

Introduction

Purpose

This manual provides instructions to install the Distribution Box (D-Box) to VeriFone® Commander Point of Sale (POS) Adapter Kit (M14671K001). The Adapter Kit allows a VeriFone Commander POS to connect to a Gilbarco® PA0409 or PA0261 series D-Box for the pump and CRIND® communications.

Note: For information on PA0409, refer to MDE-4917 FlexPay™ Connect D-Box Installation Manual and for PA0261, refer to MDE-2714 Universal Distribution Box [D-Box (PA0261XXXXXX)] Service Manual.

Intended Users

This manual is intended for Gilbarco-trained and certified Authorized Service Contractors (ASCs).

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Required Materials

Following materials are required for installing the Adapter Kit:

- Two RS-422 D-Box channels [one for the pump and one for the CRIND (can use a single D-Box with two boards or two D-Boxes)].

Parts List

Following table lists the parts included in the Adapter Kit:

Item #	Description	Part Number	Quantity
1	Gender Mender Assembly, Modular Jack to D-Subminiature, RS-232 to Category 5 (CAT-5)	Q13180-68B	2
2	Gender Mender Assembly, Modular Jack to D-Subminiature, D-Box Adapter	Q13180-69B	2
3	Cable, Work Area, 1' Long	Q13850-01	2
4	Gender Mender Assembly, Modular Jack to D-Subminiature, RS-422	Q13180-13B	2
5	Assembly, Cable, RS-422, J103/J905, D-Box	R19249-G1	2
6	RS-232 to RS-422 Adapter	M14951B001	2

Related Documents

Document Number	Title	GOLD SM Library
MDE-2714	Universal Distribution Box [D-Box (PA0261XXXXXX)] Service Manual	<ul style="list-style-type: none">• Advantage[®] and Legacy[®] Models• POS Peripheral
MDE-4917	FlexPay Connect D-Box Installation Manual	FlexPay Connect

Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractor
CAT-5	Category 5
CRIND	Card Reader in Dispenser
D-Box	Distribution Box
ESD	Electrostatic Discharge
GOLD	Gilbarco Online Documentation
POS	Point of Sale

Important Safety Information

Notes: 1) *Save this Important Safety Information section in a readily accessible location.*

2) *Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.*




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/dispenser 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 the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

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

Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:



- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

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 the Technical Assistance Center (TAC) at 1-800-743-7501. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA 70; *National Electrical Code (NEC)*, Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations 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 below must be followed to prevent death, injury, or damage to the equipment:



DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.



WARNING: Alerts you to a hazard or unsafe practice that could result in death or serious injury.



CAUTION with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

Working With Fuels and Electrical Energy

Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

Important Safety Information

No Open Fire



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 fuel vapors. Every time you get 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. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work 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 Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.

WARNING

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.

In an Emergency

Inform Emergency Personnel

Compile the following information and inform emergency personnel:

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

WARNING



Gasoline/DEF 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

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

WARNING



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

WARNING



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

WARNING



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

WARNING

DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

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

Lockout/Tagout

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

Before You Begin

Before you begin, read and understand all safety information found in the “[Important Safety Information](#)” section on [page 3](#).

CAUTION



A properly grounded Electrostatic Discharge (ESD) wrist strap must be worn while servicing any electronic devices or components. Failure to use electrostatic precautions may damage electronic components and void warranty.

To prepare for the installation, proceed as follows:

- 1 Inform the manager.
- 2 Remove power from any installed D-Boxes.
- 3 Review the installation manual for the specific Gilbarco D-Box and configure the box(es) jumpers for RS-422 input on the POS's pump and CRIND connections.
- 4 Match the parts received in the kit with “[Parts List](#)” on [page 1](#).

Installing D-Box to VeriFone Commander POS Adapter Kit (M14671K001)

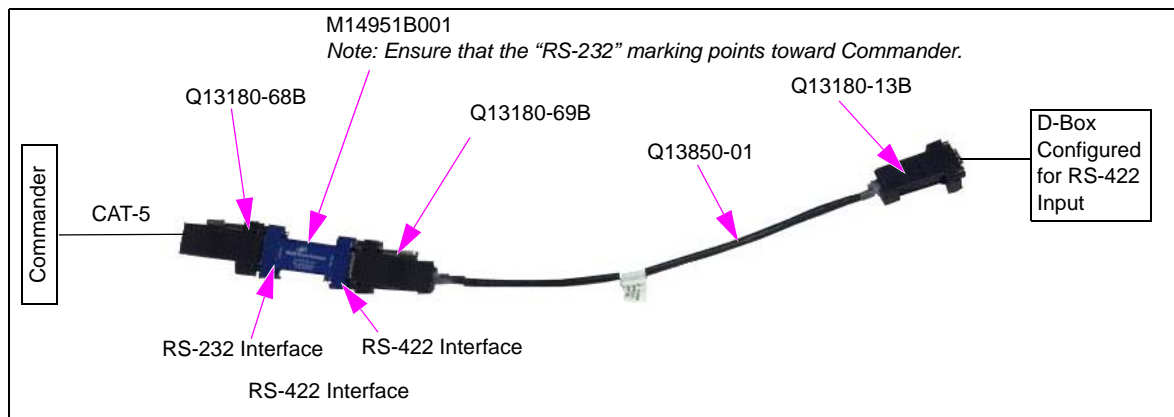
To install the Adapter Kit, proceed as follows:

- 1 Remove the 2-pin cable and install the R19249-G1 adapter.
Note: When the D-Box is configured for two-wire input, only a two-pin cable connector is used.
- 2 External to the D-Box, add the adapter to each pump and CRIND channel from the Commander POS and connect each to the D-Box.
- 3 Power up the D-Box(es) and verify that the Commander POS can communicate to the pumps and CRINDs.

Interconnected Components

Figure 1 shows the interconnected components.

Figure 1: Interconnected Components



Noise Reduction Option

Figure 1 shows a typical installation with the one-foot CAT-5 cable located near the D-Box. However, RS-422 signaling is more noise-immune than RS-232, so you can choose to connect the adapter near the Commander POS using the one-foot cable. Use the VeriFone supplied CAT-5 cable to connect to the Q13190-13B.

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