

Introduction

Purpose

This manual provides instructions to install the Heater/Fan Kit (M14702K00X) for Encore® 900 units.

M14702K001 Kit is used to install 115V Fan/Heater assembly in Encore 900 units.

M14702K002 Kit is used to install 220V Fan/Heater assembly in Encore 900 units.

The heater/fan assembly provides up to 750 Watts of heat to the dispenser at low temperature. At low temperature, the heater turns off when the Submersible Turbine Pumps (STPs) are activated. This ensures that the maximum current draw of the dispenser remains the same.

At high temperature, the fan will turn on to circulate air. There is a Light Emitting Diode (LED) indicator for the heater and one for the fan, indicating that the controller board is trying to turn them on.

Notes: 1) There are no replaceable parts on the assembly.

2) There are different assemblies for 115V and 220V units.

This manual is intended for Gilbarco®-Authorized Service Contractors (ASCs) and Customer-Specified Contractors (CSCs). It is recommended that this kit be installed by a Gilbarco-certified ASC or CSC.

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Required Reading

Before installing the equipment, the installer must read, understand, and follow:

- This manual
- National Fire Protection Agency (NFPA 70®), The National Electric Code (NEC®)
- Applicable federal, state, and local codes and regulations
- *MDE-5356 Encore Start-up and Service Manual - Safety Instructions*

Failure to do so may adversely affect the safe use and operation of the equipment.

Related Documents

Document Number	Title	GOLD SM Library
MDE-4535	SMARTConnect™ AC Power Distribution Cable Installation	<ul style="list-style-type: none">• SMART Connect• Encore and Eclipse
MDE-5356	Encore 900 Start-up and Service Manual	<ul style="list-style-type: none">• Encore and Eclipse®• Service Manual

Required Parts

The following tables lists the parts included in the Heater/Fan Kits:

M14702K001 Kit, Heater/Fan Install 115V

Item#	Description	Part Number	Quantity
1	Heater/Fan Assembly 115V	M14702A001	1
2	Screw, Metric M5 X 10 Thread Former	M00417B101	2
3	Cable, Reg/Logic	R17995-G8	1
4	Cable, Heater Control	M10900A001	1
5	Clamp, Flat Cable Mount Releasable	M01102B002	1
6	Clamp, Flat Cable	Q13459-01	1

M14702K002 Kit, Heater/Fan Install 220V

Item#	Description	Part Number	Quantity
1	Heater/Fan Assembly 220V	M14702A002	1
2	Screw, Metric M5 X 10 Thread Former	M00417B101	2
3	Cable, Reg/Logic	R17995-G8	1
4	Cable, Heater Control	M10900A001	1
5	Clamp, Flat Cable Mount Releasable	M01102B002	1
6	Clamp, Flat Cable	Q13459-01	1

Required Tools

The following tools are required to complete the Heater/Fan Assembly installation:

- 8-mm socket
- Ratchet

Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractors
ATC	Automatic Temperature Compensation
CPR	Cardiopulmonary Resuscitation Methods
CSC	Customer Specified Contractors
DEF	Diesel Exhaust Fluid
ESD	Electrostatic Discharge
FCC	Technical Assistance Center
LED	Light Emitting Diode
NEC®	National Electric Code
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PCN	Pump Control Node
STP	Submersible Turbine Pump
TAC	Technical Assistance Center

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 Gilbarco 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.

Federal Communications Commission (FCC) Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this 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 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.

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

In the event of inclement weather, including snow, ice, or flooding that makes driving conditions dangerous, please avoid servicing units. Always use available door stops to secure upper doors against unwanted/unexpected movement, especially during high winds. If necessary, reschedule service to avoid damage to the equipment. Weather may change unexpectedly; be aware of local weather conditions. During service, if conditions develop making service unsafe, close the unit(s) and proceed to a safe location.

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.



Gilbarco Veeder-Root encourages the recycling of our products. Some products contain electronics, batteries, or other materials that may require special management practices depending on your location. Please refer to your local, state, or country regulations for these requirements.

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

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 the site and dispenser for the upgrade, proceed as follows:

- 1 Inform the manager.
- 2 Barricade the unit to be worked on.
- 3 Remove power to the unit at the breaker panel. Follow OSHA lockout/tagout procedures.
- 4 Read all the safety information provided in *MDE-5356 Encore and Eclipse Start-up/Service Manual*.
- 5 Isolate the two-wire connection to the unit.

WARNING

Failure to turn off the unit during the kit installation may cause injury or bodily harm from electrical shock. Ensure that all power to the unit is switched off before opening the door to the unit and during installation.

Installing the Heater/Fan Kit for Encore 900

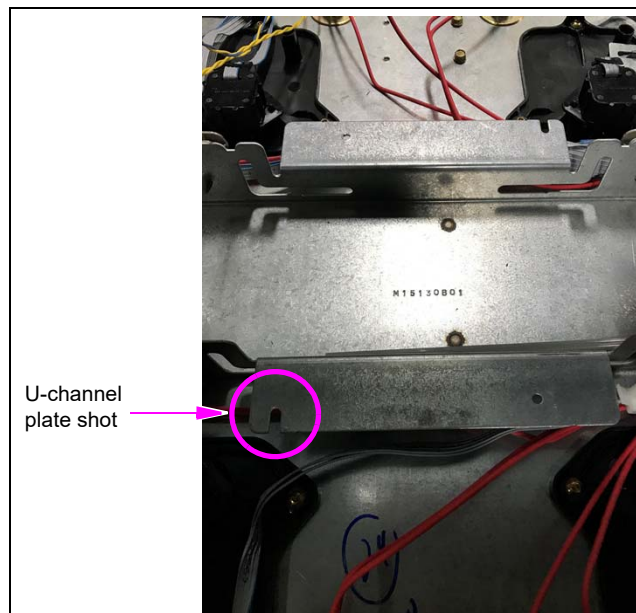
WARNING

In the event of inclement weather, including snow, ice, or flooding that makes driving conditions dangerous, please avoid servicing units. Always use available door stops to secure upper doors against unwanted/unexpected movement, especially during high winds. If necessary, reschedule service to avoid damage to the equipment. Weather may change unexpectedly; be aware of local weather conditions. During service, if conditions develop making service unsafe, close the unit(s) and proceed to a safe location.

To install the Heater/Fan Kit, proceed as follows:

- 1 Remove and retain the lower panel.
- 2 Open the main door.
- 3 Position the heater so that the cables are on the Side A of the unit [the side with the Pump Control Node (PCN)].
- 4 Place the heater on the section of the U-channel as shown in [Figure 1](#).

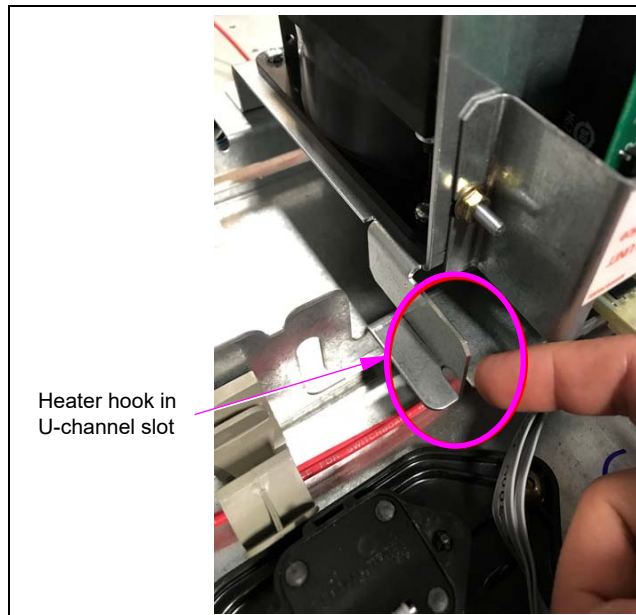
Figure 1: Heater Mounting Location



- 5 Line up the hook on the bracket of the heater shown in [Figure 2](#) with the slot on the plate shown in [Figure 1](#) on [page 7](#).

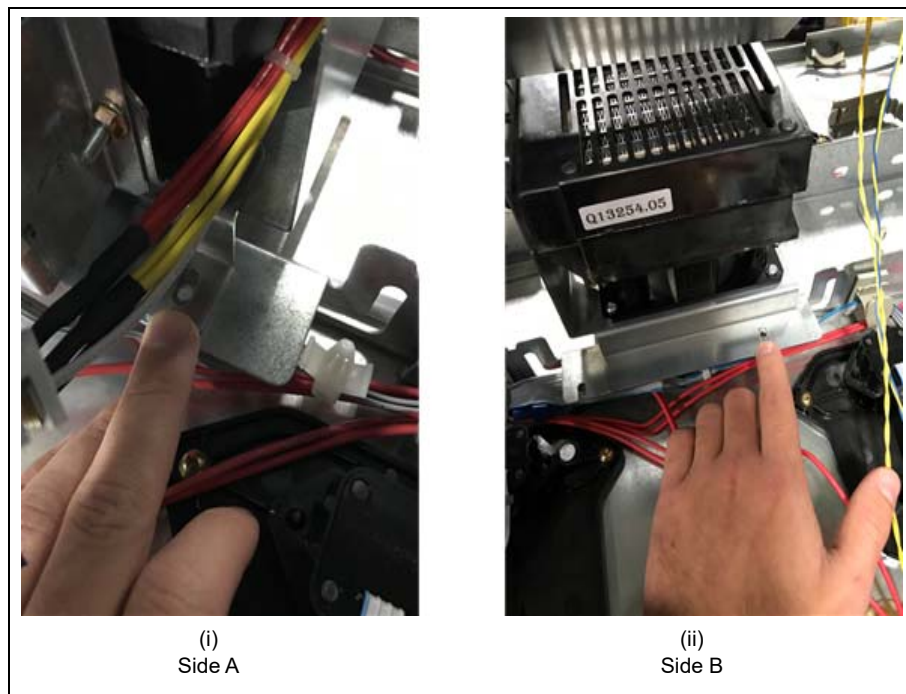
Note: Ensure that the hook is slid all the way back into the slot.

Figure 2: Heater Hook Position



- 6 Finish securing the Heater to the U-channel plate by inserting the two M5 X 10 screws into the slots on the Heater bracket shown in [Figure 3](#) with an 8-mm socket and ratchet.

Figure 3: Heater Slot Positions



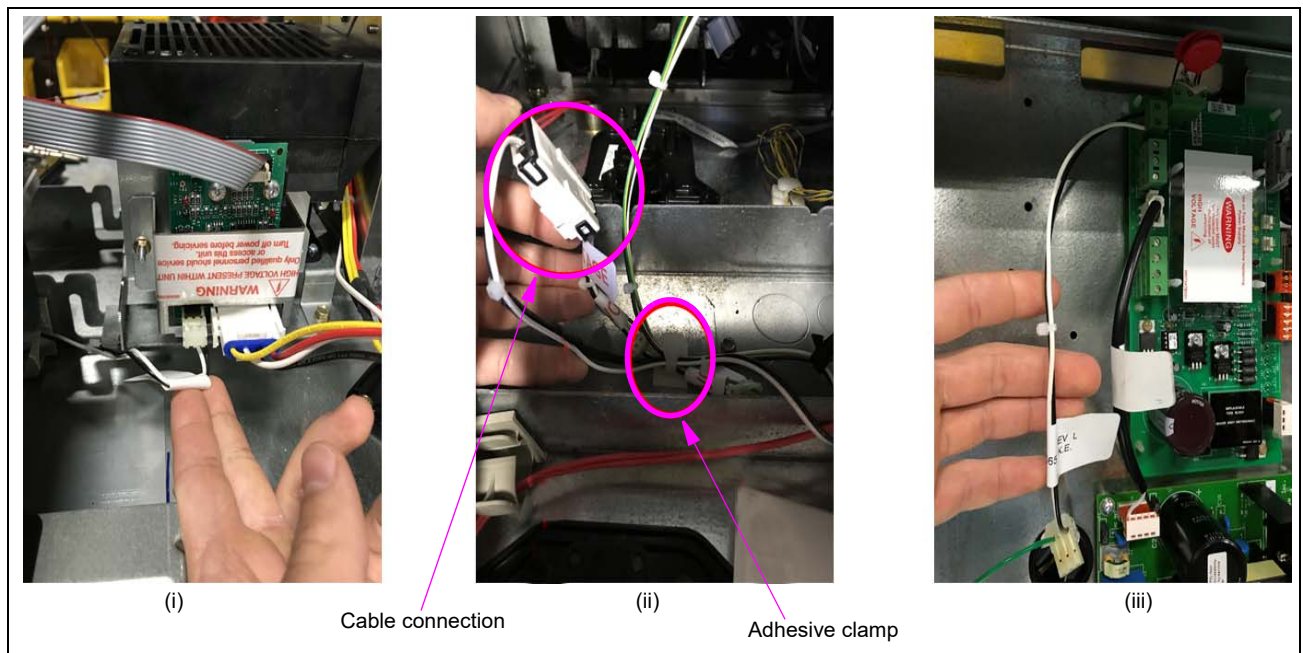
Connecting Cables in Encore 900 Units

To connect the cables in the Encore 900, proceed as follows:

- 1 Connect the heater AC power cable (black and white wire; M06969A003/A004) to any of the available positions of the Power Distribution Cable (M04406A006/A007/A008) as shown in [Figure 4](#). For detailed installation instructions of the AC power distribution cable, refer to *MDE-4535 SMART Connect AC Power Distribution Cable Installation*.

*Notes: 1) M04406A006 is used on standard Encore units, M04406A007 is used on domestic Ultra-Hi™ units, and M04406A008 is used on international Ultra-Hi units.
2) Ensure to route the AC power cable through an adhesive cable clamp in the U-channel as shown in [Figure 4 \(ii\)](#).*

Figure 4: AC Power Cable Connections



- 2 Connect the ribbon cable (M06968A001) to the PCN as shown in [Figure 5](#).

Note: Ensure to route the ribbon cable (M06968A001) through the adhesive clamp on the side of the printer cover as shown in [Figure 6](#). If no adhesive clamp is present, attach one to the side of the printer cover and route the cable through it.

Figure 5: Ribbon Cable Connections

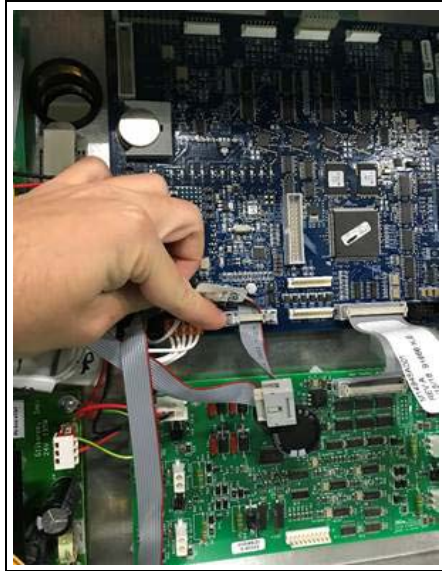
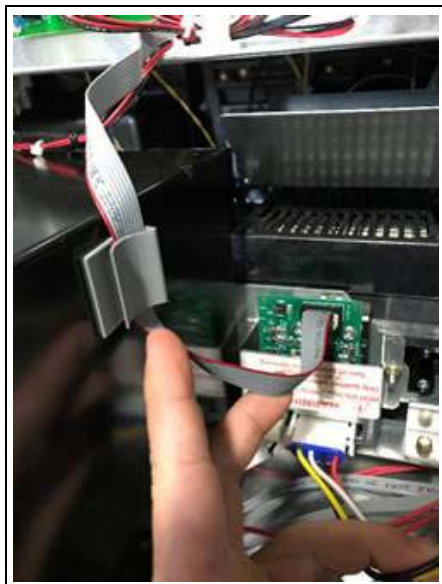


Figure 6: Ribbon Cable Routing



- 3 Close the main door.
- 4 Install the lower panel.
- 5 The installation of the Heater/Fan Kit for Encore 900 is complete.

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Phone (336) 547-5000 · <http://www.gilbarco.com> · Printed in the U.S.A.
MDE-5440B Heater/Fan Kit (M14702K00X) Installation Guide for Encore® 900 Units · October 2021