Easy Pump with Gilbarco Encore 300/500

Freedom ELECTRONICS

Installation Manual

Upgrading the Gilbarco Encore 300/500 to EMV using Freedom Electronics Easy Pump

Rev 2 • 11/2021

Kit #	SE35000 Kit
Description	Easy Pump Install
Pump Model	Encore 300/500

Freedom Electronics
Technical Support 800-761-9369 Option 2

Easy Pump with Gilbarco Encore 300/500

Parts list

Manufacturer Part #	Description	Quantity
SE35001	E35 FIM-20 Insert	2
SE35002	E35 Insert Bracket	2
SE35003	E35 Insert Gasket	2
SE35004	E35 Card Reader Insert (membrane)	2
SE35005	E35 Card Reader Insert (EPP)	2
SE35006	E35 EPP Insert	2
SE35007	E35 CR Insert Gasket (membrane)	2
SE35008	E35 CR Insert Gasket (EPP)	2
SE35009	E35 EPP Insert Gasket	2
SE35010	E35 FIM-20 Insert Overlay	2
SE35011	E35 CR Insert Overlay (membrane)	2
SE35012	E35 CR Insert Overlay (EPP)	2
SE35014	E35 MPP Overlay	2
SC00004	24V/5V Dual Power Supply	1
SC00005	Power Supply Bracket	1
SC00007	FIM-20 Power Cable	2
SC00001	FIM-20/Printer Data Cable	2
SC00013	Printer Power Cable	1
SC00019	Power Supply AC Input Cable	1
M3x0.5mmx12mm	M3 Phillips No. 1 with 0.5mm Pitch and 12mm Length	8
SC00025	Non-printer Plug	2
SA00004	Non-printer Plug Gasket	2
SA00005	Non-printer Plug Overlay	2
SC00023	Hengstler Bracket	2
SC00024	Hengstler Bracket Gasket	4
6-20x3/8xHex	3/8" Hex Head #6-20 (McMaster P/N: 93880A146)	25
6-32x3/8	3/8" Phillips No. 2 #6-32 Thread (McMaster P/N: 90272A146)	8
M4x0.7mmx10mm	M4 Phillips No. 2 with 0.7mm Pitch and 10mm Length	8
7.6mmx4.4mmx0.8mm	Split Lock Washer for M4 screw with Outer Diameter of 7.6mm, Inner Diameter of 4.4mm, and Thickness of 0.8mm	8
8-32 Nut	8-32 Locking Nut (McMaster P/N: 90413A102)	4
SC00025	Bag of zip ties (25 pack)	1
0684011 New or Reb	C56 - RS-232 Long Chute Printer (sold Separately)	
FIM-20	Sound Payments IM-20 (sold seperately)	

Tools Required

- Flat Head screwdriver
- Phillips® Screwdriver
- 5/32" Nut Driver
- 5/16" Nut Driver
- 1/4" Nut Driver

- Isopropyl Alcohol
- Putty knife
- Pliers
- Cutters/dykes

- We recommend completing the Forecourt install first. Then install a kit into the first dispenser and verify operations before moving onto any others.

- The site will be able to run on dual systems, the new Easy Pump and the existing DCR's. This allows one dispenser at a time to be upgraded without affecting the customers other dispensers.

- eReceipts are available in place of a printer, or in combination with a printer.

- Gilbarco dispensers will require printer replacement for proper printer operation, if desired.

- Dispensers with 10.4" displays CANNOT be upgraded at this time.

- Non-CRIND Encore 300/500 dispensers CANNOT be upgraded.

Important Safety Information

Know Your Environment
Working at a fueling station can present many dangers. It is a potentially dangerous environment of electricity, flammable fuels, vapors, and interaction with the general public. Only trained and knowledgeable individuals should perform service on the equipment. It is important to your safety and the safety of others to follow proper procedures.

Emergency Shut Off (ESO)
Know how to turn OFF power to all the fueling equipment by locating the ESO switch and circuit breakers. You must know how to shut off all fuel flow and electricity in an emergency.

Follow the Regulations
Information is available at Occupational Safety and Hazard Association (OSHA), National Fire Protection Association (NFPA) 30A; Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 70; National Electrical Code (NEC), as well as other national, state and local entities. All applicable codes must be followed to maintain safe installation, service, use and operation of the equipment.

LOTO (Lockout/Tagout)
Always make sure ALL power to the dispenser is turned OFF before servicing the dispenser. Follow OSHA Standard 29 CFR 1910.147 The Control of Hazardous Energy (Lockout/Tagout).

No Sparks - No Smoking
Sparks from power tools, burning cigarettes, static electricity, vehicles and other sources can ignite fuels and their vapors. Ensure that you use safe and established practices while working with electrical devices and equipment. WARNING – EXPLOSION HAZARD. DO NOT DISCONNECT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS FREE OF IGNITIBLE CONCENTRATIONS.

Wear Proper PPE
Check with your company, customers and the job/site specifics to determine what types of personal protective equipment are appropriate. Always wear the proper PPE to prevent injuries and save lives.

Barricade Your Work Area
One of the dangers of working at an active retail fueling station is the potential impact of customers and the general public. It is important to properly establish your work area by barricading, to reduce the potential of vehicles or customers from entering the work area. The use of barricades is both for the protection of workers and protection of the general public/customers.

Read the Manual(s)
Knowledge of all related manufacturer procedures, manuals and documents is important. Follow the Recommended Practices of The American Petroleum Institute (API). Understand the specific procedures before starting work. If you do not understand a procedure, call Freedom Electronics at 770-792-8888.

Notify Site
On arrival identify yourself to the site manager and inform them of the work you will be performing.
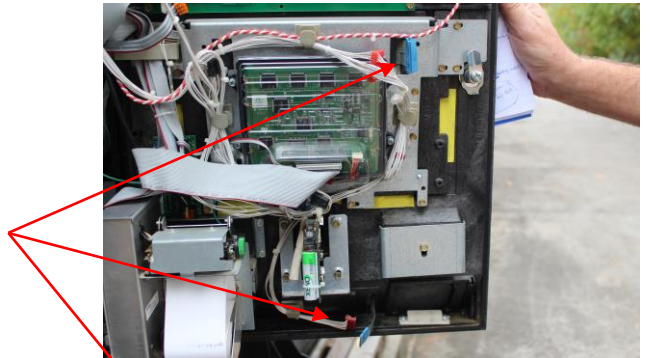
Easy Pump with Gilbarco Encore 300/500

1. **Before you begin work, read and understand the Important Safety Information**.

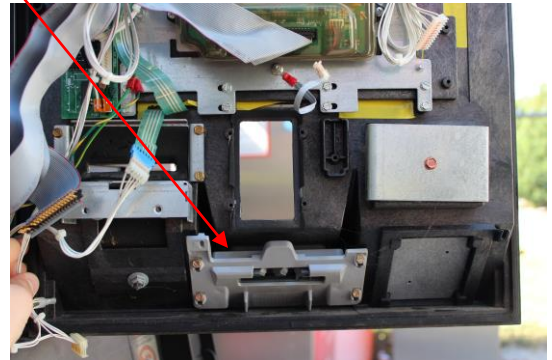2. Remove power from the Encore dispenser.

3. Remove the printer and card reader.

4. Disconnect the membrane keypad or remove the EPP keypad, depending on which is present. Also disconnect the monochrome keypad.

5. Remove the monochrome display and bracket. Save parts for step 9 and 10.

6. Secure all cables cleanly inside dispenser using zip ties and existing cable clips.

7. Remove the printer bracket.

8. Install the FIM-20 Insert Gasket (SE35003) onto the FIM-20 Insert (SE35001).

9. Install the FIM-20 Insert into the monochrome display opening and secure with bracket and screws from step 5.
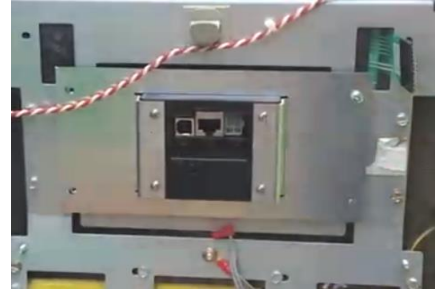

10. Install the FIM-20 Insert Bracket (SE35002) to the monochrome display bracket using screws from step 5.

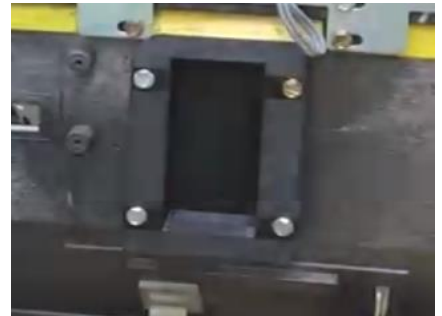11. Install the FIM-20 Insert Overlay (SE35010) over the existing monochrome keypad.

12. Install the FIM-20 into the FIM-20 Insert
    using (4) screws (M4x0.7mmx10mm)
    - Verify the gasket is present on the
      FIM-20 before installing.
    - The FIM-20's will be labeled per
      fueling point. Make sure to install
      the correct FIM-20 into the correct
      fueling point.

13. Install CR Insert Gasket (SE35007)
    onto the Card Reader Insert(SE35004)
    for doors with membrane keypads.

    Install CR Insert Gasket (SE35008)
    onto the Card Reader Insert
    (SE35005) for doors with EPP
    keypads.

14. Install the Card Reader Insert
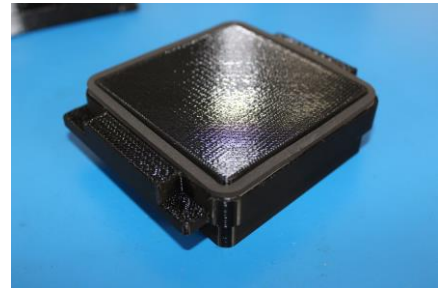   using (4) screws (6-20x3/8xHex).

15. Install Card Reader Overlay
    (SE35011) for doors with
    membrane keypads.

    Install Card Reader Overlay
    (SE35012) for doors with EPP
    keypads.

Doors with EPP keypads continue, doors with membrane keypads skip to step 19.

16. Install the EPP Insert Gasket (SE35009) to the EPP Insert (SE35006).

17. Install the EPP Insert into the EPP keypad opening using (4) screws (6-20x3/8xHex).

18. EPP Keypad: Install the EPP Insert Overlay (SE35013) over the EPP Insert.

19. Membrane Keypad: Install Membrane Keypad Overlay (SE35014) over the existing membrane keypad.

If not using a printer, skip to step 23

20. Install the Hengsler Bracket Gaskets(SC00024) to the front and back of Printer Bracket(SC00023).

21. Mount the Printer Bracket to the Printer(0684011 New) using (2) washers (7.6mmx4.4mmx0.8mm) and (2) nuts(8-32 Nut).

22. Mount the Printer to the Door using (4) screws (6-20x3/8xHex).

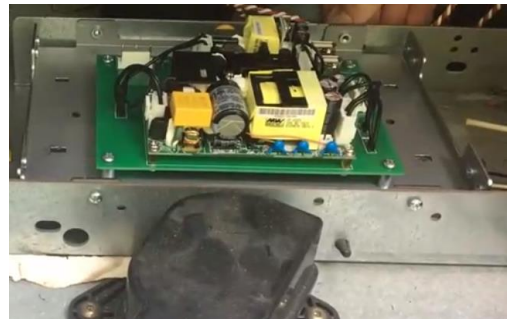*After printer installation - skip to step 26*

Printer Plug installation (When NOT using a printer)

23. Install the Printer Plug Gasket (SA00004) onto the Printer Plug(SC00025).

24. Install the Printer Plug into the door using (4) screws (6-20x3/8xHex).

25. Apply the Printer Plug Overlay (SA00005) to the exterior side of the plug.

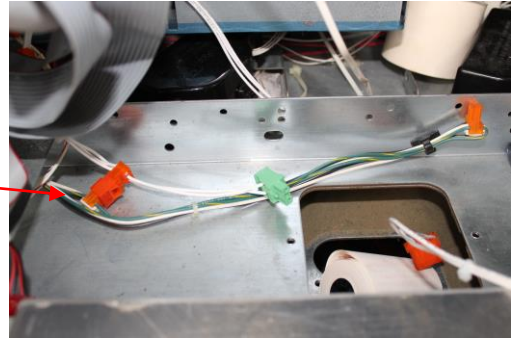*Repeat steps 3-25 on the other side of the dispenser.*

26. Mount the Power Supply Board (SC00004) onto Power Supply Bracket(SC00005) using (4) screws(6-32x3/8).

27. Install the power supply assembly into the center rails of the dispenser using (4) screws (6-32x3/8).
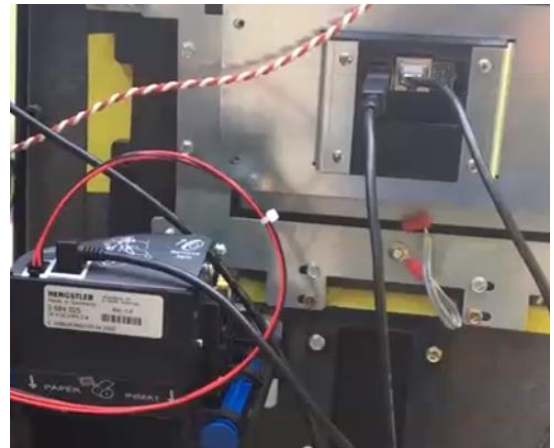
28. Connect the Power Supply Cable (SC00019) to the dispenser power harness and to J1 of the Power Supply Board.

29. Connect the Printer to the FIM-20 using cable (SC00001).

    Repeat on the other side of the dispenser.

30. Connect the FIM-20 Power Supply Cable (SC00007) to the FIM-20 and to either J2 USB ports on the power supply board.

    Repeat on the other side of the dispenser.

31. Connect the Printer Power Cable (SC00013) to the printer and to the J3 on the power supply board. *Repeat on the other side of the dispenser.*

32. Route cables through the dispenser cleanly and secure cables using zip ties and dispenser cable clips to avoid pinching and stretching.

33. Close all dispenser doors securely.

34. Power dispenser back on.