



TECH BULLETIN

070
3/95

Published regarding engineering changes and improvements

SUBJECT: Maximum Performance - 2SF and 4SF

RPM: It is important to operate the system within the pump RATED RPM. The 2SF pumps are rated at 1725 RPM (Electric) or 3450 RPM (Electric or Gas) and the 4SF pumps are rated at 1725 RPM (Electric) and 3200 RPM (Gas). Most engines have a 3600 RPM rating. Running beyond these rated pump RPMs can result in added stress to the drive-end and premature failure of an item which normally would provide years of service.

DISCHARGE PRESSURE: It is important to *operate the system within the pump RATED MAXIMUM DISCHARGE PRESSURE*. The standard 2SF is 1200 PSI, the “H” version is 1500 PSI, the “S” version is 2000 PSI and the “Z” version is 2500 PSI. The 4SF “H” was 2500-3000 PSI and the “S” version is 3000-3500 PSI.

PRESSURE GAUGE: It is important to mount your pressure gauge on or very close to the discharge manifold of the pump to receive the most accurate pressure reading. Mounted downstream of the chemical injector or near the gun or nozzle will not provide head pressure and after prolonged operation, could result in undue stress to the pump. Incorrect pressure readings from an improperly placed pressure gauge can result in excessive pressure loads to either the manifold or the drive-end of the pump.

PRESSURE UNLOADER/REGULATOR: Both the 2SF and 4SF have specially designed unloaders. The 7500S and 7600S operate within the pump specifications and maximize pump life. Use of other unloaders should be carefully reviewed before installation and use. Some regulating devices have high pressure spikes when in the by-pass mode. To assure proper operation of the unloader/regulating valve, be certain to include the 5-10% by-pass for the regulating device in the nozzle calculation. This by-pass is essential in minimizing pressure spikes.

CHEMICAL INJECTORS: The standard chemical injector for the 2SF is 7193 and for the 4SF is 7194. The orifices in these chemical injectors are designed to be used with a standard 30-50 ft. high pressure hose. As the hose length increases, additional back pressure can be created and the chemical orifice must change accordingly, to enable chemical draw. With a longer 100 ft. hose, it may be necessary to change to the 7192 on the 2SF pump. **Be aware of the increased pressure drop across the injector with this change and include this in your high pressure nozzle calculation.**

CAT PUMPS
Technical Services Department

Rev. 06/04