DRESSER Wayne

INSTALLATION

Ovation Dispenser
iMeter to Xflo Meter
Retrofit Kit
P/N WU000974-XXXX

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.

1 INTRODUCTION

This manual provides instructions for removing the iMeter (with pulser) and installing the Xflo meter (with pulser) in Ovation dispensers. The Kit part numbers are WU000974-0001 thru -0003 for the number of meters, 1 to 3, respectively.

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

1.1 Parts Required

The parts and quantities listed in Table 1 are included in the kits depending on the kit suffix (dash) number as shown. Item numbers in the table are referenced to Figure 1.

Table 1 Parts Required

Part Number	Description	QTY -0001 Kit	QTY -0002 Kit	QTY -0003 Kit	Item No.
891381-001	Elbow, 90 deg			1	1 (-0003 kit only)
2-219892-	Union, 3/4”			1	2 (-0003 kit only)
891382-001	Conduit			1	3 (-0003 kit only)
000-916695-	Screw, 1/4-20 x 7/8	2	4	6	4
WU000095-0001	Xflo Meter assembly	1	2	3	5 with XWIP
890543-001	Lockpin & retaining clip	2	4	6	6
000-905817-	O-ring 1”, valve	2	4	6	7
001-921130-	O-ring .850”, product tube	2	4	6	8
888084-001	Filter	1	2	3	9
000-920886-	Installation manual	1			10 not shown

Note: Installer to supply pipe nipples as detailed in the instructions.

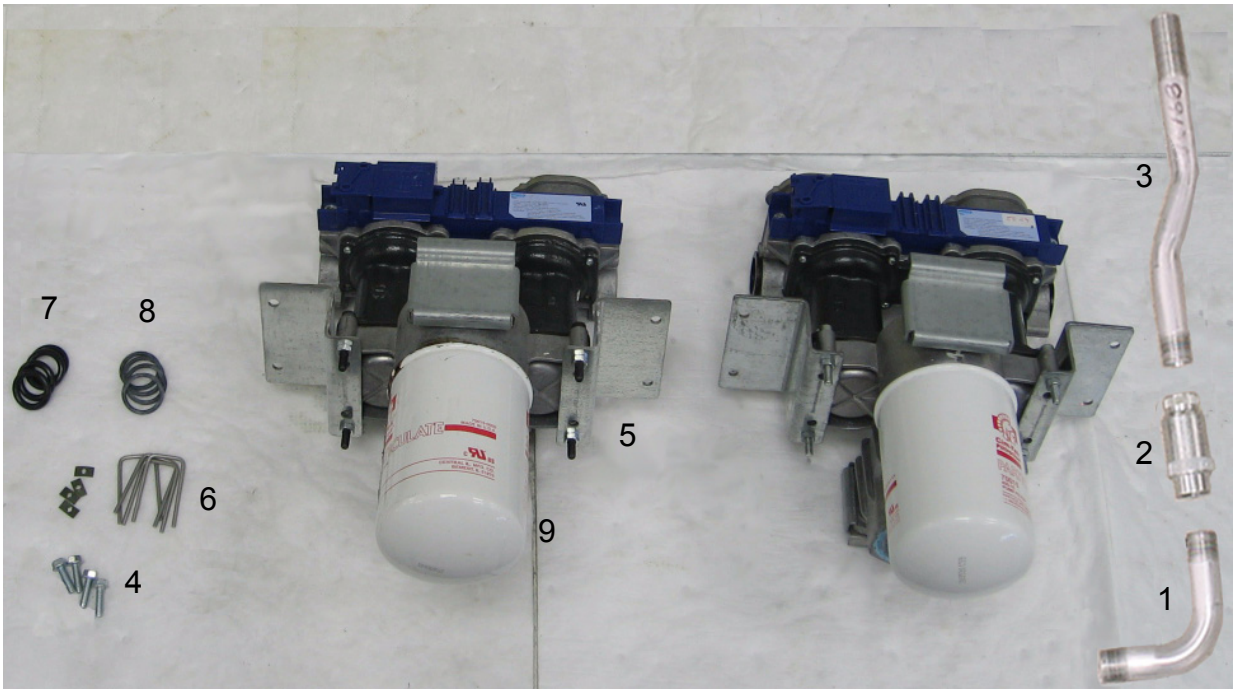


FIGURE 1 PARTS IN THE KIT. *2 Meter (-002) Kit Shown. Note: Filter is not part of the meter assembly.*

1.2 Tools Required

- Service Laptop
- iGEM pump software (current version is rev 49)
- servTerm (current version 5.4.2)
- Tube cutter, for example Ridgid Model 104 (3/16-15/16")
- Pipe wrenches
- Channel locks

3/8" and ½" Hex socket and ratchet

5 mm wrench

Flathead and Phillips head screwdrivers

Wire nuts

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.
- 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]"

⚠ **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.

2 INSTALLATION

Before beginning the installation, adhere to the safety precautions listed in Section 1.3.

2.1 Installation Instructions

1. Open upper service doors and remove lower service doors on both sides of dispenser.

2. Trip Emergency shear valves.

3. Connect laptop to the iGem computer, Figure 2.

4. Using Servterm version 5.3.7 or higher, get a Data Dump from the iGEM computer, then load iGEM pump software rev 49.00 or higher and dispenser Xflo template.

5. Using the IR remote, set clock, fueling points, blend ratios, prices, valve delays and sub-pump assignments, and put the dispenser in standalone mode.

6. Use 30 psi Nitrogen to purge each product.

7. Turn off AC power to the dispenser at the circuit breaker inside the building and turn the DD box switch bypass to remove dispenser from the control system.

8. For (-0003 kit only): Remove junction box cover. Label and then disconnect all wires on top of the terminal strip. Save cover and all hardware. See wiring diagram as needed at the end of this manual.

9. For (-0003 kit only): Loosen main conduit nut and coupling under the vapor barrier, Figure 3A and remove the main wire harness/potted fitting, Figure 3B. Pull fitting and wiring up through vapor barrier. Save washer and wiring harness.
   (Be sure to remove any wire nuts from unused wires before pulling through the conduit.)

CAUTION: In the steps below, there may be some pressure buildup at the filter and at the valve from purging the product lines. Take the necessary precautions, wear safety glasses, etc.

10. Remove filters and drain. (Removing the filters will allow access to the unions.)

11. Disconnect unions, see Figure 4.

12. For (-0003 kit only): Remove main conduit. Use tube cutter, see Figure 5, and cut conduit behind the junction box, then unscrew the two sections. Save the locknut, coupling, and washer for reuse.

13. A) Disconnect all valve wires inside the electronic enclosure. Loosen conduit nuts under vapor barrier for all valve conduits, Figure 6A. Remove conduit nuts and washers from the top of all valve conduits, Figure 6B. Remove valve coil retaining clip (or nut) from all coils and remove coil/conduit assembly, Figure 7.

    B) Remove product tube retaining pins, Figure 7, and product tubes from all valves. Rotate valves 90 degrees to gain access to retaining plate screws. For each valve, use 5mm wrench and remove the (2) retaining plate screws. Remove all valves from meters, Figure 8. Save all valves and hardware.

14. For (-0003 kit only):
    A) Screw lock nut, coupling and then washer (from step 12) onto top of conduit as previously shown in Figure 3A.

    B) Thread (item 1) 90 degree conduit Elbow into back of junction box as shown in Figure 9, and then connect top of elbow to the (item 3) Conduit using the (item 2) Union as shown in Figure 10.

15. For (-0003 kit only):
    A) Reinstall wire harness: tape wires together, and pull wires through the washer (retained in Step 9) and vapor barrier and through the new conduit and into the junction box.

    B) Screw the conduit coupling up the conduit and thread onto potted fitting and tighten conduit nut to firmly secure the coupling to the vapor barrier ensuring a tight seal with the vapor barrier. **WARNING:** A tight seal must be formed at the vapor barrier on both sides using the above hardware as instructed.

16. For (-0003 kit only): Reconnect wires to terminal strip in junction box. Use UL listed wire nuts to terminate all unused wires in the junction box. See wiring diagram 888509-XXX as needed.

17. Remove and save unions, Figure 11. (It may be easier to remove unions while meter is still secured.)

18. This step is optional, but may make removing the iMeters easier:
    Remove (2) 3/8” screws on the ends of cross bracket securing the bracket to the side columns, see Figures 10 and 12, and remove cross bracket. See Note in Figure 11 for newer models.

19. Disconnect the pulser wires at the pulsers.

20. Remove the 3/8” bolts on each side of the iMeter, Figure 10, and remove iMeter as shown in Figure 12.

21. Repeat above applicable steps for removing addition meters. (Note that one of the valve conduits is shaped differently.)

22. Install and (item 9) Filter onto new (item 5) Xflo meter.

23. A) Using 3/8” Screw (item 4), install new (item 5) Xflo meter(s) using the right hole in bracket on side 1, and reinstall the cross bracket Figure 14 if it was removed. See Figure 17 drawing for mounting holes in bracket.

    B) Secure meter with (item 4) Screw in left hole in bracket on side 2. Also see Figures 13-16.

24. Remove valve O-ring and install new valve O-rings (item 7). Lubricate with Vasoline before installing.

25. Re-install valve into meter and secure with retaining plate and 2 screws saved previously.

26. Replace product tube O-ring with new (item 8) O-ring.

27. Re-secure product tube in valve using new (item 6) Lockpin and secure one of the pins with a retaining clip.

28. Reinstall the valve coil/conduit assembly reusing the washers and nuts as shown in Figure 6A and B. Secure the coil to the valve reusing the retaining clip (or nut). (Be sure to use the nut and washer above and below the vapor barrier as shown and tighten properly to form a vapor seal.

29. Reconnect all valve wires inside the electronic enclosure.

30. Cut and thread appropriate length pipe nipple. (This will be a shorter nipple than the iMeter nipple by approximately 1-11/16 “.)

31. Install union on pipe nipple and install pipe nipple into the Xflo meter inlet, shown in Figure 15. Note: Use an appropriate amount of pipe compound on the nipple and union threads. The pipe compound must be Classified for use in a petroleum environment

32. Connect existing pulser wires to new pulser, shown in Figure 16.

33. Reset emergency valves.

34. Visually inspect tube, valve, meter and inlet pipe connections for leaks.

35. Reinstall junction box cover.

36. Turn on dispenser circuit breaker.

37. Perform a 10 gallon purge on each meter.

38. Repeat check for leaks.

39. Perform calibration on each meter side and seal meters when completed. See calibration instructions in the dispenser installation manual.

40. Put dispenser in Serial Mode using the IR remote and reset switches in the DD box for control system operation.

41. Reinstall lower service doors and close upper service doors.

42. Verify dispenser is on control system operation.

This completes the installation.

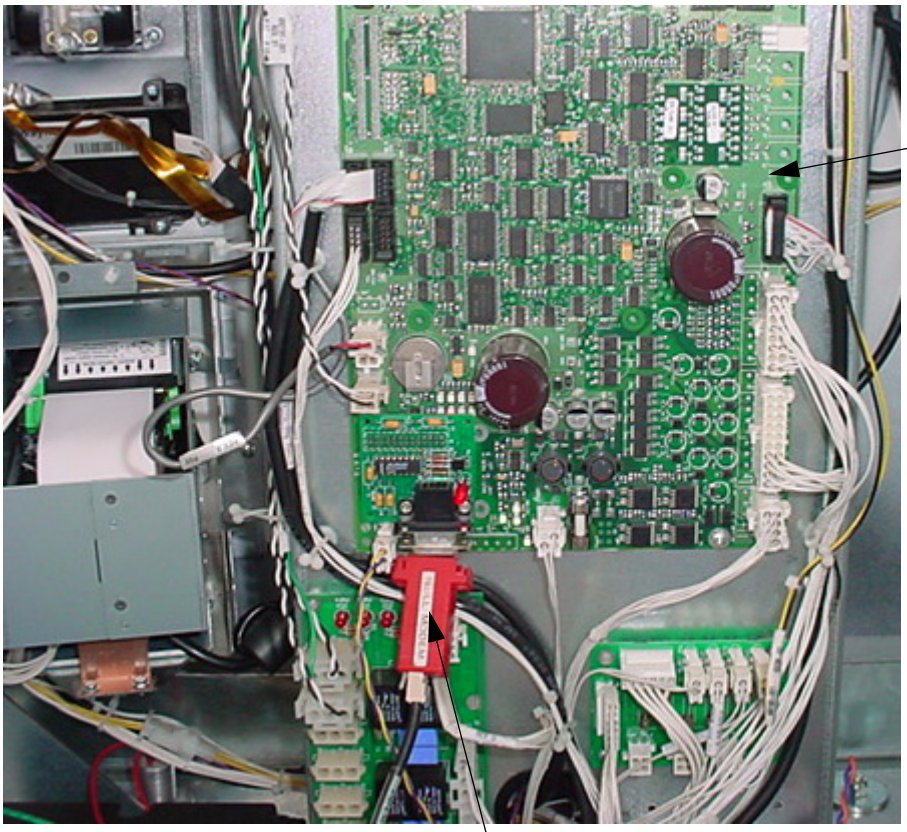
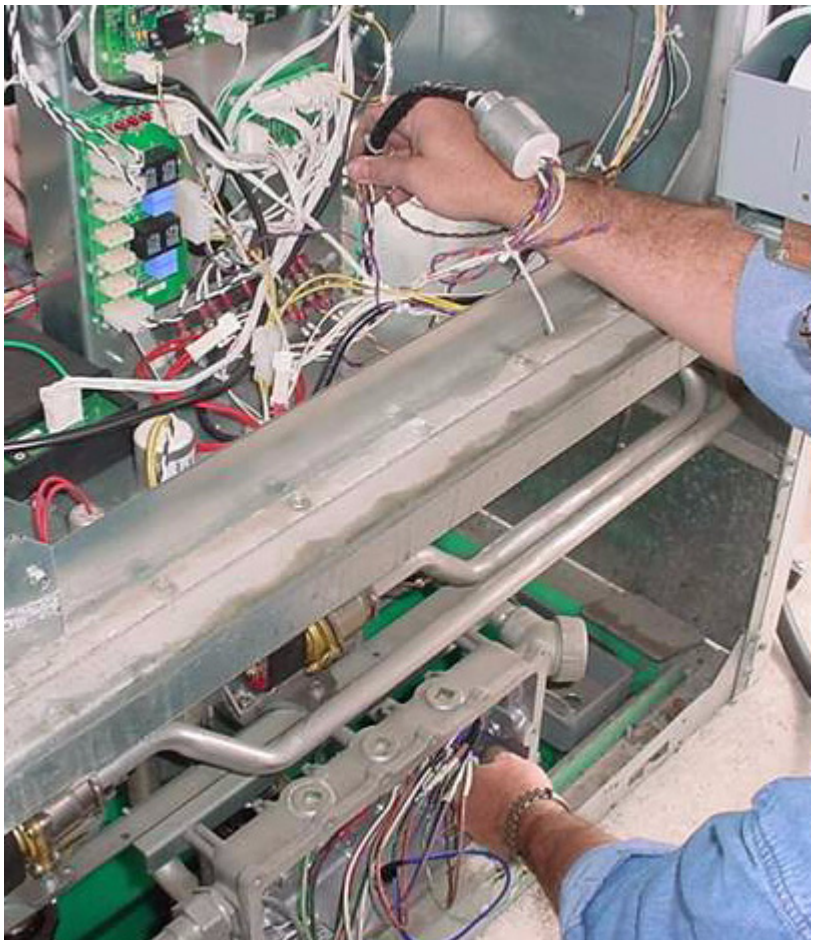


FIGURE 2.

A

Wire Harness Conduit (Locknut, Coupling, Washer)



B

FIGURE 3.

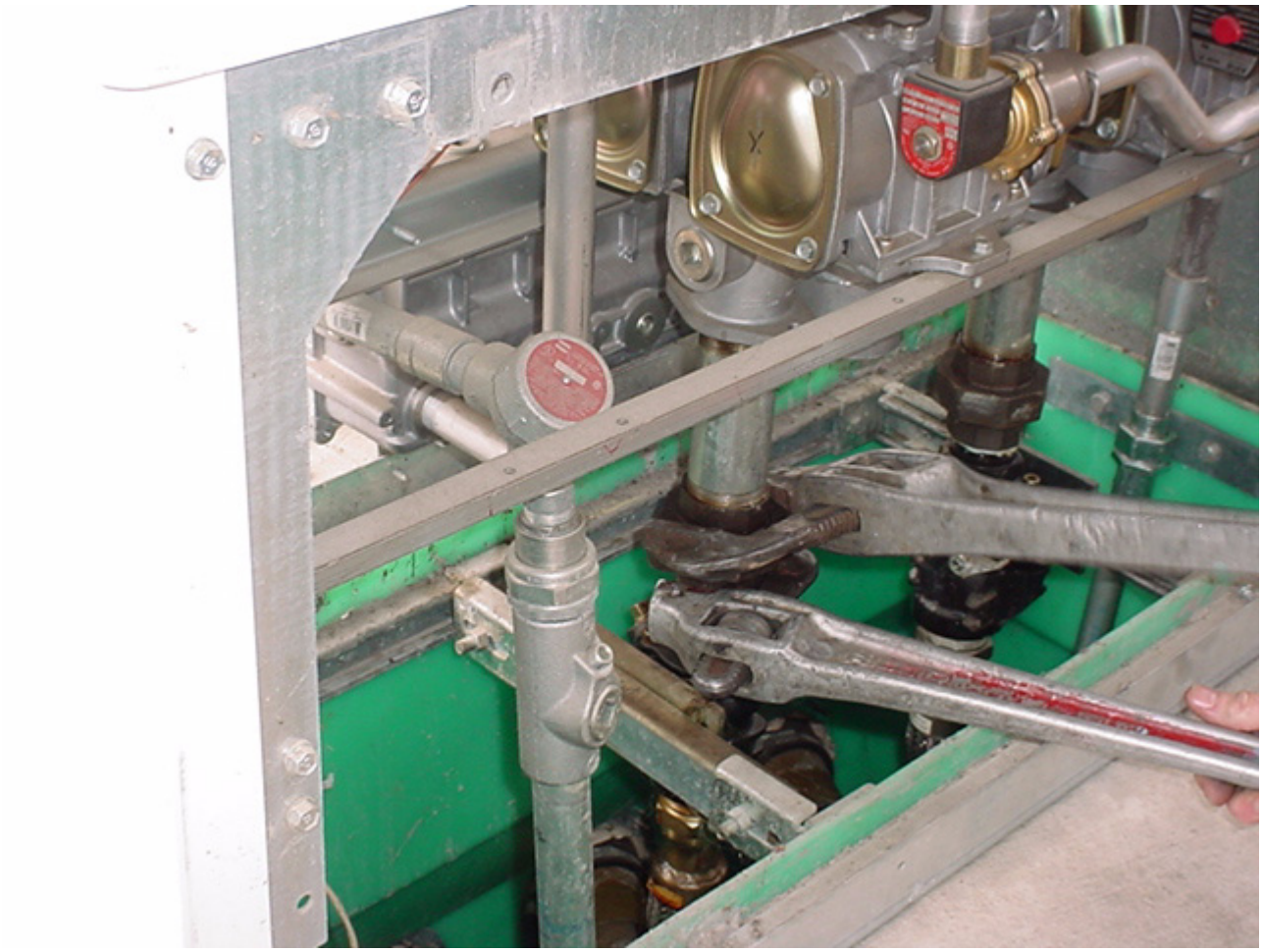


FIGURE 4.

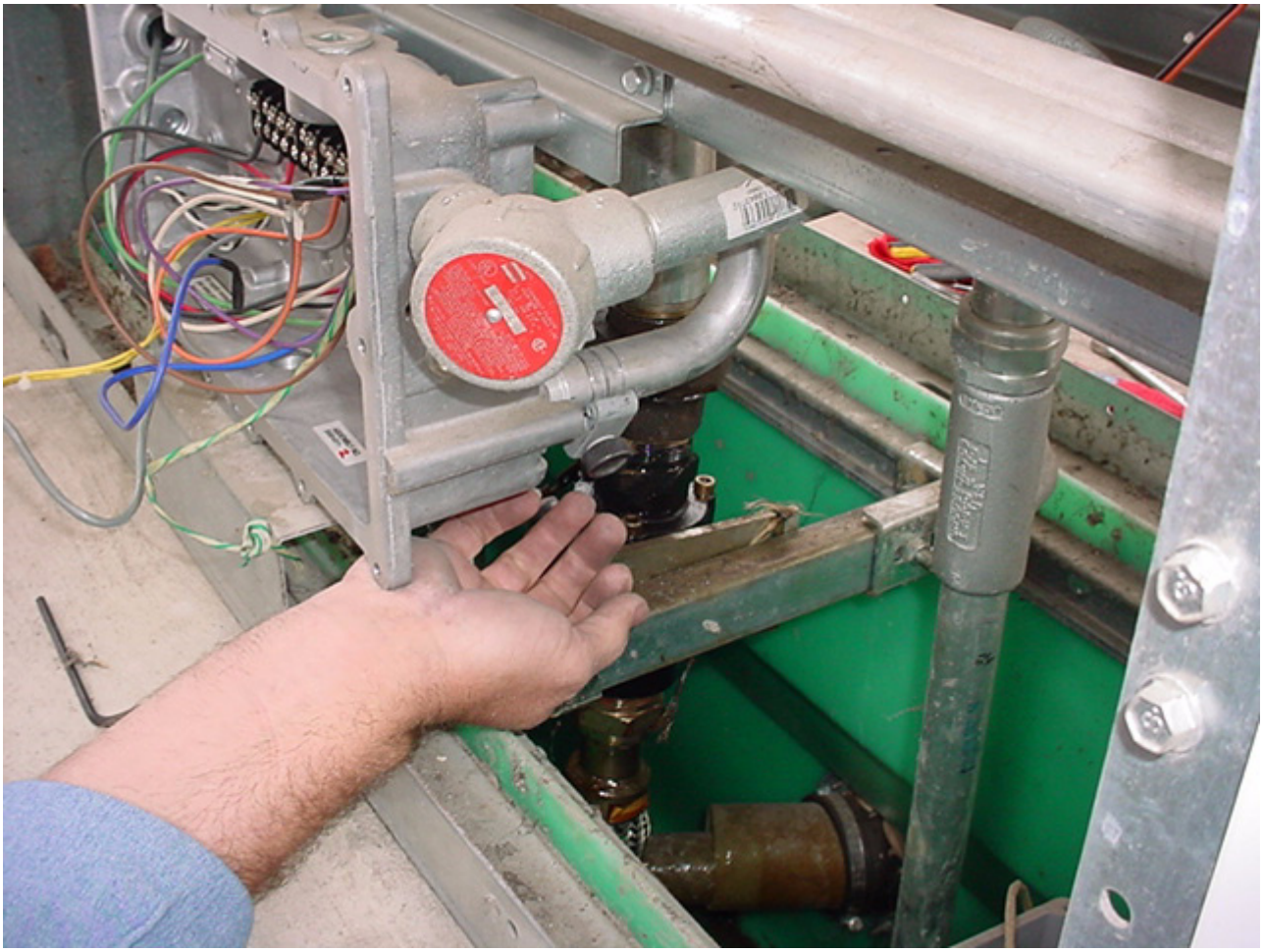
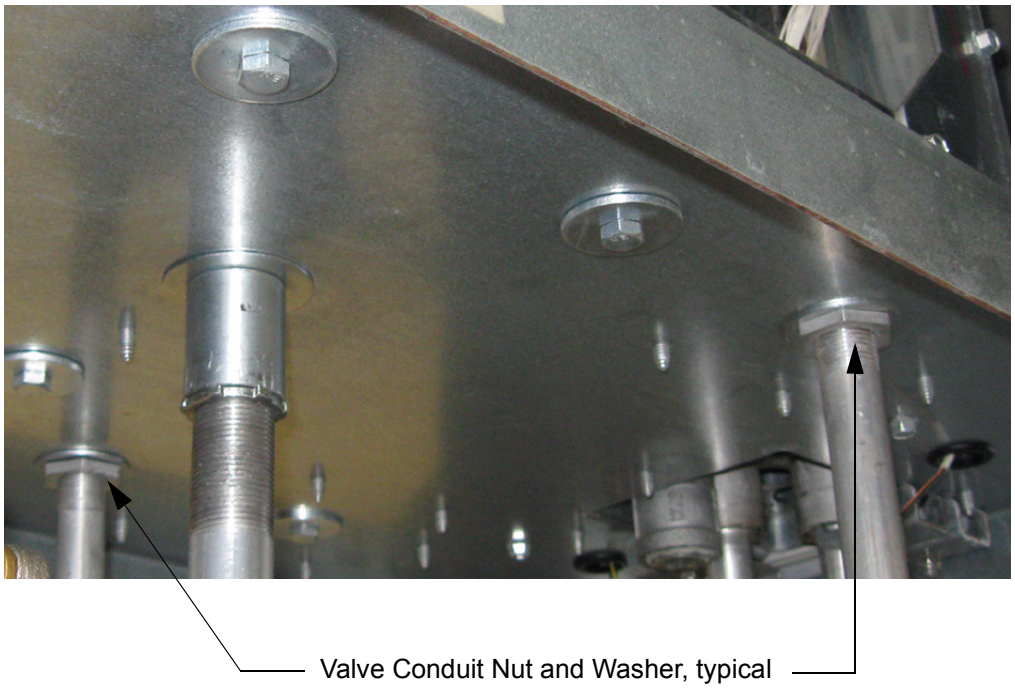
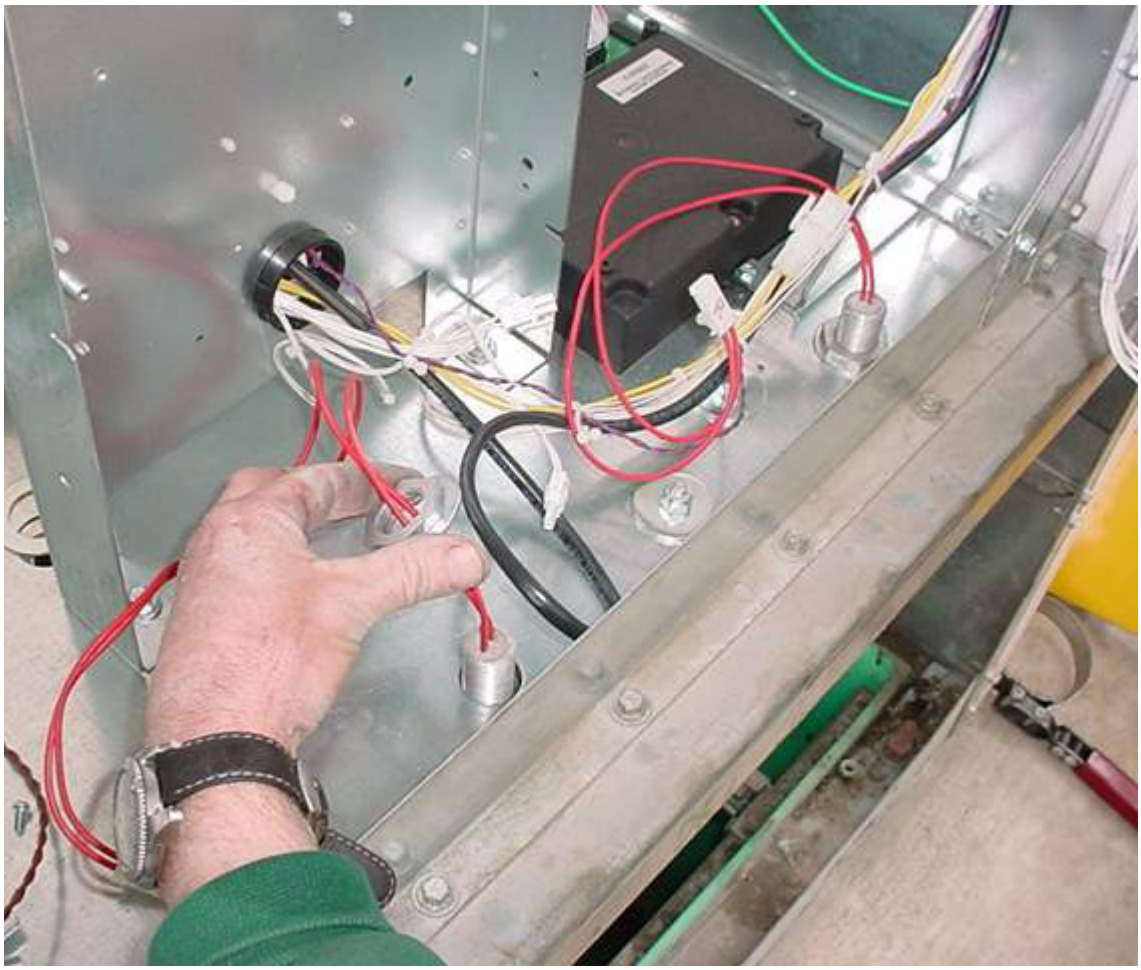


FIGURE 5.



A



B

Removing Valve Conduit Nut and Washer

FIGURE 6.

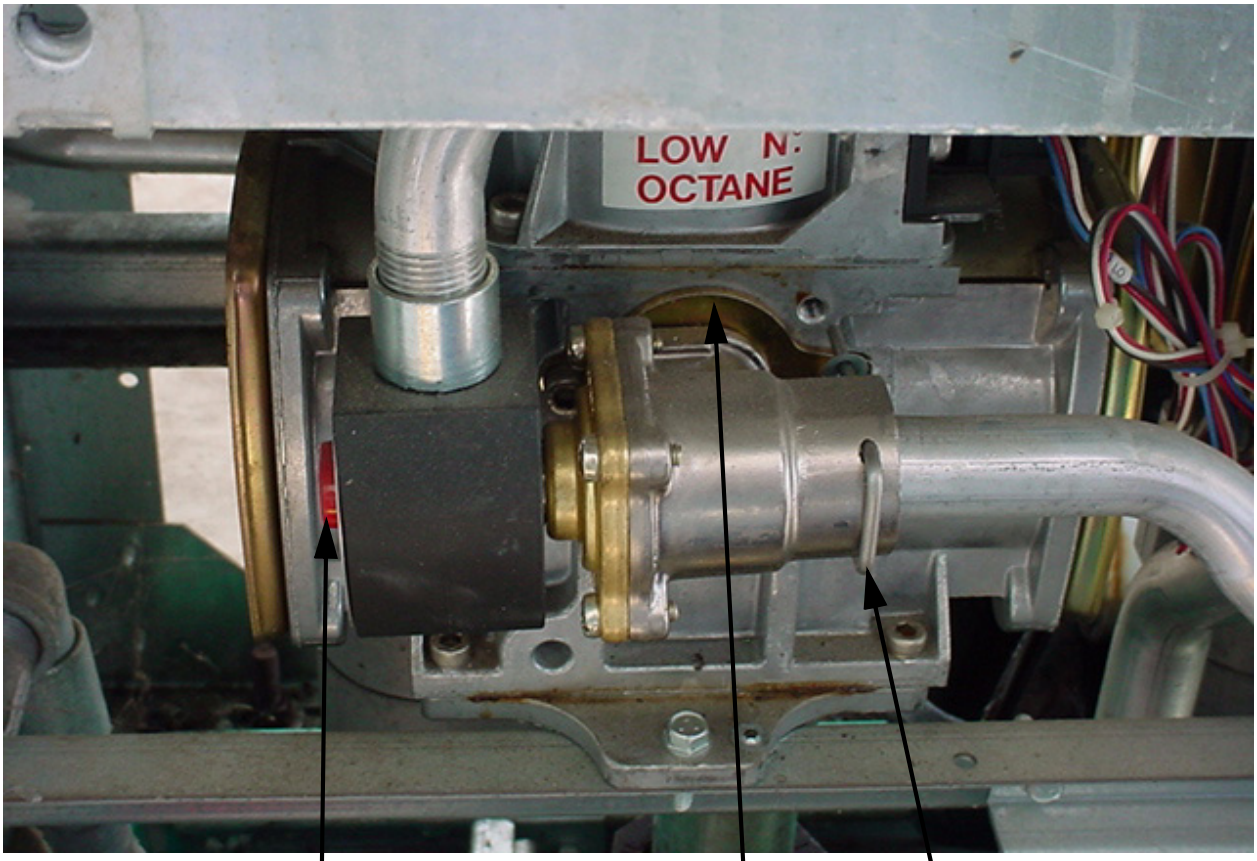

LOW
OCTANE
Valve Coil Retaining Clip
(or Nut, depending on valve type)
Valve Retaining
Plate
Product Tube
Retaining Pin

FIGURE 7.

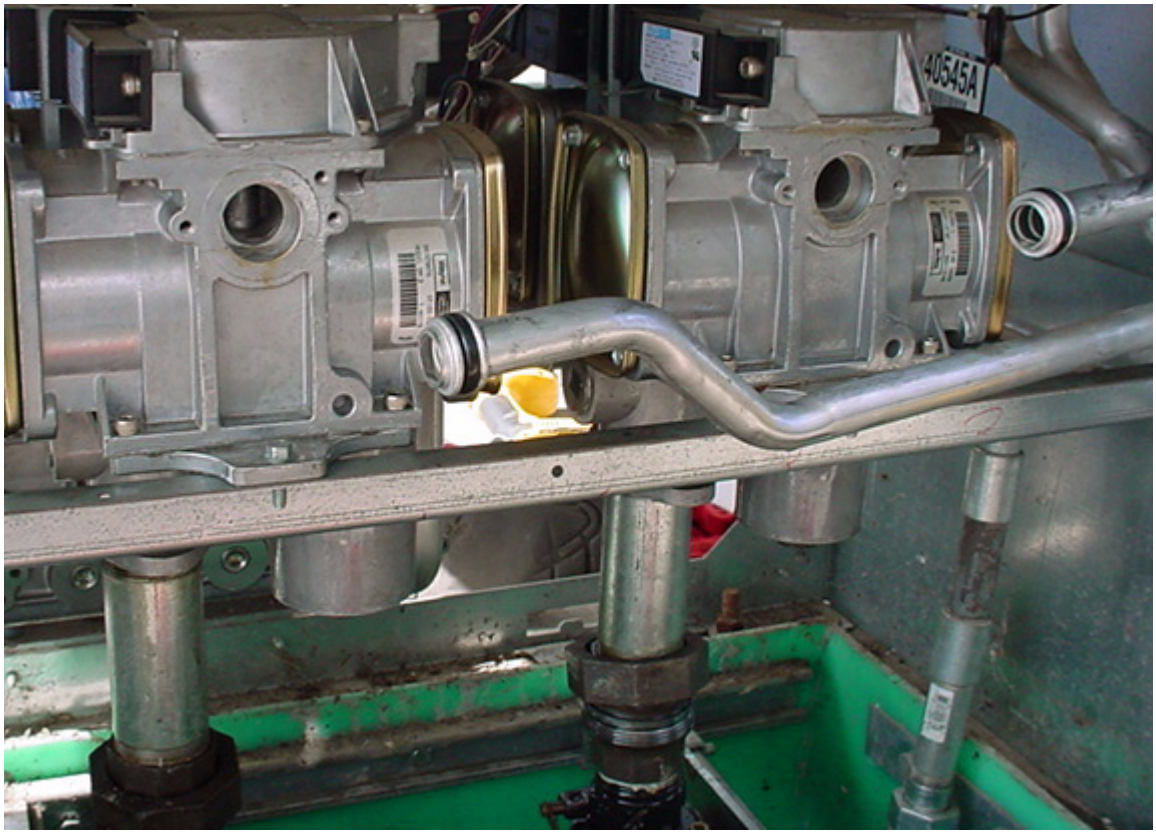
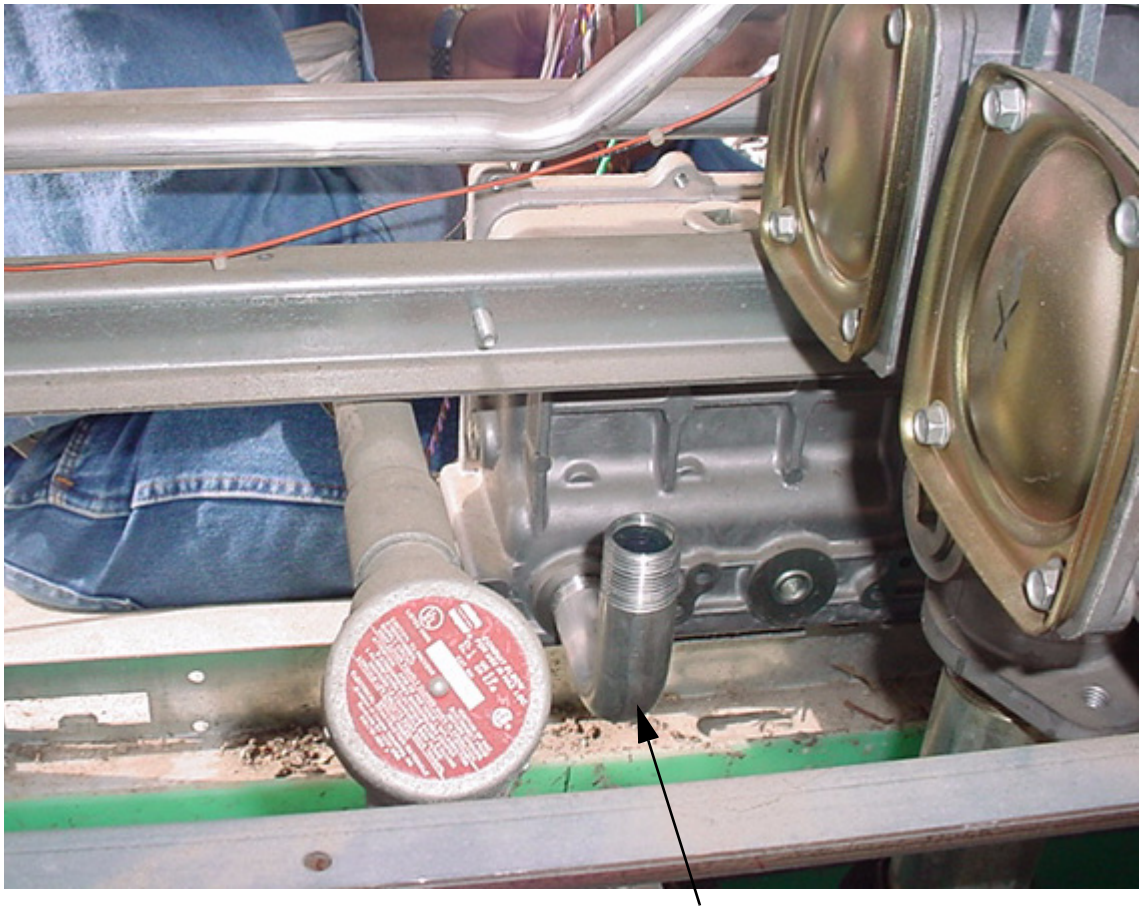


FIGURE 8.



Item 1 Conduit Elbow

FIGURE 9.

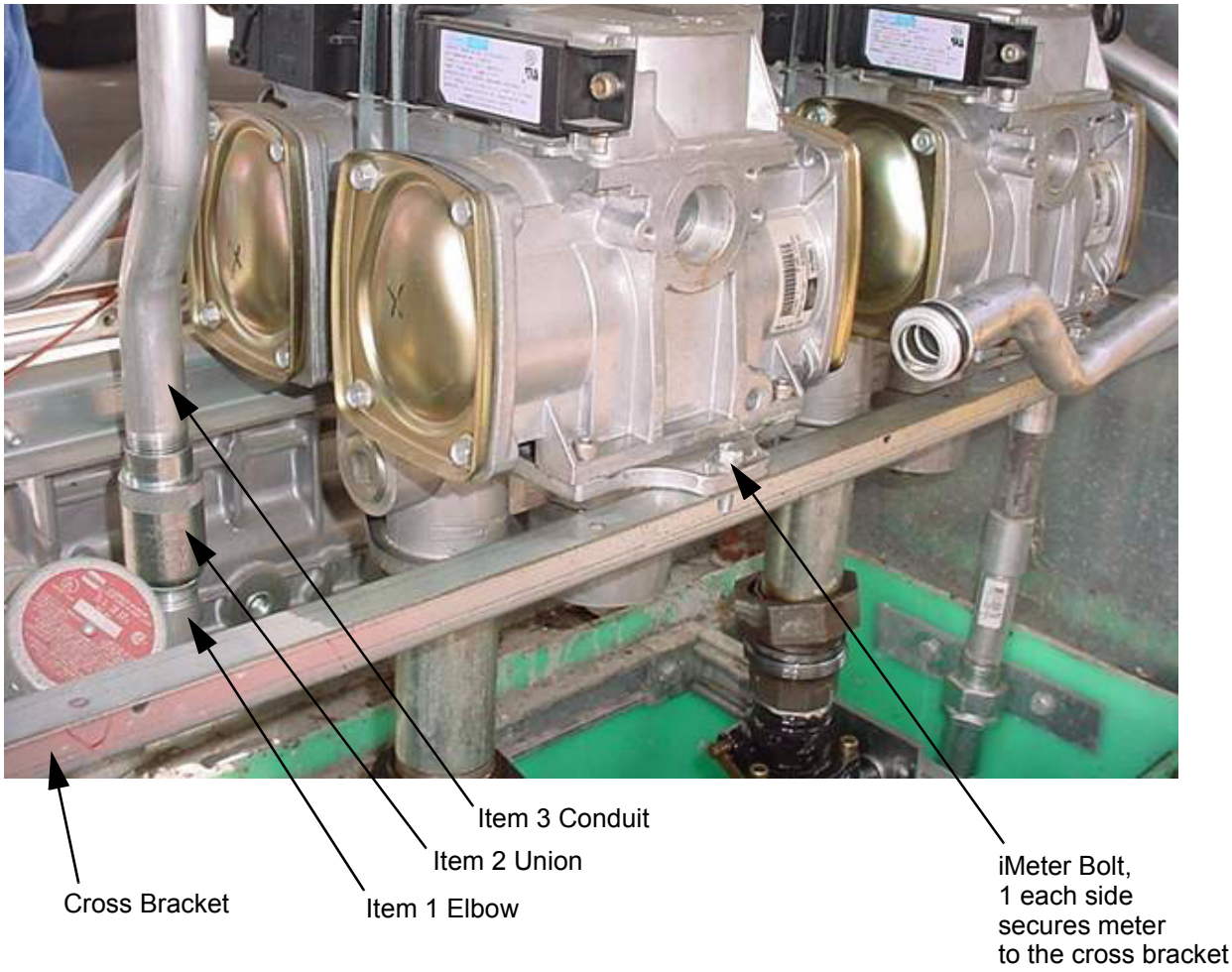

Item 3 Conduit
Item 2 Union
Cross Bracket
Item 1 Elbow
iMeter Bolt,
1 each side
secures meter
to the cross bracket

FIGURE 10.


Plus
V-Power
Note:
On newer models, the Lower Column Cover must be removed to gain access to the meter rail (cross bracket) screws.
2 Screws on each side and 4 screws inside underneath the vapor barrier
Removing Unions

FIGURE 11.

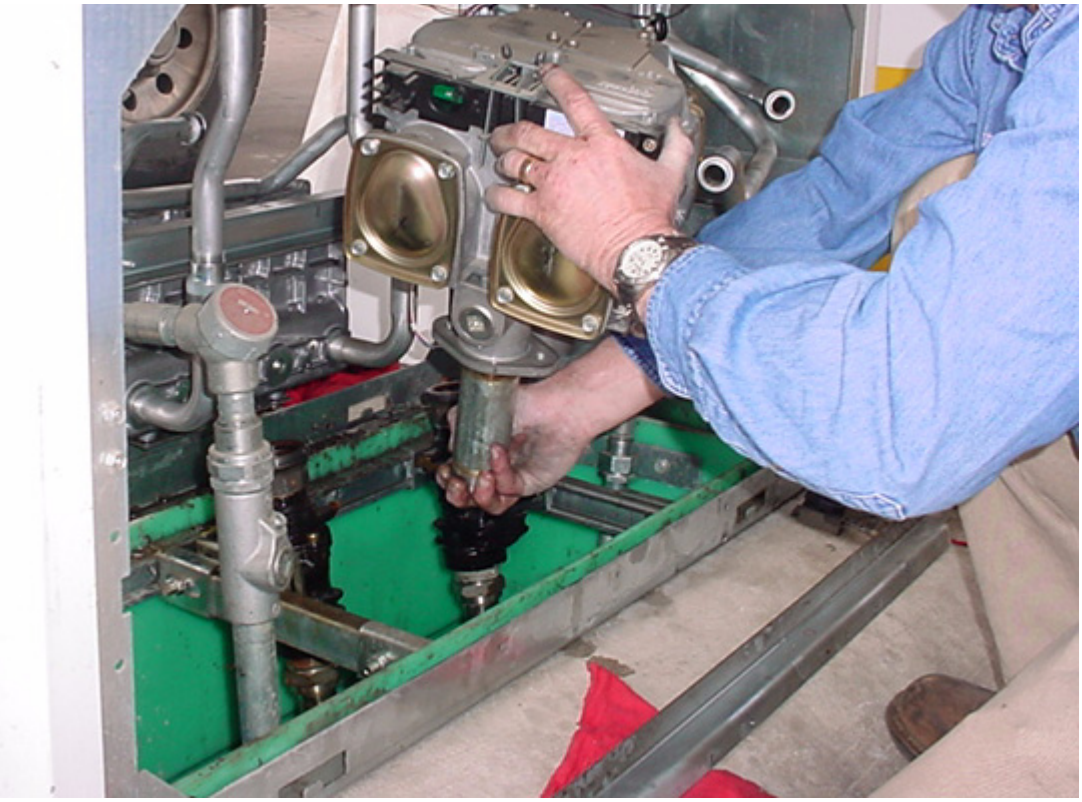


FIGURE 12.

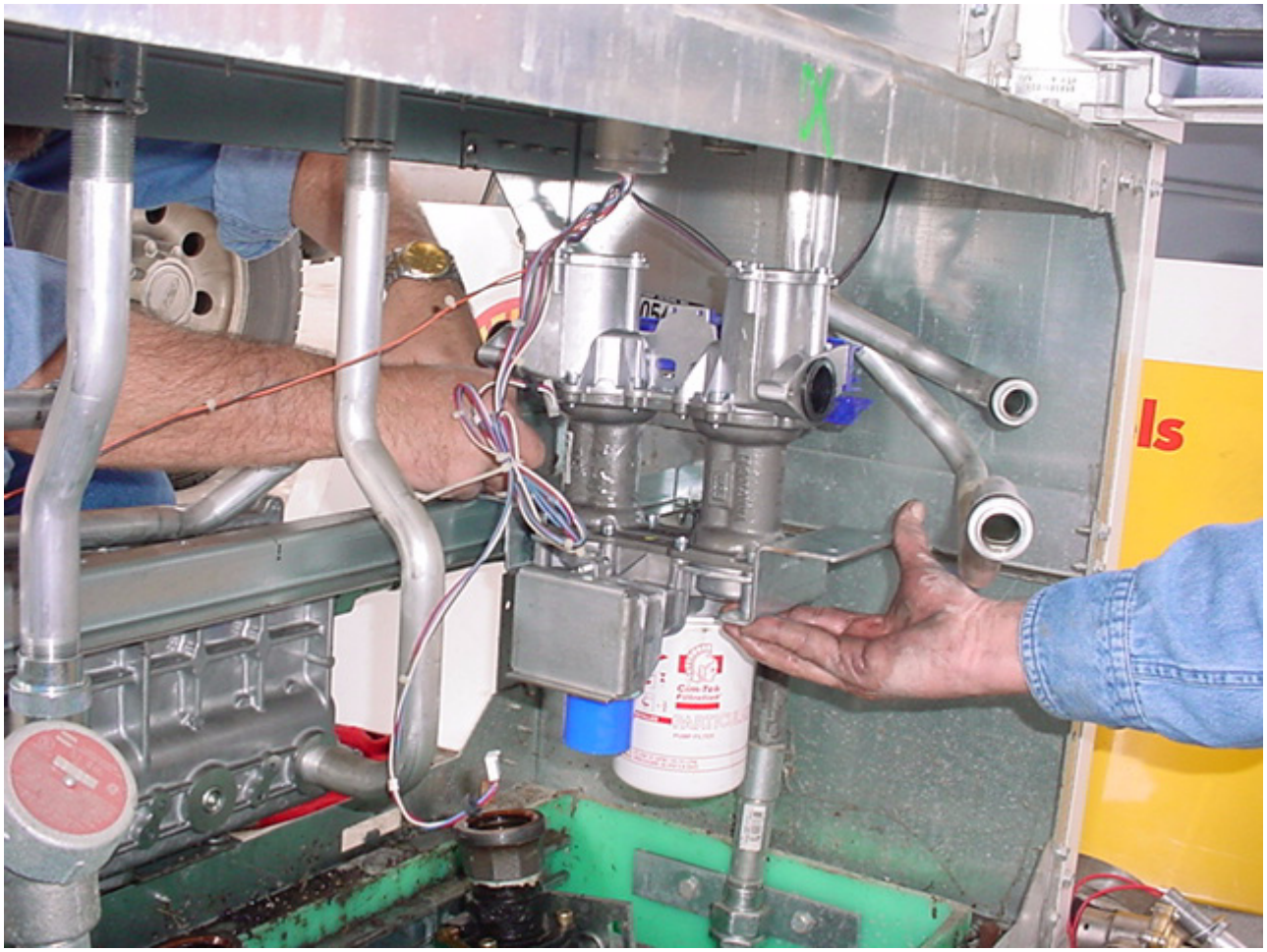


FIGURE 13.

FIGURE 14.

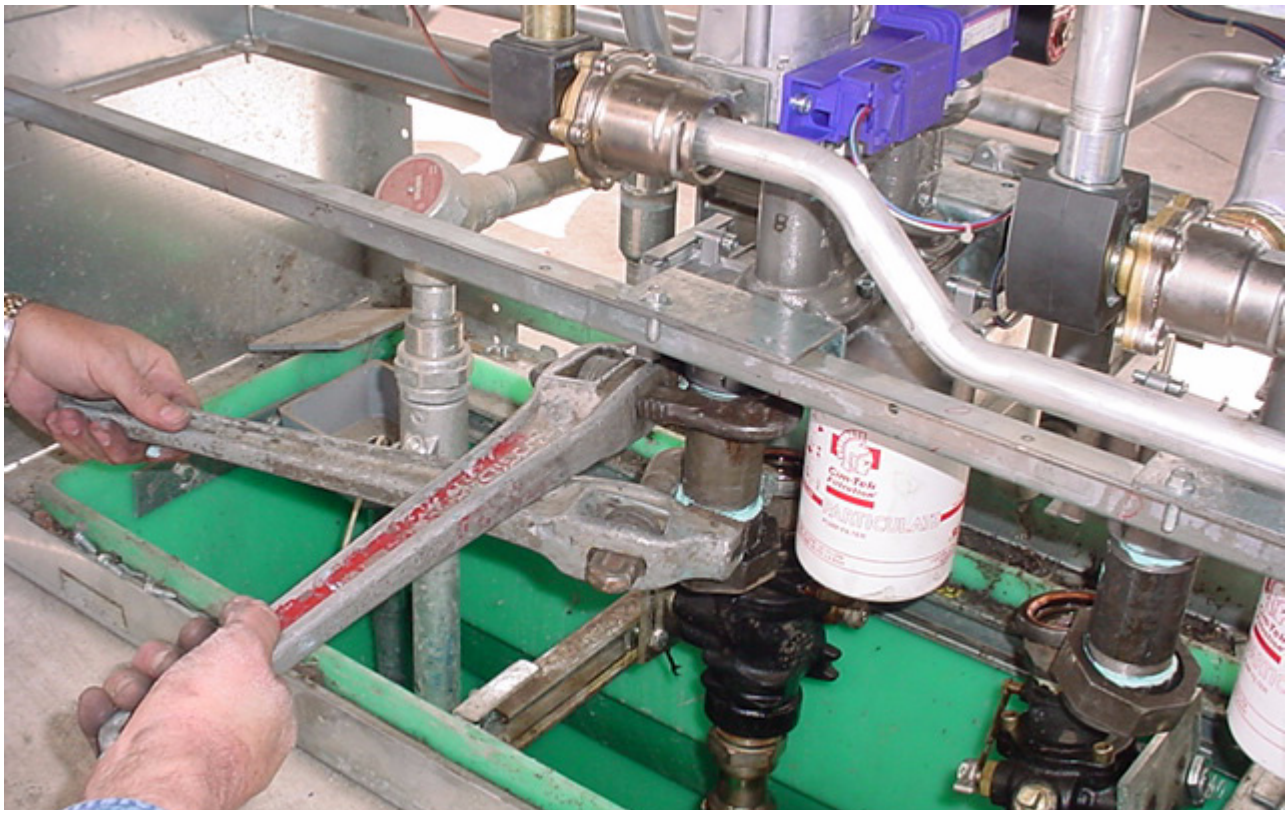


FIGURE 15.

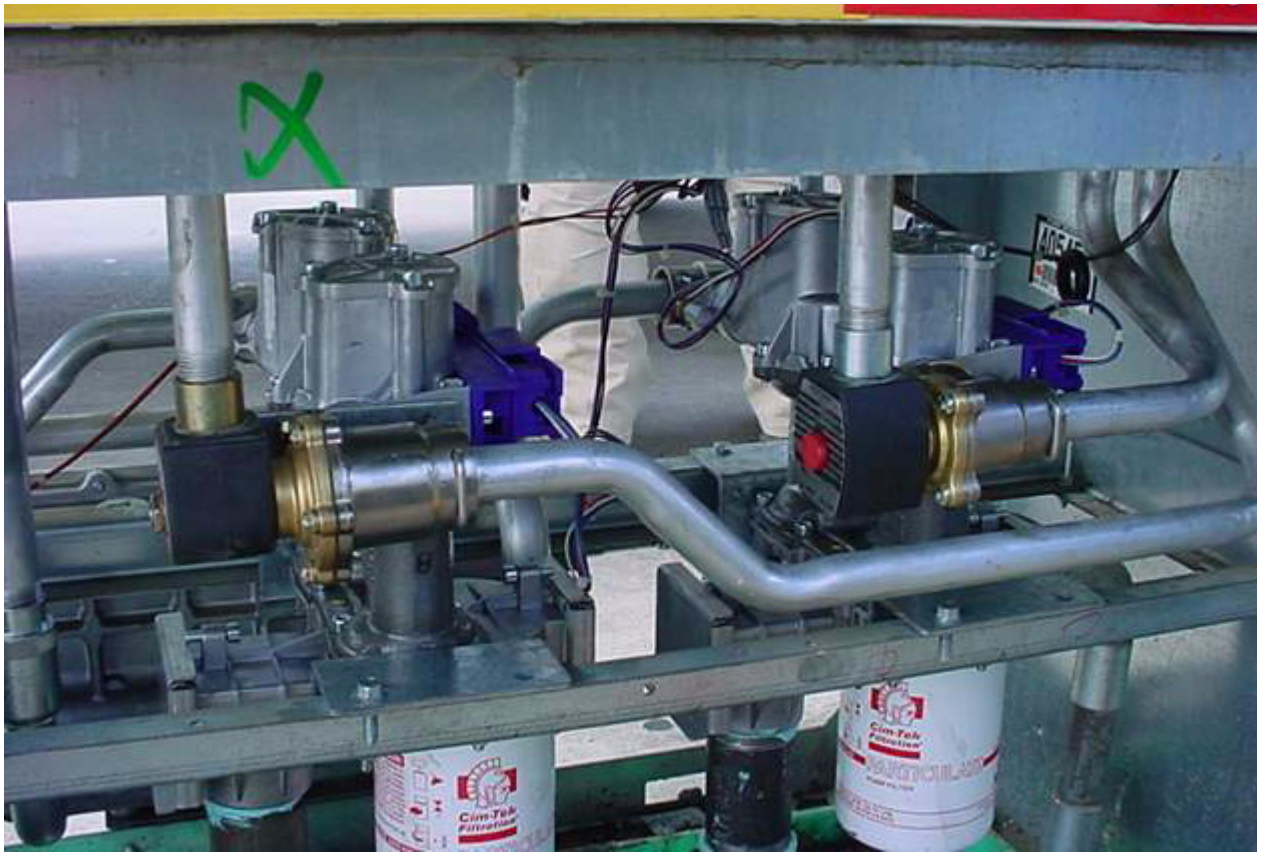
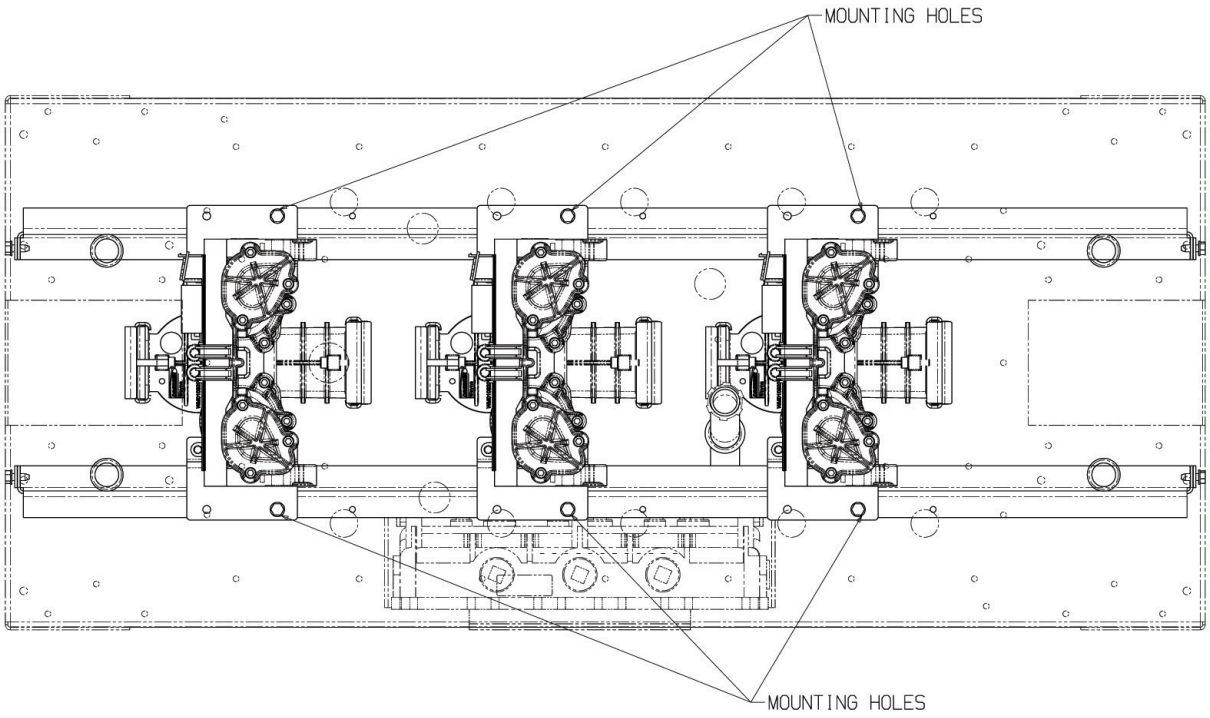
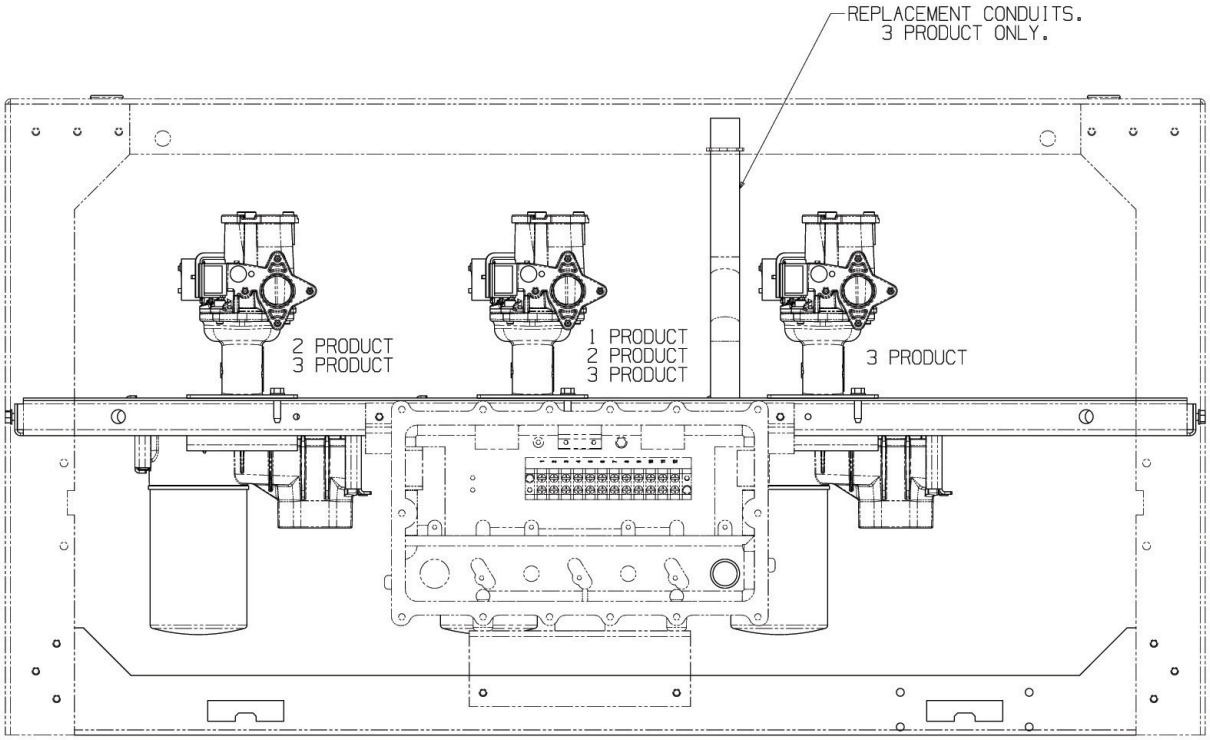


FIGURE 16.

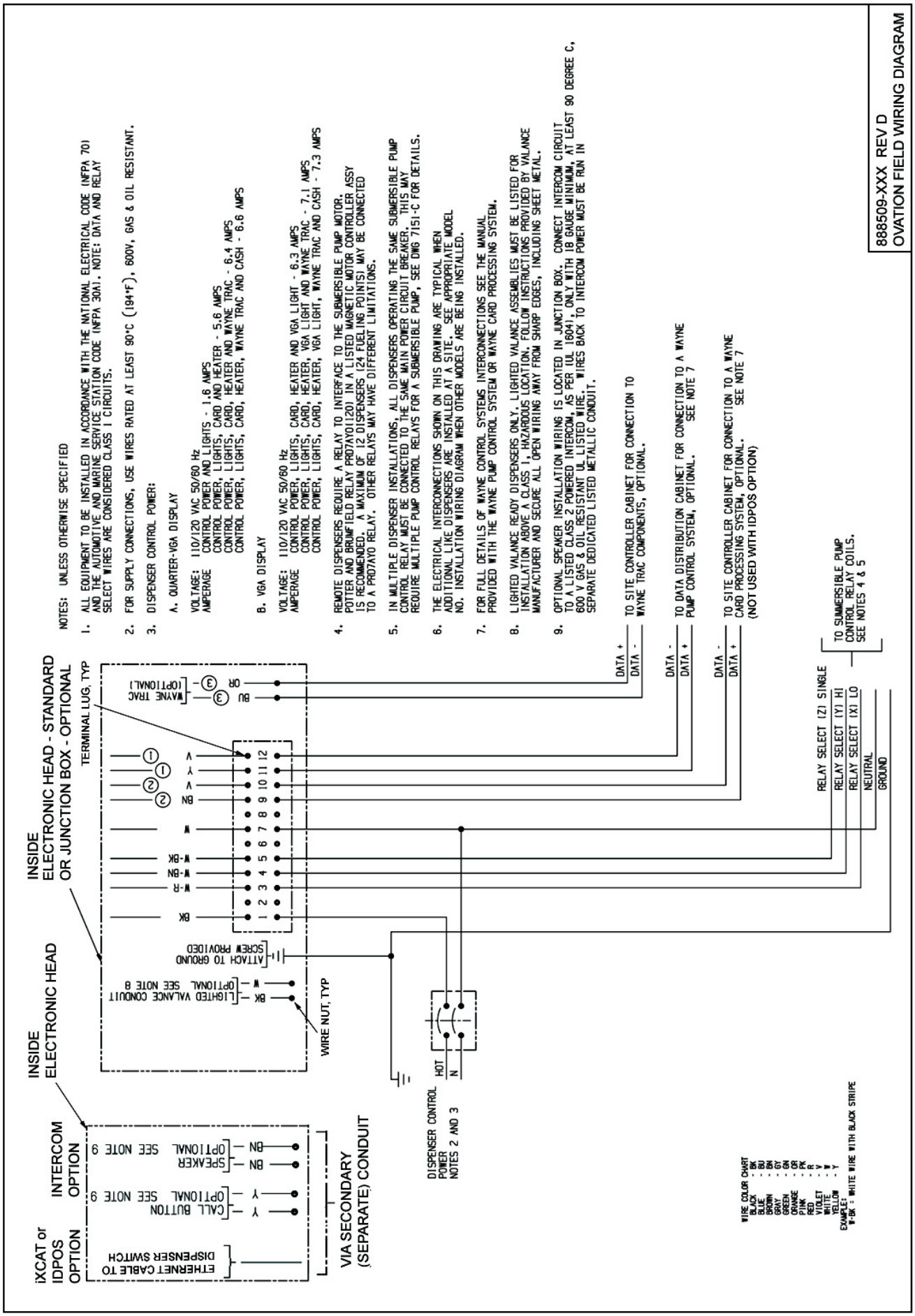


TUBES AND VALVES REMOVED FOR CLARITY



SIDE 1
TUBES AND VALVES REMOVED FOR CLARITY.
WILL VARY BY MODEL.

FIGURE 17.


888509-XXX REV D
OVATION FIELD WIRING DIAGRAM
NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA 70) AND THE AUTOMOTIVE AND MARINE SERVICE STATION CODE (NFPA 30A). NOTE: DATA AND RELAY SELECT WIRES ARE CONSIDERED CLASS 1 CIRCUITS.
2. FOR SUPPLY CONNECTIONS, USE WIRES RATED AT LEAST 90°C (194°F), 600V, GAS & OIL RESISTANT.
3. DISPENSER CONTROL POWER:
A. QUARTER-VGA DISPLAY
VOLTAGE: 110/120 VAC 50/60 Hz
AMPERAGE CONTROL POWER AND LIGHTS - 1.6 AMPS
CONTROL POWER, LIGHTS, CARD AND HEATER - 5.6 AMPS
CONTROL POWER, LIGHTS, CARD, HEATER AND WAYNE TRAC - 6.4 AMPS
CONTROL POWER, LIGHTS, CARD, HEATER, WAYNE TRAC AND CASH - 6.6 AMPS
B. VGA DISPLAY
VOLTAGE: 110/120 VAC 50/60 Hz
AMPERAGE CONTROL POWER, LIGHTS, CARD, HEATER AND VGA LIGHT - 6.3 AMPS
CONTROL POWER, LIGHTS, CARD, HEATER, VGA LIGHT AND WAYNE TRAC - 7.1 AMPS
CONTROL POWER, LIGHTS, CARD, HEATER, VGA LIGHT, WAYNE TRAC AND CASH - 7.3 AMPS
4. REMOTE DISPENSERS REQUIRE A RELAY TO INTERFACE TO THE SUBMERSIBLE PUMP MOTOR. POTTER AND BRUMFIELD RELAY PRD7AY01(120) IN A LISTED MAGNETIC MOTOR CONTROLLER ASSY IS RECOMMENDED. A MAXIMUM OF 12 DISPENSERS (24 FUELING POINTS) MAY BE CONNECTED TO A PRD7AY01 RELAY. OTHER RELAYS MAY HAVE DIFFERENT LIMITATIONS.
5. IN MULTIPLE DISPENSER INSTALLATIONS, ALL DISPENSERS OPERATING THE SAME SUBMERSIBLE PUMP CONTROL RELAY MUST BE CONNECTED TO THE SAME MAIN POWER CIRCUIT BREAKER. THIS MAY REQUIRE MULTIPLE PUMP CONTROL RELAYS FOR A SUBMERSIBLE PUMP, SEE DWG 7151-C FOR DETAILS.
6. THE ELECTRICAL INTERCONNECTIONS SHOWN ON THIS DRAWING ARE TYPICAL WHEN ADDITIONAL LIKE DISPENSERS ARE INSTALLED AT A SITE. SEE APPROPRIATE MODEL NO. INSTALLATION WIRING DIAGRAM WHEN OTHER MODELS ARE BEING INSTALLED.
7. FOR FULL DETAILS OF WAYNE CONTROL SYSTEMS INTERCONNECTIONS SEE THE MANUAL PROVIDED WITH THE WAYNE PUMP CONTROL SYSTEM OR WAYNE CARD PROCESSING SYSTEM.
8. LIGHTED VALANCE READY DISPENSERS ONLY. LIGHTED VALANCE ASSEMBLIES MUST BE LISTED FOR INSTALLATION ABOVE A CLASS I, HAZARDOUS LOCATION. FOLLOW INSTRUCTIONS PROVIDED BY VALANCE MANUFACTURER AND SECURE ALL OPEN WIRING AWAY FROM SHARP EDGES, INCLUDING SHEET METAL.
9. OPTIONAL SPEAKER INSTALLATION WIRING IS LOCATED IN JUNCTION BOX. CONNECT INTERCOM CIRCUIT TO A LISTED CLASS 2 POWERED INTERCOM, AS PER IUL 1604; ONLY WITH 18 GAUGE MINIMUM, AT LEAST 90 DEGREE C, 600 V GAS & OIL RESISTANT UL LISTED WIRE. WIRES BACK TO INTERCOM POWER MUST BE RUN IN SEPARATE DEDICATED LISTED METALLIC CONDUIT.
INSIDE ELECTRONIC HEAD
INSIDE ELECTRONIC HEAD - STANDARD OR JUNCTION BOX - OPTIONAL
TERMINAL LUG, TYP
WIRE NUT, TYP
LIGHTED VALANCE CONDUIT BK — W — OPTIONAL SEE NOTE 8
ATTACH TO GROUND SCREW PROVIDED
BK
W-R
W-BN
W-BK
W
BN
Y
Y
BU
OR
WAYNE TRAC (OPTIONAL)
1 2 3 4 5 6 7 8 9 10 11 12
INTERCOM OPTION
iXCAT or IDPOS OPTION
ETHERNET CABLE TO DISPENSER SWITCH
CALL BUTTON OPTIONAL SEE NOTE 9
Y — Y —
SPEAKER OPTIONAL SEE NOTE 9
BN — BN —
VIA SECONDARY (SEPARATE) CONDUIT
DISPENSER CONTROL POWER NOTES 2 AND 3
HOT
N
TO SITE CONTROLLER CABINET FOR CONNECTION TO WAYNE TRAC COMPONENTS, OPTIONAL.
DATA +
DATA -
TO DATA DISTRIBUTION CABINET FOR CONNECTION TO A WAYNE PUMP CONTROL SYSTEM, OPTIONAL. SEE NOTE 7
DATA -
DATA +
TO SITE CONTROLLER CABINET FOR CONNECTION TO A WAYNE CARD PROCESSING SYSTEM, OPTIONAL. SEE NOTE 7 (NOT USED WITH IDPOS OPTION)
DATA -
DATA +
RELAY SELECT (Z) SINGLE
RELAY SELECT (Y) HI
RELAY SELECT (X) LO
NEUTRAL
GROUND
TO SUMMERSIBLE PUMP CONTROL RELAY COILS. SEE NOTES 4 & 5
WIRE COLOR CHART
BLACK - BK
BLUE - BU
BROWN - BN
GRAY - GY
GREEN - GN
ORANGE - OR
PINK - PK
RED - R
VIOLET - V
WHITE - W
YELLOW - Y
EXAMPLE: W-BK = WHITE WIRE WITH BLACK STRIPE

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Retrofit Kit

Written by S. G. Martin

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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.”

Dresser Wayne, Dresser, Inc. 3814 Jarrett Way, Austin, TX 78728 (512) 388-8311
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