

This kit contains all the parts needed to convert a TFT PROTECTOR or Groupe Leader PETRO-JET Station Monitor without a shutoff valve to a station monitor with a shutoff valve.

Note: Refer to the Protector Instruction Manual (TFT item number LIZ-010) for an exploded view and part names.



Tools used for ball valve assembly:

Sockets Needed: 1/2 ", 3/4", & 1-1/8"

Needle Nose Pliers Allen Wrench: 5/32"

Face Spanner: 7/32" or 3/16" Diameter Pins

Brush For Applying Grease



1) These are the new parts that will be added to the Protector Monitor



2) Remove knob assembly. Remove cotter pin from end of locking nut. Remove locking nut, castle nut, washer and knob.



3) Open the Clamps and lift the top of the Protector off of the Flanged Base.



4) Remove lower black seal and white rear valve seat.



5) Using 1-1/8" inch socket (or wrench) remove the stationary trunnion from the right side of the housing.

Note: It has been Loctited in place and will require a moderate amount of force to remove. Clean the Loctite from the threads. This piece will be reused.

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6) Remove the Plug from the other trunnion hole with a allen wrench and a pin spanner (the holes for the pin spanner are on the end of the Plug that is inside of the Monitor).

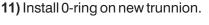


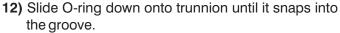
10) Insert the ball into the bell housing rotating the hex hole to your left so the circular hole is facing you.



7) Using the T-handle hex wrench, remove washer, plug and screw. These parts are not reused with the valve parts.









8) Protector is now ready to install ball valve.



13) Grease o-ring on trunnion.



9) Grasp ball with hex hole on the bottom and circular opening on the right.



- **14)** Place trunnion inside of valve ball and through valve ball hex hole and bell.
- **15)** Push trunnion into position with 'hex' on trunnion inserted into 'hex' on valve ball.

NOTE: "Hex" has one of the six sides rounded to give proper orientation between the trunnion and the ball.



- **16)** When properly inserted, the trunnion will extend through the bell housing.
- **17)** Place Belleville spring onto trunnion so that the inside of the spring washer contacts monitor first.



18) Install Smalley Ring to retain Belleville spring on trunnion.

Special tool is shown but is not absolutely necessary



19) Install stationary trunnion into bell section with red Loctite. Turn trunnion in until tight making sure that it engages the threads in the ball.



- **20)** Install black lower seal onto white rear valve seat. And install into bell white end first.
- 21) Apply grease to lower seal of bell/exit assembly.



- **22)** Place bell with valve parts installed onto base/nameplate assembly.
- **23)** Reinstall clamps with plastic inserts in reverse order of disassembly.



- 24) Screw locking bolt with knob into clamps.
- **25)** Install Washer, Castle Nut, and Cotter Pin to end of locking bolt. Do not use any Loctite.



26) Hook end of slide link into slide.



27) Install on valve handle.



28) Align 'hexes' and push valve handle onto trunnion while engaging slide link in hole on bell.



- 29) Install washer and slotted fin hex nut.
- **30)** Tighten slotted fin hex nut until valve handle contacts shoulder on trunnion and slots in nut line up with hole in trunnion.



31) Install cotter pin into trunnion.



32) Bend one leg of cotter pin.