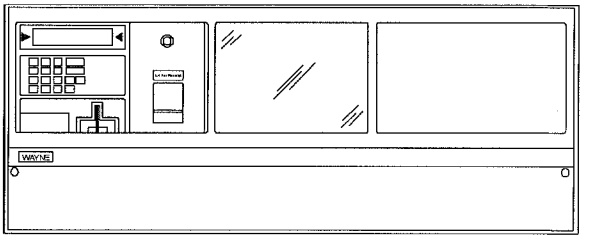
INSTALLATION

Dual CAT™ Retrofit for Vista Dispensers



DRESSER Wayne

Installation Manual
Dual CAT Retrofit
for Vista Dispensers

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How To Use This Manual

This manual explains how to install the Dual CAT retrofit kit in enhanced Vista dispensers. This includes Models V390, V395, V490, and V590.

Important: By following this instruction manual from chapter 1 through chapter 3 in the sequences presented, you will be assured of a successful install. For best results, do not perform the steps out of the sequence shown.

Section 1 includes unpacking and inspection procedures, component return procedures, and a list of tools required to install the retrofit kit.

Section 2 provides instructions for installing the Dual CAT retrofit hardware in the dispenser head.

Section 3 explains how to install the card reader in the dispenser bezel.

Appendix A includes a wiring diagram for the installation.

Appendix B explains how to change the bezel board firmware.

Section 1

Before You Start

1.1 Introduction

This manual explains how to install the dual CAT retrofit kit in Wayne™ Vista 90 series dispensers. This includes Models V390, V395, V490, and V590.

By following this instruction manual in the sequences presented, you will be assured of a successful install. For best results, perform the steps in the sequence given for the particular kit or kits that are being installed.

Important: These retrofit kits require installation of several wiring and hardware assemblies. Any installation or modification must comply with the requirements of the National Electrical Code (NFPA 70), the Automotive and Marine Service Station Code (NFPA 30A) and any other applicable codes.

Table 1-1 Dual CAT Retrofit Kits for Vista

Part Number	Description
886894-xxx	Dual CAT Retrofit Kit

Important: You must wear a static wrist strap, part number 916962 or equivalent, securely attached to an earth ground, when handling any circuit board, electronic component or assembly, or when reaching into the site controller or dispenser computer enclosure. Do not use power tools.

1.2 Kit Overview

To make sure you have all the necessary parts, refer to the parts list.

1.3 Unpacking and Inspection

Complete the following steps:

1. Before opening any cartons, count the number of cartons and verify the carton count against the supplied packing list.
2. Inspect the cartons for damage made during transit.
3. File claim information with the carrier on the bill of lading.
4. Retain cartons suspected of damage for future claim purposes.
5. Remove all equipment from the shipping cartons and carefully inspect for visible damage.

Note: Any damage should be brought to the attention of the carrier and claims made immediately. Return all equipment to the respective cartons for protection until actual installation is made. Save all cartons until it is certain that return shipments are not required.

6. Check supplied graphics (such as ad panel and dial face graphics) prior to start of installation.

1.4 Returning Damaged Components

Parts or components returned to the factory under warranty or for repair are subject to damage if not packaged properly. Complete the following steps to return parts or components to the factory.

1. Place electronic components in an anti-static bag and in the original shipping cartons for return shipment to the factory.

Note: If original shipping cartons are not available use a sturdy cardboard container and suitable packing materials such as anti-static polyethylene foam or bubble pack, to ensure the component is firmly packed.

2. Include a Return Parts Tag with the defective component describing the particular problem with the part.
3. Make sure adequate insurance is provided when returning parts to the factory.

WARNING: If the parts or components arrive at our factory in a damaged condition and it is determined that the damage is a direct result of inadequate or improper packaging, the damage will not be covered under the original warranty and the customer or distributor will be held responsible for the cost of repairs necessary to correct or replace the damaged parts.

1.5 Required Tools

Refer to Table 1-2 for a list of tools required to install the dual CAT retrofit kit.

Table 1-2 Required Tools

Quantity	Description
1	Short-shank Phillips screwdriver (medium)
	Long-shank Phillips screwdriver (medium)
1	Short-shank slotted screwdriver (medium)
1	11/32-inch box-end wrench
1	Small needle-nose pliers
1	1/4 inch nut driver
1	Anti-static wrist strap

1.6 Power Ratings

The dual CAT installation changes the existing dispenser power rating. See the following table.

Table 1-3 Power Ratings

Circuits Powered	Nominal Voltage	Amps
Dispenser electronics	120 VAC, 60 Hz	7.4
Dispenser electronics and lights	120 VAC, 60 Hz	8.0

Section 2

Dual CAT Retrofit Installation

2.1 Introduction

The following paragraphs explain how to install the Dual CAT retrofit kit. Before you begin, perform the following:

1. For dispensers being worked on, move the dispenser data link switches to BYPASS.
2. Disconnect the power from the dispenser at the power panel and dispenser junction box. Post a warning sign at the breaker box stating that the equipment is being serviced.

Caution: If other dispensers in the station are to remain operational, the wiring in some installations (which do not meet requirements of the current revision of the National Electrical Code) may allow the pump control relay terminals in the junction box of the dispenser to become energized through feedback from other dispensers connected to a common submerged pump control relay. This may occur even with dispenser power interrupted at the control panel circuit breaker. To guard against shock, shield to prevent contact with positions 3, 4, 5, and 6 on the terminal block.

2.2 Removing Bezels

Complete the following steps to remove the bezel from the dispenser.

1. Unsnap the ad panel by pulling forward firmly on its top edge. If necessary, unlock the function switch door.
2. Unscrew wing screw at each end.

3. Remove bezel and set aside.
4. Repeat steps 1 through 3 for the opposite side of the dispenser.

2.3 Lowering The Dispenser Electronics Module (DEM) Into Service Position

Refer to Figure 2-1 when performing steps 1 through 3.

1. Using a flat blade screwdriver, unfasten the 1/4-turn screws located at the top of the Dispenser Electronics Module (DEM).
2. Lower DEM into service position.
3. Repeat steps 1 and 2 for the opposite side.

Note: Side 2 of dispenser is identified by location of the Intrinsic Safe Barrier Board. See Figure 2-1 below.

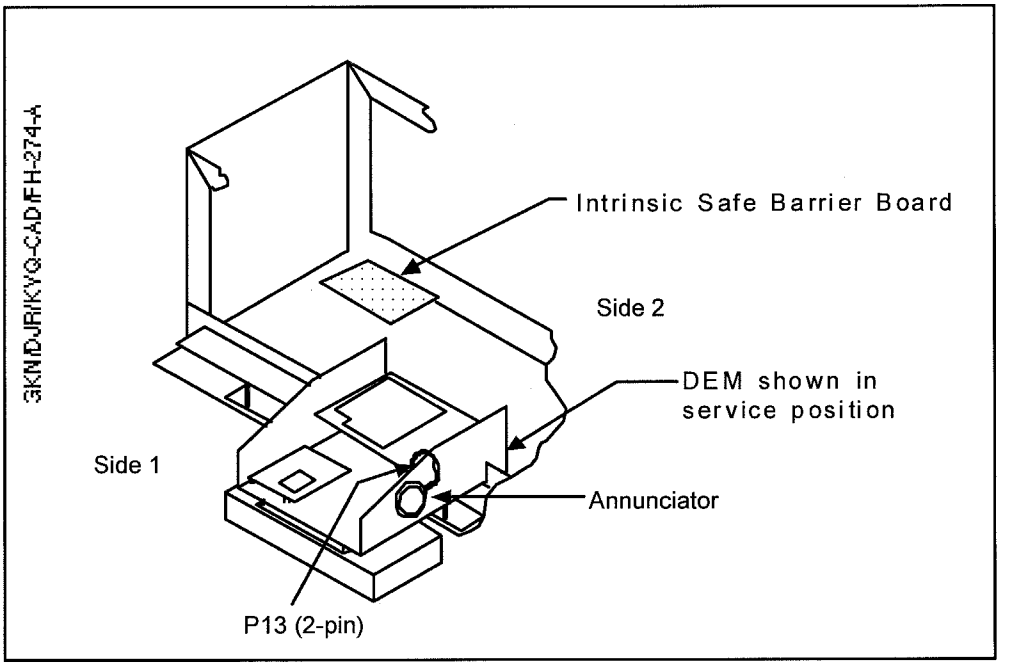

Figure 2-1 DEM In Service Position

2.4 Wayne Vac® Board Installation

1. Check to determine if the dispenser is equipped with the Wayne Vac® system.
2. Locate the Control Board Bracket Assembly (Part No. x-300331) installed inside the electronic head. Refer to Figure 2-2 for location.

Note: If no control board bracket assembly is present, the dispenser is not Wayne Vac® equipped. Skip to section 2.5.

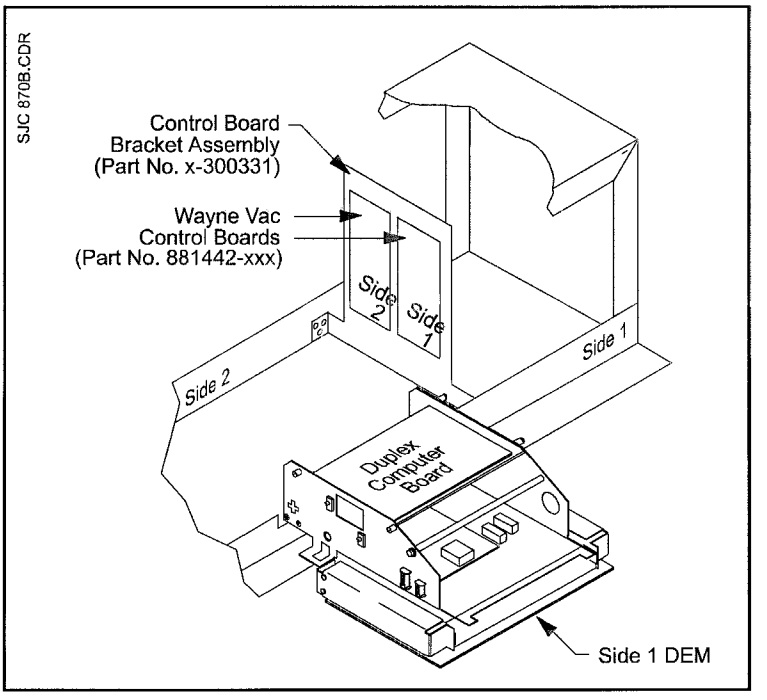

Figure 2-2 Wayne Vac Control Board Bracket Assembly

3. Disconnect and label cable assemblies installed in the following connectors on the Wayne Vac Control board. Refer to Figure 2-3 for location of connectors on the Wayne Vac Control board.

   a. Disconnect the cable assembly installed in J5 on the Wayne Vac Control board. Use a marker and label the connector "J5/S1." The "J5/S1" represents the J5 connector on side 1.

   b. Disconnect the cable assembly installed in J4 on the Wayne Vac Control board. Use a marker and label the connector "J4/S1."

   c. Disconnect the cable assembly installed in J1 on the Wayne Vac Control board. Use a marker and label the connector "J1/S1."

   d. Disconnect the cable assembly installed in J2 on the Wayne Vac Control board. Use a marker and label the connector "J2/S1."

   e. Disconnect the cable assembly installed in J3 on the Wayne Vac Control board. Use a marker and label the connector "J3/S1."

Note: J3 is used only for Vista single hose and blender dispensers. For all other applications, a jumper (Part No. 201281) is installed in the J3 connector. Do not remove the jumper.

   f. Disconnect the cable assembly installed in J6 on the Wayne Vac Control board. Use a marker and label the connector "J6/S1."

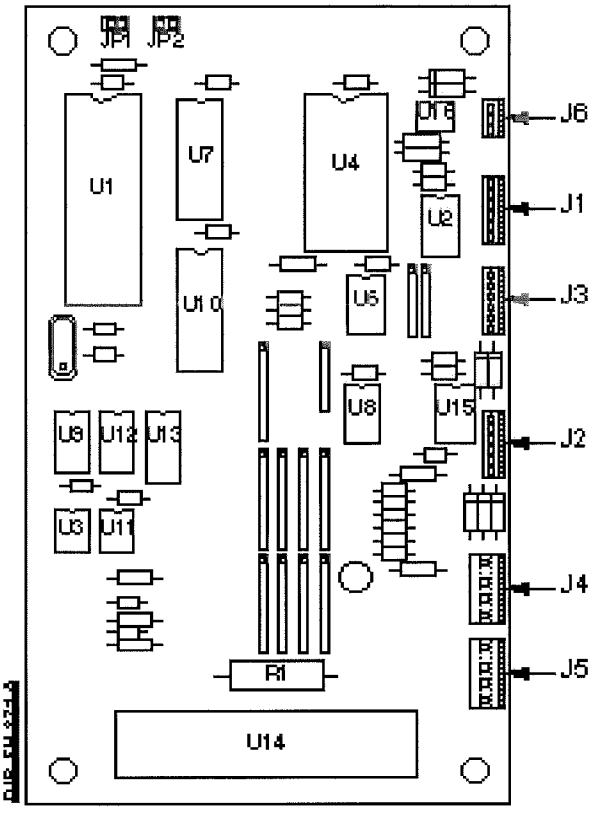

Figure 2-3 Connectors on Wayne Vac Control Board

4. Repeat step 3 for the side 2 Wayne Vac Control board. When labeling cable assemblies, use "S2" to designate side 2.
5. Remove the Control Board Bracket Assembly from the electronic head.
6. Place an anti-static wrist strap (Part No. 916962 or equivalent) on your wrist and attach the other end of the wrist strap to an earth grounding point.
7. Remove the Wayne Vac Control boards (Part No. 881442-xxx) and plastic standoffs from the Control Board Bracket Assembly. Set the boards and plastic standoffs aside for re-installation later. Discard the Control Board Bracket Assembly.
8. Locate the kit supplied printer assembly (Part No. 883727-xxx).
9. Install the Wayne Vac Control board to the printer base using the plastic standoffs removed in step 7. When installing the board to the printer base, make sure the board connectors (J1 through J6) are located at the top. Refer to Figure 2-4.

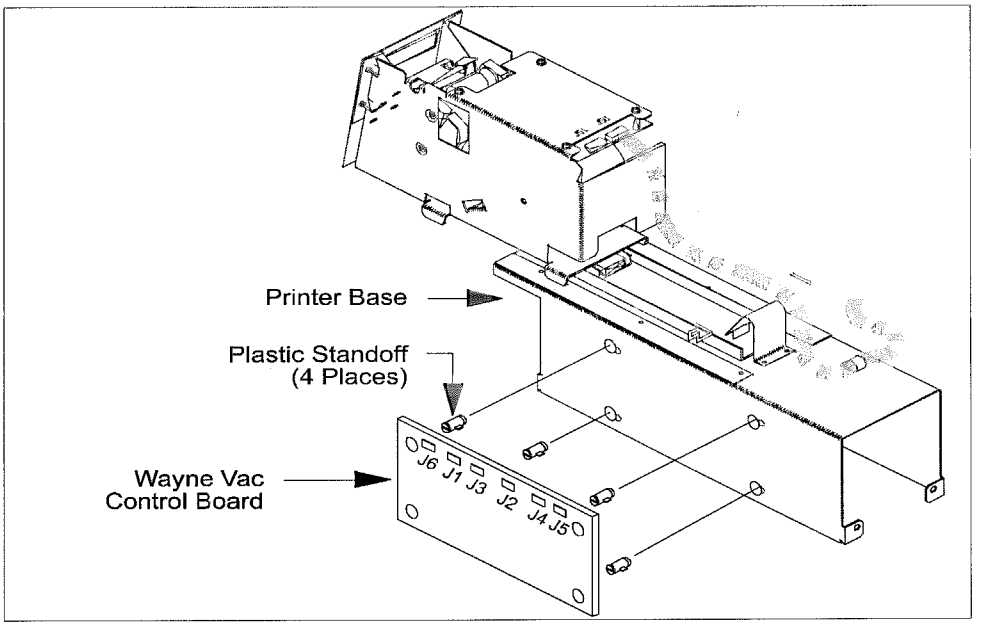

Figure 2-4 Mounting Wayne Vac Control Board To Printer Base

If the side 2 DEM Power Supply board is not installed with cable assembly 881984-xxx, skip step 10 and continue with step 11.

10. Disconnect the cable assembly (part no. 881984-xxx) from the following connectors on the side 2 DEM Power Supply board.
    a. Disconnect cable assembly from J3 on the Power Supply board.
    b. Disconnect cable assembly from J4 on the Power Supply board.
    c. Disconnect cable assembly from J5 on the Power Supply board.
    d. Disconnect cable assembly from J6 on the Power Supply board.
    e. Continue with step 12.
11. Disconnect the cable assembly from the following connectors on the side 2 DEM Power Supply board. (Do not complete the following steps if 881984-xxx is present).
    a. Disconnect cable assembly from J3 on the Power Supply board.
    b. Disconnect cable assembly from J4 on the Power Supply board.
    c. Disconnect cable assembly from J5 on the Power Supply board.
    d. Disconnect cable assembly from J6 on the Power Supply board.
    e. Disconnect cable assembly from the 4-pin male connector routing from the conduit. Discard the cable assembly.

Note: The side 1 Wayne Vac® Control board is installed on the side 1 printer base and the side 2 Wayne Vac Control board is installed on the side 2 printer base.

2.5 Removing Dispenser Electronics Modules (DEM)

1. Remove and discard annunciator and attached cabling from side 1 DEM.
2. Disconnect J5 on Computer Board from side 1 DEM and label P5.

3. Lift and remove the side 2 DEM. Label it "Side 2" with marker.

Note: Care must be taken not to scratch or damage DEM face.

4. From the side 1 DEM, disconnect the following:

   3-pin connector from J1 and label P1

   4-pin connector from J3 on the DEM bracket and label P3

   2-pin connector from J13

5. Remove annunciator and attached cabling from the Side 1 DEM. Retain for later assembly.
6. From the Computer PCB assembly on the Side 1 DEM, remove the following:
   - 2-pin connector from J1 and label P1
   - 9-pin connector from J9 and label P9
   - 9-pin connector from J10 and label P10
   - 6-pin connector from J11 and label P11 if present
7. From the Solenoid Drive Board, remove the following:
   - 15-pin connector from J1 and label P1
   - 15-pin connector from J2 and label P2

Note: For Vista enhanced, perform the following:

   - Disconnect J1 and label P1
   - Disconnect J3 and label P3

   - 9-pin connector from J7 and label P7 if present
   - 9-pin connector from J8 and label P8 if present

8. Lift and remove the side 1 DEM. Label it "Side 1" with marker.

Note: Care must be taken not to scratch or damage face of the DEM.

2.6 Installing Drain Pan (881138-001)

Note: Kits using CPM bezel module require installation of drain pan.

1. Locate gasket (part number 881163-009) and drain pan (part number 881138-001).
2. Remove protective liner from gasket and install onto drain pan spout with adhesive against drain spout flange.
3. Slide drain pan into place and fasten to base angle using 2 #8 x 3/8 screws (part number 2-513161) and 2 #8 washers (part number 6010901).
4. Repeat steps 1 through 3 for opposite side.

2.7 Installing Printer Assemblies (883727-xxx)

1. Locate two printer assemblies.
2. Facing side 1, with the front of the printer oriented away from installer, insert side 2 printer into the right side of the pump head by tilting to side then setting into place. See Figure 2-5.

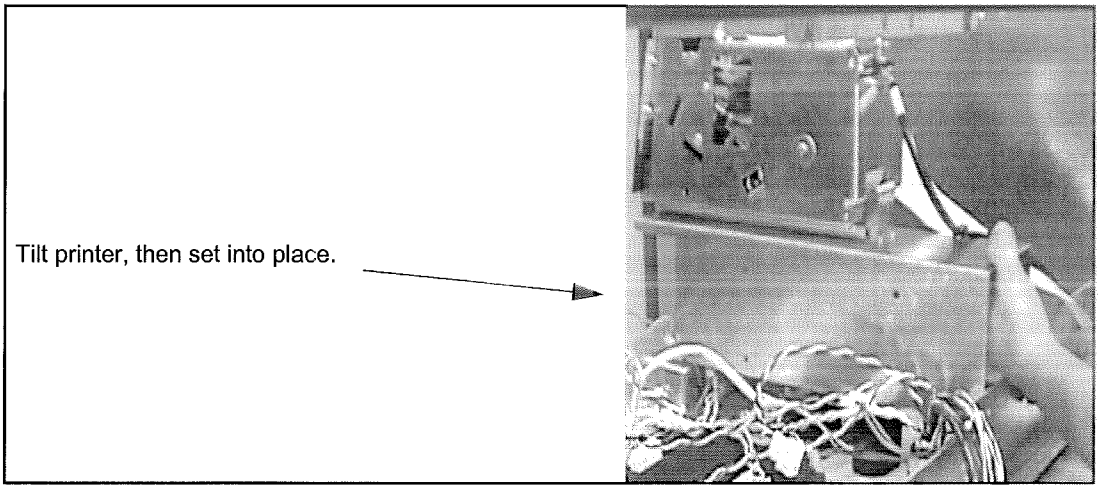

Figure 2-5 Installing Side 2 Printer Assembly

3. Secure with 4 #8 screws (part number 6006001) to base angle.
4. With the printer chute oriented toward the installer, insert printer into side 1 by tilting to side then setting in place.
5. Repeat step 3 to secure printer.
6. Remove retaining screw from bottom side of printer base (marked with warning label). See Figure 2-6.

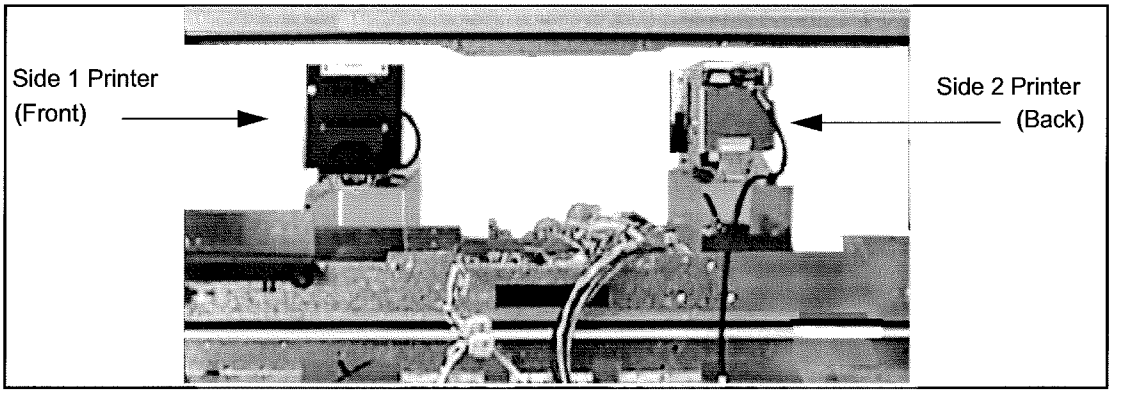

Figure 2-6 Printers in Head

Note: If removal of chassis ground wire from base angle is required during installation of printer assemblies, the ground wire must be resecured to base angle with printer mounting hardware.

2.8 Installing Heater Fan Assembly (883798-xxx)

Refer to Figure 2-2 when performing steps 1 through 3.

1. Locate the heater fan assembly.
2. Position the fan from side 1 with the transformer on top and toward side 2. See the following.

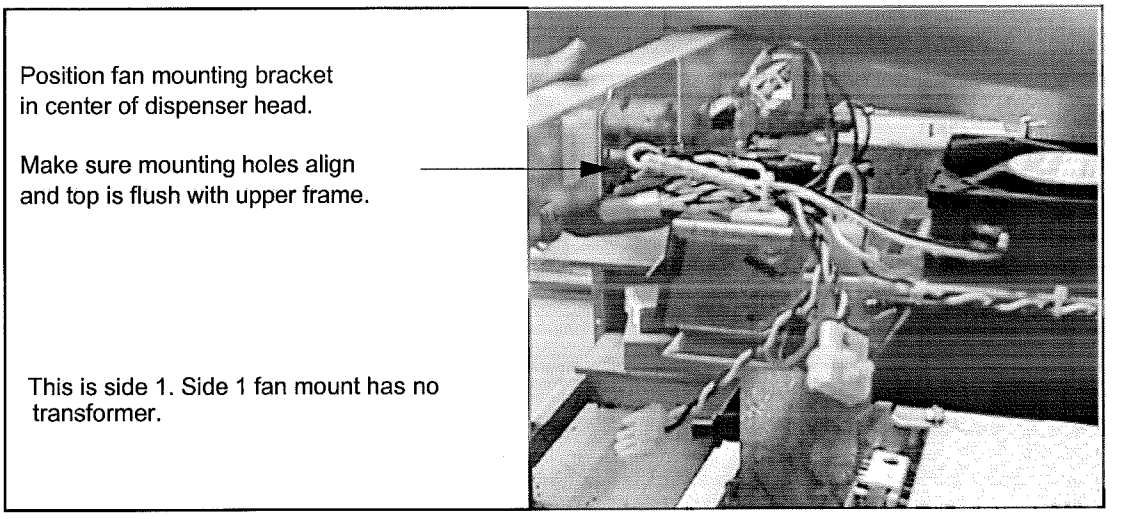

Figure 2-7 Positioning Heater Fan Assembly

3. Install fan on inside of dispenser head frame and secure with 4 #8 x 1/2 screws (part number 6006001) and nuts (part number 6109403) provided.

Note: Make sure fan bracket angle is flush with top of frame.

4. Secure fan in two places with self-tapping screws (PN 884073-004).

2.9 Installing Dual CAT Board and Bracket Assembly

The following paragraphs explain how to install the Dual CAT board and bracket assembly. Be sure to follow the steps in the sequence provided to ensure a successful installation.

Note: Care must be taken during installation of components not to damage or crimp wiring and cable assemblies.

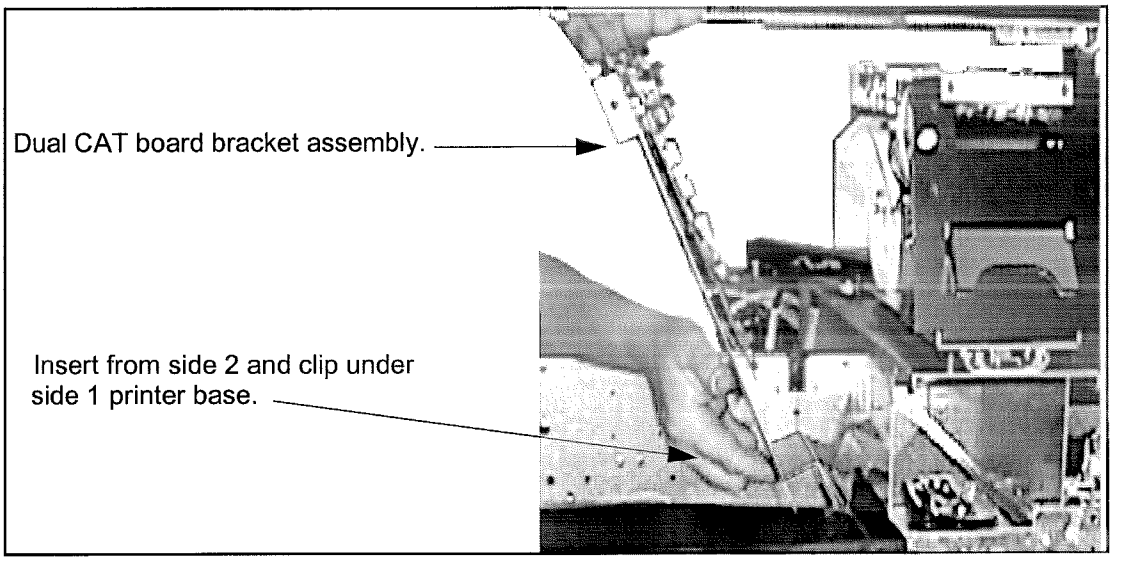

Figure 2-8 Installing Dual CAT Assembly

1. Facing side 2, insert the dual CAT board/bracket on right side of dispenser head by tilting and sliding into place.
2. Place the clip on the dual CAT board/bracket under the printer base and then pull up.

Note: Make sure that the dual CAT PCB is installed on the clip side of the dual CAT bracket and faces toward center of pump.

3. Secure dual CAT bracket in place with screws (#8 x 1/2, part number 6006001, and nuts (part number 6019403) provided.
4. For both printer assemblies, connect P7 of printer cable (part number 883924-001) to J7 of the dual CAT control board.
5. If the dispenser is equipped with a Wayne Vac® system, reconnect cable assemblies previously disconnected to the side 1 and side 2 Wayne Vac® control boards located on the printer base.

2.10 Installing Power Supply (880519-xxx)

Note: If the dispenser is equipped with a Wayne Vac® system, skip to 2.12. The power supply will already be installed.

1. Locate power supply assembly.
2. Install power supply in side 2 DEM with PCB assembly on right side.
3. Secure connectors in appropriate connections from the power supply to the DEM frame. See Figure 2-9.

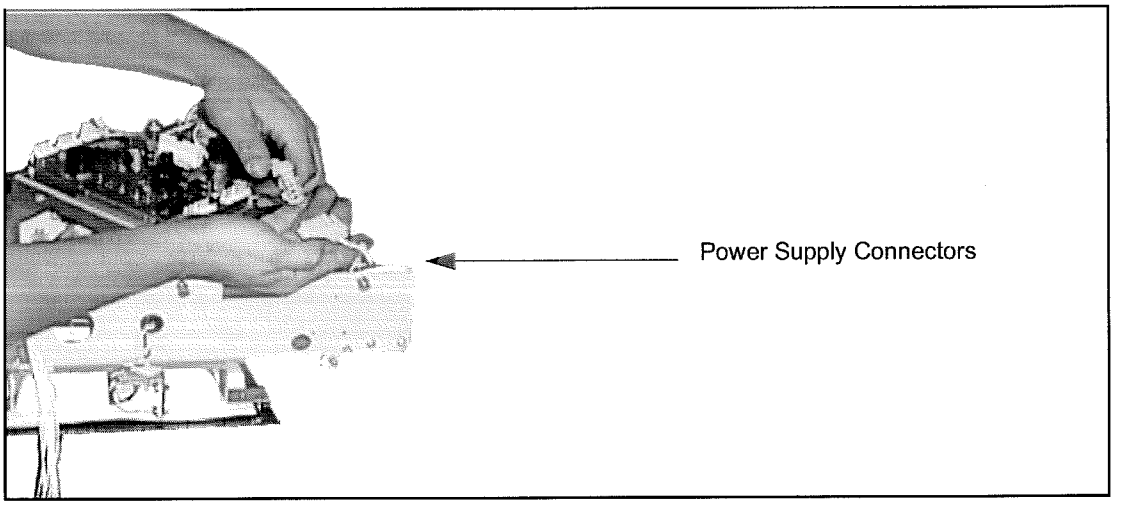

Figure 2-9 Securing Power Supply Connectors

4. Secure with four existing captive screws. See Figure 2-10.

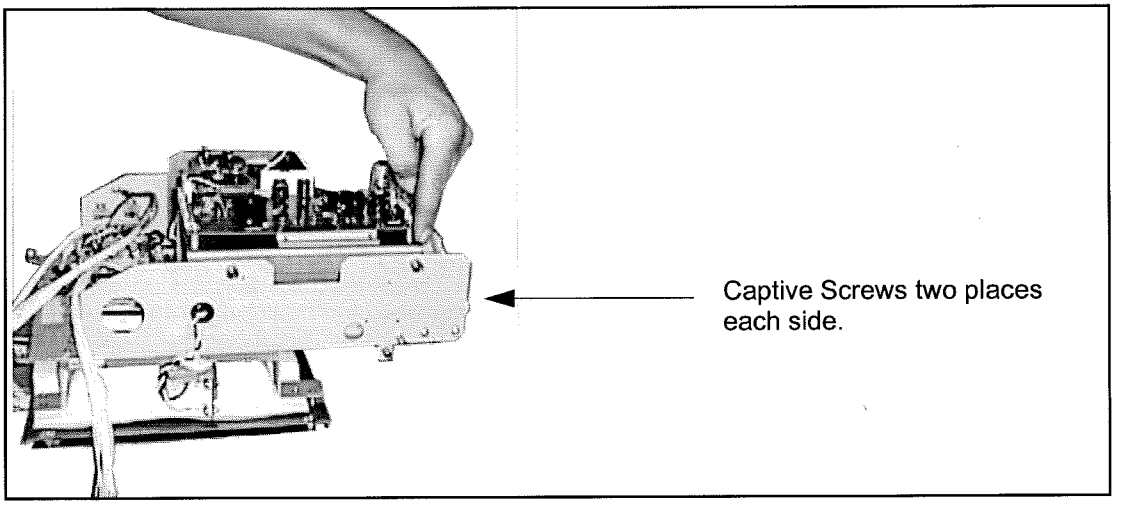

Figure 2-10 Captive Screws for Securing Power Supply

Note: Ensure that no wires are crimped when installing the power supply.

2.11 Installing Dispenser Card Processing Terminal (DCPT) Power Switch

Note: If the dispenser is equipped with a Wayne Vac® system, the power switch will already be installed.

1. Locate DCPT power switch cable assembly (P/N 880560-001).
2. On side 2 DEM, locate and knock out black hole plug labeled "DCPT Power."
3. Orient power switch in hole so that outside spade connector is toward bottom of DEM and secure with retaining nut provided.
4. Connect P2 to 5-pin connector J1 of cable from power supply transformer.

5. Connect J1 to connector on cable assembly coming from J2 on side of DEM. It may be necessary to loosen captive screws on power supply and lift it out of the way to make the connection.

Note: Route any excess length of power switch cable under power supply PCB assembly.

2.12 Reinstalling DEM Assemblies

Note: Prior to reinstalling DEMs, familiarize yourself with the connector identifications to facilitate installation.

1. Set side 1 DEM assembly in place in the service position. Ensure that no wires are crimped when installing.
2. Reconnect the following on side 1:

   P10 to J10 (9-pin connector) on Computer Board

   P9 to J9 (9-pin connector) on Computer Board

   P2 to J2 (15-pin connector) on Solenoid Drive Board

   P1 to J1 (15-pin connector) on Solenoid Drive Board

   P1 to J1 (2-pin connector) on Computer Board

   P7 to J7 (9-pin connector) on Solenoid Drive Board if present

   P8 to J8 (9-pin connector) on Solenoid Drive Board if present

   P3 to J3 (4-pin connector) on side of DEM (secure cable assembly to side of DEM with existing clamps)

   P1 to J1 (3-pin connector) on side of DEM (secure cable assembly to side of DEM with existing clamps)
3. Reinstall side 2 DEM in service position.
4. Connect P5 (9-position plug of cable 880565-002) to J5 of side 1 DEM by routing it through the square hole on the Cash/Credit Interface PCB side of the DEM and below the fan assembly (see Figure 2-2).
5. Connect 2-pin connector P4 of wire harness assembly 882025-001 to J4 on the dual CAT board.
6. Reconnect P1 (3-pin connector from side 1 EMI filter) to J1 on DEM. Secure to DEM with existing cable clamps.
7. If CPM module with fuel key is used, connect 9-pin P5 to J5 on the Cash/Credit Interface Board (part number 880285-xxx) of side 2 DEM.

Note: If KDC bezel module is used, no connection is required. Secure wire to harness using tie wrap (part number 5008601).

8. Locate P19 (5-pin connector of wire harness assembly 882025-001) and connect to J19 of the dual CAT board.

2.13 Installing the Dual CAT and BCB Cables

The following instructions explain how to install the new dual CAT board and BCB cables.

Important: Installing the CAT and BCB cables is an involved process so take your time. It is a good idea to read through the steps first and study the wiring diagram before you begin.

1. Connect the following cables:
   a. Connect BCB communication cable (PN 883979-003) to J13 on dual CAT board.

Important: Be sure cable does not interfere with printer travel.

   b. If installing dual-sided card processing, connect BCB communication cable (PN 883979-005) to J7 on dual CAT board.
   c. Connect printer control cable (PN 883924-005) to J5.
   d. If installing dual-sided card processing, connect printer control cable (PN 883924-001) to J11 on dual CAT board.
2. Mount the annunciator to the CAT board mounting bracket with double-sided tape on the annunciator's flat surface.
3. Route annunciator cable over top of bezel control cable.
4. Connect the annunciator cable to J2 on the dual CAT board.
5. Locate conduit that enters the dispenser head from the junction box in the hydraulic cabinet.
6. Once you locate the conduit from the junction box, locate where the CAT wires join the electronic head wiring harness.
7. Once you locate the wiring harness, locate the connector labeled "2".
8. Disconnect the connector labeled "2" and reconnect to P3 on new data wiring (PN 886642-001).
9. Locate connectors P4, P1, and P17 on the new cable assembly (PN 886642-001).
10. With these connectors in hand, route over fan assembly toward the dual CAT board.

Important: Move cables away from fan housing and tie-wrap to existing wiring harness above fan assembly.

11. Perform the following steps. Refer to the following illustration.

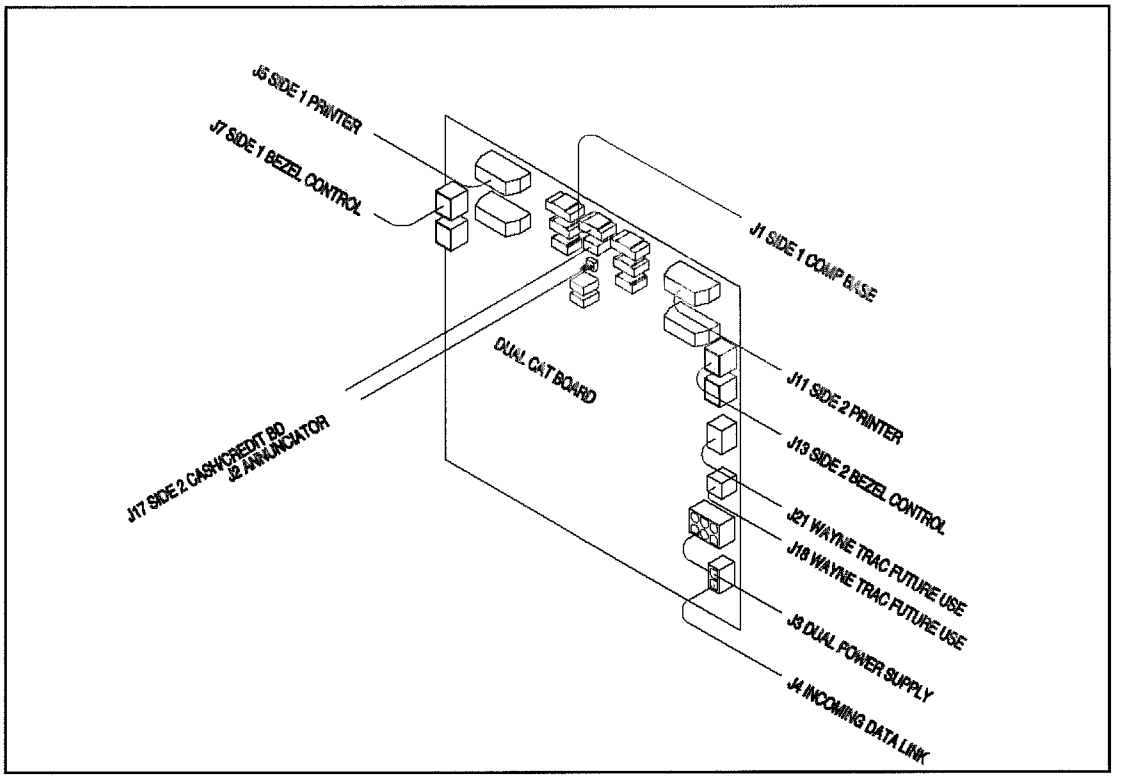

Figure 2-11 Cable Connections for Dual CAT Board

a. P13 and P14 of the new data wiring harness (PN 886642-001) to J13 and J14 on the duplex computer.

b. P17 of the new data wiring harness (PN 886642-001) to J17 on dual CAT board.

c. P1 of new data wiring harness (PN 886642-001) to J1 on dual CAT board.

d. P4 of new data wiring harness (PN 886642-001) to J4 on dual CAT board.

e. Connect P3/S2 to the 6-pin connector J3 on dual CAT board.

12. If bill acceptors are used, connect P5/1 to bill acceptor.
13. Route 883979-002 and 883924-002 (BCB communication and printer control cables) from the dual CAT board over the fan assembly and toward the side 1 printer. The printer cable plugs into the side 1 printer.
14. Connect the bezel cable to side 1 (the cable goes over the printer assembly).
15. Tie-wrap the BCB communication cable to upper frame to keep from interfering with printer travel.
16. Tie-wrap the heater wire (PN 882927-001) to the head frame.
17. Secure the DEM.
18. On side 1 and 2 tie-wrap heater cable (PN 882927-R01) and BCB communication cable to upper portion of frame.

2.14 Installing Display Cables (883979-003 and 883979-005)

1. Locate display cables (2 each).
2. Connect P1 of 883979-003 into dual CAT control board connector J1.

3. Route cable to control board bracket.
4. Secure cable with clamp (P/N 5006904) into captive nut on control board bracket with #6 screw (P/N 6005910).

2.15 Installing Wiring Harness (886642-001) and DEM Cabling

Note: Make all connections, then bundle and route harness as required.

1. Locate wire harness assembly.
2. Feed wiring harness through dispenser head from side 1 to side 2 with 2-pin connectors P13 and P14 positioned on side 1. From side 1, route harness from right side and above assembly on heater to the opposite side.
3. Make the following connections to the side 2 OCPT Control Board on the installer's right, facing side 1:
   - P19 (5-pin) to J19 on OCPT Control Board
   - P4 (2-pin) to J4 on OCPT Control Board
4. Connect P13 to J13 on side 1 DEM Computer Board.
5. Connect P14 to J14 on side 1 DEM Computer Board.
6. If CPM module with fuel key is used, connect 9-pin P5 to J5 on Cash/Credit Interface Board of side 1 DEM.
7. Locate 2-pin connector P3 from opposite side of wiring harness (part number 886642-001) and connect it to the 2-pin connector with brown and white wires coming from the conduit.

2.16 Installing Adapter Cable (Part Number 881351-001)

1. Locate adapter cable assembly.
2. Plug P1 of adapter cable assembly into P1 of heater fan assembly (part number 883798-xxx).
3. Plug P2 of adapter cable assembly into 4-pin connector labeled P1 of the Power EMI filter.

Note: P3 connector is not used.

2.17 Installing Heater Fan Output Cable (Part Number 880580-001)

1. Locate heater fan output cable assembly.
2. Connect P2 from heater fan assembly to 2-pin connector J2 of cable assembly.
3. Connect 4-pin P2 of cable assembly into J2 of DEM on side 2.
4. Secure ground wire to frame using existing ground wire connection on base angle.
5. Secure ground wire and cable assembly to side of DEM with existing cable clamps.

2.18 Installing Power Wiring Harness Assembly (P/N 881984-002)

1. Locate power wiring harness.
2. Connect P2/S2 to J2 on side 2 printer and PCB assembly.
3. Connect P5 to J5 of power supply located on side 2.
4. Connect P3 to J3 of power supply.
5. Connect P3/S2 to J3 on side 2 of the OCPT control board.
6. Connect J4 to 4 pin Wayne Vac® connector coming from side 2 conduit.

Note: If dispenser is not equipped with Wayne Vac®, J4 has no connection.

2.19 Installing Power Wiring Harness Assembly (P/N 881984-001)

1. Locate power wiring harness (P/N 881984-001).
2. Connect PS/S1 to J2 on side 1 printer PCB assembly.
3. Connect P4 to J4 of power supply.
4. Connect P6 to J6 of power supply.
5. Connect P3/S1 to J3 on side 1 of the OCPT control board.
6. Connect J4 to 4 pin Wayne Vac® connector coming from side 1 conduit.

Note: If dispenser is not equipped with Wayne Vac®, J4 has no connection.

2.20 Installing Graphics Display Heater Cable Assembly (P/N 882927-001)

1. Locate display heater cable assemblies (P/N 882927-001) Two display heater cable assemblies are required.
2. Connect spade lug terminals marked "XFMR" to terminal 5 and terminal 6 of the transformer located on heater/fan bracket. See the following figure.

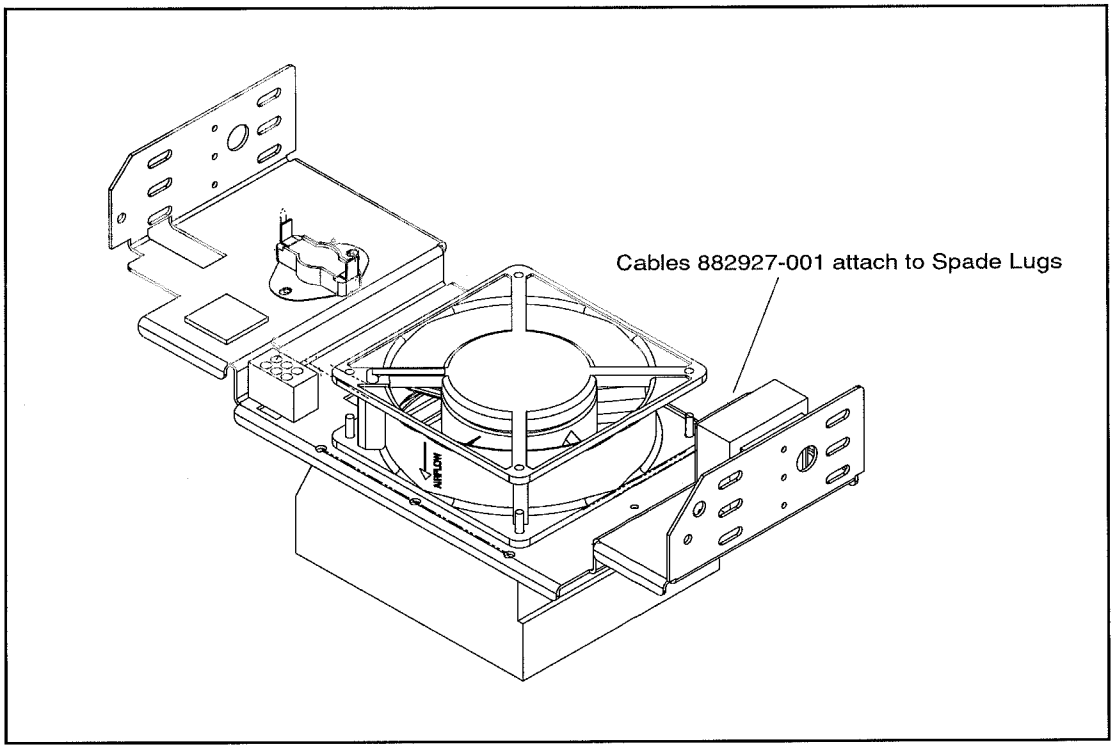

Figure 2-12 Installing Graphics Display Heater Cable Assembly

3. Route cable to side 1 for later connection to bezel module.
4. Connect the spade lug terminals from the second display heater cable assembly to terminals 7 and 8 of transformer heater/fan bracket.

2.21 Securing Cables

Perform the following steps to secure the cables.

1. Attach stick-on cable clamps (part number 000-918066-000) to frame and fan assembly bracket.
2. Use twist lock cable ties (part number 000-918197-000) provided in the kit to secure cable assemblies 886642-xxx, 881984-xxx, and 882927-001 to side 1 and 2 top frame that has existing holes for this purpose. If no holes exist in top frame, use tie wraps and adhesive cable clamps to bundle cable assemblies.
3. Return DEMs to secured position and lock into place with 1/4 turn fasteners.
4. Push the printer assemblies the full length of travel into the pump head against the stops.

Important: Ensure cables are secured and bundled in such a way that no wiring is crimped and that DEMs and printer assemblies can move freely from secured to service position.

5. Refer to Section 3 for bezel assembly and installation.

Section 3

Bezel Installation

3.1 Introduction

The following instructions explain how to assemble and install the bezel assemblies after a dual CAT retrofit has been completed.

3.2 Bezel Assembly and Installation

Refer to Figure 3-1 on the following page when performing steps 2 and 3.

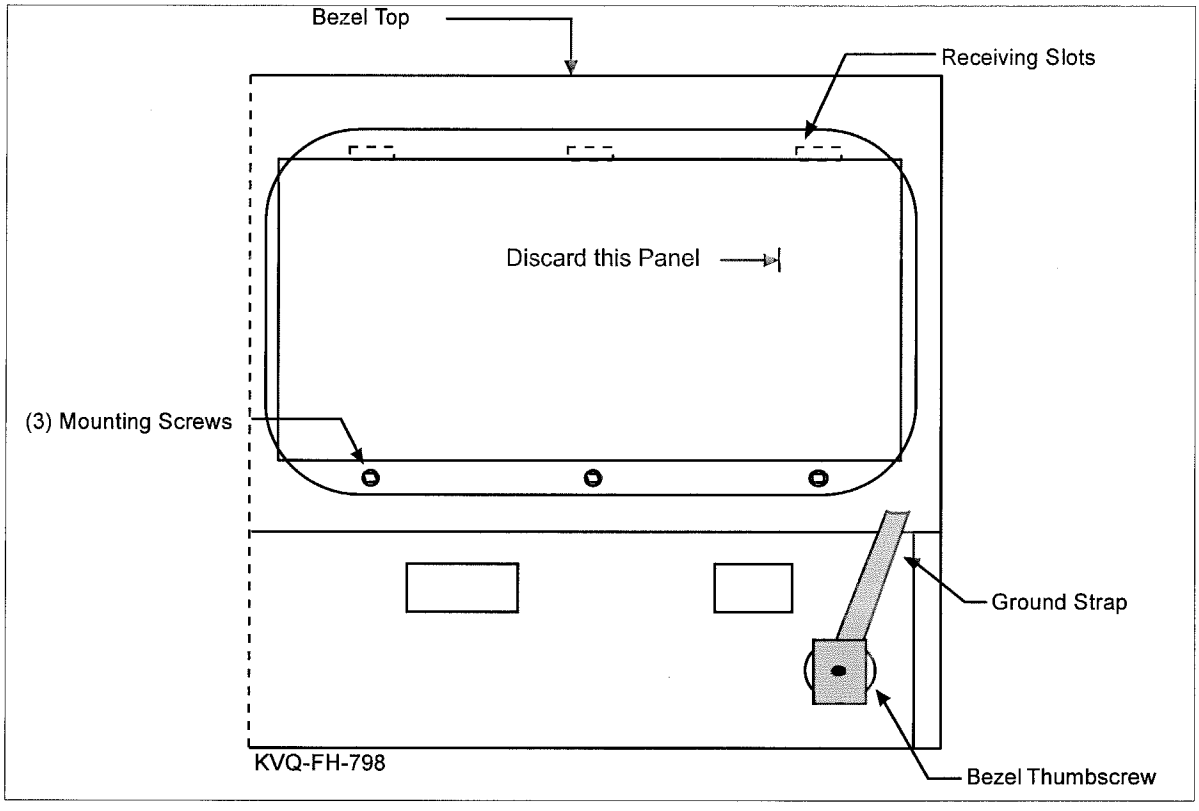

Figure 3-1 Blank Bezel Panel

1. Remove bezels to a safe working area.
2. Place one of the bezels face down, top facing away from installer. Care must be taken to ensure the face of the bezel is not scratched or damaged during installation procedure.
3. Remove the blank panel on right side using a 1/4 nut driver. Save hardware for later use.

3.3 Installing the Card Processing Module (CPM)

The following instructions explain how to install the new CPM in the bezel.

1. Set the CPM into the bezel by inserting it face down and under the receiving slots shown in Figure 3-1 and Figure 3-2.

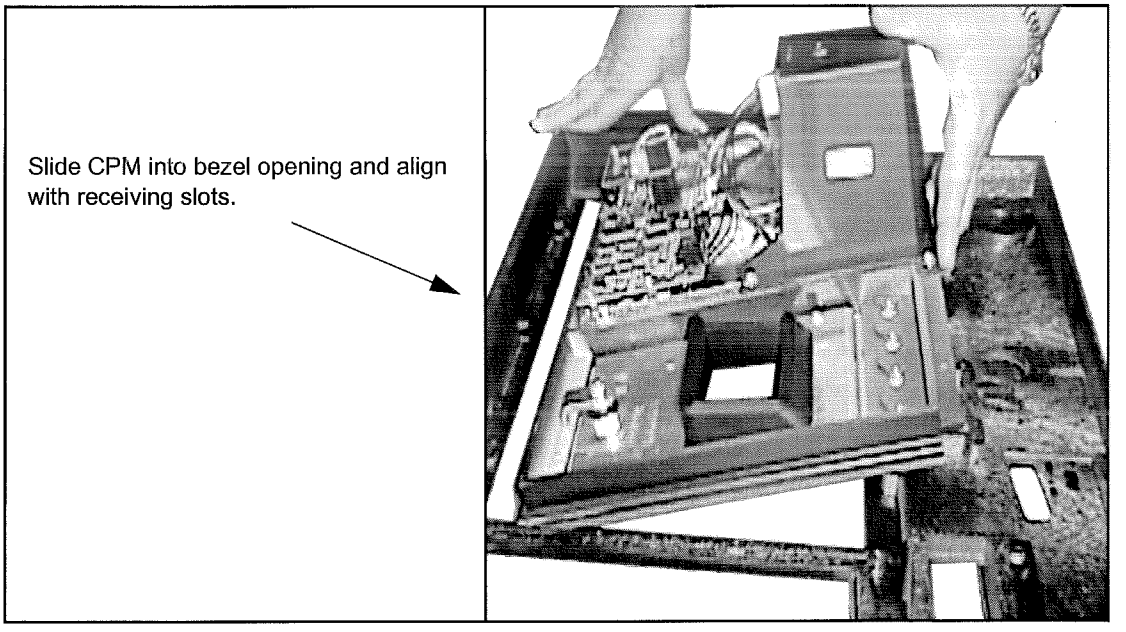

Figure 3-2 Inserting CPM into Bezel Receiving Slots

2. When in place, secure the bezel with the hardware retained in paragraph 3.2. See Figure 3-3.

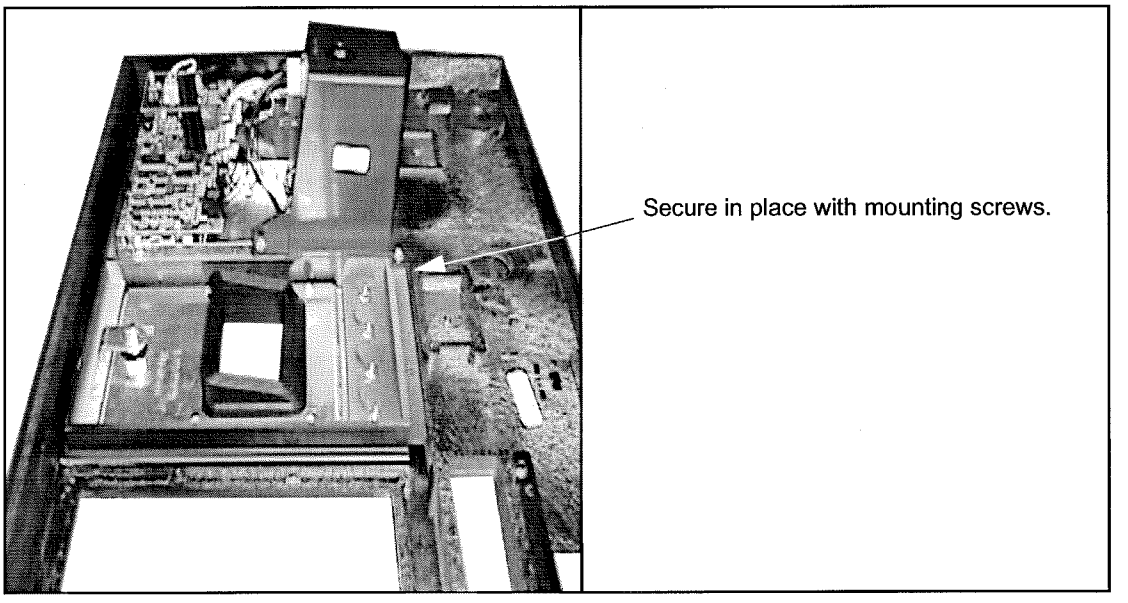

Figure 3-3 CPM Installed in Bezel

3. Repeat the steps 1 and 2 for the second bezel.

3.4 Re-Installing Dispenser Bezels

Once CPM installation is complete, you re-install the bezels into the dispenser head and complete cable connections. Refer to the interconnection wiring diagram in Appendix A for information about connecting cables.

3.4.1 Positioning Bezels and Connecting Wiring Assemblies

The following instructions explain how to position the bezel to allow making connections from the dispenser head to the CPM.

1. Place the bezel with its base resting on the dispenser. Make sure ad panel is unsnapped.
2. While leaning the bezel top outward, ensure the following connections are made. Make these connections if not already done so at the factory.
   a. Printer cable (PN 883979-xxx) from CAT board connects to J5 on the bezel control board.
   b. Keypad communication cable (PN 88475-002) connects to ribbon cable (PN 886210-001) on bezel control board.
   c. Card reader cable (PN 850350-001) connects to J4 on bezel control board.
   d. Two-wire cable (white) from graphical display connects to J8.
   e. Two-wire cable (black) from graphical display connects to J7.
   f. Attach electro-static discharge ground ribbon cable strap connects to bezel lock screw.
3. Insert upper lip of bezel hehind gasket on electronic head frame.
4. Slide bezel bottom forward against head frame. See Figure 3-4 .

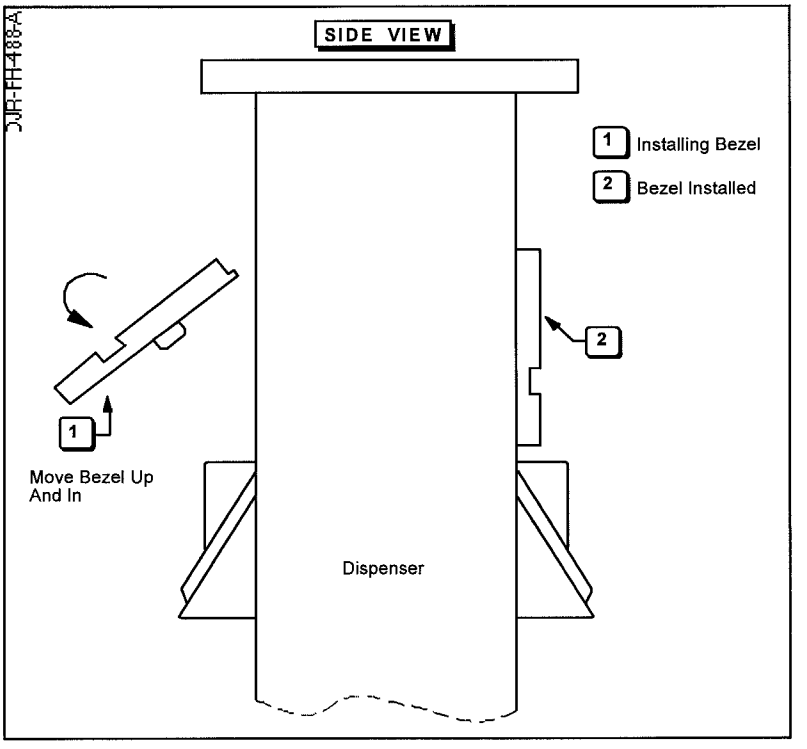

Figure 3-4 Mounting Bezel into Head

5. Secure in place with winged screws at each bezel end.
6. Repeat steps 1 through 5 for installing a bezel on the other side.
7. Reapply power to unit and perform self-test. Refer to the manual entitled "System Tests for Electronic Heads", PN 920353 for retrofit testing information.

3.5 Installing Patent and Serial Number Decal

Refer to Figure 3-5 when performing step 1.

1. Locate Patent and Serial Number Decal (part number 881785-xxx).
2. Place decal on dispenser adjacent to existing ID plate.

Note: Dispenser ID plate is located in the lower left corner of side 1 on the chassis frame.

3. Clean area of dirt and oil prior to applying decal.

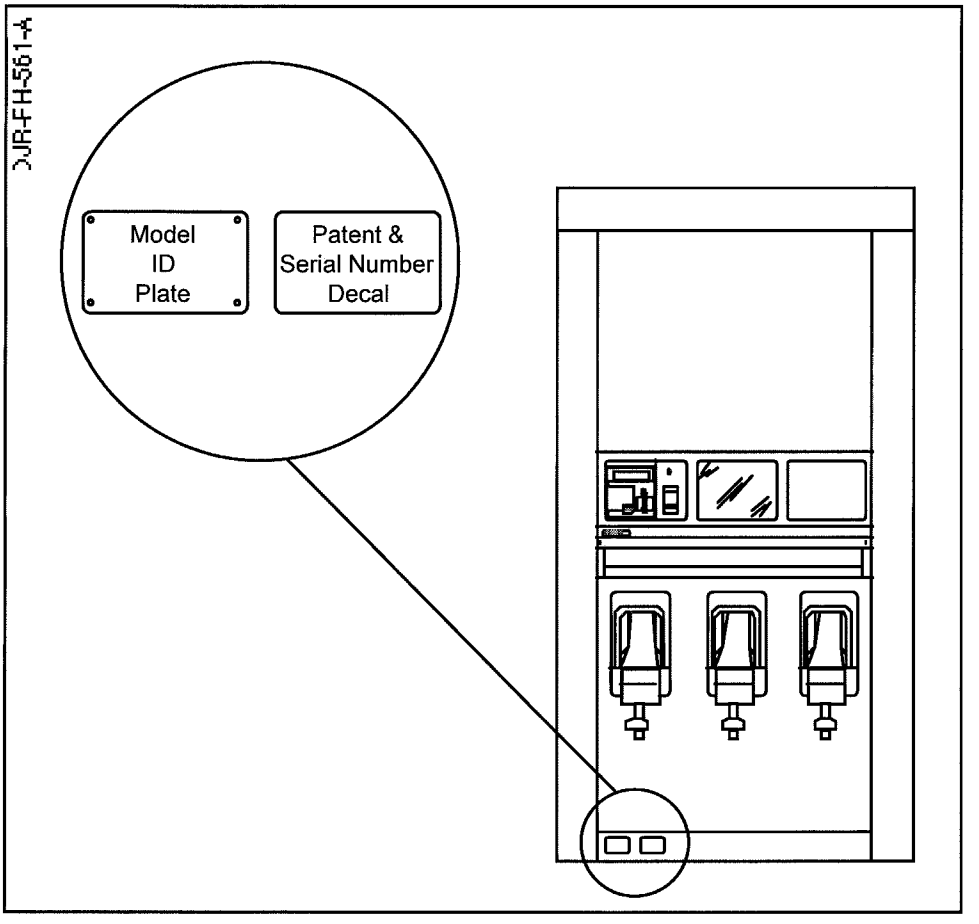

Figure 3-5 Dispenser Decal Location

Note: Refer to Appendix A for information on additional wiring requirements that may apply for a particular site.

Appendix A

Wiring Diagram

A.1 Introduction

The following diagram provides information to help you install the dual CAT retrofit kit.

Appendix B

Replacing BCB Firmware

B.1 Introduction

The following instructions explain how to replace BCB firmware when necessary. This is a simple operation but must be done correctly to ensure fault-free performance.

Note: Be sure to observe established electro-static discharge reduction procedures when replacing he chip. Always wear a static ground strap attached to an adequate earth ground.

B.2 Removing Bezel from Head

1. Disconnect power to dispenser head.
2. Lower bezel into service position.
3. Disconnect all dispenser head to bezel wiring.
4. Move the bezel to an adequate work area away from dust and moisture.

B.3 Removing BCB from Bezel

Perform the following steps to remove the BCB from the bezel.

1. Using a pair of needle-nose pliers, press white nylon stand-off retaining tabs together while gently lifting the clear plastic voltage barrier upward.
2. Repeat until the voltage barrier is free. See Figure B-1.

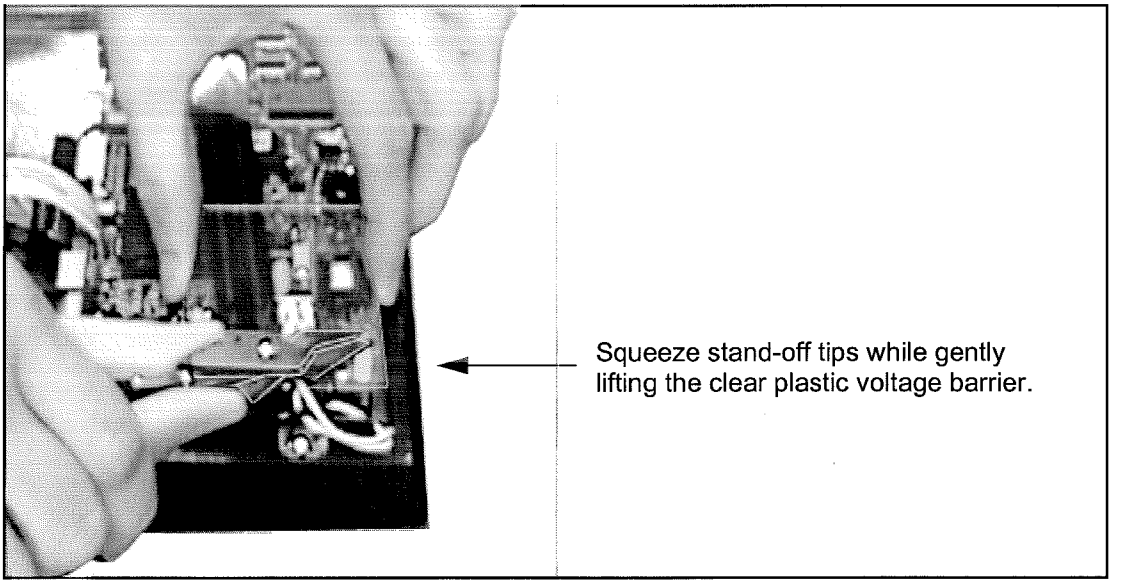

Figure B-1 Removing Voltage Barrier

3. Disconnect remaining connectors from J4, J7, and J8.
4. Disconnect connector on 886210-001 from connector on 884475-001.
5. With Phillips head screwdriver, remove all four Phillips head BCB mounting screws. See Figure B-2.

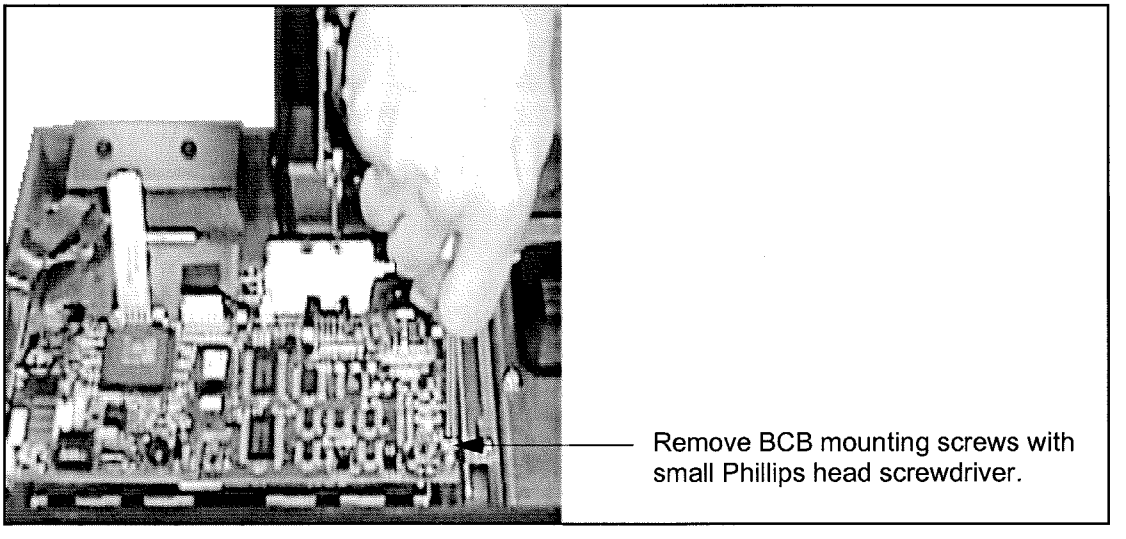

Figure B-2 Removing BCB Mounting Screws

6. With both hands, gently lift the BCB straight up so it disconnects smoothly from the connector on the graphic display board. See Figure B-3.

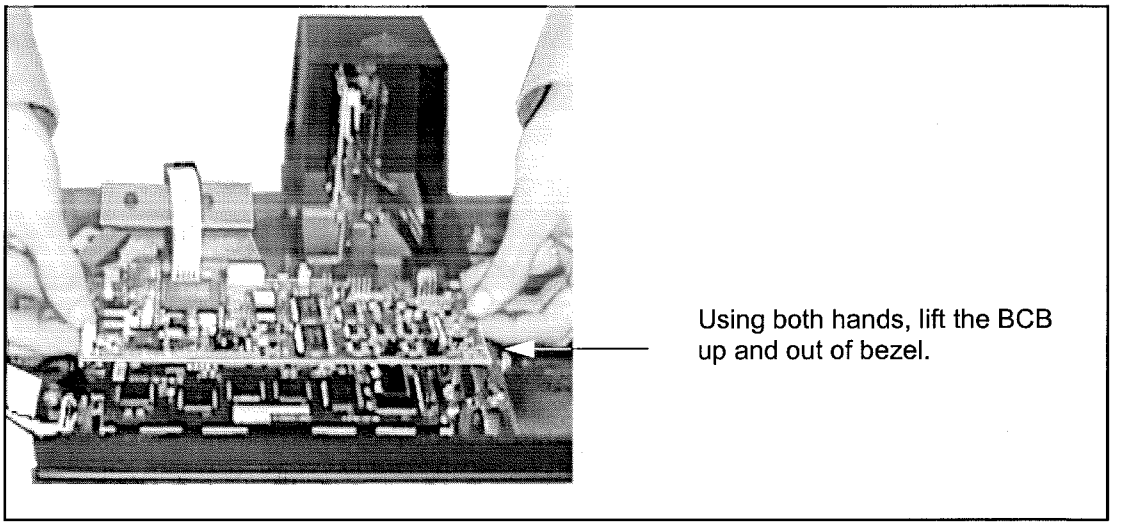

Figure B-3 Lifting BCB Out of Bezel

7. Place the BCB on a static-free work surface.

B.4 Removing the Chip from the BCB

The chip containing the BCB firmware is in socket U5 on the BCB. Perform the following to remove the chip.

1. Remove the chip with the appropriate chip puller such as that shown in the following illustrations.

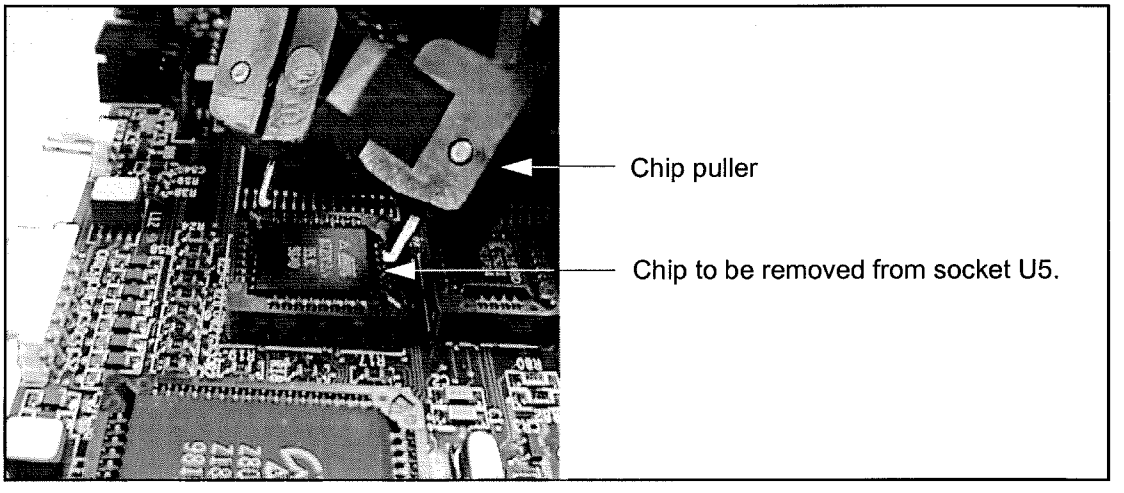

Figure B-4 Chip Puller Positioned Above Chip

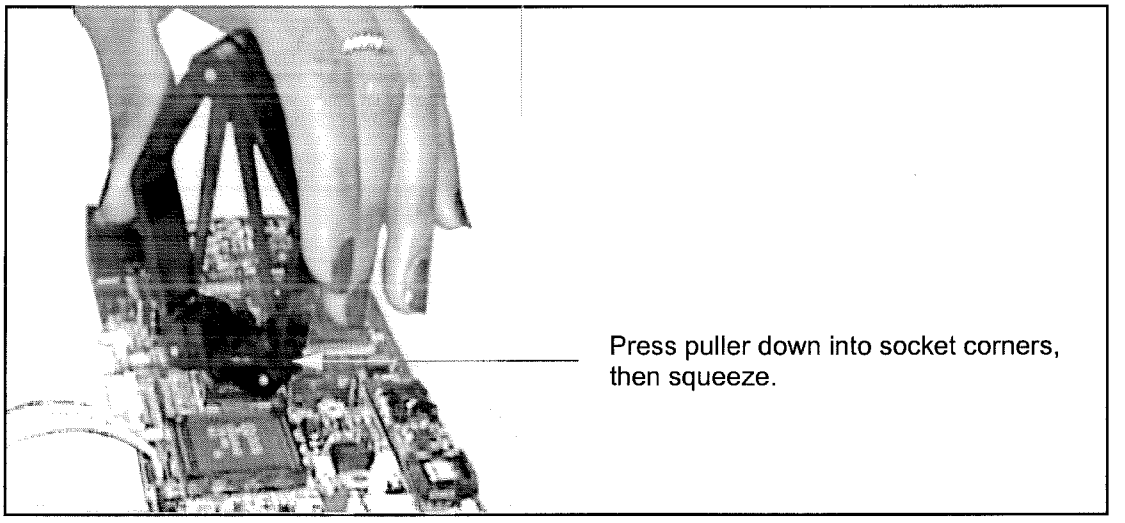

Figure B-5 Chip Puller Positioned Over Chip and Socket

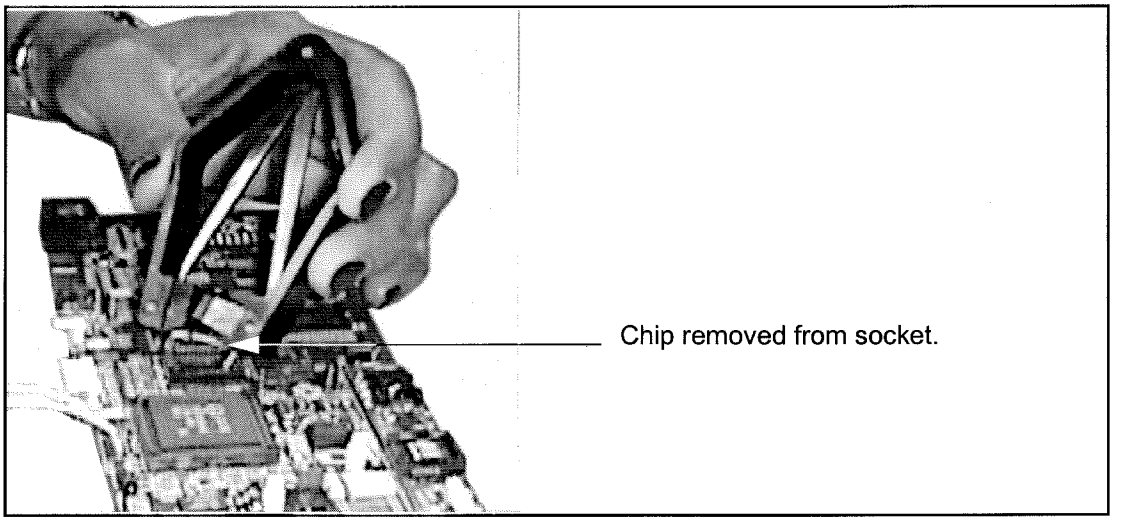

Figure B-6 Chip Removed from Socket

B.5 Replacing Chip on BCB

1. Place the new chip in socket U5 on the BCB.

Important: Make sure the square corner of the chip is oriented with the square corner of socket U5.

2. Press down on the chip firmly and evenly with your thumb until it clicks into place.

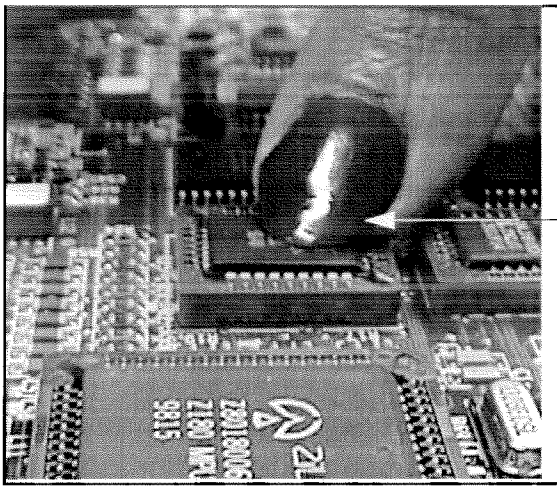

Figure B-7 Pressing Chip into Place on BCB

B.6 Re-installing BCB

1. Lay BCB on the display board using mounting holes as a guide.
2. Orient the BCB with connector J6 on BCB back over pins on graphic display board.
3. Press down gently on J6 to seat the board. See Figure B-8 for J6 location.

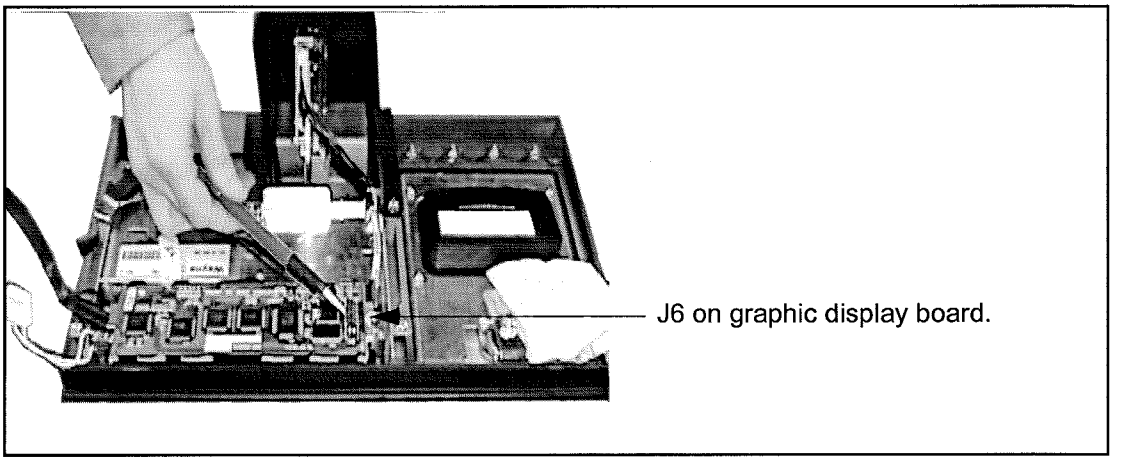

Figure B-8 J6 Location

4. Replace mounting screws.
5. Reconnect all BCB cables disconnected earlier.
6. Resecure high voltage barrier.

B.7 Re-installing Bezel

1. Place bezel in service position on dispenser head.
2. Secure all cables disconnected earlier that run from dispenser head to BCB.

3. Close and secure bezel.
4. Restore power to dispenser head.

Your system is now ready to test and operate.

INSTALLATION MANUAL

DUAL CAT RETROFIT KIT

Produced by Jim Hard.

Artwork by Jim Hard.

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