Snap-on® SCANNER

Primary Cartridge PROM Removal and Replacement

PROM Replacement Precautions (Read This First)

These instructions are for Primary cartridge PROM removal and replacement. The Primary cratridge has two PROMs installed in the circuit board, U14 and U15. Certain software updates require replacement of both PROMs, while other software updates do not. Depending on the PROMs you currently have installed, it may only be necessary to replace one PROM, even though an update kit may include two.

In addition, a Primary cartridge PROM may be included as part of a Troubleshooter Kit. This is done to ensure that the Primary will interface correctly with the new Troubleshooter. Again, depending on the PROMs you currently have installed, the Primary may not require the update.

To determine if you need to install a PROM, *always* compare the PROM version numbers. The version number of each PROM is typed on the label on top of the PROM. Only install a new PROM if the version number on the label is higher than the version number on the old PROM. For example, if the PROM currently installed is labeled 4.2 and the new PROM label shows 4.1, do not install the new PROM.

A PROM is a sensitive electronic part and must be handled with care. Avoid touching the connector terminals (pins) on the bottom of the PROM. Pins can be bent or broken easily.

Do not try to remove the plastic PROM carrier strip from the PROM. The carrier strip is to be installed on the cartridge circuit board underneath the PROM.

Note the direction in which the original PROM was installed on the circuit board and install the new PROM in the same direction. Align the notch on the PROM with the notch in the PROM outline printed on the board.

Caution: If a PROM is installed in the reverse direction, it will be destroyed when power is applied.

A PROM can be damaged by static electric discharge. PROM's are shipped in antistatic foam or protective tubes. Do not remove a PROM from its packing material until you are ready to install it. Do not hold a PROM by its pins. Before handling a PROM, touch a metal surface to remove any static electric charge from your body.

PROM Removal and Replacement

Remove and replace a Primary cartridge PROM as follows:

1. Place the cartridge on a clean, flat surface and remove the two screws that hold the cartridge case together.

2. Turn the cartridge over, tip the bottom case cover upward at an angle, and remove it, figure 1.
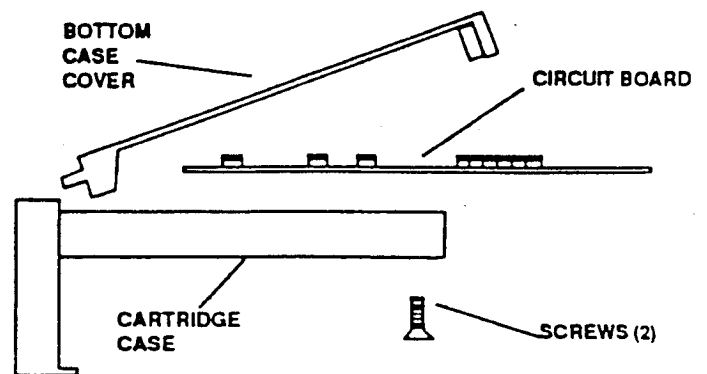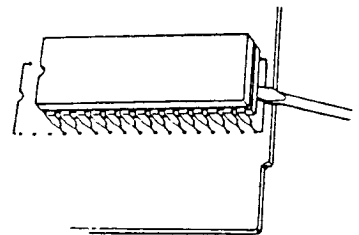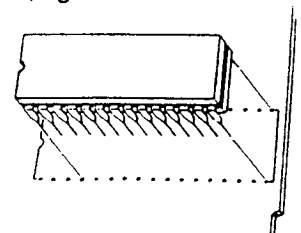

Figure 1. *Cartridge disassembly.*

3. Carefully remove the circuit board and place it on a clean, flat surface with the PROM side up.

4. Using a small screwdriver, Figure 2, carefully pry the old PROM upward slightly from one end of the circuit board. Then pry it upward an equal amount from the other end.

Figure 2. Use a small screwdriver to carefully loosen the old PROM from the circuit board.

5. Grasp the old PROM by the ends and lift it straight up and off the circuit board, figure 3.

Figure 3. Carefully lift the old PROM straight up and off the circuit board.

Continued

6. Remove the new PROM from its packing material. Observe the precautions listed above for handling a PROM.

PROM CARRIER STRIP MOVED UP ON PINS (AS SHIPPED)

PROM CARRIER STRIP SLID DOWN TO TIPS OF PINS (FOR INSTALLATION)
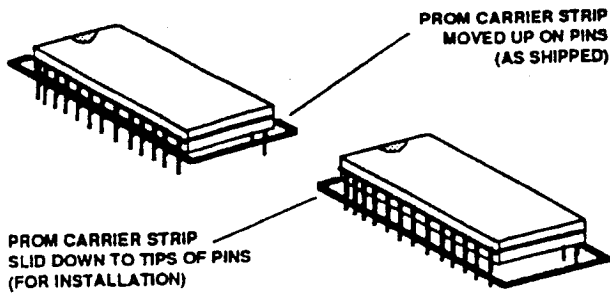
Figure 4. PROM and PROM carrier strip. Place PROM on level surface with pins down. Carefully slide carrier strip toward ends of pins.

NOTE: The PROM carrier strip attached to the new PROM serves to protect and align the pins. *Do not remove the carrier strip.*

7. Place the new PROM on a flat surface *with the pins down* and carefully slide the carrier strip downward toward the ends of the pins, figure 4. Position the carrier strip about *1/32-inch from the ends of the pins.* Be sure that ALL pins stick through the holes in the strip. If the carrier strip slides off the PROM pins, insert the pins into the strip holes on one side and then carefully insert the pins on the other side into their holes.

8. Holding the PROM by its ends, align it with the outline around the PROM socket on the circuit board. Ensure that the notch is aligned with the notch in the PROM outline on the circuit board, figures 5 and 6.
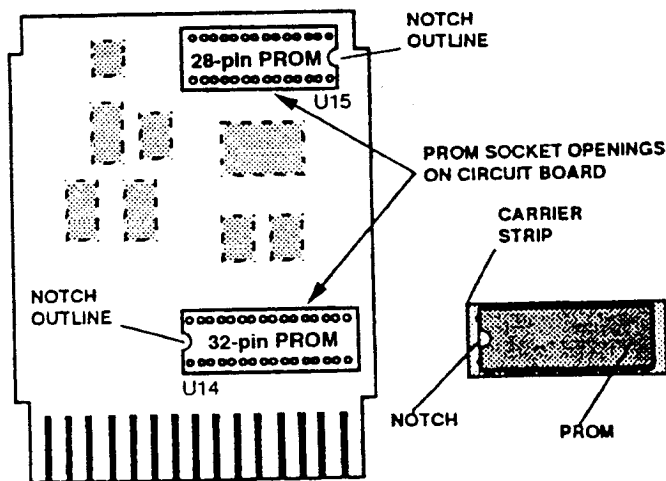

NOTCH OUTLINE

28-pin PROM

U15

PROM SOCKET OPENINGS ON CIRCUIT BOARD

CARRIER STRIP

NOTCH OUTLINE

32-pin PROM

U14

NOTCH

PROM

Figure 5. Typical PROM installation on cartridge circuit board. Align notch on PROM with notch on circuit board outline.
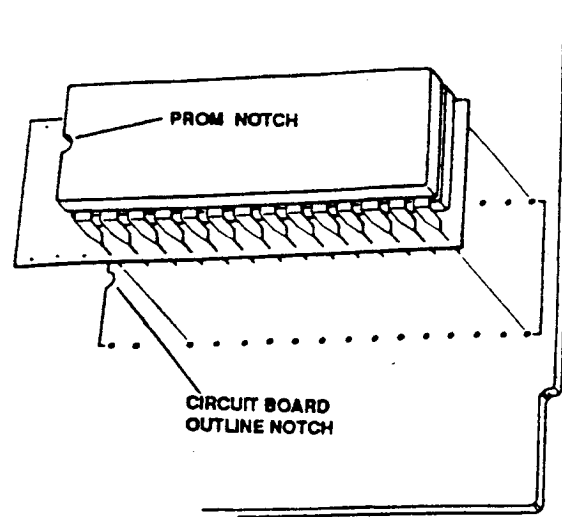
PROM NOTCH

CIRCUIT BOARD OUTLINE NOTCH

Figure 6. Lower the PROM straight into the socket. Be sure that all pins are in their sockets before pressing into place.

9. With the circuit board on a firm, level surface, place the PROM pins into the socket openings. Do not press the PROM into its socket yet.

10. Inspect the PROM to be sure it is properly aligned and that all pins are in the socket openings.

11. Press straight downward firmly to seat the PROM in its socket.

12. Inspect the PROM installation to ensure that all pins are in their sockets and none are bent inward or outward.

NOTE: If a pin is bent, carefully remove the PROM (step 4) and straighten the bent pin using small needle-nose pliers. Then proceed from step 7 to reinsert the PROM.

13. Place the circuit board in the cartridge case, figure 1. Tip the bottom case cover upward at an angle and slide it into the cartridge. Install the two screws. Do not overtighten the screws.

14. Apply the new label over the old label on the front of the cartridge.

Although replacement PROM's are labeled, it is good practice to keep PROM's in their packing material and separate from each other when replacing PROM's in more than one cartridge at a time.

Testing The PROM Installation

Install the cartridge with the new PROM in the scanner. Hold downn the red Quick ID button and select the built-in scanner demonstration program. If necessary, refer to the *Scanner Reference Manual* for the cartridge you have updated for Scanner Demonstration Program instructions.

Using the demonstration program, scroll and select all menu choices to verify that all test functions operate correctly.