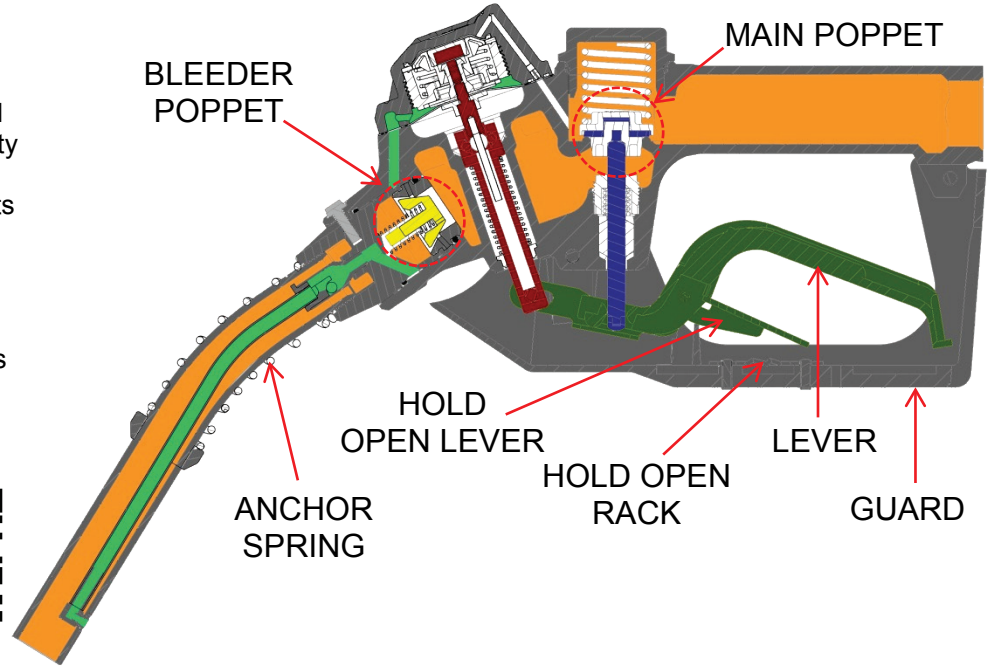


TROUBLESHOOTING GUIDE

Every OPW nozzle is flow and leak tested at the factory in accordance with third party requirements and is guaranteed to be in proper working condition when shipped. Its continued proper operation is dependent upon reasonable care in handling. Automatic nozzles should not be dragged or thrown on the ground or on paved surfaces. The automatic shut-off elements are subject to damage by such handling which can result in failure to shut off properly.

Note: You must refer to the full list of precautions listed in the [installation guide for OPW nozzles](#).



WARNING

Due to the potentially dangerous characteristics of fuel vapor and the inventory of tools needed to perform these tests, OPW recommends that all of the procedures found in this document are to be performed by trained fueling system technicians.



WARNING

Except where line pressure is needed to actively perform a test, all product lines & hoses must be depressurized and all STPs de-energized before attempting any of these procedures.

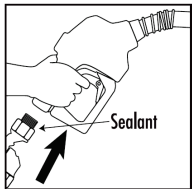


Figure 1

EXPERIENCING LEAKS AT THE INLET

What to check?

Check if there is sufficient sealant on the pipe threads (see Figure 1).

- Solution: Disconnect and apply proper sealant to the threads.

Check the nozzle for proper attachment to the hose.

- Solution: Disconnect the hose from the nozzle, reconnect the hose and tighten (see Figure 2).

Verify that thread tape was NOT used.

- Solution: You must use gas and oil-approved non-hardening thread sealant.

Note: Use of thread tape can allow for over tightening which leads to cracked inlet threads.

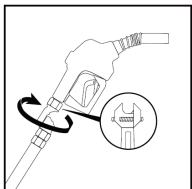


Figure 2

EXPERIENCING LEAKS OUT OF THE SPOUT

What to check?

Leaks out spout and doesn't stop with the dispenser authorized, but the lever is not engaged (the gallons dispensed readout on the dispenser may slowly increase).

- Likely Issue: Debris or foreign objects are in the main poppet (see cutaway graphic above).
- Solution: Replace nozzle.

Leaks out spout and slowly stops.

- Likely Issue: Debris or foreign objects in the bleeder poppet. (See cutaway graphic above.)
- Solution: Remove spout and clean debris. Always use new o-rings provided by OPW for replacement (see Figure 5, next page). Re-test as required.

IMPORTANT: Some amount of fuel may be present in the spout due to thermal expansion.



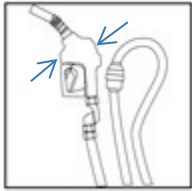


Figure 3

EXPERIENCING LEAKS DURING A FILL

What to check?

If the leak is occurring at the lever guard or stem (see *Figure 3*), there may be seal wear.

- Solution: Replace the nozzle.

If the leak is occurring at the black plastic cap on top of the nozzle (see *Figure 3*), operation will be affected.

- Solution: Replace the nozzle.

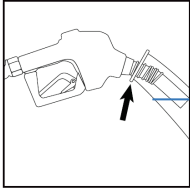


Figure 4

THE NOZZLE DOESN'T SHUT OFF OR SPLASH-BACK OCCURS

What to check?

Check the correct flow rate for the nozzle.

- Solution for LOW flow: Increase flow rate to minimum flow rate and retest. *You may need to change dispenser filter or hose.*
- Solution for HIGH flow: Reduce flow rate to maximum and retest.

****Note:** In retail applications, the tabulated flow rate is determined by Governmental & AHJ guidelines.

Confirm the maximum static hose point pressure does not exceed 50 PSI.

Check to see if the nozzle is inserted properly in the fill pipe and in the proper orientation. Liquid must cover the venturi port on the spout tip for shut off (see *Figure 4*).

- Solution: Reposition nozzle in the fill pipe.

Nozzle	Minimum Flow Rate	**Maximum Flow Rate
11A or 11B	3 GPM	10 GPM
7H	5 GPM	30 GPM

Check the spout o-rings to make sure they are not cut or missing (see *Figure 5*).

- Solution: Remove the spout to replace o-rings. Re-test as required.

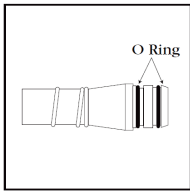


Figure 5

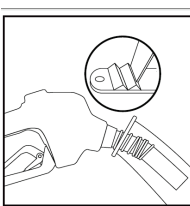


Figure 6

THE NOZZLE SHUTS OFF EARLY (PREMATURE SHUT OFF)

What to check?

Check the flow. The flow may be faster than the fill pipe allows.

- Solution: Reduce the flow rate by using a lower clip position (see *Figure 6*).

Make sure spout and/or venturi is not bent or damaged (see *Figure 7*).

- Solution: Replace spout & re-test as required.

Make sure the nozzle is properly inserted in the fill pipe. Outlet end of the spout must be below horizontal or the nozzle will shut off (see *Figure 8*).

- Solution: Adjust the angle/orientation of the nozzle as needed to improve flow.

Note: To eliminate the vehicle's fill pipe geometry as the cause, test the nozzle in an approved test container. If nozzle functions properly in the approved test container, the fill pipe's geometry may be the cause of premature shut off.

Check for debris or foreign material in the venturi port.

- Solution: Remove debris & re-test as required.

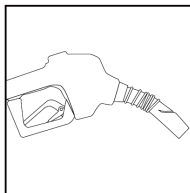


Figure 7

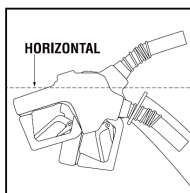


Figure 8

THE NOZZLE LEVER IS HARD TO OPEN

What to check?

Check the hose point static pressure. Maximum static pressure is 50 psi.

- Solution: With a pressure gauge at the hose point, verify system is relieving pressure.

Caution: This procedure should only be performed by a trained fueling systems technician.



SLOW FLOW AT NOZZLE

What to check?

Dirt and debris in the filter can restrict flow.

- Solution: Check dispenser filters. Replace as required.

Inspect your hoses regularly. Restrictions in the line will restrict flow rate (see *Figure 9*).

- Solution: Replace cracked or worn hoses as required.

Inspect your nozzles for external damage regularly. Damaged components must be replaced.

- Solution: Replace damaged components & re-test as required.

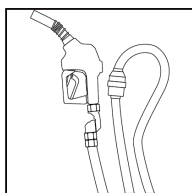


Figure 9

