



## EXTERNAL SUPPORT RESOURCE

TITLE: COMMON TROUBLESHOOTING/ FAQ  
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### PURPOSE:

This external support resource document is to help troubleshoot common failures and problems in your pump.

### TOOLS REQUIRED:

- External Support Resources (ESR's) may need to be used in some cases

### PROCEDURE:

#### Diaphragm Pumps

1. Pump quit and won't turn back on
  - a. Follow ESR-008 to diagnose if the pressure switch has failed.
  - b. Follow ESR-024 to replace relay if it has failed.
2. Pump is leaking between the motor and lower housing assembly
  - a. Check to make sure all screws, fittings, hose clamps, etc. are tight and have no cracks
  - b. If they are, the lower housing assembly has failed – Follow ESR-003 to replace lower housing assembly.
3. Pump isn't flowing
  - a. Check the valve function by following ESR-002.
  - b. If the valves are fine, make sure there are no leaks on the inlet side of the pump. Sometimes a broken hose, broken fitting, or loose hose clamp can cause enough of a leak that the pump will not prime.
  - c. Inspect the head and fittings for cracks as they can break and cause leaks as well.
4. Pump won't build pressure
  - a. Usually caused by low flow or a leak in the lower housing assembly, can be replaced following ESR-003.
  - b. Check for leaks in outlet hoses or pump head.
5. Pump clicks but will not turn back on (7870/7970 Series)
  - a. This is a failed relay.
  - b. ESR-008 includes instructions on how to change the relay out. Any typical automotive store will carry this relay or a similar one that will work.
  - c. ESR-024 contains instructions to replace relay.
6. Pump is turning on and off quickly (Cycling)
  - a. Add a bypass valve or 'return to tank' valve into your spraying system.
  - b. If this is not possible the next best step is to increase the flow of your system with larger or more nozzles.
  - c. Lastly, the pressure may be adjusted but we typically do not recommend this as it may increase pump wear and tear therefore decreasing life.

7. Import VS. Domestic Pump
  - a. Any pump with an '-I' at the end of the model number is an import pump.
  - b. The upper housing assembly and valve plate are not replaceable with a standard domestic pump.
  - c. Pressure switches are interchangeable on all models and so are lower housing assemblies.
8. Which Pumps are NSF Certified
  - a. All models are NSF certified except import and FB3 (7871/7971) series pumps.
9. Pump is overheating (getting very hot and shutting off)
  - a. It is recommended to continuously run the pumps at a pressure less than 50 PSI.
  - b. If pump is being ran continuous at a higher pressure it can cause the pump to get too hot.
  - c. Make sure pump is not cycling (turning on and off rapidly) this can cause the motor to get very and significantly damage the pump. Refer to FAQ/Common Question #6 on assistance to fix this issue.

### Roller Pumps

10. Roller Pumps cannot be run dry.
11. Running round-up through a cast iron pump is not recommended. If you are going to do so we recommend purchasing a stainless-steel pump.
  - a. IF round up is used in a cast iron pump ensure it is thoroughly flushed and rinsed with water then coated with a light oil.
12. We sell couplers in the catalog that are used to hook up the roller pumps to a PTO shaft.
13. The 6 Roller, 7 Roller, and 8 Roller pumps are self-priming. If you have issues trying to get pump started pour water into the inlet of the pump, this can help.
14. The 4 Roller is the only pump that cannot be directly hooked up to tractor PTO shafts. If you wish to use it on a PTO a gear box will be needed. The pump requires an RPM of 1800-2600.