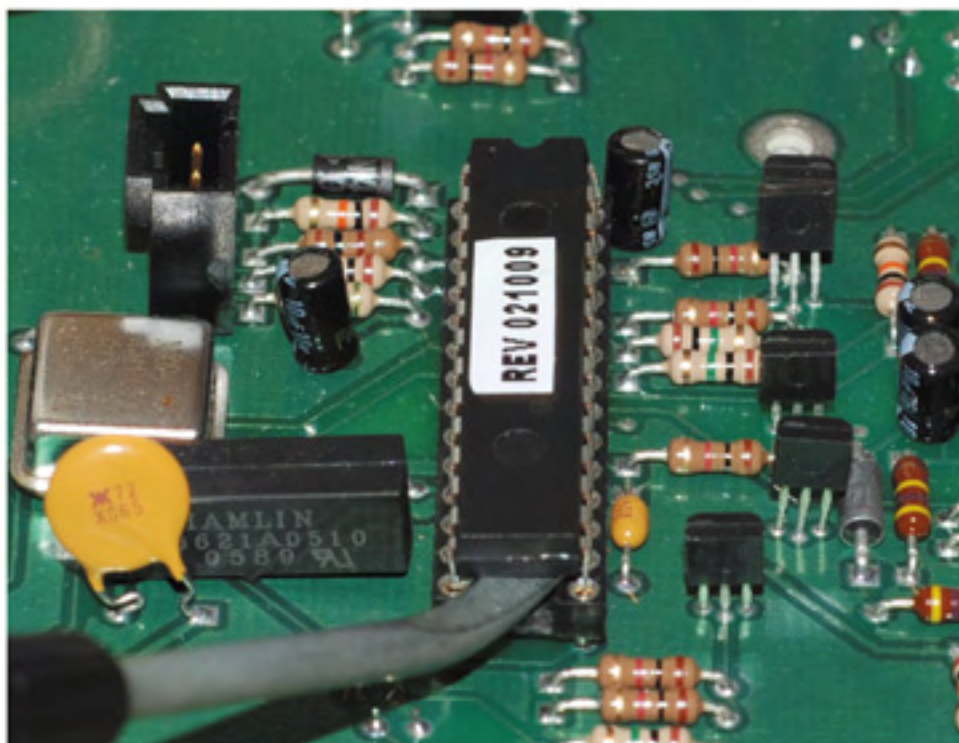
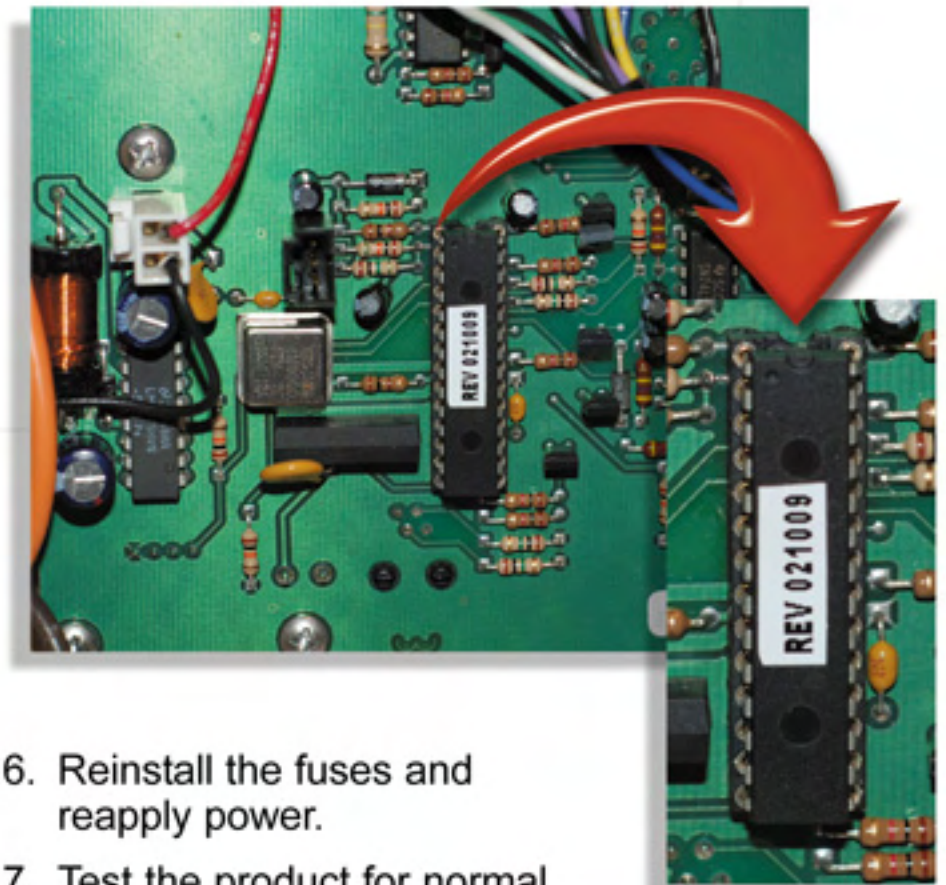
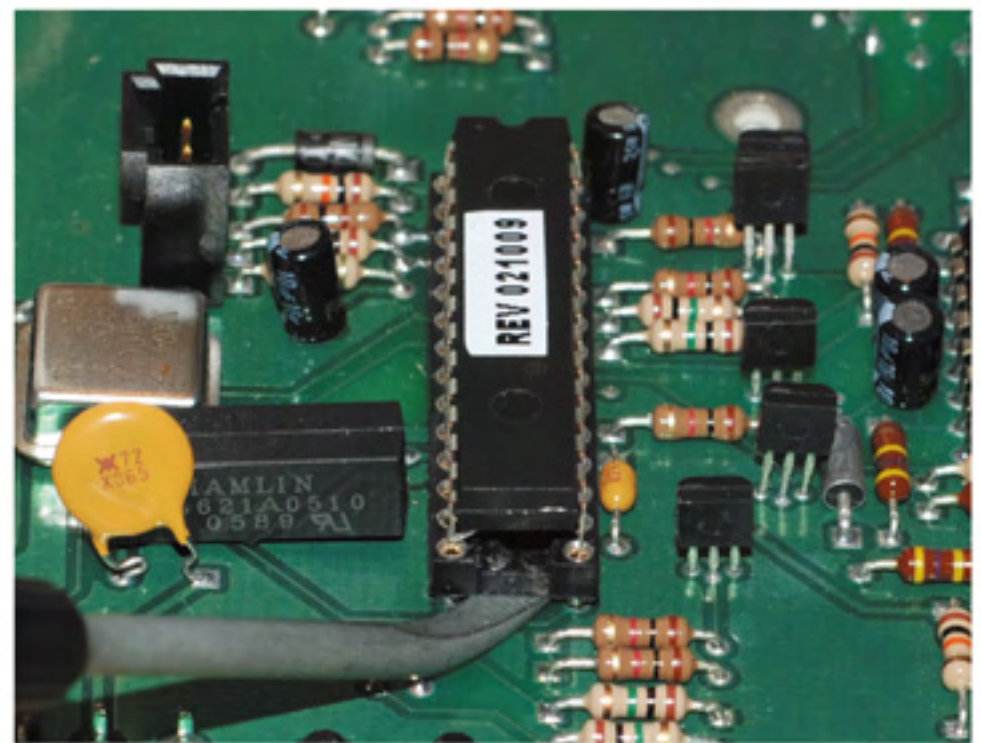
SERVICE BULLETIN**SUBJECT: PROGRAM CHIP REPLACEMENT**

The operation of your program-driven GROCO product is controlled by instructions (a program) imbedded on an integrated circuit (IC) located on the product circuit board. We continue to develop improvements to product function, and when changes are made, in order to operate the product under the most current operating parameters, a new chip must be installed.

The installation of the new chip is simple, but must be done carefully and properly for the product to function. **NOTE:** A damaged or improperly installed chip will result in complete system shut-down.

Follow these steps to replace the chip:

1. Look at the chip. Note the small detent at one end. When installing the chip, align this detent with the similar detent on the socket located on the circuit board.
2. **TURN OFF ALL POWER** to the product and remove all fuses before servicing
3. Use a chip lifting tool (a small flat blade screw driver will work) to pry one end of the old chip from its socket. **BE CAREFUL** not to insert the tool between the socket and the pcb. After one end is loose the chip may be removed by hand.
4. See step-1, then carefully align the pins of the new chip with the pin holes in the socket. Press the center of the new chip until it seats securely.
5. **BEFORE APPLYING POWER**, use a flashlight and verify that all of the pins are engaged with the socket, and that none of the pins are bent or misaligned.
6. Reinstall the fuses and reapply power.
7. Test the product for normal operation under the new operating parameters.

**CORRECT REMOVAL OF CIRCUIT****IN-CORRECT REMOVAL OF CIRCUIT**