

Instructions for Maintenance and Repair of Vermorel 1800 & 2000 Knapsack Sprayer

Always ensure the sprayer has been thoroughly cleaned with appropriate detergents and is depressurised. Maintenance work is easy to carry out if the following procedure is followed:

1. Remove the hose by unscrewing the safety valve ((212315) Vermorel 2000 or (582918) Vermorel 1800), taking care to keep the white soft rubber valve (419488) and spring (48545) safe. (Vermorel 2000 only).
2. Remove the operating lever clamping bush (251338). (Vermorel 2000 only).
3. To remove the tank for easier access, take off the harness (283845) by removing the fixing toggles (482586) and the harness supporting straps from round the top of the frame.
4. Unscrew the plastic tank retaining screw (712257), this can be done easily with a 50 pence piece.
5. Unscrew the white air chamber (451332) which is inside the tank, access via tank filler hole, inspect the sealing O ring (750214) and replace if necessary.
6. The tank is now loose and by pulling and wriggling from side to side it will lift away from the sprayer frame. Inspect the tank sealing O ring (780382) replace if necessary.
7. The pump assembly will then slide out of the frame for easier access.
8. Un-clip the lower pump shield (451330).
9. Un-clip the return spring (48535) and remove.
10. Remove the pump piston (212306 V2000 or 264422 V1800) from between the operating lever bearings (412313) at the same time unscrew the diaphragm fixing collar then slide the pump out of the operating lever (412313) collar.
11. The valves (419486 & 419487) are now accessible for inspection and replacement. Simply pop them out of their holders with a pair of pliers or flat blade screw driver to replace.
12. The diaphragm can now be removed and replaced if necessary, by undoing the small bolt in the centre
13. Reassemble in reverse order, using silicone grease (218374) on any sealing O rings.
14. The diaphragm pump (212306) assembly can be a little tricky to seat correctly, fold the diaphragm back to give more room, then undo the diaphragm collar and wriggling the assembly through the bearings (412313) it will come together.
15. To reassemble the pressure limiter
 - a. Lay the sprayer on its back – limiter side up
 - b. Place the spring and plunger into the limiter body ensuring that it is centrally located.
 - c. Position the limiter onto the male threads, turn the yellow cap clockwise until it is finger tight on the threads, then undo the yellow cap (approx. $\frac{3}{4}$ of a turn) until you hear a click. The black pointer should be between the '1' and '5' numbers on the edge of the yellow cap.
 - d. The direction of the hose outlet, points to the number on the yellow cap, which denotes the pressure limit setting. If the hose outlet points straight down, it is set to 3 BAR.

Two maintenance packs needed:

- 212310 – diaphragm valve kit
- 212308 - O ring kit