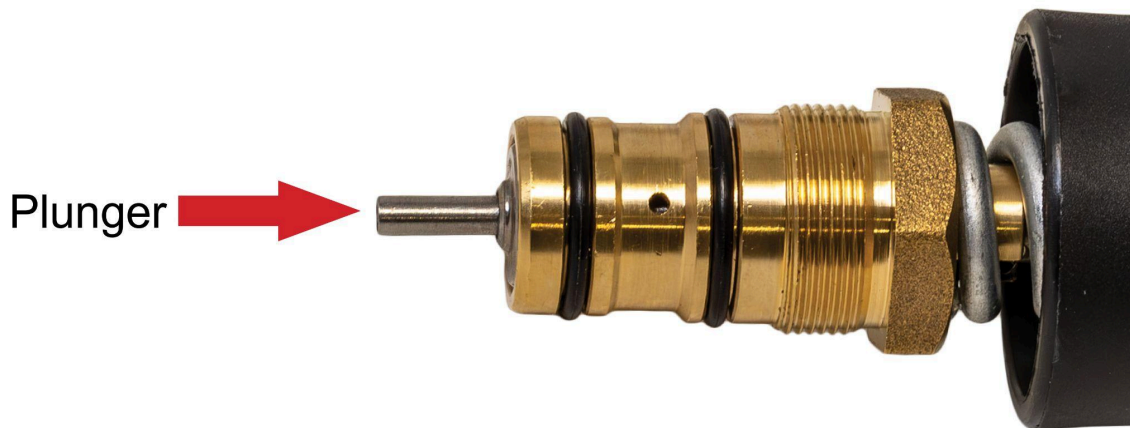


## Diagnosing Why A Pressure Washer Has Low Pressure

If you're having issues with low pressure, especially after the pump has been unused for a period of time, then the check ball may be to blame. People often rely on Simpson pump saver and conditioner ([88266](#)), which can help with low pressure. Pump saver, however, is meant to be used as a **preventative** measure when you are putting your unit into storage. Pump saver will not fix the problem if the check ball is corroded or if there is any debris around it.

### Replacing the unloader with seat:

1. To remove the unloader from the pump, the brass nut (#38) must be exposed to allow room for a wrench. To do this, turn the black knob (#44) counterclockwise until it stops.
2. Remove the complete unloader by turning the unloader's brass nut (#38) counterclockwise with a 15/16 wrench until the unloader is removed.
  - a. The unloader passage is at the bottom. There is a stainless-steel unloader valve base seat (#29). Underneath the seat is a stainless-steel ball bearing (#27) that sometimes gets stuck and prevents the pump from producing pressure.
  - b. If the ball bearing is not severely corroded into the seat, you can use compressed air to dislodge the ball bearing without removing the seat. Be sure to wear eye and hand protection for this step.
  - c. If removing the seat is required, you will need to turn the seat (#29) counterclockwise with a tool that has a very tight 3MM fit within the unloader seat.
3. Verify that the plunger will push in and out easily without much effort by pressing on it gently. If it is stuck, tap it gently to free it up and then lubricate it with a penetrating oil. If the plunger is not stuck, the next step is to see if the steel ball is stuck.



4. You will need to remove the unloader seat (#29) from the brass head and remove the ball bearing (#27) to check for corrosion or debris that could be causing the ball bearing to get stuck in the unloader seat.
  - a. There is no tool for removing a seat, so we made one from a ½ inch hexagon shaft chisel by grinding down the end to the 3MM required. We used this chisel so we could get a wrench on the tool to remove the seat from the pump.



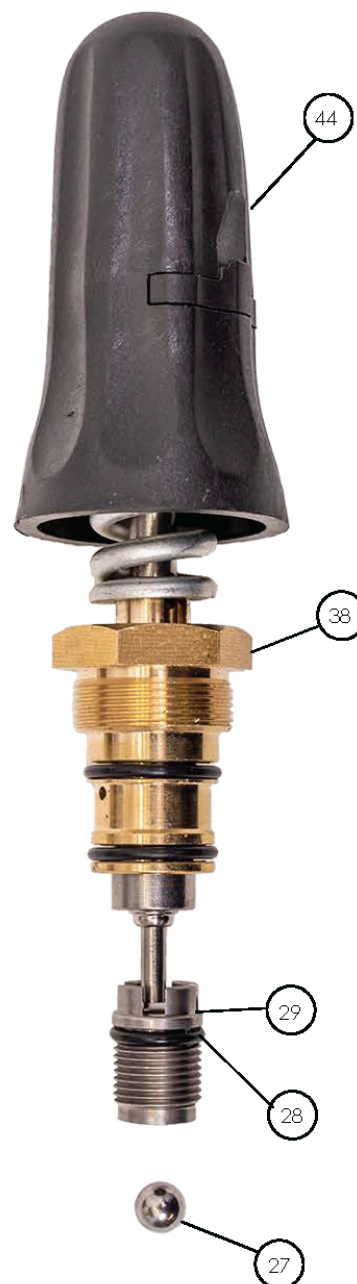
5. Clean out any debris or corrosion from the unloader valve passage before starting the reassembly process.
6. Install the stainless-steel ball bearing (#27), base seat and o-ring (#28 and #29) back into the brass manifold by applying a thin coat of grease on the o-ring and then torque the unloader seat to 10 ft-lb.
7. Reinstall the complete unloader assembly (#93) by applying a thin coat of grease on the o-rings and then torque the unloader securely to 15 ft-lb.

These instructions are for unloaders with [7108752](#) manifolds.

## UNLOADER BREAKDOWN

#93

REF	PART #	DESCRIPTION
27	7105710	BALL
28	7106705	O-RING
29	7106706	UNLOADER VALVE SEAT
30	REF 93	BAUCK UP RING
31		O-RING 9X1.8
32		STEM ASSEMBLY
33		LOCK PIN
34		O-RING 5.6X1.8
35		BACK UP RING
36		O-RING 14X1.8
37		O-RING 15X1.8
38		UNLOADER VALVE CAP
39		UNLOADER SPRING
40		UNLOADER NUT
41		SET SCREW
42		SCREW
43		NUT M6
44		UNLOADER CAP
45		CAP LOCKER
93	7108747	UNLOADER KIT



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