Installation Manual

Replacing the Wayne Ovation® printer using the Freedom Electronics FE-22 Printer.

Rev 4 • 3/2022

Kit #	FE-22 New
Description	FE-22 Install
Model	Ovation 1 Dispenser

This kit will upgrade printers on Ovation 1 dispensers only.
The Ovation 2 dispensers are currently not supported.

FE-22 Printer

Parts list

FE-22 NEW (Printer Kit)

Manufacturer Part#	Description	Quantity
FE-22 Printer	FE-22 Printer With Printer Door Assembly	1
FW00008	FE-22 Printer Door Overlay	1
FW00009	FE-22 Printer Door Frame Overlay	1
97975A205	FE-22 Printer Door and Blanking Door Screws	14
FC00004	Extended Data Input Cable	1
FC00005	Extended Power Input Cable	1
FW00005	Printer Door Blanking Panel	1
FW00011	Printer Door Blanking Panel Overlay	1
FW00013	Blanking Panel Gasket	1
91090A101	Blanking Panel Washers	6

FE-22 NFC Kit (Contactless)

Manufacturer Part#	Description	Quantity
FW00006	Contactless Panel	1
FW00012	Contactless Panel Overlay	1
FC00012	Contactless Reader Extension Cable	1
FW00013	Blanking Panel Gasket	1
91090A101	Blanking Panel Washers	6
97975A205	Blanking Panels Screws	6

FE-22 Security Kit

Manufacturer Part#	Description	Quantity
FW00014	Protective Shield	1
97975A205	Protective Shield Screws	4

Tools Required

- Flat Head screwdriver
- Phillips® Screwdriver
- 1/4" Nut Driver
- Cutters/dykes
- 8-inch file
- Hand saw
- Pliers

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.

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.

FE-22 Printer

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

2. Remove power from the Ovation dispenser.

3. Open the door by unscrewing the two locks on the door.

4. Keep the door wide open using the door hinge.

5. If the dispenser has a contactless reader on the cash acceptor panel as shown to the right, then disconnect the contactless reader cable from iX board".

6. Remove the cash acceptor panel by removing the (6) screws marked in yellow.

Cash Acceptor door with tabs

Cash Acceptor but not generally used

Printer slot

FE-22 Printer

7. Using a hand saw, cut off the center tabs from the cash acceptor opening on the dispenser door. Clean it using a hand file.

8. Mount the FE-22 printer door assembly (FE-22 Printer) onto the dispenser door in place of the cash acceptor panel using the provided screws.

9. Install the Printer Door Overlay (FW00008) and Printer Door Frame Overlay (FW00009).


10. Disconnect and remove the OEM printer power cable.

11. Disconnect and remove the OEM printer data cable.
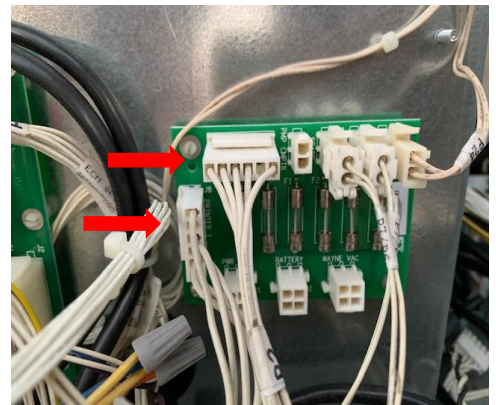
Printer power cables connections at distribution board

Freedom Electronics: FE-22 Install

FE-22 Printer

12. Remove the Wayne printer from the dispenser door.

13. Remove the OEM printer door and hinge by removing the (4) nuts.

14. Remove the lock from the OEM printer door and install it on the FE-22 printer door.

15. Connect the Extended Power Input Cable (FC00005) to the Wayne distribution board.

16. Connect the Extended Data Input Cable (FC00004) to the Wayne SPM.

17. Connect the Power and Data cables to the FE-22 printer as shown.

18. Route the grounding cable along with the other cables and attach it to a grounding point in the dispenser.
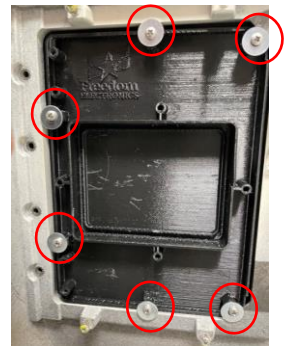
19. Secure the cables with zip ties.
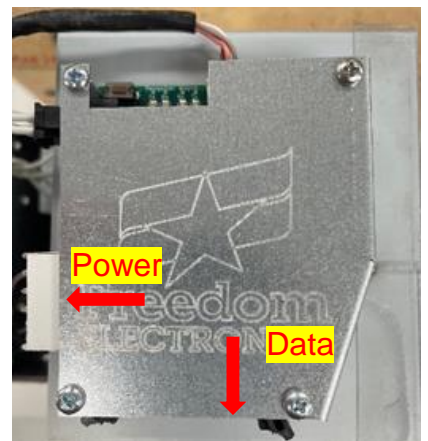
FE-22 Power & Serial connections

Freedom Electronics: FE-22 Install

FE-22 Printer

20. Install new gasket (FW00013) to the printer door opening.
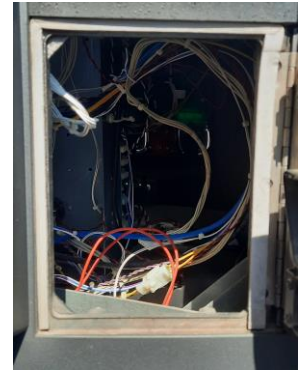
Without Contactless Reader

21. Install the Printer Blanking Panel (FW00005) to the dispenser using (6) washers and screws.

22. Install the Blanking Panel Overlay (FW00011).

With Contactless Reader

23. Remove the contactless reader from the cash acceptor panel and install it onto the Contactless Panel (FW00006).

24. Install the contactless panel to the dispenser in the printer opening using the (6) washers and (6) screws provided.
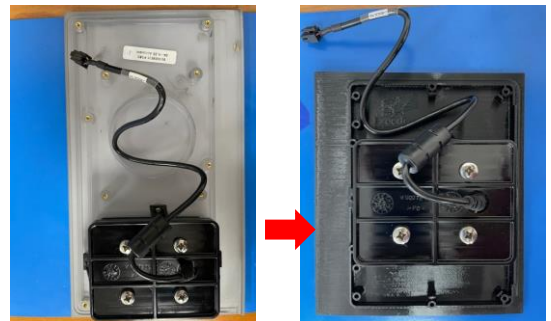
Switching contactless reader from OEM cash acceptor panel to FW00013 panel

25. Install the provided Contactless Panel Overlay (FW00012).

26. Connect the Contactless Reader Extension Cable (FC00012) to the reader and reconnect it to the iX board.
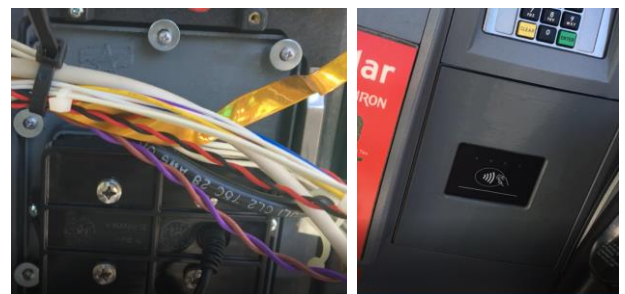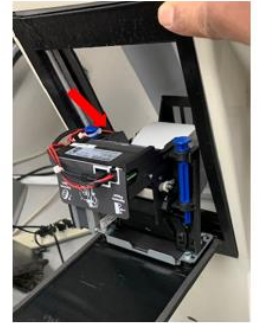
Contactless panel mounted on OEM printer opening

FE-22 Printer

27. Power on the dispenser, let the dispenser boot up and make sure there are no errors.

28. Install paper in the FE-22 printer as shown. As soon as the sensor in the paper guide detects paper, the controller starts the automatic paper insertion.

Loading paper into the FE22 printer

30. Remove the paper appearing in the eject chute by pulling it straight out.

31. Press the diagnostic button on the FE-22 printer and verify proper operation.

32. Close the dispenser door and lock it.

33. Run a transaction, select yes for receipt and verify a receipt is printed.

34. Open the printer door and make sure there are not any obstructions and close the printer door when done.

35. Finally make sure that there are no errors displayed on the POS system inside the store.

FE-22 Printer

Additional Information

Jumper settings for FE-22 printer

❑ Wayne Ovation dispenser with SPM:

- JP1-JP4 at RS232 position
- JP5-JP7 at RS232 position

❑ Wayne dispenser with QCAT

- JP1-JP4 at TTL position
- JP5-JP7 at RS232 position