Introduction

Purpose

This manual provides instructions to repair broken, stripped, or cracked PIN pad mounting bosses using the PIN Pad Door Boss Repair Kit (M07450K998) in Encore® E-CIM™ dispensers.

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Required Tools and Materials

Following tools and materials are required to install the PIN Pad Door Boss Repair Kit:

- 1/4-inch and 7 mm (9/32) Nut Drivers or Ratchet/Socket Set
  Note: Use magnetic nut drivers for convenience.
- Electrostatic Discharge (ESD) Wrist Strap
- Hand Drill
- Putty Knife
- Isopropyl Alcohol
- Pin Punch (same size as PEM® stud head)
- Hammer

Parts List

Following table lists the parts included in the PIN Pad Door Boss Repair Kit:

Item	Description	Part Number	Quantity
1	Drill Fixture (Guide)	M14581B001	1
2	PEM Stud, Metric Clinch M4 X 25	Q12887-228	40
3	Nut, Metric Hexagonal Serrated Flange	M00414B005	40
4	Gasket, Encrypting PIN Pad (EPP) Keypad, Non-adhesive	M14465B001	10
5	Sealant, Room Temperature Vulcanization (RTV) 737	M14152B001	1
6	Plate, Retainer	M14473B001	1
7	Graphic, E-CIM	M14582B001, M14582B002, M14582B003	10 20 10
8	Drill Bit, 3.9 mm	M14151B001	1

Note: This kit is for 10 sides.

Related Documents

Document Number	Title	GOLD℠ Library
MDE-3804	Encore and Eclipse® Start-up/Service Manual	• Encore and Eclipse • Service Manual
MDE-5030	Hybrid Card Reader 2 (HCR 2) Kit (M12492K001) Installation Instructions	• Advantage® and Legacy® Models • Encore and Eclipse • FlexPay™ EMV®
MDE-5081	Hybrid Card Reader 2 (HCR 2) Shield Kit (M13193K002) Installation Instructions	Encore and Eclipse
MDE-5165	Card Reader Door Boss Repair Kit (M07450K999) Installation Instructions	• Encore and Eclipse • Kit Selection

Abbreviations and Acronyms

Term	Description
E-CIM	Enhanced Customer Interface Module
EMV	EuroPay®, MasterCard®, and Visa®
ESD	Electrostatic Discharge
EPP	Encrypting PIN Pad
GOLD	Gilbarco® Online Documentation
OSHA	Occupational Safety and Health Administration
RTV	Room Temperature Vulcanization

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 a Gilbarco Authorized Service Contractor or call the Gilbarco Support 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
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.

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

Read and understand all the safety information found in *MDE-3804 Encore and Eclipse Start-up/Service Manual*.

CAUTION

A properly grounded 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.

⚠ WARNING

Failure to turn off the unit during 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 kit installation.

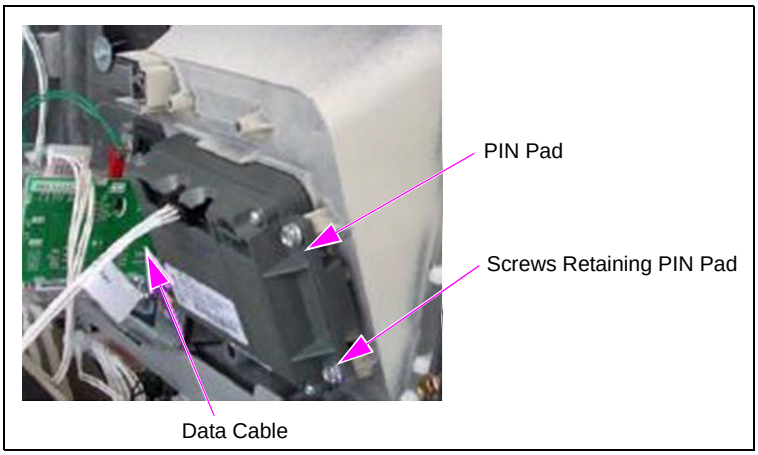
Removing Existing PIN Pad

To remove the existing PIN pad, proceed as follows:

Note: Read all instructions before beginning and observe all safety precautions provided in "Important Safety Information" on page 3.

1. Remove the lower panel of the dispenser.
2. Locate the main door, insert the main door key, and open the door.
3. Repeat step 2 for side B of the unit.
4. Disconnect the PIN pad cable from the existing PIN pad.
5. Remove the four hexagonal-head screws that secure the PIN pad to the option door using a 1/4-inch nut driver or ratchet and socket. Remove the PIN pad and place in a safe location for later use.

Figure 1: Removing Existing PIN Pad



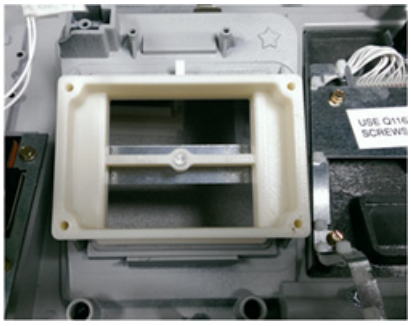
Installing PIN Pad Boss Repair Kit (M07450K998)

To install the PIN Pad Boss Repair Kit, proceed as follows:

1 Install the Drill Fixture (M14581B001) in the PIN pad opening on the dispenser door from the rear (inside) of the main door [see Figure 2 (i)].
Note: Ensure that the drill fixture is fully inserted into the PIN pad opening [see Figure 2 (ii)].

2 Place a Q12887-228 PEM Stud through the center hole of the drill fixture. From the front of the door, place the Retainer Plate (M14473B001) over the PEM stud and retain with a nut, as shown in Figure 2 (ii).

Figure 2: Installing Drill Fixture in PIN Pad Opening



(i)
Rear side of the door

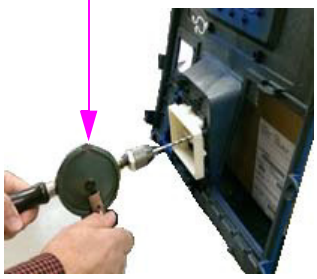
(ii)
Front side of the door

Note: Before drilling, ensure that there are no cables or components that interfere with the Drill Bit (M14151B001).

3 Drill four holes using a hand drill and the drill bit provided, through the drill fixture (guide) from the rear (inside) of the CIM door. Carefully follow the axis of the bores in the drill fixture.
Note: The holes in the drill fixture are smaller than the drill bit provided.

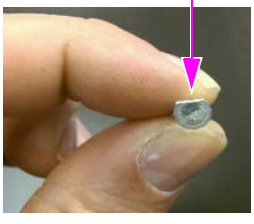
Figure 3: Drilling Four Holes Using Hand Drill

Hand drill from the inside of door



(i)

With a pair of side cutters, trim the head of two Q12887-228 PEM Studs to form a “D” shaped head.



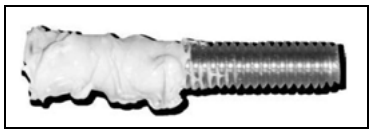
(ii)

Note: Ensure to put the metal shards into trash can.

4 Remove the drill fixture from the door.
Note: Retain the drill fixture for reuse.

5 Add a ring of RTV Sealant (M14152B001), about 0.24 inch (6 mm) wide, on the thread of the stud below the head. Ensure the RTV sealant forms a complete ring around the PEM stud (see Figure 4).

Figure 4: PEM Stud with RTV Applied



6 Repeat step 5 for the remaining three PEM studs and insert them from the front side (outside) of the CIM into the door holes with the "D" shaped heads in the bottom two holes with the flat facing away from the PIN pad opening.

7 Using a pin punch and hammer, knock in the PEM studs enough to secure them in the door. This allows the PEM studs to stay in place while installing the PIN pad.

8 After the four PEM studs are inserted, allow the RTV sealant to dry for 10 minutes before installing the PIN pad.

9 Clean the keypad gasket mounting surface using a putty knife and isopropyl alcohol.

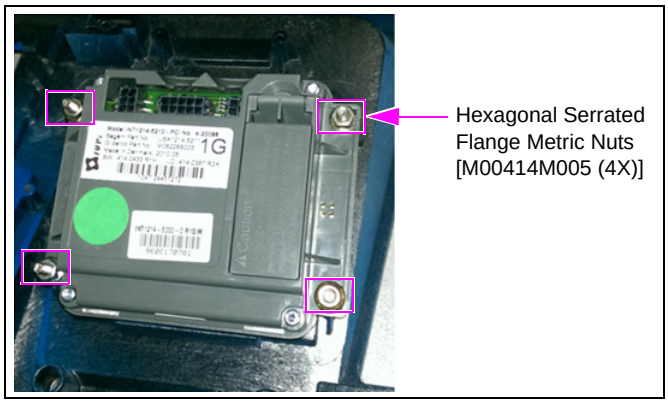
10 Place the Non-adhesive EPP Keypad Gasket (M14465B001) in the PIN pad groove, covering the dismount buttons and place the PIN pad in the door opening. Ensure that the EPP keypad gasket remains in place during the insertion process of the PIN pad and goes evenly over the dismount switches, if fitted.

Figure 5: Installing Gasket on PIN pad

11 Replace the PIN pad over the four protruding PEM studs (see Figure 6).

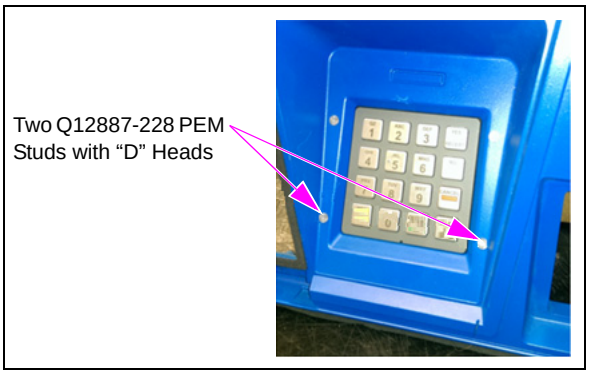
12 Place the four Hexagonal Serrated Flange Metric Nuts (M00414B005) on the protruding PEM studs and tighten the nuts loosely (see Figure 6).

Figure 6: Mounting PIN Pad



13 Continue to tighten the nuts in stages in a diagonal pattern until the heads of all four PEM studs are flush with the front face of the bezel (see Figure 7).

Figure 7: PIN Pad on Front Face of Bezel



14 Reconnect the cables disconnected in step 4 on page 6 to the PIN pad as previously installed.

15 Clean the PIN pad recess in the front bezel with isopropyl alcohol to remove any excess RTV sealant. Inspect the PEM studs and ensure that they are flush against the bezel front.

16 Clean off any shavings that may have fallen from drilling the holes.

17 Ensure to route the cables properly.

IMPORTANT INFORMATION
Cable routing is critical. It is very important to route and dress the cables properly. Exercise care in routing the cables, keeping in mind that the door(s) opens and closes for service. The cables must be dressed neatly. Ensure that there is no interference after the cables are connected and routed.

18 Power up the unit.

19 Call Gilbarco Support Center at 1-800-800-7498 and activate the PIN pad.

20 Run a debit transaction to verify the PIN pad is working properly.

21 Locate the correct colored E-CIM Graphic (M14582BXXX) from the kit and attach it to the front face around the PIN pad.

Note: If required, the customer can order a correctly configured graphic from Gilbarco Customer Service.

Installing the PIN Pad Door Boss Repair Kit is now complete.

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7300 West Friendly Avenue · Post Office Box 22087
Greensboro, North Carolina 27420
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