

The pump circuit contains two positive displacement involute gear sets and one cut-on and cut-off mechanism.

The first stage gear set sucks the fuel from the line, and the second stage gear set pressurizes the fuel.

APPLICATIONS

- Fuel oil #2 and lighter, not compatible for use with blends higher than 5% biodiesel.
- Two-pipe system (one-pipe system possible).

PUMP OPERATING PRINCIPLE

The fuel from the second stage 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 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 the nozzle.

Installation :

For one pipe installation, the by-pass plug is removed from the return port and the return port is plugged. The fuel which is not required at the nozzle is then returned back to the inlet. For two pipe installation, the by-pass plug must be fitted in the return port allowing any fuel not required at the nozzle to be bypassed back to the tank, the return plug must not be reinstalled.

Bleed :

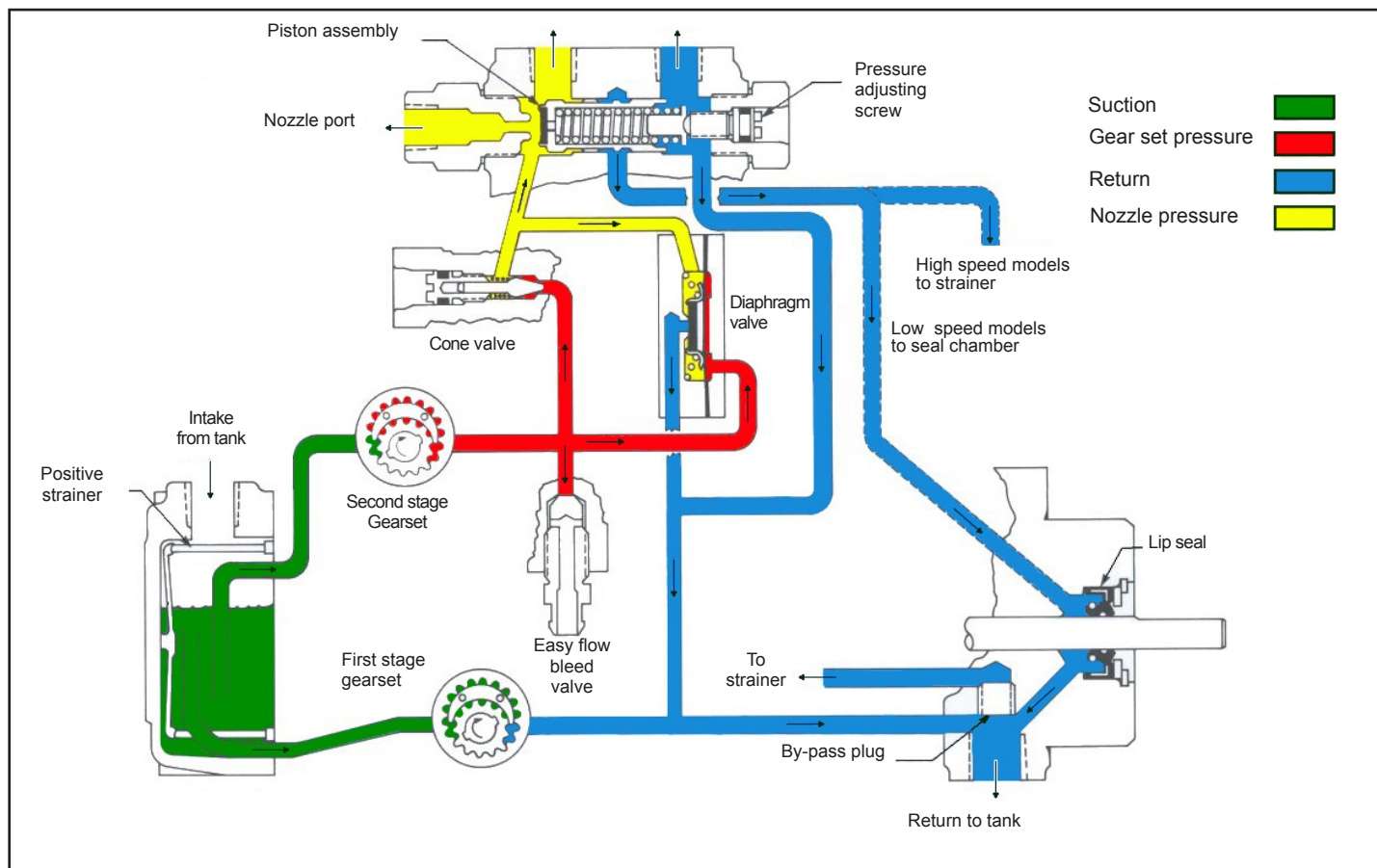
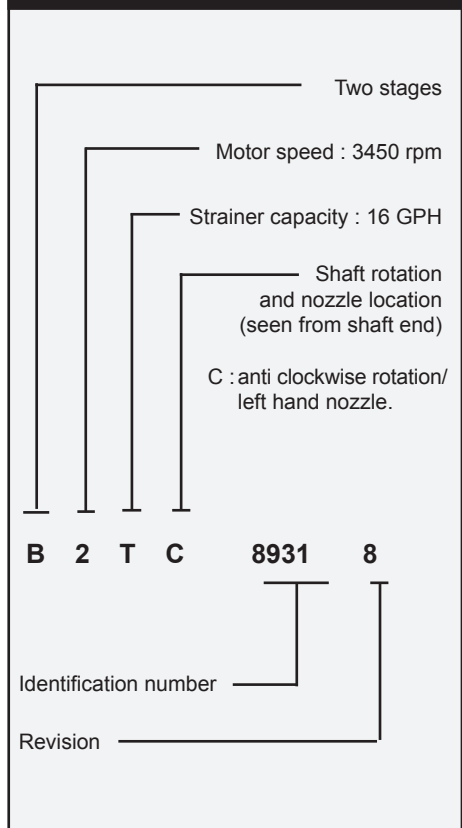
In one pipe operation, the easy flow bleeder valve must be loosened to bleed the system.

Bleeding in two pipe operation is automatic, but it may be accelerated by loosening the easy flow bleeder.

B2TC-8931

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PUMP IDENTIFICATION



General

Mounting	Flange mounting, any position
Connection threads	
Inlet	1/4 NPTF
Nozzle outlet	1/8 NPTF
Pressure gauge port	1/8 NPTF
Bleeder valve port	1/8 NPTF
Valve function	Pressure regulation and cut-off
Cut-off	Diaphragm and solenoid
Strainer	16 GHP
Shaft	5/16 in
By-pass plug	Not inserted in return port, for one pipe system. To be inserted in return port with a 5/32 Allen key for two-pipe system

Hydraulic data

Nozzle pressure range	200 - 300 psi (#2 fuel and lighter)
Delivery pressure setting	300 psi
Rated nozzle flow	23 GPH @300 psi , 3450 RPM
Oil temperature	50 - 115 F
Inlet and return pressures	10 psi max. <i>NFPA limits pressures to 3 psi max</i>
Suction height	Single pipe : 6" Hg max. vacuum, Two-pipe : 17" Hg max. vacuum, to prevent air separation from oil
Power consumption	330 W @250 ps
Rated speed	3450 rpm max.
Certified	

PUMP DIMENSIONS

