

Water Pump Troubleshoot Procedure

A. Solve water pump cavitation when there is no water in the pump



Figure 1. Pump with the clear cap on top.



Figure 2. Removing or installing the clear cap.

Cavitation of the water pump can occur after winterizing, because of air in the pump.

Steps to remedy the situation in most cases:

1. The strainer and clear cap should be on the top position on the water pump, as shown in *Figure 1*. If the clear cap is on the bottom, loosen the clamps, swivel it to the top and re-tighten the clamps.
2. Unscrew the clear cap, exposing the cup that is below it. Fill the cup with water to the top of the cup. Water will run down the center of the cup, and some water remains on the outer ring.
3. With the cap off, turn on the pump for 1 second. It will pull water onto the diaphragm.
4. Fill the cup with water again.
5. Put the cap on and screw it snugly in place as shown in *Figure 2*.
6. Turn on the pump to begin water flow.

B. Cleaning the strainer



Figure 3. The filter inside the clear cap.

After using the pump for some time, the water may flow unevenly. The built-in filter in the pump may need cleaning.

1. Remove the clear cap and the strainer that is inside of it.
2. Clean the strainer under running water.
3. Reinstall the strainer and cap.

C. Adjust the pump if the pump keeps running after the faucet is closed.



Figure 4. The 5/64 allen wrench (allen key) adjustment point.

If the pump continues to run after the faucet is closed, the pressure switch may need adjustment, especially when the pump is newly installed.

1. Insert a 5/64 allen wrench/allen key into the pump in the position shown in *Figure 4*, near where the wires connect at the top of the pump.
2. While the pump is running, turn the allen wrench approximately 1/4 turn counter-clockwise until the pump shuts off.
3. Turn the water on at the faucet again and shut it off. Observe if the pump continues to run after the faucet is

turned off. If it continues to run, turn the allen wrench again approximately 1/4 turn counter-clockwise until the pump shuts off.

D. Cleaning the Water Pump Check Valve

When connected to city water with a hose, the water tank may be observed to overflow with water. Usually, in that case, a check valve in the water pump may not be fully seated.

1. Shut off the city water supply. Disconnect the hose from the trailer.
2. With water in the fresh tank, turn on the pump to flush water through the check valve.
3. Open the bathroom faucet and kitchen faucet at the same time to increase the volume of water through the valve. Turn the water on and off a few times at both faucets at the same time to get the check valve to move.



Figure 5. The check valve.

4. If the problem recurs, it may be necessary to physically remove a small obstruction at the check valve.
5. Remove the screws that hold the head of the pump to the body. Remove the head and turn it over. The check valve is the circular valve in *Figure 5*.
6. Remove the obstruction (rust particle, hair, etc.) from the valve.

7. Since the pump head has been removed, examine the seals of the pump diaphragms for any debris that may be caught in them.



Figure 6. Remove the diaphragms (the black portion in this photo).

8. Remove the diaphragms as shown in *Figure 6* and examine both sides of the diaphragms. Remove any debris that may be caught in the diaphragms.

9. Place the diaphragms back in the pump as shown in *Figure 8*. [It does not matter if the diaphragms are rotated when reinstalled.]

10. Reassemble the pump with the wires of the pump facing the back, the side with the bracket that attaches the pump to the trailer.



Figure 7. Check the diaphragms for debris.



Figure 8. Place the diaphragms onto the pump.



Figure 9. Reassemble the pump.

[These instructions are adapted from the Escape Trailer Industries Ltd YouTube video, "Water Pump Troubleshoot", of March 27, 2019. Escape Trailer Industries Ltd reserves all rights to the video and photographs.]

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