DRESSER Wayne

iX™ Pay Secure Payment

INSTALLATION

iX Pay (U.S.) Retrofit Kits for 1/Vista Wide Body Dispensers

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

Problems with the installation of this kit 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.

SAFETY PRECAUTIONS

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 elctrical 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.[1]"

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. Department 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)*.

NOTE: To prevent damage to components located in the hydraulic cabnet, dispenser doors should be in place during rainy and/ or icy weather conditions. Also, check the nozzle boot flipper for freedom of movement. If ice has formed on the flipper it should be cleared to prevent unnecessary damage.

Local, State, and Federal Codes

All tanks (both underground and above ground), piping and fittings, foot valves, leak detectors, corrosion protection device, wiring, venting systems, etc., must be installed in accorfance with the manufacturer's instructions and in compliance with local and regional building codes and requirements pertaining to service stations (or other locations where the dispenser may be installed).

These requirements may include references to the National Electrical Code (NFPA 70), Automotive and Marine Service Station Code (NFPA 30A); Flammable and Combustible Liquids Code (NFPA 30); Code of Federal Regulations, Title 40, Section 280 (40 CFR 280); United States Environmental Protection Agency (U.S. EPA) Technical Regulations of 9-23-88 and U.S. EPA Financial Responsibility Regulations of 10-26-1988.

Where local requirements do not specify applicable codes, Wayne recommends using the codes listed above. These codes are comprehensive and detailed, often requiring interpretation to cover unusual situations, and, therefore, the associated handbooks (where applicable) should also be consulted. (The handbooks are also available from the same sources.)

Due to the variety of locations encountered, further information on installation cannot be dealt with in this document except as the codes relate directly to the installation of the dispenser. Therefore, it is strongly recommended that a quialified engineer or contractor familiar with local regulations and practices be consulted before starting installation.

For Canada, TSSA and Fuel Safety Regulations including PMH and PM1 Certification:

To prevent cuts and abrasions, Personal Protection Equipment (PPE) must be used when working around sharp metal edges.

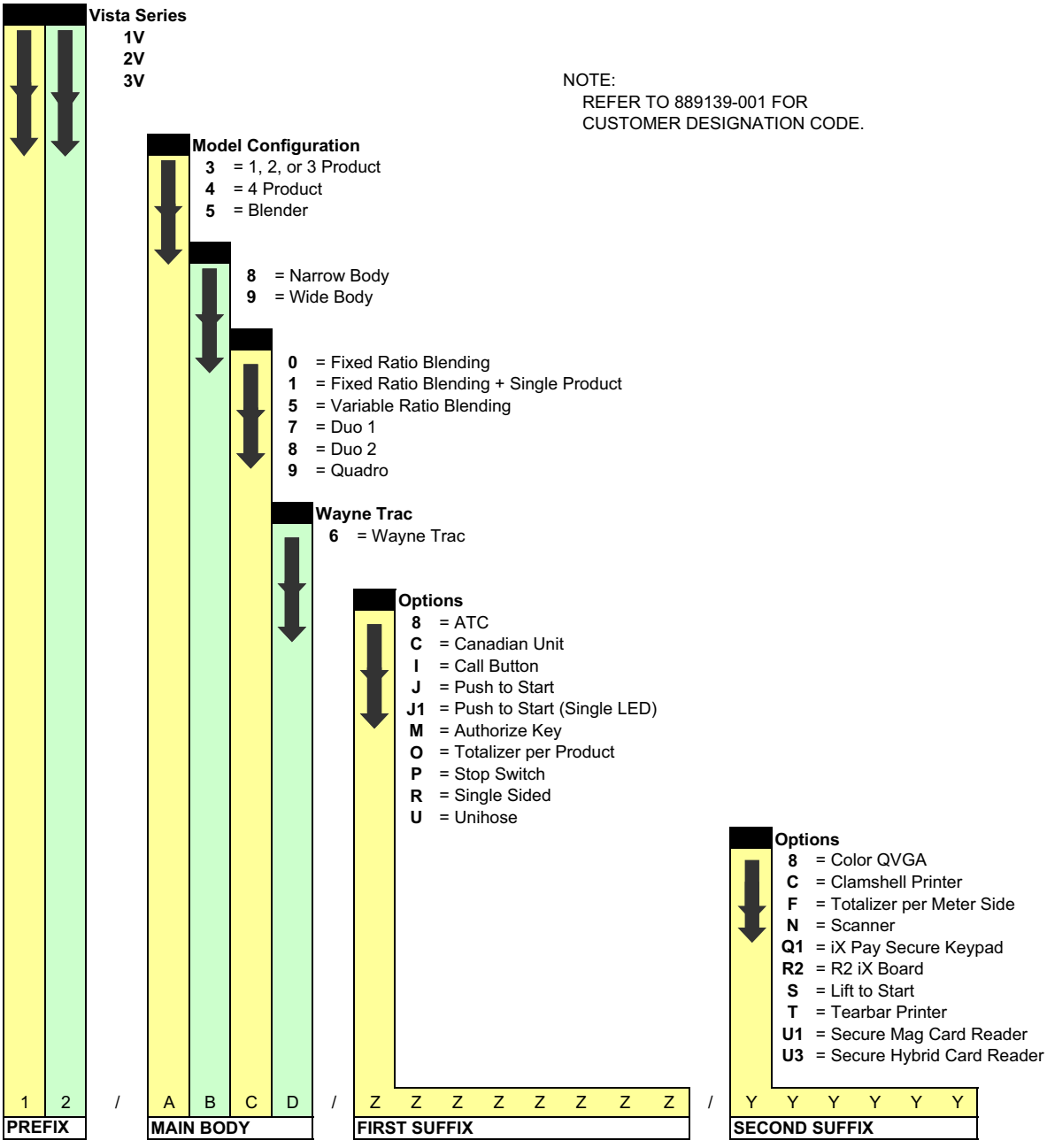
Secure Payment Kits for 1/Vista Dispensers (U.S.)

Installation

August 2010 Part No. 940060-002 Rev. 002

Vista iX PAY Retrofit Kit

MODEL DESIGNATOR CHART



1 INTRODUCTION

This manual provides instructions for installing the iX™ Pay Secure Payment Retrofit Kits for 1/Vista Wide Body dispensers. 1V kit part numbers (model numbers) are based on the Kit Model Designation Chart on the previous page and take the format of 1/Vx9xx for wide body dispensers.

Address questions concerning installation of this kit to Wayne Technical Support at 1-800-926-3737.

1.1 Parts Required

The parts and quantities that are included in each kit are shown on the following pages. Item numbers in Figure 1 are referenced to the list of parts in Table 1.

1.2 Tools Required

Socket/ratchet

Allen wrenches

Screwdrivers, Nut drivers

1.3 Safety Precautions

Before beginning the installation of this kit, block off the work area with safety cones.

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.
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- All vehicle traffic and unauthorized persons shall be prevented from coming within 20 ft.(6 m) of the dispensing device. [1]"

⚠ **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)*.

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.

Prior to installation, inspect the kit and ensure that it contains all the required parts as listed in Table 1.

Table 1 Parts Included in the Kit

Part Number	Description	Kit Qty Dual Sided Wide - for Models 1/Vx9xx	Kit Qty Single Sided Wide - for Models 1/Vx9xx	Item No.
	1V Wide SPM Elect Head Assy	1	1	1
891687-001	Printer, DW-10	2	1	2 p/o item 1
889784-001	Printer Gasket	2	1	3 p/o item 2
5057301	Cable Holder	4	2	4 not shown
001-916486-	Cable Ties	6	6	5 not shown
000-918210-	1/4-20 Nuts	8	8	6 not shown
888413-001	1/4 Washers	8	8	7 not shown
888352-001	Plastic Rivets	8	4	8 not shown
882941-xxx	Soft Key Blank Covers	2	1	9 not shown
888717-002	Octane Labels	1	1	10
000-940060-001	Installation Manual	1	1	11
886034-002	T-Bracket (Optional *TRAC*)	2	1	12
6032301	Screws (Optional *TRAC*)	4	2	13
6001802	6-32 X 3/8 Screw (Optional *TRAC*)	8	4	14
6005901	6-32 X 3/8 Screw (Optional *TRAC*)	8	4	15
WU000885-0011	6-32 X .250 X .750 Hex Standoff (Optional *TRAC*)	8	4	16
WU002015-0001	Housing Bezel Mount (Optional *TRAC*)	2	1	17
WU002016-0001	#6 Nylon Washer (Optional *TRAC*)	8	4	18
000-507868-	8-32 Nut (Optional *TRAC & SCAN*)	4	2	19
000-913632-	#10 Washer (Optional *TRAC & SCAN*)	4	2	20
000-916486-	Cable Tie (Optional *TRAC & SCAN*)	4	2	21
000-918066	Clamp (Optional *TRAC & SCAN*)	4	2	22
000-918137-	8-32 X 1/2 Screw (Optional *TRAC & SCAN*)	2	1	23
WU001629-0001	Flex Tube (Optional *TRAC & SCAN*)	4	2	24
000-918269-	6-32 X .500 X .250 Standoff (Optional *SCAN*)	8	4	25
5056102	Bumper (Optional *SCAN*)	4	2	26
882666-016	M3 X 4 Screw (Optional *SCAN*)	4	2	27

Table 1 Parts Included in the Kit

6010602	# 6 Washer (Optional *SCAN*)	8	4	28
6005901	6-32 X 3/8 Screw (Optional *SCAN*)	4	2	29
889197-001	Scanner Mounting Bracket (Optional *SCAN*)	2	1	30
000-918396-	6-32 X 3/8 Hex Standoff (Optional *SCAN*)	2	1	32
886486-006	Cable, 10-Pin (Optional *SCAN*)	2	1	33
889205-001	Decal, Laser Warning (Optional *SCAN*)	2	1	34

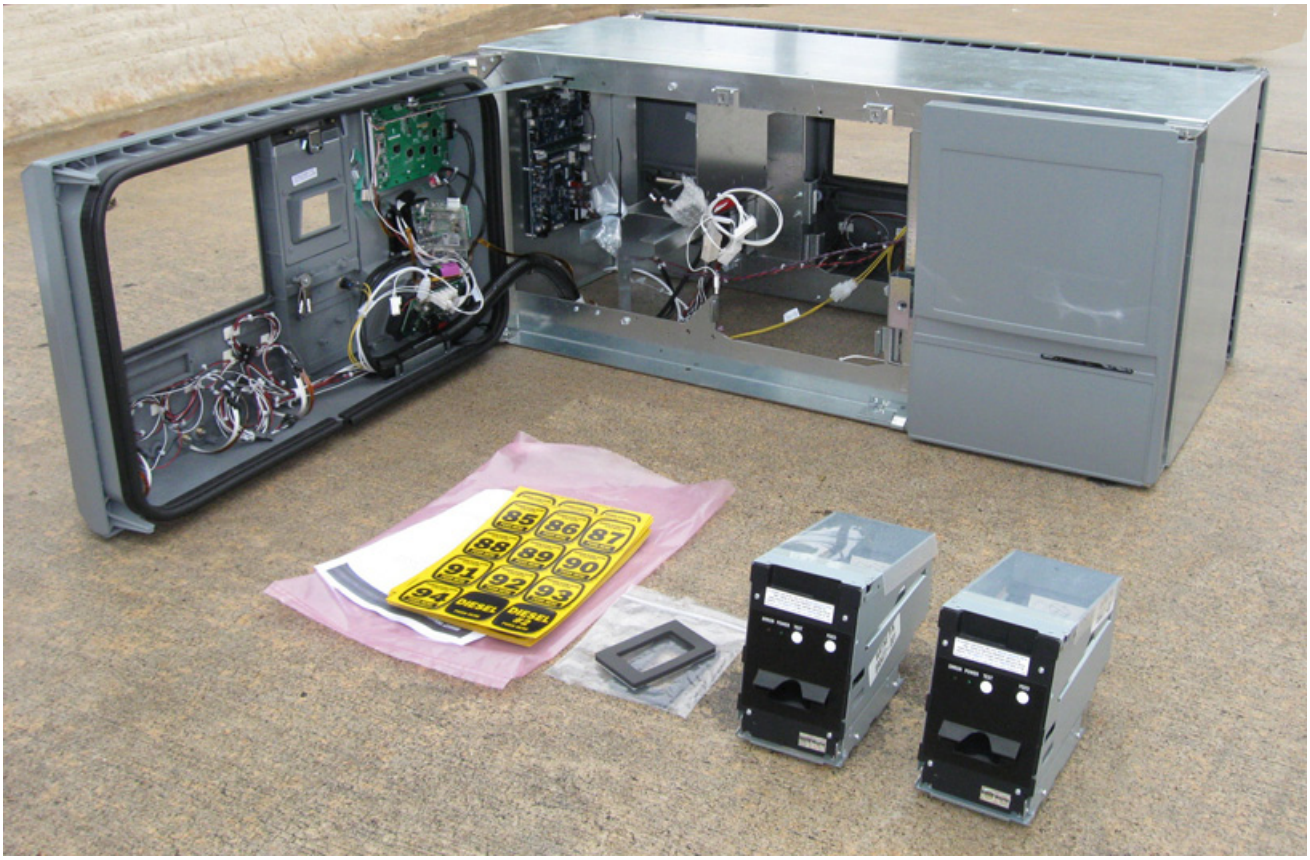


FIGURE 1 A - PARTS IN THE KIT. Gaskets and printers shown will be pre-installed at factory.

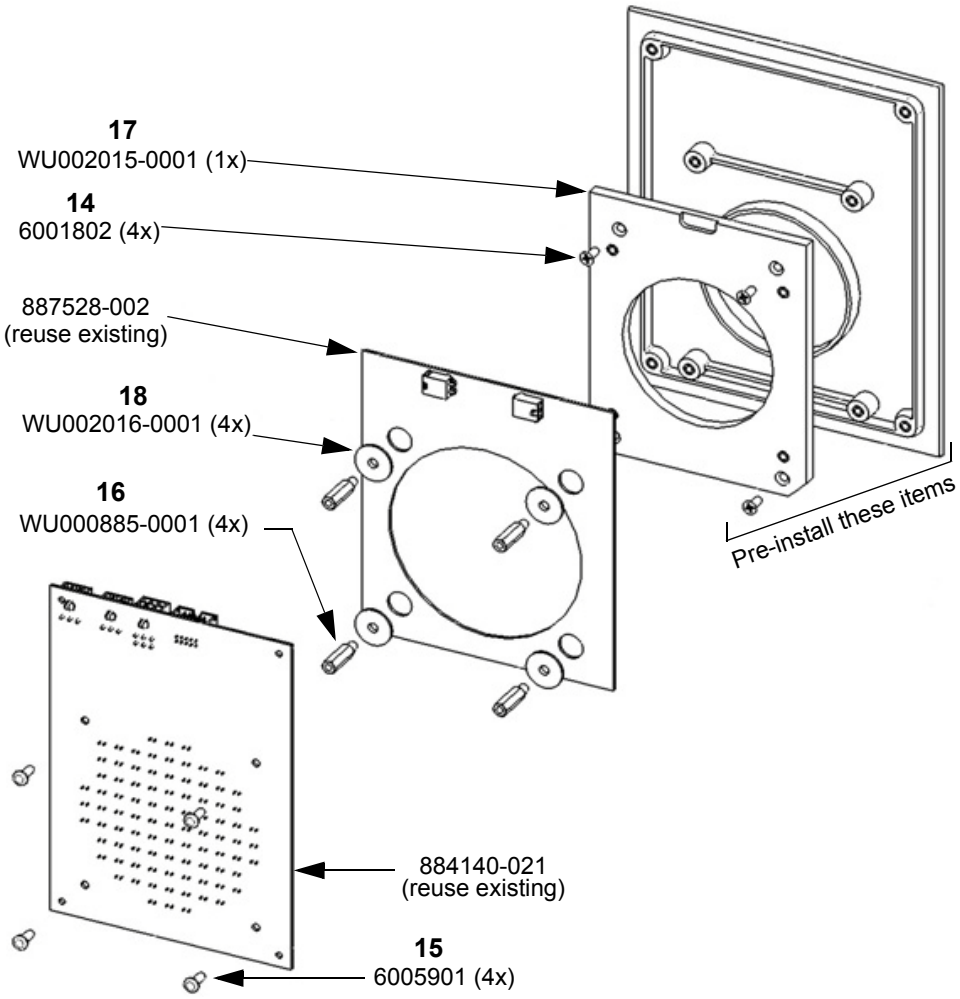


Figure 1B - Optional speedpass (Trac) components and assembly

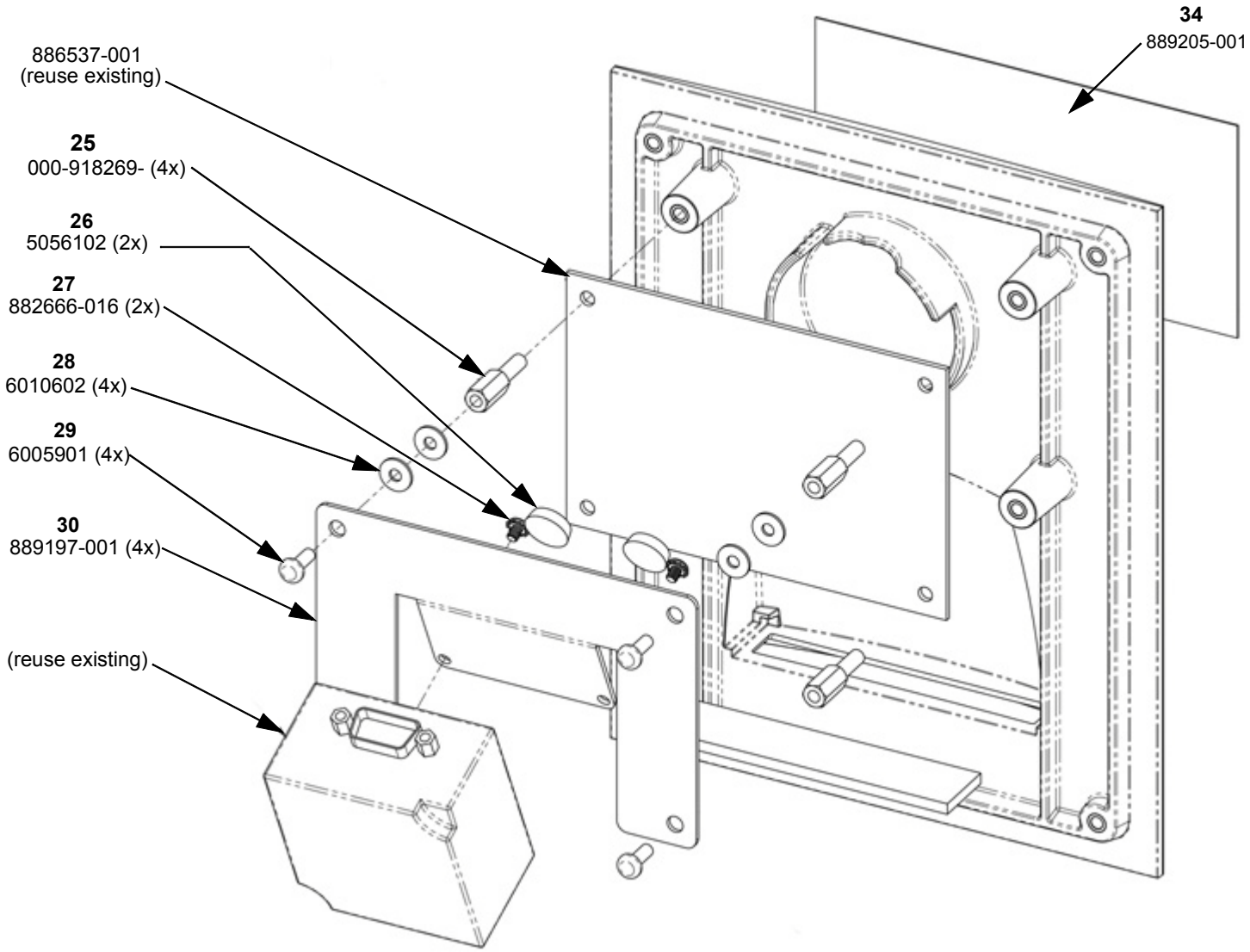


Figure 1C - Optional scan components and assembly (option 1)

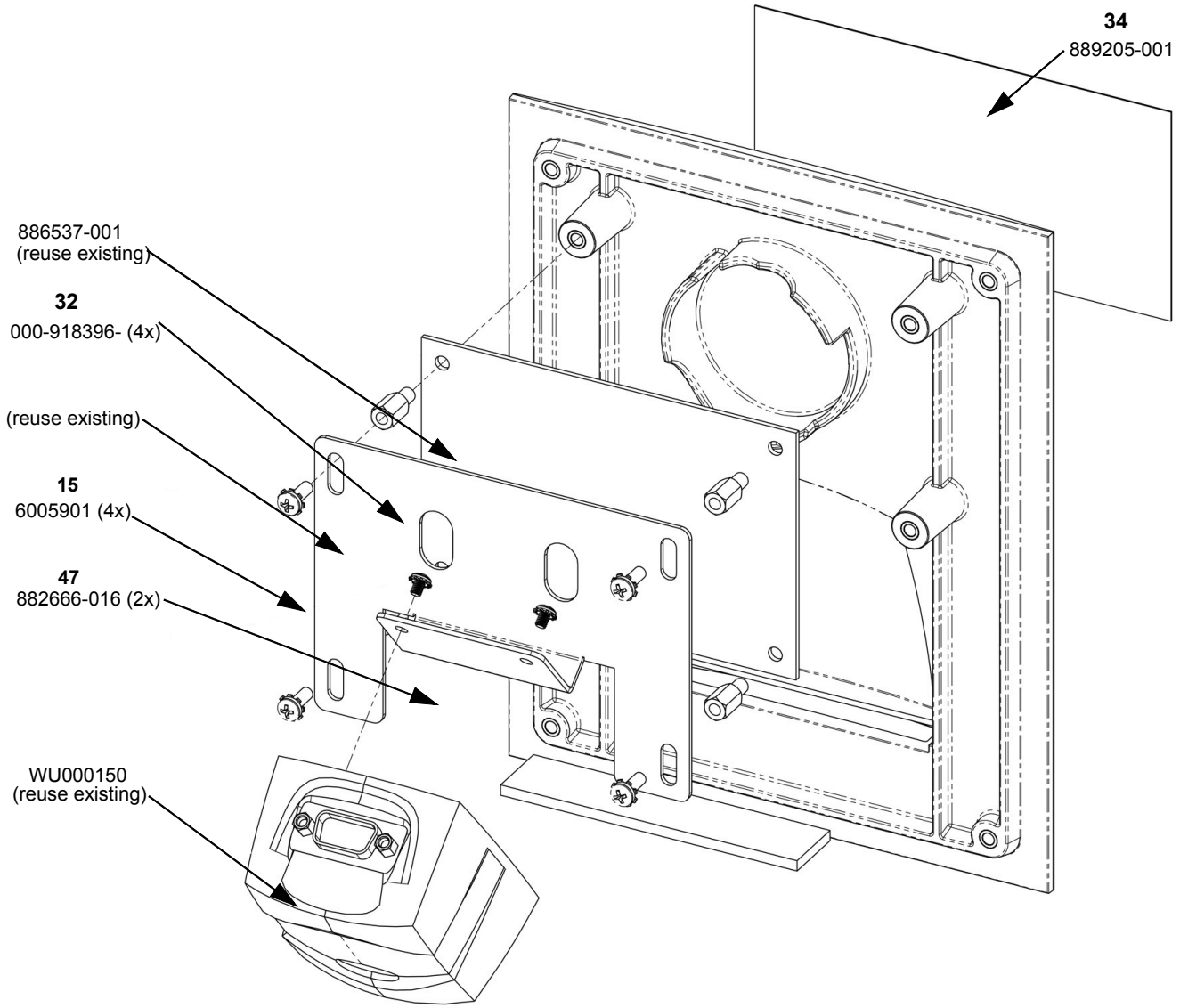


Figure 1D - Optional scan components and assembly (option 2)

2 INSTALLATION Note: Adhere to the safety precautions listed in Section 1.3

WARNING: DO NOT USE POWER TOOLS WHEN WORKING IN THE HAZARDOUS ZONE.

2.1 Installation Instructions For 1/V Wide Body

During installation of this kit, the existing electronics head frame enclosure will be removed from the vapor barrier and the new head assembly installed. New DW-10 printers are supplied pre-installed. The existing DEMs, heater fan, EMI filters and totalizers are transferred to the new head enclosure.

1. Turn off power to the dispenser at the circuit breaker.

2. On both sides of dispenser:

   A. Lower the ad panel, unlock and lower the bezels. Figure 2.

   B. Disconnect all cables from the bezels. Figure 3.

   C. Set bezels aside for now for reusing the display glass and bracket.

   D. If present, remove and discard drip tray from head chassis.

   E. If totalizers are present, disconnect the cables from totalizers and remove and save the totalizers. Discard bracket and screws.

3. Loosen two flathead screws securing the DEM to the head frame and lower the DEM. The two screws are located above the DEM. Repeat on side 2.

4. Disconnect control power and light power wires coming from the vapor barrier potted fitting.

5. Disconnect all ground wires attached to the head frame. Save the screws and nuts.

   Note: When disconnecting cables during the following steps, it is recommended to mark the connectors for easier re-connection - the AC connectors in particular - when the new head is installed.

6. Reference Figure 4 (Side 1) and perform the following:

   A. On the sides of the DEM, disconnect all cables, AC power and ground wires that go into the head.

   B. Disconnect the 2-pin cable labeled V-Cap from lower right side of DEM.

   C. Disconnect all cables from the solenoid drive board.

D. Disconnect all cables from the Duplex computer that go into the head, including J14 annunicator cable that goes to side 2 annunicator if present.

E. Mark for reuse the 880565-002 cable that connected to the computer J5. This cable goes over to the cash/credit board J2 on side 2.

If the cable is bundled with the large power harness it can be separated later as the bundled harness can be left attached to the head for now. If it is not part of the bundled harness remove and save the cable when disconnected form side 2.

F. On the Duplex computer, disconnect C/C cable J4, AC power J3, and annunicator J13 and loosen the two side screws on the DEM. Raise the Duplex computer to gain access to the cash/credit board.

G. Disconnect and discard the PTS cable 881693-001 that connects to the C/C board J4 and J5. The PTS cable from the new bezel has an adapter cable 887047-001 attached that connects to C/C board J4 and J5.

H. *If Trac Option* - Without disconnecting any cables, remove and save Trac board and screws from printer bracket and set aside for later use.

I. Disconnect and discard totalizer cable if present that connects to J7.

J. Disconnect 5V DC cable that connects to J10.

K. Lower the Duplex computer and secure side screws.

L. Remove DEM and set aside for now.

7. Reference Figure 5 (Side 2) and perform the following:

A. On the sides of the DEM, disconnect all cables, AC power and ground wires that go into the head.

B. Disconnect all cables (white cable harness) from power supply board that go into the head. The harness will be reused for the printers, but it can be removed from the head later.

C. Loosen side screw and raise power supply.

D. Disconnect and save the cable connected to cash/credit board J2 as noted in previous step 6E.

E. Disconnect all other cables from the cash/credit board that go into the head.

F. Lower the power supply and secure side screw.

G. Remove DEM from head frame and set aside for now.

8. Disconnect and mark/label the two AC power connectors from the heater/fan assembly.

9. Remove and save screws/nuts securing the EMI filters to the head chassis. Leave filters on top of the vapor barrier.

10. Group and bundle wires from the main potted fitting, and place in center of vapor barrier. Figure 7 shows the wires and cables after the head is removed.

11. Remove and discard (4) hex head nuts and washers on both sides of head frame and lift head frame up and out of the dispenser, Figure 6. Set aside for reusing the heater/fan, power supply harness, optional equipment boards, totalizers, etc.

12. Clean top of vapor barrier, Figure 7.

13. Install new head frame enclosure as follows:

    A. Open all doors on the new bezel. Side 1 of the dispenser is the side with the model/serial number plate at the bottom of the dispenser. Side 1 and side 2 of the new head frame are labeled.

    B. Matching the sides, install new head frame enclosure onto dispenser studs and secure using (4) nuts (-918210-) and washers (888413-001) on both sides of head frame. Figure 8.

14. Re-install the (4) screws, if removed, on inter columns above the head.

15. On the old head frame, cut the cable ties securing the white power harness to the frame, Figure 9. This will be used for printer power. Cut cable ties and remove and discard the RS-485 cable and any other cables attached to the harness. Since the two connectors that went to the old CAT boards will not be used, bundle and tape the harness near the unused connectors, Figure 11.

16. On the old head frame, remove (3) screws and remove heater/fan assembly, Figure 10, and install heater/fan in new head frame enclosure reusing the screws, Figure 8.

17. Connect the white printer power cables (saved previously in step 15) to the printers, Figures 11 and 12.

18. Reinstall the EMI filters reusing the hardware saved previously. The EMI filters are reinstalled on the head chassis. Note: Remove printers if needed for better access to mount the EMIs to chassis. The larger of the two EMIs is for pump control power and is installed

in the lower two holes on side 1 chassis at lower left of sales display and the smaller one is for light power and goes in the same position on chassis side 2.

19. Reinstall DEM/computer on side 1, and reinstall DEM/power supply on side 2. Also, loosen screws on sides of DEM to gain access to bottom of DEM.

20. Refer to Figures 4 and 5 for connector numbers and descriptions and reconnect wires/ cables in the following steps:

21. Reconnect all cables, AC power connectors and ground wires to the sides of both DEMs.

22. Connect the two AC cables on the heater/fan to the existing AC connectors marked/ labeled from the old heater fan.

23. Connect the white printer power cables to J5 and J6 on power supply board on side 2 DEM, Figure 5.

24. Locate AC Y cable (WU001942-0001) on the new power supply and connect it to the cash credit board J3. (First remove AC cable at J3 connector, connect Y cable and reconnect AC cable to Y cable.)

25. Reconnect cables to computer and solenoid drive board, as shown in Figure 4.

26. Reconnect the 880565-002 cable saved previously to the computer J5 and to side 2 cash/credit board J2.

27. If present, install previously-saved totalizers on the right bezel bracket using plastic rivets (888352-001) and connect the totalizer cable (883579-007) supplied with the new bezel, to the totalizers and to the cash credit board J7. Route wires into head under the printer bracket and through the bottom to the DEM.

28. Reconnect all ground wires to head frame.

29. From the bezel, Figure13, PTS harness/adapter cable 887047-001, connect the black cable to the cash credit board J4 and connect the white cable to J5. Route wires under the printer bracket and through the bottom to the DEM.

30. IF BLUE BOARD - From the vapor barrier potted fitted, connect the RS485 cable to the RS485 Y connector that goes to both iX boards, Figure 13.

    IF R2 (RED) BOARD - From the vapor barrier potted fitted, connect the RS485 cable to the RS485 Y connector that goes to the iX board, Figure 13.

31. Reconnect control power and light power inside the electronic head.

32. Secure the Duplex computer assembly to the DEM, connect sides 1 and 2 annunicators to J13 and J14 on the Duplex computer and reconnect J4 and AC power J3. Unscrew the cover on the existing annunicators insert into the holes (or slots) in printer bracket and resecure cover.

33. *If Trac Option* - Install 1 new T-bracket (886034-001) on side A only, using 2 screws (6032301) (Figure 18).

34. *If Trac Option* - Install Trac board on T-bracket using existing hardware (Figure 19).

35. Optional *TRAC*:

    ON OLD BEZEL:

    A. Disconnect cable from Antenna (884142-003) and discard Antenna.

    B. Remove light board (884140-021) and save for later use.

    C. Remove and discard light retainer (886895-001).

    D. Disconnect cable from Antenna (887528-002).

    E. Remove and save Antenna PCB assembly (887528-002) and remove and discard screws (6005910).

    ON NEW BEZEL (Refer to Figure 1B):

    F. Re-mount existing antenna (887528-002) to right bezel door (WU000975-0003) using 4 standoffs (WU000885-0001) and 4 washers (WU002016-0001) (Figure 17).

    G. Reconnect existing trac cables to light board (Figure 18):
    - 886012-008 - J1
    - 884237-003 - J3
    - 884148-003 - J5

    H. Reconnect cable from Light board to Antenna J1 (Figure 17).

    I. Remove and discard jumper on **JP1** from Antenna (Figure 17).

    J. Mount existing Light board to standoffs on Antenna using 4 screws (6005901) (Figure 19).

    K. Place flex tube WU001629-001) over cables and tie wrap flex tube using 2 Tie wraps (000-916486-).

    L. Clamp cable harness to dispenser using 1 clamp (000-918066-), 1 screw (000-918137-), 1 washer (000-913632-), and 1 nut (000-507868-) (Figure 20).

36. Optional *SCAN (Options 1 & 2)*:

ON OLD BEZEL:

A. (On Options 1 & 2) Disconnect Scanner cable from inside dispenser (Figure 22).

B. (On Options 1 & 2) Remove 4 screws holding existing Totalizer Bracket (Figure 23).

C. (On Options 1 & 2) Remove 3 screws holding the Scanner Assembly Bezel (Figure 23).

D. (On Options 1 *&* 2) Remove Scanner bracket from Scanner Assembly Bezel (Figure 24).

E. (On Options 1 & 2) Disconnect Scanner cable from scanner and save 2 screws (Figure 24).

F. (On Option 1 *only*) Remove and save Scanner (Figure 24).

G. (On Options 1 & 2) Remove and save Light board (Figure 24).

ON NEW BEZEL: (Refer to Figure 1F)

H. (On Options 1 & 2) Transfer Light board to Right Door Bezel (WU000975-0002) using 4 Standoffs (000-918269-for Option 1 or 000-918396- for Option 2) (Figure 25).

I. (On Options 1 & 2)Remove and discard Scanner Cable (886575-002) and replace with new Scanner Cable (886484-006).

J. (On Option 1 *only*) Install 2 Bumbers (5056102) onto new Scanner Bracket (889197-001) (Figure 26) .

K. (On Option 1 only) Install existing Scanner onto new Scanner Bracket (889197-001) using 2 Screws (882666-016) (Figure 37).

L. (On Option 1 *only*) Mount Scanner Bracket assembly onto Standoffs (000-918269-). Place 2 Screws (6005901) through top of assembly with 4 flat washers (2 each behind panel of assembly) (Figure 28).

(On Option 2 *only*) Mount Scanner Bracket assembly onto Standoffs (000-918369-) using 4 Screws (6005901) (Figure 29).

M. (On Option 1 *only*) Install other 2 screws on bottom of assembly and install onto standoffs (Figure 31).

N. (On Options 1 & 2) Reconnect Scanner cable to top of scanner using 2 previously-saved screws (Figure 29). (Refer to Figure 33 for *SCAN* installed)

O. Place flex tube WU001629-001) over cables and tie wrap flex tube using 2 Tie wraps (000-916486-).

P. Clamp cable harness to dispenser using 1 clamp (000-918066-), 1 screw (000-918137-), 1 washer (000-913632-), and 1 nut (000-507868-).

Q. Route new Scanner cable (886484-006) through the dispenser and install it to the SPM on connector J15 (Figure 31).

37. Close and latch/lock the right bezel door and raise DEM. Repeat on opposite side.

38. Bundle and tie wrap all cables where possible, using Holder (5057301) and Cable Ties (001-916486-). Route wires away from sharp edges and ensure cables are not pinched.

39. Ensure all ground wires inside the head are secured to the chassis.

40. Ensure all cables are inside the head and clear of bezel doors.

41. Close and lock bezel door on both sides. See Figure 14.

42. If POS does not use the softkeys on the QVGA display, cover the keys with 882941-xxx Soft Key Blank Covers.

43. Turn power on to the dispenser.

44. Verify SPM and dispenser operation. Note: Printers should be preset at factory to 115K baud. Refer to Startup and Service manual 940014 for starting up the SPM.

FIGURE 2

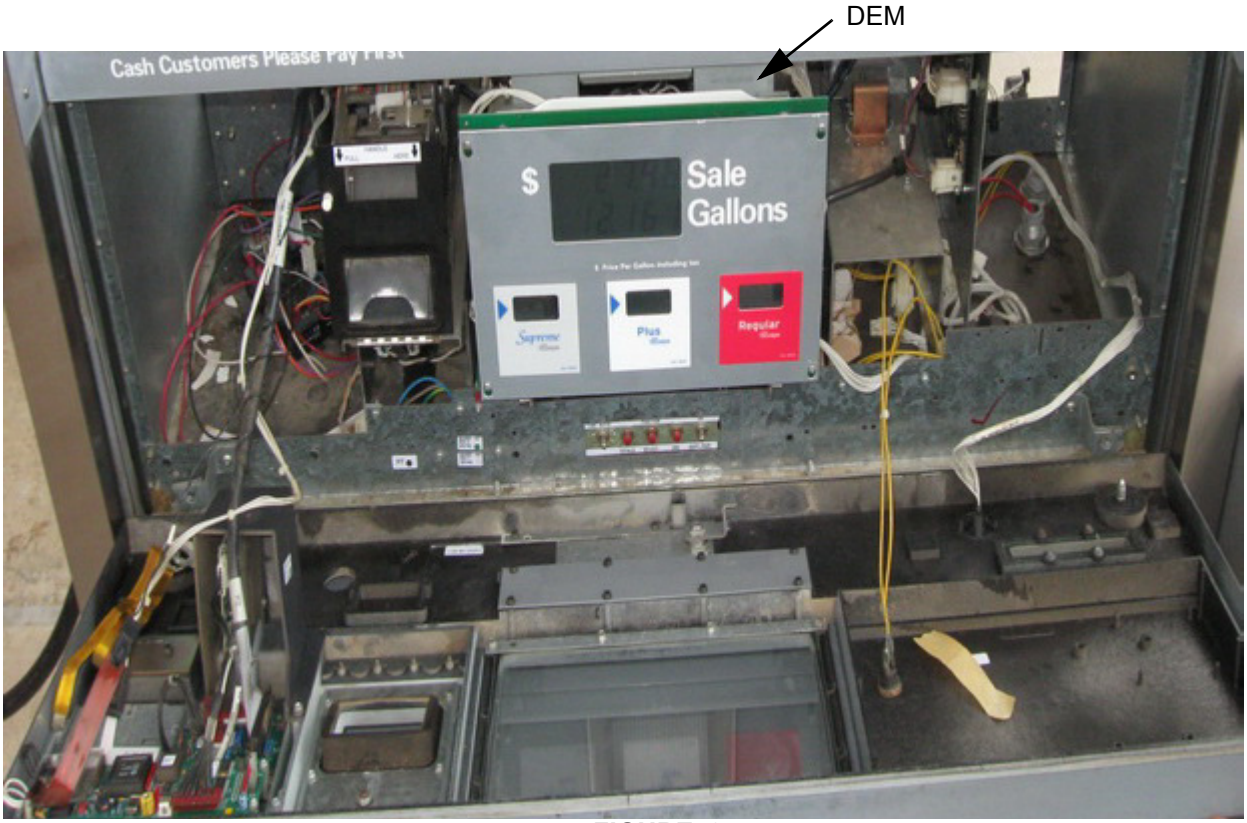
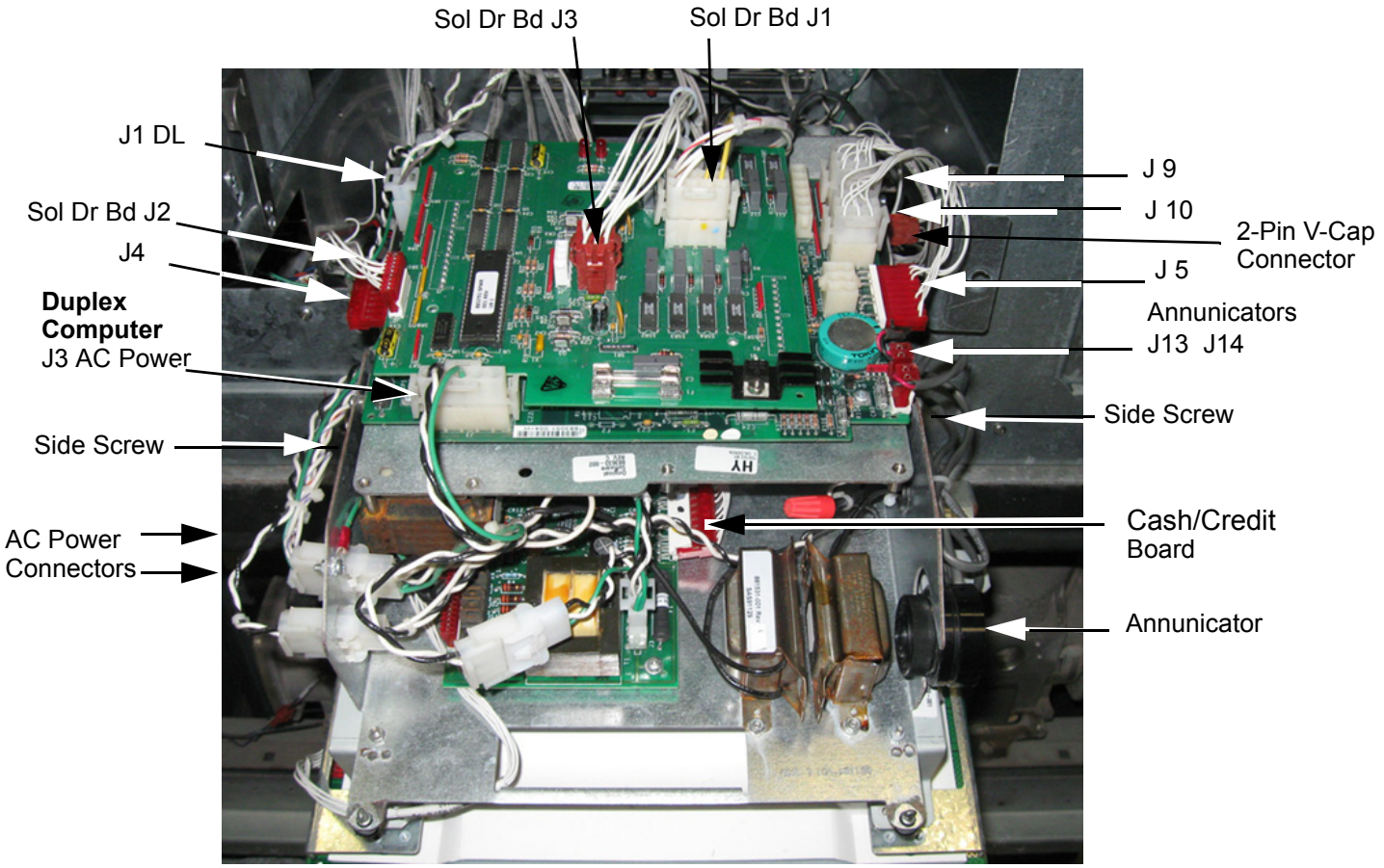


FIGURE 3



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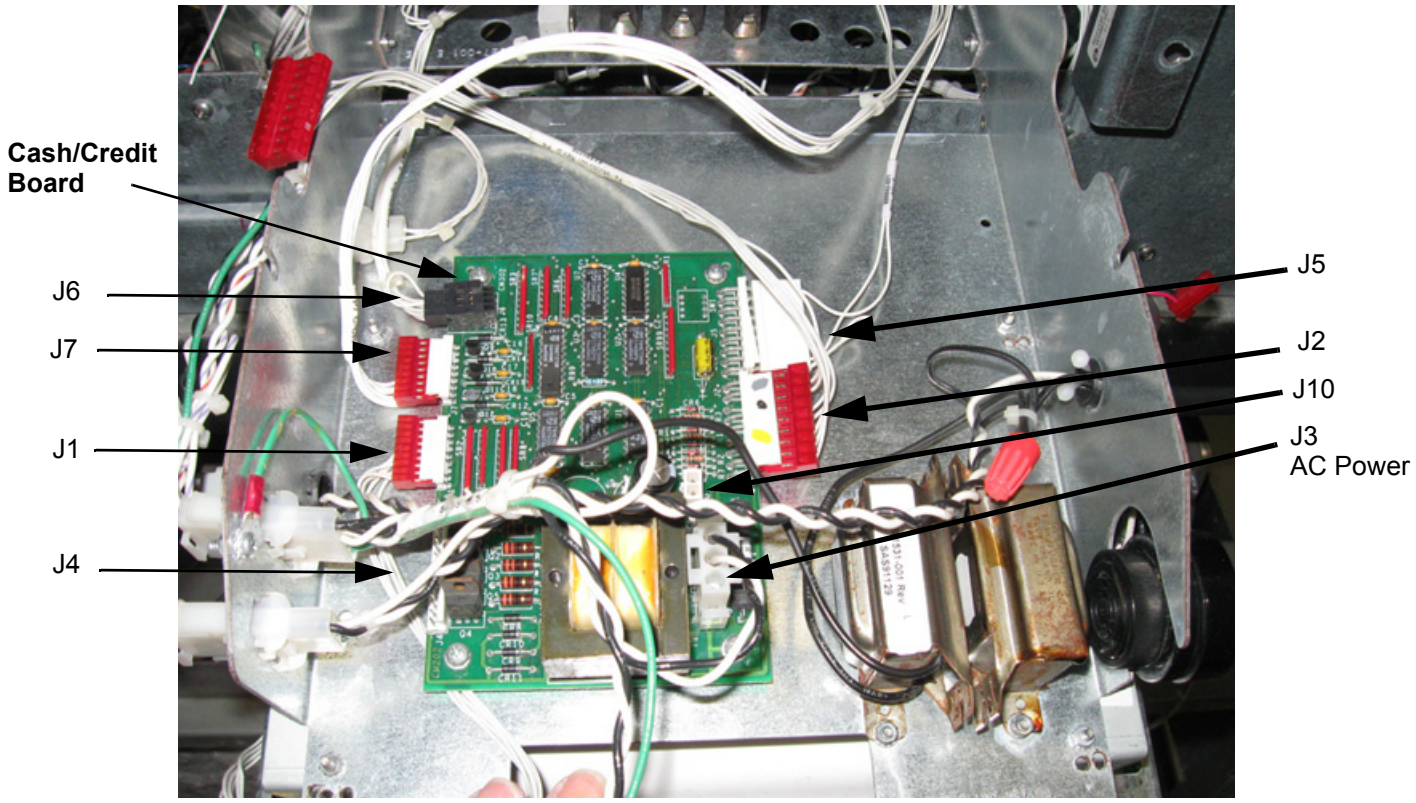
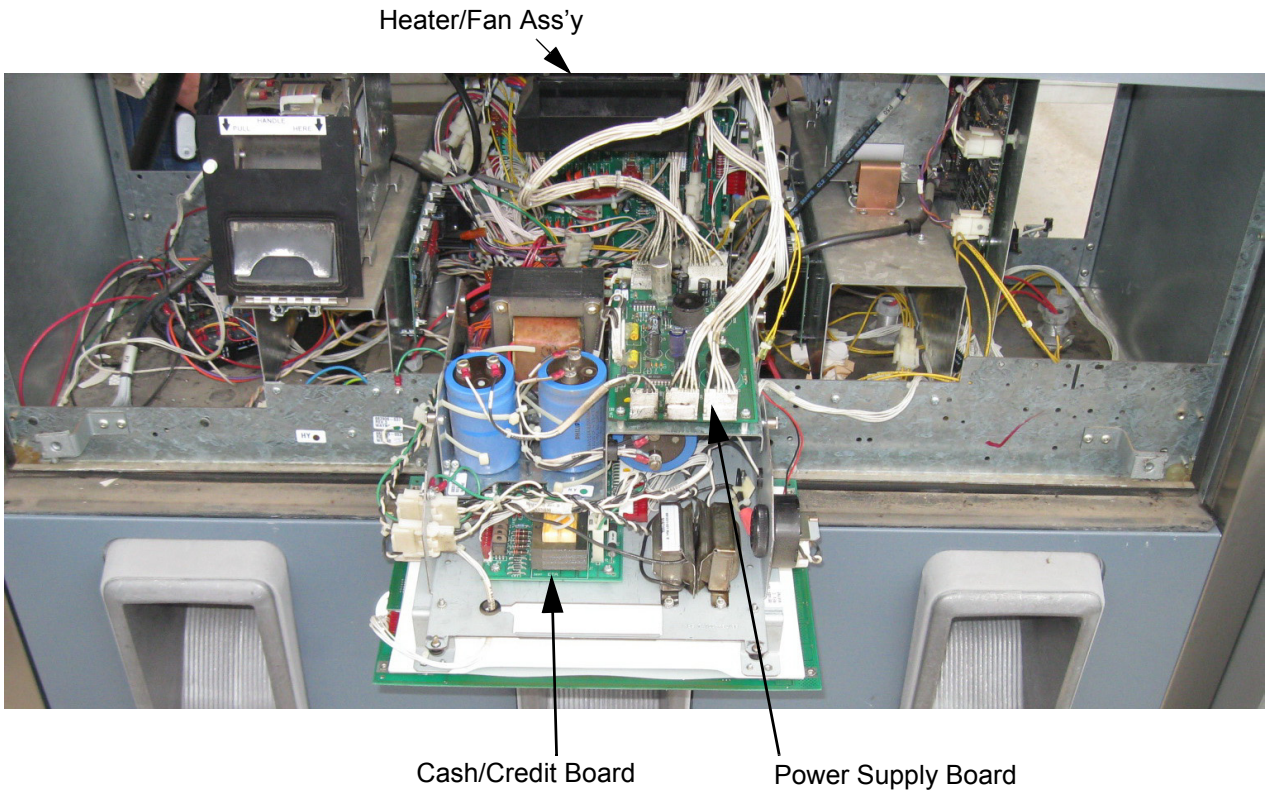


B

FIGURE 4 SIDE 1



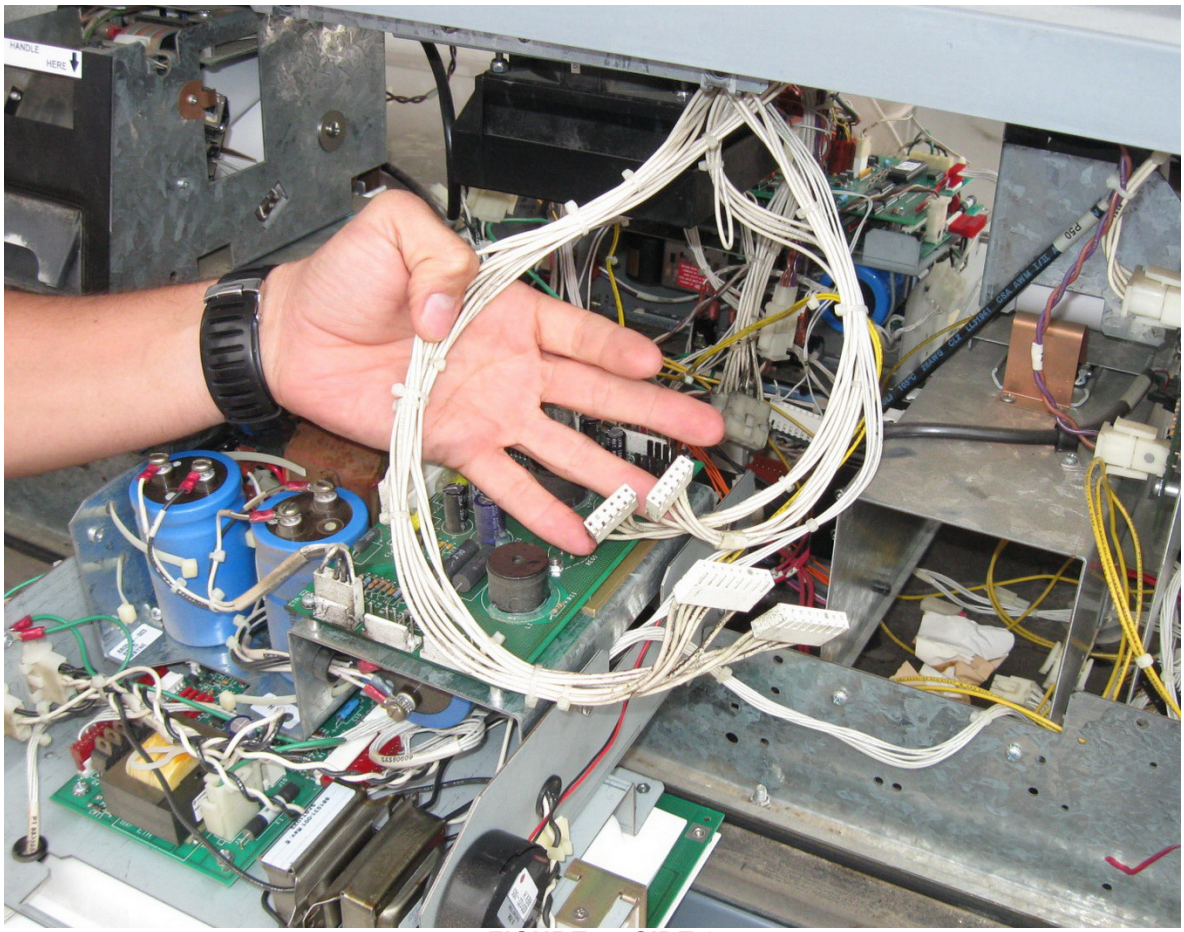


FIGURE 5 SIDE 2

FIGURE 6 Remove head

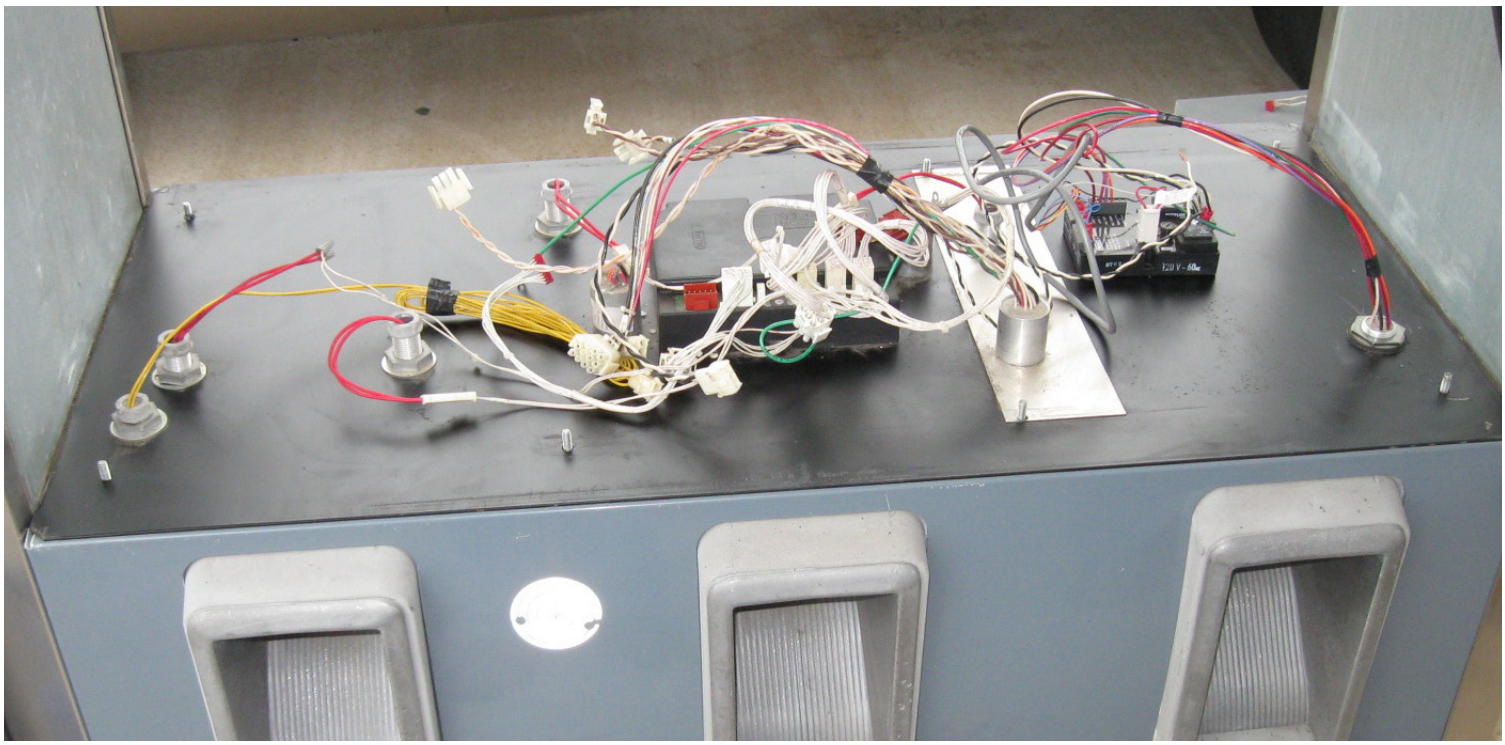


FIGURE 7 Clean Vapor Barrier

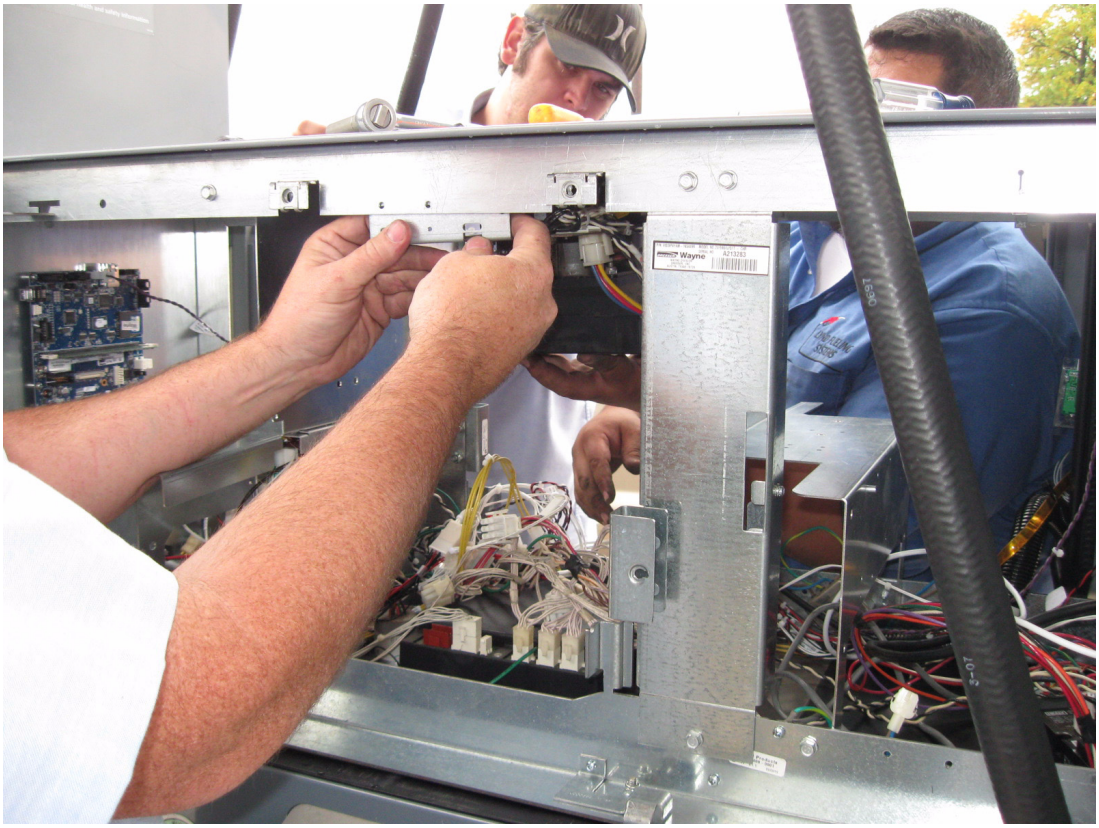
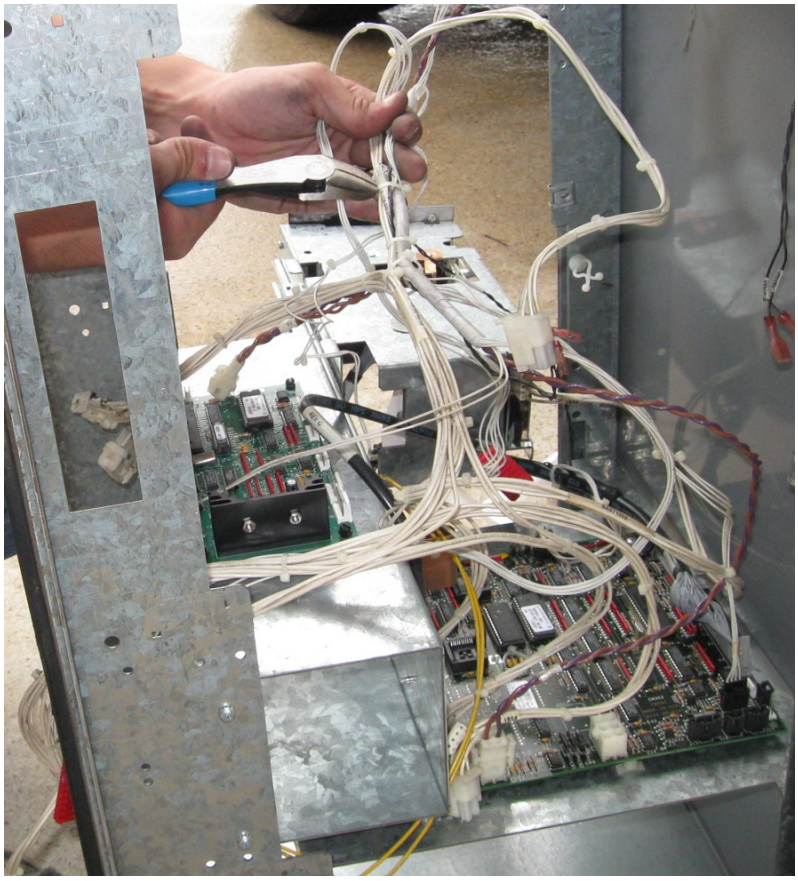


FIGURE 8 Install New head



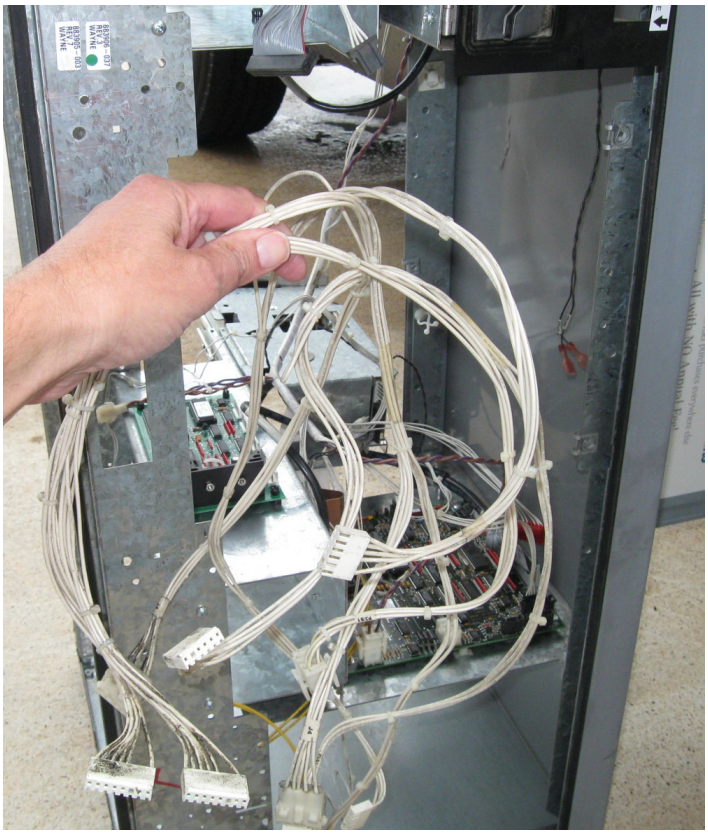


FIGURE 9

FIGURE 10

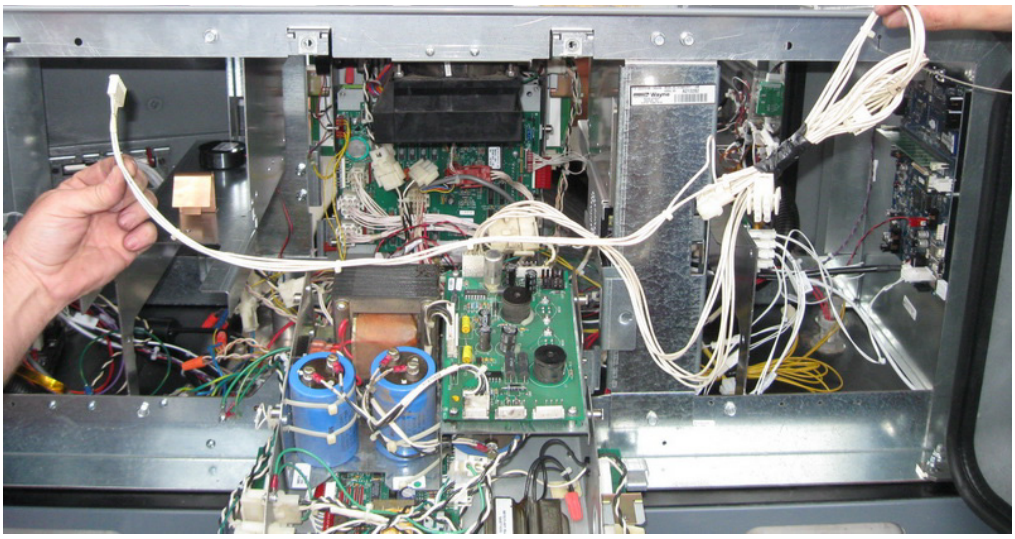
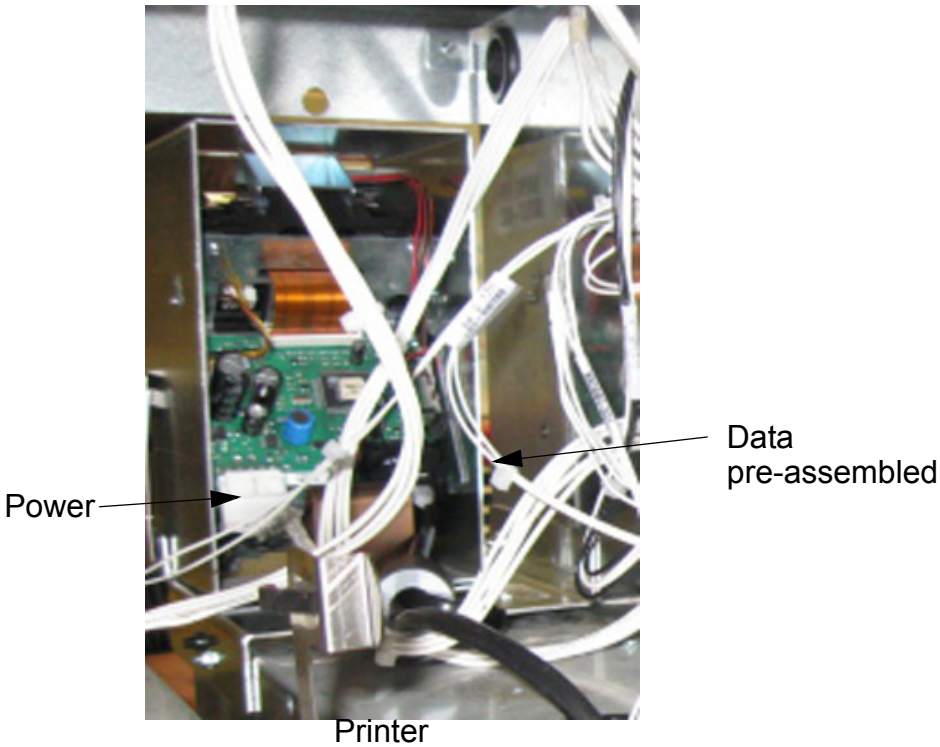


FIGURE 11



Printer

FIGURE 12

Bezel Harness

iX (R2) Board

iX Board

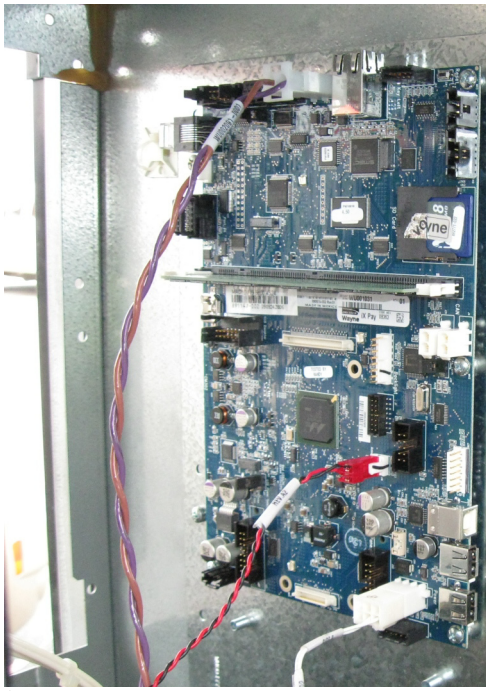


FIGURE 13

FIGURE 14 Completed Dispenser

FIGURE 15

FIGURE 16

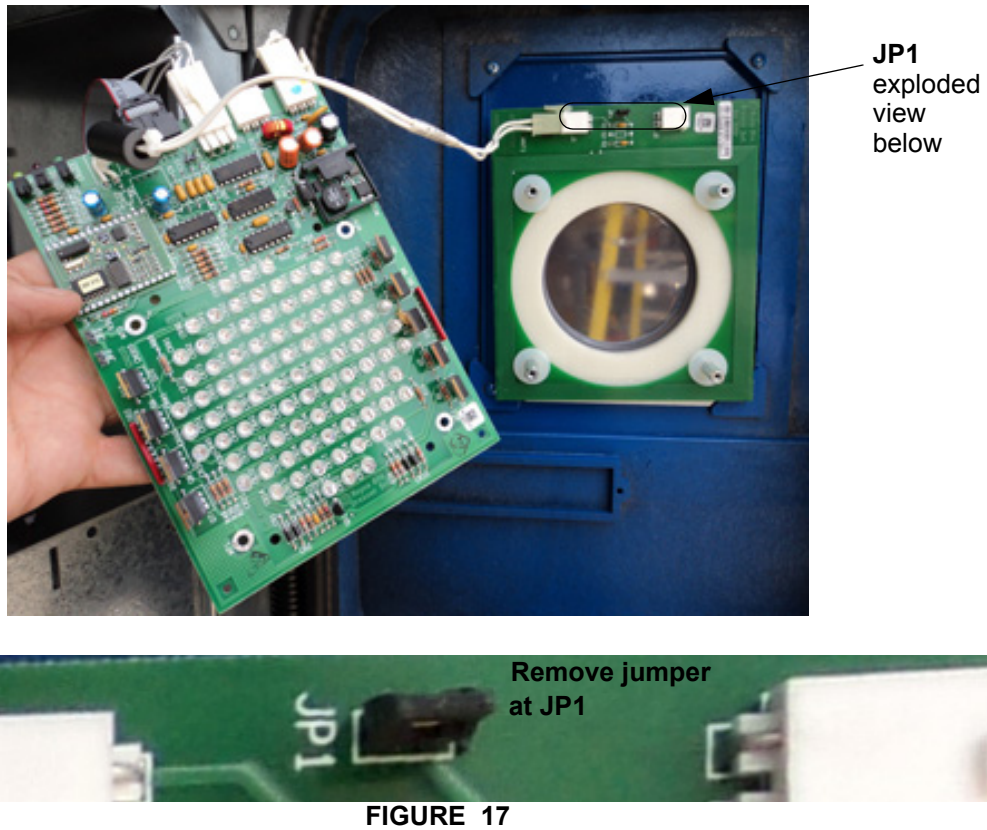


FIGURE 17

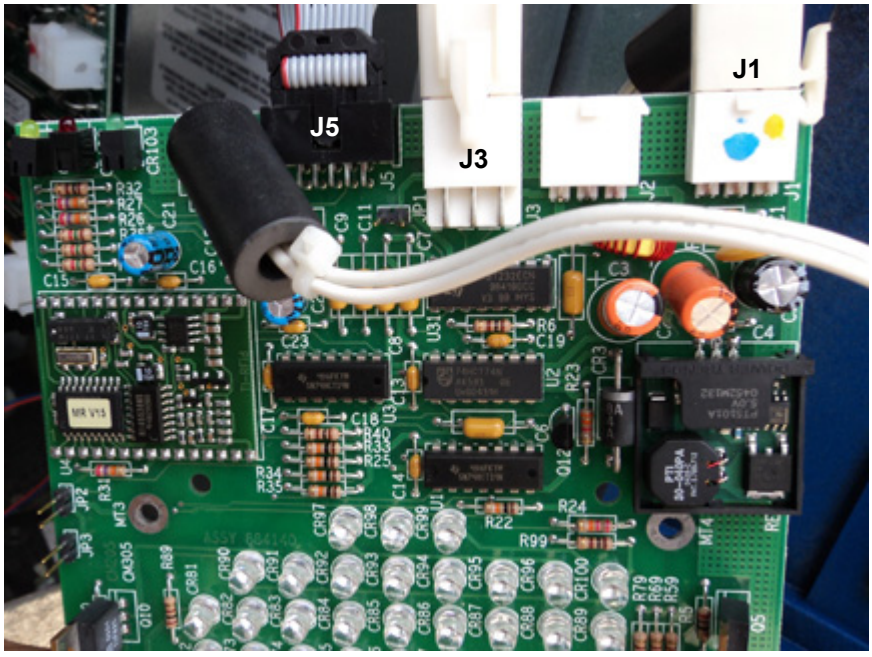


FIGURE 18

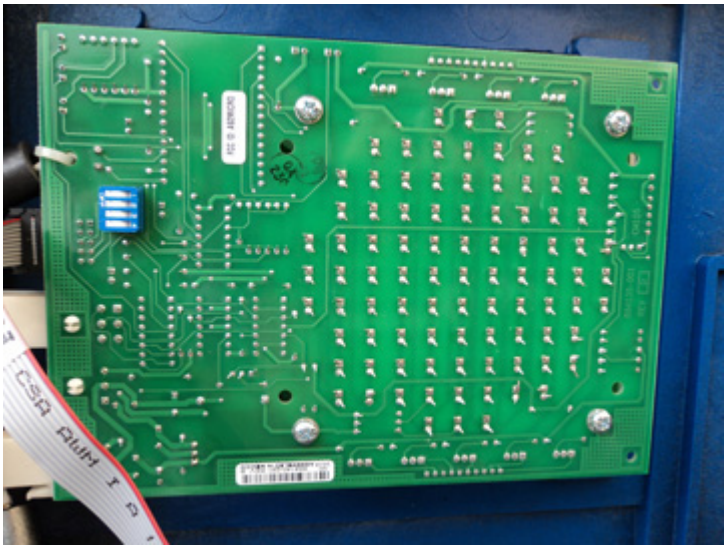


FIGURE 19

FIGURE 20

FIGURE 21 *TRAC* Installed

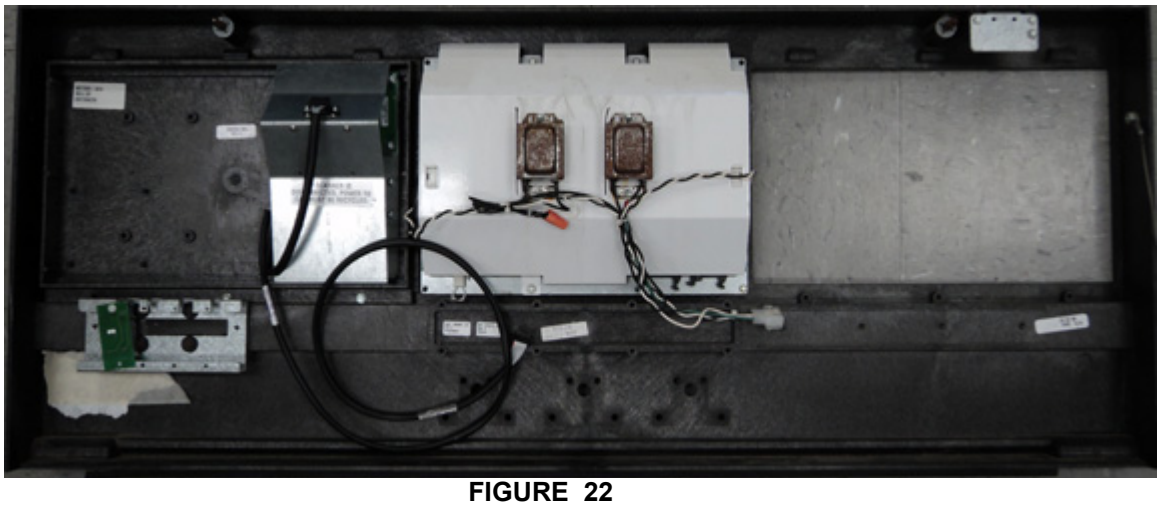


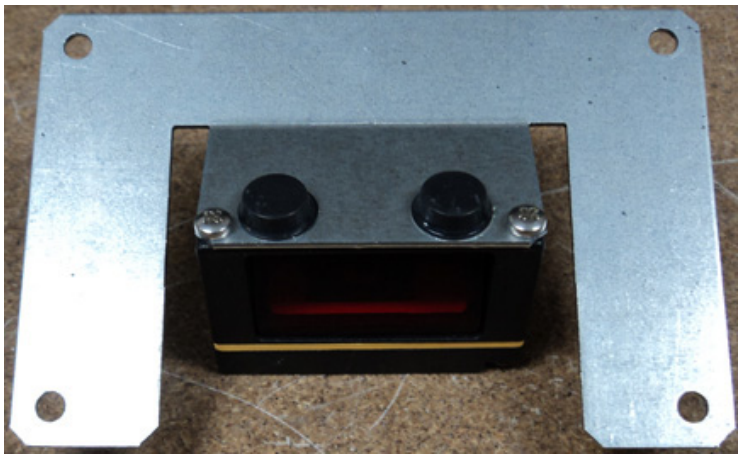
FIGURE 22

FIGURE 23

FIGURE 24

FIGURE 25

FIGURE 26



SCAN option 1

SCAN option 2

FIGURE 27

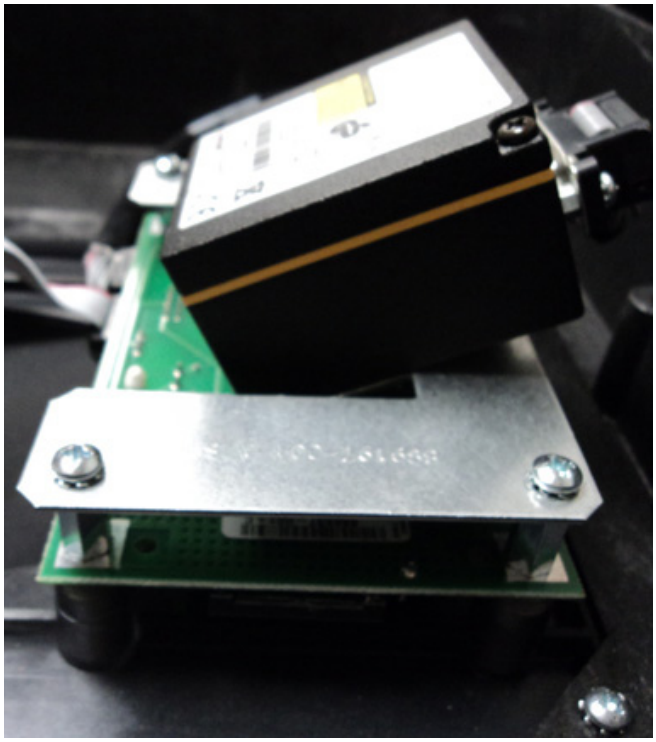
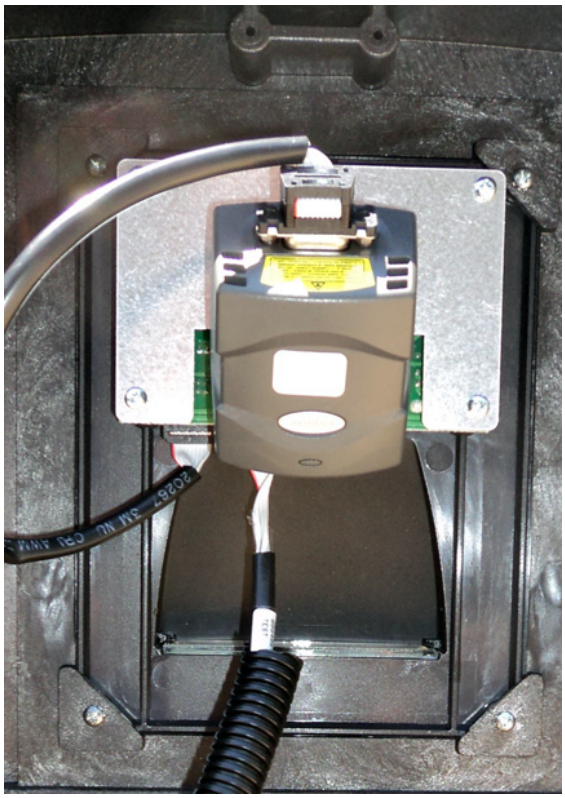


FIGURE 28

SCAN Option 1



SCAN Option 2

FIGURE 29

FIGURE 30 - *SCAN* installed

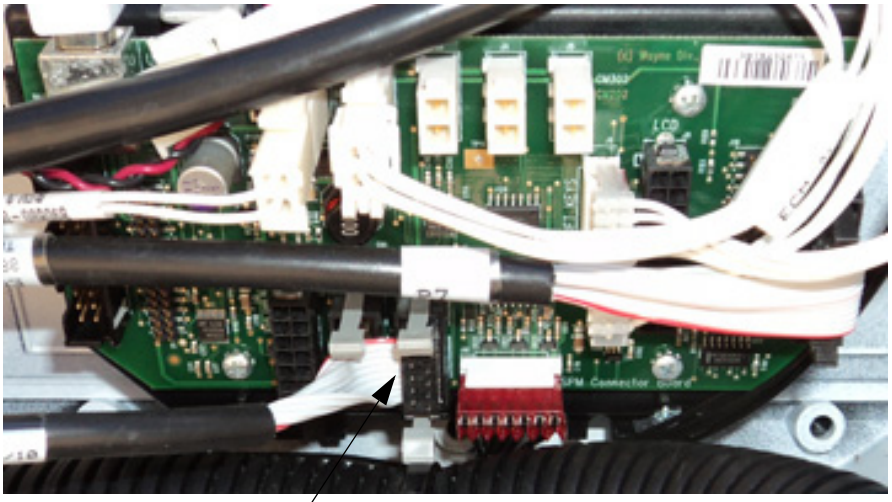
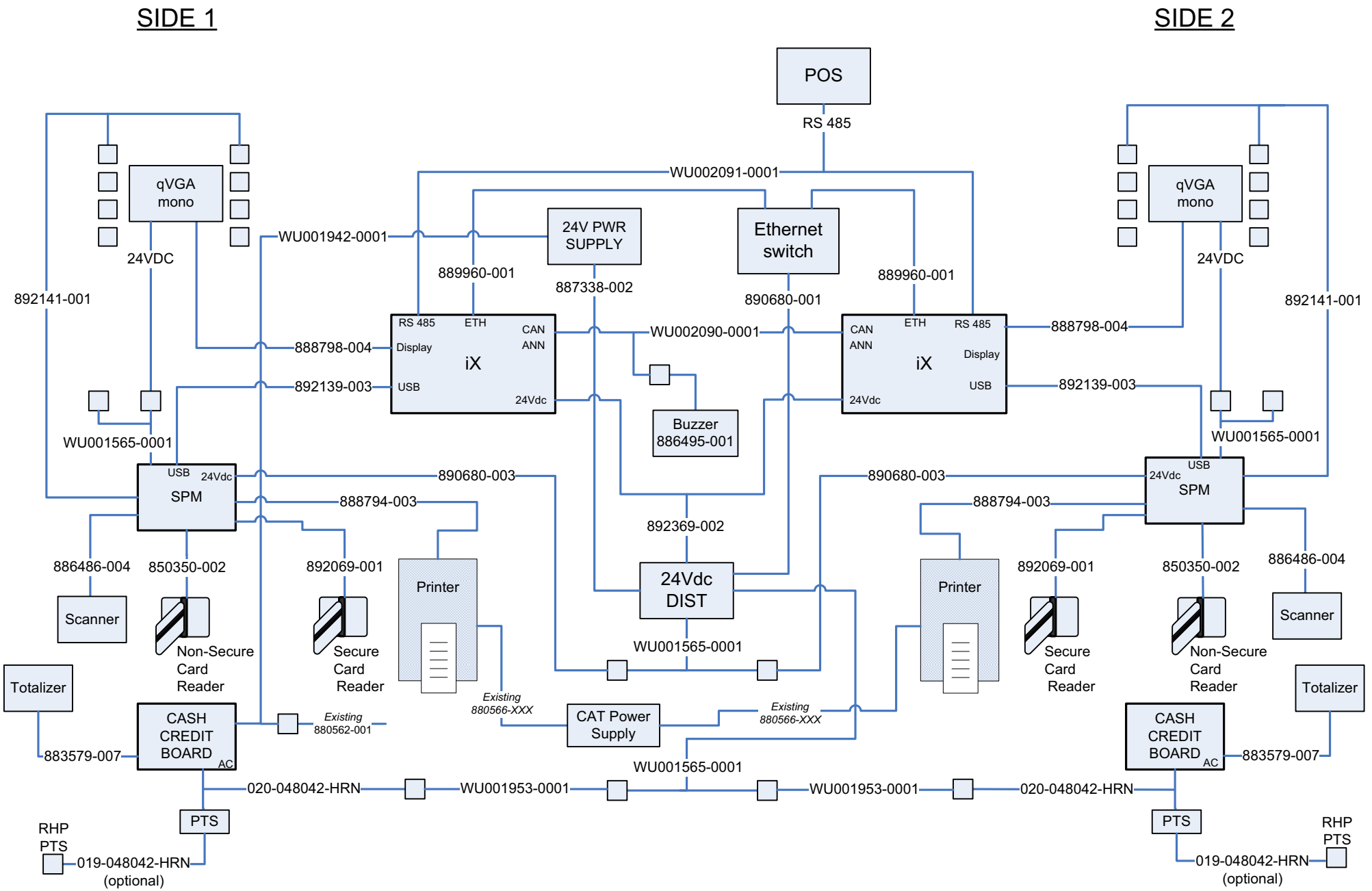
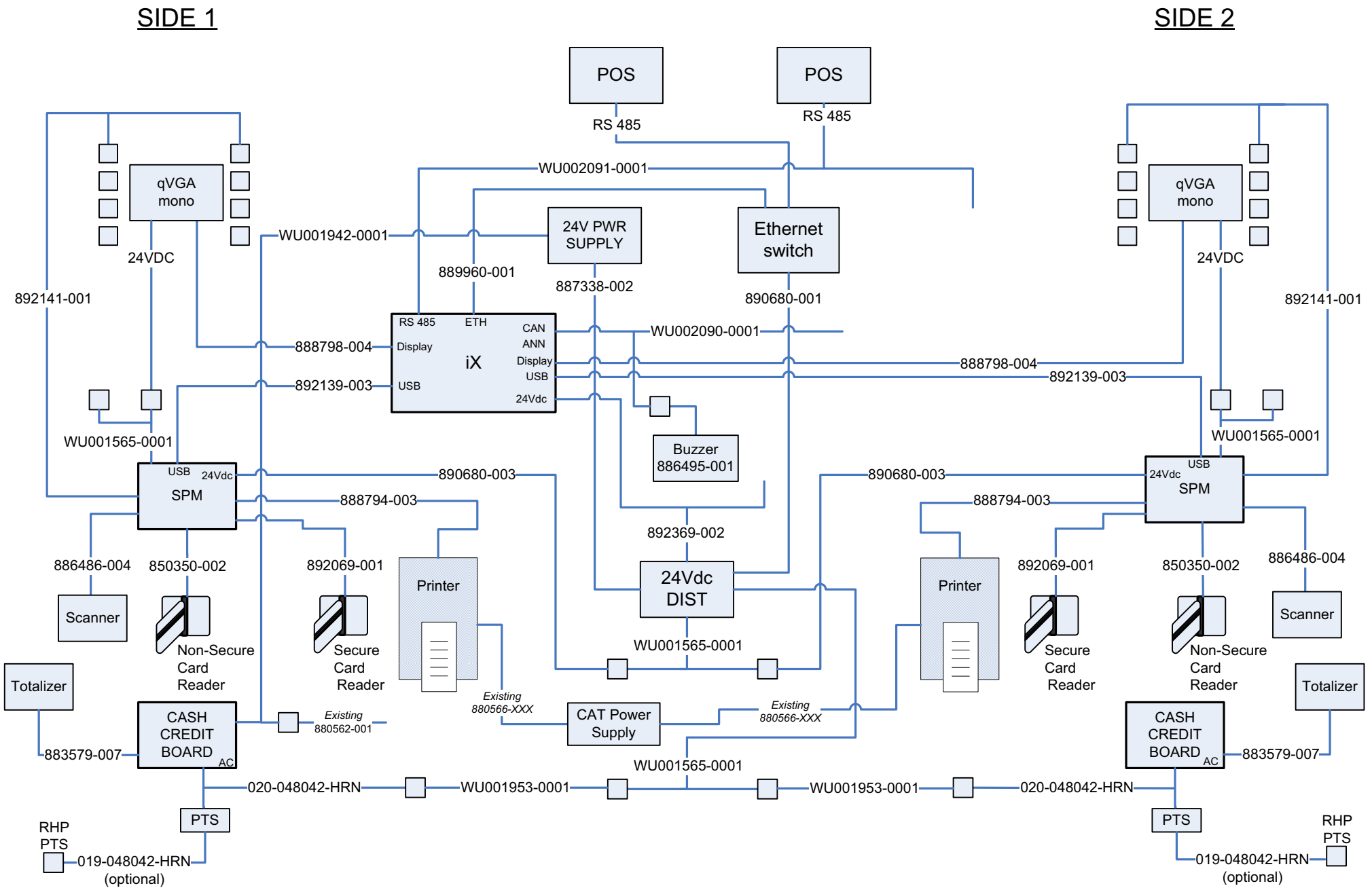


FIGURE 31 Scanner Cable to SPM J15

1 Vista SPM Retrofit Wiring Diagram



1 Vista SPM Retrofit Wiring Diagram for R2



INSTALLATION MANUAL

SPM Retrofit Kits
for 1/V Dispensers

Written by S. G. Martin

This manual was produced using Adobe® FrameMaker® and Photoshop®

Page design uses Arial Fonts

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

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