

Purpose

This document is provided to help protect your Petroleum Equipment from natural disaster effects, return equipment to service safely and quickly, and to alert you to certain Safety considerations related to your natural disaster planning.

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.


The first and most important information you must know is how to stop all fuel flow to the pump and island.

Emergency Total Electrical Shut-Off

Locate the switch or circuit breakers that shut-off all power to all fueling equipment, dispensing devices, and submerged turbine pumps (STPs). These you must operate in the event of an emergency.

 **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.

NFPA 30A, Section 4-1.2, published by the National Fire Protection Association, requires the installation of an easily accessible switch or circuit breaker to shut-off the power to all fueling equipment, dispensing devices and STPs in the event of an emergency. Know the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

OSHA Lock-Out and Tag-Out Requirements




OSHA Standard 29 CFR 1910-147 Control of Hazardous Energy Sources (Lock-Out/Tag-Out) covers ways to avoid personal injury because power was turned on or fuel pressure was applied **unexpectedly** while servicing equipment. The rule requires:

- (1) Turning off equipment power and fuel under pressure.
- (2) Use of a locking device (breaker, valve, etc.) or label device with a warning tag.

Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

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 affected 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. 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.

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 or 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
This signal word designates a hazard or unsafe practice which may result in minor injury .

CAUTION
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.

Prevent Electrical Shock and Sparks

Dispensing devices use high voltage. A potential shock hazard exists when working on or around a dispensing device.

Follow OSHA lock-out and tag-out procedures.

Always turn OFF power to the dispensing device and associated submerged turbine pumps (STPs) when servicing or making electrical wiring connections. Multiple disconnects may be required.

 WARNING	
	<p>The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser.</p> <p>This means that even if you activate these stops, fuel may continue to flow uncontrolled.</p> <p>You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not only these cashier station "stops."</p>

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.

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.


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.


⚠ 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."

- 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.

⚠ WARNING

If any gasoline has been inhaled, seek emergency help immediately.

Inhaled gasoline may cause unconsciousness and burns to lips, mouth and lungs.

⚠ WARNING

Gasoline spilled on skin may cause burns.

Wash area thoroughly with clean water.

Seek medical advice 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.)

Emergency and First Aid Information

Refer to phone book for emergency phone numbers. If needed, follow first aid instructions as outlined in American Red Cross Standard First Aid manuals.

WARNING



Gasoline
Ingestion

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 Vapor
Inhalation

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

WARNING



Gasoline In
Eyes

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

WARNING



Gasoline On
Skin

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

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 discussed earlier in this section.

Contacting Emergency Personnel

Keep the following emergency phone numbers at hand.

Ambulance: _____

Fire: _____

Police: _____

Poison Control Center: _____

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.

Station Preparations

The following steps should be taken in preparation **before** a natural disaster strikes:

- 1 To prevent underground storage tanks from floating in flood conditions, keep tanks as full as possible prior to shutting down station or evacuating.
- 2 Check/secure all storage tank fill caps when flooding conditions are expected.
- 3 Manually trip shear valves under each dispenser.
- 4 Be sure dispensers/pumps are anchored to the island per Gilbarco installation instructions.
- 5 You may lose all electronic totals, configuration, or report data during a natural disaster. Print out or manually record critical information that may be needed to restore your operation.
- 6 Remove AC power from ALL equipment before leaving the station. Safety lockout procedures should be used. Refer to [“OSHA Lock-Out and Tag-Out Requirements”](#) on page 3.
- 7 Ensure dispenser doors are properly closed, locked and that seals are in good condition. If seals are questionable, use waterproof tape around the door seals to protect unit interior against extreme wind and rain conditions.
- 8 Cover pump and dispenser openings (printer opening, cash acceptor opening, etc.) with waterproof tape to protect equipment from extreme wind and rain.
- 9 Temporarily remove non-original equipment and add-on signs from dispensers and pumps. Seal any mounting holes with waterproof tape to protect unit interior against extreme wind and rain conditions.
- 10 Secure or remove any forecourt or station equipment (trash barrels, etc.) that could blow into pumps and dispensers during extreme weather conditions.

Station Recovery

The following are general precautions to be followed before attempting station recovery after a natural disaster.

- 1 If not done prior to evacuation, remove power to all equipment at site. Refer to [“OSHA Lock-Out and Tag-Out Requirements”](#) on page 3.
- 2 Have a technician **and** electrician check equipment condition and AC power service and make any needed repairs **before** restoring power.
- 3 Check tanks for water. If present, remove water from tanks before attempting to dispense fuel. If water and contamination is heavy, tanks may need to be pumped out completely, cleaned, and filled with fresh product.
- 4 Check for water in conduit. Test for possible insulation damage, shorts or opens. If water is present, vacuum or blow water from conduits. Replace defective wires as necessary, and re-pour seal-offs.
- 5 Do not use emergency generators except for lighting. Emergency generator power may cause damage to electronic components.
- 6 Do not operate the pump or dispenser if there is any chance that water may enter the hydraulic system. Pumping water will damage hydraulic components.
- 7 Replace filters. If filter caps are present, remove caps and install filters.
- 8 Repair/replace all damaged components. Use only Gilbarco certified parts.

Pump/Dispenser - Hydraulic Area Submersion

The following applies to the hydraulic section only.

- 1 Remove lower panels to expose hydraulics section to the air. Replace panels only when section is cleaned and fully drained.
- 2 Dirt and silt may be washed away with **clean water**.
- 3 Remove cover from Junction box.
 - Remove silt and other impurities.
 - Record existing wiring numbers and color-coding.
 - Disconnect each wire nut connection.
 - When dry, restore connections using new wire nuts.
 - After junction box has air dried, replace cover and all bolts.
- 4 Units with pulsers in the hydraulic section, remove pulsers and discard. Install new pulsers.
- 5 Examine IS barriers and cable connectors. If there is any sign of corrosion or damage, replace as needed.

- 6 On self-contained pumps, remove motor and have it cleaned, dried, tested and lubricated by a motor repair shop.
- 7 Wash, clean and air-dry entire hydraulics area.
- 8 Wash and wax external dispenser surfaces. Use automotive cleaning and waxing preparations.

Pump/Dispenser/Console - Water Damage Only

The following applies to units where submersion was less than 24 hours and power was turned off prior to the disaster. Units submerged in salt or corrosive water may be permanently damaged and beyond economic repair. Units fitting this category will require replacement. Complete drying of components may require using an oven specially made for this purpose.

- 1 **Electronic Heads:** Remove all printed circuit boards and power supplies. Boards must be completely dried, cleaned and tested before re-installing in pump or dispenser.
Note: Complete Electronic Heads are available from Gilbarco-Kinston. This includes MPD-3 heads (which can replace MPD-1, 2 or 3 heads) available with or without CRIND.
- 2 **Consoles:** Send entire console to Gilbarco for cleaning, drying in specialty oven and testing. For G-SITE and Passport send all workstation components (CPU, monitor, keyboard and printer)
Note: Refurbished consoles are also available from Gilbarco-Kinston. Please check with your Customer Sales & Service representative for availability of your particular model. This includes immediate availability of TCR-G/2 consoles.
- 3 **Connections:** Open cable connections one at a time and inspect for corrosion and damage. Spray connections with good quality electronics cleaner to clean and protect. Insure connectors are clean and completely dry.
- 4 **Controllers:** Send entire controller (C-2, PAM 1000, PC G-SITE, Passport) to Gilbarco-Kinston.
- 5 **Printers:** Remove printers. Printers must be completely dried, cleaned, lubricated and tested before re-installing in pump or dispenser. Even if paper looks good, install new paper rolls. Paper may contain moisture above recommended levels and cause problems.
- 6 **Cash Acceptor:** Using appropriate security measures, remove cash acceptor and cassette. Cash acceptor must be completely dried, cleaned, lubricated and tested before re-installing in pump or dispenser.
- 7 **Speakers and Audio Transducers:** Replace with new.
- 8 **Electric resets:** (mechanical pumps and dispensers) Remove, clean and dry thoroughly. Replace switches and motor as necessary.
- 9 **Pulsers:** Replace pulsers in the electronics cabinet.
- 10 **Light fixtures:** Examine for corrosion. Clean and replace components as necessary.
- 11 **Pump handle switches:** Discard and replace with new.

12 Panel and access door locks: Flush with clean water, lubricate locks thoroughly after drying.

Equipment Submersion (equipment less than 5 to 6 years old)

Submersion was less than 24 hours and power was turned off prior to the disaster. Units completely submerged for more than 24 hours may not be recoverable.

CAUTION

Pumps, dispensers and consoles that have been completely submerged **should not** be used.

This equipment will require refurbishment, and should be sent to Gilbarco for repairs and testing.

Note: Gilbarco-Kinston has some remanufactured models available immediately. Gilbarco is acutely aware of your situation and needs. Units sent in for refurbishment due to disaster will receive the highest priority.

Equipment Submersion (equipment greater than 6 years old)

Submersion of equipment greater than 6 years old may not be economically recoverable.

CAUTION

Pumps, dispensers and consoles that have been completely submerged **should not** be used.

It is recommended that this equipment be replaced with either new or remanufactured pumps/dispensers/consoles.

Trademark Information

- CRIND®, Gilbarco®, G-SITE®, MPD®, and Passport® are registered trademarks of Gilbarco Inc.
- PAM™ 1000 and TCR™-G/2 are trademarks of Gilbarco Inc.

