MODEL L-5

L-5, L-5SS, LD-5, LD-5SS

HARWIL CORPORATION
541 KINETIC DRIVE, OXNARD, CA 93030
TEL: (805) 988-6800

1. The level switches are supplied with a 2" x 1" TT bushing threaded in place with 2 to 3 strips of Teflon tape, which must be intact or renewed if the bushing and switch are separated before assembly in the tank. Apply a minimum of two (2) to a maximum of three (3) wraps of Teflon tape to the male threads of the bushing. This is especially important if the unit is to be used in metal fittings where coarse threads could bind if not lubricated.
2. Thread the unit into the tank and tighten it until a good no-leak seal is obtained, and until the arrows molded onto the body casting and printed on the label are pointed vertically downward.
3. Remove the cover and test for proper switch action by applying multimeter probes to common, NO and NC terminals of microswitch while actuating the switch lever arm.
4. The unit is supplied with the adjusting spring in the relaxed condition. Leave the spring in the relaxed condition and fill the vessel until the float is submerged. If the switch is actuated, proceed with the electrical wiring. If the specific gravity of the working fluid is too low to lift the float and actuate the switch, the buoyancy adjusting feature must be used. Turn the lead screw clockwise until the switches are actuated. Lower the liquid level until the float is clear of liquid and the switch is de-actuated. Raise the liquid level again until the float is submerged and the switch actuates. If no further spring bias adjustment is required, proceed with wiring to local code.

ELECTRICAL WIRING

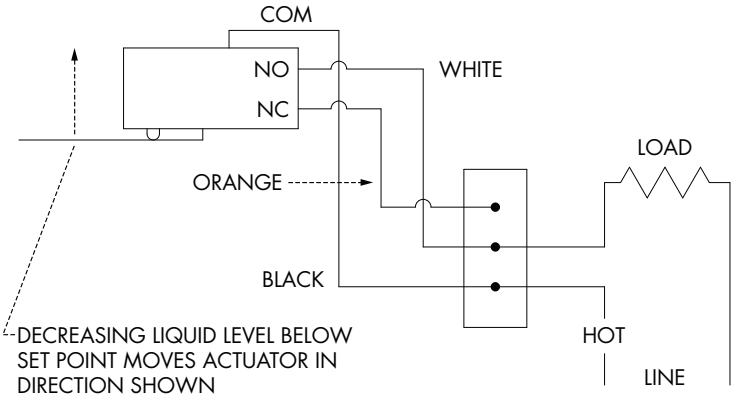
1. Models L-5 and L-5SS are supplied with Harwil strain relief cable fitting for use with round, rubber or plastic jacketed power cable.

    a. Remove gland nut and tapered rubber grommet from strain relief cable fitting and slide over cable fitting and slide over cable with gland nut going on first.

Note: Check match outside diameter of cable with inside diameter of grommet. No more than 0.020" of play should be evident.

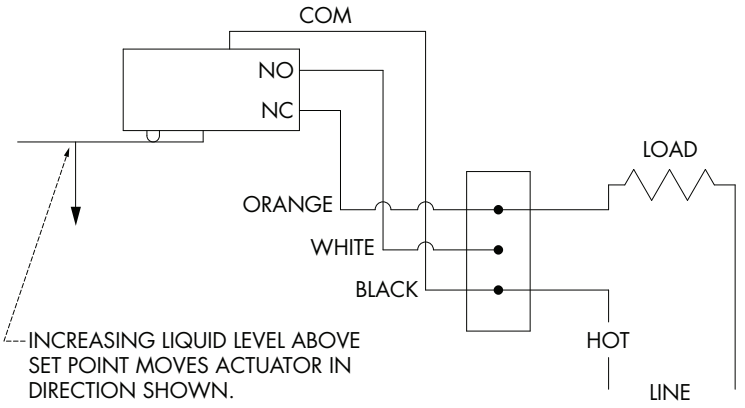
    b. Strip outer jacket of cable back 5½". Strip insulation from individual conductors approximately ¼".

FIG. 1: Wiring schematic for power applied to load when liquid level is lower than set point (power to load interrupted when liquid level is above set point).



Decreasing liquid level below set point moves actuator in direction shown.

FIG. 2: Wiring schematic for power applied to load when liquid level is higher than set point (power to load interrupted when liquid level is below set point).



Increasing liquid level below set point moves actuator in direction shown.

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c. Fork terminals are supplied with each switch. Remove from terminal strip and crimp or solder to appropriate leads.

d. Feed cable up through cable fitting and attach leads to terminal strip per wiring schematics. Fig. 1 or Fig. 2 on the previous page.

e. Push rubber grommet into conical hole in cable fitting, allowing enough cable to protrude from opposite side to allow some slack in leads attached to terminal strip. Grip cable to prevent rotation and thread gland nut onto the cable fitting to seal grommet tightly to cable.

2. Models LD-5 and LD-5SS are supplied with Harwil strain relief cable fitting for use with round, rubber or plastic jacketed power cable.

a. Repeat "1-a".

b. Strip outer jacket of cable back 2". Strip insulation from individual conductors approximately ¼".

c. Each microswitch is supplied with 3 flag slip on terminals. Remove microswitch and crimp or solder to appropriate leads.

d. Feed cable up through cable fitting and attach leads to microswitches per wiring schematics. Fig. 1 or Fig. 2 on the previous page.

e. Push rubber grommet into conical hole in cable fitting. Side cable through until end of jacket is flush with inboard end of cable fitting. Grip cable to prevent rotation and thread gland nut onto cable fitting to seal grommet tightly to cable.

3. Electrical fitting other than Harwil strain relief fitting.

a. Attach fitting to body and attach conduit to fitting and wire to local code per wiring schematics Fig. 1 or Fig. 2.

b. Microswitch actuation point may be monitored by an audible click or with an ohmmeter before connecting line power to the terminal strip or by monitoring the voltage supplied to the load through the microswitch.

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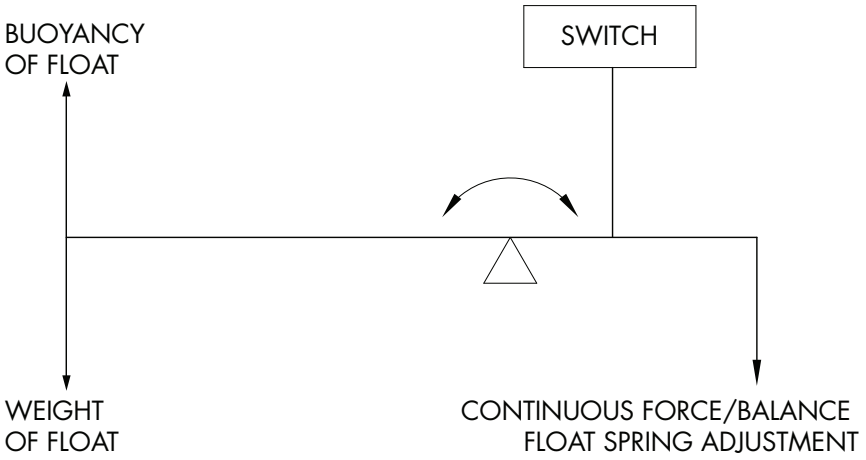
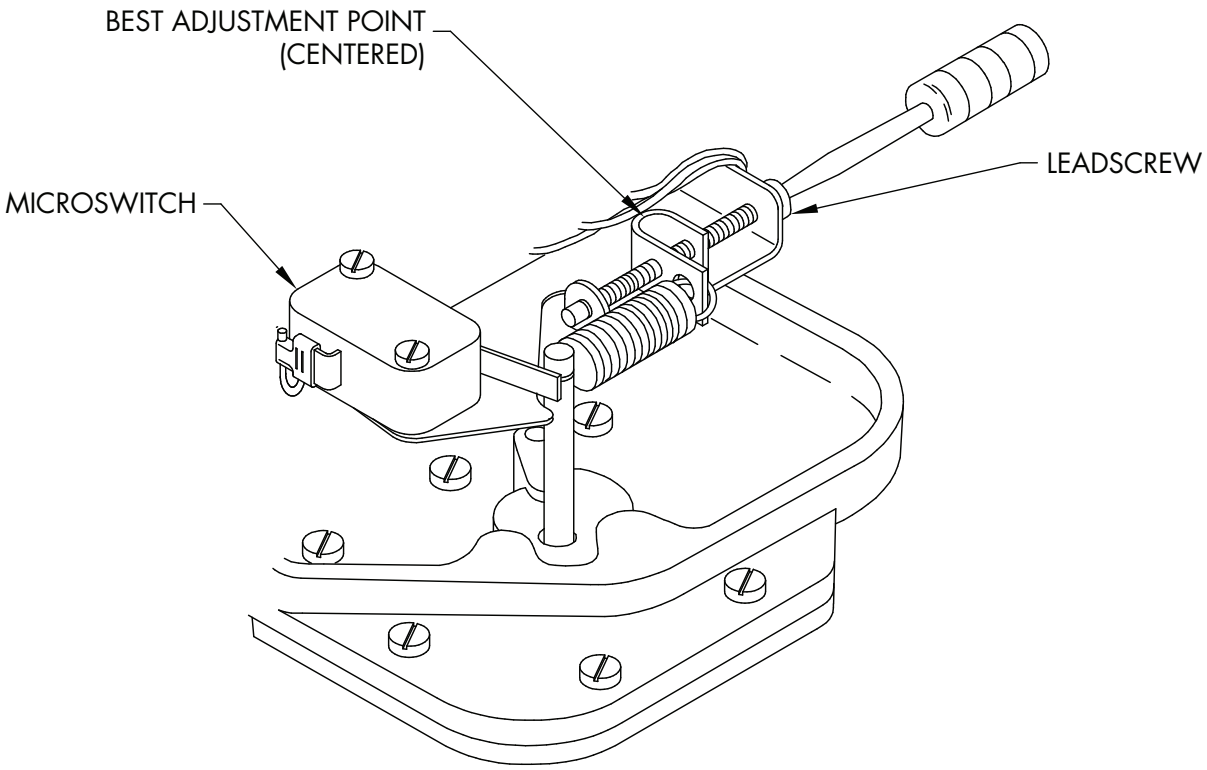
Models L-5, LD-5, L-5SS, and LD-5SS are provided with a continuous adjustable float buoyancy control to allow use in fluids with specific gravity down to 0.6.



REMOVE COVER



1. Remove cover.
2. All units are delivered with the spring in the fully relaxed condition which corresponds to the maximum specific fluid condition.
3. Insert blade type screwdriver in slotted end of adjusting screw and turn in a clockwise direction. This extends the length of adjusting spring, which in turn adjusts the float net effective buoyancy to respond to lower specific gravity fluids.

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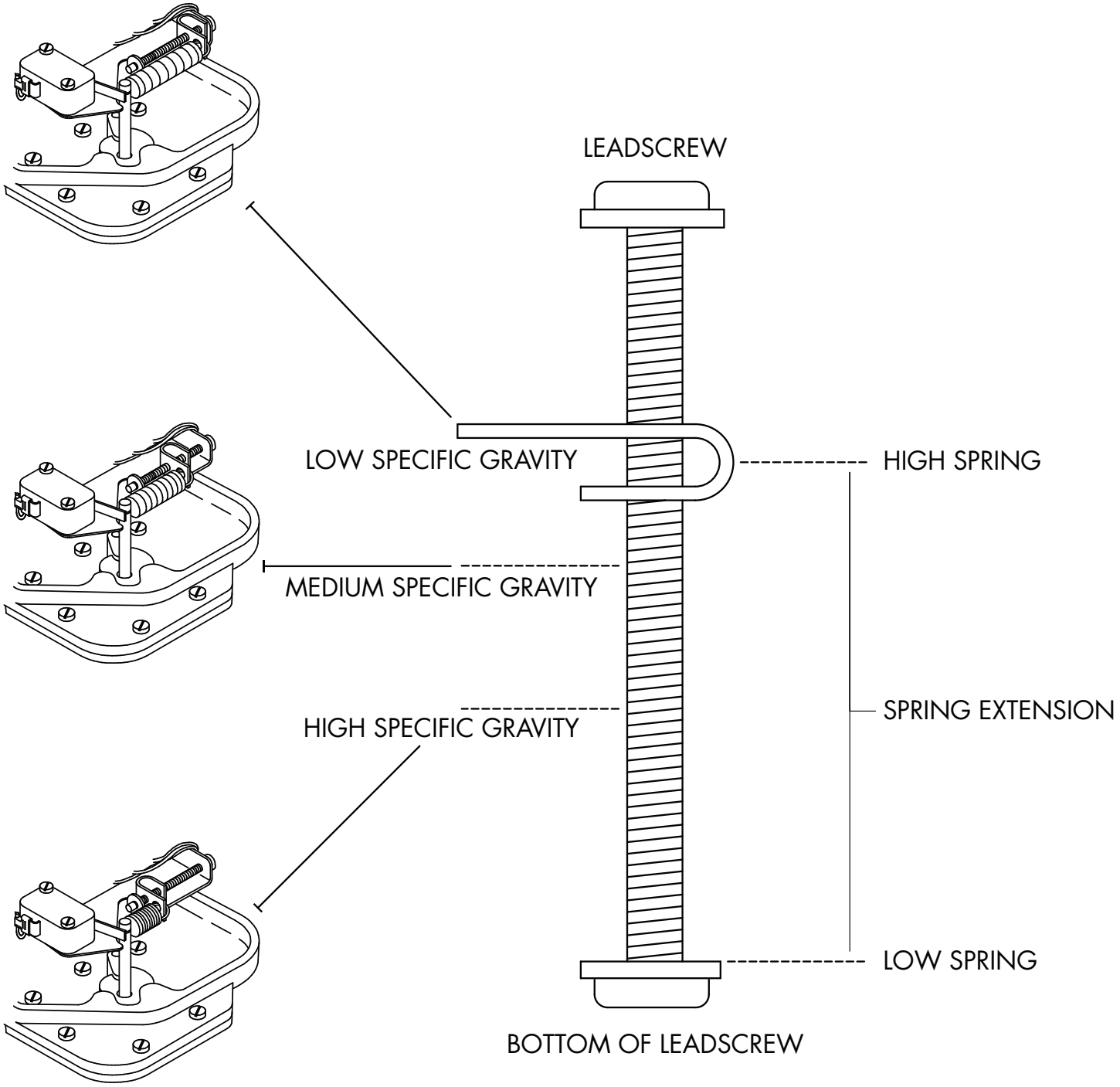
SPECIFIC GRAVITY FLUIDS



Microswitch actuation point may be monitored during the adjustment procedure detailed in (2 and 3) above by an audible click or with an ohmmeter before connecting line power to the terminal strip, or by monitoring the voltage supplied to the load through the microswitch.