

Maintenance of Relief Valve

NOTICE

Typically, when a RP device is leaking from the relief valve, a fouled or damaged first check valve is the cause. Make sure the first check valve is functioning properly before assuming there is a problem with the relief valve. If the first check is found to be functioning properly, we recommend cleaning the relief valve piston (B) and seat (C). Use a toothbrush (A) to gently brush away any debris on the relief valve piston (B) or seat (C) that may be preventing the piston (B) from sealing properly against the seat (C). This should return the relief valve to proper working order without disassembly or the use of a repair kit.

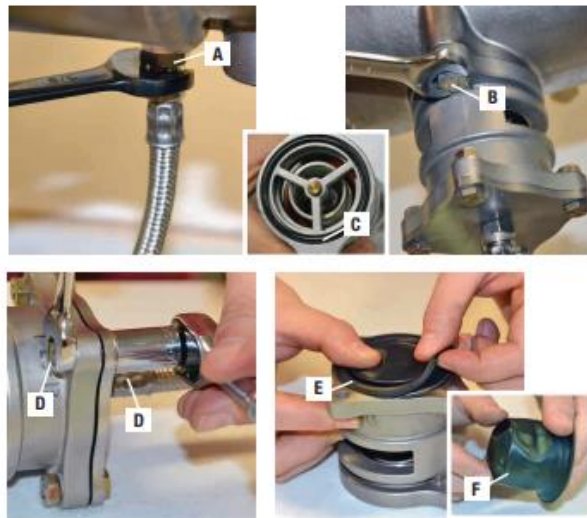


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If one is certain that the relief valve requires maintenance proceed as follows.

1. Using a $\frac{5}{16}$ " box wrench disconnect the relief valve sensing line from the valve body (A).
2. To remove the relief valve from the valve body disconnect the two relief valve mounting bolts (B) using a $\frac{9}{16}$ " wrench. When removing the relief valve be sure not to drop the top O-ring (C) as the relief valve body uses this O-ring to seal against the valve body.
3. To access the relief valve remove the relief valve cover using two $\frac{7}{16}$ " wrenches to remove cover bolts (D).
4. Remove the relief valve diaphragm (E) and check the diaphragm for tears, holes or debris (F).



Maintenance of Relief Valve (continued)

1. Check the rubber seal on the relief valve piston assembly (A) for fouling or damage by making sure the indentation of the seat in the rubber seal is present all the way around. (Confirm the relief valve piston assembly (A) sets flush on relief valve seat (B).
2. Check relief valve seat (B) for fouling or damage before reinstalling the relief valve piston assembly (A).
3. Once the relief valve is ready to be reassembled, the first step is to reform and reattach the diaphragm to the piston.
4. Move the diaphragm (C) to the fully open position making sure the embossed center is facing up.
5. While holding the diaphragm (C) with both hands, use your thumbs to gently push down on embossed center (D) so the diaphragm collapses into itself and forms a circle so that the bottom of the piston assembly can be inserted into the diaphragm and the embossed center can be pushed into the piston assembly groove.



Maintenance of Relief Valve (continued)

1. Place the piston assembly (A) into the diaphragm (B), making sure the diaphragm lays flush on the bottom of the piston assembly with no wrinkles or tears in the diaphragm.
2. Place the relief valve spring (C) back onto the relief valve assembly (A) and slide the valve assembly back into the relief valve body (D). Make sure the piston assembly lines up to penetrate hole (E) in top side of relief valve.



Maintenance of Relief Valve (continued)

1. Using two $\frac{7}{16}$ " wrenches (A) re-attach the relief valve cover.
2. Making sure the relief valve O-ring (B) is in the groove on the top of the relief valve use a $\frac{9}{16}$ " wrench to re-attach the two relief valve mounting bolts (C).
3. Use a $\frac{5}{8}$ " box wrench re-connect the relief valve sensing line to the valve (D).

