Introduction

Purpose

This manual provides instructions to install the Hybrid Card Reader S (HCRS) Kit (M13940KXXX) in Gilbarco® dispensers for Canada and outside the United States. This card reader will read magnetic stripe and chip-and-PIN payment cards. It is Payment Card Industry (PCI) 2.0 compliant.

The HCRS Kit is used for Encore® 300/500/S E-CIM™, The Advantage® Series, and Husky® Outdoor Payment Terminal (OPT) units.

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Required Tools and Materials

The following tools and materials are required to install the HCRS Kit in Gilbarco dispensers:

- Nut Drivers, 1/4-inch and 5/16-inch
  Note: Use magnetic nut drivers for convenience.
- Phillips® and Flat-blade Screwdrivers
- 1/4-inch Ratchet/Socket Set
- Static Guard Wrist Strap
- Diagonal Cutters
- Putty Knife (to remove the old gasket)
- Isopropyl Alcohol (to clean the surface of the dispenser after the gasket is removed, if required)
- Dismount Sensor Clamp (M14601B001)
- 5/32-inch or 3/8-inch Allen® Wrench Set
- Torque Wrench (1/4-inch, T15 Torx)

Parts List

The following table lists the parts included in the HCRS Kits (M13940KXXX):

Item	Description	Part Number	Universal Kit (K001) Qty	ECIM/E300/ E500 (K002) Qty	The Advantage (K003) Qty
1	Card Reader, Sankyo HCR2, No Heater, Production S/W	M13940B001	1	1	1
2	Bracket, Card Reader (for Encore 300/500/S/ E-CIM)	M13674B001	1	1	-
3	Bracket, Card Reader (for Husky OPT)	M13383B001	1	-	-
4	Bracket, Card Reader (for The Advantage Series)	M13378B001	1	-	-
5	Bracket, Serial Interface PCB (SIP) Support	M17116A001	1	-	1
6	Bracket, SIP Printed Circuit Board (PCB) Cover*	M17118B001	1	-	1
7	Sankyo HCR Kit Installation Instructions Canada	MDE-5386	1	1	1
8	Screw Sel Tp Hex Hd 6-20x .38 Stl Zn Pl	Q11677-24	6	4	6
9	Screw Sems Ph Phil M4 X 8-mm Stl Zn Pl	Q12845-57	2	-	2
10	Standoff, Suprt Ckt Bd Locking	Q10651-03	4	-	4
11	Standoff, Suprt Ckt Bd .375 Lg Plastic	Q10651-46	2	-	2
12	M3.5 Screw, Torx Head. 10 Long	M14757B001	4	4	4
13	Cable, Ground	M14084A001	1	1	1
14	Gasket, Card Reader, Universal	M13127B006	1	1	1
15	Screw, Metric M5 X 10 Thread Former, Comments	M00417B101	1	1	1
16	Nut, Metric, Flange	M00414B005	4	-	-
17	Card, Cardreader Cleaner (Single), W/ Miracle Magic	M16086A001	1	1	-
18	Screw Sel TP Hex HD 6-20X .50 Stl Zn Pl	Q11677-26	4	4	-
19	Cable, Magtek® HCR 2.0 EMV	M07702A023	1	1	-
20	Cable Mount, Adhesive Releasable (.37) Tel Gray	Q13558-04	3	3	-
21	Cable (COM 2 to CN3) and (COM 4 to CN2)	M07948A004	-	-	2
22	COM 5-6-7 to J108	M07946A004	-	-	1
23	Encore Scanner Blank HCR2 End 7000	ENE1801G001	1	1	-
24	Encore Scanner Blank HCR2 End 7001	ENE1801G002	1	1	-

Notes: 1) One kit is for one side. Order two kits for two sides.

2) The universal kit contains three card reader mounting brackets for different unit types. When installing the card reader, ensure that you use the correct mounting bracket.

Other Required Kits

The following table describes the kits required to install the HCRS for different dispenser types:

	HCRS Kit (M13940KXXX)	GCM Kit (refer to "GCM Kit Installation")
To replace a Tribrid Card Reader (TCR) that has contactless smart card installed	X	X
To replace a TCR that does not have contactless smart card installed	X	-

	GCM Kit Installation	
Dispenser Type	**GCM Kit**	**Door Required?**
The Advantage Series - Narrow Frame	M12024K012	No
The Advantage Series - Wide Frame	M12024K002	T20415-GX
Encore 300/500	M12025K002	N/A
E-CIM	M12027K002	N/A
Husky OPT	M12029K002	N/A

Note: For installing the GCM Kit, refer to "Related Documents" on page 4.

Loading the Latest SPOT Software

Note: Before loading software, inform the manager that power to the dispenser will be removed.

To upgrade the Secure Payment Outdoor Terminal (SPOT) software to the latest available version, proceed as follows:

1. Remove the CRIND® two-wire or CAT5 from the SPOT. For specific software instructions, refer to *MDE-4771 Encore S Enhanced FlexPay™ CRIND Start-up/Service Manual* or *MDE-5062 FlexPay Maintenance Tool for FlexPay/SPOT CRIND System*.
   Note: In the case of certain third-party Point of Sale (POS) systems, the CRIND two-wire may be connected. Confirm the correct setup when using a third-party POS system.
2. Restore power to the unit.
3. Connect the Ethernet® cable to the laptop and Ethernet port on the SPOT.
   Note: If a cable is present, disconnect the cable from the SPOT and reconnect after the software upgrade is complete.
4. Download the appropriate software to the SPOT.
   Note: For more information, refer to "Important Software Information" on page 4.
5. When installing new software, the CRIND device coldstarts automatically. If you are troubleshooting an existing HCRS, purging the persistent memory after a download may help eliminate any unexpected issues.
   Note: If the latest SPOT software is already installed, then proceed to step 8.
6. Reprogram the CRIND ID and CRIND Mode.
7. Enable the required options (for example, TRIND, contactless, and so on).

8 Warmstart the dispenser. Allow the POS to download the SPOT software application. After the download is complete, ensure that all graphics on the display are correct.

Upgrading the SPOT software to the latest available version is now complete.

Important Software Information

IMPORTANT INFORMATION
When installing an HCRS, upgrade the software before removing the old card reader and installing the new card reader. The CRIND/SPOT software for that side must be upgraded to the latest manufacturing release (minimum version for HCRS functionality is 5X.7.21 or later for PCI 1.3 installations or 6X.7.21 or later for PCI 2 installations.).

Follow any TRP bulletins or Gilbarco directive to use a version of software approved more recently. If the software version is less than the required minimum, it is possible that the HCRS will not function as designed. You can obtain the software by connecting to the Gilbarco extranet and downloading it from the Gilbarco Laptop Tool. You must be a Gilbarco-certified technician to have access to the Gilbarco extranet and Gilbarco Laptop Tool.

Software is loaded on the SPOT with the FlexPay Maintenance Tool.

Comply with the following software minimum requirements and supported configurations:

- Any side with an HCRS must have a minimum of 50.7.21 for PCI 1.3 or 6X.7.21 for PCI 2 installations (Verify with the customer for appropriate approved version.).
- PCI 1.3 units can have an HCRS on one side and a TCR on the other side.
- PCI 2 units can have an HCRS on one side and a HCR2 on the other side.
- If one side of the dispenser is upgraded to 50.7.21 or later to support the HCRS upgrade, then the other side can continue at its current version to support the TCR/HCR2. In other words, you can replace a TCR with an HCRS and only upgrade the HCRS side to 50.7.21 or later. The HCR2 side can remain at 50.7.13. The TCR side can remain at 50.1.12.

Note: 50.7.21 is backward compatible to TCR/HCR2 and 6X.7.21 is backward compatible to HCR2. You can upgrade the software on both sides while only replacing the hardware on one side, if needed.

Related Documents

Document Number	Title	GOLD℠ Library
MDE-3804	Encore and Eclipse® Start-up/Service Manual	• Encore and Eclipse • Service Manual
MDE-4771	Encore S Enhanced FlexPay EMV® CRIND Start-up/Service Manual	• Encore and Eclipse • FlexPay EMV
MDE-4778	Outdoor Payment Terminal - Model FPCA Installation and Service Manual	FlexPay EMV
MDE-5165	Card Reader Door Boss Repair Kit (M07450K999) Installation Instructions	• Encore and Eclipse • Kit Selection

Abbreviations and Acronyms

Term	Description
CFR	Code of Federal Regulations
CPR	Cardiopulmonary Resuscitation
CRIND	Card Reader in Dispenser
DEF	Diesel Exhaust Fluid
E-CIM	Enhanced Customer Interface Module
EMV	Europay®, MasterCard®, and Visa®
ESD	Electrostatic Discharge
FCC	Federal Communications Commission
FPCA	Forward Power Controller Assembly
GCM	Global Contactless Module
GOLD	Gilbarco Online Documentation
HCR	Hybrid Card Reader
LED	Light Emitting Diode
LOTO	Lockout/Tagout
MCU	Microcontroller Unit
NEC®	National Electrical Code
NFPA 70®	National Fire Protection Association
OPT	Outdoor Payment Terminal
OSHA	Occupational Safety and Health Administration
PCB	Printed Circuit Board
PCBA	Printed Circuit Board Assembly
PCI	Payment Card Industry
POS	Point of Sale
PPN	Product Part Number
SIP	Serial Interface PCB
SPOT	Secure Payment Outdoor Terminal
STP	Submersible Turbine Pump
TAC	Technical Assistance Center
TCR	Tribrid Card Reader
TRIND®	Transmitter/Receiver in Dispenser

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

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.

Installing HCRS Kit in Encore 300/500 Units

Before you begin, read and understand all safety information found in *MDE-3804 Encore and Eclipse Start-up/Service Manual.*

1. Inform the manager that the power must be removed to the dispenser.
2. Block off the unit from customers.
3. Upgrade software per the "Loading the Latest SPOT Software" on page 3.
4. Remove all power supplied to the unit at the breaker located in the building. Follow OSHA lockout/tagout procedures.

⚠ WARNING

Failure to turn off the unit during the installation of the kit 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 of the kit.

⚠ 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.

Removing Existing Card Reader

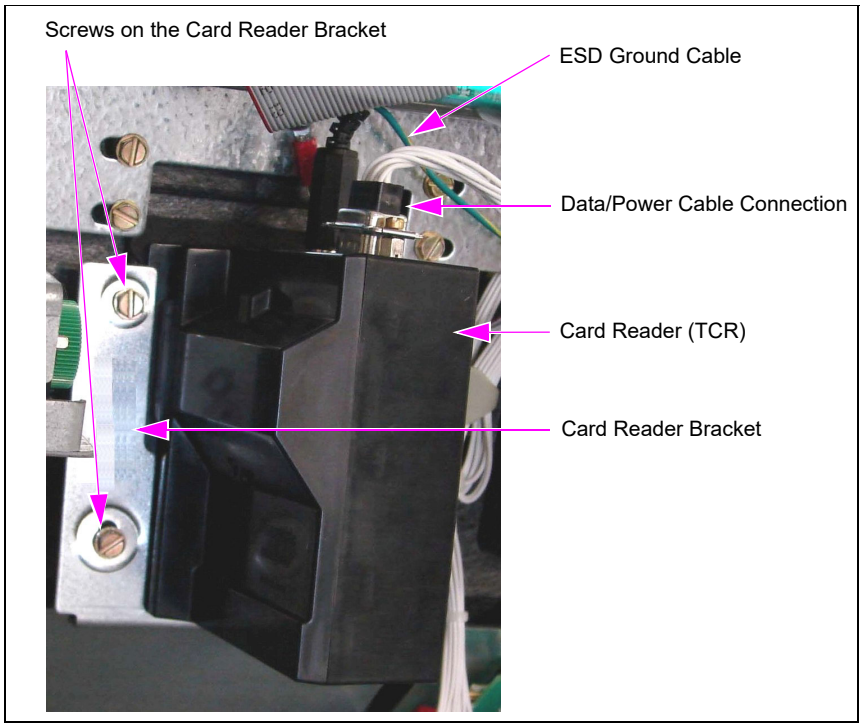
To remove the existing card reader (TCR or HCR), proceed as follows:

Note: Read all instructions before beginning and observe all safety precautions.

1. Locate the main door, insert the main door key, and open the door.
2. Repeat step 1 for side B of the unit.
3. Disconnect and completely remove the cable harness from the existing card reader.
   Note: Unused cables left connected can cause noise issues in a unit.
4. Remove the card reader ground cable, if applicable and discard.
5. Remove the screw on the activation switch if a TCR is being removed.

6 Remove the four hexagonal-head screws that secure the card reader bracket and card reader to the option door using a 1/4-inch nut driver or ratchet and socket. Remove and discard the card reader and card reader bracket. Follow proper practices for discarding the old reader.

Figure 1: Top View of TCR



7 Carefully remove the old card reader gasket from the option door. Use a putty knife, if required.

8 Ensure that the door surface where the card reader is installed is smooth and free of debris.

Installing the HCRS (M13940BXXX)

To install the HCRS in Encore 300/500 units, proceed as follows:

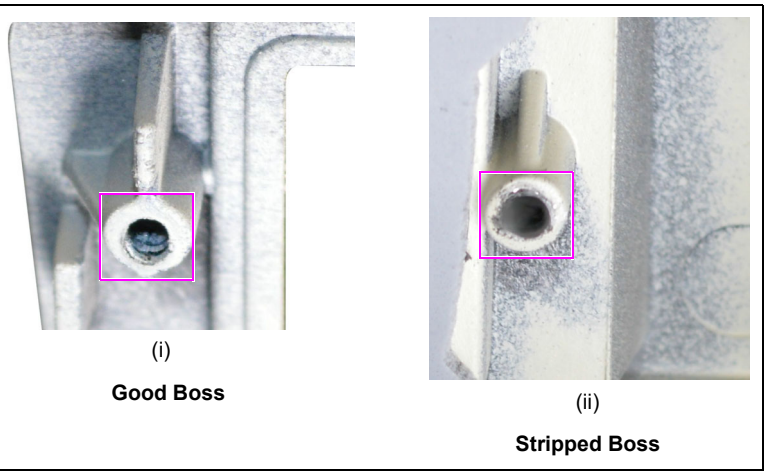
⚠ CAUTION

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.

1 Obtain the HCRS, card reader bracket, and gasket (see Figure 4 on page 11) from the kit.
Note: Do not remove the foam block from the connector on the card reader until after installation is complete. This is to protect the connector pins from damage during installation.

2 Inspect the bosses on the door before installing the card reader. If the door has stripped bosses, it is required to replace the CIM door (see Figure 2).

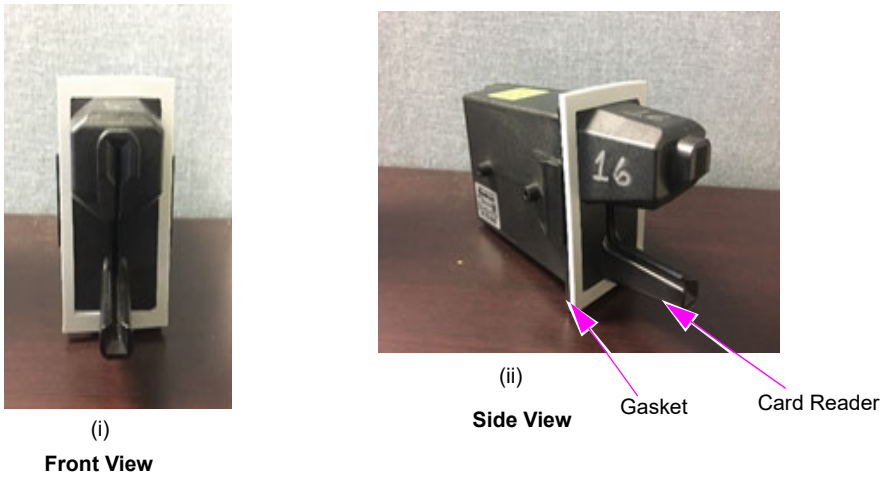
Figure 2: Examples of Good and Stripped Bosses



3 Place the non-adhesive gasket over the front of the card reader and ensure that the gasket is seated on the flange and covers the dismount buttons as shown in Figure 3.

Note: Installing this non-adhesive gasket is different from previous gasket installation. It is laid over the card reader snout first, and then the card reader is inserted into the card reader opening on the door. In this application, the card reader becomes your insertion tool.

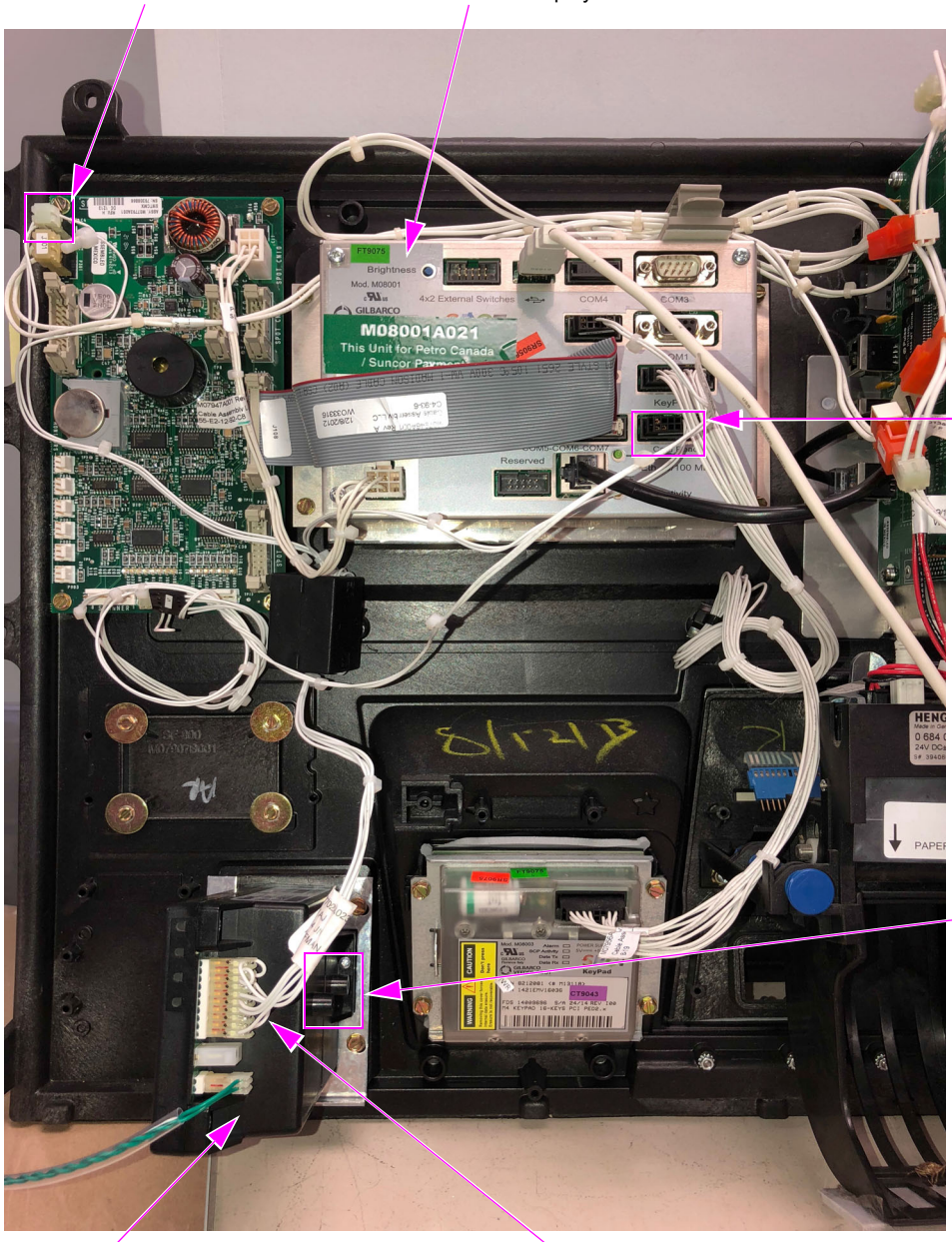
Figure 3: HCRS in Encore 300/500 Units



4 From the rear of the main door, position the HCRS and then the card reader bracket on the door so that the opening on the bracket is positioned at the top. Loosely secure the card reader bracket and HCRS to the main door using the four Q11677-24 (or M14757B001 for threaded insert doors) Screws provided in the kit.

Note: When installing the card reader bracket onto the HCRS, the lip on the bottom of the card reader bracket must face toward you (toward the data/power connector).

Figure 4: HCRS Mounted on Encore 300/500 Units



Notes: 1) The image shown is sample only. SIP may be located in different location.

2) Ensure that the card reader cable is installed onto the card reader before mounting the card reader to the dispenser.

5 Align the HCRS and card reader bracket. Securely tighten the four mounting screws in stages in a diagonal pattern with a torque wrench driver to ensure correct seating of the card reader. Do not overtighten the screws. Overtightening of the screws can strip or break the card reader bosses.

The following are the torque settings for the different door types:
- Non-threaded insert doors: 18 +/- 2 inch-lbs
- Threaded insert doors: 12 inch-lbs

6 Check the gasket from outside of the door to ensure no gasket material is visible around the card reader bezel.

7 Remove the protective foam block and with power off, connect the 7-pin Power/Data Cable (M07702A023) to the 7-pin power/data connector on the HCRS.

Notes: 1) Orient the connector as shown in Figure 4 on page 11.

2) The HCRS is equipped with a chassis ground connection that must be connected to the chassis. The HCRS will be shipped with the ground connected to the card reader. The other end must be adhered to the chassis.

3) If a Global Contactless Module (GCM) is installed, ensure there are no unit ground wires running across the back of the GCM. This will help prevent any noise interference.

8 Connect the card reader cable to the card reader port on the SPOT display and P206 on the SIP board (see Figure 4 on page 11).

The connection between the money/volume display is NOT MADE for Encore 300. If this is an Encore 300 unit, skip to step 11 on page 13.

9 For Encore 500 with Door Node 3 (M04326), Door Node 4 (M05835), or Door Node 5 (M12605), an Extension Cable (M07974A005) is required for the Cable (M07702A023) to reach the door node.

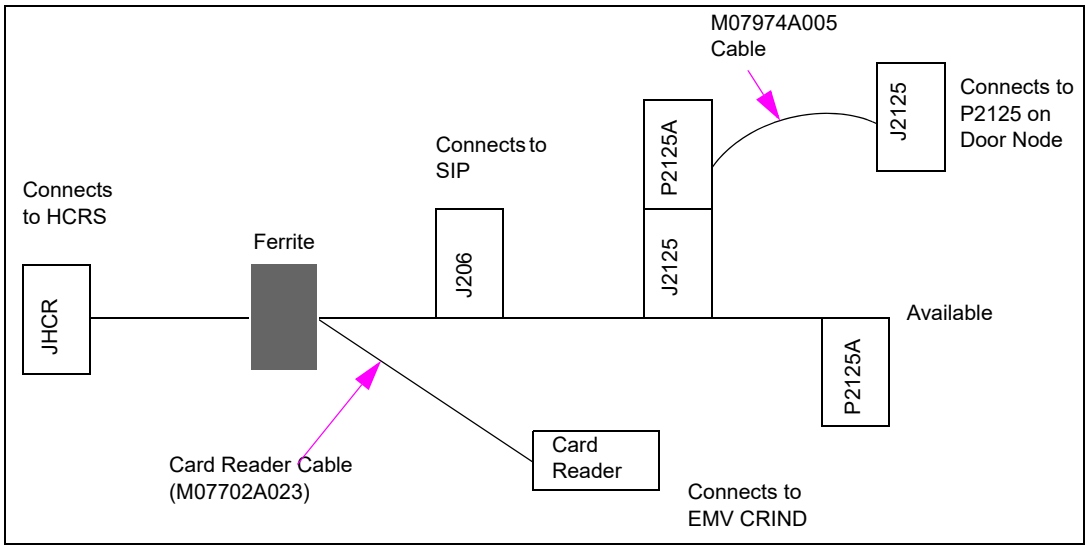
a Locate the Cable (M07702A023) on the door.

b Connect the P2125A on Cable (M07974A005) to the J2125 on Cable (M07702A023).

c Connect the J2125 on Cable (M07974A005) to the P2125 on the door node.

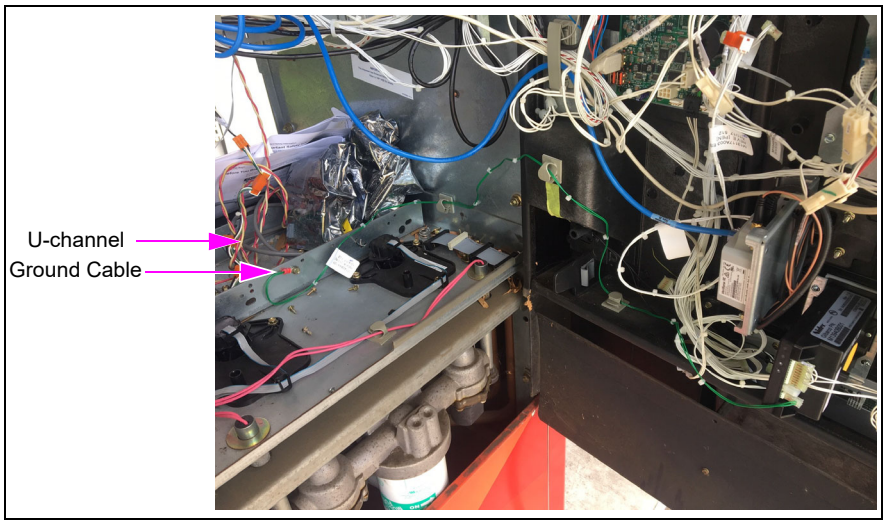
Note: P2125A on the Cable (M07702A023) remains available for other connections.

Figure 5: Connecting Cables for Encore 500



10 Connect the ground cable from the card reader to the chassis using the M00417B101 Screw provided in the kit.

Figure 6: Connecting Ground Cable to Chassis



11 Ensure that the power/data cables are secured to the unit with sufficient slack to prevent cable pull and pinching when opening/closing the door.

12 Proceed to "Completing Installation".

Completing Installation

To complete the installation, proceed as follows:

1 Dress the cables neatly. Inspect the work performed (for example, ensure that there are no pinched wires and the cables are routed securely).

2 Ensure that the cables are not stretched when the door is opened.

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.

3 Close and secure the main doors using the main door lock. Reinstall and lock the lower panel door.

4 Ensure that the HCRS is activated before using. For more information, refer to "Appendix A: Configuring/Activating FlexPay EMV CRIND Keypad" on page 36.

5 Run a debit or credit sale to verify the proper operation of the card reader.

Installing the HCRS Kit in Encore 300/500 units is now complete.

Installing HCRS Kit in Encore S E-CIM Units

Before you begin, read and understand all safety information found in *MDE-3804 Encore and Eclipse Start-up/Service Manual.*

1 Inform the manager that the power must be removed to the dispenser.

2 Block off the unit from customers.

3 Upgrade software per the "Loading the Latest SPOT Software" on page 3.

4 Remove all power supplied to the unit at the breaker located in the building. Follow OSHA lockout/tagout procedures.

⚠ WARNING

Failure to turn off the unit during the installation of the kit 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 of the kit.

⚠ 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.

Removing Existing Card Reader

To remove the existing card reader, proceed as follows:

Note: Read all instructions before beginning and observe all safety precautions.

1 Remove the lower panel, locate the main door, insert the key, remove the security latch, and open the door.

2 Repeat step 1 for side B of the unit.

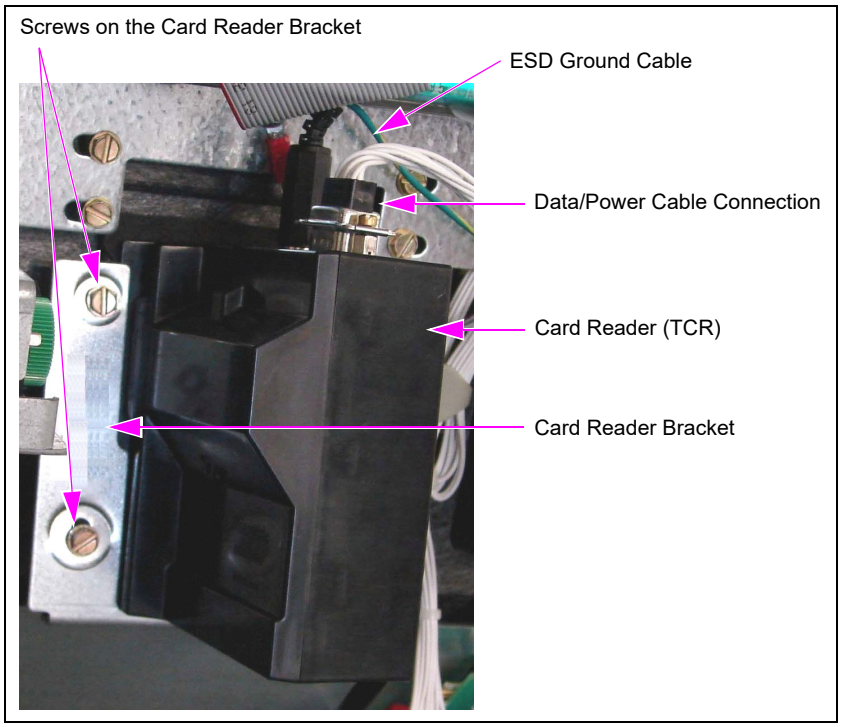
3 Disconnect and completely remove the cable harness from the existing card reader.
Note: Unused cables left connected can cause noise issues in a unit.

4 Remove the card reader ground cable, if applicable and discard.

5 Remove the screw on the activation switch if a TCR is being removed.

6 Remove the four hexagonal-head screws that secure the card reader bracket and card reader to the option door using a 1/4-inch nut driver or ratchet and socket (see Figure 7). Remove and discard the card reader and card reader bracket.

Figure 7: Top View of TCR



7 Remove the old card reader gasket from the option door. Use a putty knife, if required.

Removing the existing card reader is now complete.

Installing HCRS

To install the HCRS in Encore S E-CIM units, proceed as follows:

⚠ CAUTION

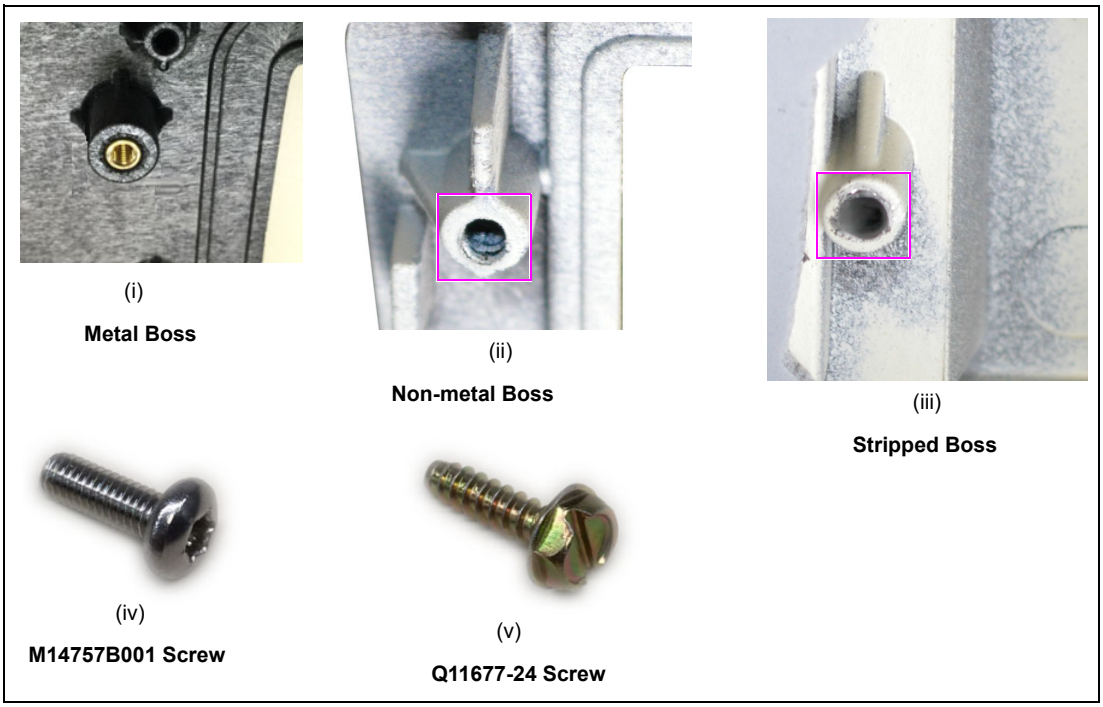
A properly grounded ESD wrist strap must be worn while servicing any electronic devices or components. Failure to use electrostatic precautions may damage electronic components and void warranty.

1 Obtain the HCRS, card reader bracket, and gasket (see Figure 11 on page 18) from the kit.

Note: Do not remove the foam block from the connector until after installation is complete. This is to protect the connector pins from damage during installation.

2 Inspect the bosses on the door before installing the card reader. If the door has metal bosses (see Figure 8), use the M14757B001 Screws for installation. If the door has non-metal bosses, use the Q11677-24 Screws. If the door has stripped bosses or is damaged, use the Card Reader Door Boss Repair Kit (M07450K999). For more information, refer to *MDE-5165 Card Reader Door Boss Repair Kit (M07450K999) Installation Instructions*.

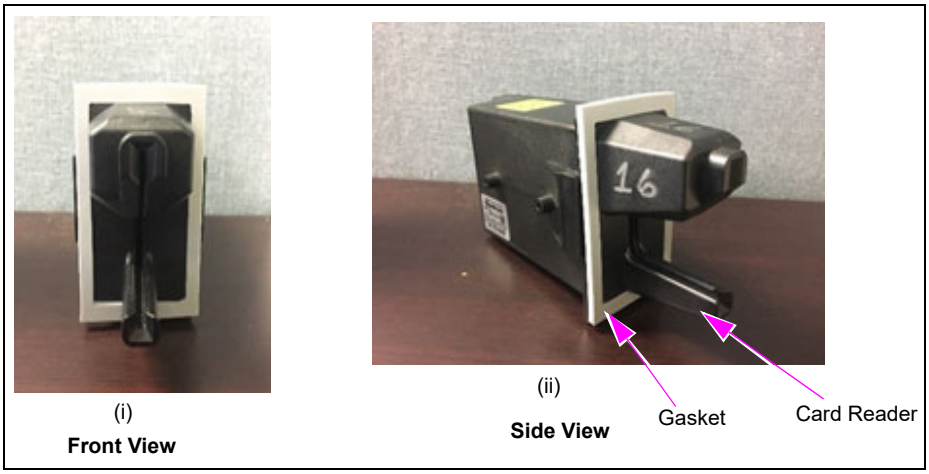
Figure 8: Examples of Metal, Non-metal, and Stripped Bosses



3 Place the gasket over the front of the card reader making sure the gasket is seated on the flange and covers the dismount buttons as shown in Figure 9.

Note: Installing this non-adhesive gasket is different from previous gasket installation. It is laid over the card reader snout first, and then the card reader is inserted into the card reader opening on the door. In this application, the card reader becomes your insertion tool.

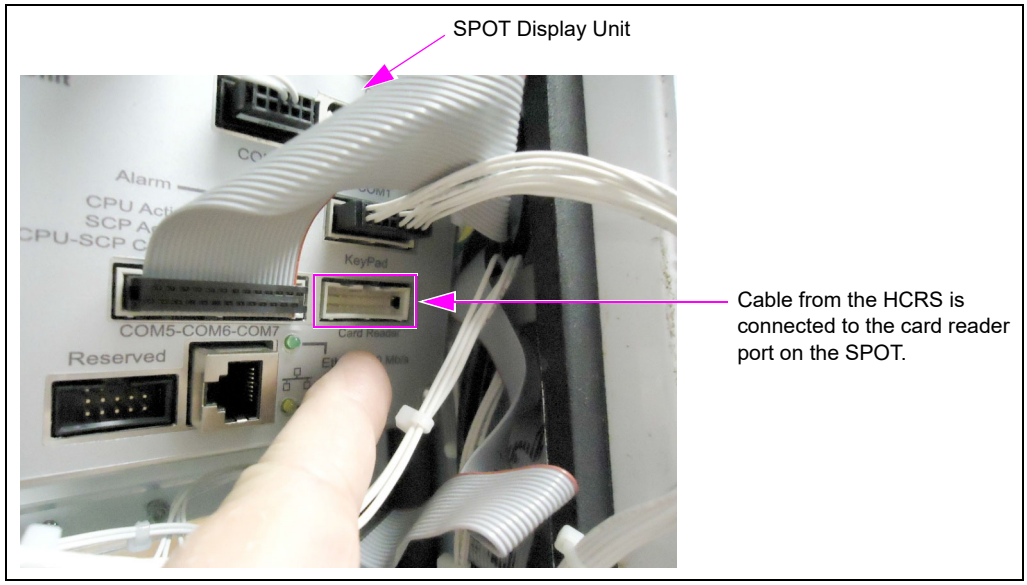
Figure 9: HCRS in Encore S E-CIM Units



4 From the rear of the main door, position the HCRS and then the card reader bracket on the door so that the card reader opening (see Figure 11 on page 18) is positioned at the top. Loosely secure the card reader bracket and HCRS to the main door as determined in step 2 on page 10 using the four screws provided in the kit, in the four holes (looking from the back of the HCRS).

Note: When installing the card reader bracket onto the HCRS, the lip on the bottom of the card reader bracket must face toward you (toward the data/power connector). It is located in the base of the HCRS.

Figure 10: SPOT Display Unit on Encore S E-CIM Units

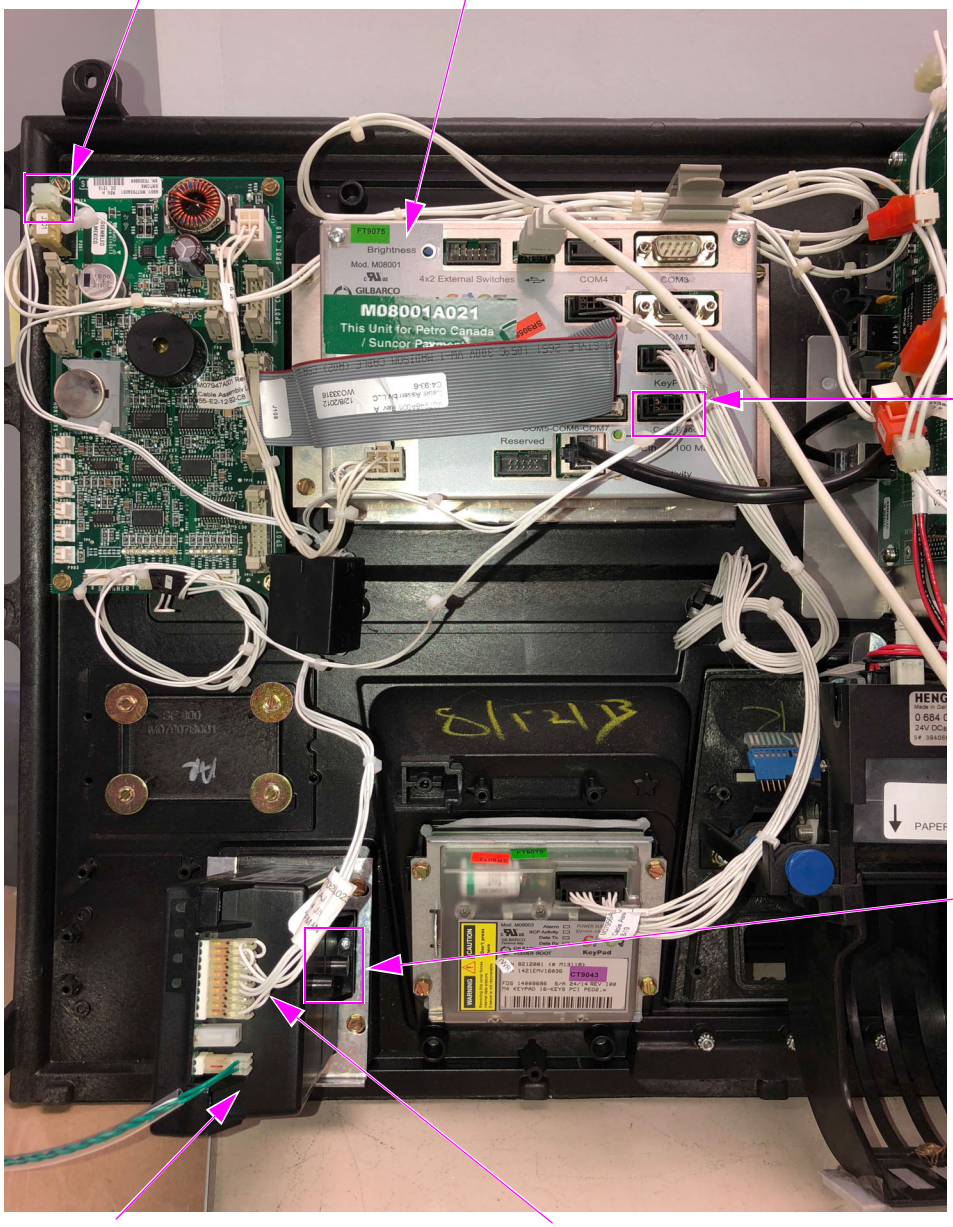


Do not overtighten the screws. Overtightening of the screws can strip or break the card reader bosses.

The following are the torque settings for the different door types:

- Non-threaded insert doors: 18 +/-2 inch-lbs
- Threaded insert doors: 12 inch-lbs

Figure 11: HCRS Mounted on Encore S E-CIM Unit



Notes: 1) The image shown is sample only. SIP may be located in different location.

2) Ensure that the card reader cable is installed onto the card reader before mounting the card reader to the dispenser.

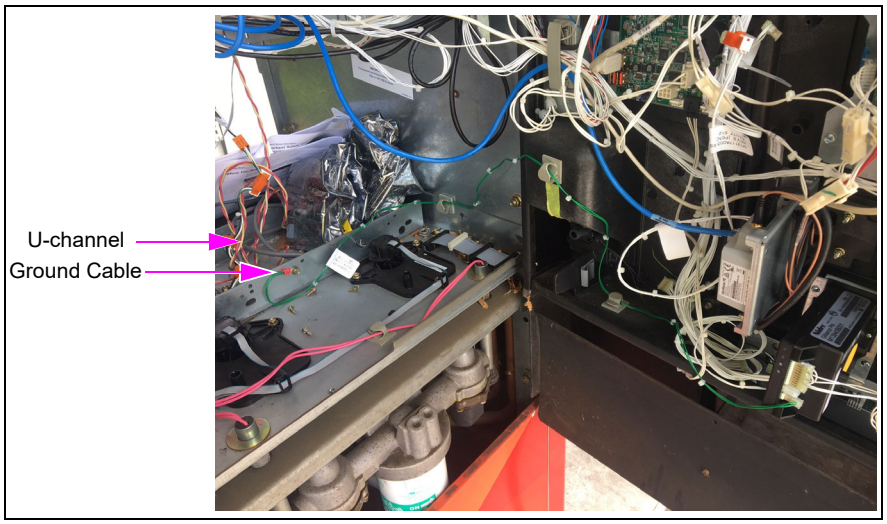
5 Align the HCRS and card reader bracket. Securely tighten the four mounting screws in stages in a diagonal pattern with a torque wrench driver to ensure correct seating of the card reader. The following are the torque settings for the different door types:

- Non-threaded insert doors: 18 +/-2 inch-lbs
- Threaded insert doors: 12 inch-lbs

6 Check the gasket from outside of the door to ensure no gasket material is visible around the card reader bezel.

7 Remove the protective foam block and with power off, connect the 7-pin Power/Data Cable (M07702A023) to the 7-pin power/data connector on the HCRS.
Notes: 1) Orient the connector as shown in Figure 11 on page 18.
2) The HCRS is equipped with a chassis ground connection that must be connected to the chassis. The HCRS will be shipped with the ground connected to the card reader. The other end must be adhered to the chassis.

Figure 12: Connecting Ground Cable to Chassis



8 Connect the card reader cable to the card reader port on the SPOT, and P206 on the SIP (see Figure 11 on page 18).

9 Connect the J2125 to P2125 on the door node/display board. Intercept the existing connector that is already connected to P2125, if already present.

10 Ensure that the power/data cables are secured to the unit with sufficient slack to prevent cable pulls and pinching when opening/closing the door.

11 Proceed to "Completing Installation" on page 20.

Completing Installation

To complete the installation, proceed as follows:

1 Dress the cables neatly. Inspect the work performed (for example, ensure that there are no pinched wires and the cables are routed securely).

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.

2 Close and secure the main doors using the security latch and main door lock. Reinstall and lock the lower panel door.

3 Ensure that the HCRS is activated before it is used. For more information, refer to "Appendix A: Configuring/Activating FlexPay EMV CRIND Keypad" on page 36.

4 Run a debit or credit sale to verify the proper operation of the card reader.

Installing the HCRS Kit in Encore S E-CIM units is now complete.

Installing the HCRS Kit in The Advantage Series Units

Before you begin, read and understand all safety information found in *MDE-2531 Gilbarco Pump and Dispenser Start-up and Service manual*.

1. Inform the manager that the power must be removed to the dispenser.
2. Block off the unit from customers.
3. Upgrade software per the "Loading the Latest SPOT Software" on page 3.
4. Remove all power supplied to the unit at the breaker located in the building. Follow OSHA lockout/tagout procedures.

⚠ WARNING

Failure to turn off the unit during the installation of the kit 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 of the kit.

⚠ 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.

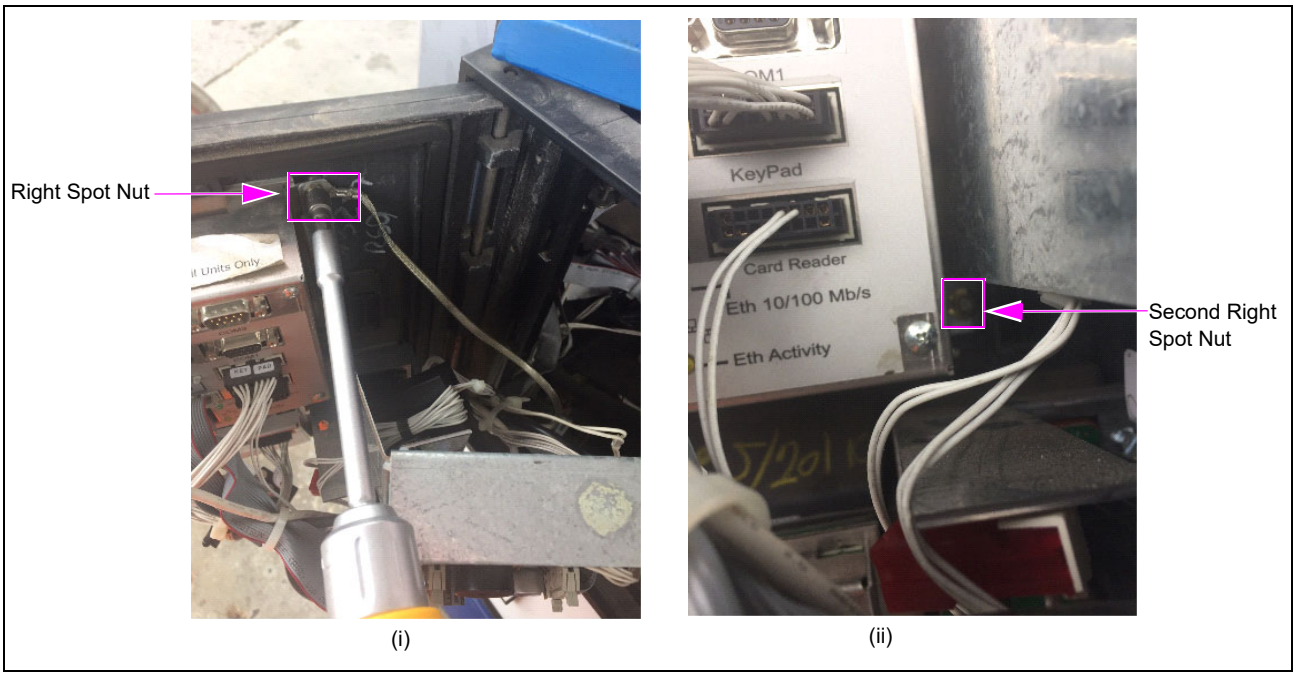
Removing Existing Card Reader

To remove the existing card reader, proceed as follows:

Note: Read all instructions before beginning and observe all safety precautions.

1. Open the left and right option doors using the key.
2. On side A, unlatch the door latches located behind the right and left option doors. Loosen the four screws at the bottom of the main access door using a 5/32-inch or 3/8-inch Allen wrench.
3. On side A, open the main access door by lifting it slightly. Place the main access door hinge bracket pin into the end slot/lock position. This locks into a maximum 90-degree angle.
4. Remove the SIP bracket. Disconnect the M07947A004, M07948A004, M07946A004, and M07702A023 cables from the SIP board and card reader.
   Note: Unused cables left connected can cause noise issues in a unit.
5. Remove the SIP board bracket by removing the two upper and lower right nuts of the M3 SPOT Display.

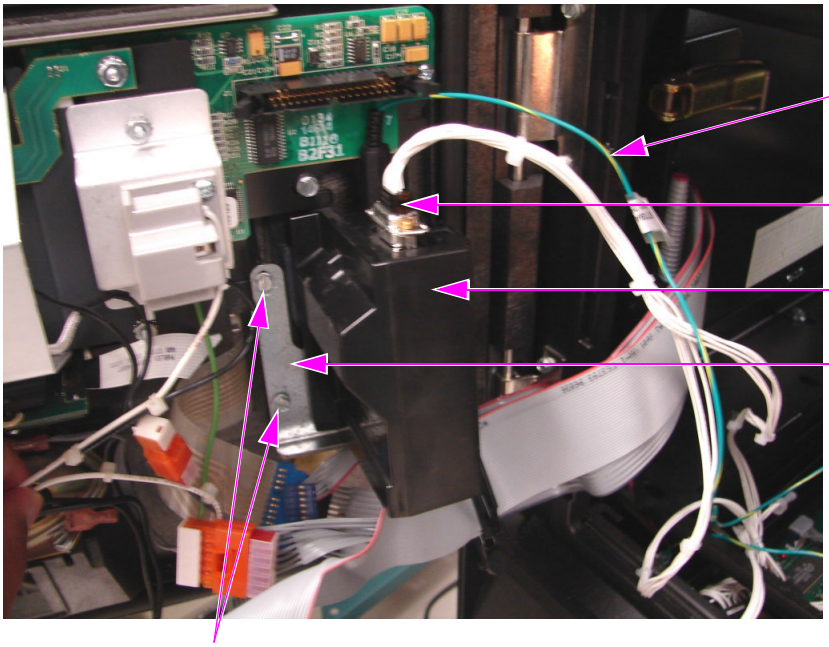
Figure 13: Removing the Upper and Lower Right Nuts



6. Remove the cable clamp from the card reader mounting bracket.
7. Disconnect and remove the cable harness from the existing card reader.
   Note: Unused cables left connected can cause noise issues in a unit.
8. Remove the screw that secures the ESD ground cable to the option door chassis.
9. Remove the screws on the activation switch.

10 Remove the four hexagonal-head screws that secure the card reader bracket and card reader to the option door using a 1/4-inch nut driver or ratchet and socket. Remove and discard the card reader and card reader bracket.

Figure 14: Top View of TCR



11 Remove the old card reader gasket from the option door. Use a putty knife, if required.

Removing the existing card reader (TCR) is now complete.

Installing HCRS

To install the HCRS in The Advantage Series units, proceed as follows:

⚠ 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.

1 Obtain the HCRS, card reader bracket, and gasket from the kit.

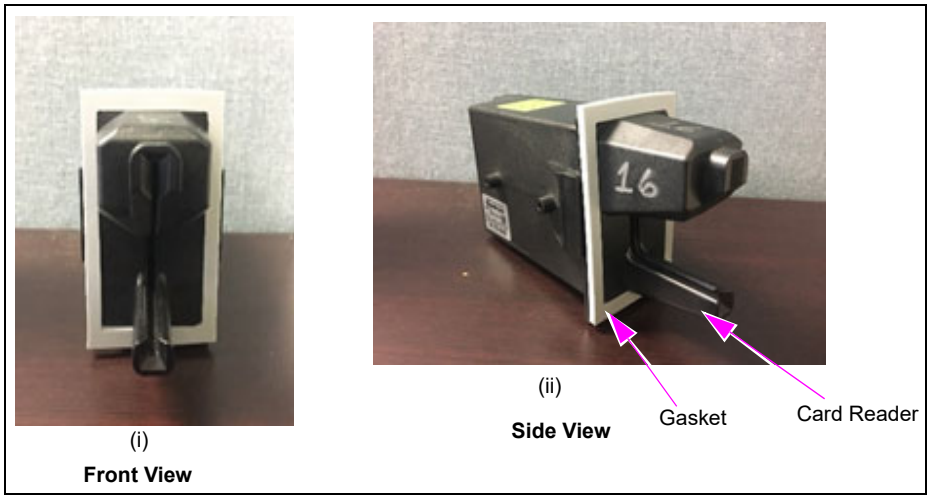
Note: Do not remove the foam block from the connector until after installation is complete. This is to protect the connector pins from damage during installation.

2 Place the gasket over the front of the card reader making sure the gasket is seated on the flange and covers the dismount buttons as shown in Figure 15.

Notes: 1) Installing this non-adhesive gasket is different from previous gasket installation. It is laid over the card reader snout first, and then the card reader is inserted into the card reader opening on the door. In this application, the card reader becomes your insertion tool.

2) You can use the old gasket with the adhesive if you don't have the non-adhesive gasket. Remember that the gasket with the adhesive must be applied to the door first and not the card reader.

Figure 15: HCRS in The Advantage Series Units



3 From the rear of the main door, position the HCRS and then the card reader bracket on the front panel so that the card reader slot is positioned on the top. Loosely secure the card reader bracket and HCRS to the main door using the four screws provided in the kit, in the four holes (looking from the back of the HCRS).

Note: When installing the card reader bracket onto the HCRS, the lip on the bottom of the card reader bracket must face toward you (toward the data/power connector).

4 Align the HCRS and card reader bracket. Securely tighten the four mounting screws in stages in a diagonal pattern to ensure correct seating of the card reader.

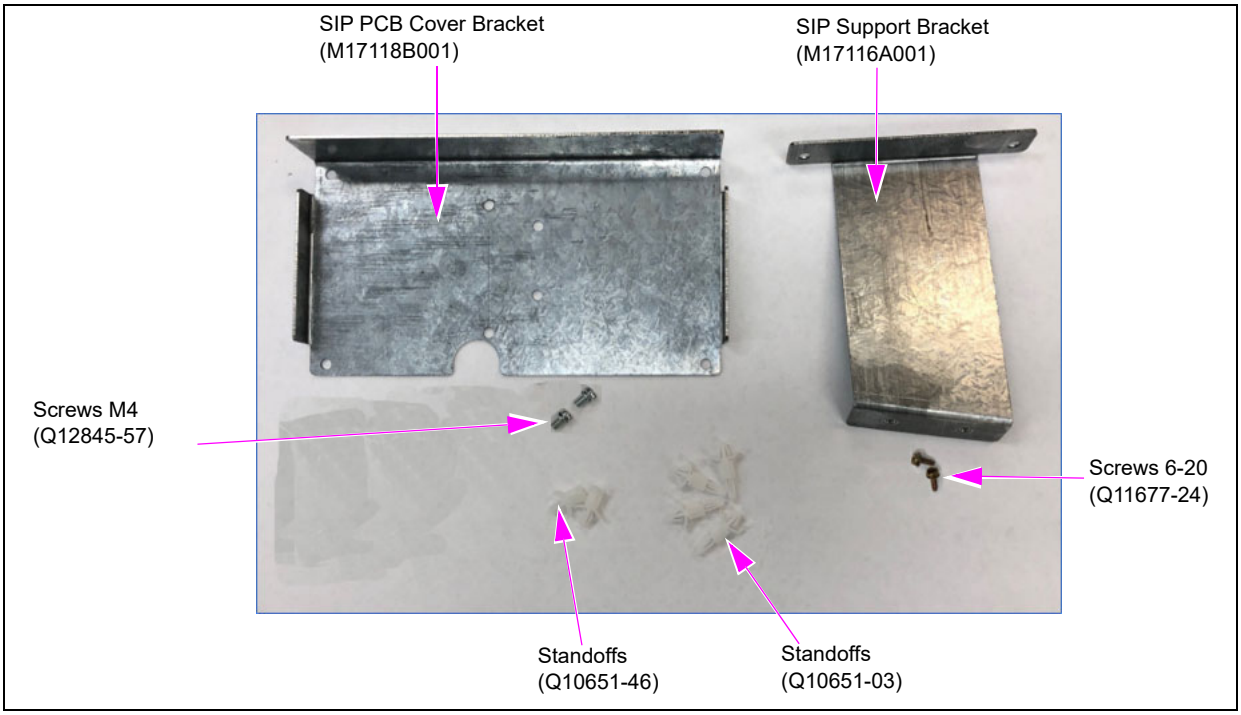
Do not overtighten the screws. Overtightening of the screws can strip or break the card reader bosses.

The following are the torque settings for the different door types:

- Non-threaded insert doors: 18 +/-2 inch-lbs
- Threaded insert doors: 12 inch-lbs

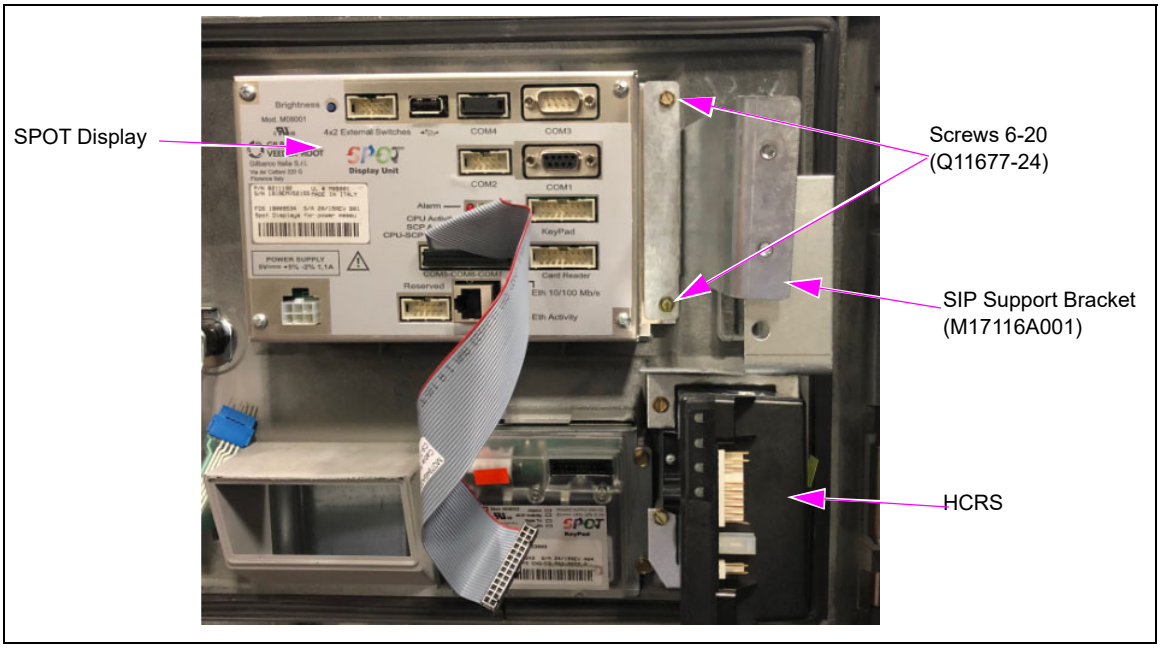
5 Install new SIP Printed Circuit Board (PCB) Cover Bracket (M17118B001) and SIP Support Bracket (M17116A001) (see Figure 16).

Figure 16: SIP Bracket Kit



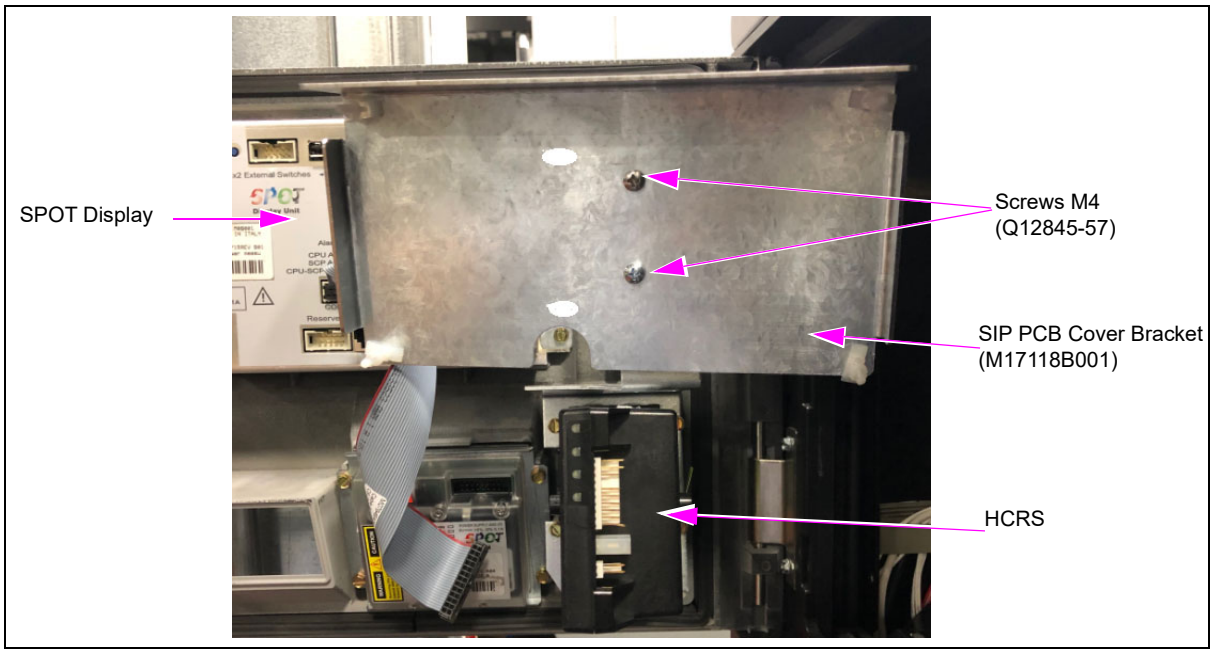
6 Using two Q11677-24 screws, install the SIP Support Bracket (M17116A001) on top of the right side of the SPOT display bracket.

Figure 17: Installing SIP Support Bracket



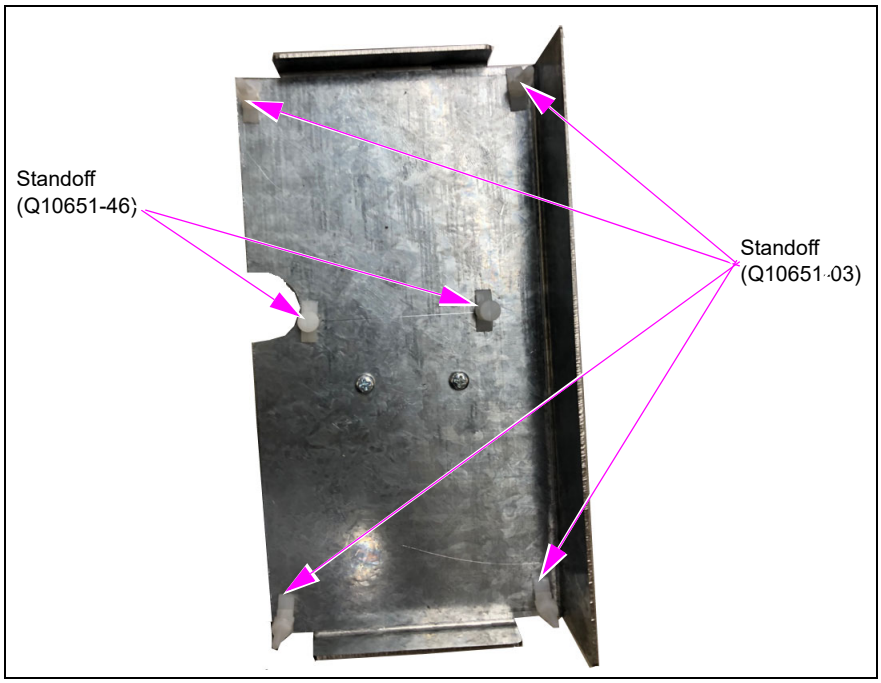
7 Mount the SIP Cover Bracket (M17118B001) on to the SIP Support Bracket (M17116A001); using two Q12845-57 screws.

Figure 18: Mounting SIP Cover Bracket



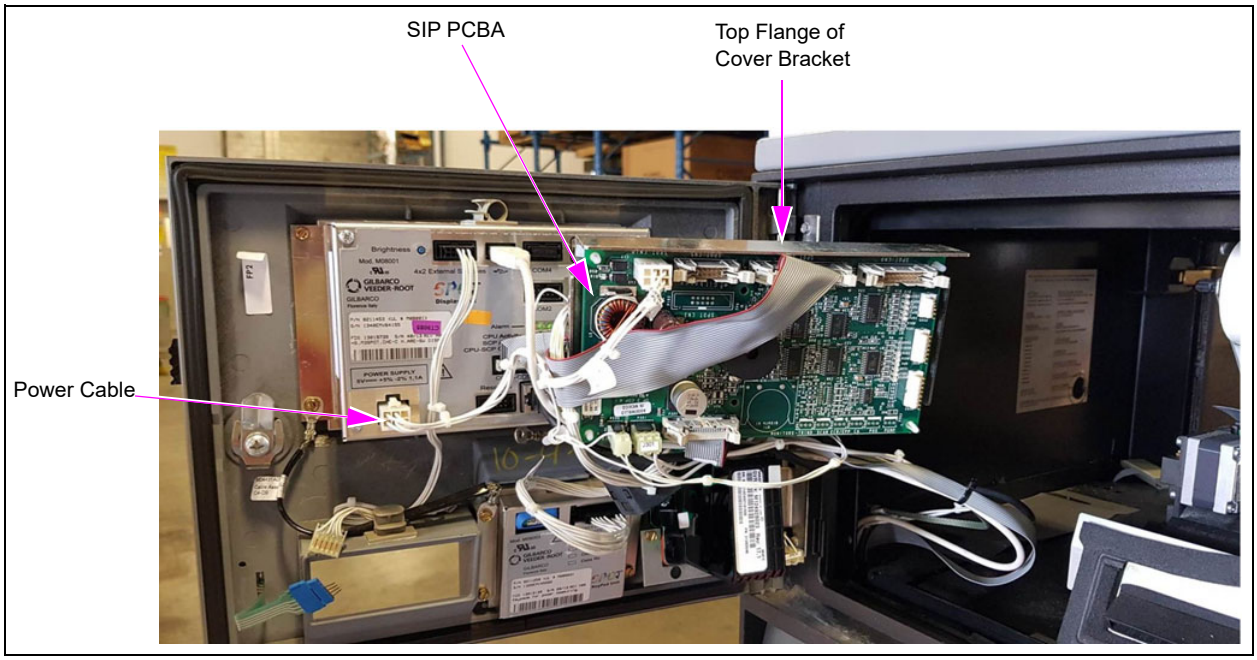
8 Plug four Q10651-03 standoffs, into the pre-drilled holes in four corners and plug two Q10651-46 standoffs above the cutout on the cover bracket (see Figure 19).

Figure 19: Mounting Stand-offs on Bracket



9 Mount the SIP PCB Assembly (PCBA) on the standoffs as shown in Figure 20.

Figure 20: Mounting the SIP PCBA



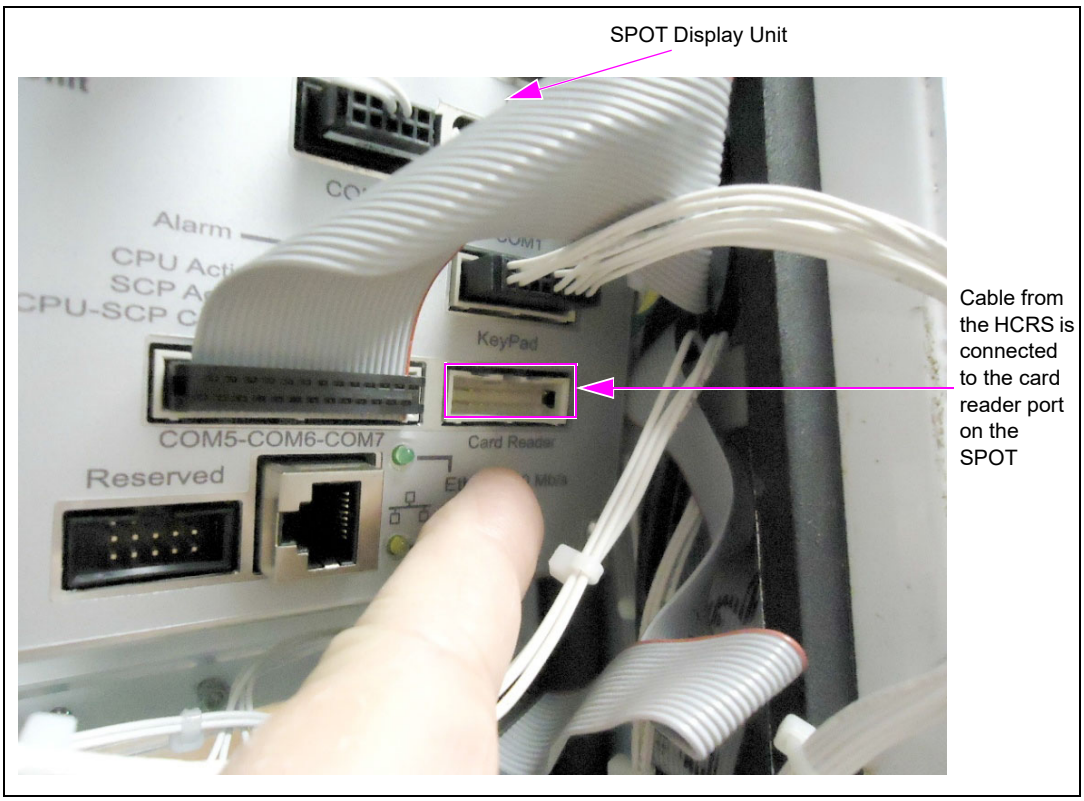
10 Reconnect all the cables as needed.

11 Remove the protective foam block from the HCRS; with power off, connect the 7-pin Power/Data Cable to the 7-pin power/data connector.

Note: The HCRS is equipped with a chassis ground connection that must be connected to the chassis. The HCRS will be shipped with the ground connected to the card reader. The other end must be adhered to the chassis.

12 Connect the card reader cable to the card reader port on the SPOT, and P206 on the SIP.

Figure 21: SPOT Display Unit on The Advantage Series Units

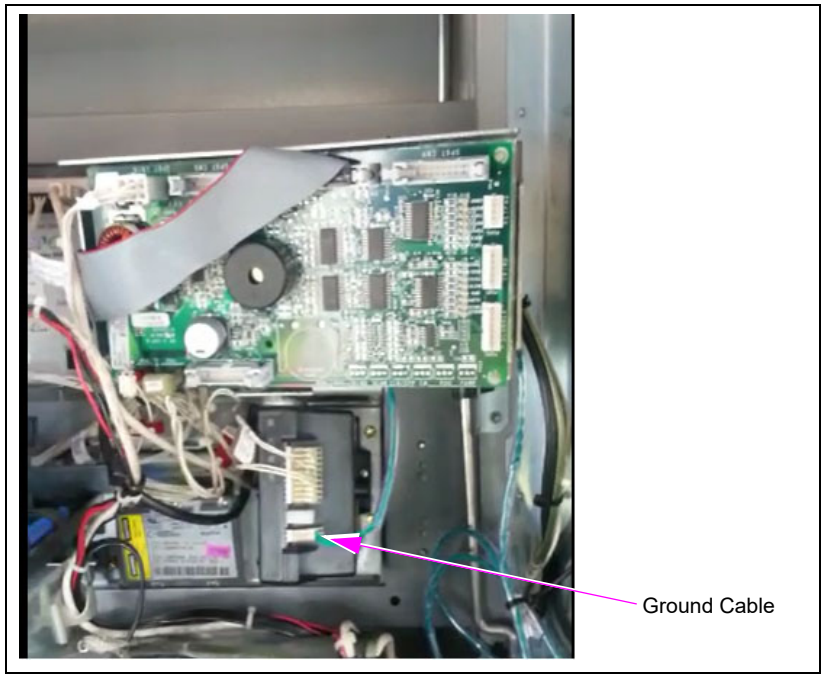


13 Connect the J2125 to P2125 on the display board.

14 Reconnect and route cables through the card reader bracket's flat cable plastic clamp.

15 Route the card reader's ground cable separately from the other cables and mount the ground cable on the printer shelf (typically, the same place as the printer's ground cable).

Figure 22: Routing the Ground Cable



16 Ensure that the power/data cables are secured to the unit with sufficient slack to prevent cable pull and pinching when opening/closing door.

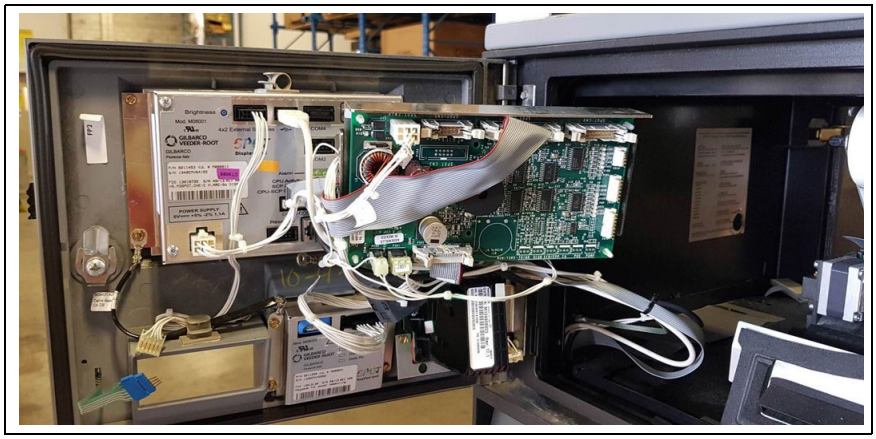
17 Proceed to "Completing Installation".

Completing Installation

To complete the installation, proceed as follows:

1 Dress the cables neatly. Inspect the work performed (For example, ensure that there are no pinched wires and that cables are routed securely).

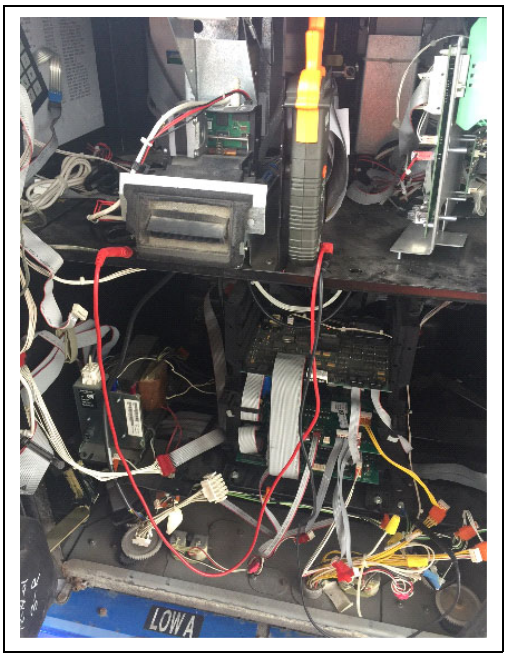
Figure 23: Cable Routing



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. Ensure that there is no interference after the cables are connected and routed.

2 Using a multimeter, ensure that you have a good chassis ground where the card reader's ground cable is connected to the chassis.

Figure 24: Checking Chassis Ground



3 Double check all wires and connections and then remove LOTO kit.

4 Apply power to the unit.

5 Ensure that the HCRS is activated before it is used. For more information, refer to "Appendix A: Configuring/Activating FlexPay EMV CRIND Keypad" on page 36.

6 Run a debit or credit sale to verify the proper operation of the card reader.

Installing the HCRS Kit in The Advantage Series units is now complete.

Installing HCRS Kit in Husky OPT Units

Before you begin, read and understand all safety information found in *MDE-4778 Outdoor Payment Terminal - Model FPCA Installation and Service Manual*.

1 Inform the manager that the power must be removed to the dispenser.

2 Block off the unit from customers.

3 Upgrade software per the "Loading the Latest SPOT Software" on page 3.

4 Remove all power supplied to the unit at the breaker located in the building. Follow OSHA lockout/tagout procedures.

⚠ 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.

⚠ WARNING

Failure to turn off the unit during the installation of the kit 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 of the kit.

Removing Existing Card Reader

To remove the existing card reader, proceed as follows:

Note: Read all instructions before beginning and observe all safety precautions.

1 Remove the rear panel.

2 Disconnect and completely remove the cable harness from the existing card reader.
Note: Unused cables left connected can cause noise issues in a unit.

3 Remove and discard the card reader ground cable.

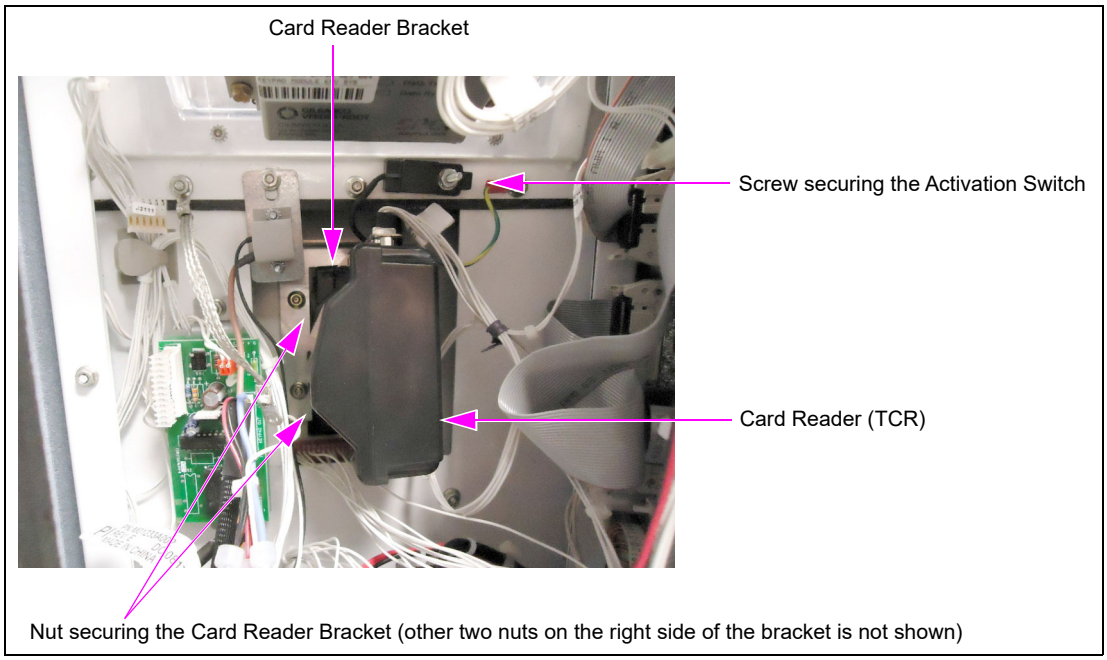
4 Remove the screw on the activation switch if a TCR is being removed.

5 Remove the four nuts on the existing card reader.

6 Remove the card reader (and bracket) from the unit.

7 Remove the card reader gasket. Use a putty knife, if required. Ensure that you have a smooth clean surface before applying the new card reader gasket.

Figure 25: TCR on Husky OPT



Installing the HCRS

To install the HCRS in Husky OPT units, proceed as follows:

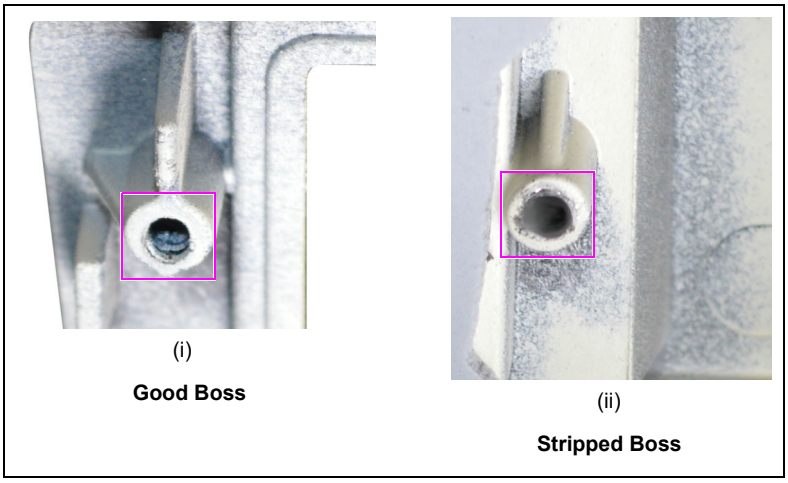
⚠ CAUTION

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.

1 Obtain the HCRS, card reader bracket, and gasket (see Figure 4 on page 11) from the kit.
Note: Do not remove the foam block from the connector until after installation is complete. This is to protect the connector pins from damage during installation.

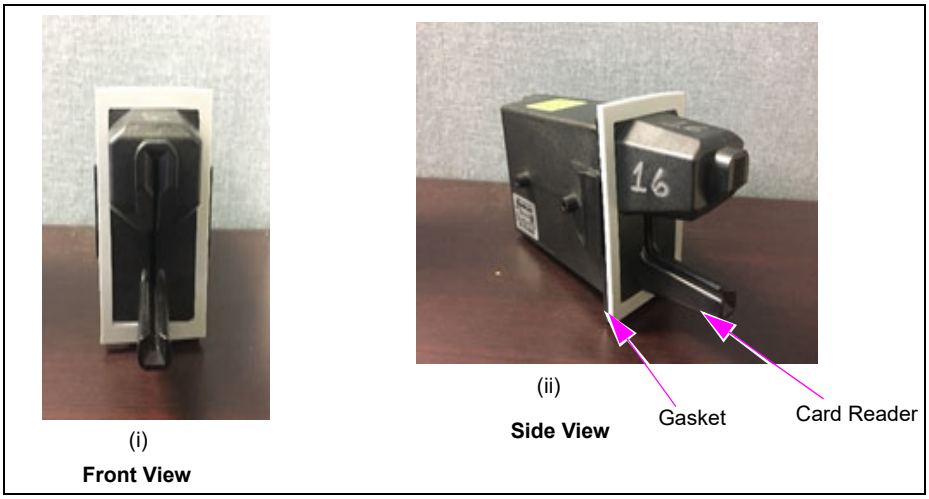
2 Inspect the bosses on the door before installing the card reader. If the door has stripped bosses it is required to replace the CIM door (see Figure 26).
Note: Boss repair kit not appropriate for this unit.

Figure 26: Examples of Good and Stripped Bosses



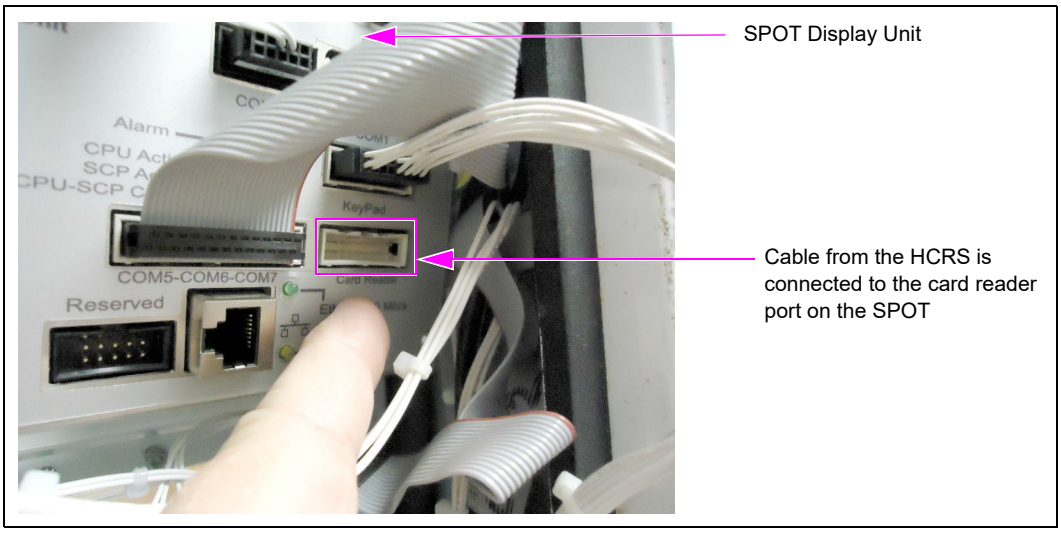
3 Place the gasket over the front of the card reader making sure the gasket is seated on the flange and covers the dismount buttons as shown in Figure 27.

Figure 27: HCRS in Husky OPT Units



4 From the rear side of unit, position the HCRS and then the card reader bracket on the front panel so that the card reader slot is positioned on the top. Loosely secure the card reader bracket and HCRS to the front panel using the four M00414B005 Nuts provided in the kit.

Figure 28: SPOT Display Unit on Husky OPT



5 Align the HCRS and card reader bracket. Securely tighten the four mounting nuts in stages in a diagonal pattern to ensure correct seating of the card reader.

Do not overtighten the screws. Overtightening of the screws can strip or break the card reader bosses.

The following are the torque settings for the different door types:
- Non-threaded insert doors: 18 +/-2 inch-lbs
- Threaded insert doors: 12 inch-lbs

6 Remove the protective foam block and with power off, connect the 7-pin Power/Data Cable to the 7-pin power/data connector on the HCRS.

Note: 1) Hold the card reader with one hand while seating the cable onto the card reader with other hand.

2) The HCRS is equipped with a chassis ground connection that must be connected to the chassis. The HCRS will be shipped with the ground connected to the card reader. The other end must be adhered to the chassis.

7 Connect the card reader cable to the card reader port on the SPOT display and P206 on the SIP (see Figure 28).

8 Ensure that the power/data cables are secured to the unit with sufficient slack to prevent cable pulls and pinching. Verify neat cable management and no pinched cables under any mounting hardware.

9 Proceed to "Completing Installation" on page 35.

Completing Installation

To complete the installation, proceed as follows:

1 Dress the cables neatly. Inspect the work performed (for example, ensure that there are no pinched wires and the cables are routed securely).

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. Ensure that there is no interference after the cables are connected and routed.

2 Close and secure the rear panel.

3 Ensure that the HCRS is activated before using. For more information, refer to "Appendix A: Configuring/Activating FlexPay EMV CRIND Keypad" on page 36.

4 Run a debit or credit sale to verify the proper operation of the card reader.

Installing the HCRS Kit in Husky OPT unit is now complete.

Appendix A: Configuring/Activating FlexPay EMV CRIND Keypad

For the card reader to activate properly, the dismount switches must be fully engaged (pressed against the door bezel). Any debris, bad card reader alignment, leftover old gasket, etc., can affect proper activation. If the unit fails to activate or repeatedly loses activation, verify the following:

- There are no stripped bosses in the door.
- The card reader opening surface is smooth and free of any debris or old gasket material.
- The gasket is installed properly.
- The card reader is installed and tightened in a diagonal pattern.

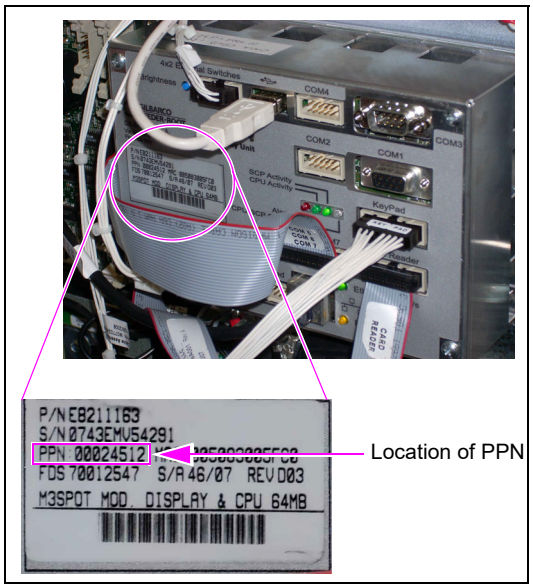
To activate a secure component, you must enter the Service Menu. To enter the Service Menu and perform the activation, proceed as follows:

1 Power up the FlexPay EMV CRIND. The Product Part Number (PPN) is displayed on the screen (see Figure 29). Note the eight-digit serial number when the unit first powers up. The right-most six digits of the serial number is the password for the Service Menu.
Note: The message, "Out of Service" is displayed when the unit first powers up.

Figure 29: Powering up FlexPay EMV CRIND

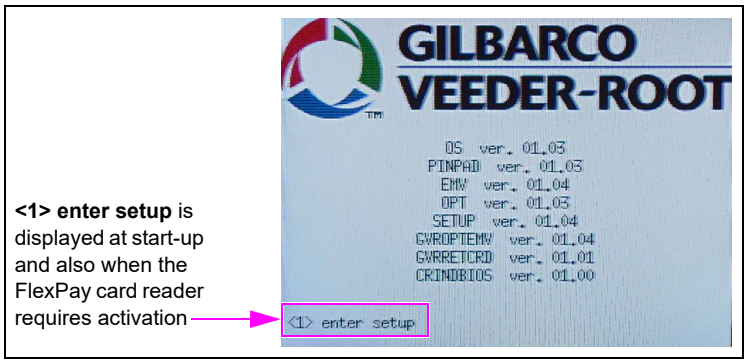
The PPN is also printed on the rear of the unit (see Figure 30).

Figure 30: PPN on Rear of FlexPay EMV CRIND Unit



The Service Menu is displayed when the FlexPay EMV CRIND keypad requires activation (see Figure 32) or a white screen with the Gilbarco logo and software package versions are displayed momentarily (see Figure 31).

Figure 31: Software Packages Screen



2 Press **1**. The Service Menu is displayed.

Figure 32: Service Menu Screen

3 Enter the right-most six digits of the PPN and press **ENTER**/**OK**. The Service Menu - Main Menu is displayed.
Note: If you do not enter the password within 60 seconds, the unit automatically restarts.

Figure 33: Service Menu - Main Menu

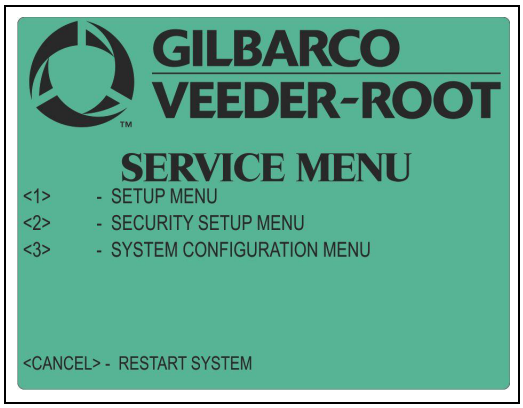
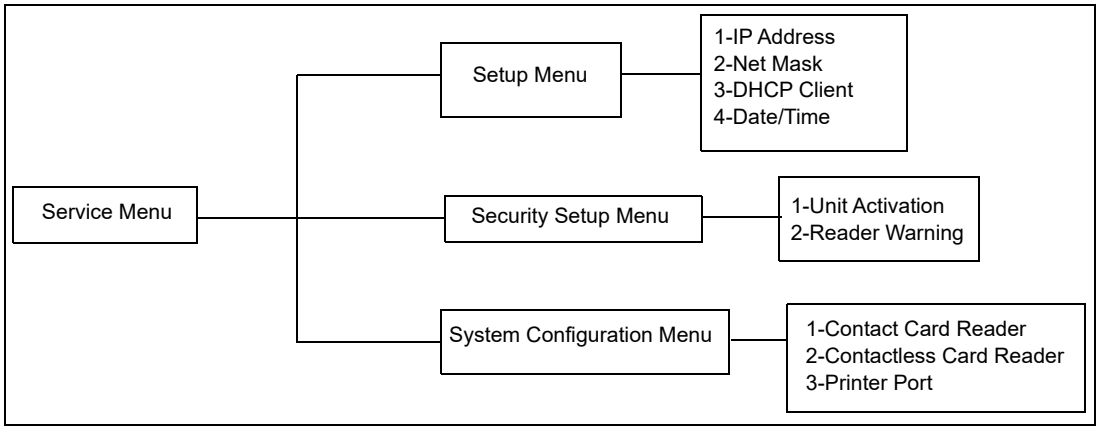


Figure 34 shows the options in the Service Menu.

Figure 34: Service Menu Options Tree



4 Press **2** to enter the Security Setup Menu.

This menu is used to activate security mounting sensors.

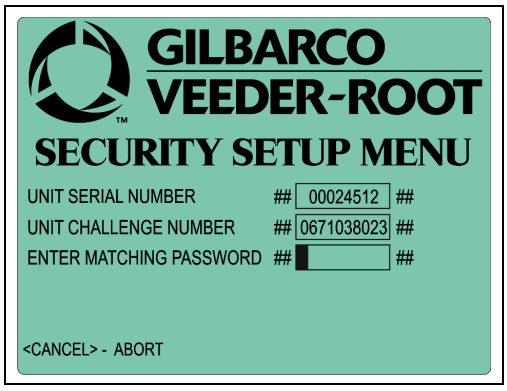
The FlexPay EMV CRIND software modules are not activated and system communications are not possible until the unit's mounting sensors are activated.

The menu displays the following:

- UNIT SERIAL NUMBER: PPN shown at start-up.
- UNIT CHALLENGE NUMBER: Variable code generated when the FlexPay EMV CRIND starts.
- ENTER MATCHING PASSWORD: Matching password is the answer to the challenge number.

Note: Gilbarco Call Center provides the matching password by a secure process that uses the serial number and challenge number, and produces a unique matching password. It must be entered within a time limit (1 minute) of the challenge number being displayed or the screen times out and reverts to the main Service Menu.

Figure 35: Security Setup Menu Screen



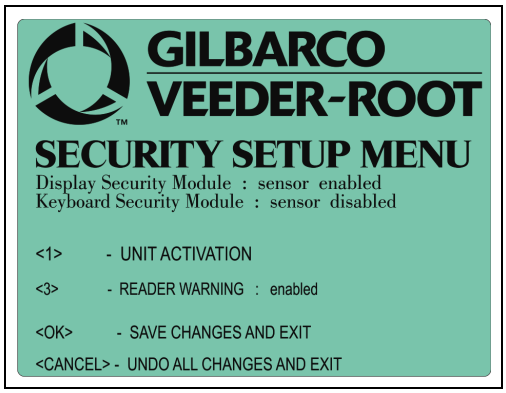
5 Provide the unit serial number and challenge number to receive a matching password.

Note: Contact Gilbarco Call Center at 1-800-800-7498 to obtain a password and state that you have a FlexPay EMV CRIND that requires activation.

6 Enter the matching password into the Security Setup Menu and press **OK**. After you enter the password correctly, the system will show the sensors status and four options.

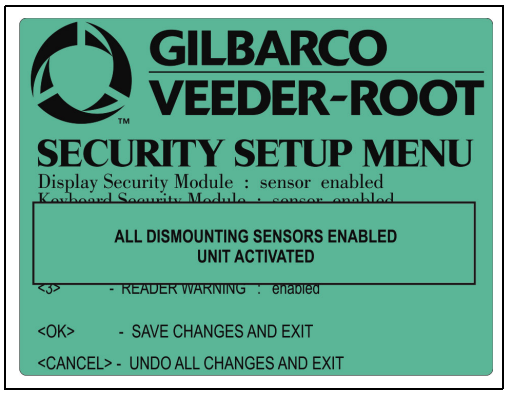
Option	Description
1	UNIT ACTIVATION (to activate the unit)
3	READER WARNING: enabled
OK	SAVE CHANGES AND EXIT
CANCEL	UNDO ALL CHANGES AND EXIT

Figure 36: Security Setup Menu - Options Screen



7 Press **1** to activate the unit. The message, "ALL DISMOUNTING SENSORS ENABLED UNIT ACTIVATED" is displayed. Press **OK** to exit the menu and press **CANCEL** to restart the FlexPay EMV CRIND.

Figure 37: Activation Screen



Activation enables all the connected secure modules.

Note: It is not possible to enable only one component and retain the other components in an inactive state.

Contrary to activation, the deactivation procedure does not require keypad entries. Therefore, no options are available in the menu. When the system sensors detect that a module with mounting sensors is dismounted, it automatically self-deactivates. The activation procedure must be repeated.

At each power up, if the FlexPay EMV CRIND main processor detects a module that is not activated, it will automatically enter the Service Menu (green screen).

Appendix B: HCRS Card Reader LED Matrix

The following table lists the Light Emitting Diode (LED) matrix for the HCRS card reader:

	LED				
State	**Green**	**Amber**	**Red**	**Indicating**	**Service action**
1	OFF	OFF	OFF	No external power	Check the power cable and power supply.
2	OFF	Solid	Solid	Power is ON, but firmware doesn't run	Reboot and/or re-seat cable. If no change, replace.
3	Solid	Solid	OFF	Power is ON, but not communicating	Check the communication cable and if its host is running.
4	Flashing	Solid	OFF	Communicating with its host and activating, not ready to read cards yet	State will go to state 8 in a few minutes or state 3 in 30 seconds.
5	Flashing	Flashing	OFF	Firmware downloading and programming	State will go to state 5 after programming in a few minutes or state 3 in 30 seconds.
6	Solid	OFF	OFF	In ready state but no communication with its host	State will go to state 8 or state 3 in 30 seconds.
7	Flashing	OFF	OFF	In ready state and being polled by its host	Normal state.
8	OFF	Solid	OFF	Dismount flag on without communication with its host	Check communication cable and dismount switch. If they are fully engaged, reactivate using the online activation tool or by calling 866-606-8966.
9	OFF	Flashing	OFF	Dismount flag on and communicating with its host	Check dismount switch. If it is fully engaged, reactivate using the online activation tool or by calling 866-606-8966.
10	OFF	OFF	Solid	Reader has no communication with its host, and the crypto driver is not functioning: Crypto Microcontroller Unit (MCU) is lost or certificates are invalid (may be tampered)	Reboot. If issue persists, then replace.
11	OFF	OFF	Steady flash	Reader is communicating with its host, and the crypto driver is not functioning: Crypto MCU is lost or certificates are invalid (may be tampered)	Reboot. If issue persists, then replace.
12	OFF	OFF	Flashing/ pause	1 flash and 3 sec pause (ON)	Reboot. If issue persists, then report tamper type "Other Tamper Error".
13	OFF	OFF	Flashing/ pause	2 flashes and 3 sec pause (ON)	Reboot. If issue persists, then report tamper type "Firmware Auth Error".
14	OFF	OFF	Flashing/ pause	3 flashes and 3 sec pause (ON)	Reboot. If issue persists, then report tamper type "Removal Sensor Error".
15	OFF	OFF	Flashing/ pause	4 flashes and 3 sec pause (ON)	Reboot. If issue persists, then report tamper type "Temperature Error".
16	OFF	OFF	Flashing/ pause	5 flashes and 3 sec pause (ON)	Reboot. If issue persists, then report tamper type "Battery Backup Error".
17	OFF	OFF	Flashing/ pause	6 flashes and 3 sec pause (ON)	Reboot. If issue persists, then report tamper type "Tamper Switch Error".
18	OFF	OFF	Flashing/ pause	7 flashes and 3 sec pause (ON)	Reboot. If issue persists, then report tamper type "Mesh Error".

Appendix C: Troubleshooting HCRS

Troubleshooting HCRS Using Dismount Sensor Clamp (M14601B001)

Symptom	Possible Causes	Steps to Resolve
Card reader dismounted/does not activate	Activation switch	1 Ensure that the dismount switches are working properly. 2 Power down the dispenser. 3 Remove the card reader and install the dismount sensor clamp. 4 Apply power to the dispenser. 5 Activate the card reader. **If the card reader activates**: a Check the card reader gasket. Ensure that the grey gasket is used. Check for tears. b Replace the gasket, if needed. c Check the bosses. Verify none are cracked or broken, if they are, use the Boss Repair Kit (M07450K999). d Ensure that the cable is good. Swap with opposite side of the dispenser. e Check the programming, ensure that the card reader programming is set correctly. **If the card reader still does not activate**: a Ensure that the dismount sensor clamp is installed correctly. b Replace the HCRS and activate.

When testing the dismount sensors, use the dismount sensor clamp shown in Figure 38.

Figure 38: Dismount Sensor Clamp

To install the dismount sensor clamp, apply pressure with both the thumb and the fingers to bend the clamp to fit the HCRS into the clamp as shown in Figure 38.

To remove the HCRS from the clamp, again apply pressure with both the thumb and fingers to bend the clamp to remove the HCRS.

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