

iX™ Pay Secure Payment

iX Pay (U.S.) Retrofit  
Kit for Ovation Dispensers

Released Rev A

INSTALLATION

ONLY SPM CERTIFIED TECHNICIANS  
SHOULD INSTALL THIS KIT



**DANGER**

## **READ THIS MANUAL BEFORE YOU BEGIN**

Dispensers have both electricity and a hazardous, flammable and potentially explosive liquid. Failure to follow the below precautions and the Warning and Caution instructions in this manual may result in serious injury. Follow all rules, codes and laws that apply to your area and installation.

## **SAFETY PRECAUTIONS - INSTALLATION AND MAINTENANCE**

Always make sure ALL power to the dispenser is turned OFF before you open the dispenser cabinet for maintenance. Physically lock, restrict access to, or tag the circuit breakers you turn off when servicing the dispenser. Be sure to trip (close) the emergency valve(s) under the dispenser BEFORE beginning maintenance.

Make sure that you know how to turn OFF power to the dispenser and submersible pumps in an emergency. Have all leaks or defects repaired immediately.

## **EQUIPMENT PRECAUTIONS**

Be sure to bleed all air from product lines of remote dispensers and prime suction pumps before dispensing product, otherwise, damage to the equipment may occur. Always use the approved method for lifting the dispenser. Never lift by the nozzle boot, sheet metal, valance, etc., otherwise equipment damage or personal injury may occur.

## **HOW TO CONTACT WAYNE**

Technical questions related to the installation of this product should be referred to Wayne Technical Support (1-800-926-3737).

## **INDICATORS AND NOTATIONS**



**DANGER**

Danger indicates a hazard or unsafe practice which, if not avoided, will result in severe injury or possibly death.



**WARNING**

Warning indicates a hazard or unsafe practice which, if not avoided, may result in severe injury or possibly death.



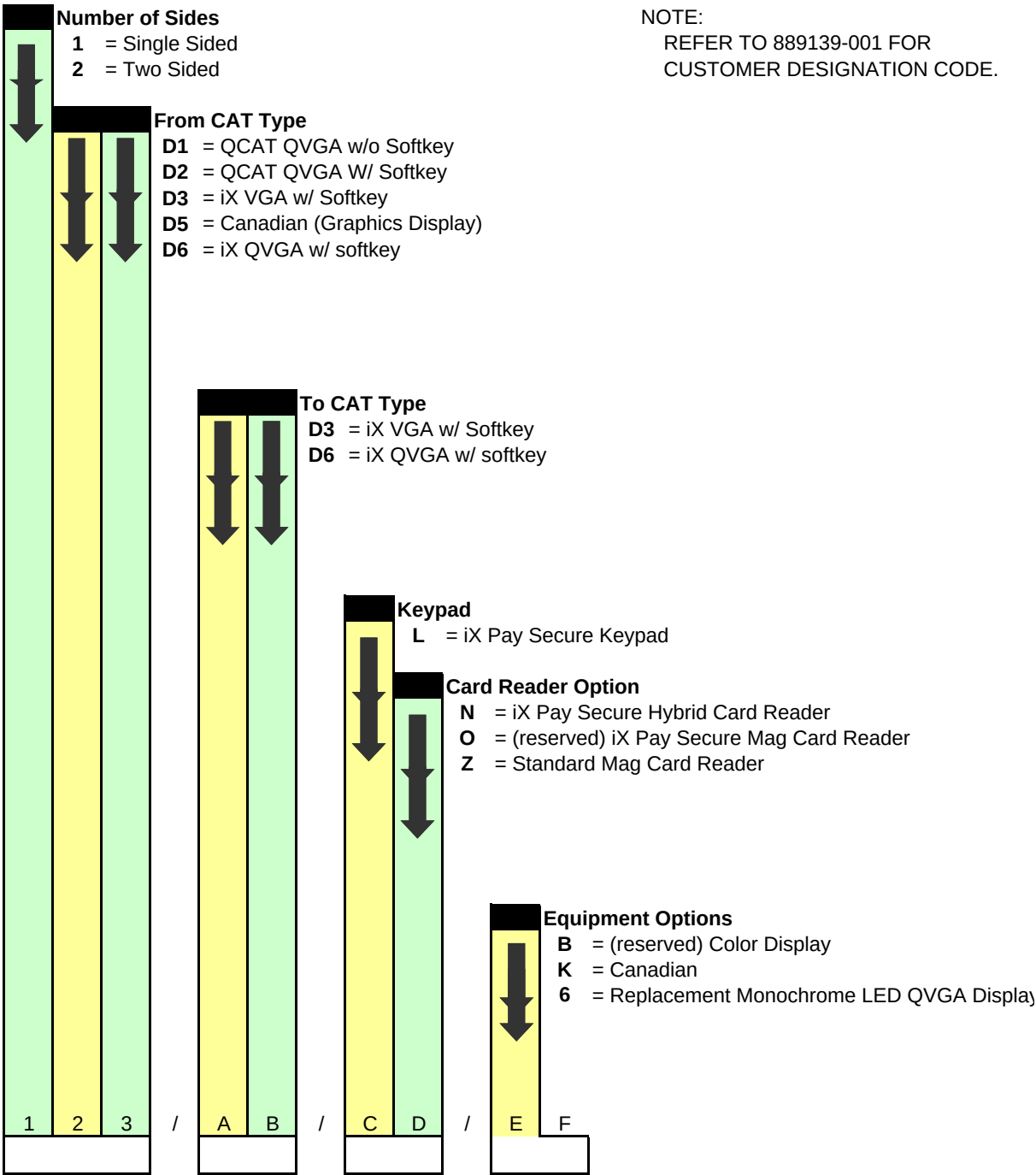
**CAUTION**

Caution indicates a hazard or unsafe practice which, if not avoided, may result in minor injury.

**NOTE:**

Important information to consider, otherwise, improper installation and/or damage to components may occur.

Ovation iX PAY Retrofit Kit  
MODEL DESIGNATOR CHART



# 1 INTRODUCTION

This manual provides instructions for installing the iX™ Pay Secure Payment retrofit kits on Ovation dispensers. These instructions apply to standard Ovations (QCAT without softkeys), QCAT with softkeys, and Ovation iX™. The parts in each kit will be configured electronically at the time of order based on the type dispenser.

The kits are identified by model number. As shown in the Model Designation Chart on the previous page, model numbers take the format 123 / AB / CD / EF. The first three positions in the model number are derived from the dispenser to be retrofitted and define the major components in the kit as shown in Fig A.

Position 1 - number of sides of dispenser to be retrofitted:

1 = Single sided    2 = Dual sided

Position 2 and 3 - Type of dispenser to be retrofitted:

D1 = QCAT QVGA without softkeys

D2 = QCAT QVGA with softkeys

D3 = iX VGA with softkey

D6 = iX QVGA with softkey

## 1.1 Safety Precautions

Block off the work area with safety cones before beginning the installation this kit.

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

NFPA 30A states that:

“When maintenance to Class 1 dispensing devices becomes necessary and such maintenance may allow the accidental release or ignition of liquid, the following precautions shall be taken before such maintenance is begun:

- Only persons knowledgeable in performing the required maintenance shall perform the work.
- All electrical power to the dispensing device and pump serving the dispenser shall be shut off at the main electrical disconnect panel.
- The emergency shut-off valve at the dispenser, if installed, shall be closed.
- All vehicle traffic and unauthorized persons shall be prevented from coming within 20 ft.(6 m) of the dispensing device. ”



### WARNING

**Electric shock hazard! More than one disconnect switch may be required to de-energize the dispenser for maintenance and servicing. Use a voltmeter to make sure ALL circuits in the dispenser are de-energized. Failure to do so may result in serious injury.**

Lockout/Tagout requirements of the U. S. Dept. of Labor, Occupational Safety and Health Administration (OSHA) may also apply. Refer to Title 29, Part 1910 of the Code of Federal Regulations (29CFR1910), *Control of Hazardous Energy Source (Lockout/Tagout)*.

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1. Reprinted with permission from NFPA 30A-90, *Automotive and Marine Service Station Codes*, Copyright ©1990, National Fire Protection Association, Quincy MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association on the referenced subject, which is represented only by the standard in its entirety.

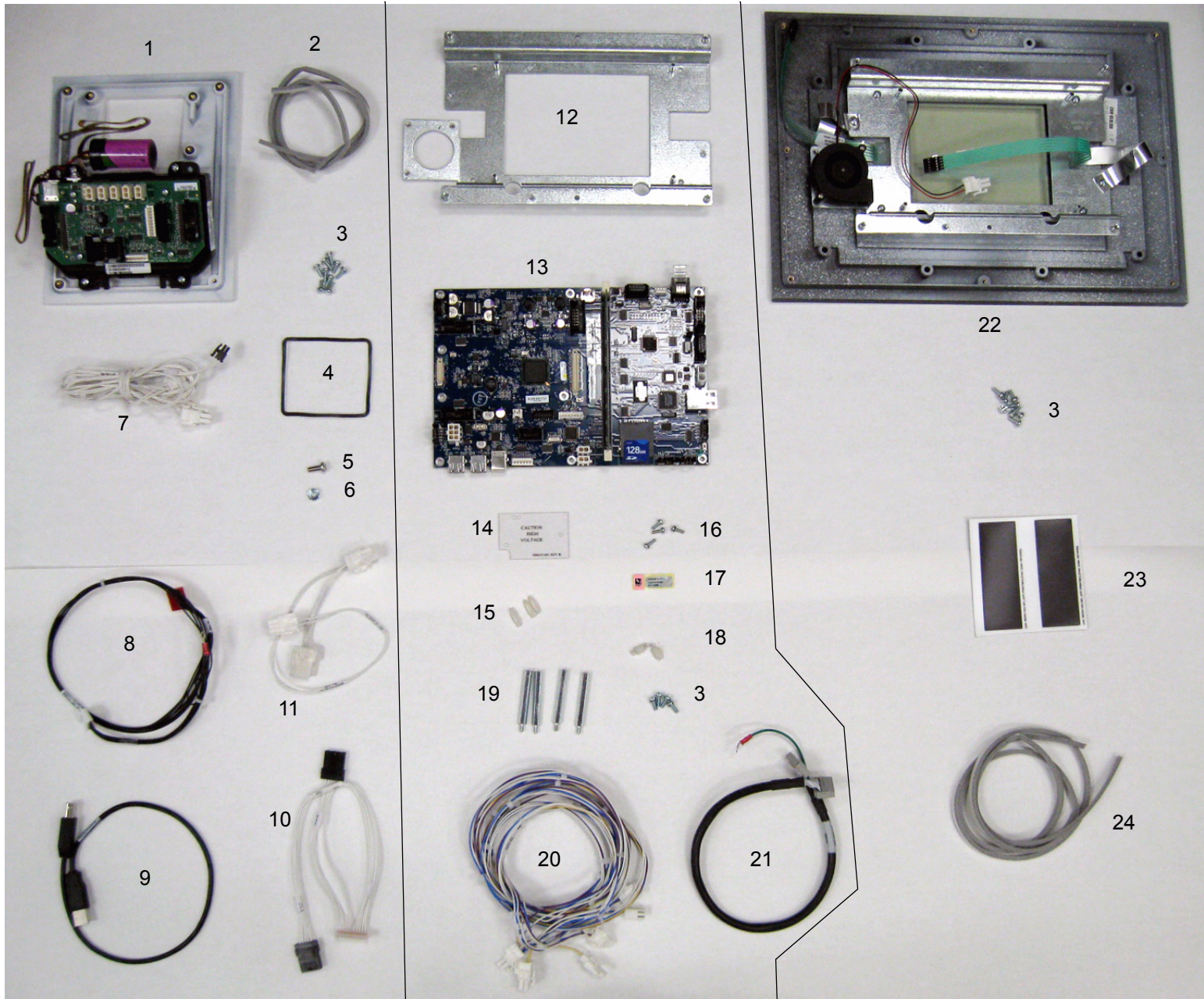
## 1.2 Parts Required

The parts and quantities that will be included in each kit are listed in Table 1. Item numbers in the table are referenced to Figure A which shows the parts required for each type of dispenser to be retrofitted. These dispensers are: Standard Ovation (QCAT without softkeys) using kit model xD1. (QCAT with softkeys) using kit model xD2, and (Ovation iX™) using kit model xD3 or xD6.

**Table 1 Parts in the Kits**

| Part Number     | Description                      | Item No.     | Qty for Dual Sided | Qty for Single Sided | Included in Kit Models   |
|-----------------|----------------------------------|--------------|--------------------|----------------------|--------------------------|
| WU001811-0001 * | PANEL ASSY, SPM KYPD             | 1            | 2                  | 1                    | xD1<br>xD2<br>xD3<br>xD6 |
| 888341-005      | GASKET, PAYMENT OPTION PAN       | 2            | 2                  | 1                    |                          |
| 6005901         | SCREW 6-32X3/8                   | 3            | 24                 | 12                   |                          |
| 887435-001      | GASKET, CARD READER              | 4            | 2                  | 1                    |                          |
| 6001105         | SCREW, #10                       | 5            | 2                  | 1                    |                          |
| 6019401         | NUT, #10                         | 6            | 2                  | 1                    |                          |
| 892120-001      | CABLE ASSY, POWER, SPM-CAT-SALES | 7            | 2                  | 1                    |                          |
| 850350-002      | CABLE, CARD READER               | 8            | 2                  | 1                    |                          |
| 892139-001      | CABLE, USB, A MALE TO B MALE     | 9            | 2                  | 1                    |                          |
| 892141-001      | CABLE, SPM-SOFTKEYS              | 10           | 2                  | 1                    |                          |
| 890593-001      | CABLE, POWER JUMPER QCAT-IX      | 11           | 2                  | 1                    |                          |
| 892115-001      | BRACKET, DISPLAY PANEL           | 12           | 2                  | 1                    | xD1<br>xD2               |
| WU001031        | IX BOARD                         | 13           | 2                  | 1                    |                          |
| 888635-001      | SAFETY SHIELD                    | 14           | 2                  | 1                    |                          |
| 882623-001      | PLASTIC STANDOFF, SAFETY SHIELD  | 15           | 6                  | 3                    |                          |
| 6005907         | SCREW 4-40X3/8                   | 16           | 8                  | 4                    |                          |
| 891564-001      | LABEL, LICENSE, WINDOWS CE 5.0   | 17           | 2                  | 1                    |                          |
| 882505-002      | PLASTIC STANDOFF,                | 18           | 4                  | 2                    |                          |
| 918173          | METAL STANDOFF, QCAT BD          | 19           | 8                  | 4                    |                          |
| 890766-001      | WIRE HARNESS, iX/iGEM CAN/ANNUN  | 20           | 1                  | 1                    |                          |
| 888798-002      | CABLE, DISPLAY-IX                | 21           | 2                  | 1                    |                          |
| WU001810-0001 * | PANEL ASSY, iX QVGA W/SOFTKEY    | 22           | 2                  | 1                    | xD1                      |
| 882941-         | SOFTKEY COVERS                   | 23           | 4                  | 2                    |                          |
| 888341-001      | GASKET, DISPLAY PANEL            | 24           | 2                  | 1                    |                          |
| 000-940015-     | INSTALLATION MANUAL              | 25 not shown | 1                  | 1                    | All                      |

\*Assembly not sold separately



KIT MODEL xD3, xD6 REQUIRED FOR IX

← KIT MODEL xD2 REQUIRED FOR QCAT WITH SOFTKEYS →

← KIT MODEL xD1 REQUIRED FOR QCAT WITHOUT SOFTKEYS →

FIGURE A PARTS

## 2 INSTALLATION

Before beginning the installation, adhere to the safety precautions listed in Section 1.1.

### 2.1 Tools Required

- Phillips head screwdriver
- Flathead screwdriver

### 2.2 Instructions for Models xD3 and xD6 - to Upgrade iX Dispensers

SEE FIGURE B1 AND B2

1. Power down the dispenser at the circuit breaker.
2. Unlock and open the bezel/door on both sides of dispenser.
3. Disconnect cable from card reader and disconnect and discard cable from keypad to iX.
4. Remove the screws from the card read/keypad panel and remove the panel. Save panel for reusing the card reader.
5. Remove the gasket and any gasket residue around the bezel window.
6. Install new (item 2) Gasket 888341-005 around the window.
7. Remove card reader from old panel. Discard card reader gasket and panel.
8. Install new (item 4) Gasket 887435-001 and install card reader onto the new (item 1) SPM panel using 4 (item 3) Screws 6005901.
9. Install the SPM panel onto the dispenser bezel using 4 (item 3) Screws.
10. Discard the following cables if applicable:
  - A) Card reader cable if cable at does not have a separate ground wire with lug attached.
  - B) If present, 24V power cable between the sales/vol display and 24VDC Distribution board.
  - C) If present, long gold-colored ground strap from chassis to iX board or keypad.
11. Connect the following cables, referring to Figures B1 and B2:
  - A) Existing DL wires (brown and violet twisted pair) to the iX board J19 (Port #3).
  - B) New (item 9) USB Cable 892139-001 to the ix board USB 1 connector and to the SPM USB connector.
  - C) New (item 7) DC Power Cable 892120-001:
    - P7/P6 (2-pin) to a spare connector on DC Distribution board,
    - J3 (2-pin) connector to the (2-pin) connector on the Sales/Vol display board,
    - P19 (6-pin) to the iX board J16 Power connector,
    - J4 (2-pin) to the SPM board J1 connector.

- D) Card Reader Cable (item 8) 850350-002 (with ground) to the card reader and to the SPM board J10.
- E) Connect the ground strap (gold-colored) that is on the SPM over to chassis and secure with #10 Screw (item 5) 6001105 and # Nut (item 6) 6019401. Be sure the ground strap does not get pinched in the door when closing.
- F) Connect the other ground strap that is on the SPM and connect the card reader ground wire over to the IX board upper left corner screw.
- G) Softkey cable (item 10) 892141-001 to SPM board J6 connector and to left and right softkeys.
- H) If QVGA Display has LED Backlight, connect backlight cable (red&white) to SPM board J2, and, if applicable, connect the QVGA display fan cable (red&black) to SPM board J3.

If QVGA Display CCFL Backlight, the two white backlight wires remain connected to the QCAT board.

- I) Printer cable to SPM board Printer connector.

- 12. Apply the (Item 17) CE Label to the inside center column.
- 13. Repeat the above steps for opposite side of dispenser.
- 14. Connect the wires that were routed over from side 1 to the side 2 iX board as follows:  
ANNUN P1 to J18 Annunciator,  
CAN P2 to J4 CAN
- 15. Close and lock service doors.
- 16. Power up dispenser.
- 17. Refer to Startup and Service manual 940014 for upgrading the iX software and starting up the SPM.

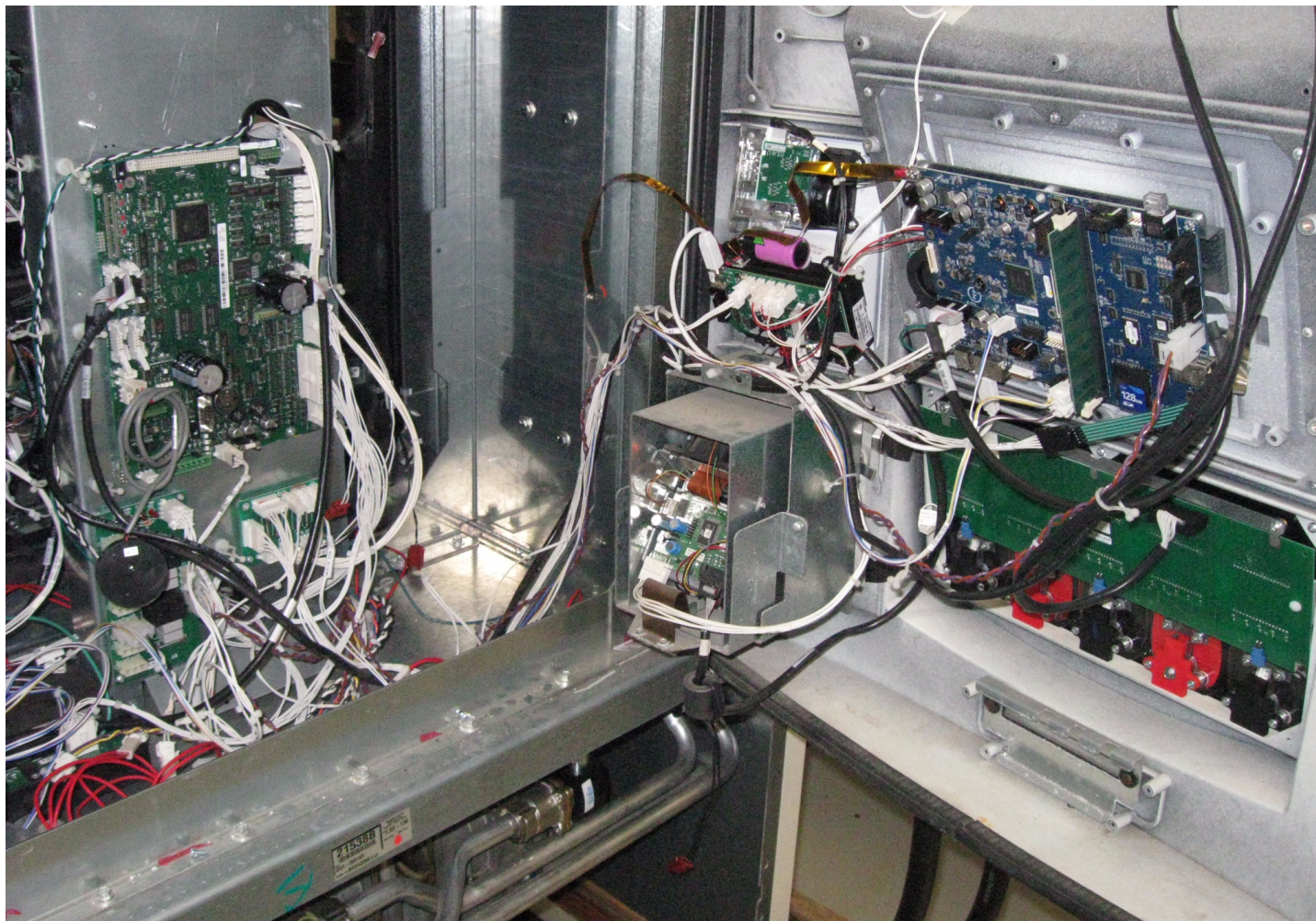


FIGURE B1

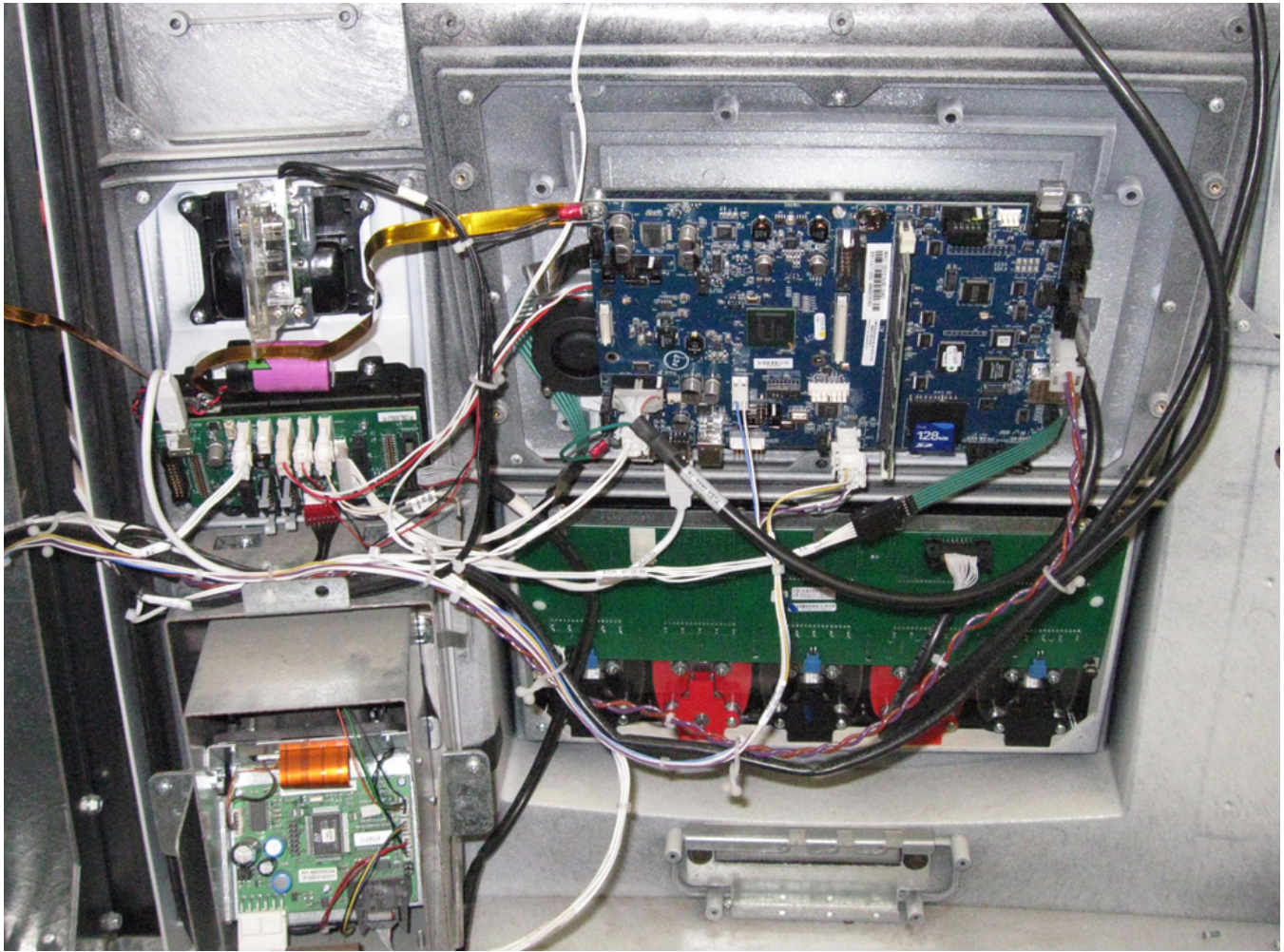


FIGURE B2

## 2.3 Instructions for Model xD2 - to Upgrade QCAT with Softkeys Dispensers

SEE FIGURE C

1. Power down the dispenser at the circuit breaker.
2. Unlock and open the bezel/door on both sides of dispenser.
3. Disconnect cable from card reader and disconnect and discard cable from keypad to QCAT.
4. Remove the (4) screws from the card read/keypad panel and remove the panel. Save panel for reusing the card reader.
5. Remove the gasket and any gasket residue around the bezel window.
6. Install new (item 2) Gasket 888341-005 around the window.
7. Remove card reader from old panel. Discard card reader gasket and panel.
8. Install new (item 4) Gasket 887435-001 and install card reader onto the new (item 1) SPM panel using 4 (item 3) Screws 6005901.
9. Install the SPM panel onto the dispenser bezel using 4 (item 3) Screws.
10. A. Determine if the existing bracket has threaded holes in the 4 corners for screws securing the circuit board.  
  
B. Determine if the existing QVGA display has CCFL backlight or LED backlight.  
  
Note: A CCFL backlight has two white wires that plug into the lower left part of the QCAT board. An LED backlight has one white and one red wire that connects to 24 volt power harness from DC Dist Bd.
11. Perform step A or step B below as applicable:
  - A) For brackets that do not have threaded holes in the 4 corners, install new (item 12) Bracket 892115-001 as follows:
    - 1) Disconnect all cables from the QCAT board and remove the board.
    - 2) Remove display from bracket. Save the display and screws, discard display cable.
    - 3) Remove the bracket from the display panel. Save screws, discard bracket.
    - 4) Install the display onto the new (item 12) Bracket reusing the screws or use (item 16 ) #4 Screws 6005907.
    - 5) Install bracket onto the panel reusing the screws.
    - 6) Connect (Item 21) Display Cable 888798-002 to the display.
    - 7) If display has an LED backlight, discard QCAT board; or if display has a CCFL backlight, install QCAT board onto the bracket using 4 (item 19) Standoffs 918173.

- B) For brackets that do have threaded holes in the 4 corners,
  - 1) Disconnect all cables from the QCAT board.
  - 2) If display has an LED backlight, remove and discard QCAT board, or if display has a CCFL backlight, remove the 4 screws from the QCAT board and install QCAT board onto the bracket using 4 (item 19) Standoffs 918173. See Figure 7. Reconnect backlight to the QCAT board and install (item 11) Power jumper cable.
- 12. Using 4 (item 3) Screws 6005901, install the iX board onto the bracket or onto the QCAT board standoffs. See Figure 7
- 13. Discard the following cables:
  - A) Card reader cable if cable at does not have a separate ground wire with lug attached.
  - B) 24V power cable between the sales/vol display and 24VDC Distribution board (or jumper harness if applicable).
  - C) Gold-colored ground strap from chassis to iX board or keypad.
- 14. Connect the following cables, referring to Figures B1 and B2:
  - A) Existing DL wires (brown and violet twisted pair) to the iX board J19 (Port #3).
  - B) Connect the (Item 21) Display Cable to iX board bottom display connector and secure ground wire under the corner screw on the board.
  - C) New (item 9) USB Cable 892139-001 to the ix board USB 1 connector and to the SPM USB connector.
  - D) New (item 7) DC Power Cable 892120-001:
    - P7/P6 (2-pin) to a spare connector on DC Distribution board,
    - J3 (2-pin) connector to the (2-pin) connector on the Sales/Vol display board,
    - P19 (6-pin) to the iX board J16 Power connector, or to QCAT Power Jumper cable
    - J4 (2-pin) to the SPM board J1 connector.
  - E) Card Reader Cable (item 8) 850350-002, as required, to the card reader and to the SPM board J10.
  - F) Softkey cable (item 10) 892141-001 to SPM board J6 connector and to left and right softkeys.
  - G) Printer cable to SPM board Printer connector.
  - H) Connect the ground strap (gold-colored) that is on the SPM over to Chassis and secure with (item 5) #10 Screw 6001105 and (item 6) Nut 6019401. Be sure the ground strap does not get pinched in the door when closing.

I) Connect the other ground strap that is on the SPM and connect the card reader ground wire over to the IX board upper left corner screw.

J) Connect the (item 8) Wire Harness as follows:

The two connector end of cable (2-pin) & (4-pin) connects to iGEM board as follows:  
P6 to J22 Buzzer A and P7 to J13 CAN.

The three connector end of cable connects to side 1 iX board as follows:  
ANNUN P4 to J18 Annunciator, P3 to J4 CAN, and P5 to J31 CAN.

The other end with the two 2-pin connectors should be routed through the grommet in the center column for the iX board on side 2 when installed below.

15. Apply the (Item 17) CE Label to the inside center column.

16. Repeat the above steps for opposite side of dispenser.

17. Connect the wires that were routed over from side 1 to the side 2 iX board as follows:  
ANNUN P1 to J18 Annunciator,  
CAN P2 to J4 CAN

18. Close and lock service doors.

19. Power up dispenser.

20. Refer to Startup and Service manual 940014 for starting up the SPM.

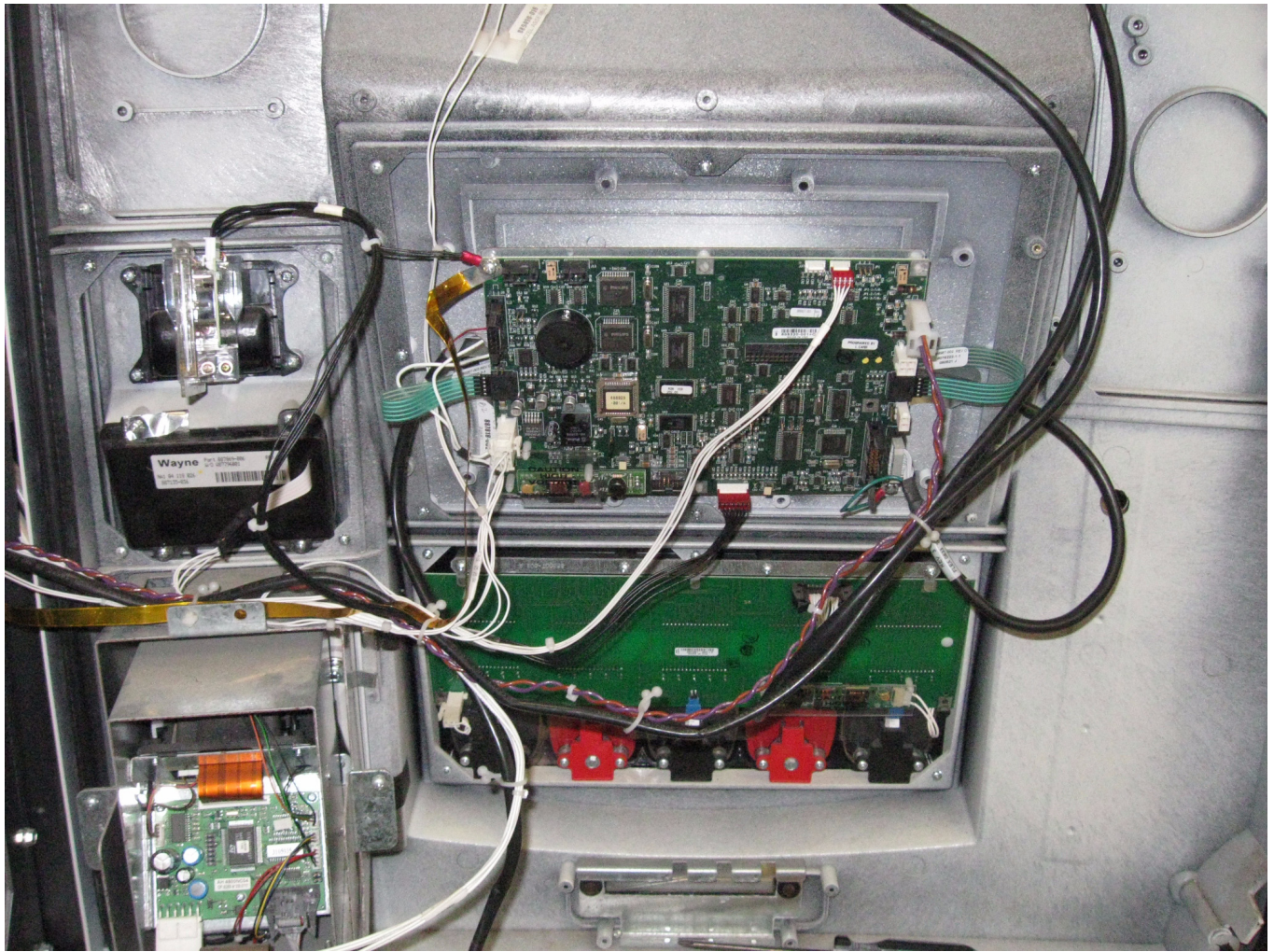


FIGURE C

## **2.4 Instructions for Model xD1 - to Upgrade Standard Ovation QCAT (Without Softkey)**

SEE FIGURES 1 THRU 7.

1. Power down the dispenser at the circuit breaker.
2. Unlock and open the bezel/door on both sides of dispenser.
3. Disconnect cable from card reader, Figure 1.
4. Remove the (4) screws from the card read/keypad panel and remove the panel. Save panel for reusing the card reader.
5. Remove the gasket and any gasket residue around the bezel window.
6. Install new (item 2) Gasket 888341-005 around the window.
7. Remove card reader from old panel. Discard card reader gasket and panel.
8. Install new (item 4) Gasket and install card reader onto the new (item 1) SPM panel using 4 (item 3) Screws 6005901.
9. Install the SPM panel onto the dispenser bezel using 4 (item 3) Screws.
10. Disconnect all cables from the QCAT board.
11. Remove the screws from the QCAT board and lift board from the plastic standoffs on the bracket.
12. Disconnect and remove the chassis ground strap from the main chassis. Save screws, discard ground strap.
13. To gain access to the top middle screw on the display panel, remove the bracket screws securing the bracket to the display panel and remove bracket (with QVGA display). Figure 2. Save for reusing the QVGA display. Discard cable.  
Caution: Hold display glass to keep it from falling inward when removing the bracket.
14. Remove (8) Phillips screws and remove display panel, Figures 3 and 4. Save screws.
15. Remove the gasket around the display panel window and remove all gasket residue.
16. Install new (item 24) Gasket 888341-001 around the window.

17. Remove the QVGA display from the old bracket/panel and install on the new (item 22) Display Panel bracket reusing the screws or use (item 16) 4-40 Screws 6005907. See Figure 5.
18. Install new (item 22) Display Panel assembly reusing (8) Phillips screws or use (item 3) screws.
19. Connect (Item 21) Display Cable 888798-002 to the display.
20. Determine if the existing QVGA display has CCFL backlight or LED backlight.

A CCFL backlight has two white wires that plug into the lower left part of the QCAT board. An LED backlight has one white and one red wire that connects to 24 volt power harness from DC Dist Bd.
21. If display has an LED backlight, discard QCAT board; or if display has a CCFL backlight, install QCAT board onto the new bracket/panel using the (item 19) Standoffs 918173. Reconnect backlight to the QCAT board and install (item 11) Power jumper cable.
22. Using 4 (item 3) Screws 6005901, install the iX board onto the bracket, shown completed in Figure 6, (or onto the QCAT board standoffs) and connect the power jumper cable, (shown completed in Figure 7).
23. Discard the following cables if applicable:
  - A) Card reader cable if cable at does not have a separate ground wire with lug attached.
  - B) 24V power cable between the sales/vol display and 24VDC Distribution board.
24. Connect the following cables, referring to Figures 5 and 6:
  - A) Existing DL wires (brown and violet twisted pair) to the iX board J19 (Port #3).
  - B) Connect the (Item 21) Display Cable to iX board bottom display connector and secure ground wire under the corner screw on the board.
  - C) New (item 9) USB Cable 892139-001 to the ix board USB 1 connector and to the SPM USB connector.
  - D) New (item 7) DC Power Cable 892120-001:

P7/P6 (2-pin) to a spare connector on DC Distribution board,  
J3 (2-pin) connector to the (2-pin) connector on the Sales/Vol display board,  
P19 (6-pin) to the iX board J16 Power connector, or to QCAT Power Jumper cable

J4 (2-pin) to the SPM board J1 connector.

E) Card Reader Cable (item 8) 850350-002, as required, to the card reader and to the SPM board J10.

F) Softkey cable (item 10) 892141-001 to SPM board J6 connector and to left and right softkeys.

G) If QVGA Display LED Backlight, connect backlight cable (red&white) to SPM board J2, and, if applicable, connect the QVGA display fan cable (red&black) to SPM board J3.

If QVGA Display CCFL Backlight, the two white backlight wires connect to the QCAT board.

H) Printer cable to SPM board Printer connector.

I) Connect the ground strap (gold-colored) that is on the SPM over to Chassis and secure with #10 screw 6001105 and Nut 6019401. Be sure the ground strap does not get pinched in the door when closing.

J) Connect the other ground strap that is on the SPM and connect the card reader ground wire over to the iX board upper left corner screw.

K) Connect the (item 20) Wire Harness as follows:

The two connector end of cable (2-pin) & (4-pin) connects to iGEM board as follows:  
P6 to J22 Buzzer A and P7 to J13 CAN.

The three connector end of cable connects to side 1 iX board as follows:  
ANNUN P4 to J18 Annunciator, P3 to J4 CAN, and P5 to J31 CAN.

The other end with the two 2-pin connectors should be routed through the grommet in the center column for the iX board on side 2 when installed below.

25. Apply the (Item 17) CE Label to the inside center column.

26. If the site's POS control system does not support softkeys, apply the (item 11) Softkey cover decal over top of the softkeys on the QVGA panel.

27. Repeat the above steps for opposite side of dispenser.

28. Connect the wires that were routed over from side 1 to the side 2 iX board as follows:  
ANNUN P1 to J18 Annunciator,  
CAN P2 to J4 CAN

29. Close and lock service doors.

30. Power up dispenser and follow the procedure in the Startup section of this manual.

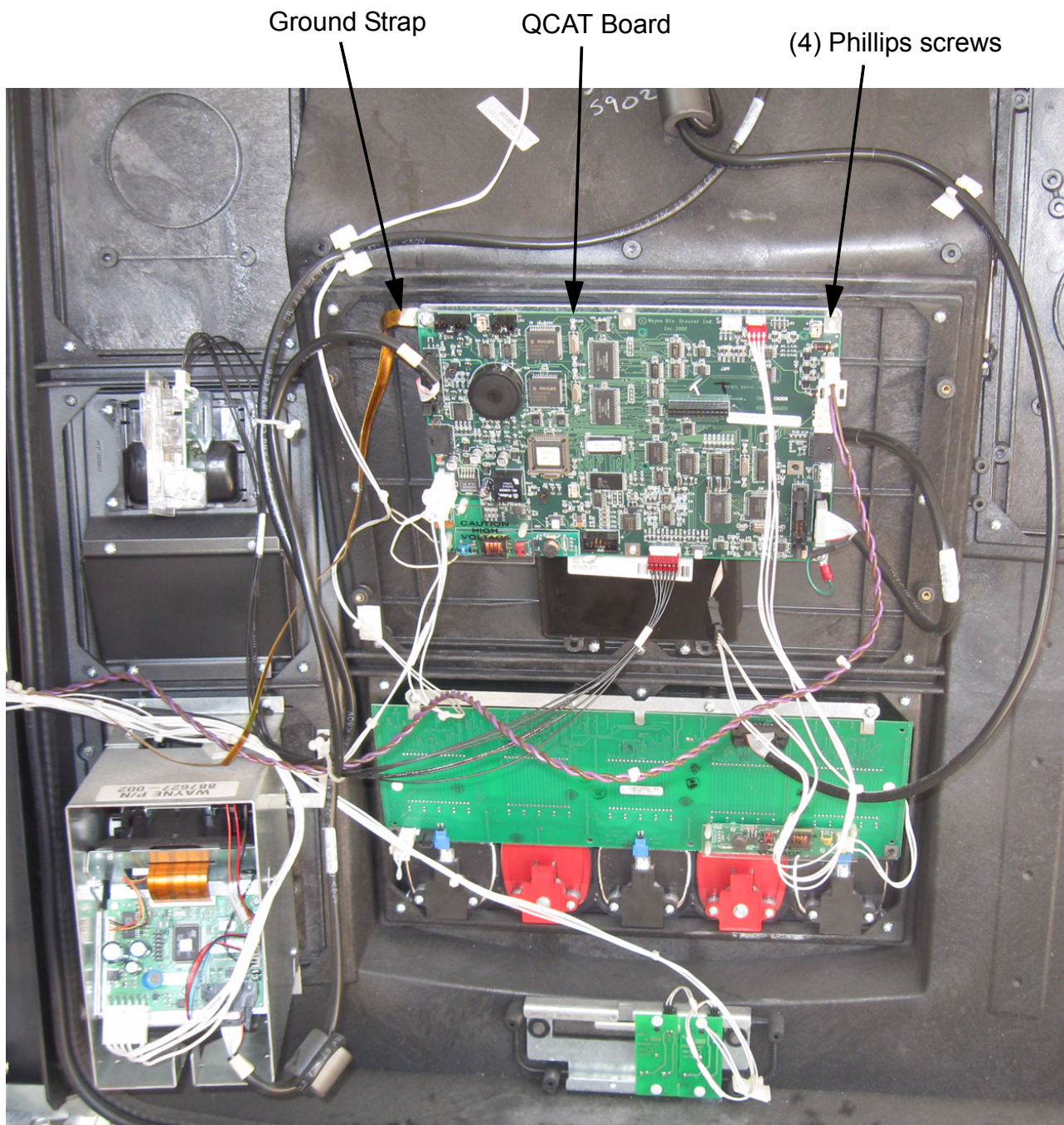
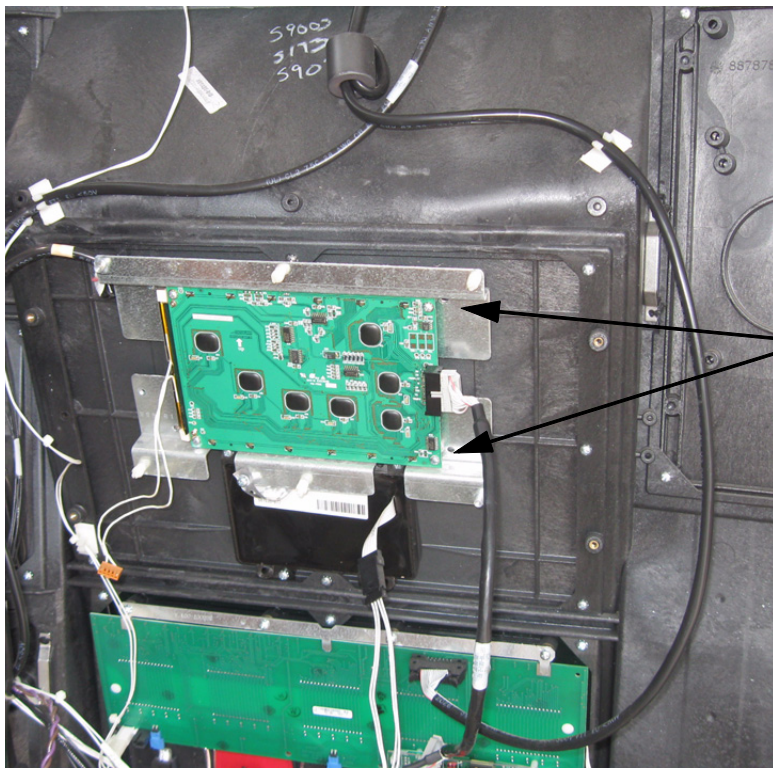


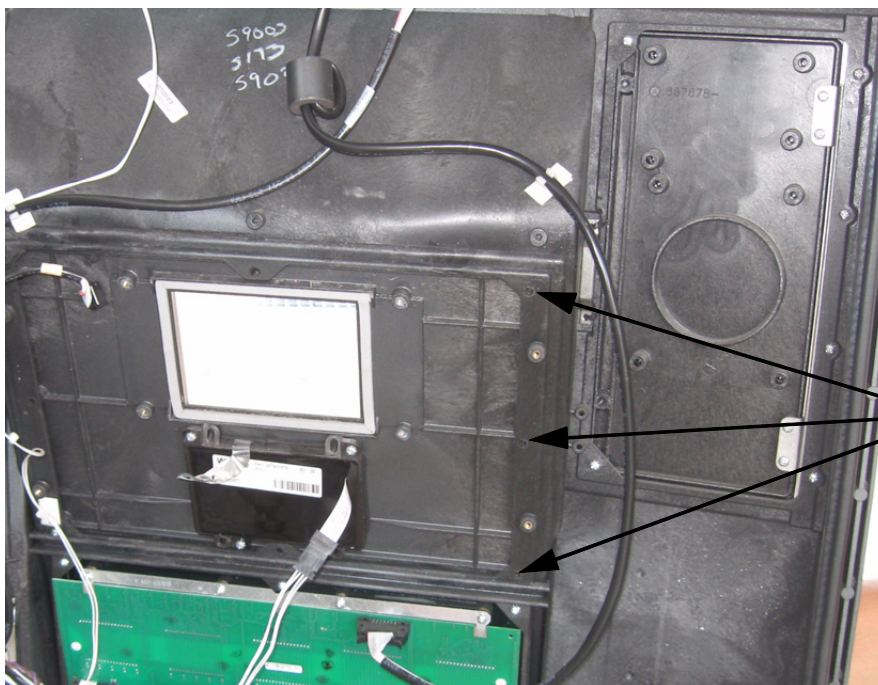
FIGURE 1



(4) Phillips screws on bracket

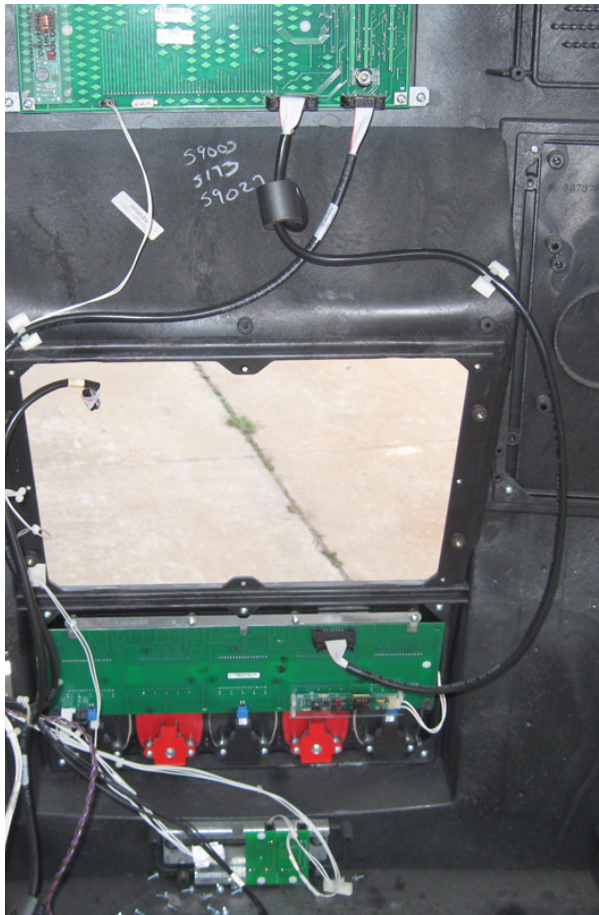
Note: Ensure display glass behind bracket does not fall when removing bracket.

FIGURE 2

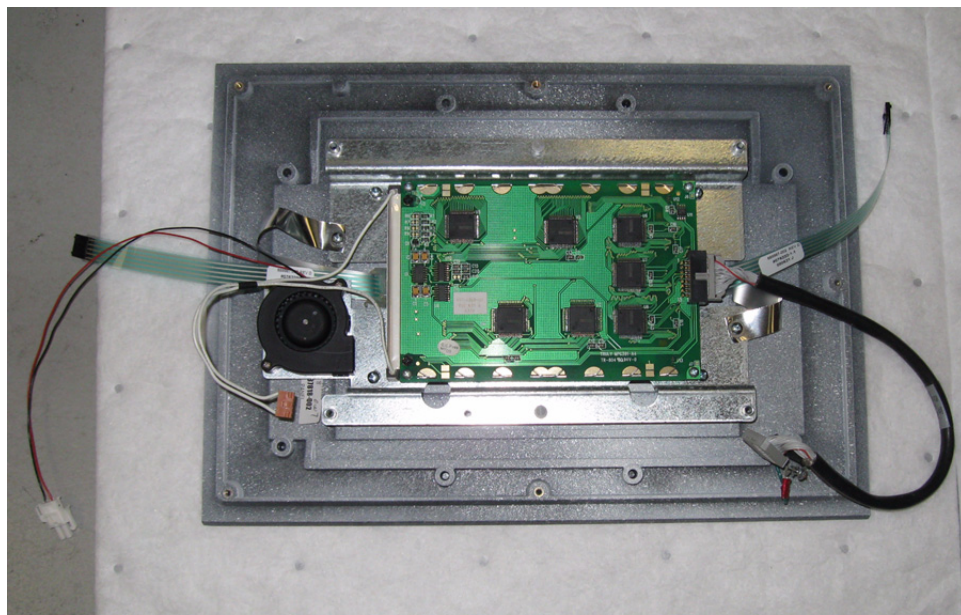


(8) Phillips screws on panel

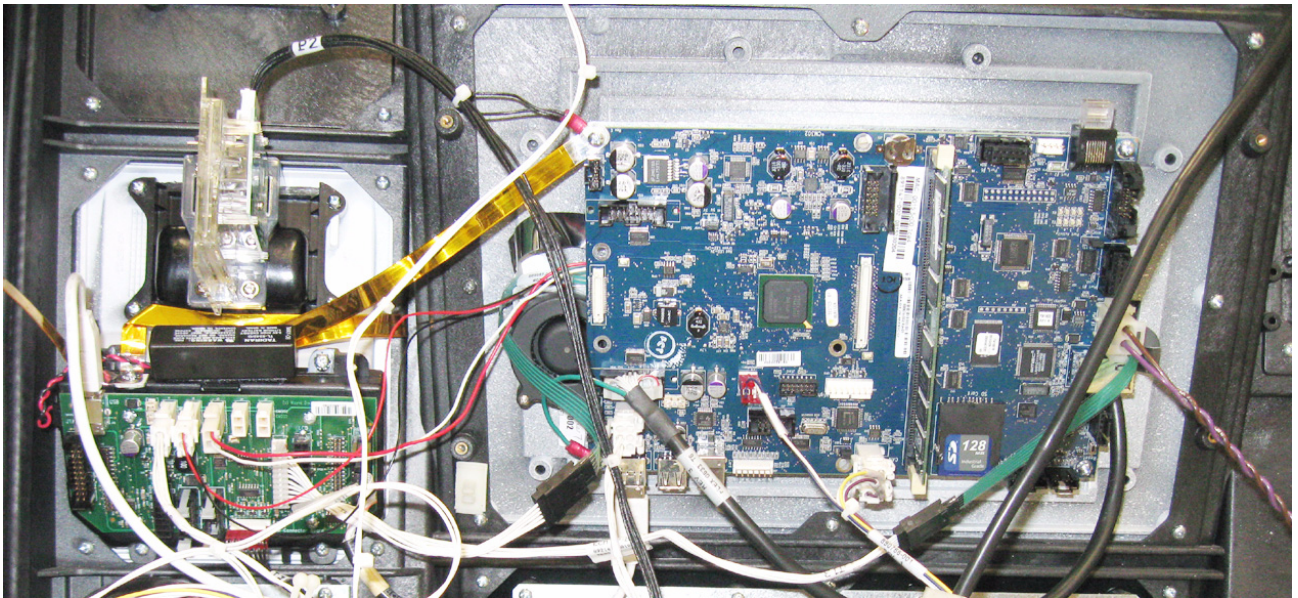
FIGURE 3



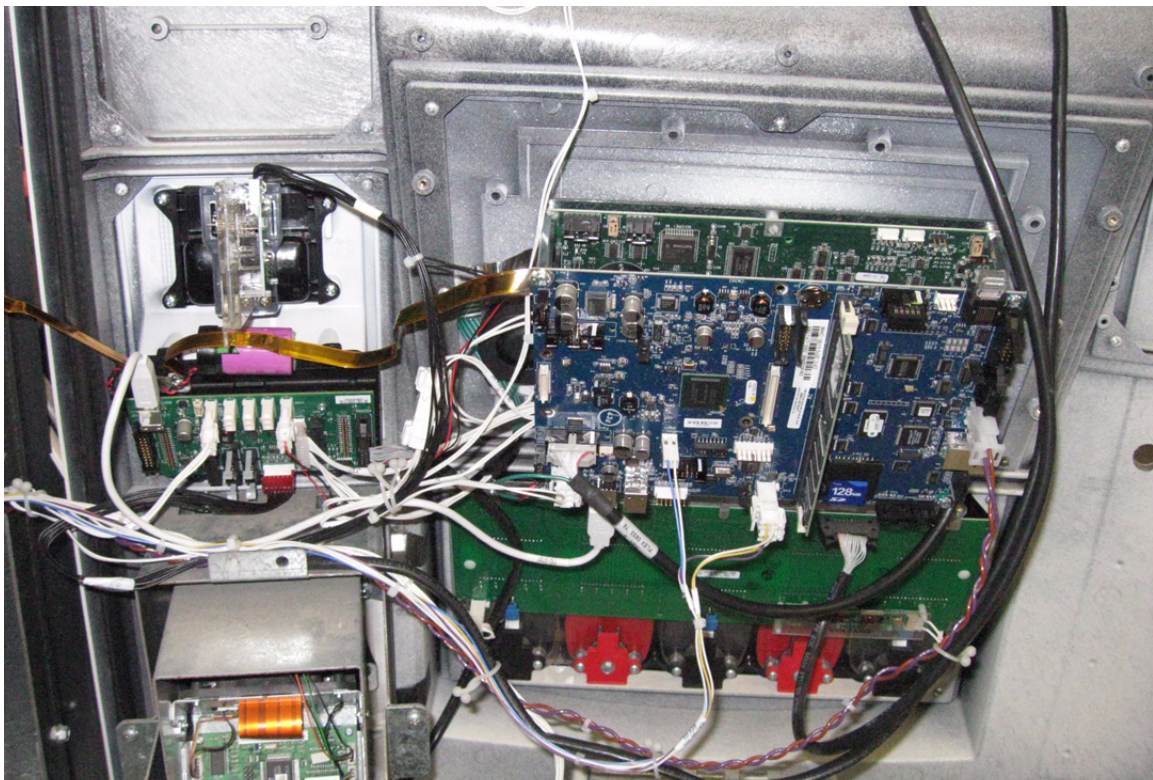
**FIGURE 4**



**FIGURE 5**



**FIGURE 6 IX INSTALLED ON BRACKET**



**FIGURE 7 IX INSTALLED ON QCAT STANDOFFS**

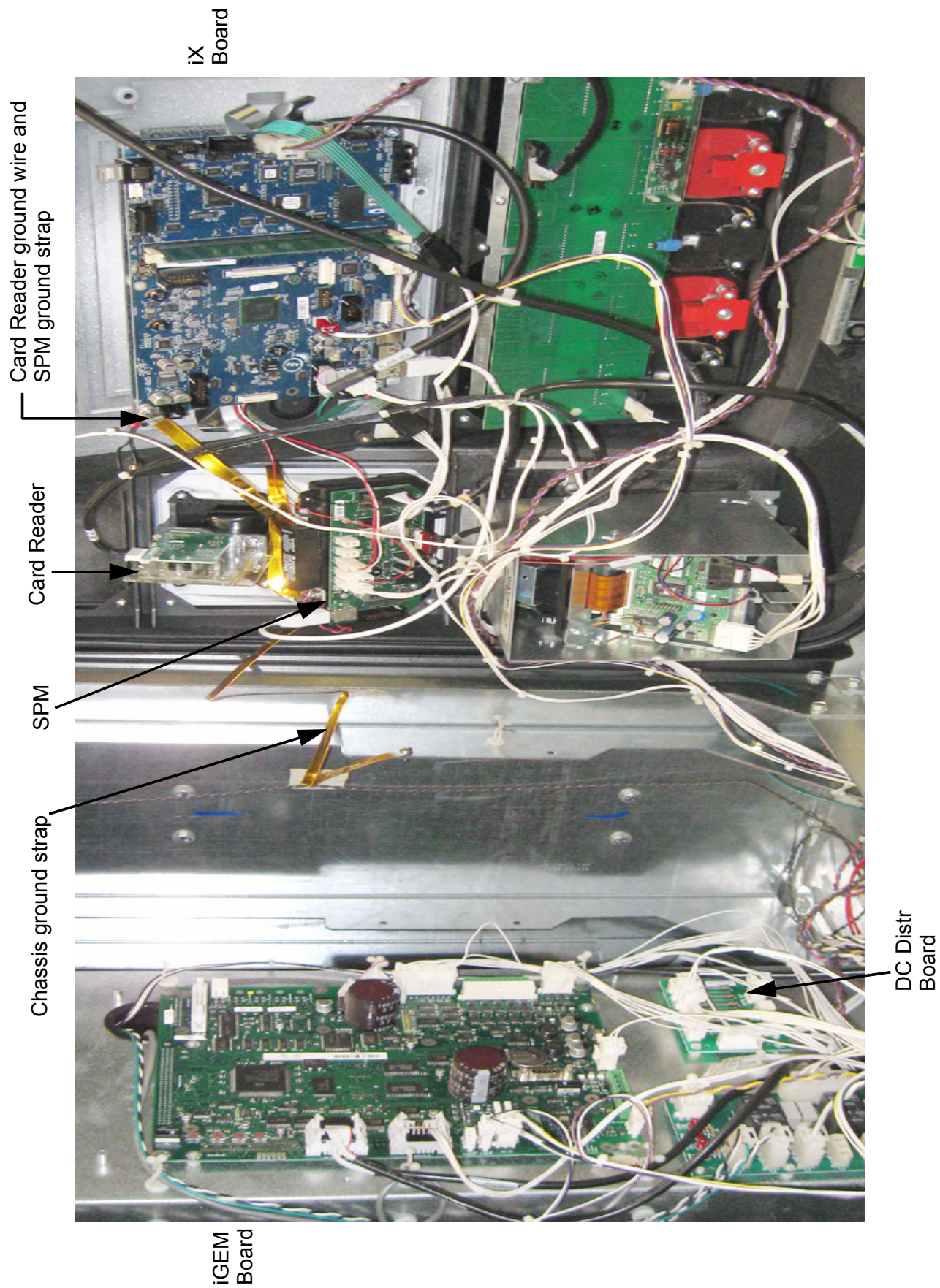


FIGURE 8

# INSTALLATION MANUAL

## iX™ Pay Secure Payment Ovation Retrofit Kit

Written by S. G. Martin

This manual was produced on a PC using Adobe® FrameMaker® and Photoshop®

Page design uses Times New Roman and Arial Fonts

Manuals are electronically printed

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**Dresser Wayne, Dresser, Inc., is located at 3814 Jarrett Way, Austin TX 78728.  
Wayne's general telephone number is (512)-388-8311.**

NOTE: "This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense."

