INSTALLATION and SERVICE INSTRUCTIONS

Valve Location

The valve location selected should be as clean and cool as conditions will permit. Poor locations always increase the possibility of encountering trouble, And definitely decrease the life of the valve no matter how durable the construction.

Installation

Parker-Skinner valves may be installed in any line regardless of the direction in which the line runs. The only caution to be observed is that the valve should never be mounted so that the coil is lower than the valve body (See Fig.1).

Apply a small amount of pipe dope to the male threads on screwed lint connections.

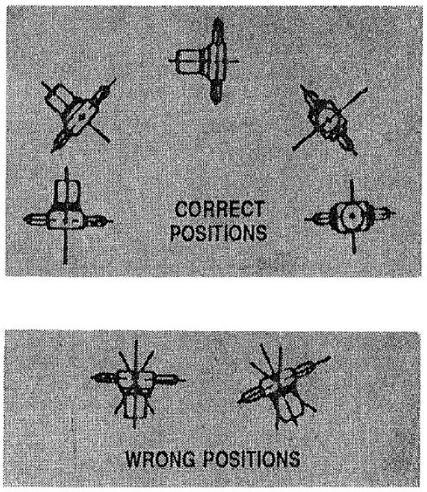

FIGURE 1

WARNING

REMOVE THE BONNET ASSEMBLY AND DIAPHRAGM BEFORE BRAZING LINE CONNECTIONS NEAR VALVE BODY.

Electrical Connections

The electrical data for the valve will be found on the coil housing. Make sure the voltage and frequency are correct. Many of the electrical codes require that each solenoid valve be protected by adequate fuses. Fuse capacities for Parker-Skinner Solenoid valves should not exceed 2 amperes for voltages below 50 volts and 1 ampere for voltages above 50 volts.

Solder all electrical connections and do not use conductors smaller than No. 18 B&S gauge.

The Junction Box or conduit connections on the coil housing can be moved to any desired position by loosening the retaining screw at the top of the coil housing and rotating the housing to the desired position. Be sure to tighten the retaining screw after this operation.

WIRING FOR MULTI-VOLTAGE COIL

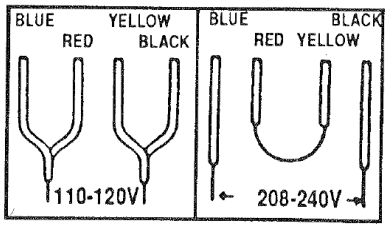

FIGURE 1A

Electrical Data *Plate supplied with all Multi-Voltage Coils has diagram (see Fig. 1A) showing the correct hook-up. For* various *electrical requirements.*

TO REMOVE OR CHANGE THE COIL

To remove the solenoid coil. first take out the retaining screw at the top of the coil housing. The entire coil assembly can then be lifted off the enclosing tube.
To reassemble. slide the entire coil assembly over enclosing tube. Put data tag on and insert screw tightly.

CAUTION: De-energize coil before removal from valve or equipment damage and or personal injury may result.

TO TAKE THE VALVE APART

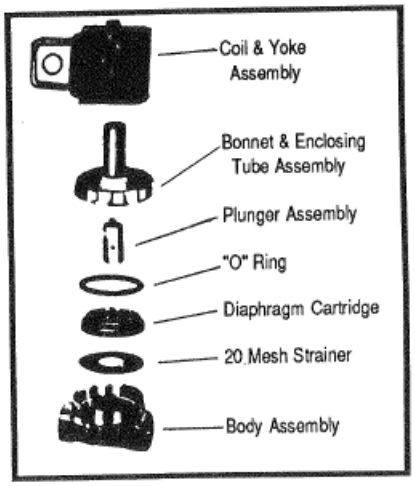

FIG. 3.

Types GP2, GP200, GP207, GP257
GP3, GP300, GP307, GP357
GP4, GP400, GP407, GP457
GP6, GP600, GP607, GP657

Disassembly -- These valves may be taken apart by unscrewing the bonnet and enclosing tube assembly from the valve body assembly. See Fig. 3. After unscrewing, carefully lift off the bonnet and enclosing tube assembly. Don't drop the plunger. The "O" ring seal and diaphragm cartridge can now be lifted out.

Be careful not to damage the machined faces while the valve is apart.

To Reassemble -- Place the diaphragm cartridge in the body with the pilot port extension *up*. Hold the plunger with the synthetic seat against the pilot port. Make sure the "O" ring is in place, then lower the bonnet and enclosing tube assembly over the plunger. Screw bonnet assembly snugly down on the body assembly.

Types GP10, GP1057
GP12, GP1257
GP14, GP1457

These valves have the plunger and diaphragm in separate enclosures. The diaphragm is between the body and bonnet.

To Remove the Diaphragm -- Remove the socket head body screws. (See Fig. 4) Next, carefully lift the bonnet assembly (upper part of the valve) off the body. The diaphragm assembly can then be removed. Be careful not to lose the diaphragm spring.

To Reassemble -- Place the diaphragm in the body so that the guide sleeve enters the mating hole in the diaphragm edge and the large metal buffer plate *is on top*. Position diaphragm spring in the center of the buffer plate. Place the bonnet assembly in position on the body. Make sure that the guide sleeve (See Fig. 4) enters the matching hole in the bonnet assembly. Replace the socket head screws and tighten uniformly.

To Remove the Plunger -- First take off the coil assembly as outlined under "To Remove or Change the Coil". Remove the two small socket head screws which hold the enclosing tube to the bonnet. Then lift off the enclosing tube, being careful not to drop the plunger.

To Reassemble -- Hold the plunger with its synthetic seat against the pilot port in the bonnet. Lower enclosing tube over the plunger making sure "O" ring seal is in place. Replace socket head screws and tighten uniformly. Reinstall coil assembly as outlined under "To Remove or Change the Coil".

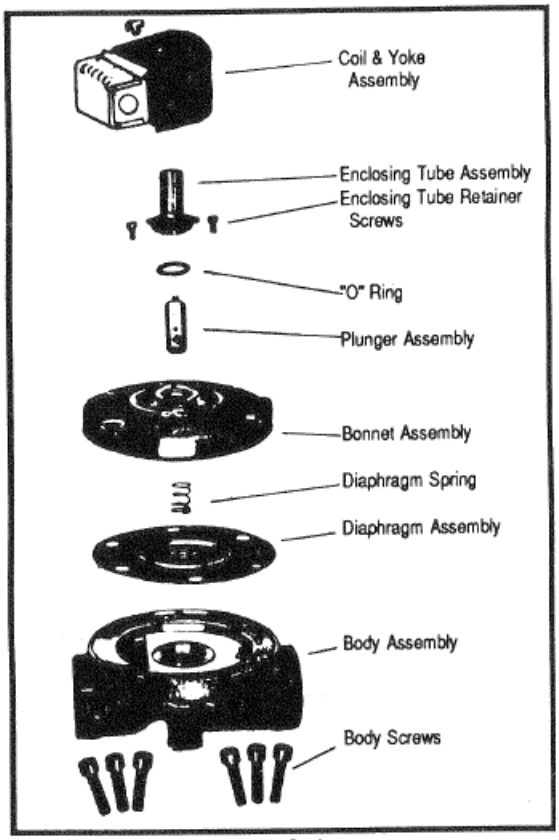

FIG. 4

-For lasting customer satisfaction

SOLENOID VALVES THAT ***SURPASS*** THEIR SPECIFICATIONS

Skinner Valve Division of Parker-Hannifin Corporation
147 W. Hoy Road, Madison, Miss. 39110

TO TAKE THE VALVE APART (Cont'd)

Types GP20, GP24, AND GP30 ---------→

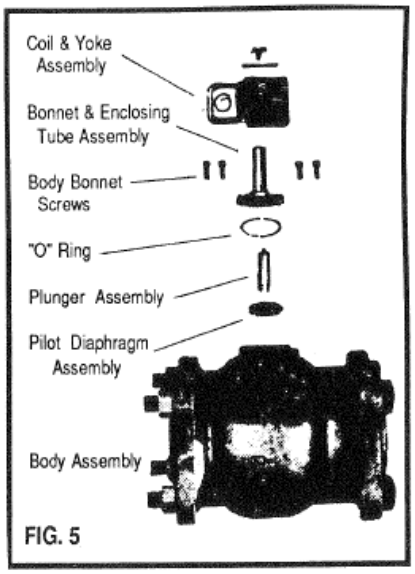

FIG. 5

Pilot Assembly -- The pilot assembly may be taken apart by removing the socket head screws which hold the body and bonnet together (See Fig. 5). After removing the screws, carefully lift off the bonnet assembly (upper part of the valve). Don't drop the plunger. The pilot diaphragm can now be lifted out. Be careful not to damage the machined faces while the valve is apart.

To Reassemble -- Place the pilot diaphragm in the body with the pilot port extension up. Hold the plunger with the synthetic seat against the pilot port. Make sure the bonnet "O" ring is in place, then lower the bonnet assembly over the plunger. Insert body screws and tighten uniformly.

Body and Spool Assembly -- Remove the body assembly from the mounting flanges. Flange seals are located in the outlet flange and inlet connection of the body assembly. If damaged replace with new "T" seals or they may be replaced with standard asbestos flange gaskets.

The internal parts may be taken out by compressing the snap ring which holds the back plate, spool spring and spool in place (See Fig. 6); Be careful not to damage the machined surfaces or spool seat while the valve is apart.

To Reassemble -- Place the spool spring over the neck on the backplate and twist to lock in place. Insert the spool through the body assembly against the port seat. Guide the back plate on to the spool pin until it stops. The snap ring groove should be clear of the back plate. Compress the snap ring and insert it into the groove. This locks the internal parts in place. Operate the spool by hand to make sure it is free and open and closes smoothly. Install flange "T" seals before bolting the body assembly to the flanges. The body assembly directional arrow must be in the direction of the flow from the inlet flange to outlet flange.

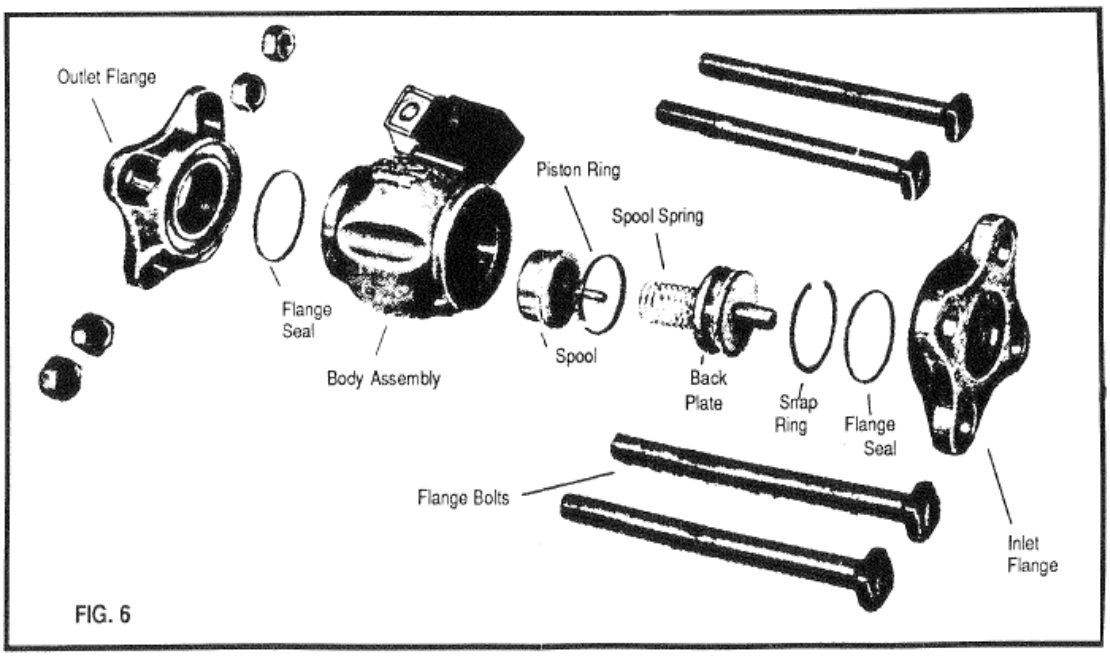

FIG. 6

UNDERWRITERS LABORATORIES, INC.

Solenoid Valve Guide

TYPE	FLUID	MAX. AMBIENT TEMPERATURE F.	MAX. FLUID TEMPERATURE F.
GP442	A, 02, W, S	115	240
GP2, GS2, GP3, GS3, GP4	A, 02, W	120	240
GS4, GP6, GS6, GP204, GP404, GP604, GP218, GS10, GP10A, GP12 GS12, GP14, GS14, GP1000, GS1000, GP1200, GS1200, GP1400, GS1400, GP200, GP250 GS200, GP300, GS300, GP400, GP450 GS400, GP600, GS600, GP650	A, G, LP, 02, W	120	225
GP207, GP307, GP407, GP607, GP227, GP327 GP427, GP627, GP527, GP1007, GP1027, GP507, GP317	W,S	120	240
GP257, GP357, GP457, GP657 GP1057, GP1257, GP1457,	W,S	120	300
GP20, GP24, GP30	A, G, LP, 02, W	120	240

#02 - No.'s 1 and 2 Fuel Oils, oils having viscosities not more than 40, SU at 100°F.
S - Steam
W - Water or other aqueous nonflammable liquids.
A - Air or nontoxic, nonflammable gases.
G - City gas supplied by public utilities.
LP - Liquefied petroleum gases.

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