LUBRIQUIP
Centralized Lubrication Systems

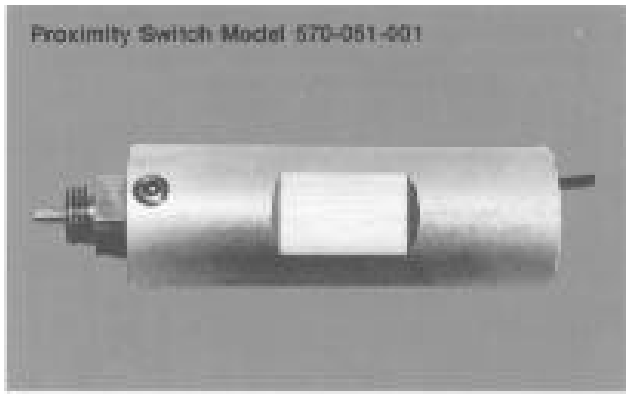
Trabon and *Manzel*
Reed Type Proximity Switches
Product Specs and Ordering

Bulletin 45306

DESCRIPTION

The Lubriquip Proximity Switch is a magnetically operated single pole, single throw reed type switch. This switch is designed primarily for use with the Lube Sentinel Monitor™, although it can be utilized to actuate any device as long as it does not exceed the 10 volt-amperage rating of the switch.

The Proximity Switch is installed in place of a piston end plug in an intermediate section on MD, MSP and MH style divider valves. With the addition of an end plug adapter, it is used on the MG and MX style divider valves. Refer to the specific system design for proper location.



SPECIFICATIONS

Material	Stainless Steel, Aluminum
Switch Rating (not to exceed any rating)	
DC	10 Watts .5 Amps, 200 Volts
AC	.01 Amps, 115 Volts
Contacts	Single Pole, Single Throw
Ambient Temperature Range	0° F to + 130° F (18° C to + 55° C)
Net Weight (Approx.)	6 ozs. (0.17 kg)

INSTALLATION

1. Loosen the three socket set screws on the reed switch and housing assembly (4) of the proximity switch and remove the magnet housing (3) from the assembly. Verify proper disassembly and assembly of components per figures 1 thru 3.

2. Select the intermediate section of the divider valve on which the proximity switch is to be mounted and remove the piston end plug from the intermediate section of the divider valve.

3. After removing the piston end plug, install a new O-ring or gasket on the magnet housing (3) and using the torque requirement as shown in Table 1, tighten it into the threaded hole.

4. With the magnet housing in position the housing assembly (4) can now be inserted. Do not secure the set screws at this time. See adjustments section of this sheet.

5. Make conduit connections as shown in figure 4. Always use 8 to 12 inch flexible conduit at the switch end in making connections. This will facilitate any adjustment or servicing as may be necessary.

Table 1: Magnet Housing and End Plug Adapter Torque Requirements

TYPE DIVIDER VALVE	FOOT POUNDS
MD, MSP, MH, MG	15
MX	35

CAUTION

Be sure the magnet (1) is in place and that a new O-ring (2) or gasket is used to seal the connection.

SERVICE AND MAINTNANCE

Frequency of inspection at periodic intervals, dependent on usage, is recommended for verification of normal operation. Limit repairs to the replacement of worn or damaged parts.

PRINCIPLES OF OPERATION

Internally, the Proximity Switch contains a magnet approximately 1/8-inch in diameter. This magnet is held against the piston of the divider valve by spring pressure. As the piston cycles back and forth, so does the magnet. In close proximity, a reed switch hermetically sealed is mounted parallel to the magnet as to feel the magnetic force as the magnet moves back and forth.

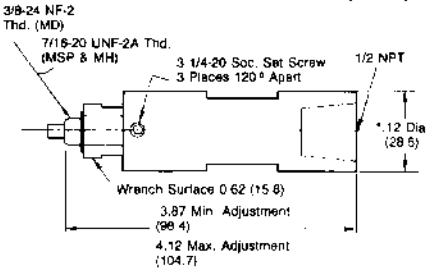
When the piston is in its back position the magnetic field is not sufficient to operate the reed switch and the contacts open. As the piston moves the magnet forward the magnetic force around the reed switch increases until it is adequate to actuate the switch, thus closing the contacts.

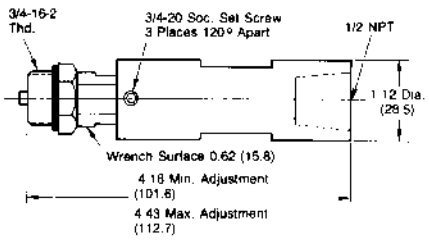
The point at which the magnet actuates the switch is adjustable and must be set at installation time, by loosening the socket set screws and by moving the switch housing back and forth until the reed switch operates properly.

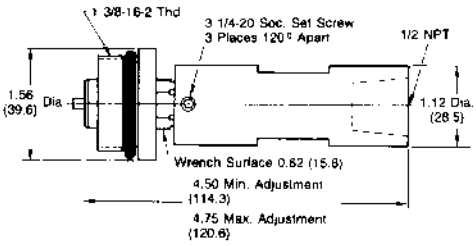
ADJUSTMENTS (See Figures 1 thru 3)

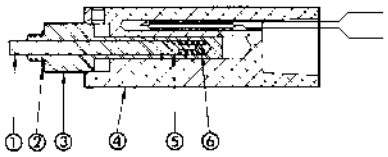
1. Disconnect Proximity Switch from the Phase Monitor or device when adjustments are made.
2. To adjust the Proximity Switch in proper relationship with the divider valve piston, the divider valve must be cycling so that the magnet is moving back and forth. This can be done by operating the system or by manually operating the divider valve with a manual test pump.
3. With the divider valve operating, connect a continuity meter across the two wires projecting from the housing assembly (4). Adjustment is made by sliding the switch housing over the magnet housing (3) back and forth slowly until the continuity meter registers a switching action.
4. Tighten the set screws and check that the Proximity Switch is operating properly.

Dimensions/ Inches (mm)



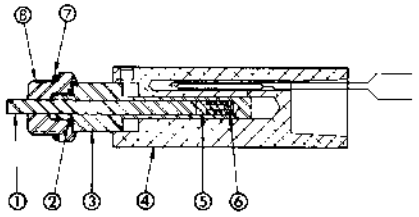






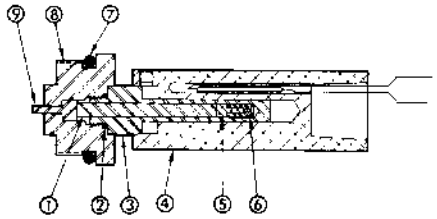
Note: Used on MH, MSP divider valves

Figure 1. Models 527-001-230, 570-051-001



Note: Used on MX divider valves

Figure 2. Model 570-049-001



Note: Used on MG divider valves

Figure 3. Model 570-155-001

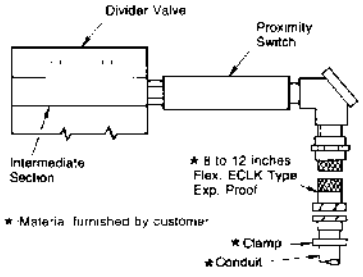


Figure 4. Typical Proximity Switch Connection

PARTS LIST (Refer to Figures 1 thru 3.)

Ref. No.	Part Number	Description	Used On	Qty. Req.
—	527-001-230	PROXIMITY SWITCH ASS'Y.	MH, MSP	1
—	570-051-001	PROXIMITY SWITCH ASS'Y.	MD	1
—	570-155-001	PROXIMITY SWITCH ASS'Y.	MG	1
—	570-049-001	PROXIMITY SWITCH ASS'Y.	MX	1
1	527-001-220	MAGNET, 2 3/16" LONG	MH, MSP	1
1	570-166-000	MAGNET, 2 1/16" LONG	MD, MG	1
1	570-225-000	MAGNET, 2 3/8" LONG	MX	1
2	527-000-240	GASKET	MH, MSP	1
2	500-132-100	GASKET	MD, MX, MG	1
3	527-001-210	HOUSING, MAGNET	MH, MSP	1
3	570-172-000	HOUSING, MAGNET	MD, MX, MG	1
4	570-168-010	REED SWITCH & HOUSING ASS'Y.	ALL	1
5	570-169-000	SPACER	ALL	1
6	570-170-000	SPRING	ALL	1
7	422-012-170	O-RING	MG	1
7	500-776-000	GASKET	MX	1
8	570-227-000	ADAPTOR, END PLUG	MG	1
8	570-226-000	ADAPTOR, END PLUG	MX	1
9	570-228-000	EXTENSION PIN, MAGNET	MG	1

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CERTIFICATE A3061 ISO 9001
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