



India Mark III Traveling Valve Replacement

Replace a broken traveling valve.

Written By: Andrew Optimus Goldheart



INTRODUCTION

Follow this guide to disassemble the traveling valve for repair or replacement.

TOOLS:

- [24mm Wrench](#) (1)
 - [Angled Socket Wrench](#) (1)
 - [Socket Wrench](#) (1)
 - [T-Handle](#) (1)
-

Step 1 — Access Door



- ☑ Before performing any repairs, perform a water test on the pump by raising and lowering the handle a full 40 strokes. A properly performing pump will yield greater than 10 liters.
- Remove the hex head bolt from the top of the access door on the pump head.
- ☑ On reassembly, this bolt should be hand-tight.

Step 2



- Pull the access door straight up off the pump head.
- ⓘ Store the access door in a sanitary place to prevent contamination.

Step 3



- ☑ The access door has a tongue that fits into the base of the pump head.
- ⓘ The access door makes a convenient tray to hold nuts and bolts during the disassembly.

Step 4 — Chain



- Place the spacer collar around the pump rod below the raised chain, with the beveled side down, and the flat side facing up.

Step 5



⚠ The following procedure requires two people. If you attempt to do this alone, you risk injuring yourself and damaging the pump.

- Lift the pump handle until the base of the chain comes to rest on the spacer collar, and the chain is slack. Hold the handle in this position while the chain is being detached.

Step 6



- Using the two access holes, place an angled socket wrench on the bolt and nut attaching the chain to the pump handle.

Step 7



- Hold the wrench on the bolt stationary.
- Loosen the nut.

Step 8



- Remove the nut from the chain bolt.

Step 9

- Remove the washer from the chain bolt.

Step 10

- Remove the chain bolt.

Step 11



- Pull the top of the chain straight off of the pump handle.

Step 12 — Head



- Remove the two bolts from the handle side of the pump head.
- Use one wrench on the bolt and another on the nut beneath. Hold the bolt stationary and loosen the nut.

Step 13



- Remove the two bolts and nuts from the handle side.

Step 14



- After removing the two handle side bolts, have your partner support the weight of the handle.
- Remove the two remaining bolts in the same fashion.

Step 15



- Lift and remove the pump head from the pump.
- ⓘ Store the pump head in a sanitary place, preferably above ground, to prevent contamination.

Step 16 — Chain



- Slightly twist the head flange, until the corners overhang the top of the tank far enough to grab.

Step 17



- Lift the head flange up about one foot above the tank.

Step 18



- Slide the rod clamp around the pump rod, and support it on the tank base.
- ⓘ Make sure the pegs in the base of the rod clamp fit into the appropriate holes in the top of the tank.

Step 19



- Tighten the rod clamp against the pump rod.

⚠ Be sure the pump rod is centered within the jaws of the clamp and held securely.

Step 20



- Lower the head flange.

Step 21



- Unscrew the chain from the top of the pump rod.
 - Remove the chain.
 - Check the chain for signs of wear or damage.
- i** Set the chain in a sanitary place, such as the access door that was previously removed.

Step 22 — Pump Rod



- Remove the spacer from around the pump rod.

Step 23



- Remove the jam nut from the top of the pump rod.

Step 24



- Remove the head flange.

Step 25



- Screw the jam nut back onto the top of the pump rod.

Step 26



- Screw a T-handle onto the top of the pump rod. Tighten the T-handle against the jam nut.

Step 27



- Have one team member lightly pull up on the T-handle, while another loosens the rod clamp. This will prevent damage to the pump.

Step 28



- Remove the rod clamp from the tank.

Step 29



- Use the T-handle to rotate the entire pump rod clockwise several full turns.
- ⓘ The foot valve is threaded and will screw into the base of the traveling valve, allowing you to pull the two valves up out of the well together.
- Keep turning until the resistance greatly increases. The foot valve will provide this resistance when fully screwed into the traveling valve base.

Step 30



- Use the T-handle to pull the pump rod straight up out of the well.

Step 31



- Pull the pump rod up a few feet, past the first joint.

Step 32



- Replace the rod clamp on the base of the pump.
- Tighten the rod clamp against the pump rod.

Step 33



- Make sure there is at least 6 inches of space between the joint and the rod clamp to allow yourself enough room to work. If necessary, continue pulling the rod out of the well before tightening the rod clamp to ensure sufficient spacing.

Step 34



- ⚠ Be sure the rod clamp is tightened against the pump rod.

Step 35



- Use two wrenches to loosen the joint between the top section of pump rod and the rest of the pump rod.

Step 36



- Separate the top section of pump rod from the joint.
- Lift up the top section of pump rod and remove it.
- Set the section of pump rod in a sanitary place, and remove the T-handle from the top.

Step 37



- Screw the jam nut and T-handle onto the top of the remaining section of pump rod still in the well.
- Tighten the T-handle against the jam nut.

Step 38



- Loosen the rod clamp and repeat the procedure for the next section of pump rod.

Step 39



- When you reach the final section of the pump rod, remove the rod clamp from the tank.

Step 40



- Lift the pump rod and valves straight up out of the well.
- Set the rod aside, taking care to keep the valves clean and off the ground.

Step 41 — Foot Valve



- Unscrew the foot valve from the traveling valve.

Step 42



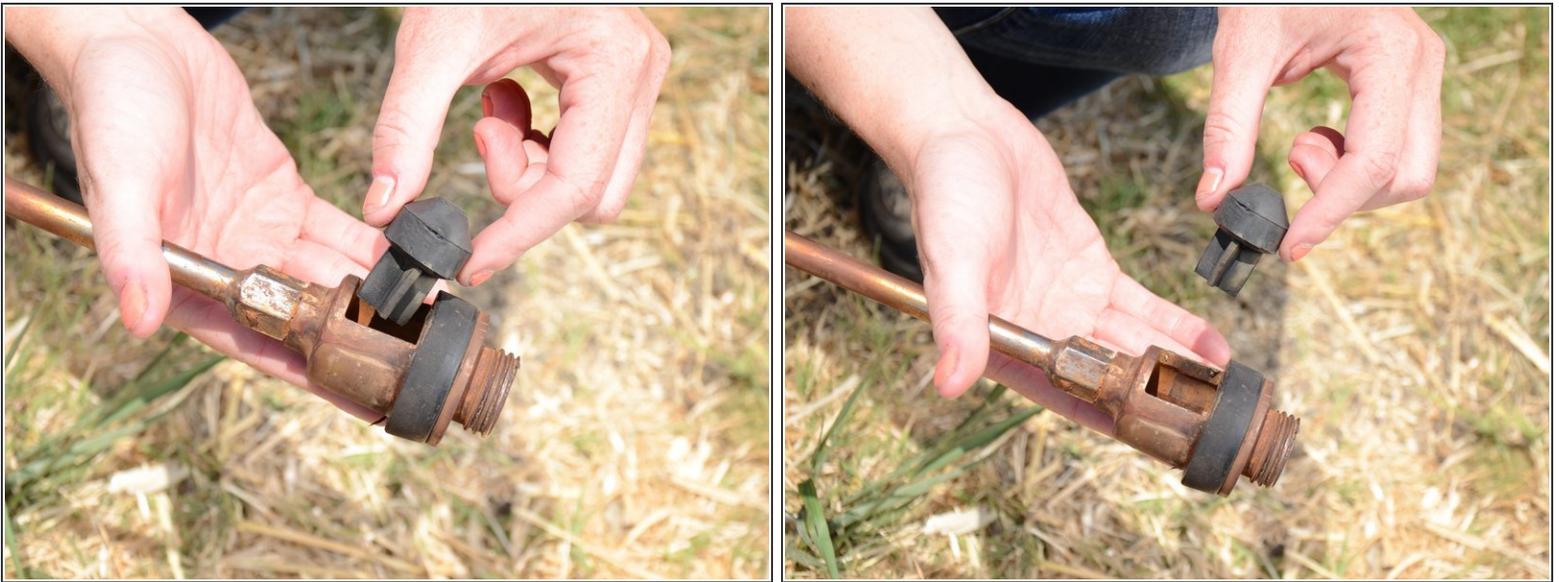
- Separate the foot valve from the traveling valve.
- Check the foot valve components for signs of wear or damage.

Step 43 — Traveling Valve



- Use a finger to push the rubber valve poppet out of the traveling valve.

Step 44



- Remove the poppet from the traveling valve.
- Check for signs of wear or damage.

To reassemble your device, follow these instructions in reverse order.