

# Installation Instructions for L129 Series Level Switchgauge® Instrument

Please read the following information before installing. A visual inspection of this product for damage during shipping is recommended before mounting.

## WARNING

**BEFORE BEGINNING INSTALLATION OF THIS MURPHY PRODUCT**

- ✓ Disconnect all electrical power to the machine.
- ✓ Make sure the machine cannot operate during installation.
- ✓ Follow all safety warnings of the machine manufacturer.
- ✓ Read and follow all installation instructions.

**CAUTION:** Certain danger to human and to equipment such as applied in a mobile or marine application may occur if some equipment is stopped without pre-warning. It is therefore, recommended that monitored functions be limited to alarm only or to alarm before shutdown in such applications.

## Description

The L129 Series Lube Level Switchgauge instrument is a combination lube level indicating gauge with adjustable low and high limit switches. It provides protection against low oil level or high level caused by overfill or fuel or water seepage into the crankcase. A 6-3/4 inch (171 mm) deep sight gauge allows you to check the condition and level of your oil without shutting down the equipment.

Fingertip adjustable limit switch contacts are adjustable thru 4-7/8 inch (122 mm) range. When the float touches the high or low limit contact, a normally open circuit will close which can activate alarms and/or shutdown the equipment.

There are two models in the L129 Series: L129 and L129CK1. The L129 model is designed for grounded, low voltage electrical systems. It features a one-wire-to-ground electrical circuit. The L129CK1 is designed for applications requiring a three-wire, above ground electrical circuit. It features ungrounded contacts and a conduit hub for electrical wiring connection.



## Specifications

**Case:** Die Cast Aluminum.

**Lens:** Tempered Glass.

**Maximum Working Pressure:** 10 psi (68.9 kPa) [0.69 bar].

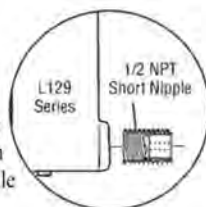
**Process Connection:** 1/2 NPT.

**Float Material:** Brass.

**Contact Rating:** 2 A @ 30 VAC/DC, pilot duty.

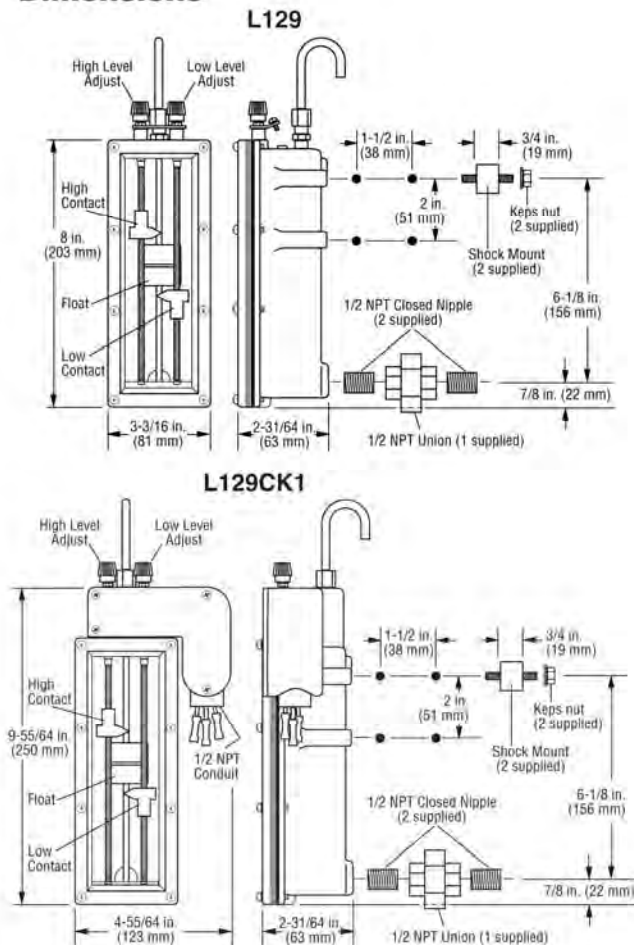
## Flow Restrictor Plug Order Separately

Flow Restrictor Plug restricts oil flow between the crankcase and the L129 Series. It is typically used on some mobile applications such as marine and mobile equipment. **Part no. 15050241.**



\*Complete with EMC Council directive 89/336/EEC regarding electromagnetic compatibility.

## Dimensions



## Repair Kits

Specify part number:

### L129

15000888	Full Repair Kit (less castings and glass assembly) for date code T2 and later.
15000480	Bezel, Glass and Gasket Set for date code W7 and later
15000485	Glass and Gasket Set for all date codes
15050241	Restrictor plug for all date codes

### L129CK1

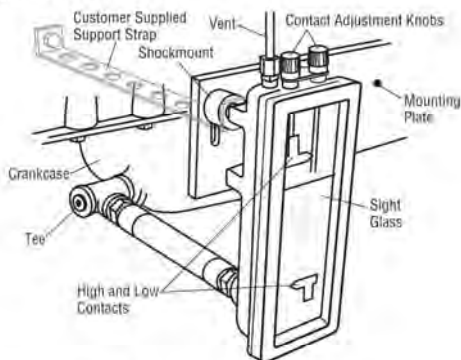
15000480	Bezel, Glass and Gasket Set for date code W7 and later
15000485	Glass and Gasket Set for all date codes
15050241	Restrictor plug for all date codes

**NOTE:** Read all instructions before beginning installation.

## Mounting

1. Determine which side of the engine to mount the L129. This will normally be the side of the engine from which it is started. Weld a slotted mounting plate to the engine skid or attach the mounting plate to the crankcase. If a mounting plate is not used, a support strap is recommended (see *Typical Installation* below).
2. Install the shockmounts in the threaded holes provided in the mounting bosses on the rear of the L129. **NOTE: We recommend using the shockmounts provided to minimize "contact bounce" resulting in improper operation.**
3. Attach the L129 to the mounting plate as shown below but do not tighten **TOO TIGHT** since you will have to adjust the L129 later in the installation process.

### Typical Installation



## Connecting Hoses and Fittings

1. **DRAIN THE CRANKCASE.** If the crankcase does not have an auxiliary plug or connection, connect the L129 to the crankcase drain plug connection. This connection will normally be a straight (parallel) thread which seals with a copper or fiber washer. **NOTE: If the drain plug on the crankcase is used for the connection, we recommend installation of a tee to allow draining of the crankcase for service.**
2. Flexible hose or rigid pipe can be used to attach the L129 to the engine crankcase. Flexible hose is to be 1/2 in. (13 mm) I.D. minimum and made of quality material. Use of flexible hose will allow you to adjust the height of the L129 to properly reflect the oil level in the crankcase. Also, a swivel connection on one end of the hose will assist in properly aligning the L129.

**WARNING:** If both flexible hose and shockmounts are used, a ground wire must be added between the L129 and the engine.

Rigid pipe is to be 1/2 inch pipe. If the length of the pipe is relatively short, no additional support for the L129 may be needed, although it is recommended. A pipe union is provided in the installation kit. Attach the hose or pipe from the L129 process connection (1/2 NPT) to the crankcase.

3. For vented crankcases, install the tube fitting and copper cane provided in the installation kit into the top of the L129. Venting to atmosphere will allow the oil level to rise in the L129 to the same level as in the crankcase, (the pressure/vacuum in the L129 and the crankcase must be equal). **If the crankcase develops a positive (pressure) or negative (vacuum) pressure, you MUST connect the**

**L129 vent back to the crankcase.** If you do not do this, the L129 will indicate high level with a pressurized crankcase and a low level with a vacuum crankcase. In extreme cases a pressurized system will blow oil out the vent tube or in vacuum crankcases can suck oil out of the L129.

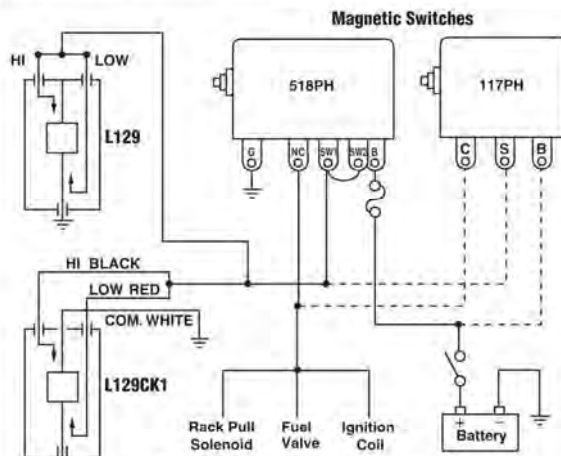
**To vent the L129 back to the crankcase,** install a 1/4 inch (6 mm) O.D. or larger tubing (copper or flexible) from the L129 vent fitting to a point in the crankcase above the full oil level or in the fill pipe that is **not** restricted by baffles, filters or other obstructions. If connecting directly into the crankcase, be sure the entry point is clear of oil splash that can plug the tube opening.

4. Refill the crankcase to proper oil level. With the engine running and warm, loosen the L129 from the mounting bracket and adjust the L129 so that the oil level shows approximately midway or above in the sight glass. Tighten shockmount nuts.

## Wiring

Follow appropriate wiring for the alarm or engine shutdown system you are using. Diagrams below are shown with the float in the "full" position.

**CAUTION:** Perform all wiring connections with the battery disconnected. Observe all contact ratings and voltages.



Contact Rating: 2 A @ 30 VAC/DC, pilot duty.

## Operation Test

The following test is to be performed after the L129 has been installed and the crankcase has been filled to the proper oil level.

1. With equipment running, turn the high and low adjust knobs one at a time until they "make" contact with the float. When contact is made the alarm or shutdown circuit should actuate.
2. Return high and low adjustment knobs to the proper contact position before operating equipment.

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