

84101 ← replaced by →

U.L. AND C.S.A. LISTED

WARNING

SHOCK HAZARD. TURN POWER OFF BEFORE SERVICING.

SPECIFICATIONS

| | |
|-------------------------|---|
| Electrical | 120/230 VAC 50/60 Hz |
| Switch Ampacity | 5 amps, 120 VAC 1.5 amps, 230 VAC |
| Temperature Range | 0°F to 131°F (-18°C to 55°C) |
| Enclosure | NEMA 1 |
| Cycle Time | 20 sec. minimum to 24 hr. maximum |
| On Time | 10 sec. minimum to 1 min. 24 sec. maximum |
| Prelube On Time | 40 seconds |
| Memory Time | 3 hours |

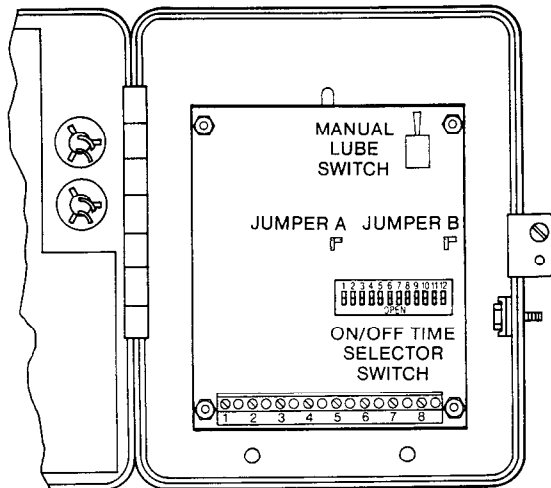


FIGURE 1

OPERATION

Model 84501 Program Timer is used to program the lubrication cycle frequency of single stroke lubricant pumps. Lube cycles will be determined by the setting on the On/Off Time Selector rocker switches. "On/Off" times should

be selected to meet system requirements (see Time Selection). During the "On" time the solenoid valve or load device (not part of timer) connected to terminals 7 & 8 is energized (amber L.E.D. will light).

FEATURES

Memory/Prelube

Timer has the capability of retaining memory for 3 hours during machine shut down or power failure. Timing is suspended during power interruptions. This feature eliminates over lubrication due to prelube (prelube occurs when power is applied to timer) when machine is frequently started and stopped.

Using two programmable jumper pins four options are available with the memory and prelube feature.

Jumper Pin A

Vertical Position - Memory On

Horizontal Position - Memory Off

Jumper Pin B

Vertical Position - Prelube On

Horizontal Position - Prelube Off

Option 1

Memory On - Jumper Pin A/Vertical Position.

Prelube On - Jumper Pin B/Vertical Position.

Prelube only occurs if power has been off longer than 3 hours.

Option 2

Memory On - Jumper Pin A/Vertical Position.

Prelube Off - Jumper Pin B/Horizontal Position.

When timer has been off longer than three hours the next lube cycle will occur after the full amount of Off Time has timed out.

Option 3

Memory Off - Jumper Pin A/Horizontal Position.

Prelube On - Jumper Pin B/Vertical Position.

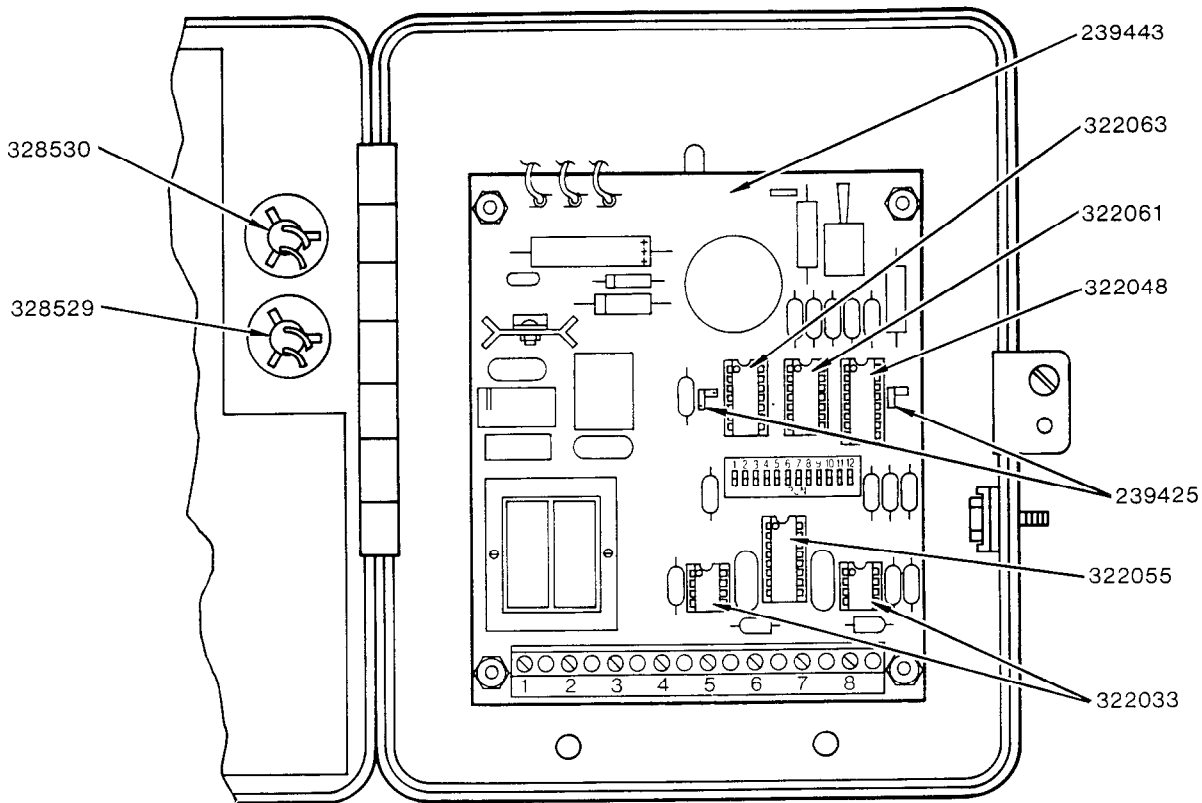
When power is applied a prelube cycle is initiated.

Option 4

Memory Off - Jumper Pin A/Horizontal Position.

Prelube Off - Jumper Pin B/Horizontal Position.

When power is applied the first lube cycle will occur when the full amount of Off Time has timed out.



SERVICE PARTS

| Part | Qty. | Description |
|---------|------|-----------------------------|
| 239425 | 1 | Jumper shunt (strip of ten) |
| *322033 | 2 | Integrated circuit |
| *322048 | 1 | Integrated circuit |
| *322061 | 1 | Integrated circuit |
| *322055 | 1 | Integrated circuit |
| *322063 | 1 | Integrated circuit |
| 328529 | 1 | Amber L.E.D. with fastener |
| 328530 | 1 | Green L.E.D. with fastener |
| 239443 | 1 | Circuit board assembly |

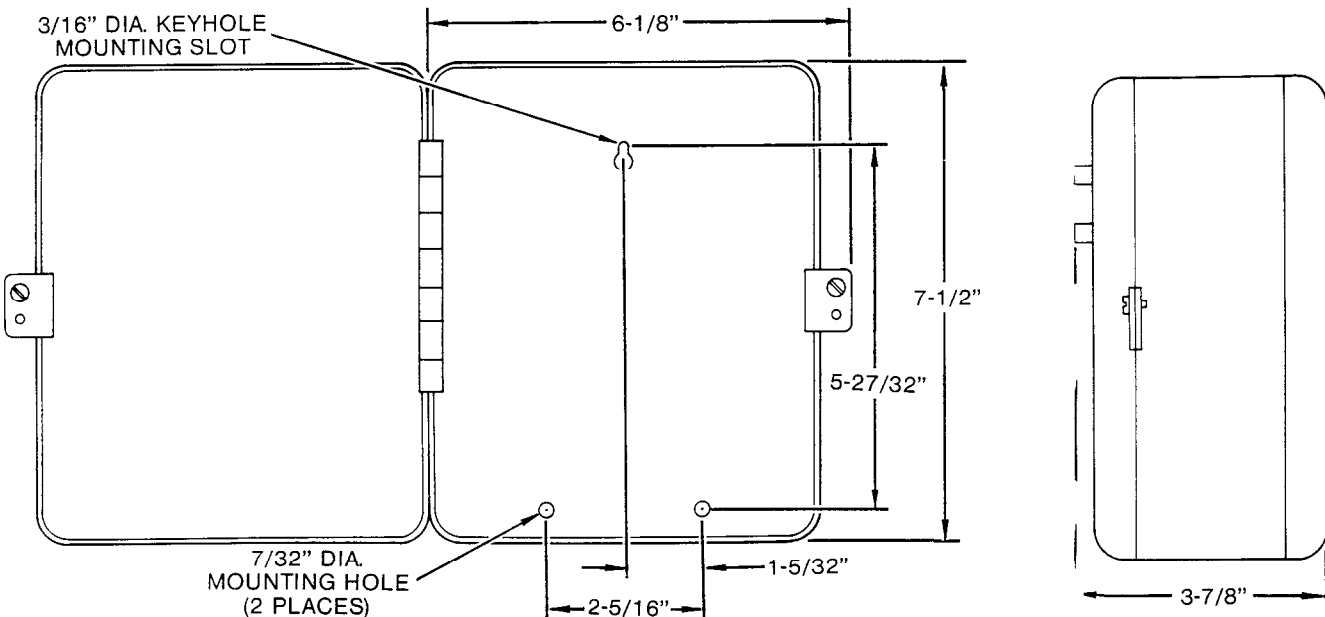
IMPORTANT:

Servicing of this unit should be done only by a qualified electronics technician or engineer trained in handling solid state equipment.

Use proper tools when removing or replacing integrated circuits on the 239443 Circuit Board.

* Included in 239448 Repair Kit.
 Repair kit also includes 237001 IC Insertion Tool & 237067 Extractor Tool.

DIMENSIONS



TIME SELECTION CHART

| ON TIME | OFF TIME | CLOSE SW # | SW 11 | SW 12 | ON TIME | OFF TIME | CLOSE SW # | SW 11 | SW 12 |
|---------|---------------|------------|--------|--------|--------------|---------------|------------|-------|--------|
| 10 SEC | 20 SEC | 1 | CLOSED | CLOSED | 1 MIN | 2 MIN | 1 | OPEN | CLOSED |
| 10 SEC | 40 SEC | 2 | CLOSED | CLOSED | 1 MIN | 4 MIN | 2 | OPEN | CLOSED |
| 10 SEC | 1 MIN 20 SEC | 3 | CLOSED | CLOSED | 1 MIN | 8 MIN | 3 | OPEN | CLOSED |
| 10 SEC | 2 MIN 40 SEC | 4 | CLOSED | CLOSED | 1 MIN | 16 MIN | 4 | OPEN | CLOSED |
| 10 SEC | 5 MIN 15 SEC | 5 | CLOSED | CLOSED | 1 MIN | 32 MIN | 5 | OPEN | CLOSED |
| 10 SEC | 10 MIN 30 SEC | 6 | CLOSED | CLOSED | 1 MIN | 1 HR 4 MIN | 6 | OPEN | CLOSED |
| 10 SEC | 21 MIN | 7 | CLOSED | CLOSED | 1 MIN | 2 HR 9 MIN | 7 | OPEN | CLOSED |
| 10 SEC | 42 MIN | 8 | CLOSED | CLOSED | 1 MIN | 4 HR 18 MIN | 8 | OPEN | CLOSED |
| 10 SEC | 1 HR 24 MIN | 9 | CLOSED | CLOSED | 1 MIN | 8 HR 35 MIN | 9 | OPEN | CLOSED |
| 10 SEC | 2 HR 48 MIN | 10 | CLOSED | CLOSED | 1 MIN | 17 HR 9 MIN | 10 | OPEN | CLOSED |
| 34 SEC | 1 MIN 8 SEC | 1 | CLOSED | OPEN | 1 MIN 24 SEC | 2 MIN 48 SEC | 1 | OPEN | OPEN |
| 34 SEC | 2 MIN 16 SEC | 2 | CLOSED | OPEN | 1 MIN 24 SEC | 5 MIN 36 SEC | 2 | OPEN | OPEN |
| 34 SEC | 4 MIN 30 SEC | 3 | CLOSED | OPEN | 1 MIN 24 SEC | 11 MIN 12 SEC | 3 | OPEN | OPEN |
| 34 SEC | 9 MIN | 4 | CLOSED | OPEN | 1 MIN 24 SEC | 22 MIN 30 SEC | 4 | OPEN | OPEN |
| 34 SEC | 18 MIN | 5 | CLOSED | OPEN | 1 MIN 24 SEC | 45 MIN | 5 | OPEN | OPEN |
| 34 SEC | 36 MIN | 6 | CLOSED | OPEN | 1 MIN 24 SEC | 1 HR 30 MIN | 6 | OPEN | OPEN |
| 34 SEC | 1 HR 12 MIN | 7 | CLOSED | OPEN | 1 MIN 24 SEC | 3 HR | 7 | OPEN | OPEN |
| 34 SEC | 2 HR 24 MIN | 8 | CLOSED | OPEN | 1 MIN 24 SEC | 6 HR | 8 | OPEN | OPEN |
| 34 SEC | 4 HR 48 MIN | 9 | CLOSED | OPEN | 1 MIN 24 SEC | 12 HR | 9 | OPEN | OPEN |
| 34 SEC | 9 HR 35 MIN | 10 | CLOSED | OPEN | 1 MIN 24 SEC | 24 HR | 10 | OPEN | OPEN |

TIME SELECTION (refer to Fig. 1)

Determine "On" time (time solenoid valve or load device is energized) and "Off" time (time between lube cycles) for system requirements. Select appropriate "On" time from Time Selection Chart and set rocker switches #11 and #12 accordingly. Select "Off" time corresponding to "On" time and close the switch from #1 and #10 indicated in chart. **Only one** switch from #1 to #10 should be closed.

WIRE CONNECTIONS

Power Source - Terminals 1 & 2

120 VAC, 50 or 60 Hz, connect jumper wire between Terminal 3 & 4 and between Terminals 5 & 6.

230 VAC, 50 or 60 Hz, connect jumper wire between Terminal 4 & 5.

Solenoid Valve or Load Device - Terminals 7 & 8. Max. load 120/240 VAC at 360 Volt-amps.

Remote Manual Lube Pushbutton Switch (Momentary N.O.) - Terminals 1 & 7.

MANUAL LUBE (refer to Fig. 1)

Push the manual lube switch (inside enclosure) or optional remote manual lube switch and hold to initiate a lube cycle. Solenoid will remain energized as long as manual lube switch is actuated.

LED STATUS

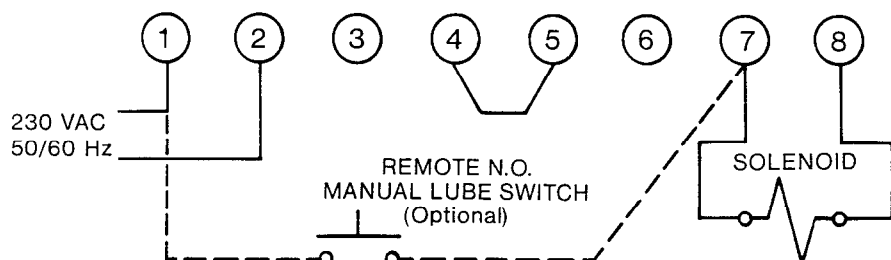
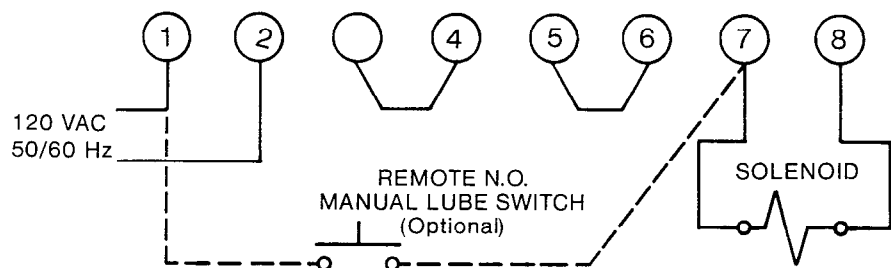
Green L.E.D. indicates Power On.
Amber L.E.D. indicates Pump On.

SURGE SUPPRESSOR/ SHIELDED WIRE

In some cases it may be necessary to use a surge suppressor when an inductive device is being controlled.

It is recommended that shielded wire be used on input/output lines to reduce problems with electrical noise.

WIRING DIAGRAMS



NOTE: Numbers in circles represent corresponding numbers on terminal strip inside timer enclosure.

RETAIN THIS INFORMATION FOR FUTURE REFERENCE

When ordering replacement parts, list: Part Number, Description, Model Number, and Series Letter.

LINCOLN provides a Distributor Network that stocks equipment and replacement parts.