

## Seal Kit Replacement Instructions Series RVDT ¼" - 2" Sizes

- Before disassembly, relieve pressure and drain fluid from the valve and piping to be opened. Take proper precautions to protect people and equipment from any residual liquid.
- Disassemble the valve in a clean environment. Prevent any dirt, grit, or fiber from getting onto the sealing surfaces or into the moving parts.
- A non-scratching probe such as an orangewood stick or ball end dental pick (burnisher) should be used to remove and install o-rings, u-cups and seat gaskets.
- Pipe wrenches and vises are not recommended for plastic valves. Strap wrenches can be used in most cases.

### Seal Replacement Procedure – Refer to diagram on page 2

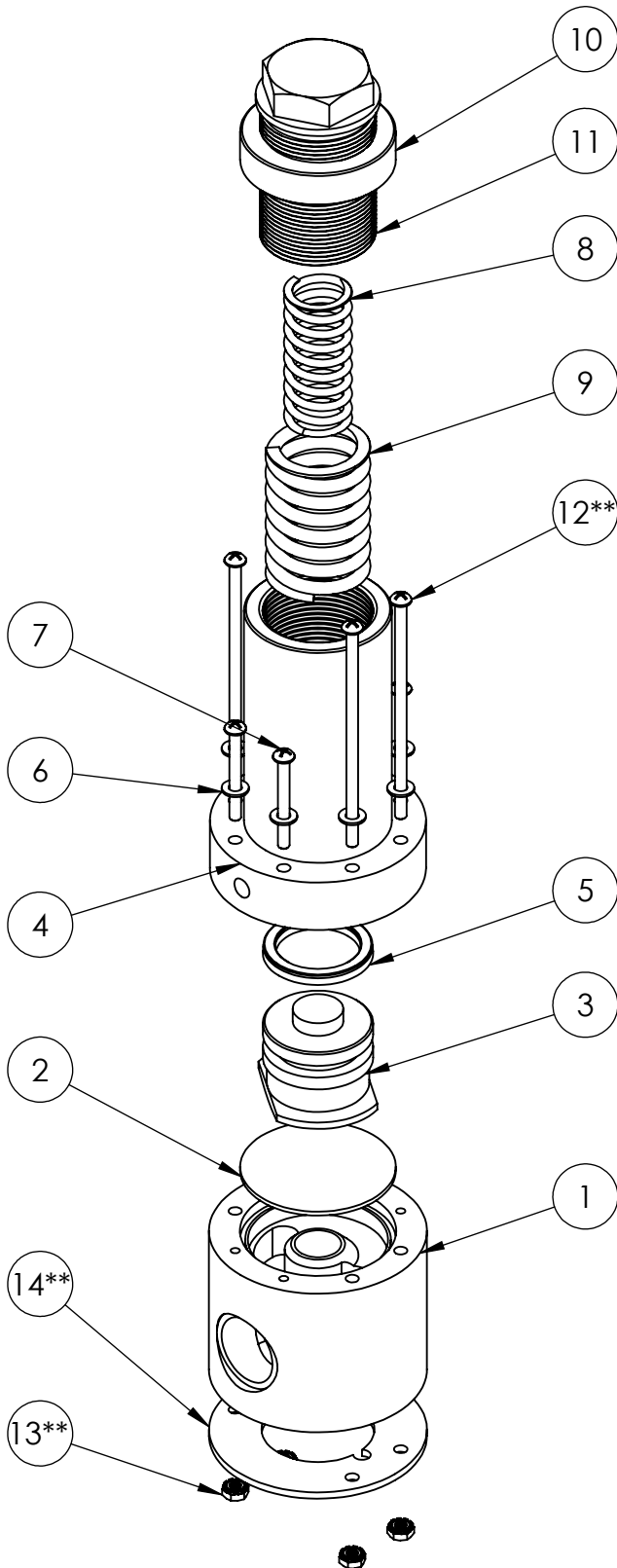
1. Stop the flow in the system and depressurize the system piping.
2. Unlock the Jam Nut (10) counterclockwise, then remove the adjusting screw (11) and remove the springs (8,9) so there is no pressure exerted by the springs. For ¼" valves the springs cannot be removed this way but the jam nut and adjusting screw has to be backed out to relieve the spring pressure.
3. Remove the screws (7) X 4 & (12) X 4 and washers (6) X 8 that hold the spring housing to the body of the valve. Some PTFE valves have a stainless steel plate (14) on the bottom of the valve that comes off when the screws are removed. PTFE, polypro, and 1-1/2 and 2" PVC, CPVC, and PVDF valves have nuts (13) on the bottom of the units that have to be removed.
4. Lift the spring housing (4) off from the top of the valve and remove the diaphragm support (3) from inside the spring housing.
5. Carefully remove and replace the u-cup (5) on the diaphragm support (3). The open end of the u-cup (5) goes down towards the flange of diaphragm support (3). In other words, goes down towards the body (1). Make sure not to scratch the u-cup groove. Clean all parts as you are going along before re-assembly.
6. Remove the original diaphragm (2) and replace it with the new diaphragm. Be careful not to scratch or damage the sealing ring in the body that seals the diaphragm, or the unit will leak. Clean any debris before installing the new diaphragm. The Teflon side of the diaphragm faces down towards the body and process liquid.
7. Put the diaphragm support (3) on top of the new diaphragm and put the spring housing (4) back. For ¼" units, the springs (8,9) have to be placed on top of the diaphragm support (3) before the spring housing (4) is put on. Each diaphragm (2) has Teflon on one side and elastomer on the other. Place the Teflon side of the diaphragm (2) down towards the seat in the body (1).
8. If working on a PTFE unit that has a SS reinforcing plate (14), line up the holes on the stainless steel bottom plate (14) with the mounting screw holes on the bottom of the body. Put a flat washer (6) on each of the long screws (12) and put the screws through the clearance holes in the spring housing (4), body (1), and back up plate (14). Lightly attach the screws (12) with the 4X kep nuts (13) but do not fully tighten.

If working on a Polypro unit, put a flat washer (6) on each of the long screws (12) and put the screws through the clearance holes in the spring housing (4) and body (1). Lightly attach the screws (12) with the 4X kep nuts (13) but do not fully tighten.

On PVC, CPVC, and PVDF units, valves 1" and under have the hold down screws thread into the plastic body. Units over 1" have screws that thread into the plastic and screws that go all the way through and have stainless steel nuts on the bottom. Use a flat washer (6) under the head of each screw (7, 12).

9. Tighten the long screws (12) with the nuts (13) first. Torque them sequentially in a star pattern.
10. Tighten the screws (7) that go into the plastic body next. Tighten them sequentially in a star pattern.
11. Re-tighten the long screws (12) with the nuts (13) sequentially.
12. Re-tighten the screws (7) that thread into the plastic sequentially.
13. **WARNING:** Do not over-tighten any of the screws or the plastic will crack – solidly hand-tight is sufficient.
14. Replace the springs and adjusting screw (if required).
15. Set the valve to the desired pressure (if required).





| ITEM NO. | DESCRIPTION       |
|----------|-------------------|
| 1        | BODY              |
| 2        | DIAPHRAGM         |
| 3        | DIAPHRAGM SUPPORT |
| 4        | SPRING HOUSING    |
| 5        | U-CUP             |
| 6        | #10 FLAT WASHER   |
| 7        | MACHINE SCREW     |
| 8        | SPRING            |
| 9        | SPRING            |
| 10       | JAM NUT           |
| 11       | ADJUSTING SCREW   |
| 12**     | MACHINE SCREW     |
| 13**     | KEP NUT           |
| 14**     | BACK UP PLATE     |

\*\*ITEMS 12 AND 13 – HARDWARE VARIES BY VALVE SIZE AND MATERIAL; SEE NOTES #2 AND #3 BELOW.

\*\*ITEM 14 – ONLY USED ON PTFE UNITS, SEE NOTE #1 BELOW.

### NOTES:

1. PTFE UNITS HAVE STAINLESS STEEL REINFORCING PLATES ON THE BOTTOM OF THE BODIES.
2. POLYPRO AND PTFE UNITS HAVE THROUGH HOLES IN THE BODY FOR THE HOLD DOWN SCREWS. THESE UNITS HAVE NUTS ON THE BOTTOM THAT THE HOLD DOWN SCREWS THREAD INTO.
3. LARGER UNITS HAVE HOLD DOWN SCREWS THAT GO THROUGH THE BODY AND HAVE A NUT ON THE BOTTOM, AND HOLD DOWN SCREWS THAT THREAD INTO THE PLASTIC BODY.
4. THE RVD200 USES A TWO PIECE DIAPHRAGM (ITEM 2).