LINCOLN

Installation and maintenance guide

Electronic lube meter

Model 981, series “A”

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Section	**F22**
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⚠ DANGER

Read manual prior to installation or use of this product. Keep manual nearby for future reference. Failure to follow instructions and safety precautions may result in death or serious injury.

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⚠ WARNING

Systems which will be dispensing fluids under pressure may need to be protected by using a thermal relief kit, which will safely limit the pressures caused by thermal expansion. Please contact your local Lincoln distributor and refer to Service Page Section K5, Page 31 for more details. Failure to include thermal relief protection may cause damage not covered under Lincoln's warranty policy.

General

The Lincoln electronic lube meter is designed specifically to dispense motor oils (SAE 5-50), gear oils (SAE 80-240), automatic transmission fluid, antifreeze (Ethylene glycol), brake fluid, engine coolant, and windshield wiper fluid solutions. Modular design, low cost, lightweight and rugged design make the model 981 the best choice for overhead reel systems.

The electronic register module contains a microprocessor powered by a lithium battery. It can be programmed to dispense in pints, quarts, liters, or gallons and will totalize in liters or gallons. The meter calibration factor is determined during factory test. The meter can be recalibrated in the field for fluids of different viscosity. A six-digit liquid crystal display, accurate to the second decimal place, shows the exact amount of fluid dispensed. The electronic-register, module housing is made of shock-resistant nylon that is protected by a rubber boot to handle the harshest of environments.

Operation

As fluid passes through the metering chamber by entering the inlet port, it forces the internal gears to rotate and exits through the outlet port. Each rotation of the gear displaces a given volume of fluid.

The display shows the amount of fluid dispensed since the last time the reset button was pushed. Pushing the reset button will reset the display to zero for the next dispense.

To change the unit of measure:

1. Press the TOTAL button three times, followed by the RESET button three times within a time frame of two seconds. The active unit of measure symbol begins flashing, indicating that you are in programming mode.
2. Press the RESET button repeatedly until the desired unit of measure appears flashing in the display.
3. Simultaneously press and hold the RESET button and the TOTAL button for about three seconds to enter the new unit of measure and exit programming mode.

Meter is not for resale measurement of fluid.

⚠ CAUTION

Please ensure that all fluid is properly filtered before it enters the meter.

Foreign particles in the meter could cause inaccurate meter readings, and could possibly damage the meter.

Features

- 1,500 psi *(103.5 bar)* pressure rating.
- Max flow rate 10 gal./m *(38 l/m)*.
- Large six-digit LCD display with two decimal point precision.
- Dispense total display in pints, quarts, gallons or liters.
- Unit of measure selectable from the front of register.
- Totalization in gallons and liters.
- Re-settable and non-re-settable totalizer
- Display operation temperature range –4 to 140 °F *(–20 to 60 °C)*.
- Low-battery indicator
- Long-life, field-replaceable, top-loading battery
- Accuracy of ±0.5 percent
- Calibration factor programmable from front of register
- Calibration factor saved in nonvolatile memory
- Rigid spout with automatic tip

Note: The display remains ON and does not affect the life of the battery

Apply Meter to Hose

Close the drain valve before starting this procedure.

1. Attach swivel to meter. Apply thread sealant to the external end of the hose. Recommended sealant is Loctite® 243.
2. Insert the metal end of the hose into the swivel. Tighten completely with an open ended, adjustable, wrench.

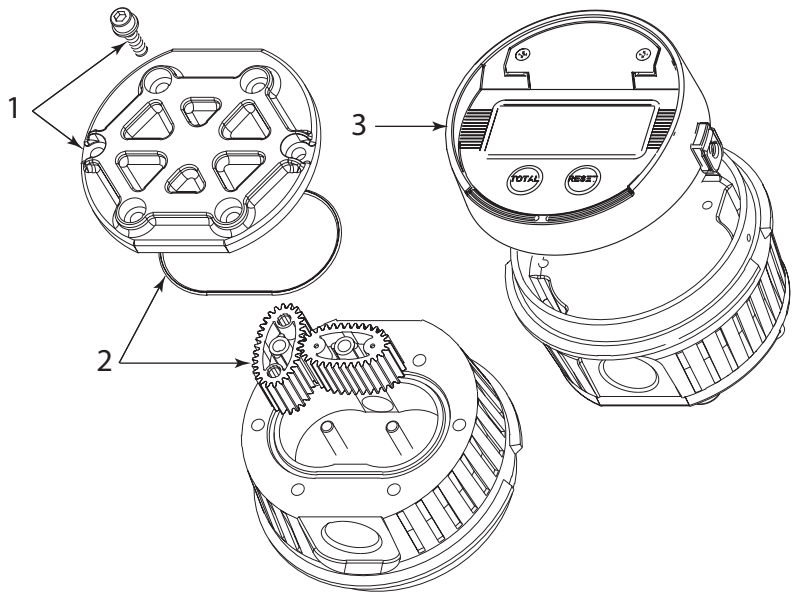
Notice

Threaded end of meter always has internal threads. Metal end of hose must have external threads.

Apply thread sealant, Loctite® 243 or equivalent, to external end.

Inlet and outlet swivel connections are either 1/2" NPT or 1/2" BSPP, depending on meter model.

Exploded view



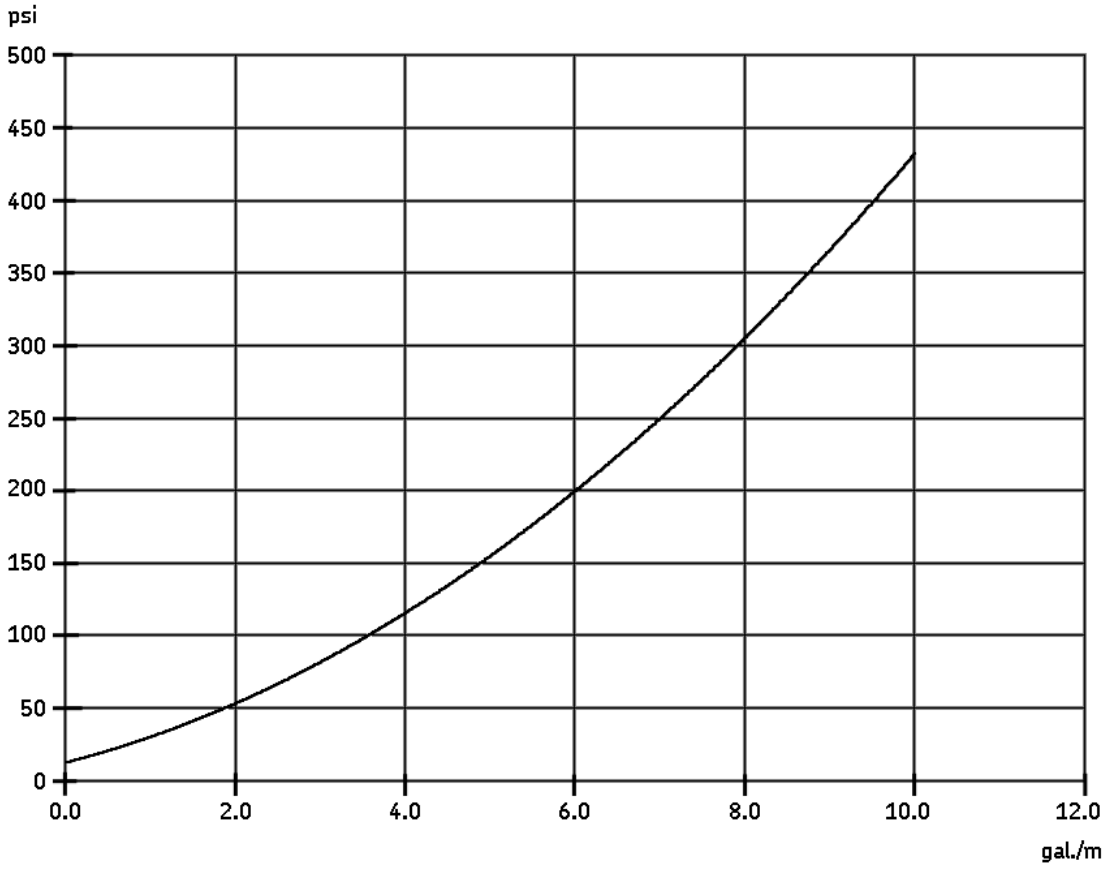
Program scale factor

1. Press the TOTAL button three times, and immediately press the RESET button three times, within a two-second time frame. The active unit of measure symbol will flash, indicating that you have successfully activated the meter's programmable mode.
2. Press the TOTAL button to advance to the first digit of the scale factor. The first digit will be blinking.
3. Press the RESET button to increment the digit to the desired value.
4. Press TOTAL to move to the next digit. Repeat these steps for each digit.
5. Once the value has been properly set, simultaneously press and hold both the RESET button and the TOTAL button for three seconds. This will enter the scale factor value and will exit from programmable mode.

Parts

Item	Description	Part no.
1	Housing cover kit with screws (standard)	276920
2	Gear service kit with o-ring (standard)	272377
3	Register module with screws	276921
4	Rubber boot (not shown)	276922
5	Control handle (not shown)	276924
6	Rigid spout with automatic tip (not shown)	282842
7	Replacement battery, 3 V lithium 2/3 AA (not shown)	276923

Pressure drop



Note:
This chart represents pressure vs. flow rate for the complete meter assembly.
The test fluid was DTE-25 hydraulic oil at 75 °F *(24 °C)*.

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Lincoln industrial standard warranty

Standard limited warranty

Lincoln warrants the equipment manufactured and supplied by Lincoln to be free from defects in material and workmanship for a period of one (1) year following the date of purchase, excluding there from any special, extended, or limited warranty published by Lincoln. If equipment is determined to be defective during this warranty period, it will be repaired or replaced, within Lincoln's sole discretion, without charge.

This warranty is conditioned upon the determination of a Lincoln authorized representative that the equipment is defective. To obtain repair or replacement, you must ship the equipment, transportation charges prepaid, with proof of purchase to a Lincoln Authorized Warranty and Service Center within the warranty period.

This warranty is extended to the original retail purchaser only. This warranty does not apply to equipment damaged from accident, overload, abuse, misuse, negligence, faulty installation or abrasive or corrosive material, equipment that has been altered, or equipment repaired by anyone not authorized by Lincoln. This warranty applies only to equipment installed, operated and maintained in strict accordance with the written specifications and recommendations provided by Lincoln or its authorized field personnel.

This warranty is exclusive and is in lieu of any other warranties, express or implied, including, but not limited to, the warranty of merchantability or warranty of fitness for a particular purpose. Warranty on items sold by Lincoln, but not manufactured by Lincoln are subject to the warranty consideration, if any, of their manufacturer (such as hoses, hydraulic and electric motors, electrical controllers, etc.) Assistance in making such warranty claims can be offered as required.

In no event shall Lincoln be liable for incidental or consequential damages. Lincoln's liability for any claim for loss or damages arising out of the sale, resale or use of any Lincoln equipment shall in no event exceed the purchase price. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, therefore the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights. You may also have other rights that vary by jurisdiction.

Customers not located in the Western Hemisphere or East Asia: Please contact Lincoln GmbH and Co. Kg, Walldorf, Germany, for your warranty rights.

Special limited warranties

Special limited 2 year warranty SL-V series, single injectors–85772, 85782, and replacement injectors–85771, 85781

Lincoln warrants the SL-V Injector series to be free from defects in material and workmanship for two (2) years following the date of purchase. If an injector model (single or replacement) is determined to be defective by Lincoln, in its sole discretion, during this warranty period, it will be repaired or replaced, at Lincoln's discretion, without charge.

Special limited 5 year warranty series 20, 25, 40 bare pumps, pmv bare pumps, heavy duty and 94000 series bare reels

Lincoln warrants series 20, 25, 40 bare pumps, PMV bare pumps, heavy duty (82206), mini bench (81133, 81323), and all 94000 LFR series (single arm and dual arm) bare reels to be free from defects in material and workmanship for five (5) years following the date of purchase. If equipment is determined by Lincoln, in its sole discretion, to be defective during the first year of the warranty period, it will be repaired or replaced at Lincoln's discretion, without charge. In years two (2) and three (3), the warranty on this equipment is limited to repair with Lincoln paying parts and labor only. In years four (4) and five (5), the warranty on this equipment is limited to repair with Lincoln paying for parts only.

Special limited 5 year warranty– limited oil meters, limited fluid control valves, aod (air-operated diaphragm pumps)

Lincoln warrants the 712 series control valves, 912 series lube meters, electronic lube meters (980, 981, 982 series), our universal inline digital meters (812/813 series), and our AOD pump offering to be free from defects in material and workmanship for five (5) years following the date of purchase. If either is determined to be defective by Lincoln, in its sole discretion, during the warranty period, they will be repaired or replaced, at Lincoln's discretion, without charge.

Special DEF (diesel exhaust fluid) limited warranty

DEF products are warranted to be free from defects in material and workmanship for a period of one (1) year following the date of purchase. The following exceptions to the standard warranty period are in effect:

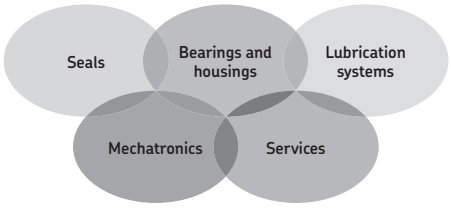
- **85700-30/85700-50 DEF hose reels (bare reel only),** 277251/277252 AC DEF pumps, and 277256 and 277257 DEF meters are warranted for two (2) years from date of purchase.

- **85623 DEF AOD (air operated diaphragm) pumps** are covered under the standard five (5) year AOD pump warranty.

If either is determined to be defective by Lincoln, in its sole discretion, during the warranty period, they will be repaired or replaced, at Lincoln's discretion, without charge.

Lincoln Industrial contact information

To find Lincoln Industrial's nearest service center call the following number; customer service 314-679-4200 (international number 01-314-679-4200) or you may also use our website www.lincolnindustrial.com



The Power of Knowledge Engineering
Combining products, people, and application-specific knowledge, SKF delivers innovative solutions to equipment manufacturers and production facilities in every major industry worldwide. Having expertise in multiple competence areas supports SKF Life Cycle Management, a proven approach to improving equipment reliability, optimizing operational and energy efficiency and reducing total cost of ownership.

These competence areas include bearings and units, seals, lubrication systems, mechatronics, and a wide range of services, from 3-D computer modelling to cloud-based condition monitoring and asset management services.

SKF's global footprint provides SKF customers with uniform quality standards and worldwide product availability. Our local presence provides direct access to the experience, knowledge and ingenuity of SKF people.

SKF BeyondZero is more than our climate strategy … our customers the SKF BeyondZero portfolio of

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