

EPROM

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EAGLE
COMPUTER

Installation

Guide

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EAGLE COMPUTER

EPROM INSTALLATION GUIDE

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INTRODUCTION

New EPROM's (Erasable Programmable Read Only Memory chips) are used to upgrade your computer system. This guide describes the EPROM installation procedures for your Eagle PC, PC Spirit, PC Plus, 1600 or Turbo PC. The installation of an EPROM requires some familiarity with computer hardware. We recommend that you rely on your dealer to install the EPROM(s). The purpose of this guide is to provide authorized service technicians with the procedures to install hardware.

NOTE

Before installing your new EPROM(s), please read the CUSTOMER SUPPORT GUIDE included in the package. Fill out the Warranty Agreement and send it to Eagle Computer, Inc. The warranty card registers your computer components with Eagle's comprehensive warranty program.

INTRODUCTION

UNPACKING & INSPECTION PRECAUTIONS

- Keep the shipping container and packing material. Should you need to repack the EPROM for replacement, the original container will provide the best protection.
- When unpacking the EPROM, inspect it for any signs of damage. If you find any evidence of damage, stop unpacking, replace the EPROM in the container, and contact your Eagle dealer immediately.
- Check that the following items came in the package:

One System EPROM (for the Eagle PC, PC Plus, PC Spirit)

or

Two System EPROM's (for the Eagle 1600 or Turbo PC)

One EPROM Installation Guide

NOTE

When ordering the EPROM, you must indicate which Eagle model you will be installing it into because the Eagle 1600 and Turbo PC require two EPROM's while the Eagle PC, PC Spirit and PC Plus require only one. The EPROM's are NOT interchangeable.

INSTALLATION INTRODUCTION

The next four sections provide EPROM installation instructions for the Eagle PC, PC Plus, PC Spirit, 1600 and Turbo PC. Follow the instructions which correspond to your system.

CAUTION

All power to your Eagle computer should be off when installing the EPROM(s).

PC EPROM INSTALLATION

PC EPROM INSTALLATION

Refer to this procedure for the Eagle PC-1, PC-2, PC-E and PC-XL computers. The following procedure is intended for authorized service personnel. We recommend you rely on your dealer to install the EPROM.

TOOLS REQUIRED: Philips head #1 screwdriver.

- STEP 1** Turn off all power to your Eagle computer. Unplug your system.
- STEP 2** If you have a video monitor, disconnect the video cable and the AC power cable from the main unit. Place the monitor to one side.
- STEP 3** Disconnect the keyboard from the main unit. Disconnect the cables to any ports in the main unit.
- STEP 4** Turn the main unit upside down. Unscrew the five screws around the vented panel over the expansion boards. Set the screws aside in a safe place.

PC EPROM INSTALLATION

- STEP 5** Lift the vented panel with the slot access door. Put it to one side.

NOTE

Note the arrangement of the power cables, the adapter board ribbon cables, and the exact position of each connector BEFORE removal, to insure proper reassembly.

- STEP 6** If you want to be sure not to scrape your hands on the interface boards, perform this step. Remove the ribbon cables from the boards. Remove all boards by removing the slot screw and washer located on the top of the slot covers. Refer to Figure 1. Set the boards to one side.
- STEP 7** Carefully reach down into the expansion board enclosure and unplug the DC power supply connectors from the main board. Refer to Figure 2.

PC EPROM INSTALLATION

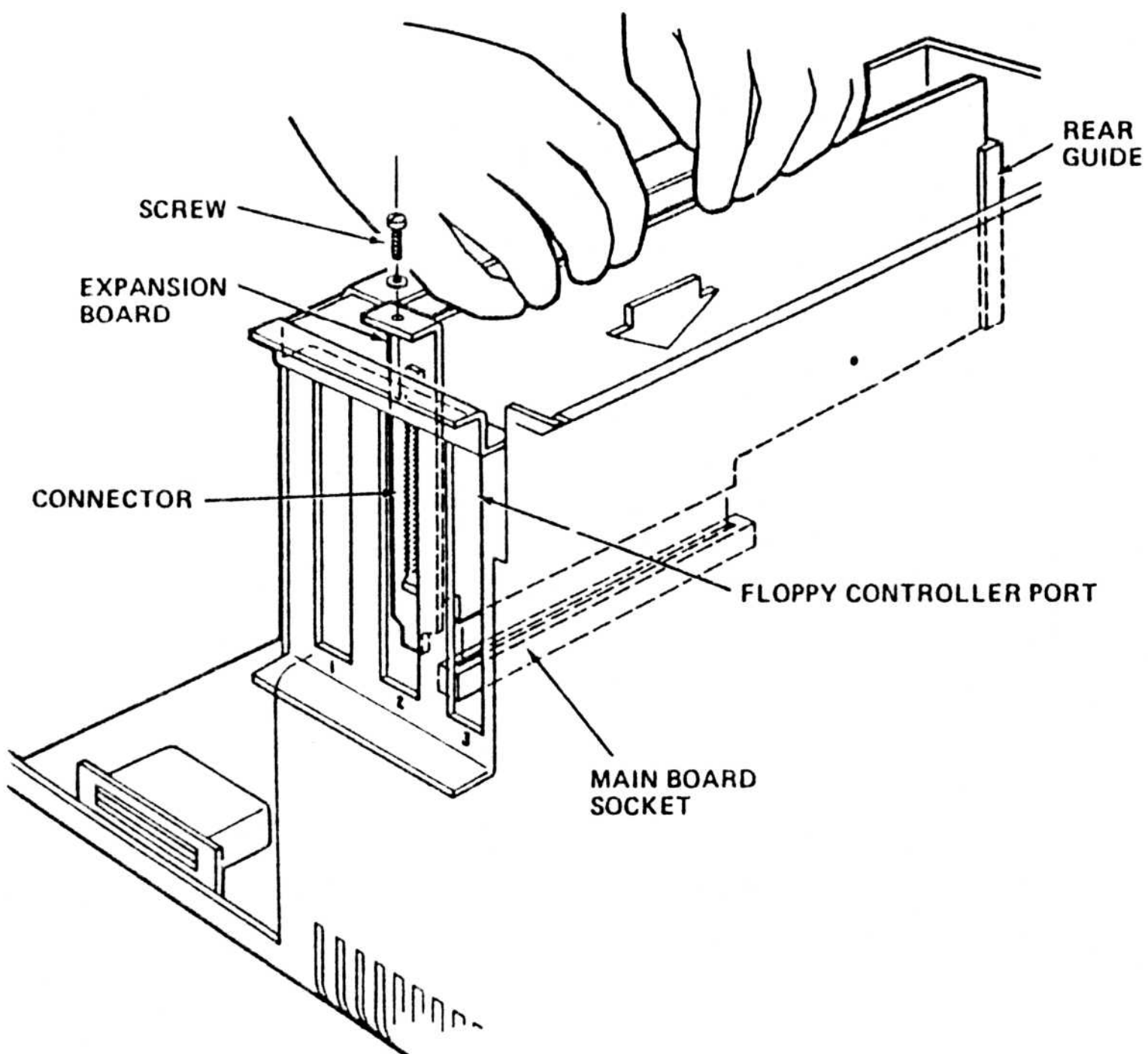


FIGURE 1: PC BOARD REMOVAL

PC EPROM INSTALLATION

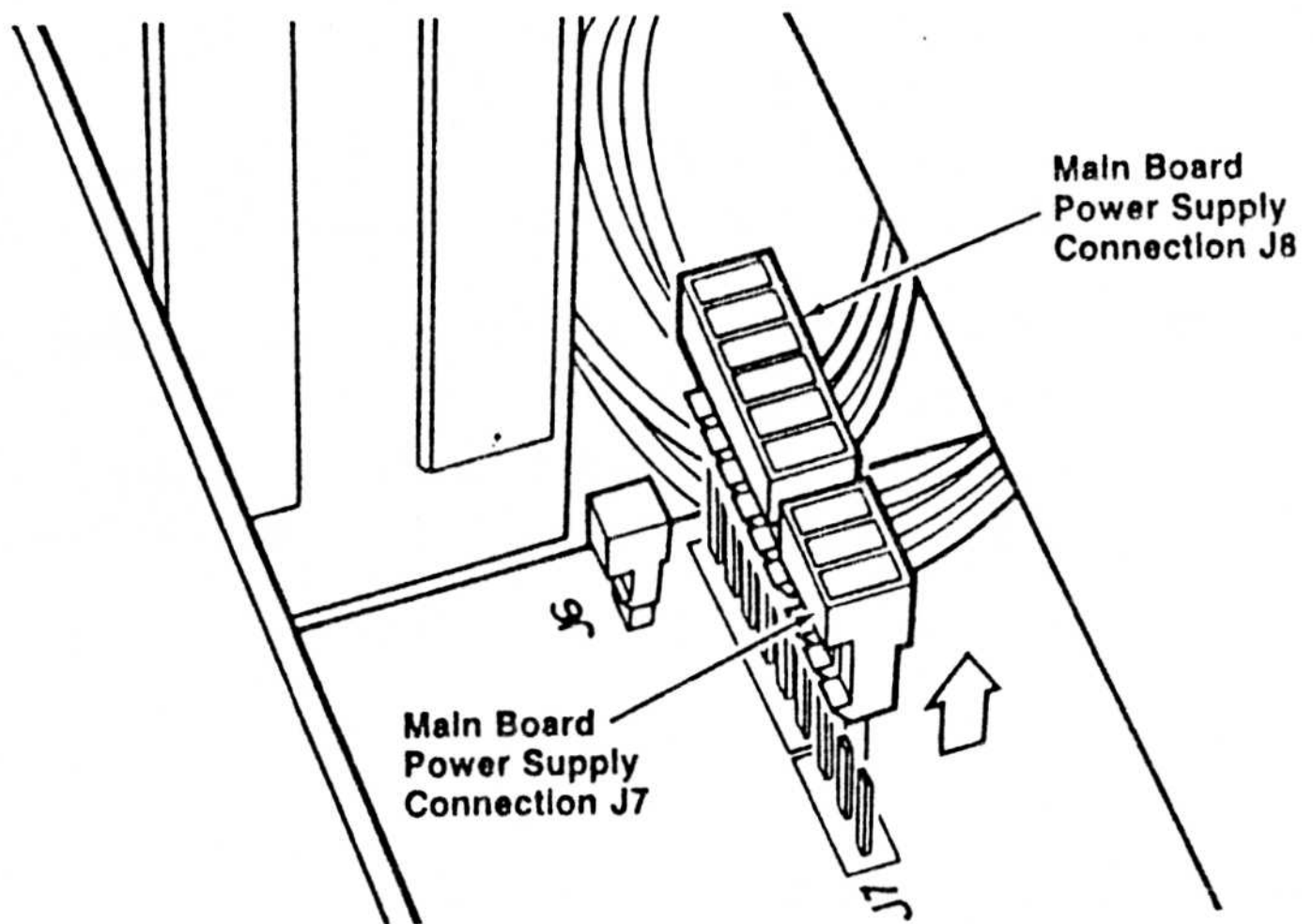


FIGURE 2: MAIN BOARD POWER SUPPLY CONNECTION

PC EPROM INSTALLATION

- STEP 8** Unscrew seven screws in the main unit: three screws on the bottom of the keyboard encasement cover, one screw on each side of the keyboard encasement cover, and two screws in the keyboard encasement cover. Refer to Figure 3. Set the seven screws aside in a safe place.
- STEP 9** Gently lift the keyboard cover. Place the keyboard encasement cover to one side.
- STEP 10** Unplug the three-wire AC power connection in the corner near the ON/OFF switch. Refer to Figure 4.
- STEP 11** Remove eight screws around the edges of the bottom panel of the main unit and one screw in the center of the bottom panel of the main unit. See Figure 3. Set the nine screws aside in a safe place.
- STEP 12** Lift the rear of the bottom panel up, then pull the rest of the panel out of the main unit. Leave the panel upside down next to the back panel of the main unit, exposing the Main Board Assembly.

PC EPROM INSTALLATION

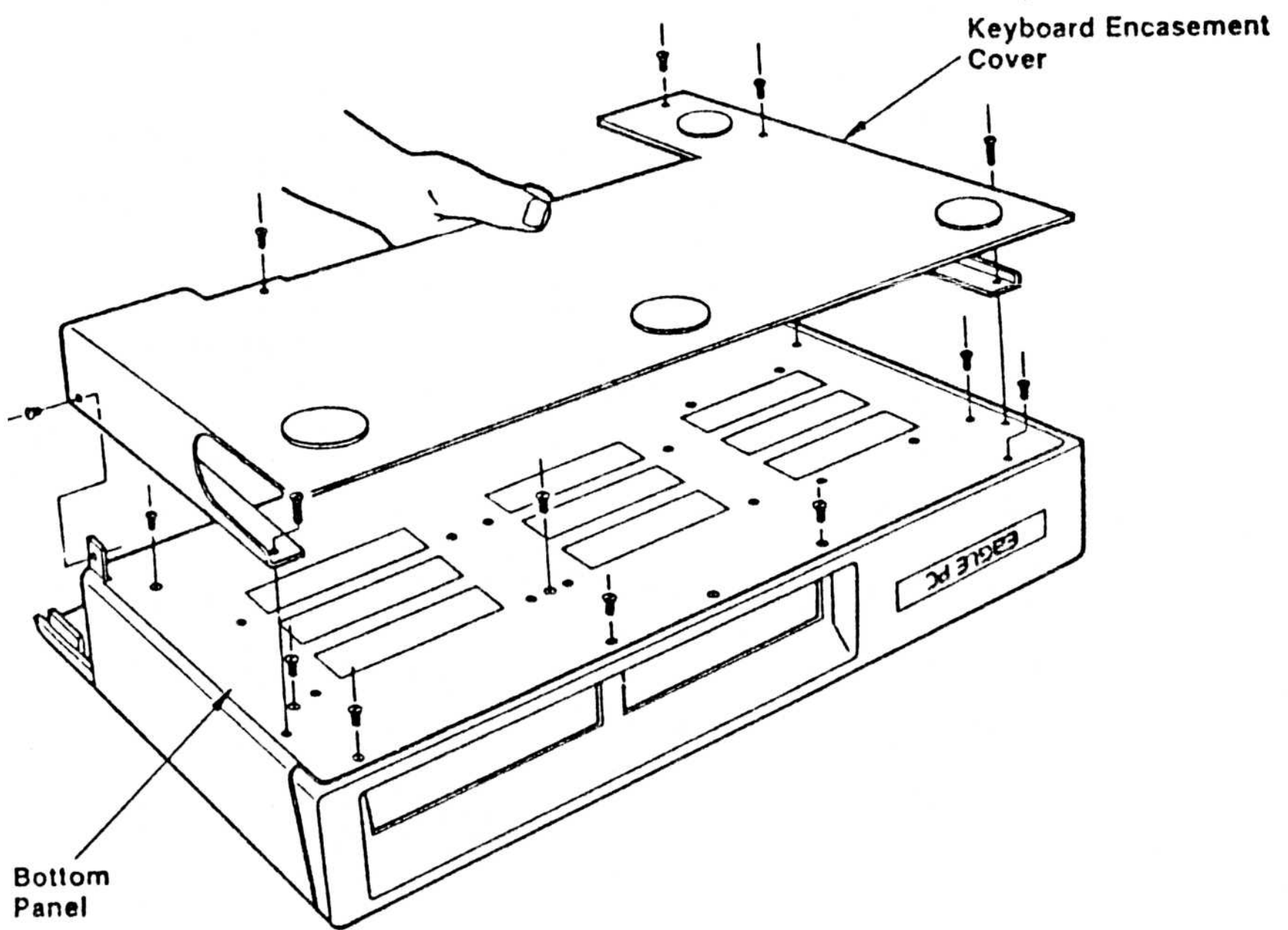


FIGURE 3: PC ENCLOSURE REMOVAL

PC EPROM INSTALLATION

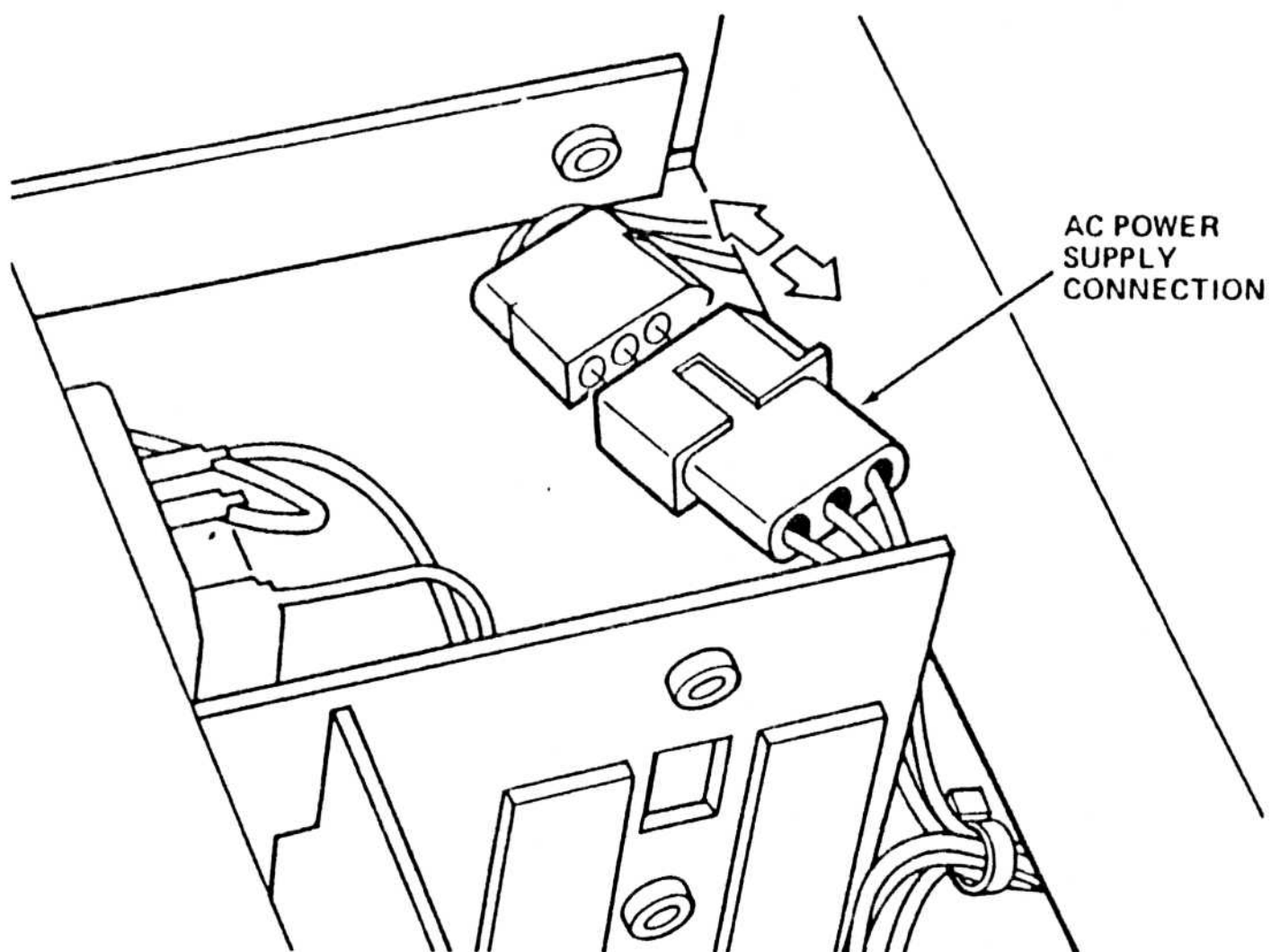


FIGURE 4: AC POWER SUPPLY CONNECTION

- STEP 13** Take out the existing EPROM in the large socket labeled U1101 and keep it in case your new EPROM does not function properly. *Do not touch any of the wires or devices on the board.* Refer to Figure 5.
- STEP 14** Remove the new EPROM from its protective wrapping.
- STEP 15** Insert the new EPROM into the large socket labeled U1101. Be sure the half circle notch on one end of the EPROM is directly over the half circle notch in the receiving socket. Make sure all the pins on the EPROM enter the holes in the socket. Gently push the EPROM until it snaps into place. *Do not touch any of the wires or devices on the board.* Refer to Figure 5.
- STEP 16** Replace the bottom panel of the main unit, tilt the panel forward and slip the floppy disk drives into place, then lower the panel onto the main unit.
- STEP 17** Reinstall the nine screws from STEP 11.
- STEP 18** Reconnect the three-wire AC power supply. Refer to Figure 4.
- STEP 19** Replace the keyboard encasement cover. Reinstall the screws discussed in STEP 8.
- STEP 20** Reconnect the power supply connectors to the main board. Refer to Figure 2.

PC EPROM INSTALLATION

- STEP 21** If you took out the interface boards in STEP 6, reinsert the boards into the sockets on the main board. Refer to Figure 1.
- STEP 22** To keep the boards firmly seated in the socket, reinstall the slot screw and washer.
- STEP 23** Reconnect the ribbon cables to the boards.
- STEP 24** Leave the slot access door open when you put the vented cover on. Reinstall the five screws that secure the vented panel to the main unit.
- STEP 25** Turn the main unit right side up. Place the video monitor on top of the main unit and reconnect the video monitor cables.
- STEP 26** Reconnect the keyboard to the main unit. Reconnect the cables to any ports.

PC PLUS EPROM INSTALLATION

PC PLUS EPROM INSTALLATION

Refer to this procedure for Eagle PC Plus and PC Plus-XL computers. The following procedure is intended for authorized service personnel. We recommend you rely on your dealer to install the EPROM.

TOOLS REQUIRED: Philips head #1 screwdriver.

- STEP 1** Turn off all power to your Eagle computer. Unplug your system.
- STEP 2** Disconnect any external devices, including the keyboard and video monitor, from the main unit.
- STEP 3** Set the main unit upside down on a cleared area with the rear of the system facing you. Unscrew the seven painted screws around the vented panel: five on the bottom plate and one on each side of the bottom plate. Refer to Figure 6. Set the painted screws aside in a safe place.
- STEP 4** Open the slot access door and gently lift the closest side of the keyboard housing up, then pull the keyboard housing so the metal tabs slide out of the slots in the main unit.
- STEP 5** Place the keyboard housing to one side.
- STEP 6** Unplug the three-wire AC power connection in the corner near the ON/OFF switch. Refer to Figure 4.

PC PLUS EPROM INSTALLATION

- STEP 7** Remove the two painted screws on the main unit bottom panel closest to the expansion boards. Set the painted screws aside in a safe place. Refer to Figure 6.
- STEP 8** Pull up the rear side of the bottom panel to release the metal tabs which fit underneath the front lip of the main unit to secure it to the main unit assembly. Slowly lift the front side of the main unit bottom panel.

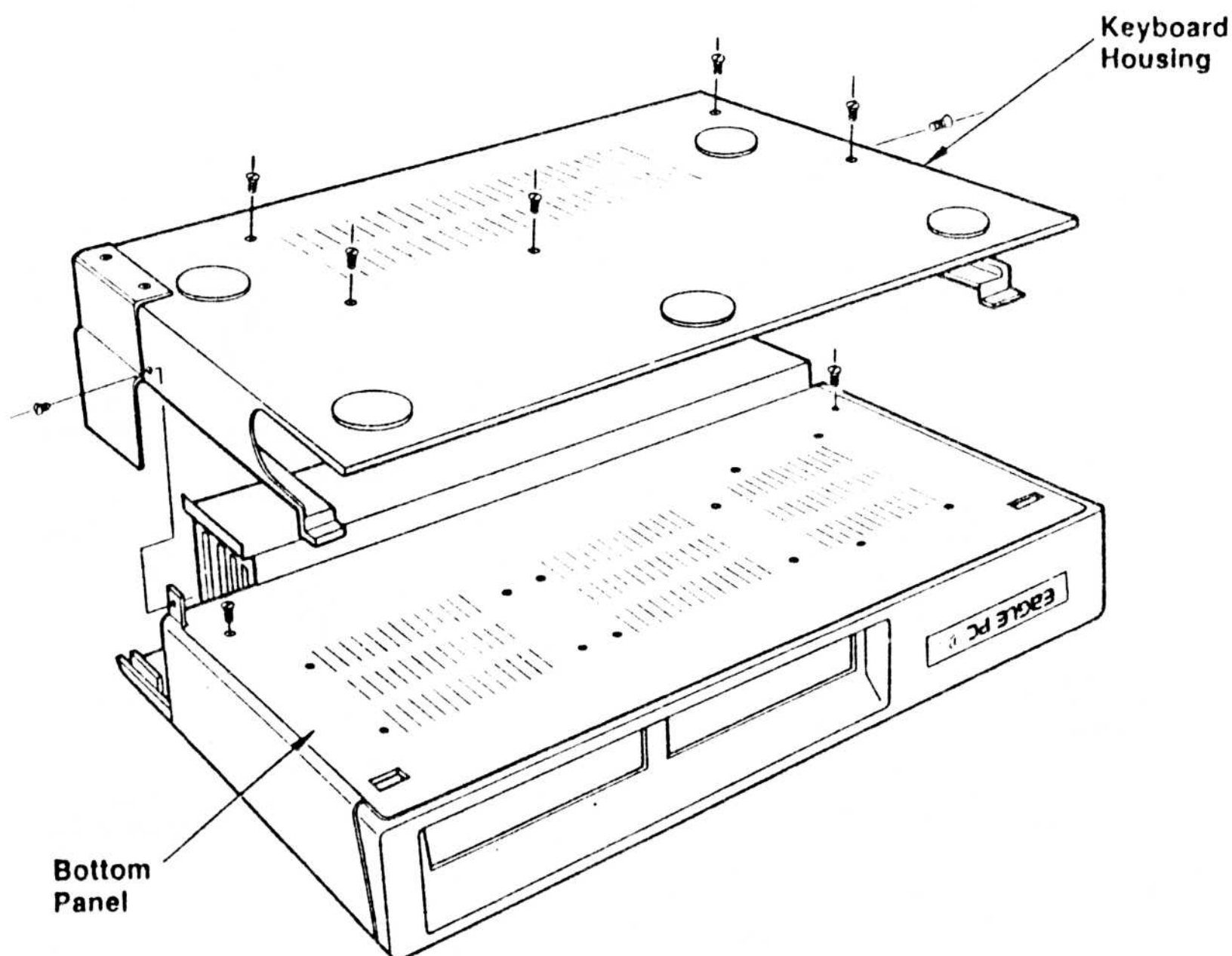


FIGURE 6: PC PLUS ENCLOSURE

PC PLUS EPROM INSTALLATION

STEP 9 With one hand supporting the bottom panel, tilt the panel towards you and disconnect the two DC power supply connectors from the main board. Refer to Figure 2.

STEP 10 Disconnect the ribbon cables from the disk drives (one from floppy disk drives, two from hard disk drives.) Figure 7 shows the ribbon cable connections to a hard disk and floppy disk drive (connections to dual floppy disk drives are identical to the connection to the floppy disk drive depicted.)

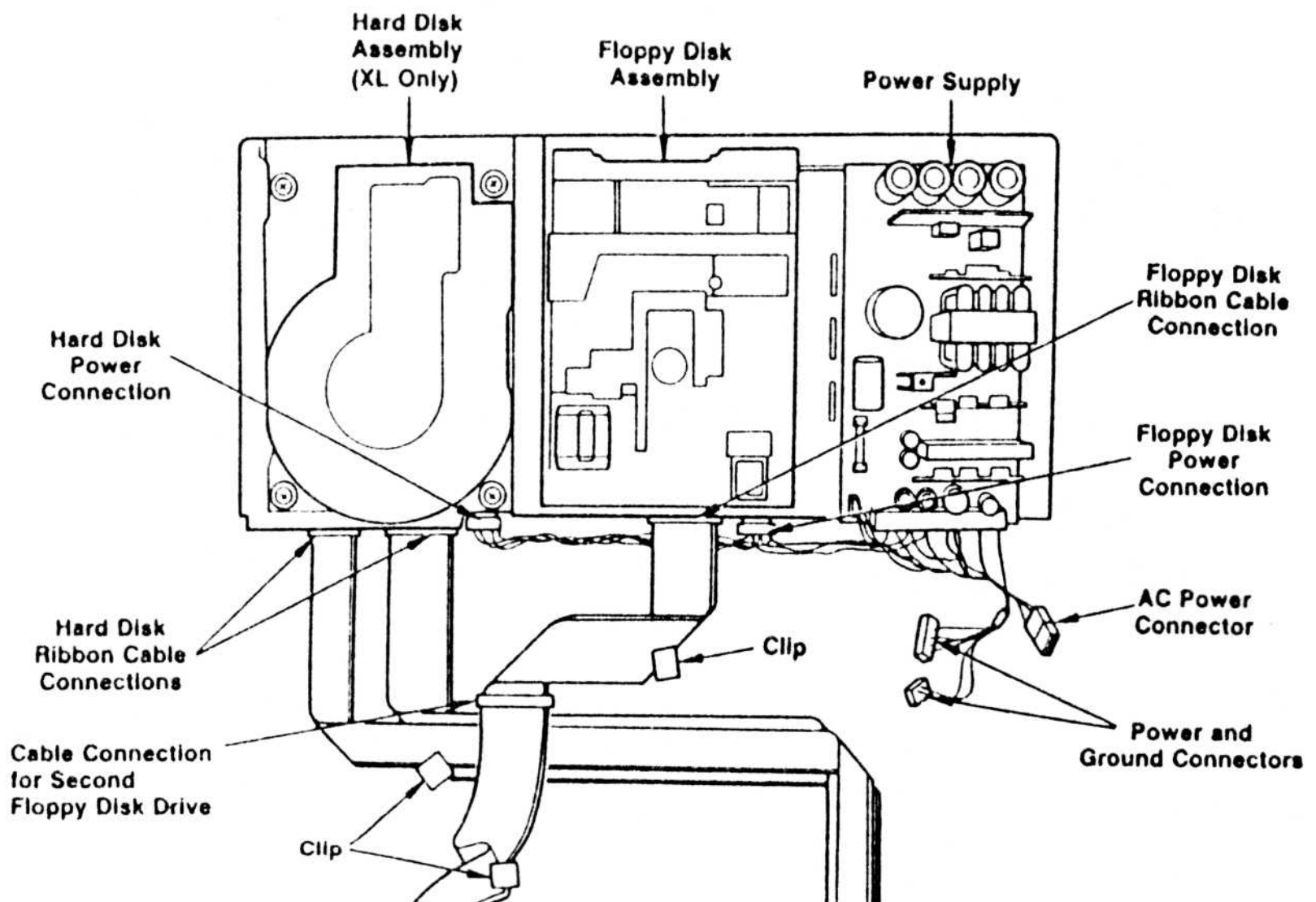


FIGURE 7: DISK DRIVE ASSEMBLY CONNECTIONS

PC PLUS EPROM INSTALLATION

- STEP 11** Remove the bottom panel and place it to one side. The bottom panel has the power supply and disk drives attached to it. The main board is now exposed for work.
- STEP 12** Take out the existing EPROM in the large socket labeled U1101 and keep it in case your new EPROM does not function properly. *Do not touch any of the wires or devices on the board.* Refer to Figure 8.
- STEP 13** Remove the new EPROM from its protective wrapping.
- STEP 14** Insert the new EPROM into the large socket labeled U1101. Be sure the half circle notch on one end of the EPROM is directly over the half circle notch in the receiving socket. Make sure all the pins on the EPROM enter the holes in the socket. Gently push the EPROM until it snaps into place. *Do not touch any of the wires or devices on the board.* Refer to Figure 8.

PC PLUS EPROM INSTALLATION

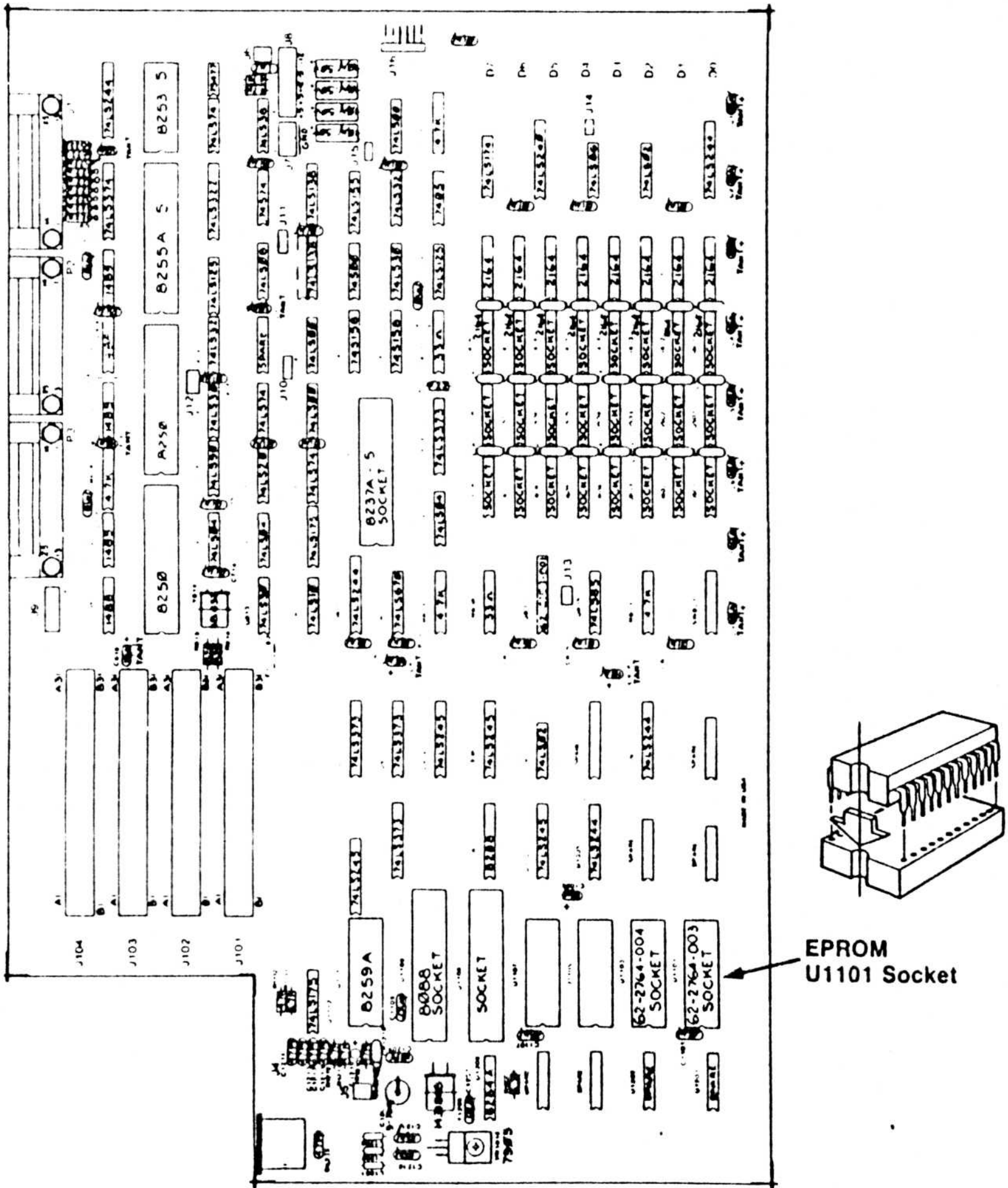


FIGURE 8: PC PLUS & PC SPIRIT MAIN BOARD

PC PLUS EPROM INSTALLATION

- STEP 15** Connect the ribbon cables to the disk drives on the bottom panel. Make sure the red edge on the cables are on the side closest to the power supply. Refer to Figure 7.
- STEP 16** Tilt the bottom panel back over the main board and reconnect the DC power supply connectors to the main board. Refer to Figure 2.
- STEP 17** Plug in the three-wire AC power connection. Refer to Figure 4.
- STEP 18** Gently lower the bottom panel into the main unit and screw in the two painted screws from STEP 7.
- STEP 19** Replace the keyboard housing with the slot access door open. Gently lower the panel to insert the metal tabs into the slots in the main unit. Replace the seven screws from STEP 3.
- STEP 20** Turn the main unit right side up. Connect any external device interface cables to the main unit.

PC SPIRIT EPROM INSTALLATION

PC SPIRIT EPROM INSTALLATION

Refer to this procedure for Eagle PC Spirit and PC Spirit-XL computers. The following procedure is intended for authorized service personnel. We recommend you rely on your dealer to install the EPROM.

TOOLS REQUIRED: Philips head #1 screwdriver.

- STEP 1** Turn off all power to your Eagle computer. Unplug your system.
- STEP 2** Retract the feet supports. Attach the keyboard to the front panel. Snap the latches into place.
- STEP 3** Disconnect any external devices from the slot access area. Place the Spirit on a cleared area with the rear of the system facing you.

PC SPIRIT EPROM INSTALLATION

- STEP 4** Remove the four screws at the top edge of the rear panel, and two screws at the front edge on the top panel. Refer to Figure 9. Set the six screws aside in a safe place.
- STEP 5** Open the slot access door and gently pull the top panel towards you until the two tabs on each side of the top panel slip out of the holes in the side panels. Lift the top panel off. Place the top panel to one side.

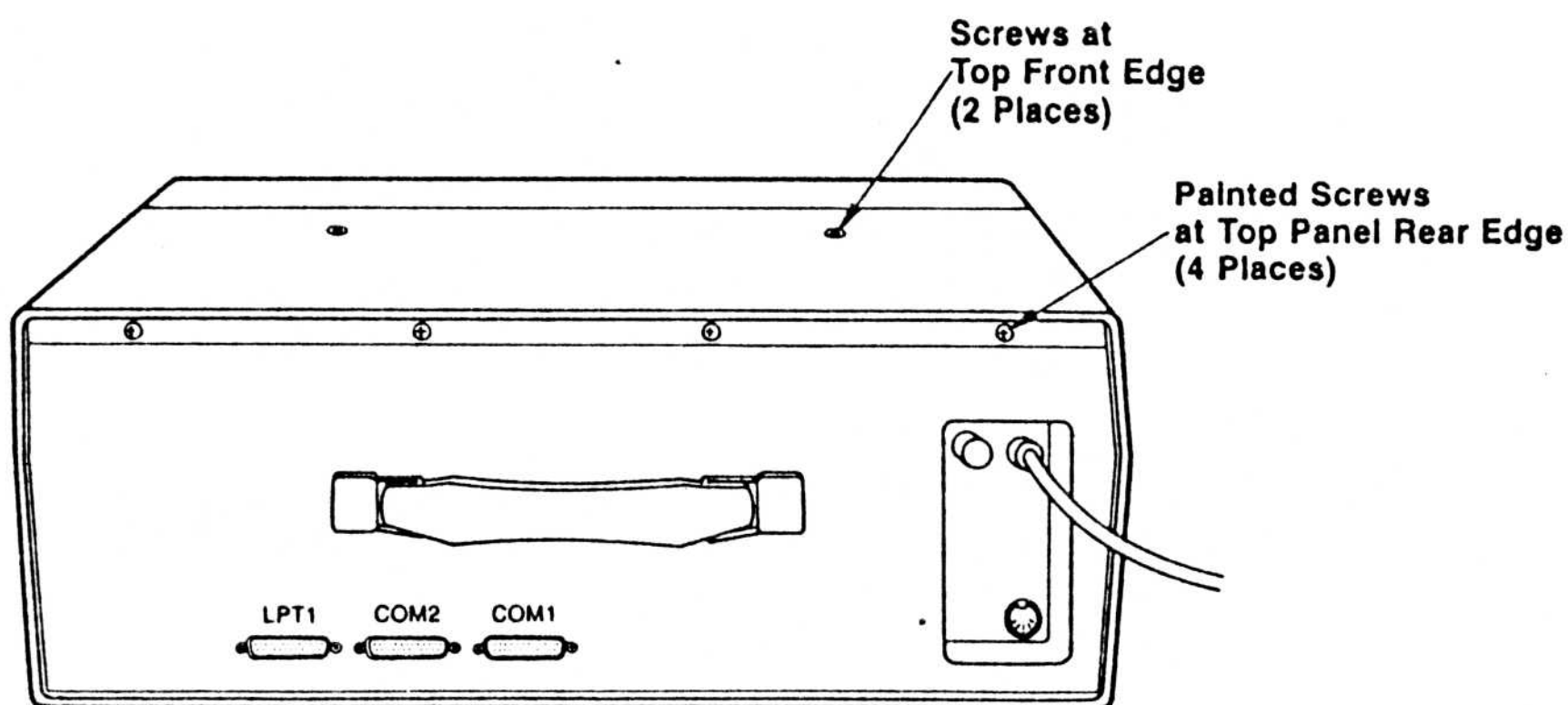


FIGURE 9: PC SPIRIT REAR VIEW

PC SPIRIT EPROM INSTALLATION

- STEP 6** Disconnect the double cable from the video monitor board. Refer to Figure 10.
- STEP 7** Disconnect the ribbon cable from the floppy disk controller board. Refer to Figure 10.
- STEP 8** If your Spirit has a hard disk, disconnect the two ribbon cables from the hard disk. Refer to Figure 11.
- STEP 9** Carefully turn the main unit on end, so that it is resting on the front panel.

CAUTION

Be sure to have the area beneath the main unit's front panel clear of objects which might mar the finish.

- STEP 10** Remove the four screws along the painted edge on the bottom cover near the front panel. Set the screws aside in a safe place.
- STEP 11** Lower the main unit back down to the work area.
- STEP 12** Remove the two inside screws and washers attaching the front panel to the upright extensions of the main unit bottom cover. Set the screws and washers aside in a safe place.

PC SPIRIT EPROM INSTALLATION

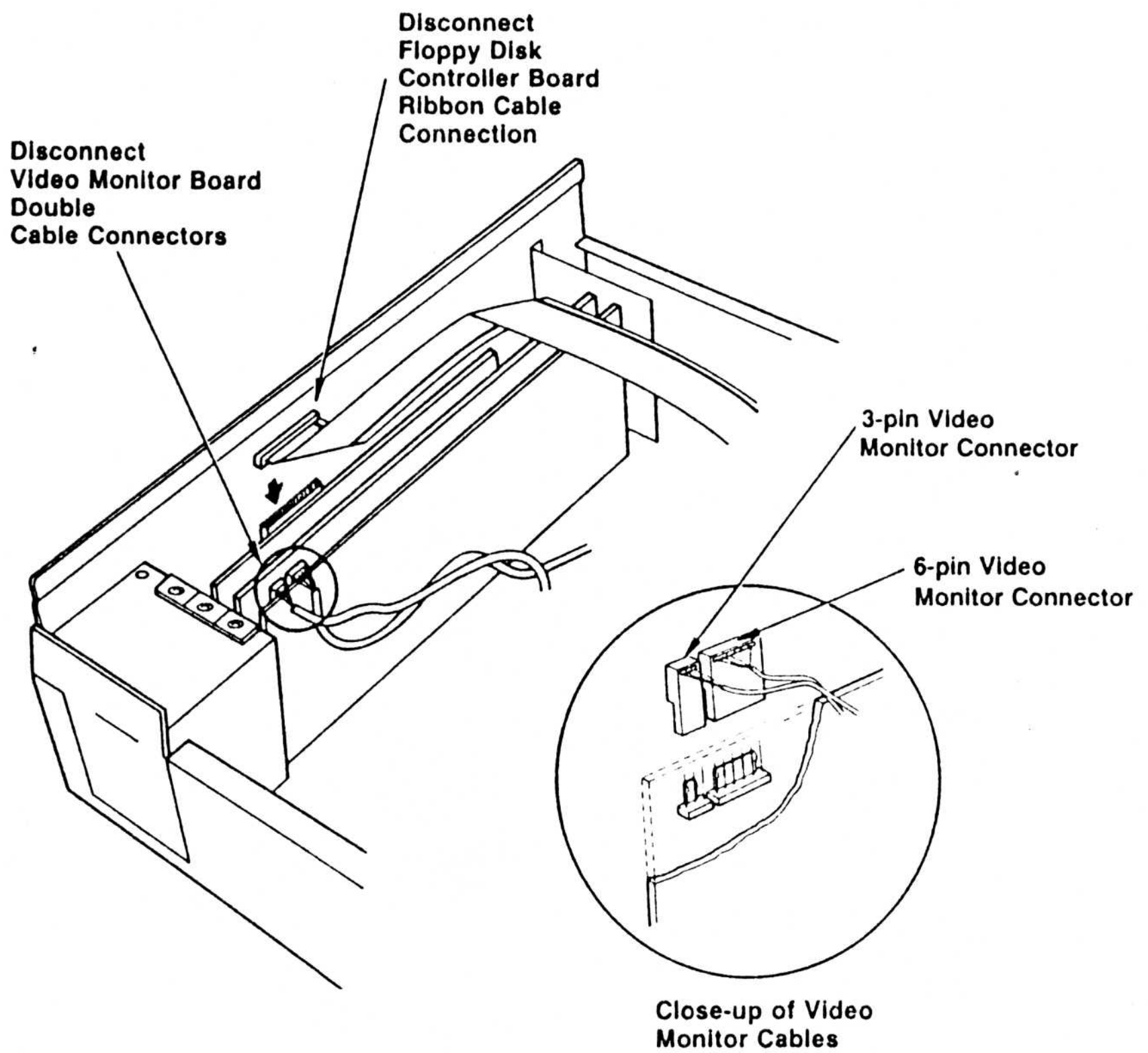


FIGURE 10: SPIRIT EXPANSION BOARD CAGE

PC SPIRIT EPROM INSTALLATION

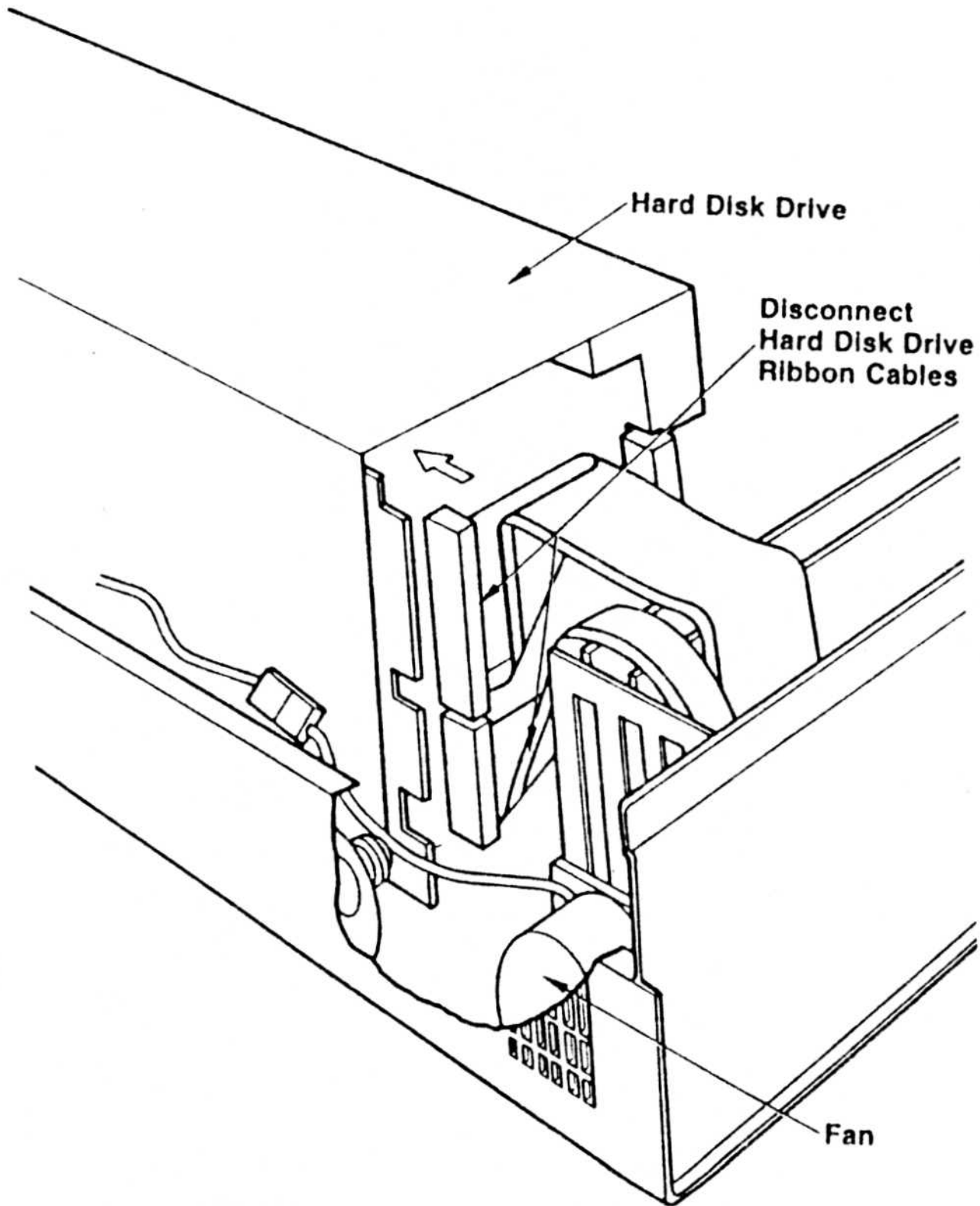


FIGURE 11: PC SPIRIT-XL HARD DISK CONNECTIONS

PC SPIRIT EPROM INSTALLATION

- STEP 13** Lift up the assembly attached to the front panel so that the assembly is lifted several inches away from the main board.
- STEP 14** With the front panel assembly tilted, disconnect the DC power and ground connectors from the main board. Refer to Figure 12.

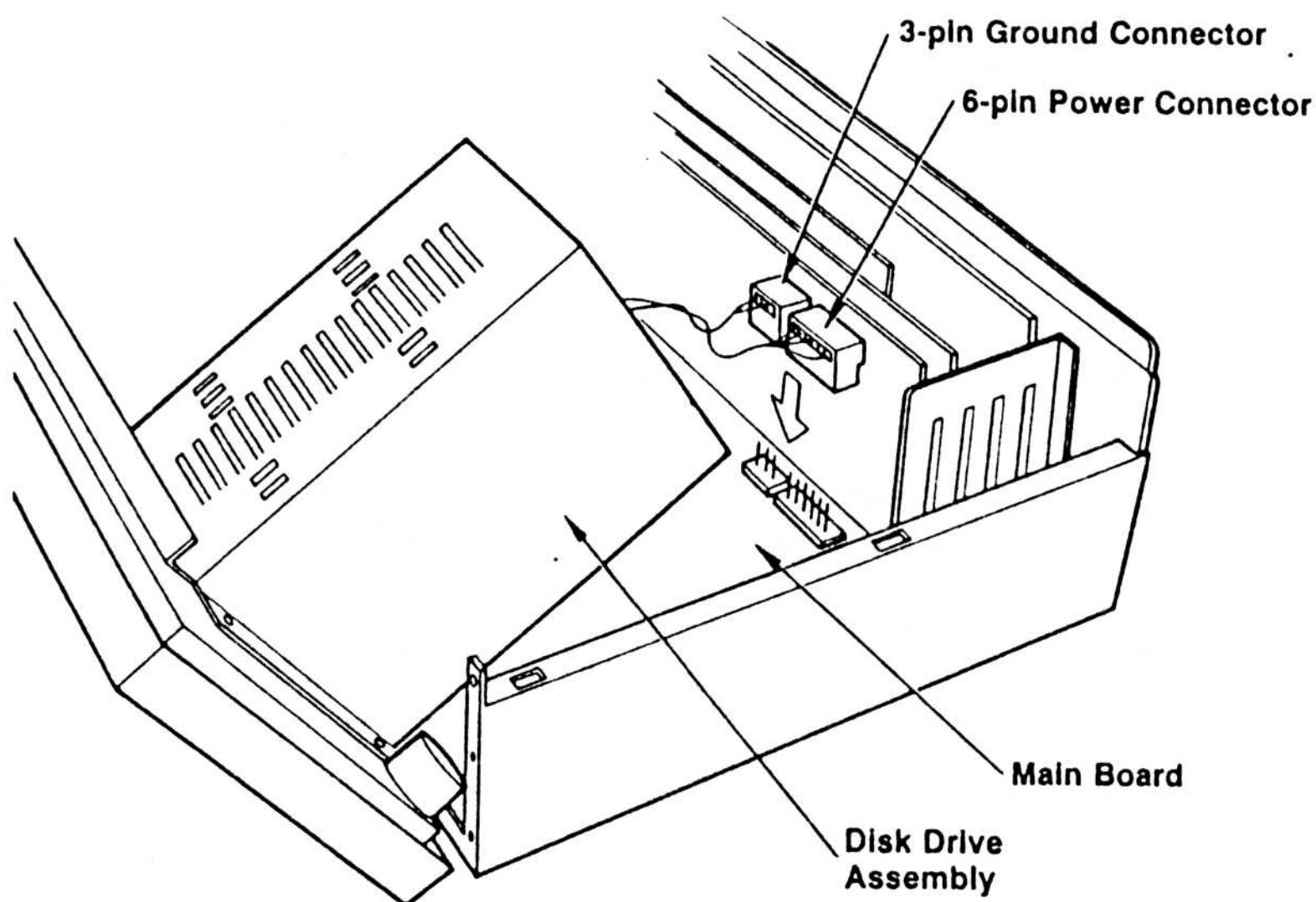


FIGURE 12: SPIRIT MAIN BOARD POWER CONNECTION

PC SPIRIT EPROM INSTALLATION

- STEP 15 Tilt the front panel assembly until it rests on the keyboard case.
- STEP 16 Take out the existing EPROM in the large socket labeled U1101 and keep it in case your new EPROM does not function properly. *Do not touch any of the wires or devices on the board.* Refer to Figure 8.
- STEP 17 Remove the new EPROM from its protective wrapping.
- STEP 18 Insert the new EPROM into the large socket labeled U1101. Be sure the half circle notch on one end of the EPROM is directly over the half circle notch in the receiving socket. Make sure all the pins on the EPROM enter the holes in the socket. Gently push the EPROM until it snaps into place. *Do not touch any of the wires or devices on the board.* Refer to Figure 8.
- STEP 19 Lower the front panel assembly back over the main board.
- STEP 20 Connect the DC power and ground connectors to the main board. Refer to Figure 12.
- STEP 21 Replace the two inside screws and washers from STEP 12.
- STEP 22 Replace the four screws from STEP 10.

PC SPIRIT EPROM INSTALLATION

- STEP 23** Reconnect the ribbon cable to the floppy disk controller board. Make sure the red edge on the ribbon cable is on the left and the polarity arrows meet at the connection. Refer to Figure 10.
- STEP 24** If your Spirit has a hard disk, reconnect the two ribbon cables to the hard disk controller board. Make sure the red edge on the ribbon cables are on the side nearest the main board. Refer to Figure 11.
- STEP 25** Connect the double cable to the video monitor board. Refer to Figure 10.
- STEP 26** Replace the top cover and the six screws from STEP 4.
- STEP 27** Turn the Spirit towards you. Unlatch the keyboard and set it before the Spirit.

1600 EPROM INSTALLATION

1600 EPROM INSTALLATION

Refer to this procedure for Eagle 1600 computers (including the 1620, 1630 and 1640 models). The following procedure is intended for authorized service personnel. We recommend you rely on your dealer to install the EPROM's.

TOOLS REQUIRED: Philips head #1 screwdriver.

- STEP 1 Turn off all power to your Eagle computer. Unplug your system.
- STEP 2 Lift the video monitor from the main unit and place the video monitor to the side.
- STEP 3 Unscrew six short screws: two located on the top of the back panel of the main unit, two located on the right side of the main unit and two located on the left side of the main unit. Set the screws aside in a safe place.
- STEP 4 Put one hand on each side of the main unit cover, gently pull the cover forward and lift the cover off. Place the main unit cover to one side.
- STEP 5 Unplug the ribbon cable and power supply connections to the disk drive assembly as shown in Figure 13 for the Eagle 1620, and Figure 14 for the Eagle 1630 and 1640.

STEP 6 Unscrew the six screws with lock washers that hold the disk drive assembly over the main assembly board: two on the right side of the disk drive assembly, two on the left side of the disk drive assembly, and two between the disk drives. *Be sure not to disconnect the disk drives from the disk drive assembly.*

Refer to Figure 13 for the Eagle 1620 and Figure 14 for the Eagle 1630 or 1640.

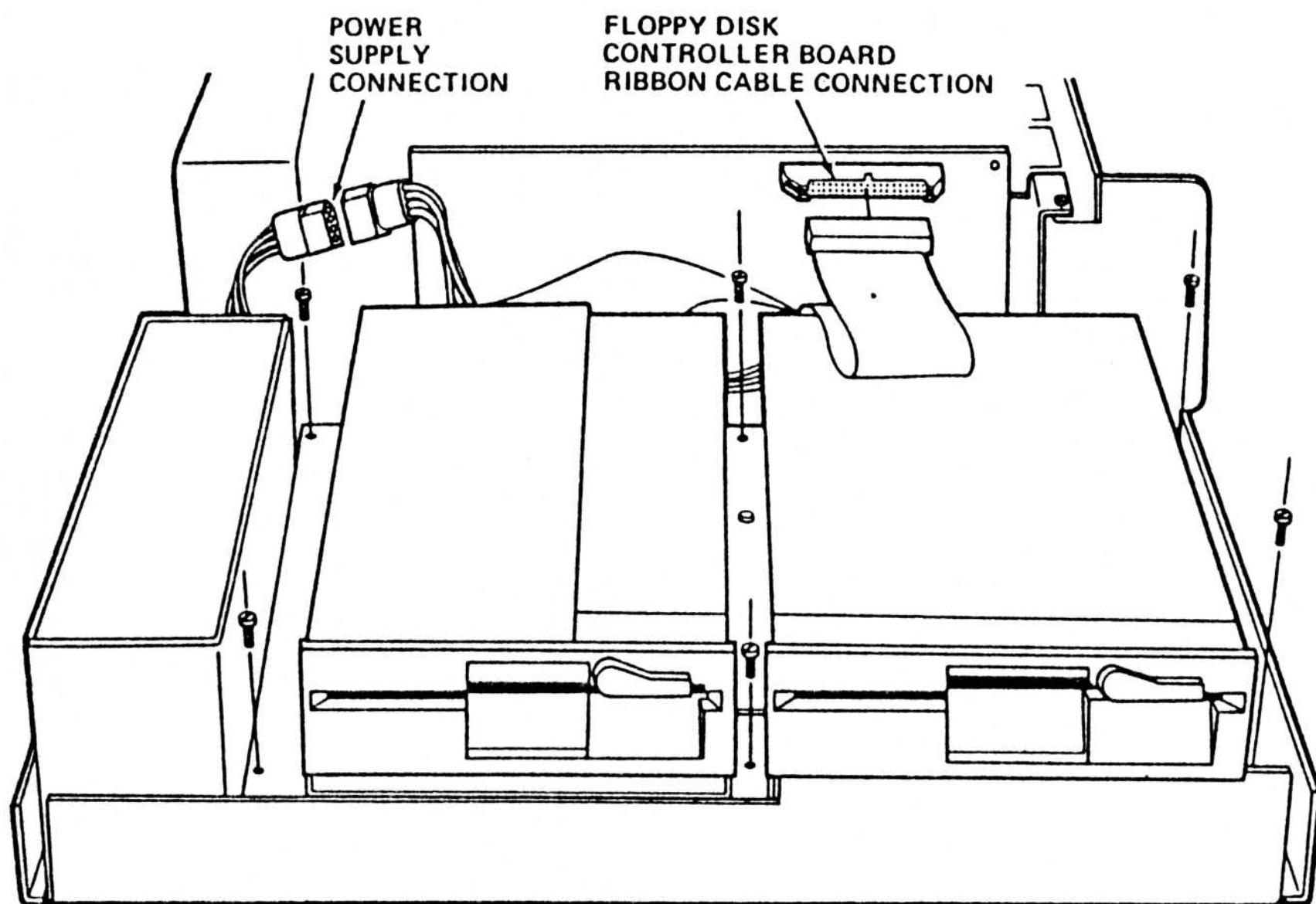


FIGURE 13: 1620 DISASSEMBLY

1600 EPROM INSTALLATION

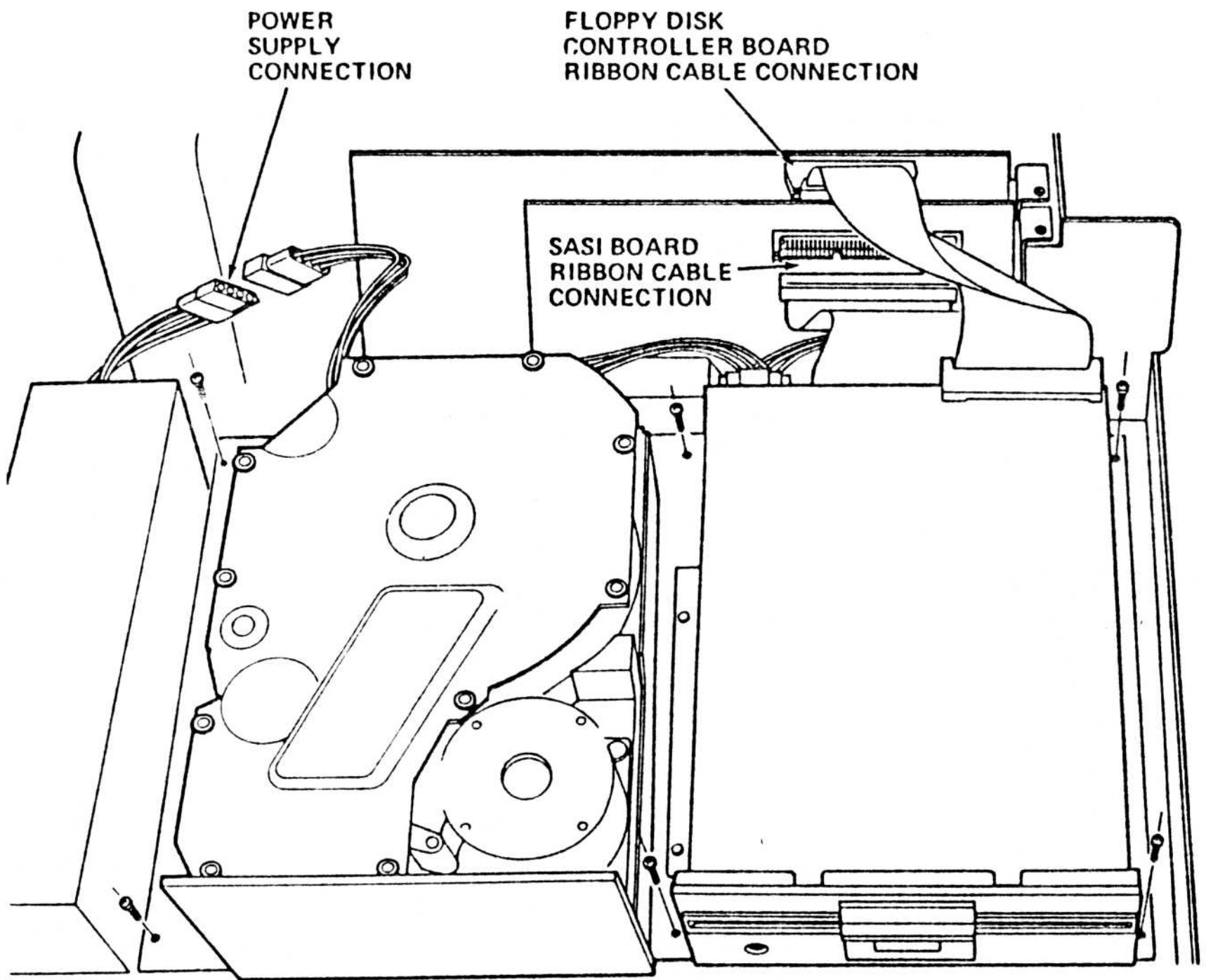


FIGURE 14: 1630 AND 1640 DISASSEMBLY

- STEP 7** Put the screws with lock washers in a safe place. Be sure not to mix these screws with screws discussed in other steps.

CAUTION

Handle the disk drive assembly with care, especially if you have a hard disk drive - bumping or jarring could damage your hard disk.

- STEP 8** Gently place the disk drive assembly to one side.
- STEP 9** Take out the existing EPROM's in the large sockets labeled U403 and U404. Keep the EPROM's in case your new EPROM's do not function properly. *Do not touch any of the wires or devices on the board.* Refer to Figure 15.
- STEP 10** Remove the new EPROM's from their protective wrapping.
- STEP 11** Insert the new EPROM's into the large sockets labeled ~~U403, U404~~ ~~U403, U404~~ U403, U404. Be sure the half circle notch on one end of each EPROM is directly over the half circle notch in the receiving sockets. Make sure all the pins on each EPROM enter the holes in the sockets. Gently push each EPROM until it snaps into place. *Do not touch any of the wires or devices on the board.* Refer to Figure 15.

1600 EPROM INSTALLATION

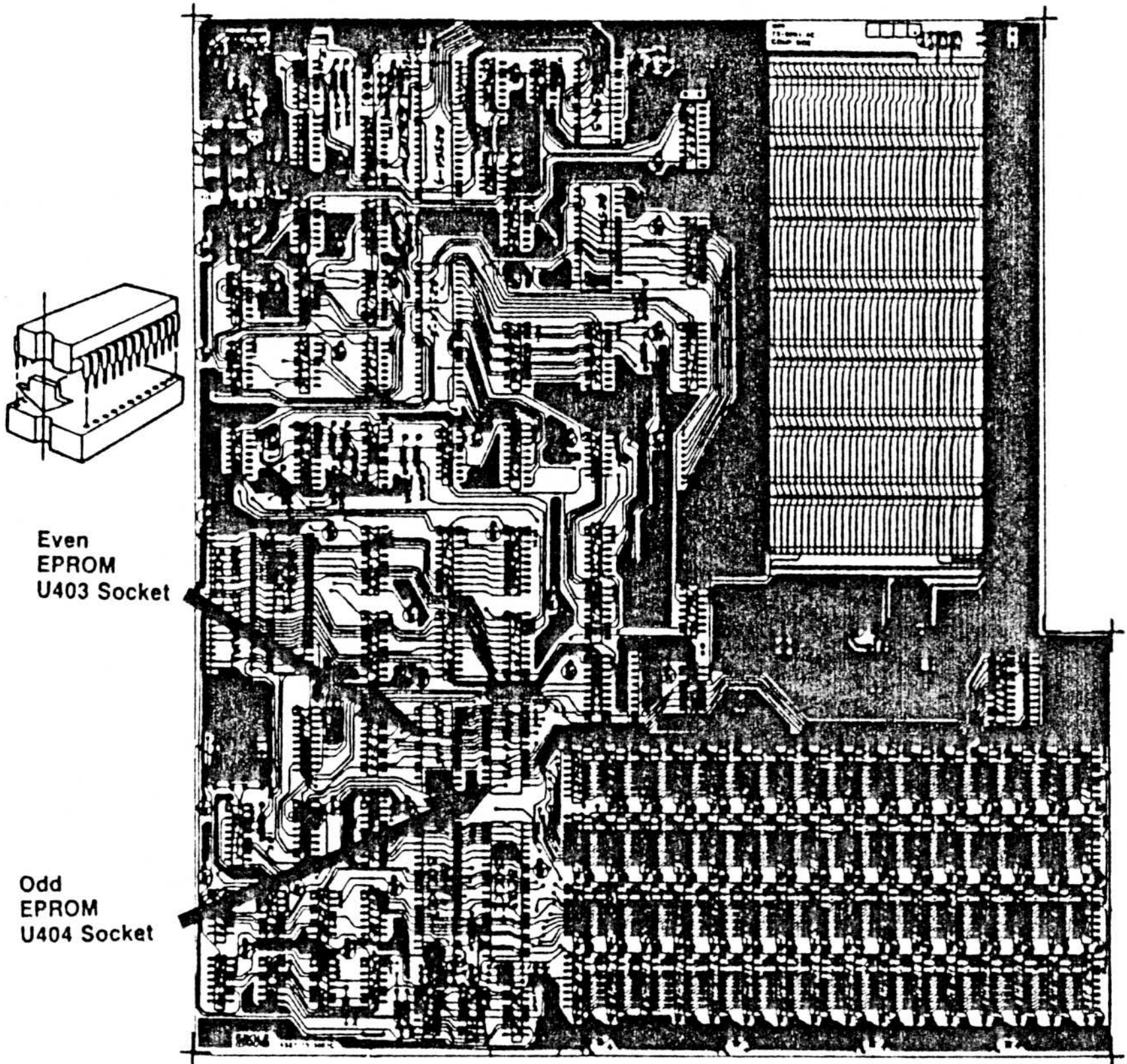


FIGURE 15: 1600 MAIN BOARD

1600 EPROM INSTALLATION

- STEP 12** Replace the disk drive assembly over the main assembly board.
- STEP 13** Reinstall the six screws with lock washers in STEP 6. Refer to Figure 13 for the Eagle 1620, or Figure 14 for the Eagle 1630 and 1640.
- STEP 14** Connect the ribbon cables and power supply wires to the disk drive assembly. Refer to Figure 13 for the Eagle 1620 or Figure 14 for the Eagle 1630 and 1640.
- STEP 15** Replace the main unit cover. Reinstall the six short screws in STEP 3.
- STEP 16** Place the video monitor back onto the main unit.

TURBO PC EPROM INSTALLATION

TURBO PC EPROM INSTALLATION

Refer to this procedure for the Eagle Turbo PC and Turbo PC-XL computers. The following procedure is intended for authorized service personnel. We recommend you rely on your dealer to install the EPROM's. Two types of EPROM's may be installed into your Turbo PC: the 2764-25 type, or the 27128-25 type. Two EPROM's must be installed at once, and they must both be the same type.

TOOLS REQUIRED: Philips head #1 screwdriver

- STEP 1** Turn off all power to your Eagle computer. Unplug your system.
- STEP 2** Unscrew six short screws; two in the top of the back panel of the main unit, two in the left side of the main unit and two in the right side of the main unit. See Figure 16. Set the screws aside in a safe place.
- STEP 3** Facing the back panel, put one hand on each side of the main unit cover and push forward, then gently lift the cover off. Place the main unit cover to one side.
- STEP 4** Remove the EPROM currently in the U506 socket on the main board. Remove the EPROM currently in the U706 socket on the main board. Refer to Figure 17 for the EPROM locations.
- STEP 5** Remove the EPROM's from their protective package. Do not bend the prongs.

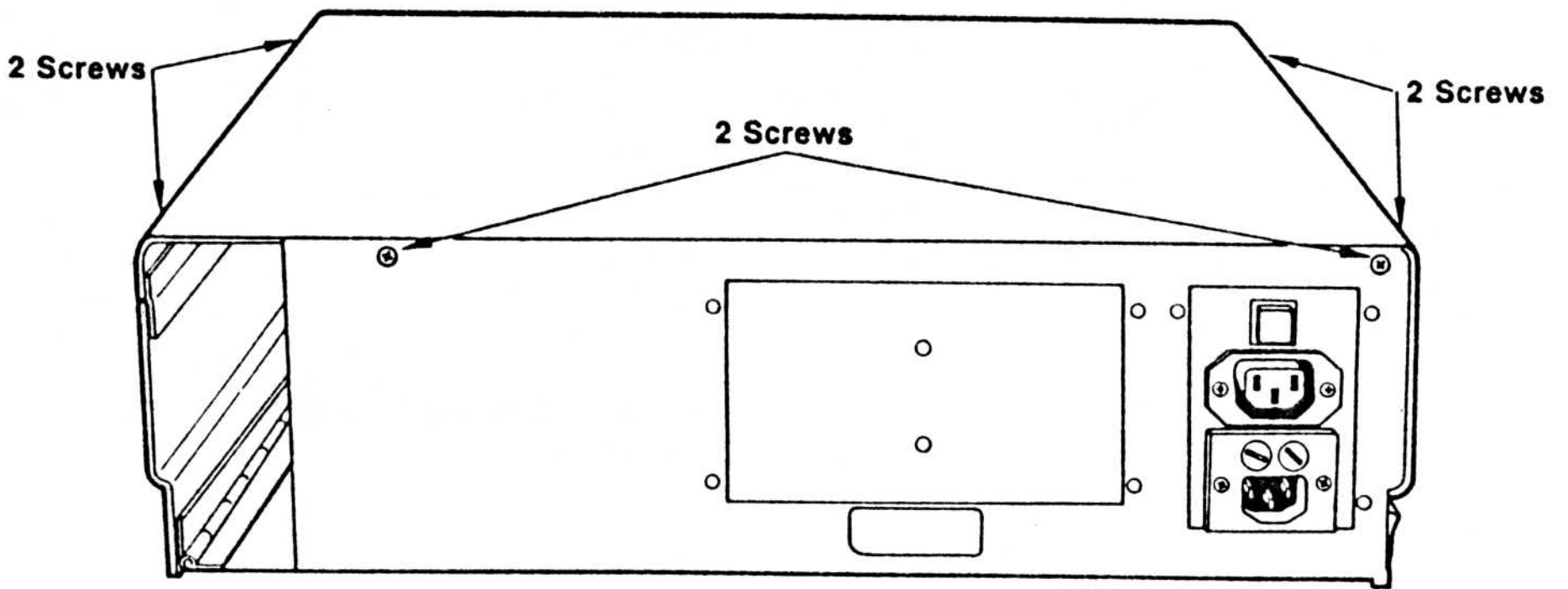


FIGURE 16: PC TURBO ENCLOSURE

TURBO PC EPROM INSTALLATION

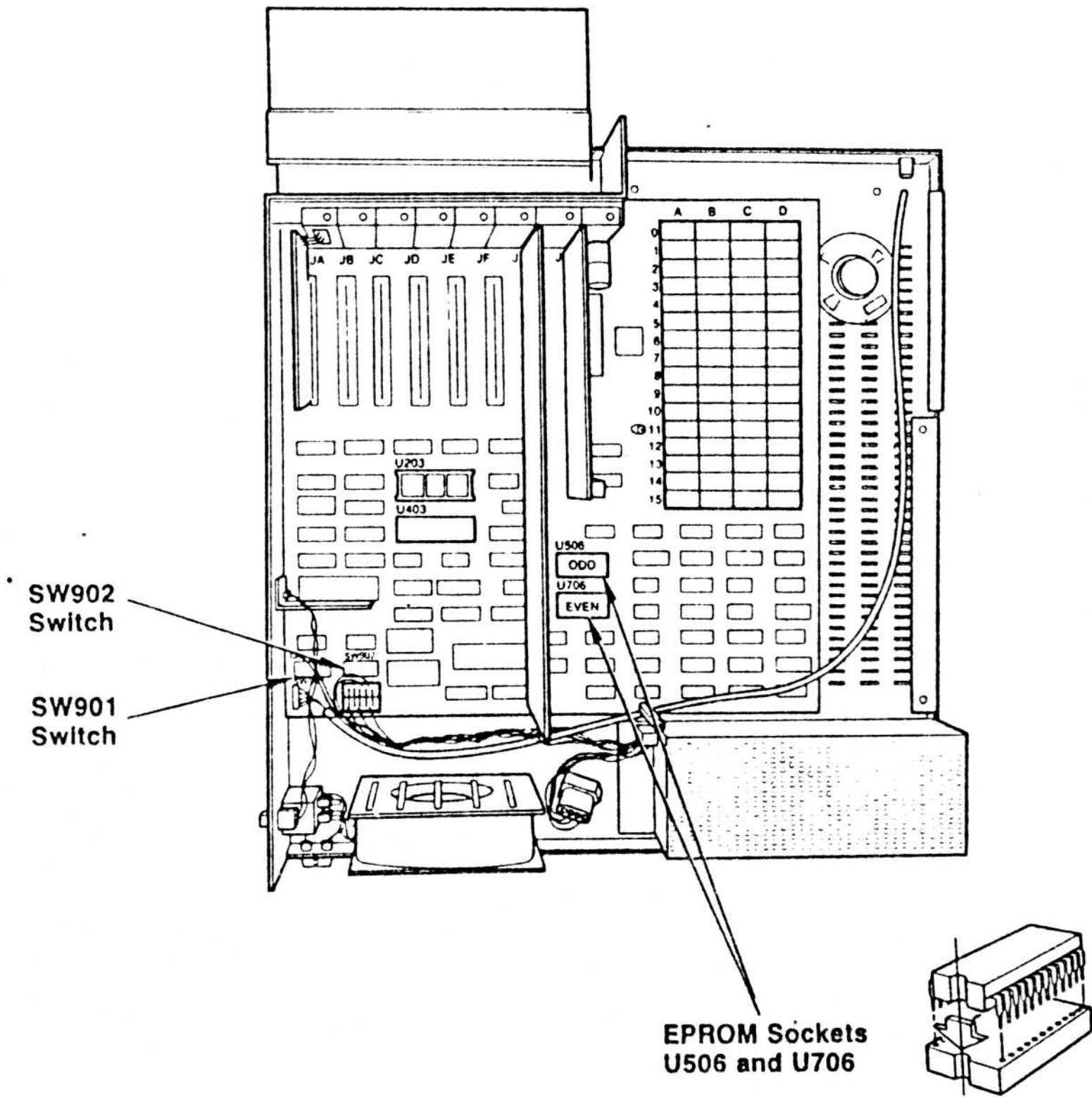


FIGURE 17: PC TURBO MAIN BOARD

TURBO PC EPROM INSTALLATION

- STEP 6** Determine what type of EPROM you are installing, by reading the top of the chip. The second group of numbers indicate the type. For example, 62-2764-0007 indicates a .2764-25 type EPROM. Insert the EPROM marked "ODD" into the U506 socket on the main board. Insert the EPROM marked "EVEN" into the U706 socket on the main board. Refer to Figure 17 for the EPROM locations.
- STEP 7** Set positions 3 and 4 on the SW902 Switch to reflect the type of EPROM installed. If you have 2764-25 type EPROM's, set position 3 to OFF and position 4 to ON. If you have 27128-25 type EPROM's, set position 3 to ON and position 4 to OFF. See Figure 18 for an example of the switch and Figure 17 for the location of the switch.
- STEP 8** Leave the slot access door open and replace the main unit cover. Reinstall the six screws that secure the cover.

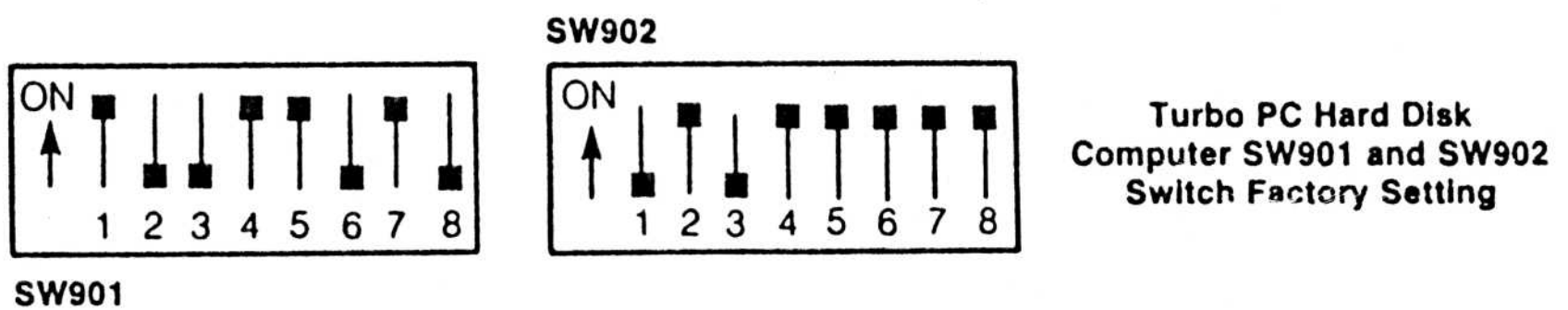


FIGURE 18: SW901 & SW902 SWITCH EXAMPLE



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