

Installation Instructions

Purpose Of This Document

This document provides information to install a Visible Discharge Indicator (VDI) to Highline™, The Advantage® Series, Legacy®, Encore® and Performer® series pumps and dispensers.

Read NFPA 30A And NFPA 70



Before installing this equipment, the installer must read, understand, and follow this manual, NFPA 30A (The U.S. Automotive and Marine Service Station Code) and NFPA 70 (The U.S. National Electric Code) and applicable federal, state and local codes and regulations. Failure to do so may adversely affect the safe use and operation of the equipment.

Recommended Tools And Equipment

The following tools are needed to install VDI kits:

- Pipe wrench
- UL classified pipe sealant

Recommended Manual

The following documents may provide additional information:

- MDE-2531 Pump and Dispenser Service Manual

VDI Kit Selection Guide

Kit Number	Used On	Hose Diameter
K94202-01	Encore, The Advantage Series, Legacy and Performer Series	3/4"
K94202-02	Encore, The Advantage Series, Legacy and Performer Series	1"

Important Safety Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock or pressure release could occur and cause death or serious injury if these safe service procedures are not followed.

Preliminary Precautions


You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain or service this equipment.

Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump and island. Locate the switch or circuit breakers that shut-off all power to all fueling equipment, dispensing devices, and submerged turbine pumps (STPs).

⚠ WARNING

The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser.

 This means that even if you activate these stops, fuel may continue to flow uncontrolled.

You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not only these cashier station "stops."

Total Electrical Shut-Off Before Access

- Any procedure requiring access to electrical components or the electronics of the dispenser requires total electrical shut-off of that unit. Know the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

Evacuation, Barricading and Shut-Off

Any procedures requiring accessing the pump/dispenser or STPs requires the following three actions:



- An evacuation of all unauthorized persons and vehicles
- Using safety tape or cones as barricades to the effected units
- A total electrical shut-off of that unit

Read the Manual

Read, understand and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call a Gilbarco Authorized Service Contractor or call the Gilbarco Call Center at 1-800-800-7498. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

There is applicable information in: NFPA 30A: *Automotive and Marine Service Code*; NFPA 70: *National Electrical Code (NEC)*; OSHA regulations; and federal, state, and local codes which must be followed. Failure to install, inspect, maintain or service this equipment in accordance with these codes, regulations and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions that follow must be followed to prevent death, injury or damage to the equipment

- **DANGER** - This signal word is used to alert you to a hazard to unsafe practice which will result in death or serious injury
- **WARNING** - This alerts you to a hazard or unsafe practice that could result in death or serious injury.
- **CAUTION** with Alert symbol - This signal word designates a hazard or unsafe practice which may result in minor injury.
- **CAUTION** without Alert symbol - When used by itself, CAUTION designates a hazard or unsafe practice which may result in property or equipment damage.

Prevent Explosions and Fires

Fuels and their vapors will become explosive if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause explosive vapors in the vicinity of dispenser or island.

No Open Flames



Open flames from matches, lighters, welding torches or other sources can ignite fuels and their vapors.

No Sparks - No Smoking



Sparks from starting vehicles, starting or using power tools, burning cigarettes, cigars or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuels and their vapors. After getting out of a vehicle, touch the metal of your vehicle to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Be familiar with Cardiopulmonary Resuscitation (CPR) methods if you are working with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA tag out and lock out procedures. If you are not familiar with this requirement, refer to information in the service manual and OSHA documentation.

Working With Fuel Safely

Be sure to follow information in this manual, related materials and approved industry standard practices in handling fuel and fueling equipment.

Protect Your Eyes



Spraying fuel from residual pressure in lines can cause serious eye injuries. Always wear eye protection. Gasoline spilled in eyes may cause burns to eye tissue. Rinse eyes with water for approximately 15 minutes. Seek medical advice immediately. It is not necessary to wear eye protection unless performing hydraulic service.

Use Proper Fuel Handling Techniques

- Be sure breakaways, shear valves and other emergency devices are properly installed. Refer to manufacturer's instructions for proper installation.
- Collect, transport and dispose fuel only in approved containers specifically designed for this purpose.
- Before working with any chemicals or fuels in and around a dispensing facility, read the MSDS pertaining to those chemicals as prescribed in the Occupational Safety and Health Administration Standard, 29 CFR 1910.1200. Refer to the supplier's literature.

Hydraulic Pressure Releases and Fuel Leakage

Working on hydraulic systems can result in leakage of fuel that may also be under pressure.



Turn off all circuit breakers for unit being worked on, all dispensers using the same grades of fuel, and all associated STPs.

Do not allow unauthorized or untrained individuals to service hydraulic equipment.

Shear valves, required by NFPA 30A, are intended to shut-off the flow of fuel at the dispenser base (hydraulics area) during vehicle impact or fires. A single-poppet shear valve prevents fuel from flowing from the underground tank. A double-poppet shear valve prevents fuel from flowing from the underground tank and from the dispenser.

React Quickly to Fuel Spills, Fires or Vehicle Impact



Follow these steps in the event of a fuel spill, fire, or vehicle impact.

- 1 Use station EMERGENCY TOTAL ELECTRICAL SHUT-OFF immediately. Turn off all system circuit breakers to the island. Refer to [“Total Electrical Shut-Off Before Access” on page 2](#) for more information.
- 2 Call emergency numbers for fires, vehicle impact or any significant spills.
- 3 Use safety tape, cones or barricades to block the work area. Do not go near fuel spill or allow anyone else in the area.
- 4 Take precautions to avoid igniting fuel. Do not allow starting of vehicles in the area and immediately stop use of open flames, smoking or power tools in the area.
- 5 Provide emergency and first aid assistance. If any gasoline has been inhaled or spilled on skin, seek emergency help immediately.
- 6 Use approved and safe procedures to clean up all spills with a “fuel or gasoline absorbent” material approved by your local regulatory agencies. (Dispose of fuel and hazardous absorbent material promptly and according to the requirements of the fire department, local EPA, and federal, state or local resources.)

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Be sure to clean hands after handling equipment. Do not place any equipment in mouth.

WARNING

This area contains a chemical known to the State of California to cause cancer.

⚠ WARNING

This area contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Emergency First Aid Information

⚠ WARNING



Gasoline ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

⚠ WARNING



Gasoline inhaled may cause unconsciousness and burns to lips, mouth and lungs. Keep airway open. Seek medical advice immediately.

⚠ WARNING



Gasoline spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

⚠ WARNING



Gasoline spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

Informing Emergency Personnel

Compile the following information for emergency personnel:







- Location of accident (e.g. address, front/back of building, etc.)
- Nature of accident (e.g. possible heart attack, run over by car, burns, etc.)
- Age of victim (e.g. baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (e.g. stopped bleeding by pressure, etc.)
- Whether or not victim has vomited (e.g. if swallowed or inhaled something, etc.)

IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

Installation


The following instructions provide information for project preparation, installation, and final steps.



Preparation

- 1  Read all instructions before beginning.
- 2  Follow all safety precautions.
 - Barricade area.
 - Do not allow vehicles or unauthorized people in work area.
 - Do not smoke or have open flames in work area.
 - Do not use electric power tools in work area.
 - Wear protective gear (safety glasses, gloves) in work area.
- 3  Isolate unit at distribution box.
- 4  Remove lower door and, on dispensers only, close and test all shear valves.
- 5  Turn off all power to unit including unit lights. Turn off all associated STP power. Use system circuit breakers. Multiple disconnects may be required.
- 6  Place nozzle(s) into approved container to drain and bleed pressure. Some residual pressure may remain. See MDE-2531 for test procedures.

Installing VDI Kits



⚠ WARNING



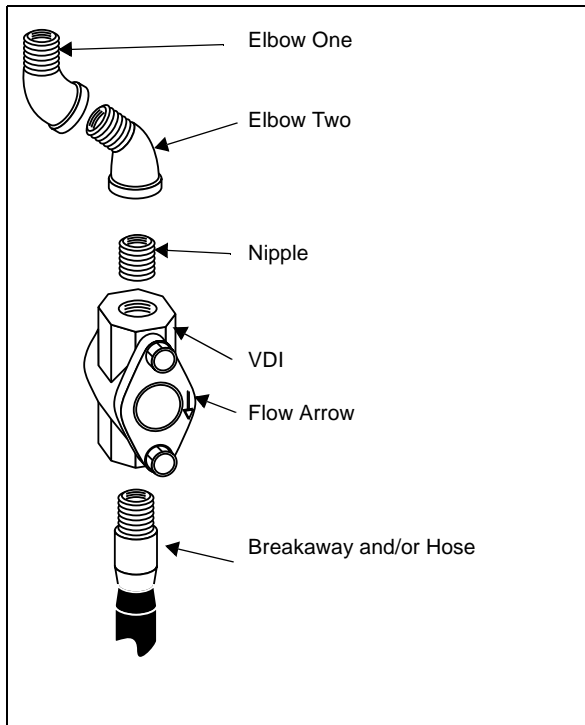
Residual pressure and entrapped fuel may still be present and may spray when removing hose, nozzle and breakaway. Fire/Explosion can result in severe injury or death.

- Wear eye protection.
- Clean up spills promptly.

- 1  Remove nozzle, hose and breakaway. Some residual pressure may remain.
- 2  Use U.L. listed pipe sealant on pipe threads. Do not use teflon tape.
- 3 On K93871, K93872, and K93897, do the following

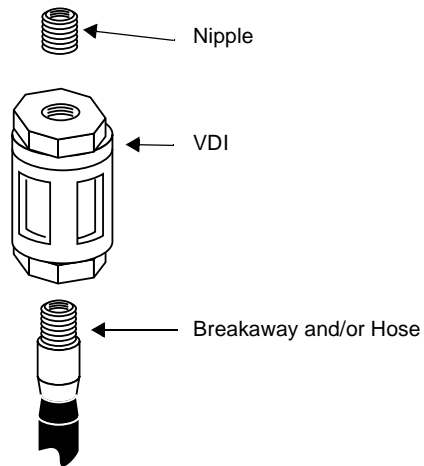
Install on The Advantage Series (K93871):	To:
1. Elbow One	Discharge Casting
2. Elbow Two	Elbow One
3. Nipple	Elbow Two
4. VDI	Nipple and point flow arrow to nozzle
5. Breakaway, Hose and Nozzle	VDI

Install on Highline, Legacy, or Performer (K93872 and K93897):	To:
1. Nipple	Discharge Casting
2. VDI	Nipple and point flow arrow to nozzle
3. Breakaway, Hose and Nozzle	VDI



4 On K94202-01 and K94202-02, do the following.

Install On The Advantage Series, Legacy or Performer:	To:
1. Nipple	Discharge Casting
2. VDI	Nipple
3. Breakaway, Hose and Nozzle	VDI



Final Steps



1 On dispensers only, open shear valve.

2 Turn on unit and STP power. In the distribution box, place unit in normal operation.



3 Purge air, check for leaks and operation of VDI.

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