



W.S. Darley & Co.

Fire Pump Division

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TECHNICAL BULLETIN

1202510

TITLE: BEST PRACTICES FOR FRONT MOUNT PUMPS

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Driving a fire pump off the front of an engine is a well established means of powering the pump, dating back decades. Due to changes in engine design, as well as factors intrinsic to front mount applications, special steps should be taken to ensure a safe and reliable installation.

Darley now recommends all front mount applications be driven by a torsionally damped driveshaft, such as the ISO-TEC brand manufactured by Dana and sold through Machine Service and other driveline suppliers. Machine Service can be contacted at 920-339-3000 or through their website at <http://www.machineservice.com/isotec.htm>.

These torsionally damped driveshafts provide two benefits. First, the elastomer joint absorbs the torsional vibration caused when each cylinder fires. This will reduce the knocking or clanking noise that comes from the pump transmission when the truck is at an idle or at engine speeds below around 1000 RPM. Second, the shaft critical speed is significantly reduced, allowing for safer operation with less chance of operating in a condition of resonance.

Failure to use a torsionally damped driveshaft may lead to sudden catastrophic driveline failure due to either cumulative damage caused by torsional vibration or due to operating at a resonant frequency.

All driveshafts that will be rotating when the vehicle is stationary should be equipped with guards. Please refer to installation instructions when installing drivelines.

Please direct any questions regarding this bulletin to our engineering office at 800-634-7812 or 715-726-2650.

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