

# Lube Level Maintainer – Model LM500/LM500-TF



## Features

- **Test Feature (TF)** allows test of float and switch
- **Direct Mount (DM)** capable
- Eliminates under/overfill due to “human error”
- See oil level and condition without shutting down
- Simple installation
- Automatically maintains lube level
- Low level, 3-wire, snap-action switch
- Positive sealing Thumb-Valve™

**Not intended for use with fuel**

The Murphy LM500-TF Oil Level Maintainer includes a test feature that confirms both the float and switch are operating correctly with a single press of the test button. The LM500 series maintains the crankcase oil level of an engine, pump or compressor. Adjusted to the correct running-oil-level, it will replenish oil as it is used. The low-level switch will alarm and/or shutdown the equipment if supply oil is lost and the equipment continues to use oil.

## Application

The LM500 maintains oil level on any size engine. It also supports installations that require a 3-wire, snap-action switch. Refer to LM500 Series Flow Rate Chart for application data.

## Test Feature

The form C (3-wire) contact allows a controller/annunciator to be wired as a closed-loop system, resulting in a reliable fault-sensitive circuit.

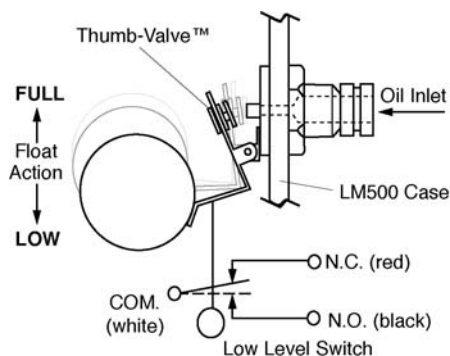
## How the LM500 Maintains Levels

As crankcase oil level drops, the LM500 float also drops and opens the Thumb-Valve™. This allows oil to flow from the supply tank, through the LM500, and into the crankcase. When proper level is achieved in the crankcase, the LM500 float rises, causing the Thumb-Valve™ to close off further oil flow.

The simple and unique Thumb-Valve™ is non-clogging and provides a positive, leak-free seal.

## Thumb-Valve Operation

If the clean oil supply is depleted and oil level continues to fall, the low level switch will operate an alarm or equipment shutdown.



## Specifications

**Crankcase Balance Vent Connection:** 1/2 NPTF (top).

**Inlet Connection:** 1/2 NPTF removable screen (side).

**Outlet Connection:**

2 x 3/4 NPTF (side)

1 x 3/4 NPTF (bottom)

**Thumb-Valve™ Material:** Viton.

**Snap-switch:** SPDT rating 10 A, 125 VAC; 0.5 A, 125 VDC; 10 A, 30 VDC.

**Wire leads:** 18 AWG x 14 in. ± 2 in. (355 mm) length.

**Conduit Connection:** 1/2 inch conduit (female, top).

**Case:** Die cast aluminum

**Lens:** Clear “Frog Eye” non-staining, high impact, high temperature polycarbonate; UV and heat stabilized.

**Dial:** High visibility white background with solid green band for normal level indication.

**Maximum Inlet Pressure:** 9.50 psi/25 ft. oil (head pressure).

**Maximum Case Pressure:** 15 psi (103 kPa).

**Maximum Differential:** 2 in. (51 mm) between running and stopped.

**Maximum Ambient Temperature:** 250°F (121°C).

**Float:** 304 Stainless Steel

**Flow Rates:** Refer to LM500 Series Flow Rates chart for application data.

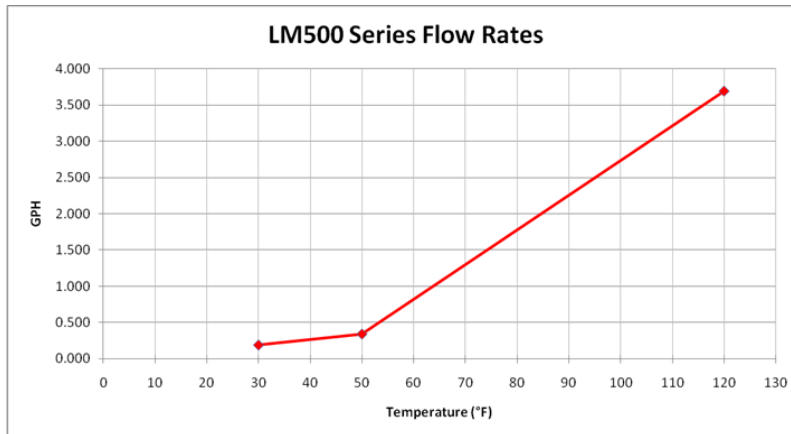
**Dimensions:** Overall 6-9/16 inch tall x 6-3/16 inch deep x 3-1/2 deep. For exact dimensions, refer to document “00-02-0729 LM500 Installation Instructions”.

**LM500/LM500-TF Shipping Dimensions:** 9.5 x 7.5 x 11 in. (241.3 x 190 x 279.4 mm).

**LM500/LM500-TF Shipping Weight:** 3 lbs. 13.44 oz (1.74 kg)

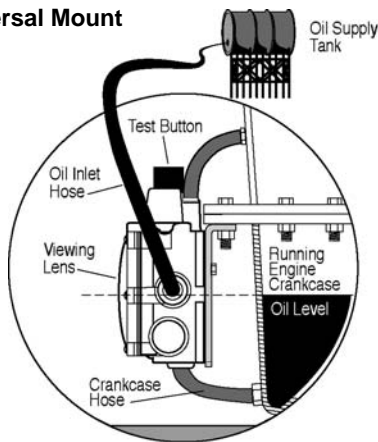
## LM500 Series Flow Rates

LM500 Series Flow Rates are based on SAE 40 motor oil @ 2 ft. head pressure. Friction losses due to piping are not considered.



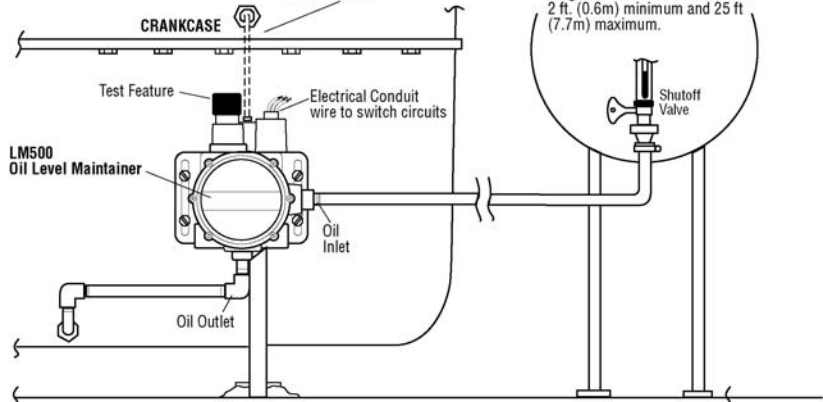
## Typical Installations

### Universal Mount

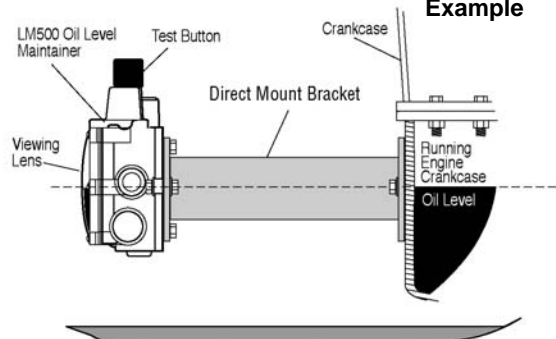


For vented crankcase use the plastic vent plug or optional vent tube kit (15000954). For sealed systems, vent must be piped back to crankcase, above oil level.

### Pipe Mount

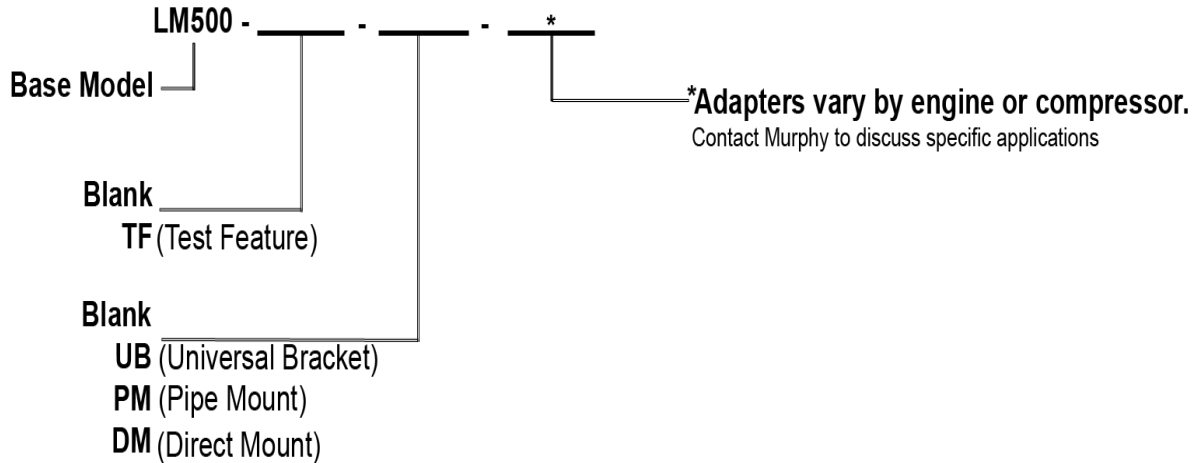


### Direct Mount Example



## How to Order

To order the LM500 use the model number designation diagram below. (Example for Pipe Mount: **LM500-TF-PM**)



## Mounting Brackets with Hardware

In addition to the direct mounting option, Murphy offers two mounting brackets for the LM500. The Pipe Bracket Kit fits a 7/8 in. (22 mm) diameter pipe (see typical installation below). The Universal Flange Kit allows various mounting methods. For exact dimensions, refer to document "00-02-0729 LM500 Installation Instructions".

### Accessories (Specify part number)

Description	Part Number
Vent Fittings Kit	15000954
Hose Kit	15000355
1/2 NPT x 1/2 in. Hose Barbed Fitting	89080801
3/4 NPT x 1 in. Hose Barbed Fitting	89081001
Pipe Bracket Kit	15000518
Universal Flange Kit	15000519
Bubble Lens Kit	15000532

### Vent Fitting Kit: 15000954

- One Tubing vent
- One 1/4 x 1/2 NPT Connector

### Hose Kit: 15000355

- One 1/2 in. (13 mm) I.D. x 3 ft. (914 mm) long hose
- One 1 in. (25 mm) I.D. x 3 ft. (914 mm) long hose
- Two 1/2 in. (13 mm) worm gear clamp
- Two 1 in. (25 mm) worm gear clamp
- Two 1/2 NPT x 1/2 in. (13 mm) barbed fitting
- Two 3/4 NPT x 1 in. (25 mm) barbed fitting

### Fittings Kit: 15000943

- One Tubing vent
- One Hose Barb, 1/2 NPT to 1/2 Hose
- One Hose Barb, 1" ID HOSE x 3/4 NPT
- One Connector, 1/4 x 1/2 NPT

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A copy of the warranty may be viewed or printed by going to <http://www.fwmurphy.com/warranty>