

Trouble Shooting Tank System

Identify problem that the user is having. Has it been an on going problem, or just occurred. What led up to the problem?

Identify pump on system. NOTE: SERIAL NUMBER IS STAMPED ON THE FOOT OF THE PUMP

It is important to know what model pump you are dealing with, is it vacuum only or vacuum/pressure and age of the pump on the system.

What type of components are on the system - (primary trap, secondary trap, final filter, vacuum relief valve, pressure relief valve and gauge), or any other component in plumbing on inlet or exhaust side of pump.

Where is the vacuum gauge located on the system: between pump and secondary, on the secondary, between secondary and primary or on the tank. This information is needed to be able to use the gauge as a tool in the trouble shooting procedure.

What type of maintenance is or has been recently performed on pump / system.

What type of oil is being used. (oil recommendation) HD10W-30 synthetic oil

How the pump is being driven. (Gas/Diesel Engine, PTO, Hydraulic, Electric, or under the hood).

Bottom line is you have to get as much information as possible about the pump and system and what has led up to the problem, there may be one or multiple problems/solutions.

Ask the user if the pump shaft turns, what sound is the pump is making. Is it a normal sound, a chattering/ clicking sound, what is the vacuum reading on the gauge, does it work in both the pressure mode and vacuum mode.

Pump Shaft is not turning: (possible problems) check motor/power source, belt/coupling failure, bearing failure, something sucked into pump, broken vane.

Pump Shaft turns, but pump makes no sound - pump vanes are stuck in rotor slot.

Pump Shaft turns, but pump has an erratic sound and will not build normal vacuum. (possible problems) pump speed - verify pump is running at the desired speed (1200 rpm thru 1500 rpm), vanes sticking, pump needs to be flushed, is specified oil being used, belt loose.

To be able to perform the flushing process the pump must produce a small amount of vacuum to be able to suck the cleaning solution through the pump.

If pump needs to be flushed - Knowing the pump on the system (is it equipped with flush valve) and how to walk them through the flushing process is very important. Be sure to drain oil catch canister on exhaust after the flushing process.

Normal vacuum gauge reading - but no vacuum in tank or at end of suction hose: Depending where the gauge is located - will help decide what component to start with in the trouble shooting process. (possible problems) blockage in plumbing on system, secondary trap ball, secondary trap needs to be drained and cleaned, primary trap ball, primary trap needs to be serviced, check suction hose for leaks.

Pump will not build vacuum on tank, with inlet and discharge ball valve closed: (possible problem) verify gauge, if pump is equipped with vacuum/pressure slide valve be sure handle is all the way out in vacuum mode, verify pump speed, loose belt on belt drive systems, pump needs to be flushed, faulty vacuum relief valve, blockage in plumbing on system on inlet side of pump, blockage in plumbing on exhaust side of pump.

Any oiling questions you will need to know what type of oil system is being used: oil dripper, oil wick pump mount, oil wick remote reservoir, is the reservoir made from CR steel, or Aluminum. Knowing the type of reservoir will determine what parts/solutions that could be a problem.

Pump using excessive or more oil than normal - (possible problem) oil reservoir too full, should be filled to 1" from top, wrong grade/type of oil, faulty vacuum relief valve, vacuum relief valve setting has been set higher.

Pump not getting normal amount of oil - (possible problem) check oil level, wrong grade/type of oil, oil lines from reservoir to pump have leak, brass fittings on pump/reservoir leak, wicks need to be changed, vent in oil fill cap plugged.

Pump - excessive heat - (possible problem) RPM of pump too fast, pump not getting sufficient oil, vacuum relief valve set too high, exhaust blockage.

Exhaust blockage or pump inlet plumbing blockage - if there has been a component/system failure that has allowed contaminant to make its way to the pump, the plumbing on the inlet side of pump and EXHAUST side of pump should be thoroughly cleaned, because if it made it to the pump it will pass through the exhaust.

Premature bearing failure on pump - (possible problem) excessive heat problems , drive belt too tight, drive coupling misalignment.