

JUROP Rotary Vane Vacuum Pump & Tri-Lobe Blower System Maintenance

JUROP blowers, rotary vane vacuum pumps, and the correlating air conveyance component systems require routine maintenance. To keep your blower or pump and system operating correctly - it is recommended to follow the below steps:

Check the Vacuum Pump's Oil – JUROP Vacuum pumps consume small amounts of oil during use and do not have a return within the system as this oil is sacrificial and should turn to vapor and or smoke during normal operations

All rotary vane vacuum pumps will have oil sight glass, tube, eye, or dipstick. If a remote reservoir is used, verify that this reservoir has oil. Always use the manufacturer's recommended oil. The oil level needs to be checked on a routine basis during the vacuum pump's daily operation

Check the Blower's Gearbox Oil Level – All Blowers have gears to operate internal lobes. These gearboxes must maintain a certain level of gear oil to ensure lubrication of the gear assemblies. Please reference the corresponding JUROP blower manual for specifications

Drain the oil catch muffler - Daily – If the oil catch muffler starts to exhaust oil, you will lose pressure and overall pump performance. This overflow of oil may backfill the rotary vane vacuum pump. When draining the muffler system each day, pay attention to the material expelling from the muffler's drain valve, this is a good way to spot any water and or debris that may have entered the vacuum pump system

Drain the secondary moisture trap - Daily – If the secondary moisture trap starts to fill, you will lose the ability to create pressure and or vacuum. Check the secondary shut-off before every use - if possible, by opening the drain valve upon the bottom of this moisture trap. If the secondary trap has any substance within it, this could end up ingested into the vacuum pump or blower and causing major pump failure. If any substance is in the secondary shut-off, this indicates the tank is full and or the tank system's primary shut-off upon your vacuum system is not working correctly

Check the primary shut-off - Daily – The primary shut-off is the first stopping point within the vacuum tank system for the product being loaded upon your vacuum tank. This primary shut-off must work correctly every time or the pump & system will fail quickly, and you will certainly have a catastrophic pump failure. Verify each day, before starting, the rubber seat is in proper shape and form, the float ball appears to be free of any debris and operational, the cage of which the float ball rests, or sits within is attached to the primary shut-off assembly correctly

Clean the Vacuum Pump & Blower Air Filter – Every blower and or rotary vane vacuum pump system should have within the system an air filter protecting the pump somewhere between the primary shut-off and the corresponding pump. This filter will prevent any airborne foreign objects from being sucked into the vacuum pump or blower through the tank and shut-off during normal operation and causing pump failure.

This air filter must be cleaned routinely if not each day before the operation of the vacuum system. Remove the stainless-steel mesh filter daily from the air filter canister and clean with either soapy water and or diesel fuel – reference manufactures manual for verification of filter location and cleaning method

Flush the Pump or Blower – During your PM service of the truck and vacuum system perform the manufactures suggest Pump Flushing Procedure. This will remove the caked oil and carbon build-up from within the rotary vane vacuum pump or blower and the corresponding components - expelling this carbon & debris build-up out of the vacuum pump or blower. Flushing the system on a routine basis will help in reducing wear as well as smoke due to the fact of eliminating varnish and or carbon build-up from within the oil catch muffler within the system of a vacuum pump

DO NOT OVER-SPEED NOR UNDER-SPEED THE PUMP!!!! – Either over and or under-speeding the blower or rotary vane vacuum pump shaft input speed will cause catastrophic pump failure and damage the entire vacuum system in time.

The vacuum system drive circuit and corresponding components should be designed, programmed and or dialed into the correct operational input rpm of the blower or rotary vane vacuum pump during initial vacuum system installation. Every blower and or vacuum pump has a different optimum operational rpm. Contact the manufacturer for the correct operational rpm for your input shaft of your blower and or vacuum pump

Grease the Driveline and all moving parts – Each day and or during your PM service before use of the truck and vacuum system it is imperative to grease the driveline, u-joints and all other grease fittings within the vacuum system and corresponding drive system

Please remember some vacuum pumps and blowers have grease fittings upon the input drive shafts – Grease when conducting this service!!!

Check ALL Drive Components of the Blower or Vacuum Pump System
During your PM service - If vacuum system incorporates a gearbox verify the gear oil level within this gearbox, clean the venting tube and or cap upon the top of the gearbox case as well as review all aspects of the gear oil level and overflow system incorporated

If vacuum system incorporates a belt and pulley to operate the blower or rotary vane vacuum pump, you must check the drive belts for wear and verify these belts are within parameters of tension referencing the manufactures suggestion during your PM service. When incorporating hydraulics, it is imperative to ensure the fluid is clean and or replaced on a routine basis as the viscosity deteriorates in the same fashion as your engine oil. Contact the blower or rotary vane vacuum pump manufacturer for the optimum hydraulic circuit, gearbox, and belt specifications for your blower or vacuum pump system

Check the Rotary Vane Vacuum Pumps' Vane Wear – Follow the manufacturer's suggested protocols for checking vane wear. All rotary vane vacuum pump vanes are designed to deteriorate or wear down. Checking the vane wear periodically will reduce the likely hood of a vane breaking and causing pump failure. Vanes should be checked for wear per the pump manufacturer's recommendation

Before each use – Visually Inspect the Entire System – Each day before use, make a visual inspection and verify your vacuum pump system has no kinked hoses and or loose connections. Verify all components appear to be in safe operating condition. Verify all drive components appear to be free of any visual defects and or debris. Clean all debris from the vacuum pump, drive system, air filter, and vacuum system shut-off tank components within the tank truck prior to any operation

Finally – Watch the Gauges – Keep a close eye on the tank level indicators upon and within the vacuum tank system. It is very important to know when your tank system is full. Even after the blower or rotary vane vacuum pump is turned off the vacuum system can and will continue to flow out of or load into the vacuum tank the liquid material within the hoses unless the correct valves upon the tank and system are shut-off and or closed. By overfilling the vacuum tank, the product being loaded may be introduced into the blower or vacuum pump.

JUROP Blowers and Rotary Vane Vacuum Pumps are engineered and designed to convey air, not liquids nor solids. Liquids and or solids conveying through the blower or vacuum pump will cause pump failure