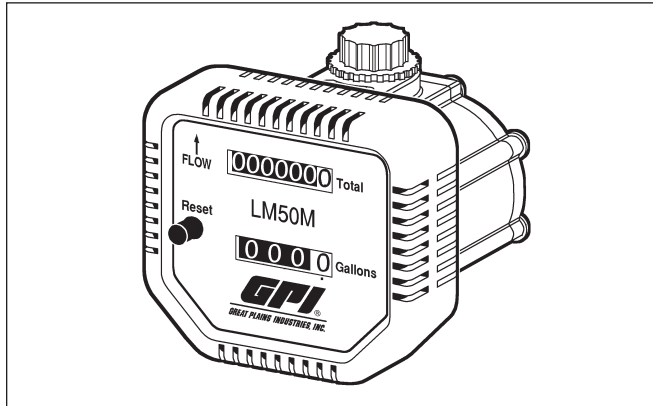


# LM50M Mechanical Positive Displacement Inline Meter

## Owner's Manual



### INTRODUCTION

The LM50M meter has been designed specifically to dispense lubricating oils, ATF and engine oil up to a viscosity of SAE 140. This high pressure, positive displacement-type meter is suitable for all in-line and end-of-line applications and features a rugged and robust register with Total and re-settable Totals.

Please read and retain this Owner's manual to assist you in the operation and maintenance of this quality product.

### GENERAL INFORMATION

If you experience problems with this product, refer to the Maintenance and Troubleshooting sections of this manual. If you require further assistance, please contact GPI Customer Service.



#### IMPORTANT INFORMATION

GPI recommends that if you are using your meter as an in-line application you should install a filter before the inlet of the meter. Contact GPI for further details.

### INSTALLATION

Flow direction is bottom to top through meter. Do not over tighten connections.

NOTE: If using in an in-line application, open the valve slowly to prevent over spinning the rotors.

### OPERATION

#### Reset Button

The Reset Button allows you to clear the Total.

### MAINTENANCE

#### CAUTION

Ensure the fluid supply to the meter is disconnected and the line pressure is released before disassembly.

#### Register and Gear Train Removal

1. Remove the protective shroud and peel off the meter faceplate.
2. Remove the four (4) Phillips head screws.
3. Remove the register assembly.
4. Take careful note of the orientation of the gears on the gear train, then carefully remove the gears.

NOTE: Assembly is a reversal of the assembly procedure.

5. Replace the gears.

NOTE: The register is not repairable and will need to be replaced if faulty or damaged.

6. Replace the register and screws.
7. Fit a new faceplate onto the register face.
8. Replace the protective shroud.

#### Rotor Replacement

1. Remove the eight (8) Phillips head screws from the underside of the meter and remove the coverplate and O-ring.
2. Remove both rotors and inspect for any signs of wear or damage. Replace if worn or damaged.

NOTE: Ensure the rotor with the magnets is assembled on the correct side. (Figure 1) The magnets in the rotor must face towards the mechanical display.

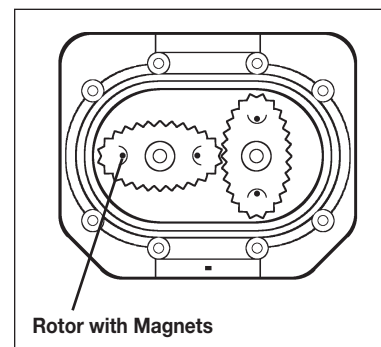


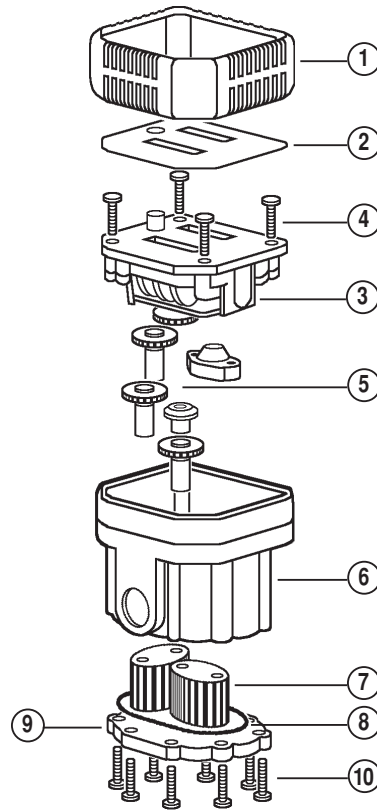
Figure 1

3. Replace both rotors positioned 90 degrees to each other (see Figure 1). Check rotation by turning the rotors.

NOTE: If the rotors do not rotate freely, remove one of the rotors and replace it correctly at 90 degrees to the other rotor. Re-check the operation of the rotors.

4. Lightly grease the O-ring and place it on the meter body.
5. Clean the meter coverplate and place it on the body. Take care not to damage the O-ring.
6. Install the eight (8) Phillips head screws and tighten in a diagonal pattern to 0.73 ft.-lbs. (1 nm). Visually check that the cap has been pulled down evenly.
7. Test the meter by turning the rotors with a finger or by supplying low air pressure (No more than a good breath) to the inlet port of the meter. This will confirm the meter is operating correctly.

## ILLUSTRATED PARTS DRAWING



## TROUBLESHOOTING

### A. METER NOT ACCURATE.

1. **Flowrate not correct.** Adjust flowrate to correct rate: 0.26-8 GPM (1-30 LPM).

### B. NO FLUID PASSING THROUGH THE METER.

1. **Dirt particles jamming the rotors.** Dismantle meter assembly and clean. (Refer to meter disassembly.)

### C. THE METER IS NOT REGISTERING FLUID OUTPUT.

1. **Damaged register assembly.** Replace register assembly.
2. **Damaged gear or gears.** Replace complete gear set.

### D. OIL LEAK FROM COVERPLATE.

1. **Damaged O-rings.** Replace damaged O-rings.

## SPECIFICATIONS

<b>Wetted Components:</b>	Acetal, aluminum, nitrile (NBR), mild steel
<b>Accuracy:</b>	±1%
<b>Flow Range:</b>	0.26-8 GPM (1-30 LPM)
<b>Max. Working Pressure:</b>	10,350 kPa /1500 psi/103.5 bar
<b>Inlet/Outlet Thread:</b>	1/2 in. BSPT or NPT (F)
<b>Operating Temperature:</b>	+14°F to +131°F (-10°C to +55°C)
<b>Weight (approx.):</b>	1.08 lbs. (490g)

Item No.	Part No.	Description	No. Req'd.
1	IM071BUS	Protector Shroud Set.....	1
2	IM166L-GPIS	Faceplate (Litre).....	1
	IM166Q-GPIS	Faceplate (Quart).....	1
	IM166G-GPIS	Faceplate (Gallon).....	1
3	IM168AS	Register Assembly.....	1
4	N87S	Register Screw Set.....	4
5	IM176S (Litre)	Gear Set (Litre / 4 Gears) .....	1
	IM177S (Quart)	Gear Set (Quart / 4 Gears) .....	1
	IM178S (Gallon)	Gear Set (Gallon / 5 Gears) .....	1
6	IM165	Meter Body (BSP).....	1
	IM165-1	Meter Body (NPT).....	1
7	IM181AS	Rotor Set .....	2
8	BS035S	O-Ring .....	1
9	IM011S	Coverplate .....	1
10	N65	Screw Set .....	8

### Limited Warranty Policy

Great Plains Industries, Inc. 5252 E. 36<sup>th</sup> Street North, Wichita, KS USA 67220-3205, hereby provides a limited warranty against defects in material and workmanship on all products manufactured by Great Plains Industries, Inc. This product includes a 1 year warranty. Manufacturer's sole obligation under the foregoing warranties will be limited to either, at Manufacturer's option, replacing or repairing defective Goods (subject to limitations hereinafter provided) or refunding the purchase price for such Goods theretofore paid by the Buyer, and Buyer's exclusive remedy for breach of any such warranties will be enforcement of such obligations of Manufacturer. The warranty shall extend to the purchaser of this product and to any person to whom such product is transferred during the warranty period.

The warranty period shall begin on the date of manufacture or on the date of purchase with an original sales receipt. This warranty shall not apply if:

- A. the product has been altered or modified outside the warrantor's duly appointed representative;
- B. the product has been subjected to neglect, misuse, abuse or damage or has been installed or operated other than in accordance with the manufacturer's operating instructions.

To make a claim against this warranty, contact the GPI Customer Service Department at 316-686-7361 or 800-835-0113. Or by mail at:

Great Plains Industries, Inc.  
5252 E. 36<sup>th</sup> St. North  
Wichita, KS, USA 67220-3205

The company shall, notify the customer to either send the product, transportation prepaid, to the company at its office in Wichita, Kansas, or to a duly authorized service center. The company shall perform all obligations imposed on it by the terms of this warranty within 60 days of receipt of the defective product.

GREAT PLAINS INDUSTRIES, INC., EXCLUDES LIABILITY UNDER THIS WARRANTY FOR DIRECT, INDIRECT, INCIDENTAL AND CONSEQUENTIAL DAMAGES INCURRED IN THE USE OR LOSS OF USE OF THE PRODUCT WARRANTED HEREUNDER.

The company herewith expressly disclaims any warranty of merchantability or fitness for any particular purpose other than for which it was designed.

This warranty gives you specific rights and you may also have other rights which vary from U.S. state to U.S. state.

Note: In compliance with MAGNUSON MOSS CONSUMER WARRANTY ACT – Part 702 (governs the resale availability of the warranty terms).

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