

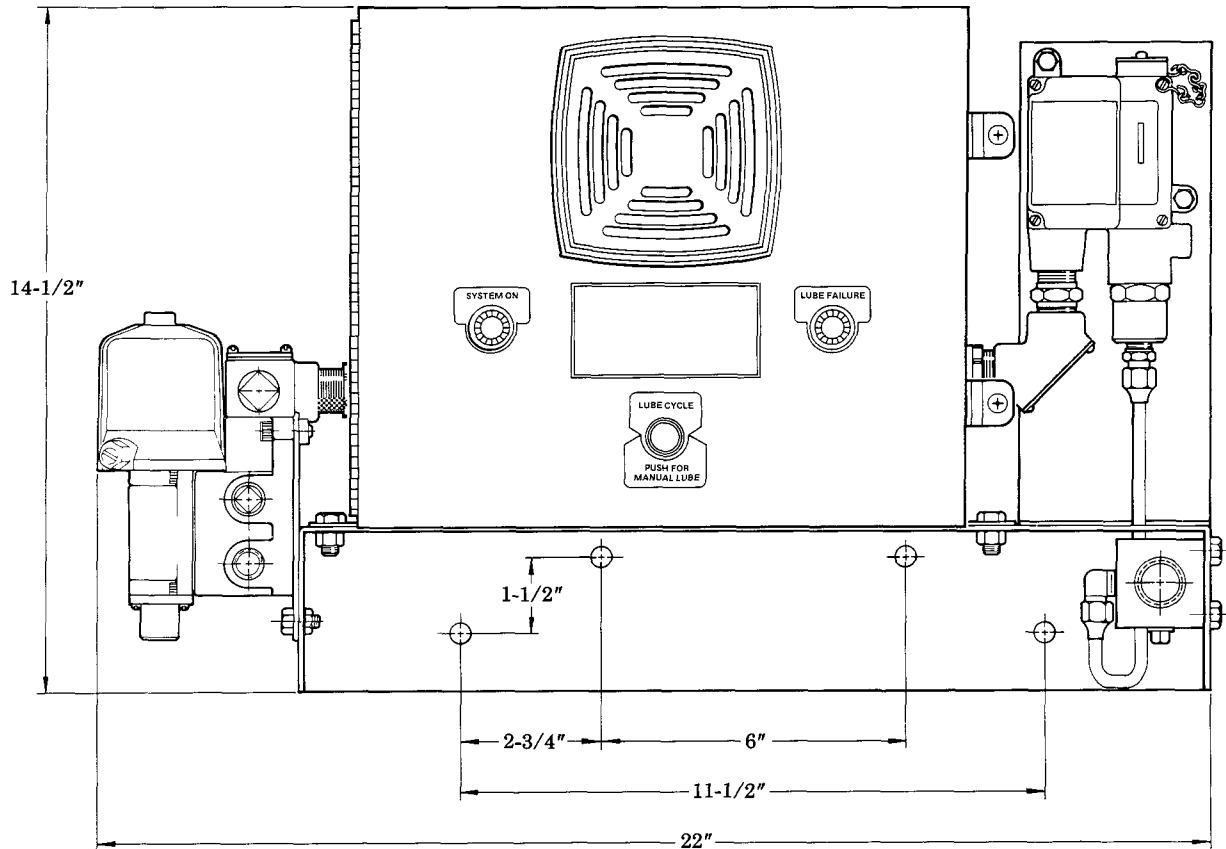
J.I.C. MASTER CONTROL PANEL

N.M.T.B.A. AND J.I.C. ST'D EGP-1-1967



Model 102951

Series "C"



DESCRIPTION

The 102951 is used on systems where airmotor-driven pumps are used. In this case, the air supply to pump airmotor is controlled through the air solenoid valve on the control panel. Venting is accomplished through an air-operated valve at the pump outlet.

ELECTRICAL SPECIFICATIONS

The 102951 is designed for use on 115 Volts, 60 Hertz, Single Phase but will operate on 95 Volts (+20%-10%), 50 Hertz at reduced speed of timing motor. Maximum power required is 110 Volt-amps. (Does not include externally connected signal devices)

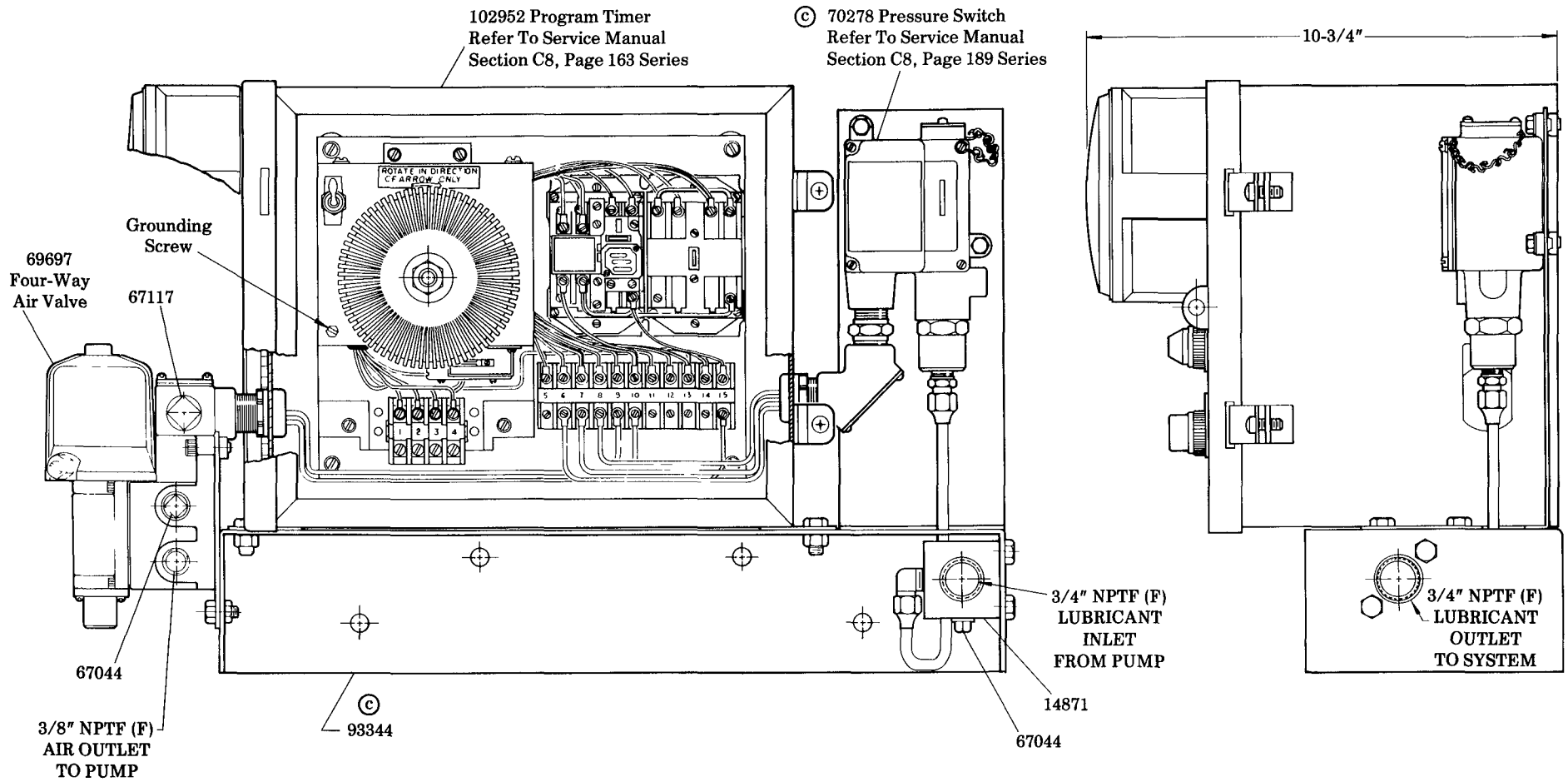
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MODEL 102951 MASTER CONTROL PANEL



OPERATION

PRE-LUBE CYCLE

When power is turned on with toggle switch in "A" position and timer switch in the normal position (switch arm not depressed) a circuit through a closed contact of the toggle switch and magnetic relay starts the pump for a pre-lube cycle.

The air solenoid valve is energized. The vent valve closes and lubricant is dispensed through supply lines to injectors.

The timing circuits of the time delay relay are energized and the time delay relay begins timing out.

In a normal operation, the injectors dispense the lubricant to the bearings and the pressure raises in the supply line to actuate pressure switch before the time delay relay times out.

The actuation of the pressure switch energizes control relay coil stopping pump. A second function of the control relay is to hold relay energized through the time switch so that when pressure vents after pump stops, relay coil will not de-energize.

The timing circuits of the time delay relay are also de-energized with the opening of the normally closed contacts of the control relay, and the time delay relay resets to zero.

Cycle timer motor rotates clip on program disc into actuating arm of timer switch to de-energize control relay. Lube cycle begins when cycle timer motor drives clip past the timer switch arm, allowing it to return to normal where time delay relay will be energized again.

Operating sequence is repeated as above with the programmed disc determining the frequency of all subsequent lube cycles.

NOTE: A pre-lube cycle cannot be initiated when power is first turned on should the clip on disc be positioned to hold down timer switch arm. In this case, the first cycle will be initiated when clip moves off actuating arm. Maximum time that clip can hold down arm is 80 seconds (a factory setting).

LUBRICATION CYCLE CONTROLLED BY THE TIMER

When power is turned on with toggle switch in "B" position, the program disc will rotate clip toward timer switch arm. When clip actuates switch, the air solenoid valve is energized. Pump starts and vent valve closes. Lubricant is delivered through supply lines to injectors.

The timing circuits of the time delay relay are energized and the time delay relay begins timing out.

In a normal operation, the injectors dispense the lubricant to the bearings and the pressure raises in the supply line to actuate pressure switch before the time delay relay times out.

The actuation of the pressure switch energizes control relay coil, stopping pump. A second function of control relay is to hold relay energized through the timer switch so that when pressure vents after pump stops, relay coil will not de-energize.

The timing circuits of the time delay relay are also de-energized with the opening of the normally closed contacts of the control relay, and the delay relay resets to zero. Cycle timer motor drives clip on program disc off of actuating arm of timer switch to de-energize control relay. Should timer switch arm be released during pumping time the auxiliary contact of the time delay relay will hold pump on until pressure reaches shut-off point.

LUBRICATION FAILURE ALARM

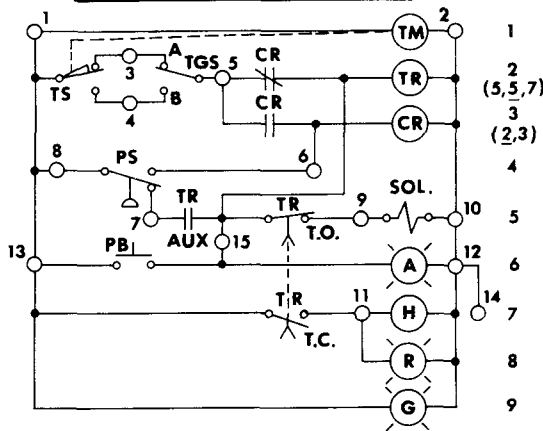
The 102951 is provided with a lubrication failure light and alarm horn. If the time delay relay should time out before pressure switch has actuated, the failure alarm circuits will be activated. Pump stops, energizing light and horn. No more lube cycles can be initiated by the cycle timer. Alarm signal will remain energized until power supply to master control panel is disconnected.

SERVICE PARTS

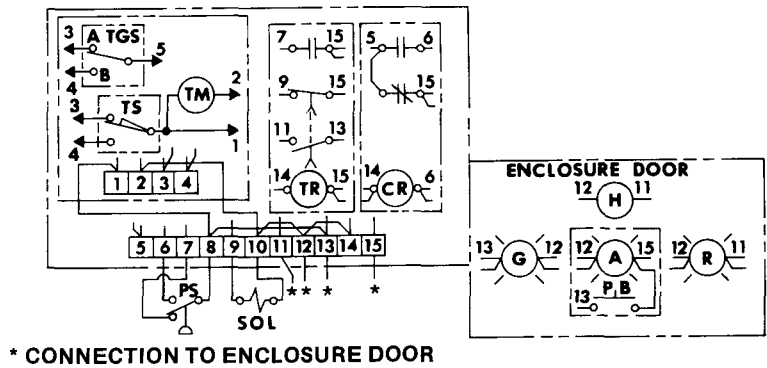
PART	QUAN.	DESCRIPTION
14871	1	Junction block
67044	2	Pipe plug
67117	1	Pipe plug
*69697	1	Four-way air valve
© *70278	1	Pressure switch
102952	1	Program timer
© 93344	1	Mtg. bracket

*Recommended service parts inventory

ELEMENTARY DIAGRAM



POSITION DIAGRAM



SEQUENCE OF OPERATION

- (1) Timer Motor (TM), line 1, and green lamp, line 9, are energized when power is on. Time Relay Coil (TR) is energized through Timer Switch (TS), Toggle Switch (TGS) and Control Relay (CR) N.C. contacts, line 2. SOL, line 5, and amber lamp, line 6, is also energized through TR - T.O. contacts, line 5. TM starts moving clip on program disc towards operating arm of TS, TR begins timing out. SOL port opens allowing air to pump, pump starts delivering lubricant through injectors to bearings.
- (2) After all bearings have been supplied lubricant, pressure raises actuating PS to energize CR coil, line 3. CR - N.C. contacts, line 2, open de-energizing TR coil, amber lamp and SOL. TR resets, pump stops and pressure vents. CR contacts, line 3, close to hold CR coil energized through TS and TGS so that CR does not drop out when PS contacts return to normal after system vents. TM actuates TS, line 2, de-energizing CR coil.
- (3) Next lube cycle begins when TS, actuated by TM, recloses TS contacts, line 2, to energize TR, etc. Sequence follows same as Steps 1 and 2.
NOTE: Sequence of operation is the same for TGS in either "A" or "B" position, however, TGS in "A" position will insure TS in position to initiate lube cycle when power is turned on.
- (4) Closing Manual Lube Pushbutton (PB), line 6 (lighted pushbutton, amber lamp), energizes TR coil, line 2. Through the PS - N.C. contacts, line 4, TR aux. contacts, line 5, close energizing SOL and amber lamp. Pump starts and services bearings through injectors, see Step 2.
- (5) If for any reason PS contacts, line 4, do not open within time setting of TR, TR will time out, opening T.O. contacts of TR, line 5, to stop pump and closing T.C. contacts of TR, line 7, to energize red lamp and horn (amber lamp remains lit), with PS closed, TR coil is energized through instantaneous contacts of TR (aux.), line 5. TR will remain timed out until line switch is opened to turn off power.

CODE	PART	DESCRIPTION
TM		TIMER MOTOR
TS	84132	TIMER SWITCH
TGS	TIMER	TOGGLE SWITCH
TR	69693	TIME RELAY
CR	69361	RELAY
SOL	69697	SOLENOID VALVE
PB		LIGHTED PUSH-BUTTON
A	69778	
H	69779	HORN
R	69757	RED LAMP
PS	70278 (C)	PRESSURE SWITCH
G	69755	GREEN LAMP

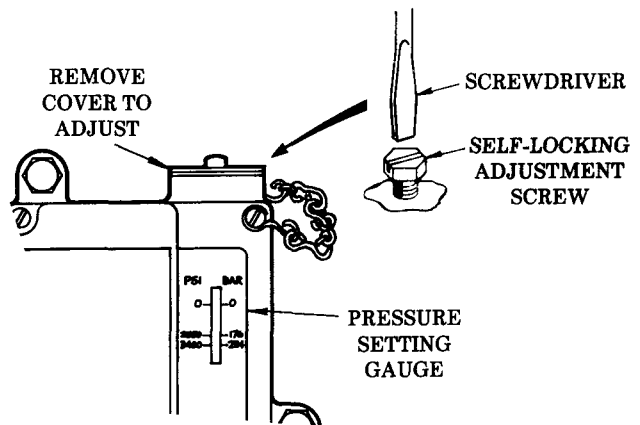
© MODEL 70278 PRESSURE SWITCH IMPORTANT

The 70278 Pressure Switch is factory set at 2500 psi for normal high pressure grease systems.

For low pressure oil systems, pressure switch MUST be reset for 850 psi.

To lower the actuation pressure turn the self-locking adjustment screw clockwise. To raise the actuation pressure turn the adjustment screw counter-clockwise.

NOTE:
Pressure switch is provided with a scale indicating pressure in "Bars" as well as lbs. per sq. in. "Bar" is the metric unit of measure for pressure.



RETAIN THIS INFORMATION FOR FUTURE REFERENCE

When ordering replacement parts, list: Part Number, Description, Model Number, and Series Letter.
LINCOLN ST. LOUIS provides a Distributor Network that stocks equipment and replacement parts.
A list of Authorized Service Departments will be furnished upon request.