

Introduction

Purpose

This manual provides instructions to install the Gilbarco® SPOT M7 Retrofit Kit on Wayne® Vista Wide and Narrow dispenser models 1, 2, and 3/VXXX.

Overview

This kit is used for the installation of the SPOT M7 Retrofit Kit in Wayne Dispensers installed at sites.

Intended Audience

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

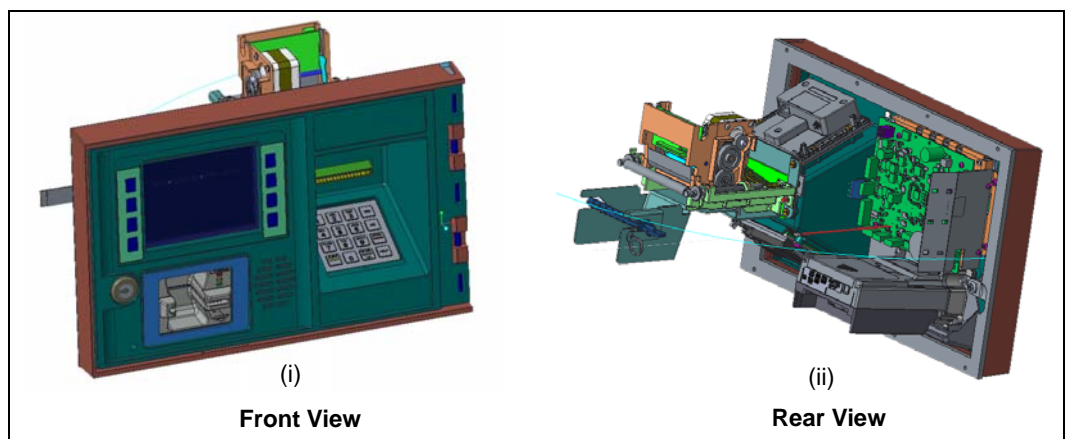
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Hardware

The SPOT M7 Retrofit kit for Wayne Vista dispensers consists of a door with frame and SPOT (Secure PIN Pad for Outdoor Terminal) M7 electronics. The components in the kit are shown in [Figure 1](#).

Figure 1: Front and Rear Views of SPOT M7 Electronics



Required Tools

The following tools are required for the installation of the SPOT M7 Retrofit Kit in Wayne dispensers:

- Pneumatic Drill
- 4-mm Drill Bit
- 1/4-inch Nut Driver (plastic thread forming screws supplied in the kit are of imperial sizes)
- M7 and M8 Screws and Nut drivers

Parts List

The following table lists the critical components included in this kit:

| PBEPK-M7-VISTA M7 Wayne Vista Retrofit | | | | |
|---|--------------------|---|--------------------|-----------------|
| Assembly | Part Number | Description | Requirement | Quantity |
| Pre-Assembled Kit | M15044AXXX | M7 Wayne Vista Vanguard Door | Required | 1 per side |
| | M13754A003 | 5.7 display and Peripheral Interface PCB (PIP)3 assembly | Required | 1 per side |
| | M14330A001 | UX300 Card Reader, Wayne Vista | Required | 1 per side |
| | M13888AXXX | Universal Payment Module (UPM) | Required | 1 per side |
| | M14331A001 | UX400 Contactless Card Reader | Option | 1 per side |
| Pre-Assembled | M16336A02X/12X | Auxiliary Feature PCB (AFP) assembly | Required | 1 per dispenser |
| | M16185A04X | Dispenser Communication Module (DCM)2.2 Assembly M7 Vista | | |
| Assembled at Site | M13827B001 | Gasket, Frame Wayne Retrofit Kit | Required | 1 per side |
| | M13672A001 | Assy, Mounting Wayne Electronics | Required | 1 per dispenser |
| | M16206A001 | Shield Vista | Required | 1 per side |
| | M16207B001 | | | |
| | M16203A001 | | | |
| | Q11677-28 | Screw Sel Tp Hex Hd 6-20X 62 | Required | As required |
| | M12258B001 | Template, Bezel | Required | 1 per side |

Abbreviations and Acronyms

| Term | Description |
|-------------|---|
| AFP | Auxiliary Feature PCB |
| ASC | Authorized Service Contractor |
| CAT5 | Category 5 |
| DCM | Dispenser Communication Module |
| EMV® | Europay®, MasterCard®, and Visa® |
| ESD | Electrostatic Discharge |
| OSHA | Occupational Safety and Health Administration |
| PIP | Peripheral Interface PCB |
| SEA | South-East Asia |
| SPOT | Secure PIN Pad for Outdoor Terminal |
| UPM | Universal Payment Module |

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 Support for your location. 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.

Important Safety Information

No Open Fire



Open flames from matches, lighters, welding torches, or other sources can ignite fuels and their vapors.

No Sparks - No Smoking



Sparks from starting vehicles, starting, or using power tools, burning cigarettes, cigars, or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

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

Hazardous Materials

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

WARNING

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

WARNING

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



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

In an Emergency

Inform Emergency Personnel

Compile the following information and inform emergency personnel:

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

WARNING



Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open. Oxygen may be needed at scene. Seek medical advice immediately.

WARNING

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

WARNING



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

WARNING



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

WARNING



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

WARNING

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

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

Lockout/Tagout

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

Before You Begin

Before you begin, read and understand all safety information.

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.

- 1 Inform the manager.
- 2 Barricade the unit to be worked on.
- 3 Remove power to the unit at the breaker panel. Follow OSHA lockout/tagout procedures.



WARNING

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

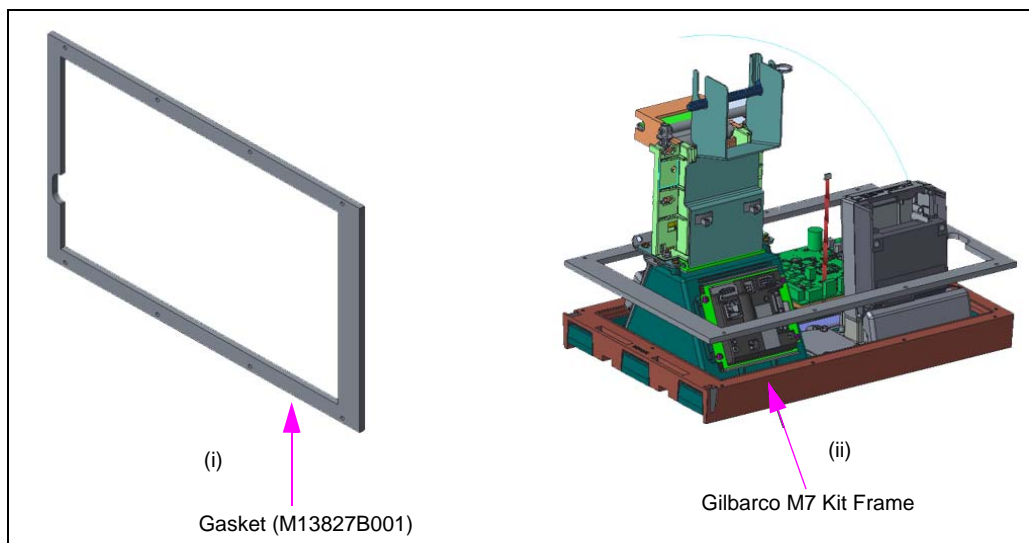
- 4 Match the parts received in the kit with [“Parts List”](#) on [page 2](#).

Installing the Gilbarco SPOT M7 Retrofit Kit

To install the SPOT M7 Retrofit kit in Wayne dispensers, proceed as follows:

- 1 Install the Gasket (M13827B001) on the Gilbarco M7 Kit Frame as shown in [Figure 2](#).

Figure 2: Installing the Gasket M13827B001



- 2 Drill eight mounting holes (4-mm diameter) on the Wayne Bezel using the metal support Bracket (M12258B001) as a template (see [Figure 3](#)).

⚠ WARNING


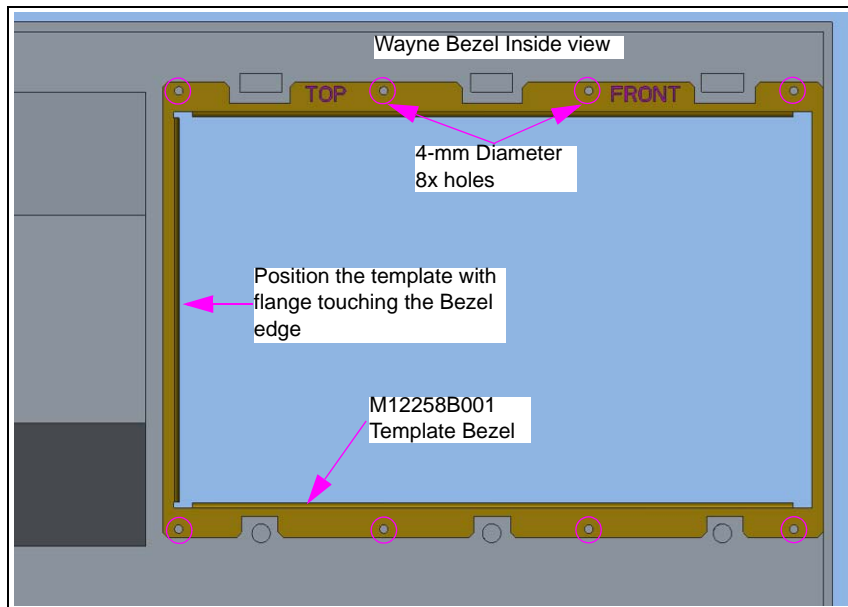
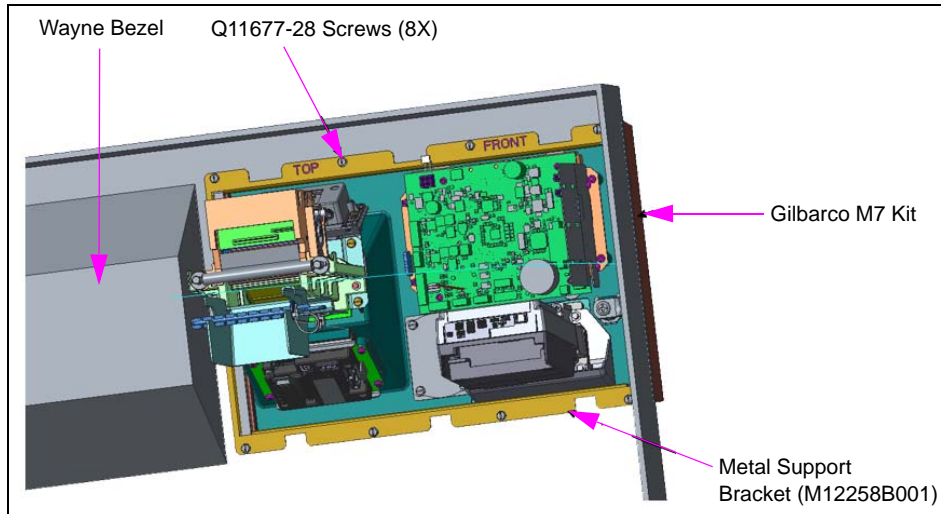
 Use of electric tools must be avoided on the island. Always use a Pneumatic drill gun.

Figure 3: Template and Location of Mounting Holes



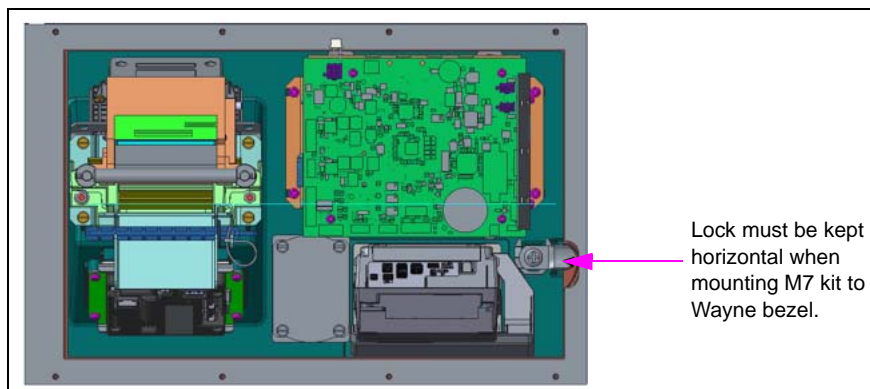
- 3 Mount the Gilbarco M7 Kit on the front side of the Wayne Bezel and secure the Gilbarco M7 retrofit kit using Q11677-28 Screws (8X).

Figure 4: Securing the Gilbarco M7 retrofit kit



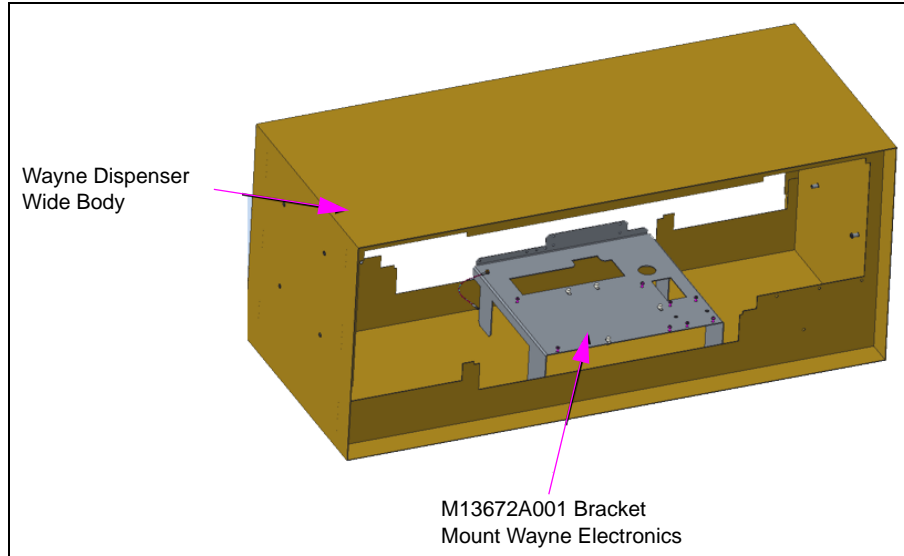
- Notes: 1) If the Wayne bezel is damaged and the kit does not seal, use the flat sealing plate M12438B001 included in the kit. Seal the plate to the bezel with Silicone.*
- 2) Ensure that the lock is kept in a horizontal position when mounting the M7 Kit to the Wayne bezel as shown in [Figure 5](#).*

Figure 5: Position of the Lock



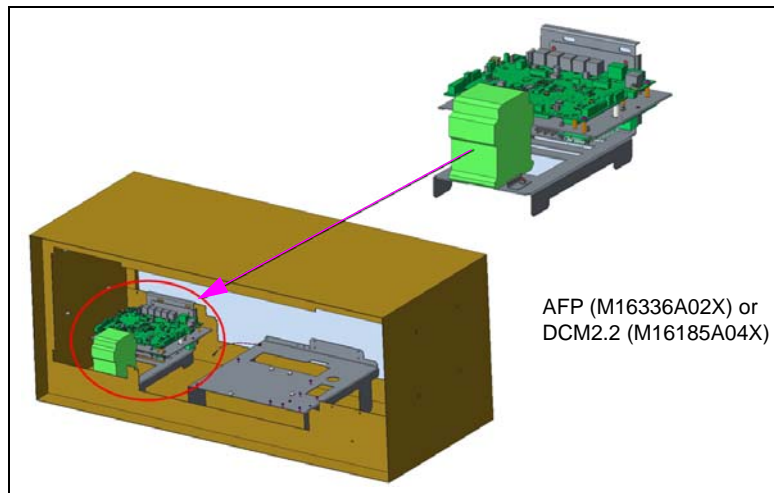
- 4 Transfer the Wayne Electronics onto the metal Bracket (M13672A001) and place the metal bracket in the Wayne dispenser as shown in [Figure 6](#). Reconnect cables from Wayne dispenser.

Figure 6: Reconnecting the Cables



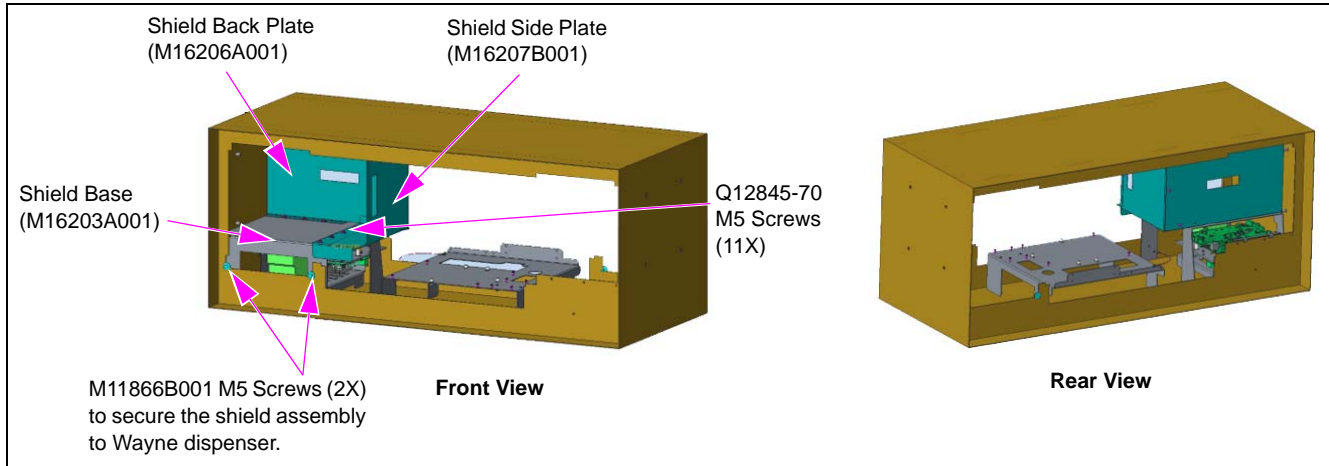
- 5 Place the Gilbarco Electronics AFP or DCM2.2 assembly as shown [Figure 7](#).
- 6 Connect AC power to the Phoenix Power supply using Cable (M03689A005).
- 7 Complete all cable connections and wire routing between AFP/DCM2.2 and the M7 Kit.

Figure 7: Completing the Cable Connections



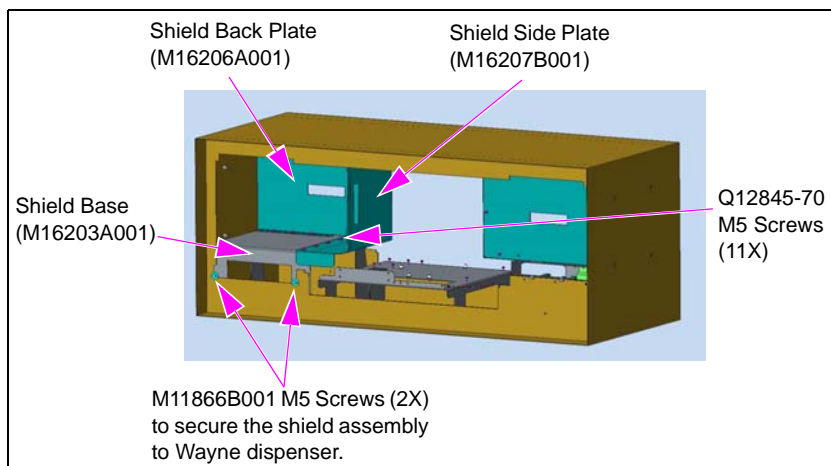
- 8 Place the shield base, and mount the shield plates using the M5 hardware provided (see [Figure 8](#)).
- 9 Use the two M5 Screws to secure the shield assembly to the Wayne dispenser frame.

Figure 8: Securing the Shield Assembly - Side A



- 10 Place the shield base on the other side and mount the shield plates using the M5 hardware provided.
- 11 Use the two M5 Screws to secure the shield assembly.

Figure 9: Securing the Shield Assembly - Side B



Connecting Cables to the AFP Assembly

Side A

On Side A of the unit, connect the following cables to the AFP assembly:

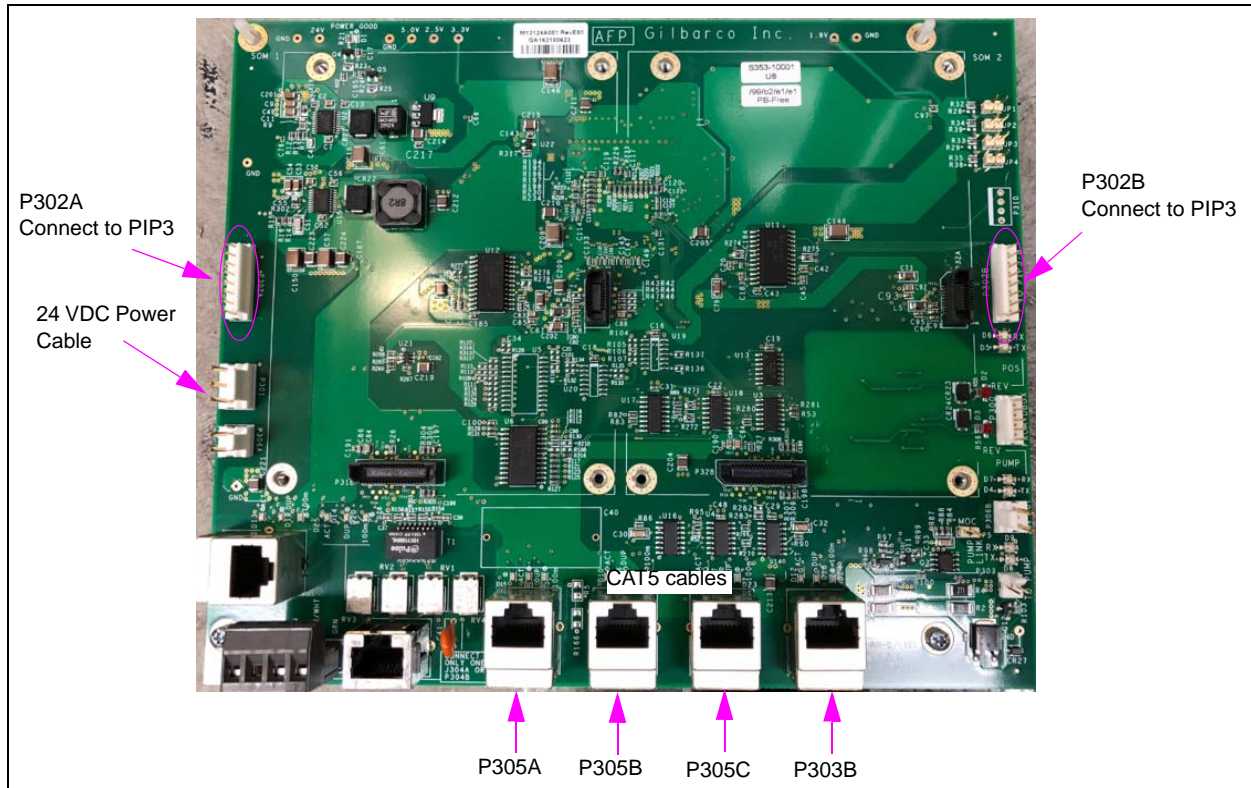
- 1 Connect the 24 VDC Power Cable (M14340A005) to J301A on the 24 VDC Power to AFP/Fuse Board Cable (M12777A003) on the AFP assembly.
- 2 Connect the 24 V printer power cable to one of the headers on the fuse board located on the AFP assembly.
- 3 Connect the AFP Serial Cable (M14339A001) to the P202 connector on the PIP3 and to the P302A connector on the AFP.
- 4 Connect the Category 5 (CAT5) cable from the UPM to RJ-45 connector on the AFP assembly.
- 5 Connect the CAT5 cable from UX300 card reader to RJ-45 connector on the AFP assembly.

Side B

On Side B of the unit, connect the following cables to the AFP assembly:

- 1 Connect the UPM Power Cable (M14340A005) to J301B on M12777A003 Cable on the AFP assembly.
- 2 Connect the 24 V printer power cable to one of the headers on the fuse board located on the AFP assembly.
- 3 Connect the P202 connector on PIP3 to AFP serial cable to P302B.
- 4 Connect the CAT5 cable from UPM to RJ-45 connector on the AFP assembly.
- 5 Connect the CAT5 cable from UX300 card reader to RJ-45 connector on the AFP assembly.

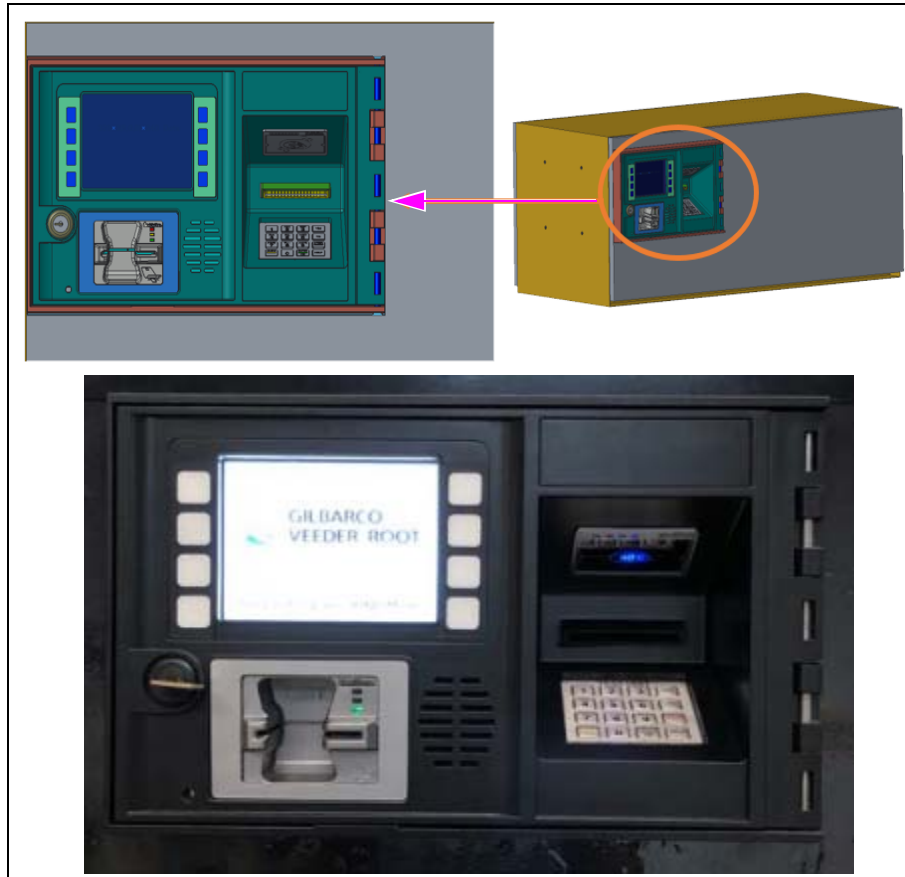
Figure 10: Cable Connections



SPOT M7 Retrofit Kit for Wayne Vista Dispensers Installed

The installation of the Gilbarco FlexPay IV Retrofit kit is now complete.

Figure 11: View of PBEPK-M7-VISTA Installed



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