

Nozzle Kit Installation Instructions

Warning!



Read these and all warnings and instructions carefully. They are included to help you install and maintain the *FleetLINK* equipment safely in the highly flammable environment of a fueling station.

Disregarding these warnings and instructions might lead to death, serious injury and property loss or damage, to you and others. It is YOUR responsibility to install, operate and maintain the equipment according to the instructions appearing in this manual and to conform to all applicable codes, regulations and safety measures. Failure to do so could void all your warranties connected with this equipment.

Explosion Hazard



Installations must comply with all applicable requirements of the National Fire Protection Association NFPA-30 “Flammable and Combustible Liquids Code”, NFPA-30A Automotive and Marine Service Station Code, federal, state and local codes and any other applicable codes or regulations.

Do not smoke! Aside from being bad for your health, smoking around hydrocarbon vapors might cause an explosion. Do not perform metal work with fuel tank cover removed, or when any fuel leakage is suspected. Do not perform any operation that may impair fuel tank or fuel pipe safety. Use pneumatic (NEVER electric!) tools for metal work inside the hazardous area.



For Installer's Safety



- **Block off the work area to protect yourself and other persons from moving vehicles. Use safety cones or other signaling devices.**

Kit Contents

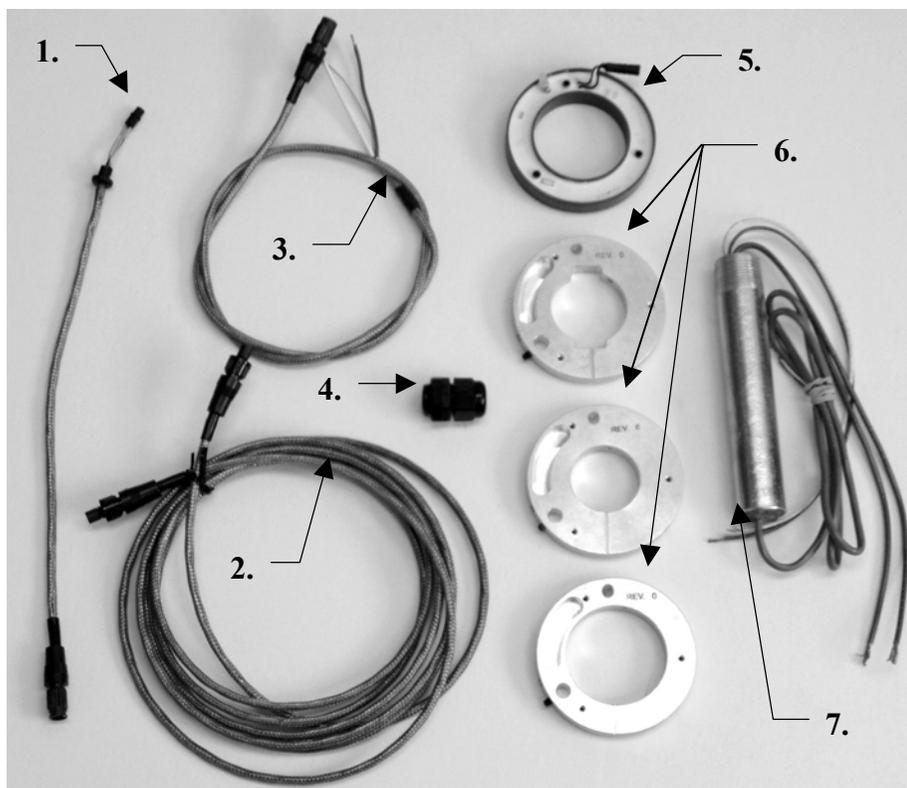


Figure 1: Kit Contents

1. Nozzle Cable
2. Hose Cable (12ft, 15ft or 18ft)
3. Pump Whip Cable
4. 3/4" Compression Fitting and Nut
5. Nozzle Coil Assembly
6. Aluminum Adapter (various styles; not all are included in kit)
7. Intrinsic Safety Barrier

Also included, but not shown: Four #6-32 x 7/8" Phillips flat-head stainless steel screws, silicone wire nuts, bag of cable ties and these instructions.

Each component can be purchased separately for maintenance/repair. See the price list for part numbers and details.

Tools Required

- 5/64" Hex key
- #1 Phillips screwdriver
- Large flat blade screwdriver
- 3/4" round knockout panel punch
- Wire cutters
- Channel lock pliers
- 3/8" drive socket set
- Open-end wrenches (various sizes)

Installation Procedures

Installing the Nozzle Components

1. See *Figure 2*. Use a flat-blade screwdriver to route the Nozzle Cable (Item 1 in *Figure 1*) under the handle insulator on the right side of the nozzle body.



Figure 2: Nozzle With Nozzle Cable Installed

2. See *Figure 3*. Mount the Aluminum Adapter (Item 6 in *Figure 1*) to the nozzle at the base of the spout.

Note

You may have to remove the splash guard and/or trim the Hand Insulator to mount the adaptor..

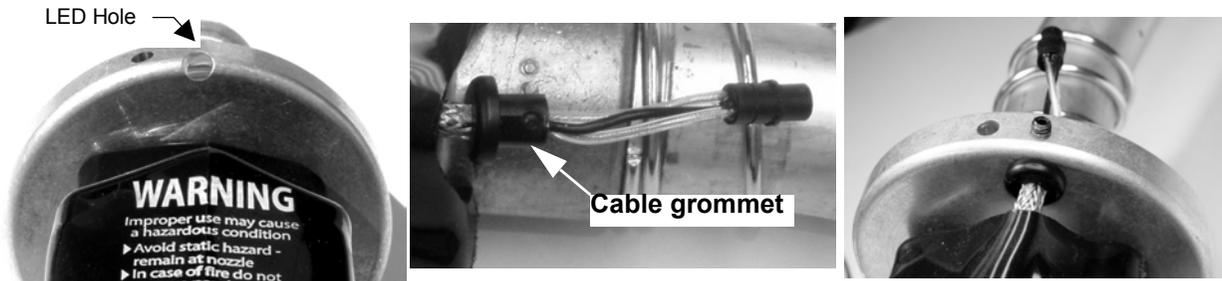


Figure 3: Nozzle Kit Installation Details

3. Position the LED hole at the 12 o'clock as shown in *Figure 3*.
4. Insert the end of the Nozzle Cable (Item 1 in *Figure 1*) into the hole in the adapter until the grommet is fully seated.
5. Align one of the flats on the grommet with the set-screw.
6. Secure adapter to the nozzle by tightening the set-screws with the 5/64" hex wrench.
7. Tighten the Nozzle Cable grommet-retaining set-screw.
8. See *Figure 4*. Slip the Nozzle Coil Assembly (Item 5 in *Figure 1*) over the nozzle spout and plug the Nozzle Cable into the Nozzle Coil Assembly.

- Align the LED on the Nozzle Coil Assembly with the angled hole in the Aluminum Adapter (Item 6 in *Figure 1*) and carefully push the Nozzle Coil Assembly onto the Adapter. *The LED will bend slightly when doing this.* Secure using the supplied #6-32 flat head screws.



Figure 4: Nozzle Installation Finishing Up

Installing the Hose Components

- See *Figure 5*. It is strongly suggested that you install a limited-rotation (270°) swivel on the nozzle to prevent twisting of the cable. You can order one from OPW if desired.



Figure 5: Installing the Hose Components

- Attach the Hose Cable (Item 2 in *Figure 1*) to the fueling hose with the supplied cable ties, *OR* use the optional corrugated split loom (center *Figure 5*) available from OPW Fuel Management Systems (see *Page 8*).
- Connect the Nozzle Cable to the Hose Cable by aligning the connectors and then pushing them together.

4. Slide the coupling nut over the connection and twist 90° clockwise to secure.
5. Connect the Hose Cable to the Pump Whip Cable by aligning the connectors and then pushing together. Make this connection with the break-away connector as shown.
6. Slide the coupling nut over the connection, then twist it 90° clockwise to secure.

See Page 8 for data concerning the integrity of the Nozzle Cable/Hose Cable/Pump Whip Cable electrical connections.

Installing the Intrinsic Safety Barrier



Figure 6: Cable Compression Fitting and Intrinsic Barrier Installation

1. Use the 3/4" panel punch to cut a hole in the dispenser for the compression fitting.
2. Fasten the compression fitting to the dispenser with the supplied nut.
3. Feed the free end of the Pump Whip Cable through the fitting, then tighten the nut.
4. Thread the Intrinsic Safety Barrier (Item 7 in *Figure 1*) into the dispenser's explosion proof junction box. *You may need a 3/4"-to-1/2" reducer (not included) to do this.*
5. Connect the Pump Whip Cable wires to the Intrinsic Safety Barrier using the supplied wire nuts as shown in *Figure 7* on page 7.
6. Connect one of green wires from the barrier to the junction box grounding screw.

- Use off-the-shelf wire nuts (not supplied) to attach the remaining Barrier conductors to the Vehicle Identification Terminal (VIT).

See *Installing the VIT Kit (M00-020-4262)* for more information.

Warning

When extending the green ground wire, you MUST use minimum 12 AWG conductor to comply with safety regulations.

Wiring Diagram

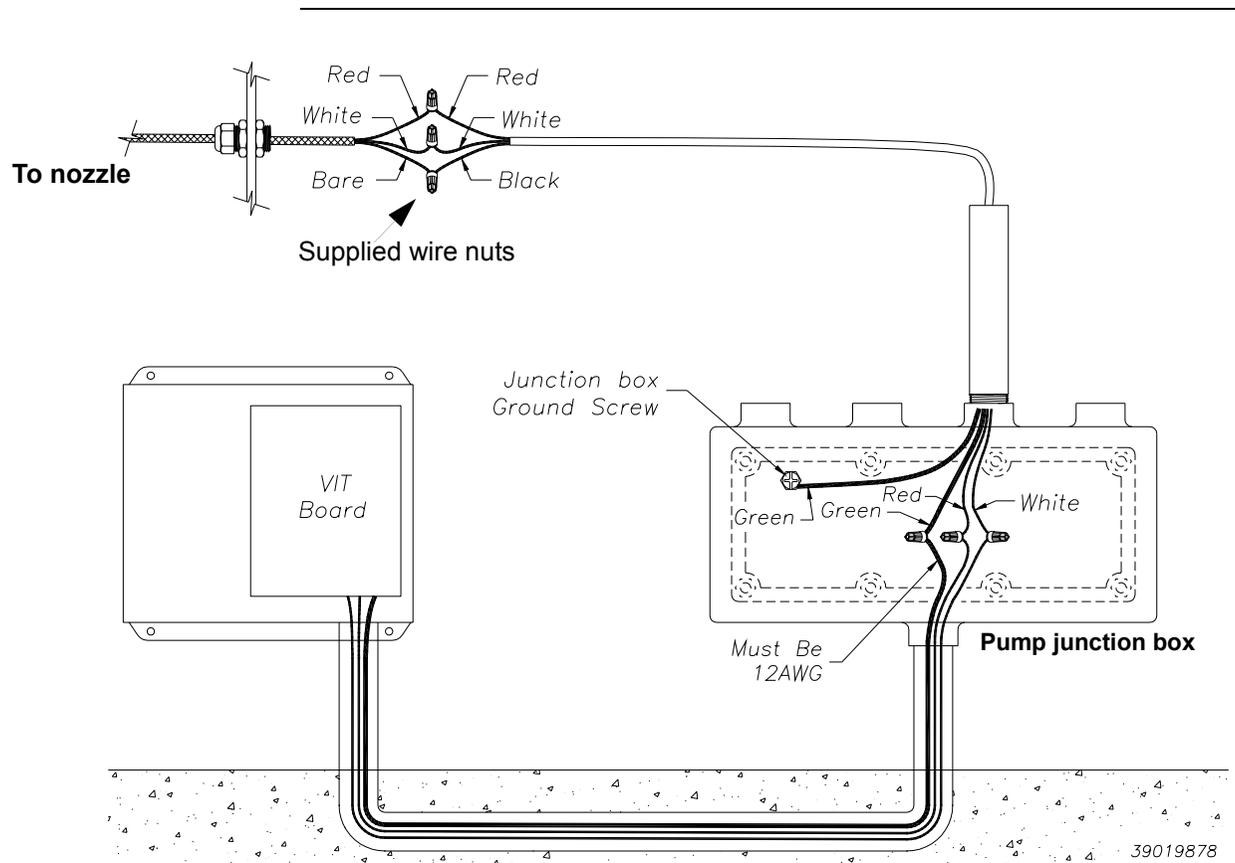


Figure 7: System Wiring Diagram

Additional Components

The following additional installation components are available from OPW Fuel Management Systems:

Description	Part Number
3/4" Limited Rotation Swivel	30-3229
1" Limited Rotation Swivel	30-3230
Corrugated Split Loom – 1.5"	50-2146
Corrugated Split Loom – 1.625"	50-2147
Corrugated Split Loom – 2.0"	50-2148

Cable Electrical Connection Specifications

FleetLINK connectors are designed with drive-offs in mind. Although a coupling nut secures the cable connections, the connectors can be safely pulled apart without undoing the nut, up to ten times without damaging the cables. This happens if someone drives away with the fueling nozzle still inserted in the vehicle.

The force required to separate the connectors drops after each forced separation, as shown in the table below..

Number of Disconnects	Pull-Apart Force
1	5.6 lb
2	3.8 lb
3	3.0 lb
4	2.8 lb
5	2.9 lb
6	2.7 lb
7	2.7 lb
8	2.6 lb
9	2.5 lb
10	2.3 lb