



ASC – Cutter System for A-Series Non Clog Pumps

O & M Addendum

3 Pages

Description

The Cutter System is a modification offered on the standard HOMA A-Series non-clog pumps. This accessory is field retrofit-able or can be ordered with new units. The cutter assembly is a set of high-grade carbide cutting knives which are mounted in the eye of the impeller. The two knives rotate with the impeller and work in conjunction with a stationary knife mounted on an adjustable cutter plate bolted to the suction flange. Adjustment of the two cutting surfaces is accomplished with setscrews located in the cutter plate.

Uses

The ASC Cutter System has been used successfully in many applications where standard non-clog pumps required a high level of routine pump maintenance for removal of debris. The most common applications are collection systems for hospitals, prisons and industrial complexes. Specialty services such as rendering plants, fish processing and farm waste are also successful application of the HOMA ASC pumps.

Pump Installation

If your pump has been equipped from the factory with the ASC cutter system, little needs to be done to prepare the application. The standard auto coupling provides for suitable installation and no special clearances are required. The cutter clearance is factory pre-set to .020" to achieve the best general use performance. The setting should be checked prior to running as shipping can cause the setting to change. If adjustment of the cutter is necessary, follow the instructions below.

Performance

There is some reduction in pump performance due to the cutter mechanism in the flow path. While total head capability is not compromised, a slight flow reduction is noted as head is dropped. Contact the factory to obtain a corrected performance curve.

Conversion and Cutter Installation

If you are retrofitting an existing non-clog pump follow steps 1 – as noted. A conversion kit should contain a new impeller with cutters, cutter plate, Volute O-Ring, Impeller Bolt & Clamping Disk and cutter bolts & set screws.

- 1 **CAUTION!** - Prior to pulling pump and performing any work, be sure pump is locked-out using all necessary safety precautions.
- 2 Remove bolts, which secure the pump volute and pull volute from motor assembly.
- 3 Secure Impeller with blocking or use air ratchet to remove impeller bolt. Withdraw the bolt and clamping disk and remove impeller. Be sure to retain the shaft key.
- 4 Clean the impeller bolt threads and remove any oils or Loctite residue.
- 5 Coat the shaft with lubricant and install new cutter impeller and shaft key.
- 6 Loctite the new bolt using Red Loctite #262 and install disk and bolt to proper torque specifications.
- 7 Reinstall the pump new volute using a new O-ring. Lubricate the o-ring with mild soap to ease installation.
- 8 Note: the new volute will have suction area machined away to allow the cutting plate to be mounted close to the impeller inlet.
- 9 Install set screws in Cutter Plate and mount plate with four mounting bolts. Mounting bolts should be installed using Red #262 Loctite.
- 10 Adjust the setscrews to achieve the desired clearance. Standard clearance is .020". In high rag service, the clearance may be set to .010" to achieve maximum cutting.

NOTE! Be sure to rotate the impeller and check both cutter clearances. Slight variations may exist in the location of the two impeller knives.

Maintenance

Other than in high abrasive service, the setting of the cutters will not require any routine maintenance. Frequency of service will vary with abrasive content and hours of operation. A proper maintenance schedule must be developed by routine inspection of the cutters.

Torque Specs

Bolt Size	Assembly Hardware	Impeller Bolt
10 mm		25 ft/lbs.
16 mm	80 ft/lbs.	108 ft/lbs.
20 mm	150 ft/lbs.	210 ft/lbs.