Encore® S Enhanced

FlexPay™ EMV® CRIND® Start-up/Service Manual

Computer Programs and Documentation

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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.

Approvals
Gilbarco is an ISO 9001:2008 registered company.
Underwriters Laboratories (UL):

UL File#	Products listed with UL
MH1941	All Gilbarco pumps and dispensers that bear the UL listing mark.
MH8467	Transac System 1000 and PAM 1000
E105106	Dell DHM Minitower
E165027	G-SITE and Passport Systems

California Air Resources Board (CARB):

Executive Order #	Product
G-70-52-AM	Balance Vapor Recovery
G-70-150-AE	VaporVac

National Conference of Weights and Measures (NCWM) - Certificate of Conformance (CoC):

Gilbarco pumps and dispensers are evaluated by NCWM under the National Type Evaluation Program (NTEP). NCWM has issued the following CoC:

CoC#	Product	Model #	CoC#	Product	Model #
02-019	Encore	Nxx	02-036	Legacy	Jxxx
02-020	Eclipse	Exx		G-SITE Printer (Epson)	PA0307
02-025	Meter - C Series	PA024NC10		G-SITE Distribution Box	PA0306
	Meter - C Series	PA024TC10	02-037	G-SITE Keyboard	PA0304
02-029	CRIND	—		G-SITE Mini Tower	PA0301
	TS-1000 Console	—		G-SITE Monitor	PA0303
	TS-1000 Controller	PA0241		G-SITE Printer (Citizen)	PA0308
02-030	Distribution Box	PA0242	02-038	C+ Meter	T19976
	Meter - EC Series	PA024EC10	02-039	Passport	PA0324
	VaporVac Kits	CV	02-040	Ecometer	T20453
			05-001	Titan	KXXY Series

Trademarks

Non-registered trademarks

Applause™ Media System	G-SITE® Lite™	SMART CRIND™
CIM™	Highline™	SMART Meter™
C-PAM™	Horizon™	SmartPad™
ECR™	Insite360™	Surge Management System™
EMC™	MultiLine™	Tank Monitor™
FlexPay™	Optimum™ Series	TCR™
G-CAT™	PAM™ 1000	Titan™
Gilbert™	Passport™	Ultra-Hi™
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e-CRIND®	Performer®
Eclipse®	The Advantage® Series
Encore®	Transac®
G-SITE®	Transac® System 1000
Gilbarco®	Trimline®
InfoScreen®	TRIND®
Legacy®	VaporVac®

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Table of Contents

1 – Introduction

Overview

This manual provides start-up and service information for FlexPay™ EMV® CRIND® components mounted on Encore® S Enhanced (units with an E-CIM™ bezel) FlexPay units. It includes procedures for activation of the FlexPay EMV CRIND and the setting of all site equipment configurable addresses.

The setup/configuration of the following equipment is described in this manual:
- FlexPay EMV CRIND Display
- FlexPay EMV CRIND Keypad
- FlexPay Card Reader

The equipment is part of a Local Area Network (LAN) that uses Ethernet® Transmission Control Protocol/Internet Protocol (TCP/IP) addressing. Each piece of equipment must be allocated an address based on the existing site LAN address structure.

The following are the additional pay at the pump equipment addresses that must be set during installation:

Equipment	Address
FlexPay EMV CRINDs	10.5.48.71, for pumping position # 1
	10.5.48.103, for pumping position # 32

The subnet mask for all LAN equipment must be set to 255.255.255.0.

Required Tools

CRIND Diagnostic Card (Q12534-170) is required to install the FlexPay EMV CRIND components mounted on Encore S Enhanced (units with an E-CIM bezel) FlexPay units.

Related Documents

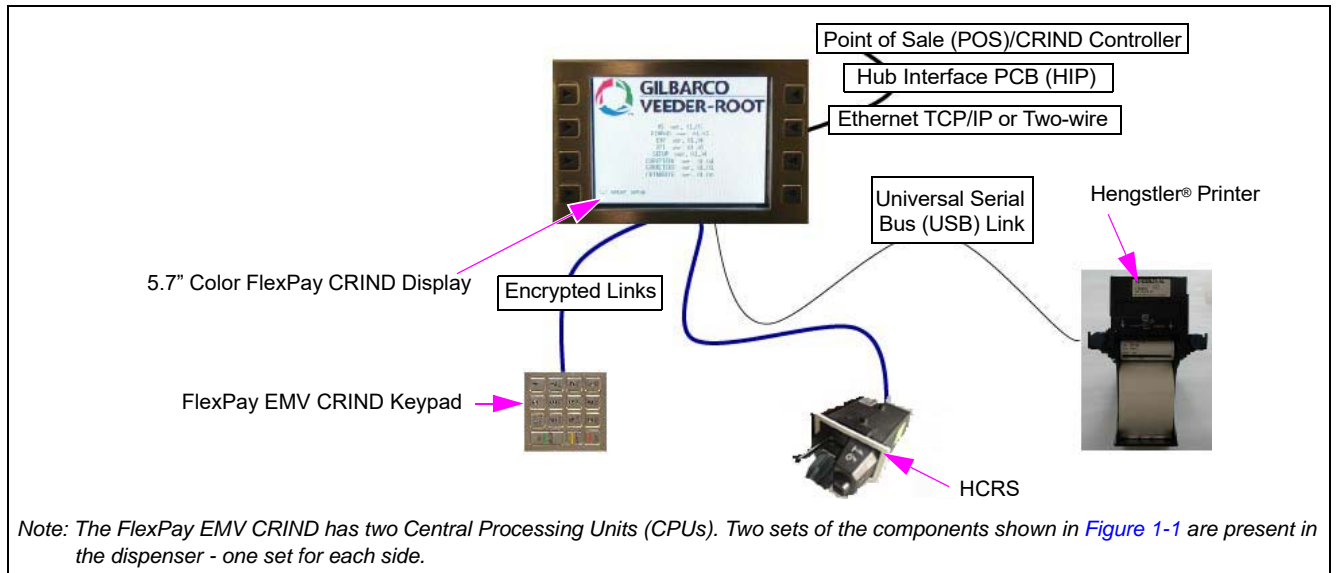| Document Number	Title	GOLD℠ Library
MDE-3804	Encore and Eclipse® Start-up/Service Manual	• Encore and Eclipse • Service Manual
MDE-3985	Encore Installation Manual	• Encore and Eclipse • Encore and Eclipse Installers • Footprint & Elevation Library
MDE-5062	FlexPay Maintenance Tool for FlexPay/SPOT CRIND System	• CRIND and TRIND® • FlexPay EMV
MDE-5118	EMV Troubleshooting Guide for Canada	• CRIND and TRIND • Encore and Eclipse Installers • Encore and Eclipse • FlexPay EMV • POS Peripheral Devices
MDE-5314	Insite360™ Remote Management Installation, Start-up, and Service Manual	• FlexPay EPP and SCR • FlexPay IV
MDE-5386	Hybrid Card Reader S (HCRS) Kit (M13940KXXX) Installation Instructions	Encore and Eclipse

Abbreviations and Acronyms

Term	Description
ASC	Authorized Service Contractor
BIOS	Basic Input/Output System
CAT5	Category 5
CPU	Central Processing Unit
CRIND	Card Reader in Dispenser
DHCP	Dynamic Host Configuration Protocol
E-CIM™	Enhanced Customer Interface Module
EMV	Europay®, MasterCard®, and Visa®
FCC	Federal Communications Commission
GCM	Gilbarco Contactless Module
GOLD	Gilbarco® Online Documentation
HCR	Hybrid Card Reader
HIP	Hub Interface PCB
LAN	Local Area Network
LED	Light Emitting Diode
MOC	Major Oil Company
NEC®	National Electrical Code
NFPA®	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PCB	Printed Circuit Board
PCBA	Printed Circuit Board Assembly
PCN	Pump Control Node
POS	Point of Sale
PPN	Product Part Number
SIP	Serial Interface PCB
SPOT	Secure PIN Pad for Outdoor Terminal
SSL	Secured Socket Layer
STP	Submersible Turbine Pump
TCP/IP	Transmission Control Protocol/Internet Protocol
TCR™	Tribrid Card Reader
TRIND	Transmitter/Receiver in Dispenser
USB	Universal Serial Bus

System Site Configuration Overview

Figure 1-1 shows the components in the FlexPay EMV CRIND.

Figure 1-1: System Site Configuration

Note: The FlexPay EMV CRIND has two Central Processing Units (CPUs). Two sets of the components shown in Figure 1-1 are present in the dispenser - one set for each side.

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2 – 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 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.

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 fluid 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.

Hazards and Actions

⚠	**WARNING**
	Spilled fuels, accidents involving pumps/dispensers, or uncontrolled fuel flow create a serious hazard.
	Fire or explosion may result, causing serious injury or death.
	Follow established emergency procedures.
	DEF is non-flammable. However it can create a slip hazard. Clean up spills promptly.

The following actions are recommended regarding these hazards:

Collision of a Vehicle with Unit   Fire at Island   Fuel Spill
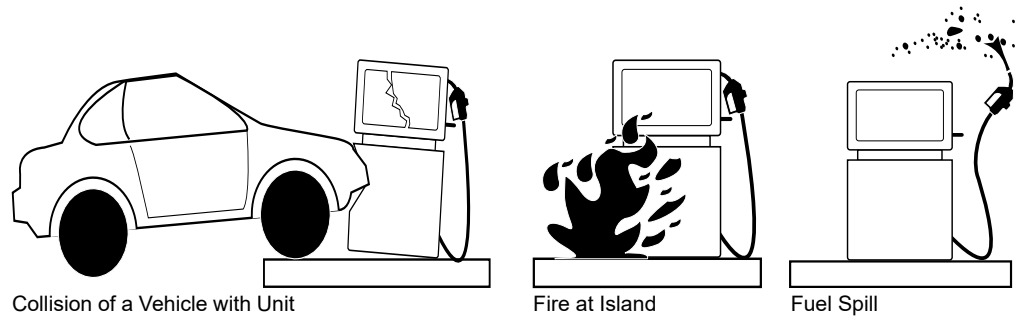
- Do not go near a fuel spill or allow anyone else in the area.
- Use station EMERGENCY CUTOFF immediately. Turn off all system circuit breakers to the island(s).
- Do not use console E-STOP, ALL STOP, and PUMP STOP to shut off power. These keys do not remove AC power and do not always stop product flow.
- Take precautions to avoid igniting fuel. Do not allow starting of vehicles in the area. Do not allow open flames, smoking or power tools in the area.
- Do not expose yourself to hazardous conditions such as fire, spilled fuel or exposed wiring.
- Call emergency numbers.

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3 – Start-up and Configuration

This chapter describes the start-up and configuration procedure for the FlexPay EMV CRIND display module.

Configuring CRIND IDs and CRIND Mode (CRIND Diagnostic Mode)

The CRIND diagnostic mode is used to configure the CRIND IDs and CRIND Mode, and any other peripheral devices connected to the dispenser.

<table>
<tr><td align="center">IMPORTANT INFORMATION</td></tr>
<tr><td>• As an additional security measure, the FlexPay EMV CRIND keypad requires that the Enter key be pressed after any number entry (in diagnostic mode only).

• Unlike previous versions of the CRIND software, the CRIND ID and CRIND Mode must be configured independently on each side of the dispenser.</td></tr>
</table>

To enter the CRIND diagnostic mode and configure the CRIND IDs and CRIND Mode, proceed as follows:

1 Swipe the CRIND Diagnostic Card (Q12534-170) as shown in Figure 3-1.

Figure 3-1: CRIND Diagnostic Card

(i)

CRIND Diagnostic Card (Q12534-170)
*Note: Ensure that the magnetic stripe is oriented to the
right as shown.*

(ii)

The CRIND Diagnostic Startup Menu opens.

Figure 3-2: CRIND Diagnostic Startup Menu
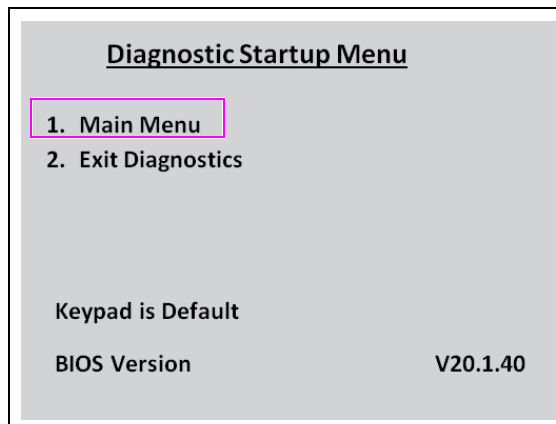
2   Press **1** > **Enter**. The Main Menu opens.

Figure 3-3: CRIND Diagnostic - Main Menu
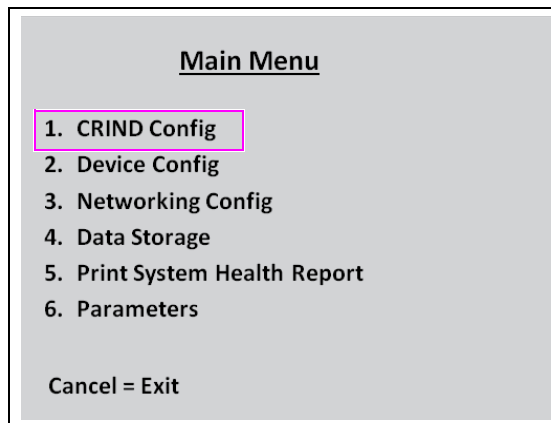
3   Press **1** > **Enter**. The CRIND Config screen opens.

Figure 3-4: CRIND Config Screen
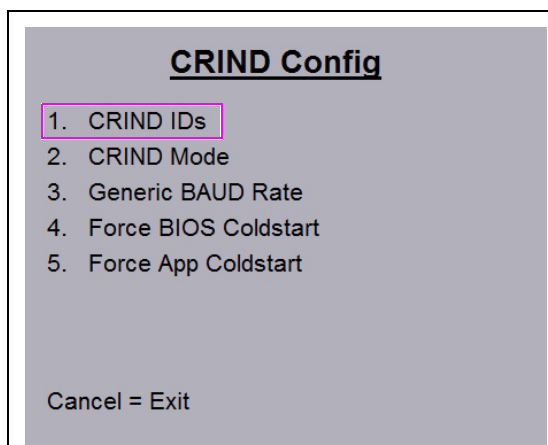
4 Press **1** > **Enter**. The CRIND ID side 1 screen opens.

Figure 3-5: CRIND ID Configuration Screen

5 Configure the CRIND ID for side 1 and press **Enter** to save the configured value and exit.
    *Note: To configure a two-digit CRIND ID, you must press **Enter** after entering each digit of
         the CRIND ID. For example, to enter 12 as the CRIND ID, the key entries will be **1**,
         Enter, **2**, **Enter**.*

6 To configure the CRIND Mode, press **2** > **Enter** on the CRIND Config screen
    (see Figure 3-4 on page 3-2). The CRIND Mode screen opens.

Figure 3-6: CRIND Mode Screen

7 Press **1** > **Enter** to set the CRIND Mode to MOC or press **2** > **Enter** to set the CRIND Mode
    to Generic.

8 Press **Enter** to save the configuration and exit.

Configuring Setup Menu and System Configuration Menu Parameters

To configure the Setup Menu and System Configuration Menu parameters, proceed as follows:

1 Power up the FlexPay EMV CRIND and note the 8-digit Device Serial Number [Product Part Number (PPN)], when the unit first powers up. The right-most six digits of the PPN is the password for the Service Menu.

Note: Gilbarco recommends that Authorized Service Contractor (ASC) note down the PPN for future reference. The PPN is also printed on the rear of the unit (see Figure 4-2 on page 4-2).

Figure 3-7: Powering up FlexPay EMV CRIND

2 When the software package version numbers are shown, press **1** to enter setup.

Note: If the "<1> enter setup" option does not appear after 30 seconds to 1 minute, power down the FlexPay EMV CRIND and power up the unit.

Figure 3-8: Software Packages Screen

<1> enter setup appears at start-up and also when the FlexPay card reader requires activation
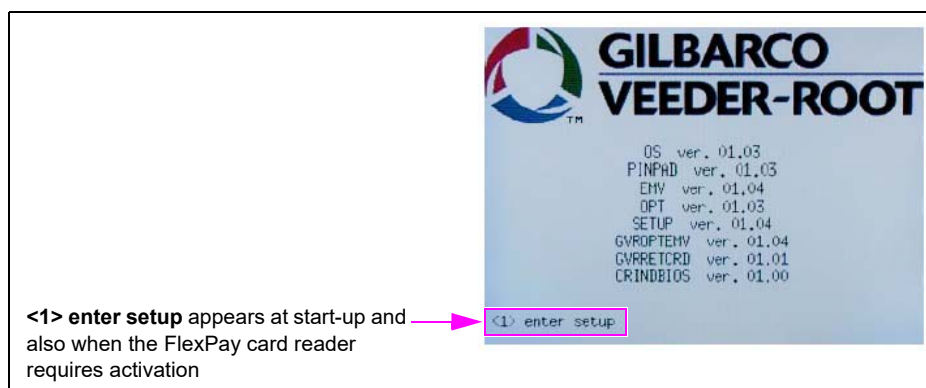
The Service Menu opens.

Figure 3-9: Service Menu

3 Enter the right-most six digits of the PPN and press **ENTER/OK**. The Main Menu opens.

Figure 3-10: Service Menu - Main Menu

4 Press **1** to enter the Setup Menu. Press **1** to configure the IP address to 10.5.48.XX/255.255.255.0, where XX = 70 + the CRIND ID. Press **ENTER** again to save changes and exit.

Figure 3-11: Setup Menu

5 When the Service Menu is displayed, press **3** to enter the System Config Menu.

Bundle 5X.Y.ZZ

To configure bundle 5X.Y.ZZ, proceed as follows:

Press **1** to set the contact card reader to "PANASONIC" (if not already set to "PANASONIC").

To enable Contactless Card acceptance, press **2** to:
- Set Contactless Card Reader to "PANASONIC" (if not already set to "PANASONIC"), if the contactless card reader connects to the Tribrid Card Reader (TCR).
- Set Contactless Card Reader to "OTI" (if not already set to "OTI"), if using the Gilbarco Contactless Module (GCM) option.

Figure 3-12: System Config Menu for Bundle 5X.Y.ZZ

(i)   (ii)

6 Check if the correct printer port is selected ["COM3" if two-wire POS interface is used at the site and "USB" if TCP/IP POS interface is used at the site].

7 Press **OK** to save changes and exit.

8 Press **CANCEL** to undo all the changes and exit.

Bundle 6X.7.21

To configure bundle 6X.7.21, proceed as follows:

To enable the Contact Card Reader, press **1** to:
- set "HCR2", for Sankyo card reader.
  If "PANASONIC" is selected, then change the option to HCR2. Otherwise the card reader will fail showing a red-X card reader error.
- set "Omron" (not used in North America).
- set "None" (if no card reader).

To enable the Printer Port, press **2** to:
- set "USB", for using Ethernet between the POS and dispenser for communication.
- set "COM3", for using two-wire between the POS and dispenser for communication.

To enable the Contactless Card Reader, press **3** to:
- set "OTI", for using GCM for Contactless.
- set "None", if no GCM is installed.

To select the Mode, press **4** to:
- set "SPOT", for using Ethernet between the POS and dispenser for communication.
- set "Diagnostics", the SPOT Check or SPOT Dash Tool.
- set "CRIND BIOS", for using two-wire between the POS and dispenser for communication if you want to use the CRIND diagnostic card.

Figure 3-13: System Config Menu for Bundle 6X.7.21

9   Press **OK** to save changes and exit.

10 Press **CANCEL** to undo all the changes and exit.

Configuring FlexPay EMV CRIND to Support Esso™ Speedpass™ Tags (Gilbarco TRIND Option)

TRIND/Speedpass Installation Requirements

FlexPay EMV CRIND Basic Input/Output System (BIOS) V20.0.30 or higher and G-SITE® V59.0.34 are required for operation in the Esso Speedpass environment.

The FlexPay EMV CRIND BIOS installed on either side must be V20.0.30 or higher. The FlexPay EMV CRIND on each side must be connected and configured independently.

Ensure that the unit has TRIND hardware and readers installed as shown in Figure 3-14.

Figure 3-14: TRIND Setup
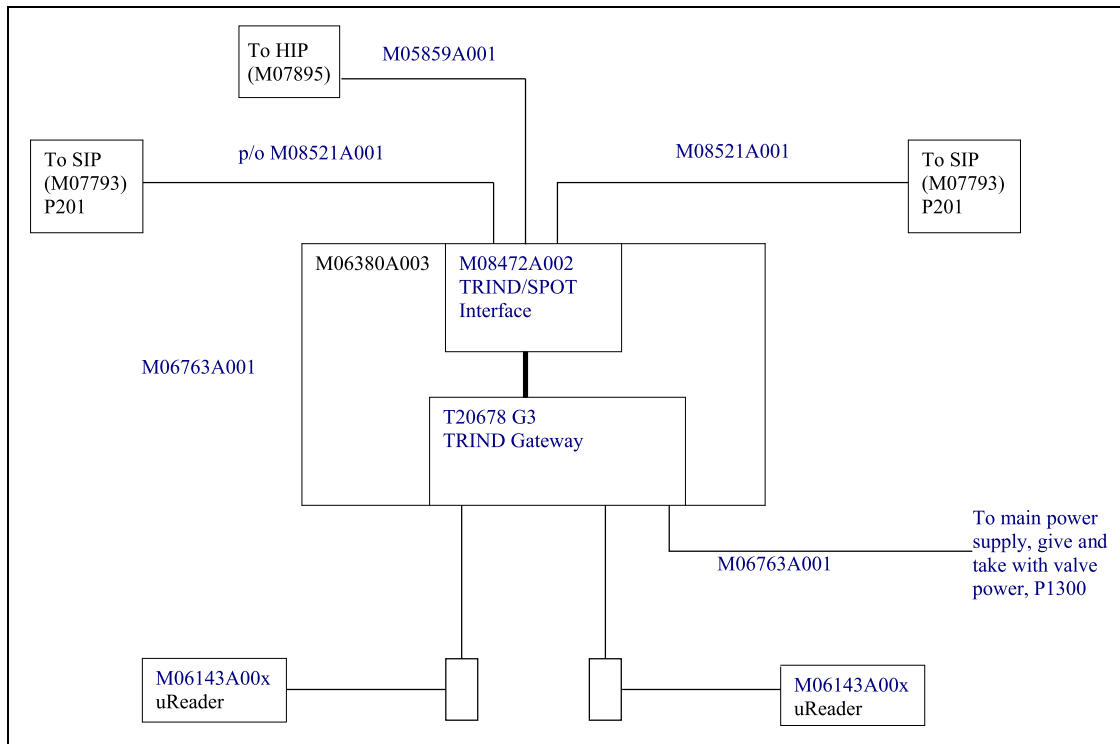
Configuring FlexPay EMV CRIND BIOS to Enable TRIND

To configure the FlexPay EMV CRIND BIOS to enable TRIND, proceed as follows:
Note: The FlexPay EMV CRIND BIOS on each side must be configured independently.

1   Ensure that the CRIND BIOS is configured for Major Oil Companies (MOC) CRIND operation. Also, ensure that the correct CRIND address has been programmed. For details, refer to "Configuring CRIND IDs and CRIND Mode (CRIND Diagnostic Mode)" on page 3-1 and "Configuring Setup Menu and System Configuration Menu Parameters" on page 3-4.
Note: When the CRIND BIOS is configured for MOC CRIND operation, the CRIND BIOS will not start the application until the BIOS can poll the dispenser. If the unit is hung while starting the application, ensure that the cable between the dispenser and FlexPay EMV CRIND Hub Printed Circuit Board Assembly [PCBA (M07895)] is connected and the Light Emitting Diodes (LEDs) are flashing to indicate that the pump is being polled. Refer to "MOC CRIND Mode" on page 4-21.

2   After pump polling is established and the dispenser displays the next screen after "Starting Application", swipe the CRIND diagnostic card. The Diagnostic Startup Menu opens.

3   Press **1** > **Enter**. The Main Menu opens.

4   Press **2** > **Enter**. The Device Config menu opens.

5   Press **4** > **Enter**. The TRIND Menu opens.

6   The option "1. Enable TRIND" is displayed on the screen if the TRIND is not presently enabled or "1. Disable TRIND" is displayed if the TRIND is presently enabled. If "1. Enable TRIND" is displayed on the screen, press **1** > **Enter** to enable TRIND/Speedpass functionality.

7   Press **Cancel** until the Diagnostic Startup Menu opens. Press **2** > **Enter** to exit the CRIND diagnostics.

8   Perform steps 1 to 7 to program the other side of the dispenser.

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4 – Service

Replacing and Activating FlexPay EMV CRIND

Overview

FlexPay EMV CRIND display and FlexPay EMV CRIND keypad units, which are supplied from the factory and are already mounted into the FlexPay dispenser, are already activated. Thus, the activation process is not required.

Spare parts replacements for secure components (keypad, card reader, or display) requires the FleyPay EMV CRIND to be activated before it can be placed into operation.

FlexPay units that are activated will power up with a BLUE screen before connecting to the system controller. Units that are not activated will automatically power up with a GREEN screen.

A menu option is also available briefly at power up, which allows the system to be "Activated".

The activation function is protected by a factory-calculated password that is different for each FlexPay EMV CRIND, as well as for each time the function is accessed on each FlexPay EMV CRIND.

The equipment that calculates the password is kept in a secure environment in a Gilbarco maintenance facility. The process to generate a password is accessible to authorized maintenance technicians only.

The FlexPay EMV CRIND display/FlexPay EMV CRIND keypad and card reader must be securely mounted before commencing the process.

Unbolting a FlexPay EMV CRIND keypad/FlexPay card reader or keypad from a system that has been activated will automatically deactivate the system.

Configuring/Activating FlexPay EMV CRIND

To activate the FlexPay EMV CRIND, 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 PPN is displayed on the screen. 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" normally is displayed when the unit first powers up.

Figure 4-1: Powering up FlexPay EMV CRIND

The PPN is also printed on the rear of the unit.

Figure 4-2: PPN on Rear of FlexPay EMV CRIND Unit
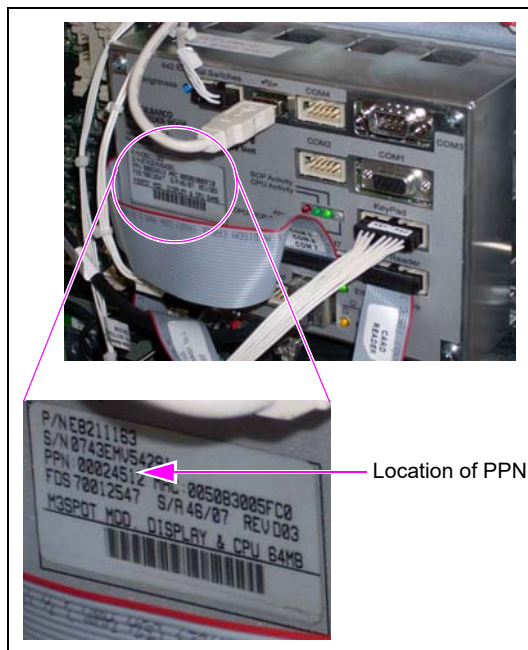
2 The Service Menu opens when the FlexPay EMV CRIND requires activation (see Figure 4-4). Otherwise, a white screen with the Gilbarco logo and software package versions is displayed momentarily.

Figure 4-3: Software Packages Screen

OS ver. 01.03
PINPAD ver. 01.03
EMV ver. 01.04
OPT ver. 01.03
SETUP ver. 01.04
GVROPTEMV ver. 01.04
GVRRETCRD ver. 01.01
CRINDBIOS ver. 01.00

<1> enter setup

<1> enter setup appears at start-up and also when the FlexPay EMV CRIND requires activation.
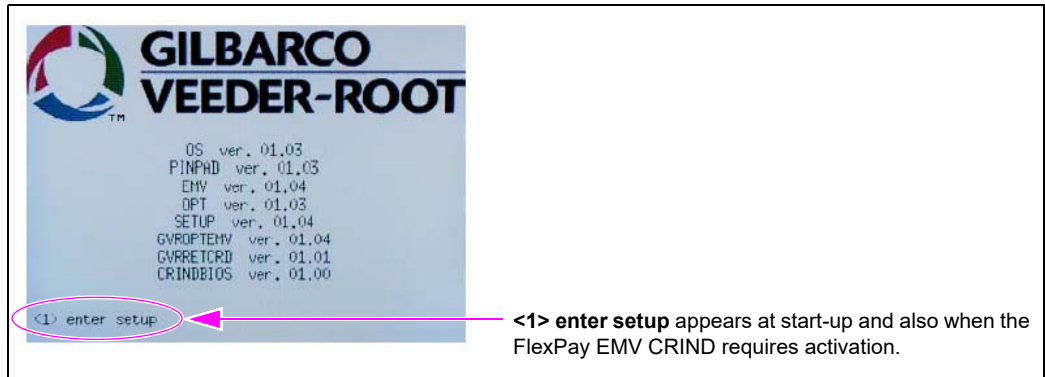
3 Press **1**. The Service Menu opens.

Figure 4-4: Service Menu - Screen 1

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

Figure 4-5: Service Menu - Main Menu

Figure 4-6 shows the options in the Service Menu.

Figure 4-6: Service Menu Options Tree

Mode Select is available on Bundle 6X.7.21 only.
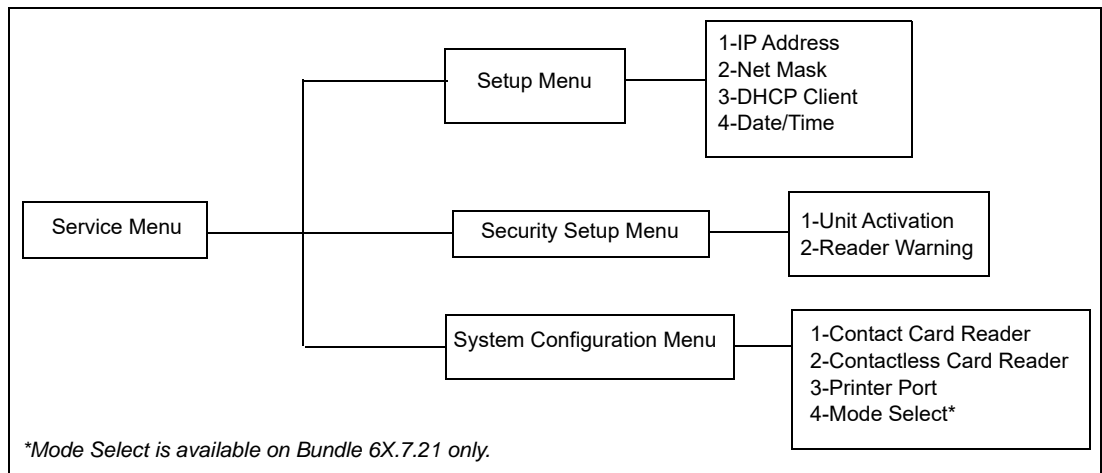
Note: For configuring options in the Setup Menu and System Configuration Menu, see Figure 3-11 on page 3-5 and Figure 3-12 on page 3-6.

5 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's 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 (one minute) of the challenge number being displayed. Otherwise, the screen times out and reverts to the main Service Menu.

Figure 4-7: Security Setup Menu - Screen 1
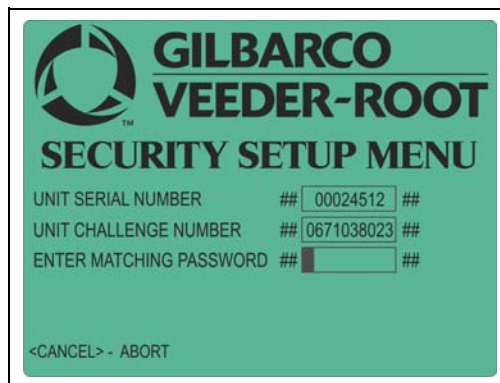
6 Provide the unit serial number and challenge number to receive a matching password.
   Note: To obtain a password, call the Gilbarco Call Center at 1-800-800-7498, and state that you have a FlexPay EMV CRIND that requires activation.

7 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 three options.

Option	Description
1	UNIT ACTIVATION (to activate the unit)
OK	SAVE CHANGES AND EXIT
CANCEL	UNDO ALL CHANGES AND EXIT

Figure 4-8: Security Setup Menu - Options Screen
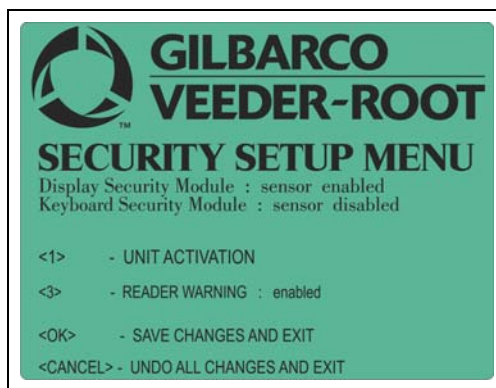
8 Press **1** to activate the unit. The message, "ALL DISMOUNTING SENSORS ENABLED UNIT ACTIVATED" is displayed. Press **OK** to exit the menu and press **CANCEL** to restart the FlexPay EMV CRIND.

Figure 4-9: Activation Screen
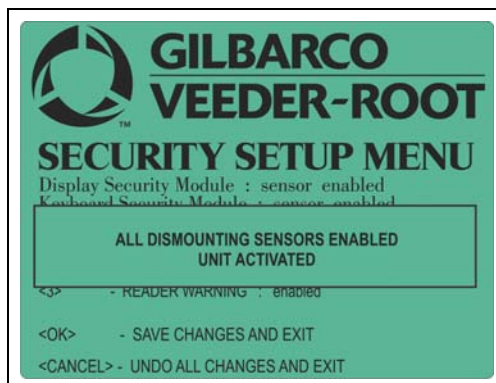
Activation will enable all the connected secure modules.

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 FlexPay EMV CRIND. The activation procedure must be repeated.

At each power up, if the FlexPay EMV CRIND main processor detects a module whose sensor has disengaged, it will automatically enter the Service Menu (GREEN screen). For a description of the various diagnostics screens, refer to "Appendix A- Diagnostic Screens" on page A-1.

FlexPay Maintenance Tool Advanced Mode

Setting up Laptop

Note: Only done one time before updating all the FlexPay EMV CRIND devices.

Configure the laptop's TCP/IP address as 10.5.48.1 as the FlexPay EMV CRIND devices will be on the same subnet at 10.5.48.XX.

To set up the laptop, proceed as follows:

1   Click the **Local Area Connection** icon on your laptop. The Local Area Connection Status window opens.

Figure 4-10: Local Area Connection Status Window
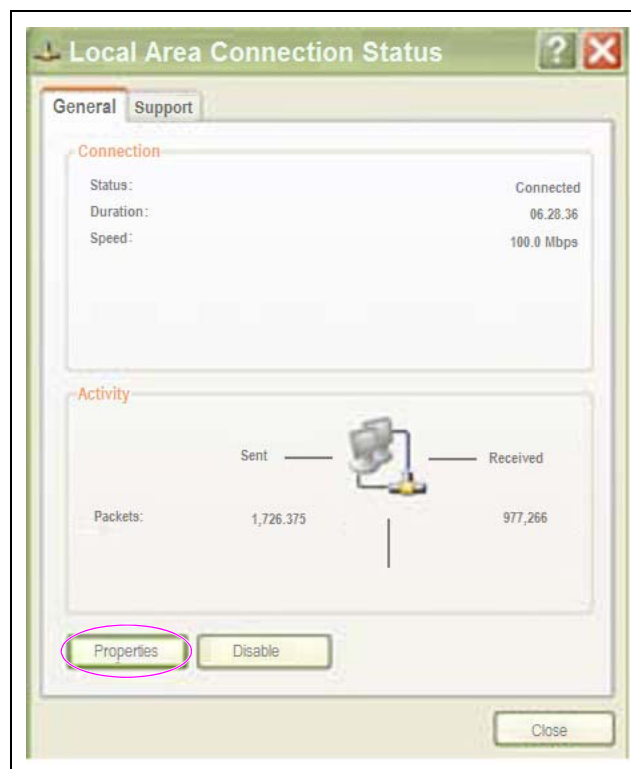
2   Click **Properties** on the General tab. The Local Area Connection Properties window opens.

Figure 4-11: Local Area Connection Properties Window

3   Select **Internet Protocol [TCP/IP]** on the General tab and click **Properties**. The Internet Protocol (TCP/IP) window opens.

Figure 4-12: Internet Protocol (TCP/IP) Window
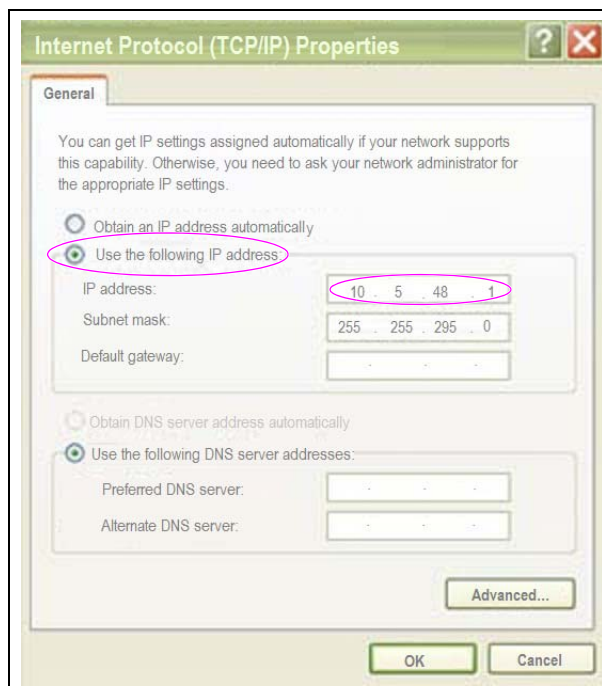
4   Select the **Use the following IP address** option. Configure the laptop's TCP/IP address as
    10.5.48.1.

5   Install the FlexPay Maintenance Tool by running FlexPayMaintenance_setup_2_X_X_X.exe
    file.
    *Note: The shortcuts created by installer has been renamed to FlexPay Maintenance Tool
    Advanced, formerly known as SPOTUpdate and FlexPay Maintenance Tool Basic
    (formerly known as OneClick).*

6   Copy the Secure PIN Pad for Outdoor Terminal (SPOT) Software to the
    C:\SPOT\Versions\V50.0.XX directory as indicated by the release notes and the SPOT
    Resource and Images file to the **C:\SPOT\ResourcesToUpload\V50.0.XX** directory.
    Note: V50.0.XX is the currently used directory. This will later change to V61.0.XX.

Loading Resources and Software into FlexPay EMV CRIND

The FlexPay Maintenance Tool - Basic will automatically handle loading software, resources,
and moving from "stored" to "current version". For more information, refer to *MDE-5062
FlexPay Maintenance Tool for FlexPay/SPOT CRIND System.*

To load resources and software into FlexPay EMV CRIND, proceed as follows:

1   Ensure that the FlexPay EMV CRIND is powered up and displays "SYSTEM OFFLINE" or a
    CRIND idle screen with a message "Please Pay Inside".

Figure 4-13: Please Pay Inside Screen
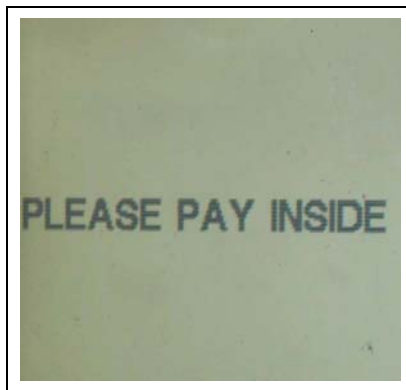
2   Ensure that the laptop is connected to the FlexPay EMV CRIND Hub PCBA (M07895) or to
    the FlexPay EMV CRIND display.
    *Note: A "crossover" Category 5 (CAT5) cable is required when connecting a laptop directly
    to the FlexPay EMV CRIND display. When connecting the laptop to the hub PCBA,
    either a crossover or regular CAT5 cable can be used. When connected to the hub
    PCBA, either the opposite side CRIND must be disconnected from the Ethernet or it
    must have a different IP address.*

3   Start up the FlexPay Maintenance Tool and click **Connect**. The current versions is displayed.
    *Note: If the laptop does not connect to the CRIND device, verify that the IP addresses are
         configured correctly and cables are connected properly.*
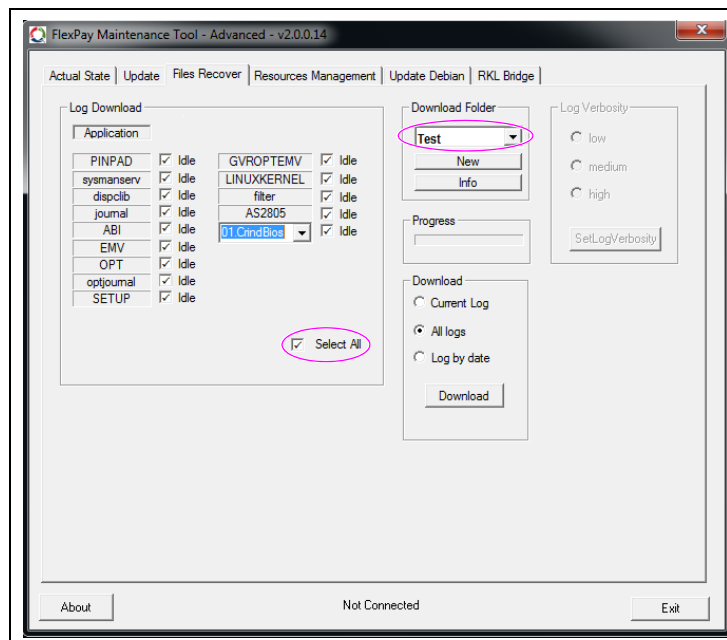
Figure 4-14: FlexPay Maintenance Tool Advanced
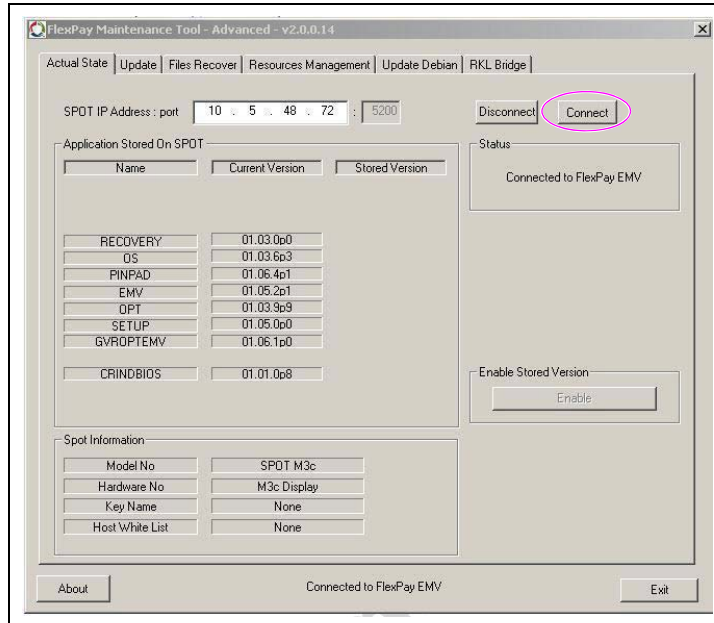
Recovering Files

To recover files using the FlexPay Maintenance Tool, proceed as follows:

Note: Recovering files refers to downloading the log files.

Figure 4-15: Recovering Files

1 In the Download Folder box, enter a name to create a folder for the log files to be written.

2 Click the **New** button.

3 In the Log Download field, select the **Select All** option.

4 Click the **Download** button to start the log file download process.

The log file will be written to the **SPOT\Logs**folder name used in step 1.

*Note: If step 1 is not completed, the **Download** button will remain grayed out and inactive (see Figure 4-15 on page 4-9).*

The following table lists the options to download the logs:

Download Option	Description
Current Log	Retrieves the current day's logs.
All Logs	Retrieves current day and history logs.
Log by Date	Asks to provide a period of time to retrieve the history with those dates.

Select the **Select All** check-box as default to select all the logs. The complete list of logs will be retrieved for current day and history.

Managing Resources

Note: The FlexPay Maintenance Tool - Basic will automatically load resources at the same time when the software is loaded.

To manage resources, proceed as follows:

1 Select the **Resources Management** tab. Select the required **Resource Update** drop-down list option based on the PPN of the FlexPay EMV CRIND and then:
    a Select **V50.0.xxP-00** from the list of options.
    b Select **V50.0.xxP-01** from the list of options.

Note: V50.0.XX is the currently used directory. This will later change to V61.0.XX.

Figure 4-16: Selecting Resource Update
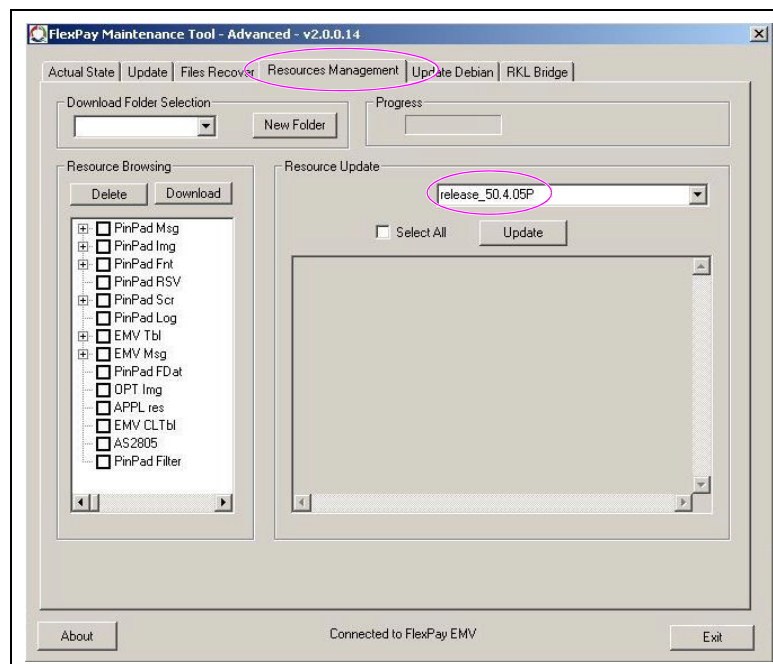
2   Select the **Select All** check box and then click **Update** to start the download.

Figure 4-17: Downloading Resources
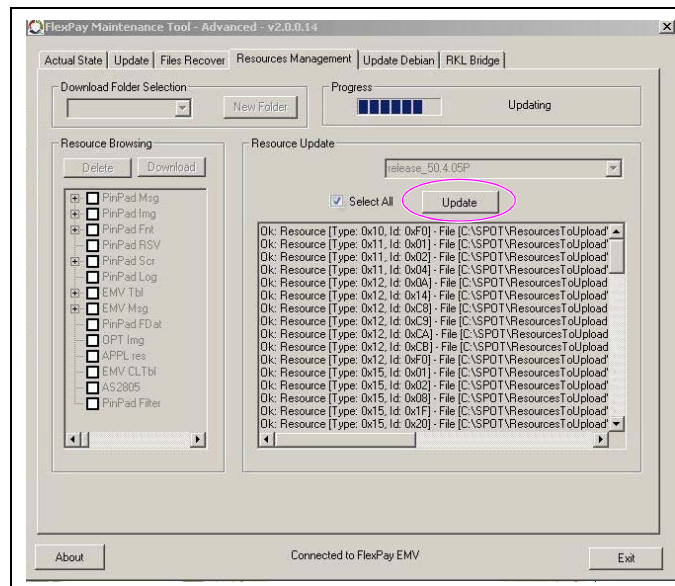
A dialog box with the message, "Upload Terminated. Status OK" is displayed.

3   To load the software, select the **Update** tab. Select the downloading version based on the FlexPay EMV CRIND PPN and then:
    a Select **V50.0.xxP-00** from the list of options.
    b Select **V50.0.xxP-01** from the list of options.
    c Click **Send** to send the software to the FlexPay EMV CRIND.

Note: V50.0.XX is the currently used directory. This will later change to V61.0.XX.

Figure 4-18: Loading and Sending Software to FlexPay EMV CRIND
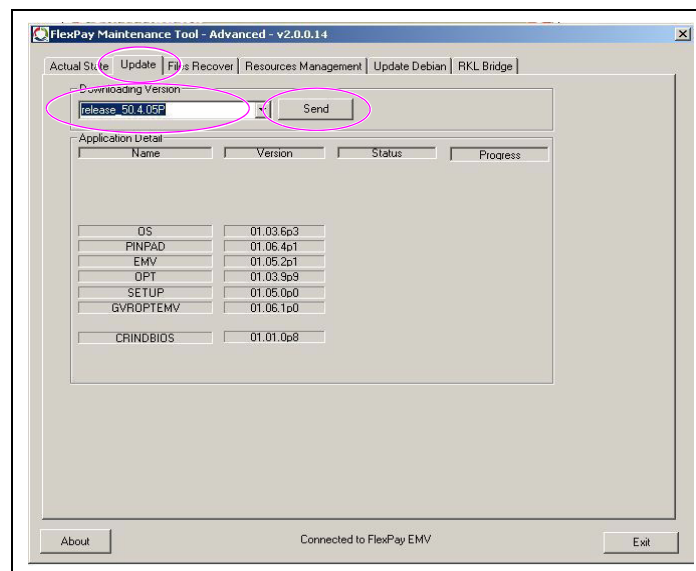
When complete, all status boxes must show "OK".

4 To activate the software and resources, select the **Actual State** tab and click **Enable**.

Figure 4-19: Activating Software and Resources
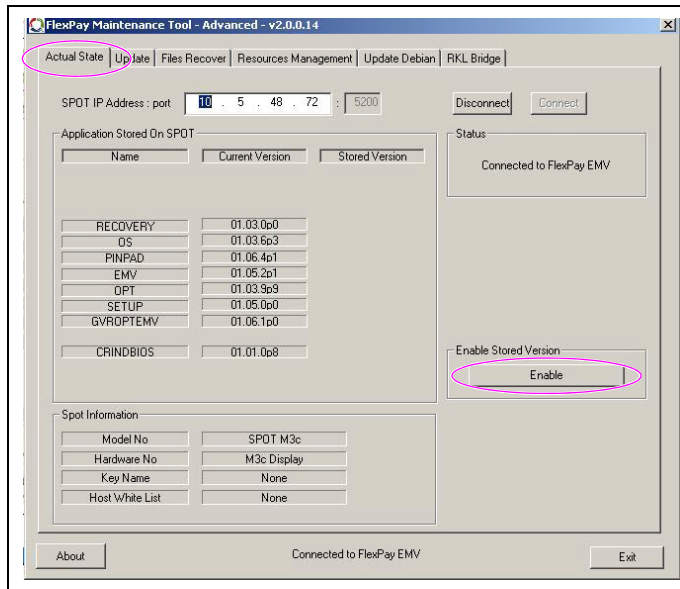
A yellow Software Update screen opens on the FlexPay EMV CRIND display momentarily and the unit reboots automatically.

Figure 4-20: Software Update Screen Progress
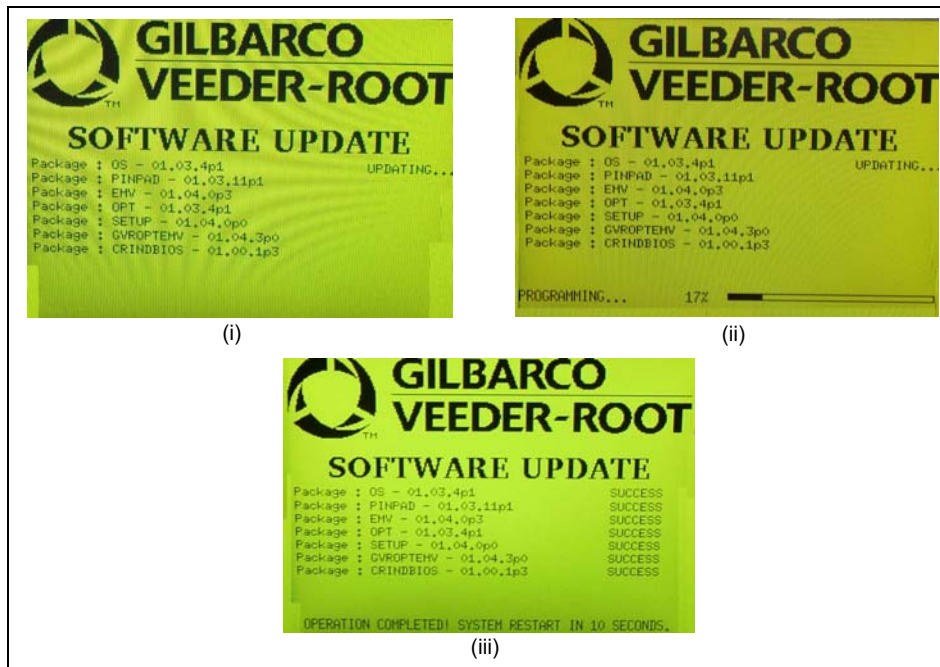
Troubleshooting Tamper Error

When starting up a FlexPay EMV CRIND unit and a screen shown in Figure 4-21 opens, the software did not pass the internal check and must be replaced. This problem is commonly seen if the FlexPay EMV CRIND is powered off in the middle of the yellow Software Update screen (see Figure 4-20 on page 4-12).

Figure 4-21: Tamper Screen

If the screen shown in Figure 4-21 opens, contact Gilbarco Technical Support at 1-800-743-7501 for further directions.

FlexPay EMV CRIND Display

To troubleshoot FlexPay EMV CRIND display related problems, proceed as follows:

1 Check the status LEDs at the rear of the CRIND unit and determine if the unit is receiving power. Solid/flashing green and yellow LEDs indicate that the CRIND unit is communicating with the Serial Interface PCB (SIP) Board (M07793A001) and other components. When the red alarm LED is active, the FlexPay EMV CRIND display must be replaced. However, if the red alarm LED is not active, it is possible that a red start-up screen on the display can be recovered with just a power fail, as a temporary error condition was detected on start-up.

If the module is defective or is in alarm status, a red screen opens on the display (refer to "Red Screen" on page A-1).

Figure 4-22: Status LEDs
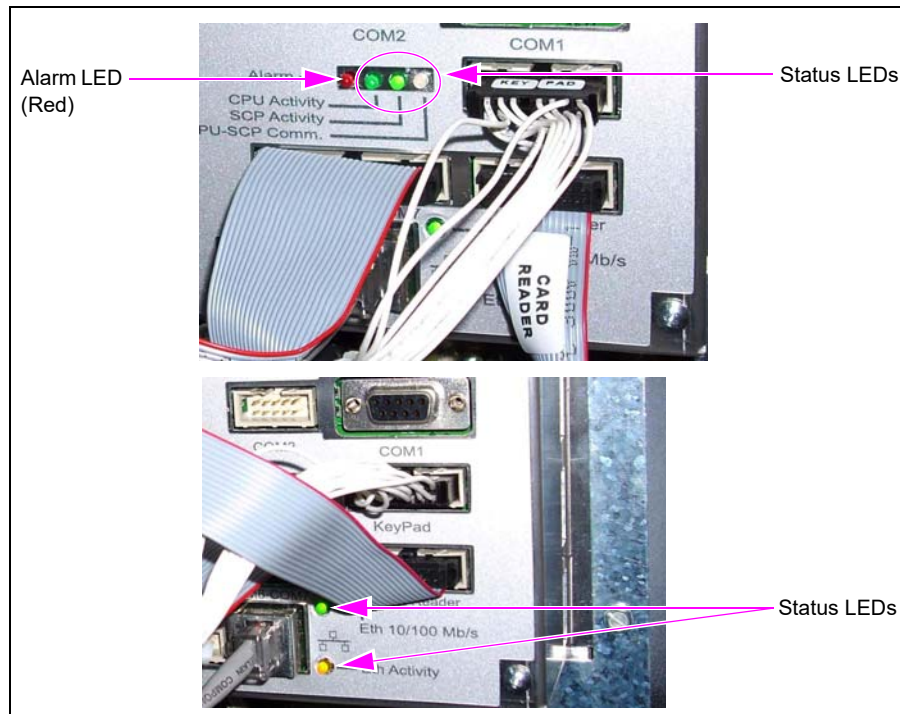
2 Verify if the SIP board is powered up (use a multimeter to check voltage levels at the test points on the PCB).

3 Verify if the fuse on the SIP board is intact. The fuse is located on the rear portion of the PCB. If the fuse is damaged, a new SIP board must be used; the fuse cannot be replaced.

Figure 4-23: SIP Board

Fuse located at the rear of the SIP Board (M07793A001)

These LEDs indicate communication status between the SIP and the following components:
- Card Reader (TXECR and RXECR)
- POS (TXPOS and RXPOS)
- Pump (TXPM and RXPM)

Flashing LEDs indicate that communication is active.
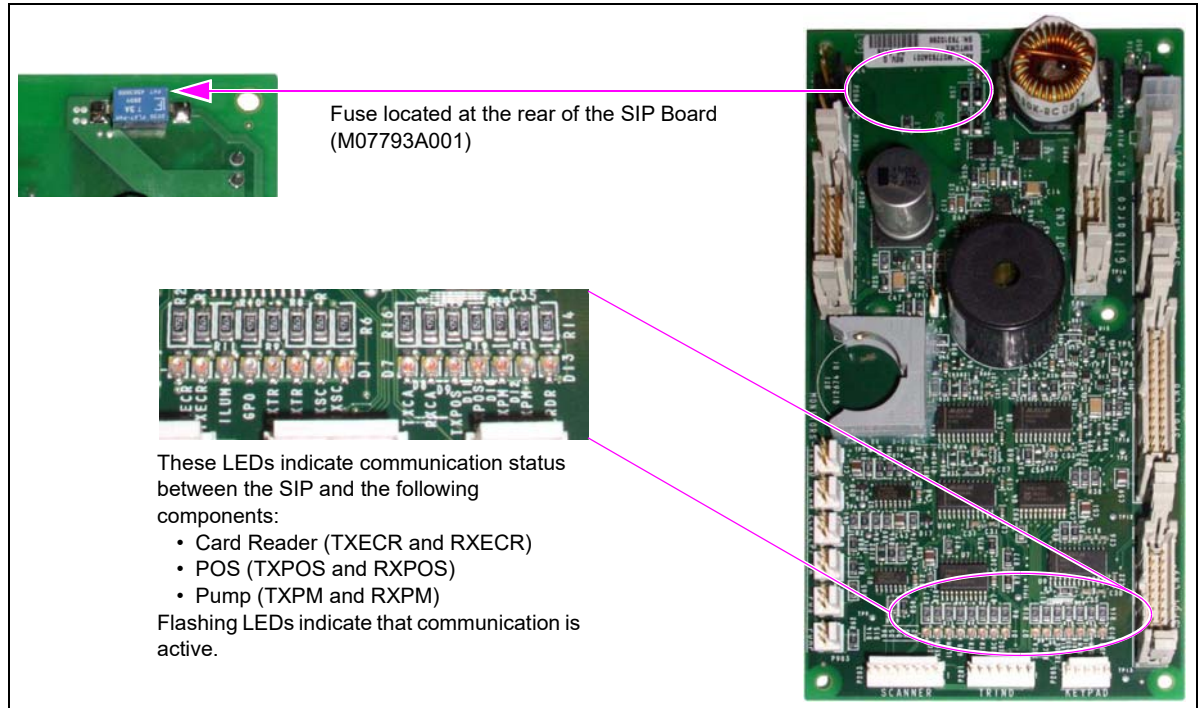
Note: Card reader (TXECR and RXECR) only applies for a TCR card reader. These LEDs are inactive for an HCR 2 card reader.

FlexPay EMV CRIND Keypad

If the FlexPay EMV CRIND keypad is not communicating with the FlexPay EMV CRIND unit or is defective, the following error messages is displayed.

Figure 4-24: FlexPay EMV CRIND Keypad Error Screens
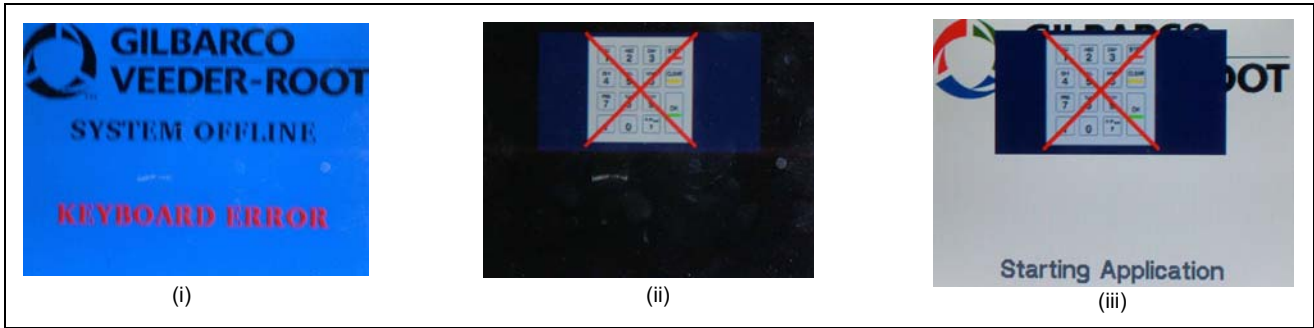
To troubleshoot this problem, check the status LEDs at the rear of the FlexPay EMV CRIND keypad and determine if the unit is receiving power. Solid/flashing green LEDs indicate that the keypad is communicating with the FlexPay EMV CRIND unit and other components. If the red alarm LED is active (solid), it indicates that the unit is defective and must be replaced.

Note: The message, "KEYBOARD ERROR" or graphic may be displayed if the keymount dismount switch is active. Check mounting/microswitch activation of the keypad if the status LEDs appear to be normal (red alarm LED is not active and communication is active). The microswitch is located to the right of the keypad and is under the gasket.

Figure 4-25: Status LEDs at Rear of FlexPay EMV CRIND Keypad
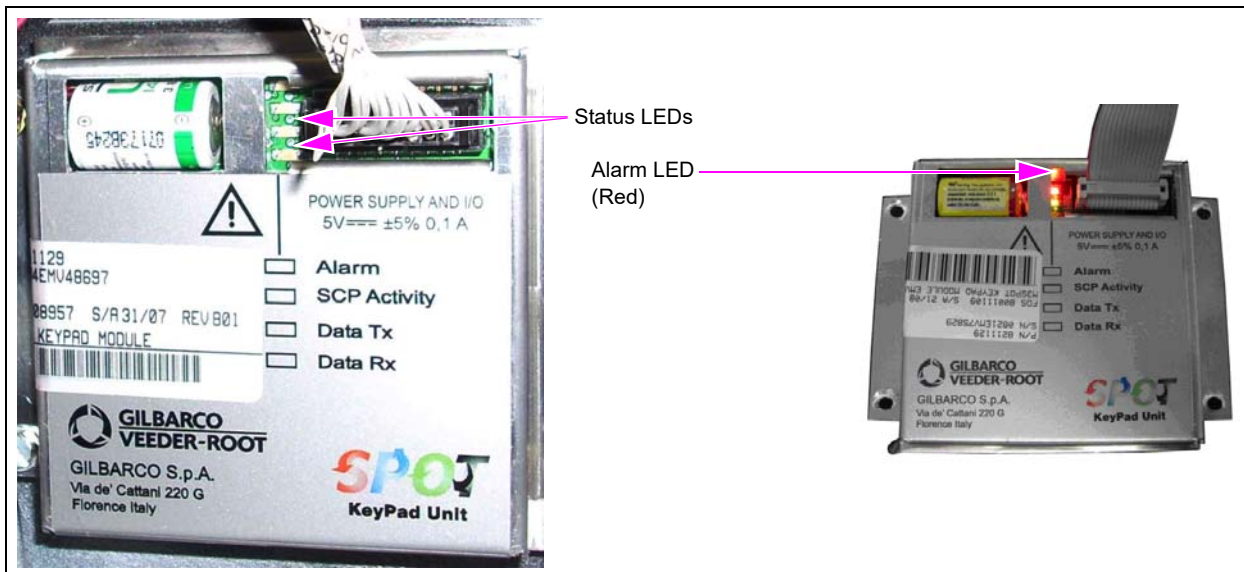
IMPORTANT INFORMATION

As an additional security measure, the FlexPay EMV CRIND keypad requires that the **Enter** key be pressed after any number entry (in diagnostic mode only).

FlexPay Card Reader

If the FlexPay card reader is defective or is not communicating properly, the following error messages is displayed.

Figure 4-26: FlexPay Card Reader Error Screens

(i)   (ii)

To troubleshoot this problem, verify that:

1 The FlexPay card reader is properly mounted (if recently dismounted or replaced).

2 The FlexPay card reader cable is connected to the CRIND unit.

3 The correct card reader type is selected in the System Config Menu.

Figure 4-27: System Config Menu

4 Replace the FlexPay card reader, if required.

IMPORTANT INFORMATION

After replacing any of the secure components you must activate/configure the FlexPay EMV CRIND. For detailed instructions, refer to "Replacing and Activating FlexPay EMV CRIND" on page 4-1.

Printer

To troubleshoot printer-related problems, proceed as follows:

1 Verify if the printer USB cable is connected to the rear of the FlexPay EMV CRIND unit.

Figure 4-28: Printer USB Cable Connection
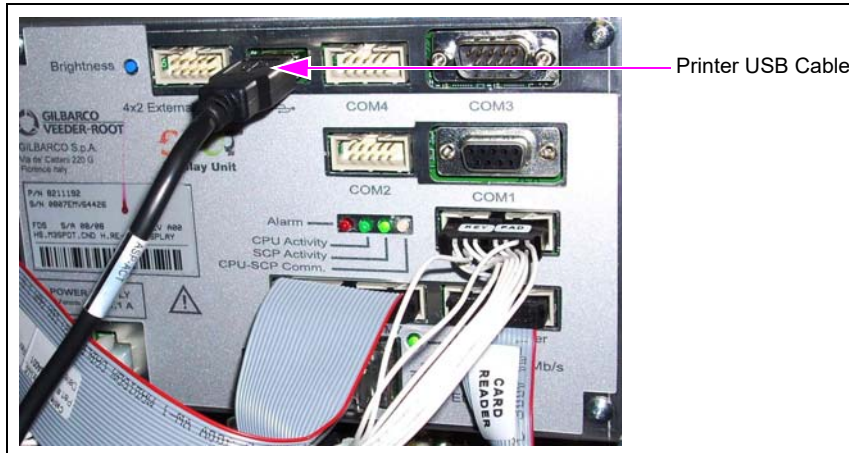
2 Verify if the correct printer port is selected in the System Config Menu ("COM3" if two-wire POS interface is used at the site and "USB" if TCP/IP POS interface is used at the site).

Figure 4-29: System Config Menu

POS Communication

If you experience problems with POS communication, verify if the POS two-wire port on the HIP Board (M07895A001) is connected to the POS two-wire.

Figure 4-30: POS Two-wire Port on HIP Board

POS Two-wire Port on HIP Board

This LED (D6) will be lit if the two-wire to the POS is reversed.
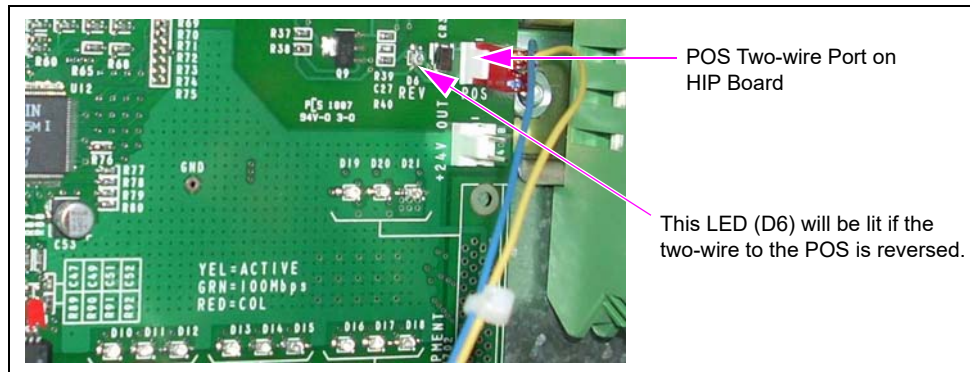
When installing the FlexPay EMV CRIND in an existing site equipped with Bulloch POS, the POS must be reprogrammed to identify both side 1 and side 2, as side 1. If this change is not made, the POS will not download screen definitions and graphics properly to the FlexPay EMV CRIND.

Pump Communication

If you experience problems with pump communication, verify if the pump two-wire port on the HIP board is connected to the pump two-wire port on the Pump Control Node (PCN) board.

Figure 4-31: Pump Two-wire Port on HIP Board and PCN Board

Pump Two-wire Port on HIP Board

Pump Two-wire Port on PCN

(i)   (ii)
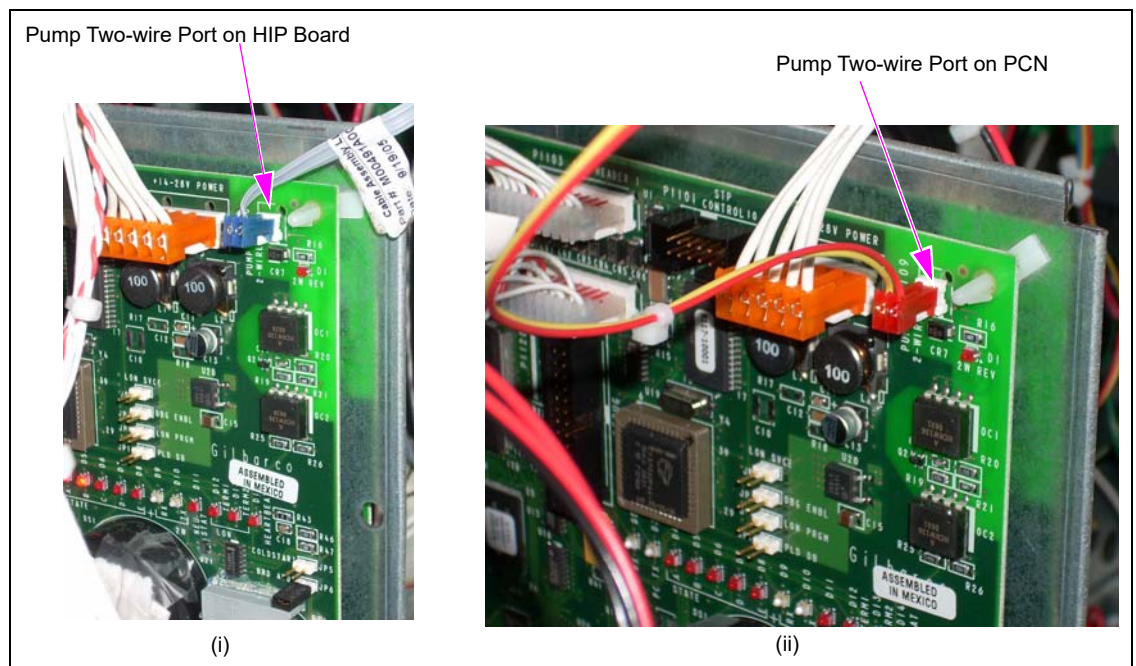
FlexPay TRIND

If there are any errors when setting up the FlexPay TRIND, proceed as follows:

1   Ensure that the TRIND reader LEDs on the Light and Indicator Assembly (M06143) are flashing, to indicate that the TRIND Gateway Board (T20678) is polling the readers. If they are not flashing, then proceed as follows:

    a   Verify if all cables are connected properly as shown in Figure 3-14 on page 3-8.

    b   Check the TRIND gateway to ensure that the address jumpers for side 1 and side 2 match the CRIND IDs programmed in CRIND diagnostics.

2   Check the status of the TRIND LEDs on the SIP Board [M07793 (see Figure 4-32)]. The RXTR and TXTR LEDs must flash, if the CRIND BIOS is polling the gateway board properly. If both LEDs are not flashing, then proceed as follows:

    a   Verify if all cables are connected properly as shown in Figure 3-14 on page 3-8.

    b   Verify if TRIND is enabled in the CRIND Diagnostic menu. To enable TRIND, refer to "Configuring FlexPay EMV CRIND BIOS to Enable TRIND" on page 3-9.

Figure 4-32: SIP Board (M07793)

TRIND LEDs
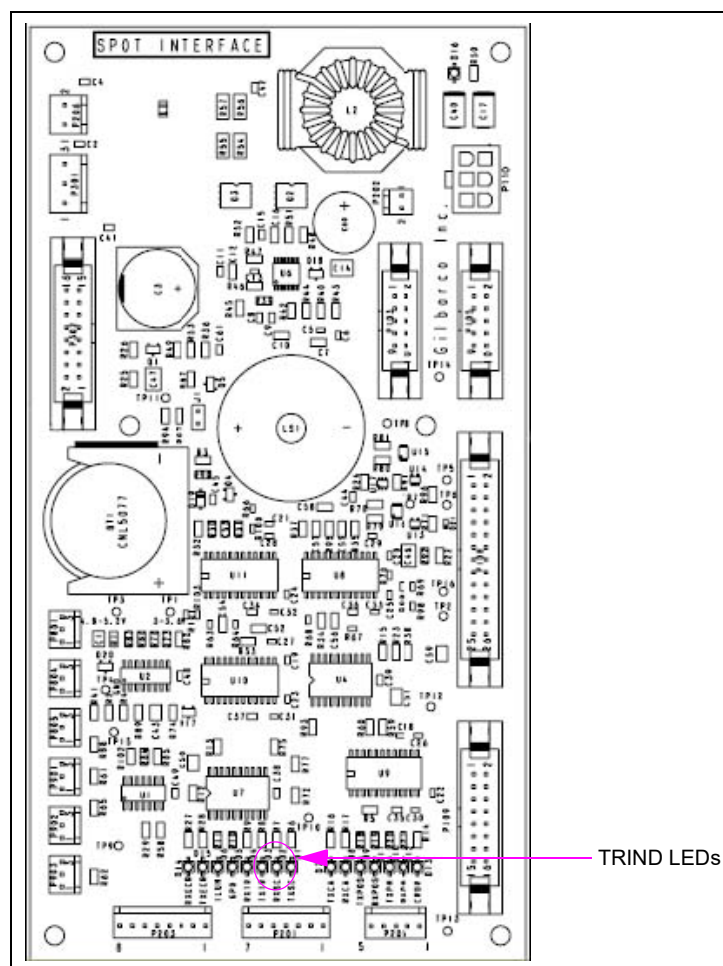
MOC CRIND Mode

When running the application in the MOC CRIND Mode, if the CRIND device hangs in the "Starting Application" screen, proceed as follows:

1   Ensure that the CRIND hub is connected properly to the PCN board. Verify the cable connection between the FlexPay EMV CRIND HIP Assembly (M07895) and PCN, the two-wire cable must be connected to P403 on the M07895 and the pump two-wire port P1109 on the Sandpiper™ PCN board.

    When connected and addressed properly, the 2W Rev RED LED on the PCN board must not be solid and the Tx and Rx LEDs must be flashing.

2   Ensure that the PCN board is set up with the two-wire address 7 and 11, and is configured for normal "console" operation.

3   Ensure that CRIND V20.0.30 or higher is installed so that the PCN gets polled properly.

    The following packages (or higher versions) must be installed:

Name	Version
OS	01.03.5p3
PINPAD	01.05.0p2
EMV	01.04.0p3
OPT	01.03.7p3
SETUP	01.04.0p1
GVROPTEMV	01.06.0p3
CRINDBIOS	01.00.2p6

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Appendix A – Diagnostic Screens

At power up, if the Service Menu cannot be entered, one of the following diagnostic screens opens on the FlexPay EMV CRIND display.

Yellow Screen

This indicates that the system has found an active package in its memory and has started to install it. A progress % bar opens on the screen.

Figure A-1: Yellow Screen

Red Screen

This indicates that alarm(s) is/are running in the module(s). The module that has been damaged (or is in alarm status) is not indicated.

Figure A-2: Red Screen
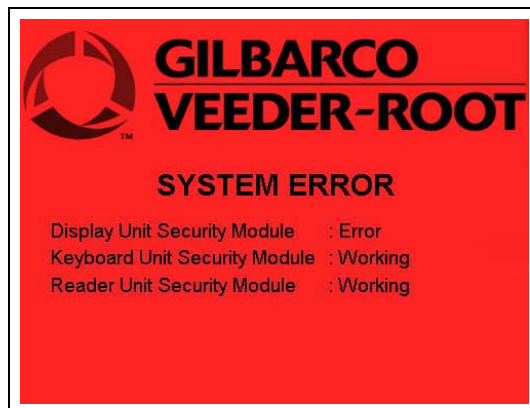
Blue Screen

This indicates that the system has been activated, is running correctly, and is waiting for a master device connection.

Figure A-3: Blue Screen

Green Screen

This indicates that the system is running but has not been activated through the commissioning process. In this situation, the FlexPay EMV CRIND will automatically enter the Service Menu.

Figure A-4: Green Screen
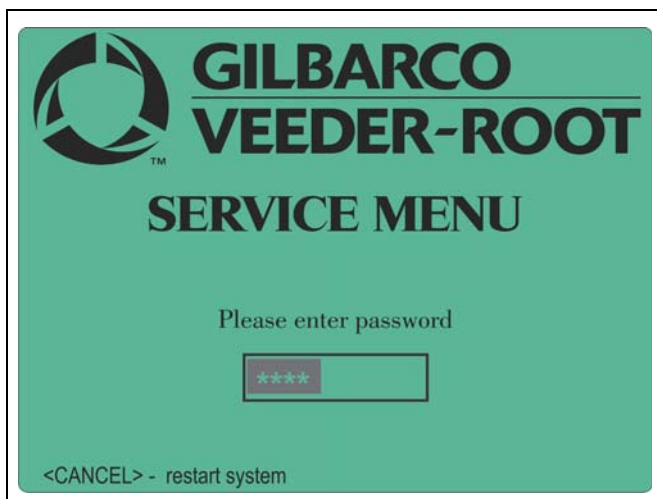
Appendix B – Troubleshooting EMV Card Reader

EMV Card Reader Messages

When the card reader is operating properly, the start-up screen on the EMV card reader opens as shown in Figure B-1.

Figure B-1: Start-up Screen

Verify if the cables are connected correctly and LEDs on the SIP board are glowing. If the Reader Offline screen is displayed, replace the card reader (see Figure B-3 on page B-2).

Figure B-2: Reader Offline Screen

Figure B-3: Troubleshooting Flowchart for Card Reader Offline

Note: For more information, refer to MDE-5118 EMV Troubleshooting Guide for Canada.
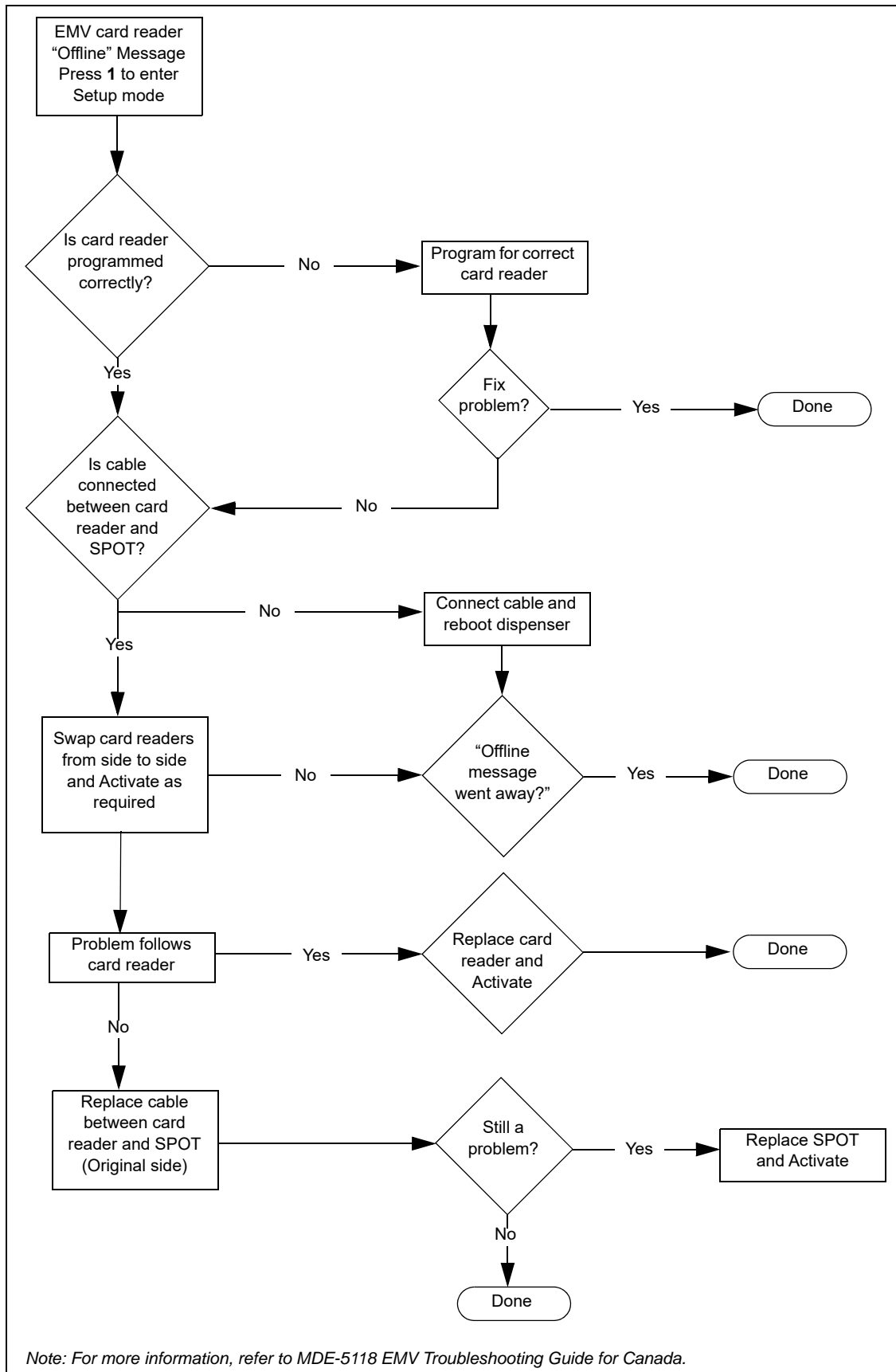
Reseat the dismounted sensor (see Figure B-5 on page B-4), if the Reader Dismounted screen opens.

Note: Ensure that the sensor is very tight and seated flat before rebooting the dispenser.

Figure B-4: Reader Dismounted Screen
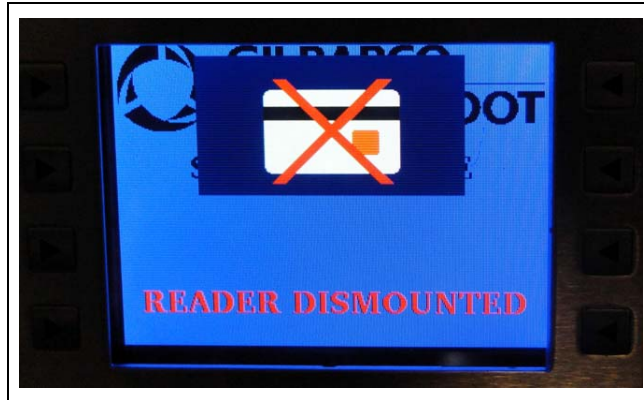
Figure B-5: Troubleshooting Flowchart for Reader Dismounted - For Panasonic® TCR
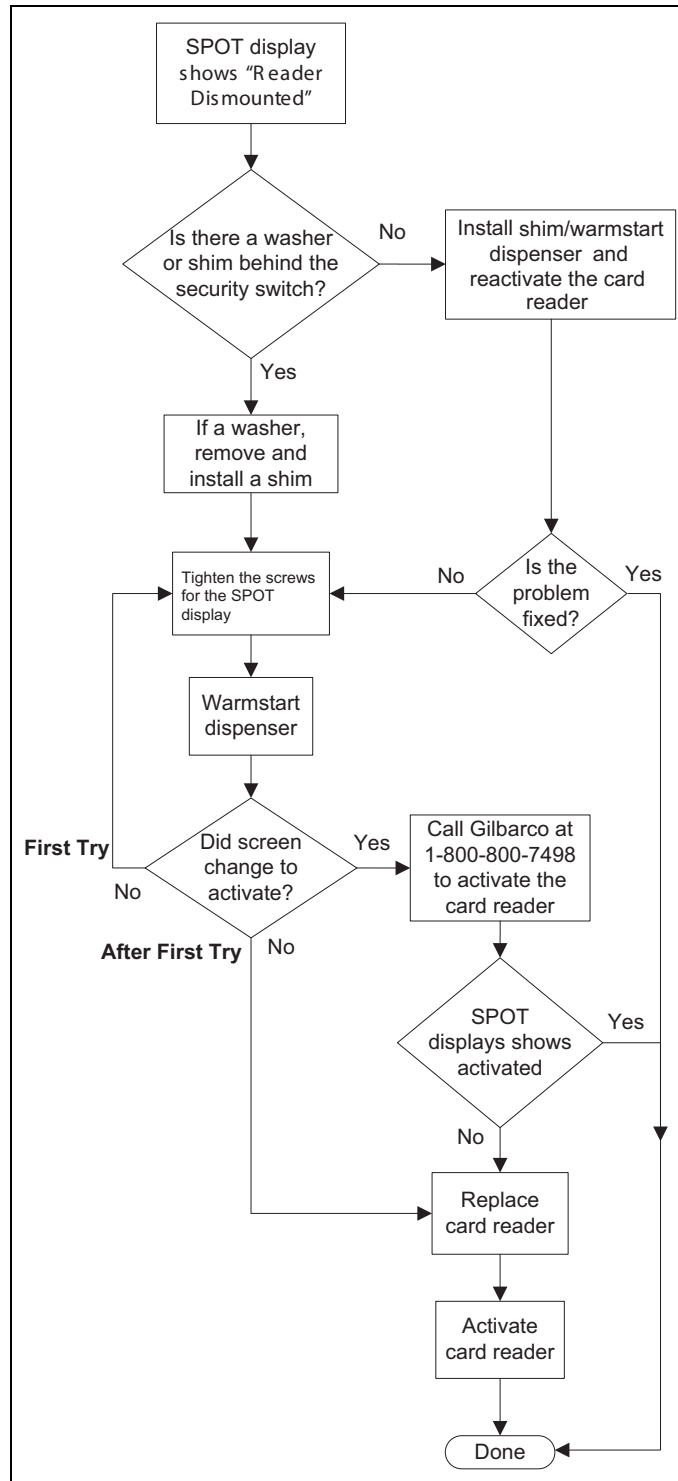
Figure B-6: Troubleshooting Flowchart for Reader Dismounted - For HCR S
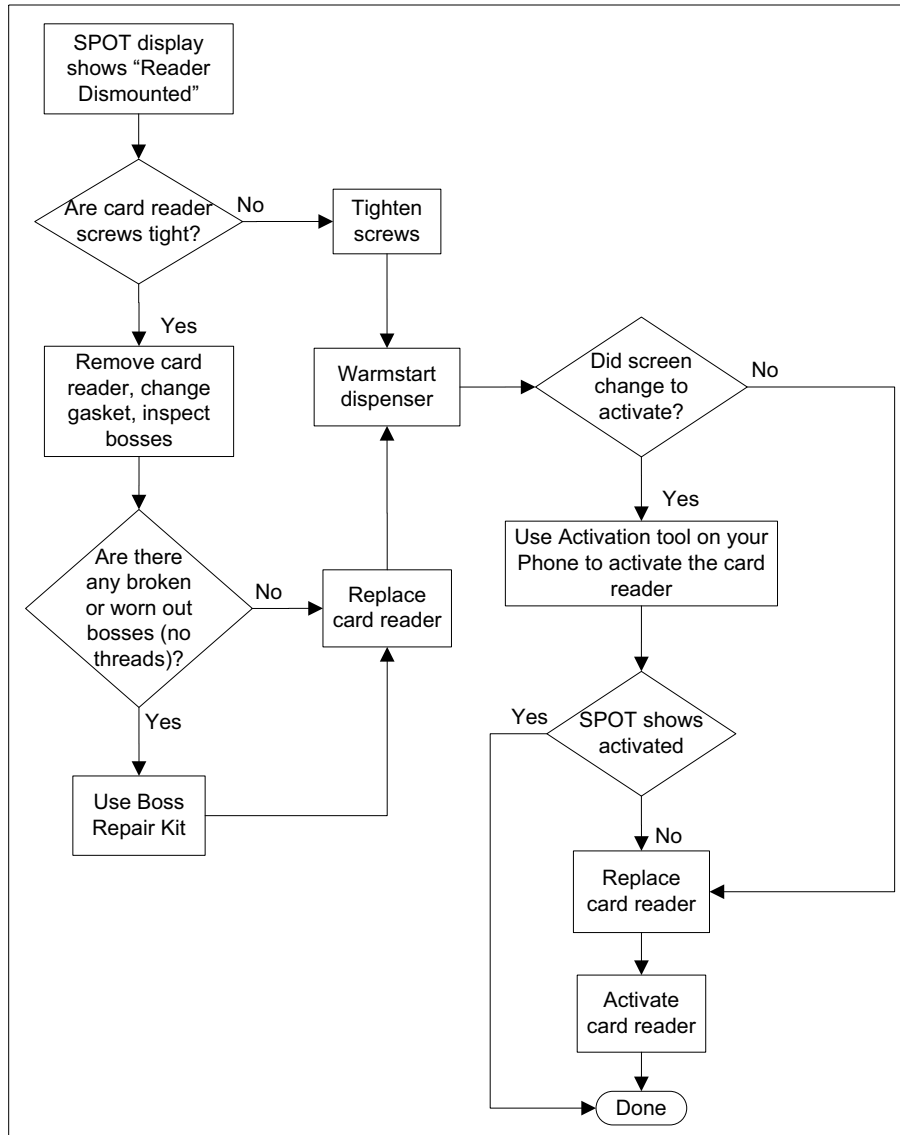
Replace the card reader (see Figure B-8) if the Reader Tampered screen opens.

Figure B-7: Reader Tampered Screen
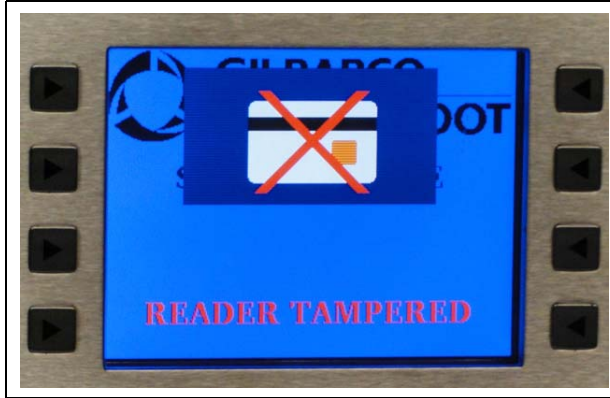
Figure B-8: Troubleshooting Flowchart for Reader Tampered
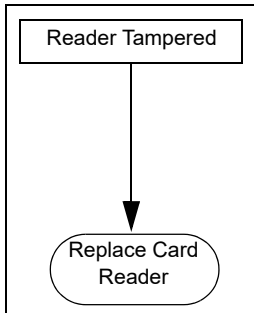
Replace the card reader (see Figure B-10) if the Bad Card Reader CERT screen opens.

Note: This screen opens when the keys in the card reader are erased or incorrect (lab unit is used for production, or vice versa).

Figure B-9: Bad Card Reader CERT Screen

Figure B-10: Troubleshooting Flowchart for Bad Card Reader CERT
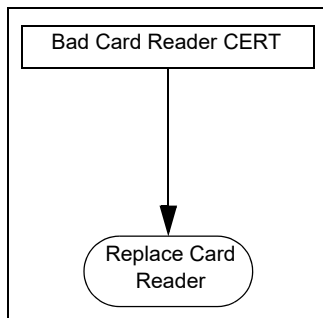
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