

Service Bulletin: MART Power Washer

MART Tech Services

Essentials for Operating Your Parts Washer Pump System

MART POWER WASHER users with wash pumps 20 H.P. or larger have a vertically mounted centrifugal pump specifically engineered for the parts washing application.

Pump Description: The pump system consists of a centrifugal pump driven by a constant speed motor. The pump is unique in that the vertical design supports the bearings above the wash solution tank, thereby preventing contamination. A lip seal and air gap in the base plate further protect

the bearings. The throttle bushing above the impeller casing "seals" the pump. The clearance between the shaft and the throttle bushing is very small. Hydrodynamic lubrication from the pumped solution flow through the throttle bushing prevents metal to metal contact. Some say that vertical centrifugal pumps are "sealed" by a controlled leak. MART's newest pumps utilize a hardened stainless steel throttle bushing and shaft sleeve to reduce wear by a factor of 3 or 4 in this critical pump area.

Pump Maintenance

Bearing Lubrication:

Lubrication frequency depends on operating conditions. Normal duty calls for lubrication every 1000 hours of operation or every 6 months, whichever comes first. The Bearings are greased with Mobilith XHP222 Grease. This is a lithium complex soap type grease. Only use Mobilith XHP222 grease to lubricate your pump and motor. Use your machine hour meter to determine proper lubrication intervals. Do NOT over grease.



One of the most common causes of pump problems is **Throttle Bushing** wear.

The following are signs that you have excessive **Throttle Bushing** wear.

- **Wash pump noise or vibration.**
- **Wash pump motor trips overload.**

Wash pump noise or vibration: Too high of a wash solution temperature or a lack of solution may cause cavitation. Pump cavitation sounds like rattling or low rumbling near the pump. Make sure your wash temperature is below the recommendations in the MART Manual. Check the pump Suction Screen to make sure it is not clogged from debris that is restricting flow and causing cavitation. If your Pump Suction Screen is no longer in place or is damaged, then it is very important to replace it. This filter prevents debris from entering your pumping system, causing severe damage to the Wash Pump or clogging of the Wash Nozzles. **It is important to brush the Pump Suction Screen clean on a daily basis.**

Wash Pump trips Motor Starter Overload: The Motor Starter Overload trips by over-amperage. Increased amps are caused by increased load on pump motor. The most common causes are from excessive Wash Nozzle wear or excessive Throttle Bushing wear. It is possible that over-amperage is being caused by other reasons. For [help in trouble-shooting Motor Starter overloading](#) please visit our website or refer to your MART Power Washer Manual or call MART Tech Services.

[Pump replacement parts, Pump Upgrades and New Wash pumps are available from MART Tech Services.](#)

The MART Power Washer Manual is continuously revised and is a very useful tool for trouble shooting and for maintaining a service schedule. If you would like a new Power Washer Manual call MART Tech Services.

For MART Tech Services call:

1-800-543-6278

Monday-Friday 7:00am to 5:00pm (central)

E-mail: patrickl@martwash.com