READ THIS BOOK This book has important information for safe installation and operation of this equipment. Read and understand this book before applying power. Keep this book and tell all service personnel to read this book. If you do not follow the instructions, you can cause bodily injury, death or damage to the equipment.

For new books, visit our web page at: http://www.bennettpump.com
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NOTICE

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause undesired operation.

Not all equipment covered in this manual is listed by Underwriters Laboratories.

IMPORTANT

Examine the shipment immediately upon arrival to make certain there has been no damage or loss in transit. Bennett Pump Company, as shipper, is not liable for the hazards of transportation. Please make damage claims directly to the truck line.
# Safety Instructions

**WARNING** ADVERTISSEMENT ADVERTENCIA

For the safe installation of this equipment, read and understand all warning and cautions. Look for these warnings:

- **DANGER** means: If you do not follow the instructions, severe injury or death will occur.
- **WARNING** means: If you do not follow the instructions, severe injury or death can occur.
- **CAUTION** means: If you do not follow the instructions, damage can occur to the equipment.

### DANGER
- Fire, explosion, injury or death will occur if fuel filters are changed by untrained personnel. Make sure only trained personnel change filters.
- To prevent injury to you from vehicles and onlookers, always place a barrier around this equipment before performing service or maintenance.
- Gasoline is flammable. NO SMOKING OR OPEN FLAME.
- Disconnect all power to this equipment and associated submerged pump(s) during installation, service or any maintenance, i.e., changing filters.
- To prevent electric shock, keep the electrical parts of the dispenser dry.
- Disconnect all power to this equipment and associated submerged pump(s) during installation, service or any maintenance, i.e., changing filters.

### WARNING
- Electronic components are static sensitive. Use proper static precautions (static straps) before working on the equipment.
- The emergency shut-off valve (also called the fire valve, shear valve or impact valve) must be closed when service or maintenance is performed on this equipment.
- You must have training in the operation and programming of this dispenser before using it. READ THE OPERATORS MANUAL.
- Make sure this equipment is correctly grounded. Failure to do will cause injury or damage equipment or improper operation. Improper grounding voids the warranty.
- When anchoring the dispenser, always level the dispenser with shims before bolting to the island. DO NOT shim just the middle of the dispenser and bolt down.
- Do not drill holes in fuel dispensers. Holes can cause failure of the electronic equipment. The warranty will become void. Use only adhesive backed sign mounting brackets.

**READ AND UNDERSTAND ALL WARNING LABELS ATTACHED TO THE DISPENSER**
Product Specifications

POWER REQUIREMENTS

AC Power Input, Electronic.......................................................................................................................115/230VAC, 50/60Hz @ 660W.
DC Power Supply Outputs...........................................................................................................................+5VDC @ 5.0 Amps Max.
........................................................................................................................................................................+12VDC @ 1.75 Amps Max.
........................................................................................................................................................................+24VDC @ 2.75 Amps Max.
Lead-Acid Battery Output..............................................................................................................................+12VDC @ 2.0 Amps Max.
Nickel-Cadmium Battery Output....................................................................................................................+3.6VDC @ 40 Milliamps Max.

ENVIRONMENTAL REQUIREMENTS

Operating Temperature Range......................................................................................................................-20°C to +40°C.
Humidity.......................................................................................................................................................0-95% non-condensing.

DIMENSIONS

1000 Series Maximum .................................................................................................................................. *49" Wide x 22" Deep x 91" High.

Determining the Number of Product Supply Pipes Needed

Determine the dispenser's model number from the serial tag located on side 1 inside the unit on the deck. Locate the model number in the chart below to determine the number of product pipes required.

**Step 1**: The dispenser will require a submerged pump and pressurized supply line for each product.

**Step 2**: Determine the number of product pipes required by finding the model number below.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Product Supply Lines Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1X11N1X-XXXX</td>
<td>Use 1 product line plumbed to position A.</td>
</tr>
<tr>
<td>1X12N2X-XXXX</td>
<td>Use 1 product line plumbed to position A.</td>
</tr>
<tr>
<td>1X21M1X-XXXX</td>
<td>Use 1 product line plumbed to position A.</td>
</tr>
<tr>
<td>1X22N2-XXXX</td>
<td>Use 1 product line plumbed to position C.</td>
</tr>
<tr>
<td>1X22M2-XXXX</td>
<td>Use 1 product line plumbed to position C.</td>
</tr>
<tr>
<td>1X22N1-XXXX</td>
<td>Use 1 product line plumbed to position A.</td>
</tr>
<tr>
<td>1X24N2-XXXX</td>
<td>Use 1 product line plumbed to position A.</td>
</tr>
<tr>
<td>1X31B1-XXXX</td>
<td>Use 1 product line plumbed to position A, for low grade product.</td>
</tr>
<tr>
<td>1X32B2-XXXX</td>
<td>Use 1 product line plumbed to position C, for high grade product.</td>
</tr>
<tr>
<td>1X31M1-XXXX</td>
<td>Use 1 product line plumbed to position A, for low grade product.</td>
</tr>
<tr>
<td>1X32M2-XXXX</td>
<td>Use 1 product line plumbed to position B, for middle grade product.</td>
</tr>
<tr>
<td>1X42B1-XXXX</td>
<td>Use 1 product line plumbed to position A, for low grade product.</td>
</tr>
<tr>
<td>1X44B2-XXXX</td>
<td>Use 1 product line plumbed to position C, for high grade product.</td>
</tr>
</tbody>
</table>

*Note: The model number in the model number list is repeated where the entry in not important to this discussion.*
Determine the model number of the dispenser from the serial plate located on the front bottom rail. Utilizing the chart below determine the features of the dispenser to be installed. Understanding the features of the dispenser to be installed will be helpful in understanding the proper installation of the dispenser.

**How a Model for the Pacific Series Dispensers is Made Up.**

1. Din 1K 1000 Series Pacific

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Graphics</td>
</tr>
<tr>
<td>2</td>
<td>Country</td>
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<tr>
<td>3</td>
<td>Language</td>
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<td>4</td>
<td>Suffix</td>
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<td>5</td>
<td>Product</td>
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<td>6</td>
<td>Product</td>
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<td>32</td>
<td>Model</td>
</tr>
<tr>
<td>33</td>
<td>Model</td>
</tr>
<tr>
<td>34</td>
<td>Model</td>
</tr>
</tbody>
</table>

---Field Positions
---Sample Pump

Note: Order the valance canopy as a separate order line item.
Determining the Correct Position of the Product Supply Pipes

The following chart (Figure 1) indicates the relationship of the product inlets to the nozzle boots. Find the model number of the dispenser you are installing and determine the number of product inlets and their location. Exact inlet locations can be found on the base diagrams later in this manual.

Figure 1
General Installation Information

IMPORTANT

Examine the shipment immediately upon arrival to make certain there has been no damage or loss in transit. Bennett Pump Company, as shipper, is not liable for the hazards of transportation. Please make damage claims directly to the truck line.

Please read these instructions carefully and read all tags attached to the dispenser before starting installation. A dispenser that is not properly installed will not perform properly and will void the limited warranty.

Installation must be in accordance with the National Electrical Code (NFPA 70), the Automotive and Marine Service Station Code (NFPA 30A), and all state and local codes.

For complete instructions for installing underground liquid storage systems, order “Recommended Practices for Installation of Underground Liquid Storage Systems” from the Petroleum Equipment Institute, P.O. Box 2380, Tulsa, OK 74101.

Underground Installation Requirements

EXISTING INSTALLATIONS RECEIVING NEW DISPENSERS

When a new dispenser is attached to an old underground installation, the tanks should be cleaned and tested for leaks. Any water accumulation in the tank must be removed. Bennett Pump is not responsible for any damage to the dispenser or for improper operation due to accidents, abuse, or faulty installation. We require installing new wires in the underground metal conduits to validate the equipment warranty.

Pipelines and Pit Boxes

PIPELINES AND UNDER-PUMP CONTAINMENT SUMPS

General

It is extremely important to ensure that all wiring and conduits are in accordance with all local, state and federal regulations, including, but not limited to, the National Electrical Code (NFPA 70), NFPA 30, and NFPA 30A.

NOTE: U.L. requires that all electrical connections to the dispenser be made with threaded, rigid conduit and properly sealed conductors. All dispensers and electrical connection boxes must be grounded per NFPA 70.

The dispenser must be mounted on a concrete foundation. Do not pour concrete around the product pipes or electrical conduit. The use of a UL approved containment sump designed for the Bennett Dispenser Model used is highly recommended. Follow the containment sump manufacturer’s installation instructions for proper installation. Use water to pack the sand in place. See Figure 2.
DETERMINING STUB UP POSITIONS IN THE CONTAINMENT SUMP

Determine the model number of the dispenser or pump from the pump's name plate and locate the corresponding configuration from figure 6. The corresponding configuration will indicate the location of the piping and conduit connections for the dispenser. Plan your installation to locate these items according to these prints.

Anchor the dispenser to the island with four anchor bolts through the base frame. WHEN ANCHORING THE DISPENSER, always level the dispenser with shims before bolting to the island. Place the shims at the location of the anchor bolts so the dispenser frame is not distorted when the anchor bolts are tightened down. The dispenser must be bolted to the island. Do not skip this step.

NOTE: All piping must be clean of foreign debris, such as: oil, grease and shavings. All connections must be tight to prevent leaks.

Swing joints or flex pipe must be used at the ends of the horizontal pipe between the dispenser and the tank. See Figure 3. These joints prevent leaks which might develop through ground movement from settling of the tank, frost heaving of the ground or pump island settling. The joint under the dispenser also aids proper alignment of the product union or coupling.

NOTE: Make sure the installation conforms to the new EPA regulations for underground storage tanks.

PIPE INSTALLATION FOR REMOTE DISPENSERS

Install an approved emergency shear valve, designed to close automatically in the event of severe impact or fire exposure, in the dispenser supply line at the base of the dispenser. The valve will also permit safe inspection and maintenance. Follow the installation instructions for the valve being installed. See Figure 4.
How to Lift & Transport the Pacific Series

(see figure 5)

THE ONLY FACTORY APPROVED METHOD FOR LIFTING THE 1000 SERIES

LIFTING SYSTEM SUFFICIENT TO LIFT 2000 LBS

DO NOT INSTALL OPTIONAL VALANCE BEFORE SETTING UNIT

CAUTION: LIFT STRAP MUST BE VERTICAL. DO NOT PULL UPRIGHT TO THE SIDE.

LIFTING STRAP USER PROVIDED

DANGER: USE PROPER PERSONAL BARRIERS TO FENCE OFF AREA AROUND UNIT WHILE LIFTING ONTO STATION ISLAND.

CAUTION: DO NOT LIFT UNIT BY THE METER RAILS OR VAPOR BARRIER. PERMANENT DAMAGE WILL OCCUR.

Figure 5
CAUTION: DISPENSERS MUST BE INSTALLED WITH A SUITABLE POWER OPERATED PUMP INCORPORATING A PROVISION FOR EXPANSION RELIEF WHICH WILL RELIEVE AT PRESSURES NOT TO EXCEED 50 LBS. PER SQ. INCH. DO NOT USE LINE CHECK VALVE BETWEEN DISPENSER AND OPERATED PUMP UNLESS PROVIDED WITH RELIEF VALVE.

INLET PIPING SHALL BE A MINIMUM SCHEDULE 40 STEEL PIPE WITH UL LISTED UNION INSTALLED PRIOR TO INSTALLATION INTO THE DISPENSER INLET. ALL JOINTS TO BE MADE USING CLASSIFIED PIPE JOINT SEALING COMPOUND.

THIS UNIT MUST BE ANCHORED TO THE ISLAND WITH A MINIMUM OF 4 BOLTS WITH MINIMUM DIAMETER OF 1/2" THROUGH THE BASE FRAME. DO NOT SHIM MIDDLE OF BASE RAILS TO BOLT DOWN DISPENSER. SHIM ONLY NEAR BOLTS.

DANGER: INSTALLATION TO CONFORM TO NATIONAL, STATE AND LOCAL CODES.

DANGER: IMPACT SAFETY VALVES ARE TO BE INSTALLED WITH SHEAR SECTION IN LINE WITH SURFACE OF ISLAND TO WITHIN +/- 3/4", DEPENDING ON VALVE TO BE USED. A LONGER OR SHORTER INLET NIPPLE MAY BE REQUIRED. INSTALLER MUST SUPPLY +/- 1/2" INLET PIPES. THREADED FOR INLET MANIFOLD (NPT THREAD). CUSTOMER TO PROVIDE PIPE, GROUND JOINT UNION, CONDUIT, AND FITTINGS TO ELECTRICAL AND PLUMBING INLETS. USE ONLY UL LISTED RIGID METAL CONDUIT AND UL LISTED SEALING FITTINGS WITH CONDUCTOR SEALS.

CAUTION: DISPENSERS MUST BE INSTALLED WITH PROVISIONS FOR EXPANSION RELIEF, WHICH WILL RELIEVE AT PRESSURES NOT EXCEEDING 50 PSI (345 MPa). DO NOT USE LINE CHECK VALVE BETWEEN DISPENSER AND TANK UNLESS PROVIDED WITH RELIEF VALVE.
Determining the Number of Wires Needed

**AC POWER WIRES** (115 or 230 Volt installations)

Every model of 1000 series requires the following wires:
- 1 x 12ga. Green ground wire
- 1 x 14ga Black L1 power wire for electronics power.
- 1 x 14ga. White for 115V neutral or red for 230V L2, for electronics power.

**FUEL COMMUNICATION WIRES**

If the dispenser is to be connected to a control console, use the following for fuel communication:

**Single Sided units - Current Loop:**
- 1 x 18ga. Orange wire for communication positive
- 1 x 18ga. Yellow wire for communications negative

**Two Sided Units - Current Loop:**
- 2 x 18ga. Orange wire for communication positive
- 2 x 18ga. Yellow wire for communications negative

**Single or Two Sided Units - RS485**
- 1 x 18ga. Orange wire for communication positive
- 1 x 18ga. Black wire for communication common
- 1 x 18ga. Brown wire for communication negative

**CARDREADER COMMUNICATION WIRES**

If the dispenser is equipped with a card reader, use the following for card reader communication:

**Single or Two Sided Units - RS485**
- 1 x 18ga. Violet wire for communication positive
- 1 x 18ga. Gray wire for communication common
- 1 x 18ga. Blue wire for communication negative

**PRODUCT RELAY CONTROL WIRES**

A remote relay control wire will be required for each primary product.

**One product units:**
- 1 x Red 14ga. wire.

**Two product Units:**
- 1 x Red, 1 x Brown 14ga. wires.

**Three product units:**
- 1 x Red, 1 x Brown, 1 x Blue 14ga wires.

**Note:** 3 product blenders only require 2 product control wires. The center, blended product will cause both submerged pumps to turn on.

**Note:** 3+1 blenders require 3 product control wires. Two product control wires will be used to control the 3 blended products. The 3rd product control wire will control the non-blended product, usually diesel.
Determining the Number of Wires Needed

Wiring Notes: These notes are must do requirements to ensure a successful installation that meets Bennett's limited warranty requirements.

1. Check with Federal, State and Local Codes for conduit use in your area. Bennett recommends rigid metal conduit.
2. Use only stranded wire with listed gas and oil resistant insulation. Do not use wire smaller than listed on the Bennett wiring diagrams. For long runs increase wire size accordingly.
3. DO NOT USE WIRE NUTS ON DATA LINES. DO NOT SPLICE DATA WIRES THEY MUST BE DIRECT RUNS.
4. When the dispenser wires are pulled though the underground conduit leave at least 72” higher than the base of the dispenser to allow enough length to reach the dispenser terminal strip.
5. The wire separator (supplied with the pump) must be installed on the wires as they exit the pump conduit before the wires are terminated to the power board. The wire separator is needed to properly seal the conduit in the last step of installation.
6. Electronic power must be on a separate dedicated circuit breaker. Do not put submerged pump power on this circuit breaker. Up to two dispenser may be placed on (1) 15 amp circuit breaker.
7. WARNING: DO NOT CROSS PHASE THE DISPENSERS OR DAMAGE WILL OCCUR. When installing more than one dispenser the remote sub-pump relay control wires must be on the same AC power phase or cross phasing will occur at the sub-pump relay. This means that the electronic power for all dispensers at the site must be on the same phase.
8. Bennett requires the installation of RC networks across the coil and contact of the sub-pump relays for proper operation of the dispenser. Failure to install the RC networks will void Bennett's limited warranty!
9. The maximum distance from the breaker panel to the dispenser is 500 feet (150m).

BEGINNING THE WIRING PROCESS

Open the pump and locate the inlet wiring electrical conduit. Remove the cover from the power distribution board by removing the lower two screws and loosening the two screws on the top back side of the cover. Place cover and screws in a location that will remind you to replace the cover once the wiring has been completed. Pull the dispenser wires through the underground conduit and into the electronic enclosure.

Installing the wire Separator

A safe installation requires that a wire separator be installed on the wires as you route them through the conduit and into the dispenser’s electronic enclosure. The wire separator holds the wires apart to ensure that the seal off compound fully seals around each wire. You will apply the seal off compound during the last step of installation. This will prevent gasoline fumes from working their way into the electronic enclosure. The wire separator is supplied in the plastic bag located inside the electronic enclosure attached to the side wall.
Instructions for Earth Grounding the Equipment

**WARNING:** Failure to properly ground the equipment can cause injury or damage to the equipment and will void the Bennett limited warranty.

This product must be properly grounded. Each dispenser requires a 12-gauge earth ground wire. Grounding provides a path of least resistance for electric current to reduce the risk of electric shock. Grounding is also required to protect the dispenser’s computer from external electrical noise generating devices. The ground wire connection must provide 1 ohm (or less) resistance to earth ground. To establish a good earth ground, follow this procedure:

1. Connect a 12-gauge (minimum), green stranded wire to the grounding terminal near the terminal block in the electronic head and to the ground on the power supply ground terminal number 1.
2. Pull the wire through the rigid metal conduit and connect it directly to the ground bar of the main electrical service panel, not a sub-panel. Do NOT rely on the metal conduit as a ground. DO NOT USE WIRE NUTS ON GROUND WIRES. USE COMPRESSION CONNECTORS ONLY!
3. Do not daisy-chain ground wires. All ground circuits must be dedicated wires connected directly to the ground bar in the main electrical panel. A direct connection to the site’s ground rod must be connected to the ground bar in the main electrical panel.
4. Ensure that a 14-gauge minimum ground wire is connected between the dispenser ground lug and the power board terminal 1. This wire must be connected for proper operation to occur.

AC Power Installation

Each remote dispenser uses one 115V, 50/60 Hz or 230V, 50/60 Hz circuit for dispenser power. Make sure the power source has the correct frequency and voltage. Connect the electrical circuit to the terminal strip on the power supply board.

All references to 115VAC in this manual can also be identified as 230VAC if the dispenser ordered is for 230 VAC. Note: 115VAC installations: L1 is hot and L2 is Neutral. In 230VAC installations: L1 is hot and L2 is the other phase hot.

Electronic Power Connections:

1. Connect the White 14ga. wire in 115V circuits or the Red 14ga. wire in 230V circuits to the power board terminal 2.
2. Connect the Black 14ga. wire to the power board terminal 3.
3. Electronic power must be connected to a dedicated 15 amp. circuit breaker. The dispenser is factory wired for both 115V and 230V operation and may not be changed in the field. (If this is done, the warranty is voided.) Electronic power for all dispensers at an installation must be wired to the same AC line phase or damage from cross phasing will result in the remote sub-pump relay control circuits.

Rules to ensure proper operation:

1. Each remote dispenser uses one 115V, 50/60 Hz or 230V, 50/60 Hz circuit for dispenser power. Put no more than two (2) Pacific dispensers on a circuit breaker (for Electronic Power).
2. Do not connect any other devices or motors to these circuits.
3. Put the pump wiring in a separate conduit. Do not put non-pump related wires, such as price signs or intercoms, in the same conduit as pump wiring.
4. Use only 14-gauge stranded gas and oil resistant THHN wire.
5. Do not use wire nuts within the dispenser or the wire run from the breaker panel to the dispenser.

**WARNING:** All Dispenser AC Power circuits (for Remotes only) must be on the same phase or damage will result to the dispenser power board or the sub-pump relay box.
Connecting Pump Motor Power for Remote Dispensers

The remote dispensers require a submerged pump control relay box, such as Red Jacket or F.E. Petro across the line starters. Check with those manufacturers for information on control relay boxes.

Termination of Field Wiring for Pump Motor Power of Remote Dispensers

Follow the diagram on the next page by locating the model number of the dispenser you are installing in the chart. The individual product wires are identified by the colors used in this manual. Connect the designated wire to the power board terminal strip position as indicated in the chart.

⚠️ Warning: The terminal sequence does not necessarily follow the sequence of the products. For example, a two product dispenser connects to the "A" product relay output and the "C" product relay output (not the "B" as you might expect). Connect the opposite end of the product control wire to the sub-pump relay box as below:

1st Product: Connect the Red 14ga. wire to the power distribution board as indicated in the diagram and the other end to the control relay box for your 1st product. 2nd Product: Connect the Brown 14ga. wire to the power distribution board as indicated in the diagram and the other end to the control relay box for your 2nd product. 3rd Product: Connect the Blue 14ga. wire to the power distribution board as indicated in the diagram and the other end to the control relay box for your 3rd product.

<table>
<thead>
<tr>
<th>Model Number</th>
<th>1st Product</th>
<th>2nd Product</th>
<th>3rd Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>1X11 or 1X12</td>
<td>Red to TS 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1X21 Mixer or 1X22 Mixer or 1X22</td>
<td>Red to TS 7</td>
<td>Brown to TS 15</td>
<td></td>
</tr>
<tr>
<td>1X22 one sided or 1X24</td>
<td>Red to TS 11</td>
<td>Brown to TS 15</td>
<td></td>
</tr>
<tr>
<td>1X31 or 1X32 Mixer</td>
<td>Red to TS 7</td>
<td>Brown to TS 11</td>
<td>Blue to TS 15</td>
</tr>
<tr>
<td>1X31 or 1X32 Blender</td>
<td>Red to TS 7</td>
<td>Brown to TS 15</td>
<td></td>
</tr>
<tr>
<td>1X42 or 1X44 Blender</td>
<td>Red to TS 7</td>
<td>Brown to TS 11</td>
<td>Blue to TS 15</td>
</tr>
</tbody>
</table>

⚠️ CAUTION: Use a separate circuit breaker for each pump motor. Make sure the pump motor is never on the same circuit breaker as any other power circuit for the dispenser.
Data Communication Wiring for Use with a Console or Controller

Data wires are required for operation of each fueling position with a control console or controller. The data wires can be put in the same conduit as the other pump wiring. Refer to the wiring diagram section for additional information.

Current Loop Fuel Wire Termination: (Power Distribution Board TS5)

1. Connect 1 Orange 18ga. wire to power distribution board terminal 24 for side 1 positive connection. Connect the other end to the 515 or control console position 1 positive.
2. Connect 1 Yellow 18ga. wire to the power distribution board terminal 23 for side 1 negative connection. Connect the other end to the 515 or control console position 1 negative.
3. Connect 1 Orange 18ga. wire to power supply board terminal 26 for side 2 positive connection. Connect the other end to the 515 or control console position 2 positive.
4. Connect 1 Yellow 18ga. wire to the power supply board terminal 25 for side 2 negative connection. Connect the other end to the 515 or control console position 2 negative.

RS485 Fuel Wire Termination: (White Terminal Block)

1. Connect 1 Orange 18ga. wire to the + (positive) connection on the white terminal block located above the CPU. Connect the other end to the Dual Fan Out Box (Interconnection Box) 1 positive.
2. Connect 1 Black 18ga. wire to the common connection on the white terminal block located above the CPU. Connect the other end to the Dual Fan Out Box (Interconnection Box) 1 Ground.
3. Connect 1 Brown 18ga. wire to the - (negative) connection on the white terminal block located above the CPU. Connect the other end to the Dual Fan Out Box (Interconnection Box) 1 negative.
Data Communication Wiring for Use with a Console or Controller

RS485 Card Reader Wire Termination: (Power Distribution Board TS4)

1. Connect 1 Violet 18ga. wire to the power distribution board terminal 20 for the positive connection. Connect the other end to the Interconnection Box positive.
2. Connect 1 Gray 18ga. wire to the power distribution board terminal 21 for the common connection. Connect the other end to the Interconnection Box Gnd (Ground) connection.
3. Connect 1 Blue 18ga. wire to power supply board terminal 22 for the negative connection. Connect the other end to the Interconnection Box negative.

Finishing the Dispenser Wiring Installation

⚠️ CAUTION: Data wires (two 18-gauge per fueling position) are dedicated to a particular fueling position. To prevent damage to the electronic circuit boards, do not mix the data wires or connect them to any other data wires!

⚠️ CAUTION: DO NOT USE WIRE NUTS OR SPLICES ON DATA WIRES. FAILURE OF THE SYSTEM WILL OCCUR!
1. Wrap some “CHICO X” fiber around wires and push into conduit assembly to prevent potting from running down the length of the conduit. See Figure 6.
2. Using the wire separator provided, install one wire in each hole until all wires are separated.
3. Push wire separator at least 3/4” into conduit.
4. Prepare potting compound according to directions. **NOTE:** Use “CHICO” potting compound for sealing fittings in hazardous locations.
5. Using a funnel, pour potting into conduit, be sure to get potting in between each wire.
6. Let stand until firm.

![Figure 6](image)

Potting compound here

Wire Separator

"CHICO X" fiber

3/4” min.
DANGER: Fire, explosion, injury or death will occur if fuel vapors are present. Make sure there are no vapors present before starting this procedure.

CAUTION: To prevent damage to the dispenser, follow the proper start-up procedures.

Before applying AC power to the dispenser, follow this procedure:

1. Open the upper and lower cabinet doors using the keys that were shipped with the unit.
2. Check to make sure:
   - The boards and other components have not come loose.
   - LCD display boards are not cracked or damaged.
   - The cables are properly connected to the boards.
   - There are no torn cables or stranded harnesses.
   - Pulser and pump handle harnesses are connected properly to the pulsers and nozzle boots.
   - Both leads to the 12-volt battery are attached.
   - Put the AC switch on the power supply board in the OFF position.
3. Make sure the impact valves are closed.
4. Turn off all submerged pump circuit breakers and all other circuit breakers to the dispenser.
   - Make sure the 12-gauge green ground wire is properly terminated on the power supply board and in the dispenser ground terminal. This ground connection must measure 1 ohm (or less) resistance to earth ground at the main electrical enclosure. Disconnect the TS1 to TS 3 plug from the dispenser’s power board. Measure the ground resistance using an Ohm meter connected between the Green ground on Terminal 1 and the Neutral wire on Terminal 2 on the disconnected plug. After measurement reconnect the plug to the power board. Note: this measurement method only works on 115VAC circuits. It will not work on 230VAC circuit.
   - Make sure all the screws on the terminal strip are tight and that the terminal strip is fully pressed onto the circuit board and snapped in place.
   - Make sure the wiring (AC and DC) agrees with the wiring diagrams.

Turn on 115 or 230 Volts circuit breaker to supply AC electronic power to the unit:

1. Use a voltmeter to verify 115 or 230 Volts AC on Terminal 3 only of the Electronic Head terminal strip. Terminal 2 is Neutral. This AC circuit provides power to the electronic boards. Use a voltmeter to verify there is no AC power on any other terminals or wires at this point.
2. Turn on the switch on the power distribution board and make sure displays are operating normally.

CHECKING THE SUBMERSIBLE PUMP MOTOR CIRCUIT:

WARNING: To prevent injury, make sure impact valves and submerged pump breakers are off.

IMPORTANT NOTE The software in the 1000 Series Bennett blender dispenser controls Product “A” and “C” sub-merged pump motors. When the blend product is activated, no Product “B” field motor wire is required.

For Remote Dispensers:

1. Put the Product A pump handle in the ON position and select product A. The dispenser display will reset. Use a voltmeter to verify 115 or 230 Volts AC on Terminal 7 of the terminal block. Use Terminal 2 as neutral. Return the Product A pump handle to the OFF position.
2. Put the Product B pump handle in the ON position. Use a voltmeter to verify 115 or 230 Volts AC on Terminal 11 or Terminal 15 of the terminal block depending on model. (If a Blender is being

(Continued on page 18)
Dispenser Start-Up and Checklist

(Continued from page 17)

installed, use a voltmeter to verify 115 Volts AC on Terminals 7 and 15 of the terminal Block.) Use Terminal 2 as Neutral. Return the Product B pump handle to the OFF position.

3. Put the Product C pump handle in the ON position. Use a voltmeter to verify 115 Volts AC on Terminal 15 or Terminal 15 of the terminal block depending on model. Use Terminal 2 as neutral. Return the Product C pump handle to the OFF position.

4. Repeat steps 1 through 3 (depending on the model being started) for the opposite side of the unit.

5. Open and set the impact valves on remote dispensers only.

6. Repeat for remaining units.

FINISHING THE WIRING INSTALLATION -REPLACE THE SAFETY COVERS

Now that the pump is completely wired and tested replace the safety covers.

- Replace the power board cover removed at the start of the wiring process and be sure that all 4 screws are installed and properly tightened. Perform this operation with the dispenser power off.
- Check that the Intrinsic barrier cover is properly installed and the screws are tight.
- Check that the power supply cover on the back of the computer module is in place and the screws are properly tightened.
- Close and lock all dispenser doors and covers.

Important: All covers must be returned to their designed locations or the pump will be unsafe to operate and the warranty on this unit will be voided.

Purging Air From Remote Dispensers.

Use the following steps on every unit starting with the unit farthest from the tank. Be sure to checks for leaks as you purge the air from the system.

1. Turn off all power to the submerged pumps involved.
2. Use a UL approved sealant to connect a gasoline compatible, conductive hose with a mechanical valve to the shear valve test port.
3. Place the outlet end of the closed valve in a container approved for gasoline.
4. Turn on the power to the STP involved and activate the pump.
5. Slowly open the mechanical valve until you obtain a slow, constant stream of fuel.
6. Repeat this operation for all shear valves at the site.
7. Open all shear valves and close and lock all doors upon completion.
8. Open each nozzle and purge the excess air from the dispenser.
<table>
<thead>
<tr>
<th>Item</th>
<th>Procedure</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shear valve installed per valve manufacturer recommendations.</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>All hanging hardware must be checked for continuity.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The units must be properly bolted to the island.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Vapor piping must not contain vapor traps.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Electrical field conduits must be properly potted per local, state and national codes.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Equipment must be installed in conjunction with an emergency power cutoff to remove all power from the equipment in the case of an emergency. Test this system for proper operation.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>All grounds must be properly connected per the installation manual requirements as well as local, state and national codes.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Use of properly sized neutral breaking circuit breakers for the units involved.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>All dispenser electrical power is wired to the same phase of electrical power.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Use 3 wire shielded cable or 3 wires together for the card reader RS485 communications circuit. (Bennett highly suggests that these should be twisted at least 3 times per foot.)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Use 3 wire shielded cable or 3 wires together for the Fuel RS485 communications circuit. (Bennett highly suggests that these should be twisted at least 3 times per foot.)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>New site wiring must be megger tested. Pull new wires in conduits in existing installations.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Verify the correct brand panels, nozzles and hoses are installed for each grade.</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Calibrate the meters per the procedure on page 24.</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Close and lock all dispenser doors, covers and panels.</td>
<td></td>
</tr>
</tbody>
</table>
Field Wiring and Communication Diagram - Current Loop

Electrical Ratings
- Total Electronic Power: 560 Watts, 120/240 V
- Franklin Intelevac: 160 Watts, 120/240 V
- Main Control Valve: 15 Watts, 120/240 V
- Submerged Pump Control Relay Coil: 30 Watts Max, 120/240 V
- Puls: 30 MA, 5 VDC
- Battery: 2.0 Amp Hours, 12 VDC
- Pump Handle Switch: Intrinsically Safe

Wiring Information for All 1000 Series Remote Dispensers with 708 Electronics Current Loop

Diagram of wiring connections for remote dispensers with 708 electronics current loop.
Field Wiring and Communication Diagram - RS485

WIRING INFORMATION FOR ALL
1000 SERIES
REMOTE DISPENSERS WITH
708 ELECTRONICS
RS485 COMM.

ELECTRICAL RATINGS

<table>
<thead>
<tr>
<th>Component</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Electronic Power</td>
<td>560 Watts, 120/240 V</td>
</tr>
<tr>
<td>Franklin Intellivac</td>
<td>160 Watts, 120/240 V</td>
</tr>
<tr>
<td>Main Control Valves</td>
<td>15 Watts, 120/240 V</td>
</tr>
<tr>
<td>Submerged Pump Control Relay Coil</td>
<td>20 Watts, 120/240 V</td>
</tr>
<tr>
<td>Pulser</td>
<td>30 mA, 5 VDC</td>
</tr>
<tr>
<td>Battery</td>
<td>2.0 Amp Hours, 12 VDC</td>
</tr>
<tr>
<td>Pump Handle Switch</td>
<td>Intrinsically Safe</td>
</tr>
</tbody>
</table>
Notes For Remote Wiring Diagram (on previous page)

1. All wiring must be installed and used in accordance with the national electrical code (NFPA #70, Automotive and marine service code NFPA #30A), state and local electrical codes.

2. All wiring gauge is minimum required, stranded wire with THHN insulation must be used. Do not reuse old wire from an existing installation.

3. Do not use PVC conduit. Use only rigid metal conduit. Using PVC conduit could void the Bennett Limited Warranty!

4. Pull a Green 12 ga. stranded THHN ground wire through the junction box and wiring trough and secure at grounding post near the terminal strip in the dispenser's electrical enclosure. Terminate the other end at the main electrical service panel ground bar. Do not terminate at the neutral bar of a sub-panel or rely on metal conduit for this ground connection. Each dispenser's grounding post must be within 1 ohm resistance to earth ground potential. Do not use wire nuts on ground circuits, use only compression type connectors.

5. Electronic power must be a dedicated circuit. The electronic power required for this dispenser ranges from 115VAC to 230VAC for its operation. There are no settings to change between the two power references. Electronic power for all dispensers at the installation must be wired to the same AC line phase or damage will result to the dispensers. This will avoid a cross phase condition on the remote relay control wires.

6. Use 15 Amp neutral breaking circuit breakers which are supplied by the customer.

    Breaker Identification:
    CB #1 Electronic Power— Hot for electronic power is 115VAC except for export codes which are 230Vac. CB #3 Submerged pump motor product A. CB #4 Submerged pump motor product B. CB #5 Submerged pump motor product C.

    Note: No more than 2 dispensers per breaker. Only 1 submerged pump motor per breaker.

7. Motors are dual voltage (115VAC or 230VAC) and are factory set. Check motor switch on each motor to be sure it is set according to the voltage supplied.

8. Absolutely no daisy chaining of data wires. Damage to the dispenser or console will result. Do not connect these wires if unit is used without a console.

9. If optional speaker is utilized, speaker/intercom and call button wire must be run in a separate conduit to avoid interference noise with the intercom system.

10. Field connection = ☐

11. No connection for single sided dispensers.

12. These wires are used for connecting remote consoles. Refer to console installation instructions for proper wiring methods. The dispenser must be connected to an approved Bennett console or control device.

13. All control relays must have a RC networks across the coil and contacts as shown. Use Bennett part number A444101. Failure to properly suppress relay electrical noise with RC networks will cause system malfunctions and will void the Bennett Limited Warranty.
How to Mechanically Calibrate the SB-100 Meter

The Bennett SB-100 Meter is built to maintain accurate measurement under normal operating conditions. The meter is a positive displacement device with rods and pistons, which require a break in period. The meter is calibrated at the factory using a solvent for safety purposes, and must be calibrated at installation. We strongly suggest recalibration of the meter again after a 90 day break in period.

Each SB-100 meter is provided with the following calibration information:

- The dial adjusting cover has (+) and (-) arrows to indicate the correct direction to rotate the dial to either increase or decrease delivery.
- The dial cover has two pin hubs, one to the left of the shaft and one to the right. The seal pin may be inserted in either hub. See Figure 9. The smallest adjustment (.6 cu. in.) occurs when the pin is pulled from one side and inserted in the other side by moving the dial the least amount or half a hole. A 1.2 cu. in. adjustment is made by pulling the pin and turning the dial until the next adjacent hole aligns with the same hub and reinserting the pin.

To calibrate the meter, follow this procedure:

1. Starting with a wetted test can, measure the actual delivery of the meter at fast flow in an accurate test measure. The test measure should be a minimum of 5 gallons (20 liters).
2. Cut and remove the existing seal wires and remove the seal pin. See Figure 7.
3. Turn the dial the necessary amount in the (+) or (-) direction to increase or decrease the quantity of fuel delivered.
4. Re-insert the seal pin in the desired pin hub.
5. Dispense 5 gallons (20 liters) of fuel to allow the meter to adjust to the new settings. Do not make any adjustments based on this delivery.
6. Make sure the meter is properly calibrated. Dispense another 5 gallons (20 liters) of fuel into an official test measure to check the calibration.

Figure 7
How to Perform an Electronic Calibration in Menu Code 27

This menu code allows the technician to perform an electronic calibration procedure. These procedures include two different incremental calibration procedures and one overwrite calibration procedure. In an incremental calibration procedure, the new entered value is added to the existing value. In an overwrite calibration procedure, the new entered value replaces the existing value.

⚠️ WARNING!!! - You must perform the E-Cal prior to dispensing fuel. If the E-Cal isn’t performed properly then the dispenser will produce a Calibration error.

Prior to entering Mode 27 you must slide the switch over on the CPU Board. Currently this switch is in “Normal Operating Mode”. To gain access to Mode 27 you must slide it to the right anytime before going into this mode. If you attempt to dispense with this switch in “E-Cal Mode” then the dispenser will give you an Error 74.

The Basic Calibration Procedure

This procedure assumes that the test can sight glass is graduated in units of cubic inches or cubic centimeters (milliliters). If the sight glass is in test can percentage units, refer to the optional calibration procedure in the next section.

Prior to performing any E-Cal procedure you must go to Mode 6 and make sure the dispenser configuration is correct. An incorrect configuration will prevent the use of un-configured meters. You also must make sure that every product has a price other than zero. A zero price will prevent the use of any configured meter.

To perform a basic calibration, follow this procedure:

1. After the Manager’s Mode has been accessed, press the number 2 and 7, then the MODE button on the keypad. The first display shows the current electronic calibration correction constant of the first configured meter. Use the ↑ button or ↓ button to view the current electronic calibration correction constant for each configured meter. Once you are viewing the desired meter, press ENTER.
2. The main display shows the test can size entry prompt. Enter the test can size and press the ENTER button. Once the test can size has been entered, the main display for the select dispenser side will show “READY” and the test can size will appear in the first ppv display. The second ppv display will show the volume unit of measure (USG for United States Gallon, LIT for liter or BIG for British Imperial Gallon).
3. At this point you are ready to run a test can sale. Turn on the pump handle. If push-to-start is active you will be prompted to push the start button. If the selected pump handle supports multiple products, you will be prompted to choose the desired product.
4. Once the product is selected, the main display will reset. The main money display will show the current electronic calibration correction constant for the selected meter. The volume display will show the current sale volume. Run a sale as close as possible to the test can size entered in step 2 and turn off the pump handle. The display will change to the error entry display.

(Continued on page 25)
5. Depending on the volume unit of measure, the error display will either show "in Err" for cubic inches or "cc Err" for cubic centimeters (milliliters). Enter the amount of the error (positive or negative) and press the ENTER button. You can only change the amount to a negative value after the entered amount is other than zero. Once the ENTER key is pressed, the main display will show "READY". Go to step 3 to run another test can or press CANCEL to exit.

The Optional Calibration Procedure
This procedure assumes that the test can sight glass is graduated in test can percentage units rather than cubic inches or cubic centimeters (milliliters) as in the basic calibration procedure. If the sight glass is in cubic inches or cubic centimeters, refer to the basic calibration procedure.

To perform the optional calibration, follow this procedure:

1. Repeat step one from the basic calibration procedure.
2. The main display now shows the test can size entry prompt. Before entering the test can size, press the +/- button. This switches the error entry mode from cubic units to percentage units. The second ppv display will show "PER" to confirm the percentage unit mode. Enter the test can size (still in gallons or liters) and press the ENTER button. Once the test can size has been entered, the main display for the select dispenser side will show "READY" and the test can size will appear in the first ppv display. The second ppv display will still show "PER" for the percentage unit mode for error entry.
3. Repeat steps 3 - 4 from the basic calibration procedure.
4. The error display will show "PC Err" for percent error. Enter the amount of the error (positive or negative) and press the ENTER button. You can only change the amount to a negative value after the entered amount is other than zero. Once the ENTER key is pressed, the main display will show "READY". Go to step 3 to run another test can or press CANCEL to exit.

The Direct Percentage Entry Procedure
This procedure provides a way of zeroing or overwriting the electronic calibration correction constant. This procedure requires no test can.

To perform the direct percentage entry, follow this procedure:

1. Repeat step one from the basic calibration procedure.
2. The main display now shows the test can size entry prompt. Press the ↑ button to bypass the test can prompt and access the direct percentage entry menu.
3. The ↑ button or the ↓ button is used to select the meter. Note that only the top ppv will display the selected meter as you press these buttons.
4. As the new electronic calibration correction constant is entered, it will show up in the main volume display. When the ENTER button is pressed, the entered electronic calibration correction constant is loaded into the current meter and appears in the second ppv display. Go to step 3 to update another meter or press the CANCEL button to exit this menu code.
Bennett Limited Warranty for Products Installed in the United States - Pacific & Horizon II

Bennett Pump Company guarantees new Service Station Equipment manufactured by Bennett against defects in material or workmanship during the warranty period in accordance with the provisions stated below:

- The Site Audit Report issued with all equipment must be completed and returned at time of installation to Bennett Pump Company, Spring Lake, MI to initiate warranty.
- Warranty service must be performed by the nearest Bennett Authorized Service Representative qualified to perform service on the defective equipment. Only Authorized and Certified Service Representatives are allowed to perform warranty service. Use of service personnel other than qualified Bennett Service Representatives without prior approval by Bennett Pump Company will void payment of any warranty claims.
- Labor and travel costs incurred while servicing Bennett equipment will be paid at previously contracted rates subject to published standard repair time allowances to qualified Bennett Service Representatives with travel cost limited to 200 miles. Travel cost shall be limited to 4 hours round trip.
- Bennett equipment has been installed according to the manufacturer's instructions and diagrams.
- During the warranty period, Bennett Pump Company will, at its option, repair or replace defective parts returned to its factory, transportation charges prepaid.
- The manufacturer reserves the right to make changes in the design or to make additions

Dispensers – Pacific & Horizon 2 Series Dispensers (excluding Natural Gas, Hydrogen and Hydraulic-less Dispensers)
Warranty on parts, labor, and travel is 24 months from date of installation or 30 months from date of Bennett's original invoice, whichever comes first.

Warranty excludes nozzles, hoses and fittings, hose retractor, filters, belt adjustments, paper jams, light bulbs, or any leaks after the installation start-up and audit. Minor adjustments such as meter calibration, pulser adjustments, and handle switch adjustments, customer specified items manufactured by others, and customer requested reprogramming of equipment are not covered by warranty.

Field Retrofit Card Readers, Payment Modules, Cash Acceptors, and all other field retrofit Accessories
The field retrofit assembly is warranted for parts only for 12 months from date of installation or 18 months from date of original invoice, whichever comes first, except the receipt printer and driver board which is warranted for parts for ninety (90) days from the date of installation or 180 days from original invoice, whichever comes first.

Consumable Items such as receipt paper are not warranted. The use of receipt paper not specified by Bennett will void the printer assembly warranty.

Model 515 Pump Controller, 621 Module, Fan Out Boxes
Warranty on parts, labor and travel is 12 months from the date of installation or 18 months from the date of original invoice, whichever comes first.

Software
Bennett Pump Company warrants Bennett products and software packages, whose operation is controlled by Bennett designed and developed software, shall be free of material defects and conform to current Bennett specifications for a period of ninety (90) days from the date of original invoice. Bennett shall use its best effort to correct such defects and to supply to purchaser at Bennett's expense, a corrected version within a reasonable time after purchaser notifies Bennett in writing of any defects and provides the programs and instructions required to reproduce the claimed defect.

Warranty does not cover any modification to the program, the Bennett product, and/or connection to unapproved equipment made by any person or any defect caused by such modifications/connections.

Upgrade Kits
Bennett offers kits which are installed as an option to enhance operating features of an existing Bennett product are warranted for parts only for ninety (90) days from date of installation or 12 months from date of original invoice, whichever comes first. Upgrade Kit warranty applies to kit components only. Warranty status of the remainder of the product remains unchanged.

Spare Parts
For equipment under warranty: The warranty period for all spare parts replaced is the remainder of the original warranty. Spare Parts are warranted for the value of the parts only (no labor, mileage, or other charges).

For equipment not under warranty: The warranty period is 90 days from the date of invoice to the end user, or 12 months from the date of original invoice, whichever comes first. Spare Parts are warranted for the value of the parts only (no labor, mileage, or other charges).

General Exclusions
1. Warranty does not apply to any product which has been altered, subjected to unusual physical or electrical stress, an Act of God, damaged by accident, tampered with, or subjected to misuse or abuse including substituting parts or accessories from other manufacturers without the written consent of Bennett Pump Company. The above warranties shall not exist if the original identification marks have been removed or altered.
2. Bennett makes no warranty with respect to the Bennett equipment or Bennett's performance of services under this agreement, express or implied, and Bennett hereby disclaims the implied warranties of merchantability and fitness for a particular purpose.
3. In no event shall Bennett be liable for any loss of profits, loss of use, interruption of business or indirect, special, incidental or consequential damages of any kind in connection with or arising out of the furnishing, performance, use or failure of the Bennett equipment, software or services acquired from Bennett, the distributor or the user, whether alleged as a breach of contract or tortuous conduct, including negligence. Bennett's liability hereunder for damages shall not, in any event, exceed the amounts paid by the buyer to Bennett for equipment, software or services as to which the claim arose.
4. No action arising out of any claimed breach of the Warranty Agreement or transaction under this Warranty Agreement may be brought by either party more than two (2) years after the cause of action has accrued.
5. Use of non-Bennett replacement parts, unless specified by Bennett, will void the equipment warranty.
6. This warranty only applies to Bennett equipment installed in the United States of America and Canada.
7. Failure to pay the Bennett invoice within stated invoice terms, covering the respective Bennett equipment purchased under this limited warranty may, at Bennett's discretion, void this limited product warranty.

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING, WITHOUT LIMITATION, THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

BENNETT PUMP COMPANY
1218 E. Pontaluna Road
Spring Lake, MI 49456
Tel: 231-798-1310 Fax: 231-799-6202
PCI SSC’s approval only applies to PEDs that are identical to the PED tested by a PCI Security Standards Council recognized laboratory. If any aspect of the PED is different from that which was tested by the laboratory - even if the PED conforms to the basic product description contained the letter, then the PED model should not be considered approved, nor promoted as approved. For example, if a PED contains firmware, software, or physical construction that has the same name or model number as those tested by the laboratory, but in fact are not identical to those PED samples tested by the laboratory, then the PED should not be considered or promoted as approved.

No vendor or other third party may refer to a PED as “PCI Approved” nor otherwise state or imply that PCI SSC has, in whole or part, approved any aspect of a vendor or its PEDs, except to the extent and subject to the terms and restrictions expressly set forth in a written agreement with PCI SSC, or in an approval letter. All other references to PCI SSC’s approval are strictly and actively prohibited by PCI SSC.

When granted, an approval is provided by PCI SSC to ensure certain security and operational characteristics important to the achievement of PCI SSC’s goals, but the approval does not under any circumstances include any endorsement or warranty regarding the functionality, quality, or performance of any particular product or service. PCI SSC does not warranty any products or services provided by third parties. Approval does not, under any circumstances, include or imply any product warranties from PCI SSC, including, without limitation, any implied warranties of merchantability, fitness for purpose or noninfringement, all of which are expressly disclaimed by PCI SSC. All rights and remedies regarding products and services, which have received an approval, shall be provided by the party providing such products or services, and not by PCI SSC or the payment brand participates.
Pacific Site Audit Report

Model and Serial Number of Dispensers and Serial Number of Secure Pump Pays (page 2 for more space): (please indicate if E-85 is used for any dispensers):

Site Information:
Phone: ____________________________
Name: ____________________________
Address: __________________________
_______________________________________
City: __________________ State: ______ Zip: ______
Owner by: ____________________________
Equipment Purchased Date: __________

What type of Interface Box are you using for the Fuel Communication? ____________________________
What type of Point of Sale (P.O.S.) are you using? ____________________________ Software Version? ____________________________

Enter Y = Yes, N = No or N/A = not applicable:

______ Is the dispenser mechanically mounted to the island using securing bolts and metal shims?
______ Are the card reader’s and or RS485 Fuel field wiring twisted at least 3 times per foot?
______ Is the distance between the dispenser(s) and the Interface Box less than 500 feet (150m)?
______ For the field wiring does each dispenser have a dedicated rigid metal conduit?
______ Is the field wiring Oil and Gas resistant, THHN, the right gauge and copper stranded?
______ Is the field wiring continuous with no splices?
______ Is the field wire conduits sealed for vapors in the head of the dispenser?
______ Is this location using Cathodic Protection? Check the voltage between Neutral and Earth Ground. 
Readings: _____ VAC _____ VDC (see page 2 for warning)
______ Are there no more than 2 dispensers on one dedicated 15 Amp breaker?
______ Are the wires between the P.O.S. within 100 feet (30m)?
______ Is there an emergency cutoff valve mounted on each product line of the dispensers per manufacturer’s specifications?
______ Is all piping and cutoff valves secured per manufacture’s specifications and State regulations?
______ Is the low grade coming into the left product line from side A?
______ Are there any leaks in the hydraulic assembly, hose outlets or hanging hardware?
______ Is the Pump Controller on the same phase of power as the dispensers?
______ Are all of the dispensers on the same phase of power?
______ Is an approved emergency stop relay installed and working properly for the fuel court area?
______ Are there 3 R. C. Networks installed properly in each sub-pump relay?
______ Have the meter calibrations been verified?
______ Was the Bennett Warranty statement reviewed with the station Manager / Owner and do they understand the policy?
______ Has the start-up and checklist been completed (page 19 of Installation Manual - 111102)?
______ Were all Bennett installation instructions followed per our Installation Manual (111102)? If not, please describe, in detail, anything out of the ordinary on the back (page 2).
Exceptions to Bennett Installation Instructions: Please list anything out of the ordinary or worth mentioned that may affect the safety or dispensing of the installed equipment. If there were any confusing instructions in our Installation Manual or start-up procedure please add your comments here.

Warning: If the location is using and impressed current cathodic protection system then it is imperative that the system is hooked up correctly. An improper installation could cause damage to our equipment. Please check for stray voltage coming from this system on the Earth Ground and Neutral within the Bennett equipment.

__________________________________________________________________________________
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__________________________________________________________________________________

Paid by:
Technician: ____________________________
Name: _______________________________
Email: _______________________________
Phone: _______________________________
Certification #: _______________________

Owner/Manager Signature: ___________________________

Address: _______________________________
Phone: _______________________________

Email: ___________________________________

Certification #: _______________________

Technician Signature: ____________________________