FIRE PUMP PRIMING SYSTEM FOR MANUAL PUMP

A Trident Model (#31.001.17) air operated priming system will be installed. The unit will be of all brass and stainless-steel construction and designed for fire pumps of 1,000 GPM (3,750 LPM) or less. Due to corrosion exposure no aluminum or vanes will be used in the primer design. The primer will be two-barrel design with ¾” NPT connection to the fire pump.

The primer will be mounted above the pump impeller so that the priming line will automatically drain back to the pump. The primer will also automatically drain when the panel control actuator is not in operation. The inlet side of the primer will include a brass ‘wye’ type strainer with removable stainless steel fine mesh strainer to prevent entry of debris into the primer body.

Performance, Safety, and NFPA Compliance

The priming system will be capable to a vertical lift to 22 inches of mercury and will be fully compliant to applicable NFPA standards for vertical lift. The system will create vacuum by using air from the chassis air brake system through a two-barrel multi-stage internal “venturi nozzles” within the primer body. The noise level during operation of the primer will not exceed 75 Db.

Air Flow Requirements

The primer will require a minimum of 13.2 cubic foot per minute air compressor and will be capable of meeting drafting requirements at high idle engine speed. The air supply will be from a chassis supplied ‘protected’ air storage tank with a pressure protection valve. The air supply line will have a pressure protection valve set between 70 to 80 PSIG.

Primer Control

The primer control will have a manually operated, panel mounted “push to prime” air valve; which will direct air pressure from the air brake storage tank to the primer body. To prevent freezing, no water will flow to and from the panel control.

Power Requirements

To reduce the electrical power requirements on the fire apparatus the priming system will be air powered. The system will not require annual tear-down and maintenance, an electric motor or solenoid, electrical wiring, lubrication, belt drive, or clutch assembly.

Warranty

The primer will be covered by a five (5) year parts warranty.