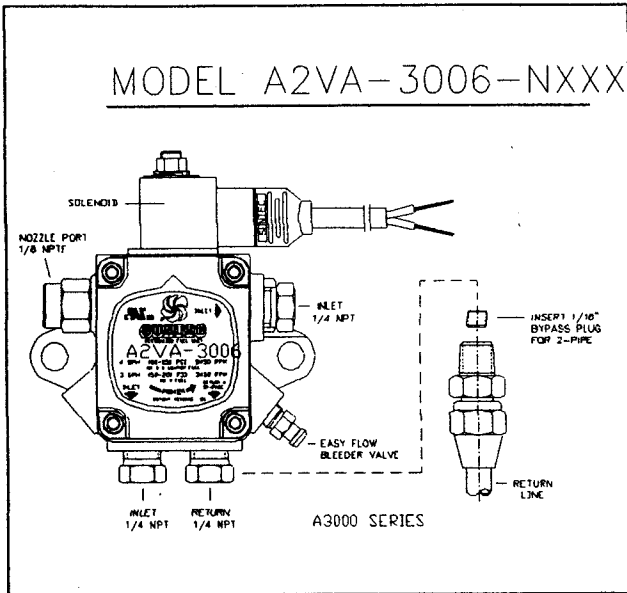


A-3000 SINGLE STAGE FUEL UNITS 1725 RPM BLACK LABEL 3450 RPM WHITE LABEL



Important Information

Caution: This product must be installed, adjusted and started only by a qualified service technician: an individual or agency, licensed and experienced with all codes and ordinances, who is responsible for the installation and adjustment of the equipment. The installation must comply with all local codes and ordinances and with the National Fire Protection Standard for Liquid Fuel Equipment, NFPA 31 (or CSA B139-M91).

Caution - Pressurized or gravity feed installations must not exceed 10 P.S.I. on inlet line or return line at the pump. A pressure greater than 10 P.S.I. may cause damage to the shaft seal.

GENERAL INFORMATION - ALL SYSTEMS

Long or oversized inlet lines may require the pump to operate dry during initial bleeding period. In such cases, the priming may be assisted by injecting fuel oil into the pump gearset. Under lift conditions, oil lines and fittings must be air tight. To assure this, "Pipe Dope" may be applied to both the used and unused inlet and return fittings. **DO NOT USE TEFLON TAPE ! DO NOT USE COMPRESSION FITTINGS !**

MOUNTING POSITION - Model A-3000 series fuel units may be mounted in any position.

VACUUM CHECK - A vacuum gage may be installed in either of the 1/4" inlet ports, whichever is convenient. The A-3000 series fuel unit can be used where the vacuum does not exceed 6" hg. single pipe and 12" hg. two pipe. Running vacuum is the total of all pressure drops from the tank to the inlet of the pump.

ONE - PIPE SYSTEM - (NO RETURN LINE)

DO NOT INSTALL BYPASS PLUG! Connect inlet line to pump inlet. Start burner. Arrange primary burner control for continuous operation during purging. Open easy flow bleed valve 1 turn CCW. Bleed unit until all air bubbles disappear - **HURRIED BLEEDING WILL IMPAIR EFFICIENT OPERATION OF UNIT.** Tighten bleed valve securely.

TWO- PIPE SYSTEM-

REMOVE 1/16" BYPASS PLUG FROM PLASTIC BAG ATTACHED TO UNIT. Remove 1/4" plug from return port. Insert bypass plug up inside return port (see illustration above) and tighten. Attach return line and inlet lines securely. Start burner - air bleeding is automatic. Opening Easy Flow Air Bleed Valve will allow a faster bleed if desired. Return line must terminate 3-4" above supply line inlet (inside tank). Failure to do this may introduce air into the system and could result in loss of prime.

A -3000 CIRCUIT OPERATION-

The A-3000 has a unique circuit that contains two separate cut on and cut off mechanisms. The first is the cone valve - diaphragm valve circuit that is used in the A-70 Models. The second is the solenoid bypassing circuit which can be used to achieve cut on and cut off at full operating speed. The cone valve - diaphragm valve gives a high speed cut on regardless of type of control used. The solenoid bypassing circuit provides cut off at full operating speed regardless of which type of control is used.

The pump circuit contains a positive displacement involute gear set and four controlling valves. The sequence of operation is as follows: The fuel from the gear set flows across the cone valve causing a pressure differential sufficient to overcome the spring force of the diaphragm valve. This causes the diaphragm valve to close and the fuel is then routed to the piston chamber. If the solenoid dumping valve is closed, when the level of this flow causes the piston chamber pressure to rise above that of the opposing spring force, the piston opens and flow passes through to the nozzle. The piston spring is adjusted such that a given nozzle pressure can be maintained while any resulting excess fuel is metered back to the inlet on single pipe, and the tank on two pipe installation. If the solenoid bypassing valve is open (not energized) when the diaphragm circuit closes, the pressure in the piston chamber remains below the level to open the piston until the solenoid valve is energized (closed). When power is removed from the solenoid, the valve opens, closing the piston at full operating speed, shutting fuel off to the nozzle..