

DW Valve rebuild Instructions

Rev 2.0 – [06/2/2025]

Before



After

Kit #: FE-16353

Description: Wayne Ovation valve rebuild kit

Model: 890568-R01



Installation Manual

Parts List

Manufacturer Part #	Description	Quantity
Freedom Electronics	FE-16353	1

Tools Required

Nut driver with T25 star bit

Suggested cleaner dish soap/degreaser

Scotch Brite pad

Firm scrub brush



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.



Procedure

This procedure instructs the field operator proper rebuild steps using the Freedom Electronics Valve rebuild kit. All internal components, mounting O-rings and valve body screws are supplied new in this kit.

Note: Before starting this procedure, be advised valves may contain fuel/oil residues, a containment barrier, (i.e. cardboard, plastic liner) is suggested for the specific area to be used for this rebuild.

1. Using a nut driver with T25 star bit, remove the 4 top screws as shown in figure 1



Figure 1

2. Remove the top/stem portion of the valve



Figure 2

3. Discard all the internal components: springs, O-rings, white plunger shroud, brown plunger and screws. Figure 2. Components on the right. These are replaced new from the kit.
4. Using hot soapy water, scotch bright and stiff brush, clean upper and lower valve bodies. Allowing the valve bodies to soak aids in surface cleaning.
5. Important: internal surfaces and mounting areas are required to be clean and free from debris. Additional cosmetic exterior cleaning is left to the operator.
6. Inspect internal surfaces after cleaning for any remaining debris and mounting flanges for any mechanical discrepancies, (chips, dings, scratches) that may inhibit a proper connection in the system. Figure 3.



Figure 3

7. Locate in the rebuild kit (part number FE-16353), the brown plunger and white shroud.
8. Insert the brown plunger into the white shroud as shown in fig 4



Figure 4

9. Place/insert these assembled components into the lower valve body as well as the large O-ring into the O-ring groove shown in fig 5.



Figure 5

10. Locate the following Items: piston, white spring stop retainer and black spring stop. Place the retainer in the retainer groove as shown in Fig 6.



Figure 6

11. Place the retainer in the retainer groove as shown in Fig 7



Figure 7

12. Locate and place black spring stop onto the piston noting the orientation of the part. The black spring stop has a small retainer fence that holds the spring and this fence is oriented away from the white spring stop retainer. Install the black spring stop onto the piston as shown in figure 8



Figure 8

13. Locate the small spring and install into the beveled end of the piston. Figure 9



Figure 9

14. Locate the large spring and place over the piston up to the black spring stop. Figure 10



Figure 10

15. Holding the upper valve body with the stem down, insert the piston assembly into the stem, small spring end first. Figure 11



Figure 11

16. Holding the piston assembly into the upper valve body stem, orient and place the upper assembly onto the lower assembly as shown.



Figure 12

17. Locate the 4 supplied screws, verifying the alignment of the upper and lower bodies together and the large O-ring in place. The upper and lower valve bodies should mate together flush.
18. Holding the upper and lower sections together, secure with the 4 supplied screws.
19. Tighten firmly by hand