

# Did You Know...

information you can use



**STINGRAY**  
Parts Washers

## Wash Pump System

STINGRAY® Parts Washer users with wash pumps 20 H.P. or larger have a vertically mounted centrifugal pump specifically engineered for the STINGRAY Parts Washer application.



**Pump Description:** The pump system is a close-coupled centrifugal pump driven by a constant speed motor. The pump consists of a casing, shaft, and impeller, column, base-plate, bearing frame, and bearings. The bearing frame 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. You might say that vertical centrifugal pumps are “sealed” by a controlled leak. STINGRAY’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.

**MART**  
**TECH SERVICES**  
(800) 543-6278  
[www.marttechservices.com](http://www.marttechservices.com)

**Service and Support**  
Our offices are open M-F from  
8AM to 5PM CST

## Pump Maintenance

**Bearing Lubrication:** Lubrication frequency depends on operating conditions. Normal duty calls for lubrication every 1000 hours of operation. Bearings are greased at STINGRAY 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.

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:** Listen for pump cavitation. Pump cavitation sounds like rattling or low rumbling near the pump. Too high of a wash solution temperature or lack of solution may cause cavitation. Make sure your solution temperature is below the recommendations in the STINGRAY Manual. Check the pump Suction Tube Filter Screen to make sure it is not clogged from debris and causing restricted solution flow and cavitation. If your Pump Suction Screen Filter is no longer in place or is damaged, then it is very important to replace. 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 clean the Pump Suction Screen Filter daily.**

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(Wash Pump System, continued)



**Wash Pump trips Motor Starter Overload:** The Motor Starter Overload trips by over-ampereage. 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-ampereage is being caused by other reasons. For help in

trouble-shooting Motor Starter overloading please refer to your STINGRAY Parts Washer Operator's Manual or call MART Tech Services.

**Pump replacement parts, Pump Upgrades and New Wash pumps are available from MART Tech Services.**

The STINGRAY Parts Washer Operator's Manual has recently been revised and is a very useful tool for trouble shooting and for maintaining a service schedule. If you would like to buy a new Parts Washer Operator's Manual call MART Tech Services.

Let us know if you would like a copy of a previous service bulletin or would like to have your service bulletins faxed or e-mailed to a specific person.

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