

This manual contains important warnings and information.
READ AND KEEP FOR REFERENCE.

INSTRUCTIONS

First choice when quality counts.™

For Controlling and Monitoring Automatic Lubrication Systems

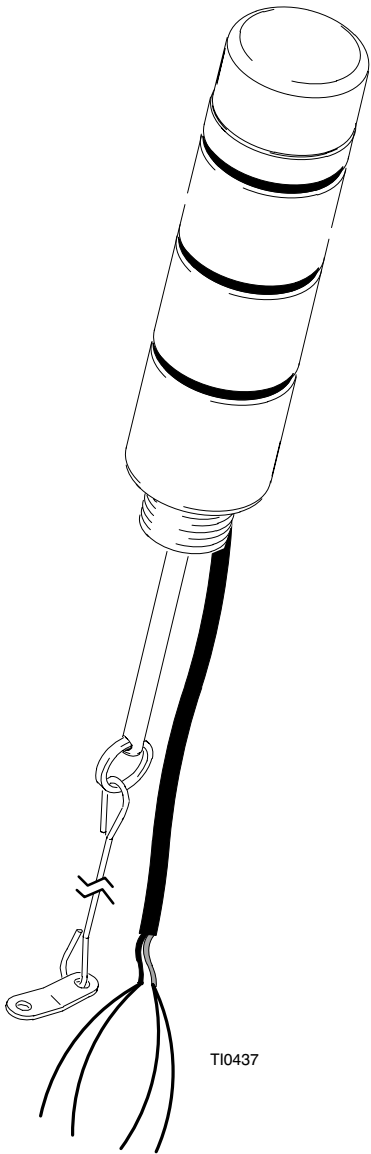
Level Indicator

Part No. 244023

The Level Indicator is designed to provide visual and remote monitoring of the level of lubricant in Graco's 90# Automatic Lubrication Pump Modules.

Table of Contents

Warnings	2
Installation	3
Operation	5
Parts	6
Technical Data	7
Dimensions	7
Graco Standard Warranty	8
Graco Phone Number	8



Symbols

Warning Symbol



This symbol alerts you to the possibility of serious injury or death if you do not follow the instructions.

Caution Symbol



This symbol alerts you to the possibility of damage to or destruction of equipment if you do not follow the instructions.

WARNING



INSTRUCTIONS

EQUIPMENT MISUSE HAZARD

- Disconnect the power before servicing and before you remove the cover.
- Do not touch electrical components inside the Lubrication Controller; you could get an electric shock or damage the circuits.
- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are not sure, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories. Modifying parts can cause a malfunction and result in serious bodily injury.
- Check equipment daily. Repair or replace worn or damaged parts immediately.
- Connect to a proper electrical power source. See the **Technical Data** section on page 7.
- Comply with all applicable local, state, and national fire, electrical, and safety regulations.
- Use only alarm and control devices that are compatible with the electrical requirements of this unit.

Installation

Installing the Level Indicator

CAUTION

The Level Indicator is not designed to be operated in a caustic environment.

NOTE: If retrofitting your lubrication system, prior to beginning installation you must verify that you have a reservoir cover (part #196804) that has a 3/4" npt fitting and a follower plate (part #243191 or #241485).

WARNING

PRESSURIZED EQUIPMENT HAZARD

The equipment stays pressurized until pressure is manually relieved. To reduce the risk of serious injury from pressurized fluid, accidental spray, or splashing fluid, follow the pressure relief procedure whenever you service this equipment.

1. Shut down system and relieve system pressure. Follow the **Pressure Relief Procedure** found in the Pump Module Manual that initially came with your system.
2. Remove the six screws (C) see fig.1, that hold the pump module and reservoir cover to the reservoir and disconnect the vent hose (B) see fig. 1.
3. Remove the pump module and reservoir cover from the assembly, (also remove the follower plate if so equipped).

CAUTION

Use of a thread sealant in step 4 is not recommended. If your procedures require a thread sealant be sure to use only a sealant that is compatible with plastic pipe to prevent cracking or discoloration of the Level Indicator.

4. Remove the 3/4" plug (A) see fig.1, from the reservoir cover. Slide the metal plate and cable through the hole and hand tighten the level indicator to the fitting.

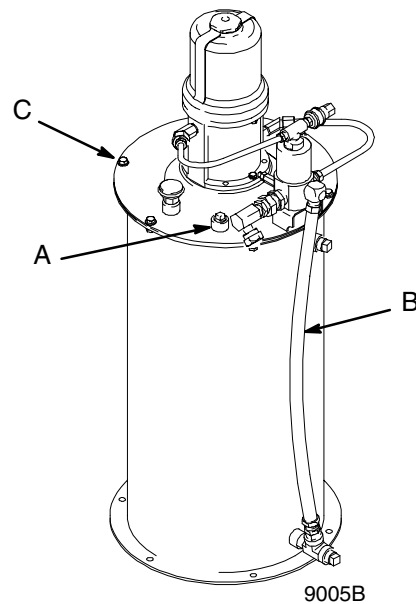


Fig. 1

5. Slide the follower plate (part #243191 or #241485) onto the pump tube and attach the metal clip (D) see fig. 2, to follower plate using screw (E) (part #112948).

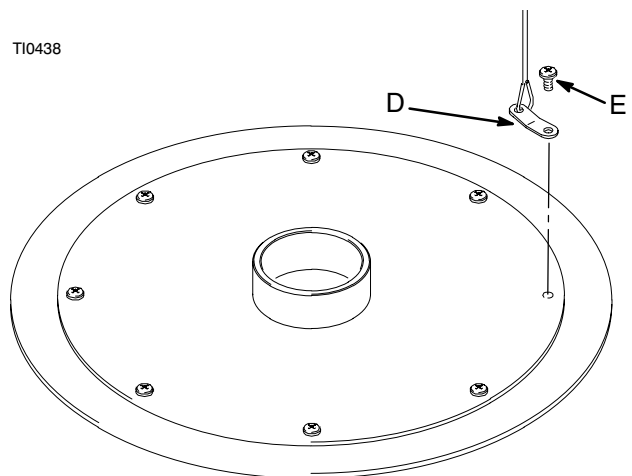




Fig. 2


6. Insert the follower plate into the reservoir and reassemble the reservoir cover and pump module using the six screws (make sure the cable is straight). Re-attach the vent hose to assembly using new thread sealant.
7. Reattach all supply lines to the pump module.
8. Start up system. Follow the pump module start up procedures found in the Pump Module Manual that initially came with your system.

Installation

Installing the external alarm or warning lights

The level indicator comes with two sets of wires, see fig.3. One set of wires is shrink wrapped in red and one set in black. Both switches are normally open, voltage-free switches, and can be used as a switching device for activating an external alarm or light. The alarm or lights indicate a full or low level situation.

 WARNING	
	ELECTRIC SHOCK HAZARD Before you install or remove the Pump Level Reservoir Indicator disconnect and isolate all power supplies.

 CAUTION	
To avoid premature switch failure and the loss of fluid / low level indication:	
<ul style="list-style-type: none">• Do not exceed the rating of the Level Sensor Switch by connecting excessive lights or audible signals.• Level Sensor Switch is rated for a maximum of 170V DC and 10 Watts. Maximum switch current of .4 AMPS.	

1. Connect the red set of wires, see fig. 3, to the **LOW** level indicator device.
2. Connect the black set of wires, see fig. 3, to the **FULL** level indicator device.

Operation

Visual and remote indicator light Display

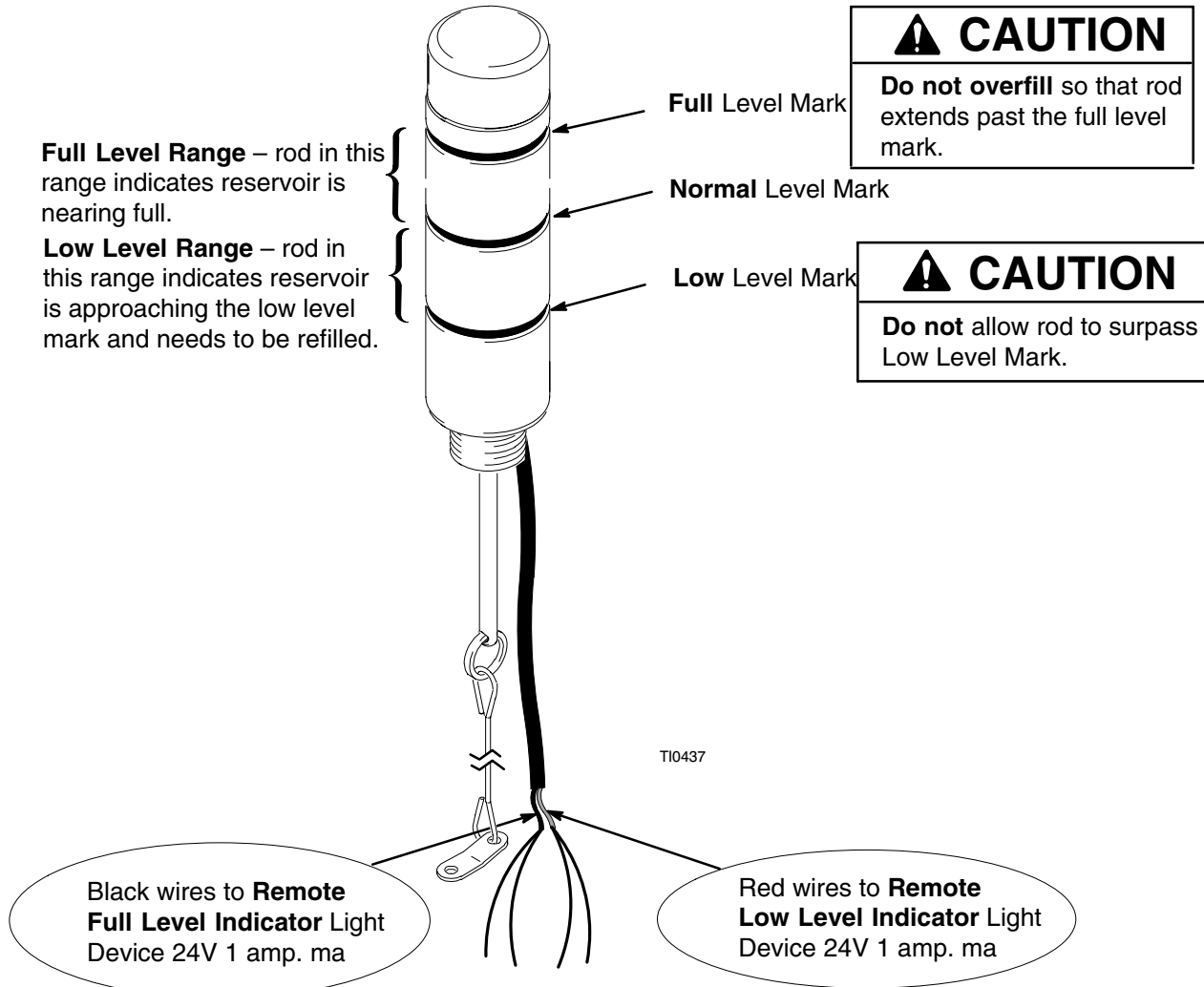


Fig. 3

Full Level Mark – rod is visible at this mark and Indicates that the lubrication supply container is full. No additional lubricant needs to be added.

Full Level Range – rod is visible in this range and indicates that the main lubrication supply container is nearing full and does not need to be refilled.

Normal Level Mark – rod is visible at this mark and indicates that the lubrication supply container has sufficient material. No additional lubricant needs to be added.

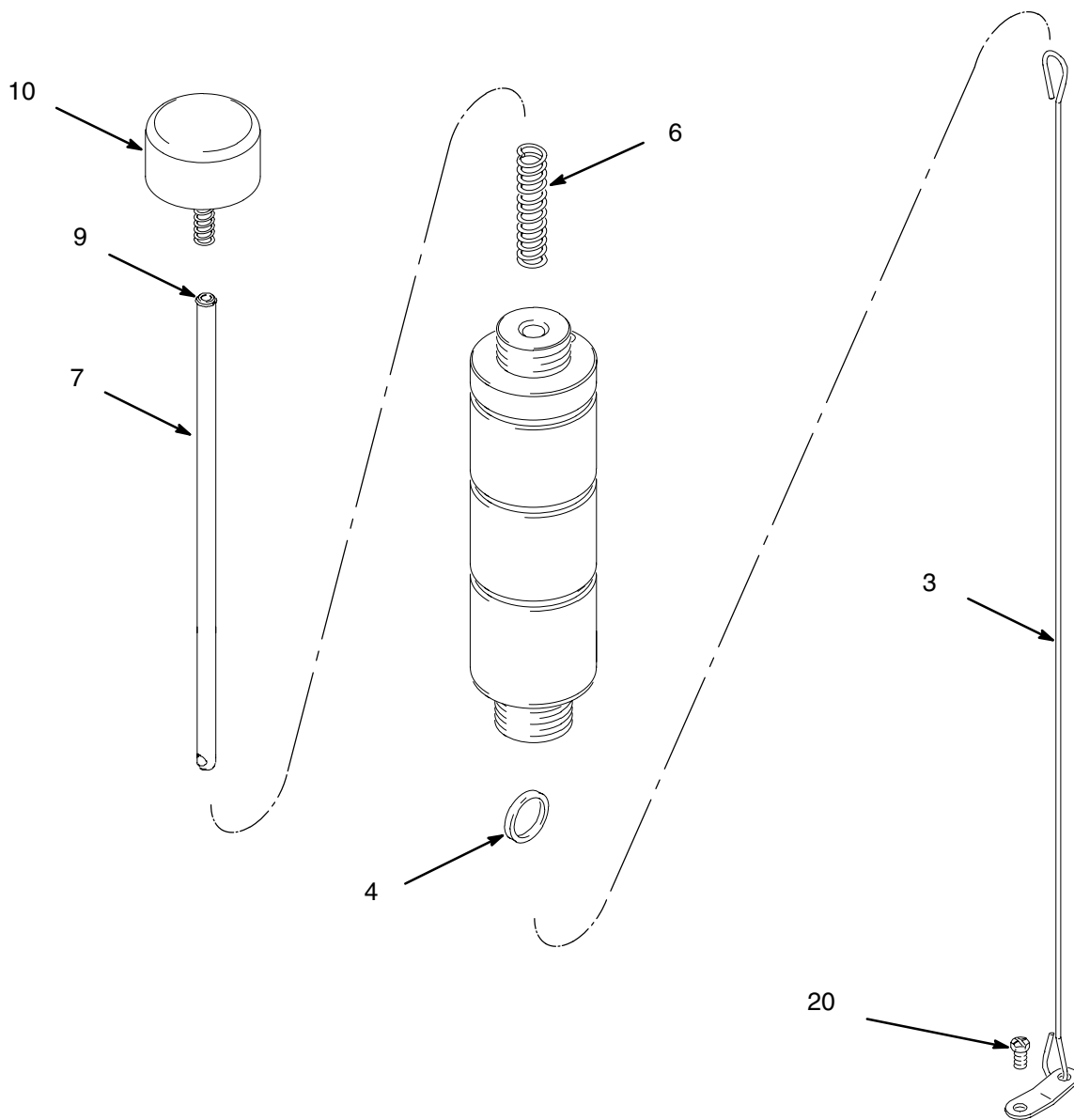
Low Level Range – rod is visible in this range and indicates that the lubrication supply container is approaching the low level mark and needs to be refilled.

Low Level Mark – rod is visible at this mark and Indicates that the main lubrication supply container is low and needs to be refilled.

Remote Full Level Indicator light – when lit indicates that the main lubrication supply container is full. No additional lubricant needs to be added.

Remote Low Level Indicator Light – when lit indicates that the main lubrication supply container is low and needs to be refilled.

Parts



T10437

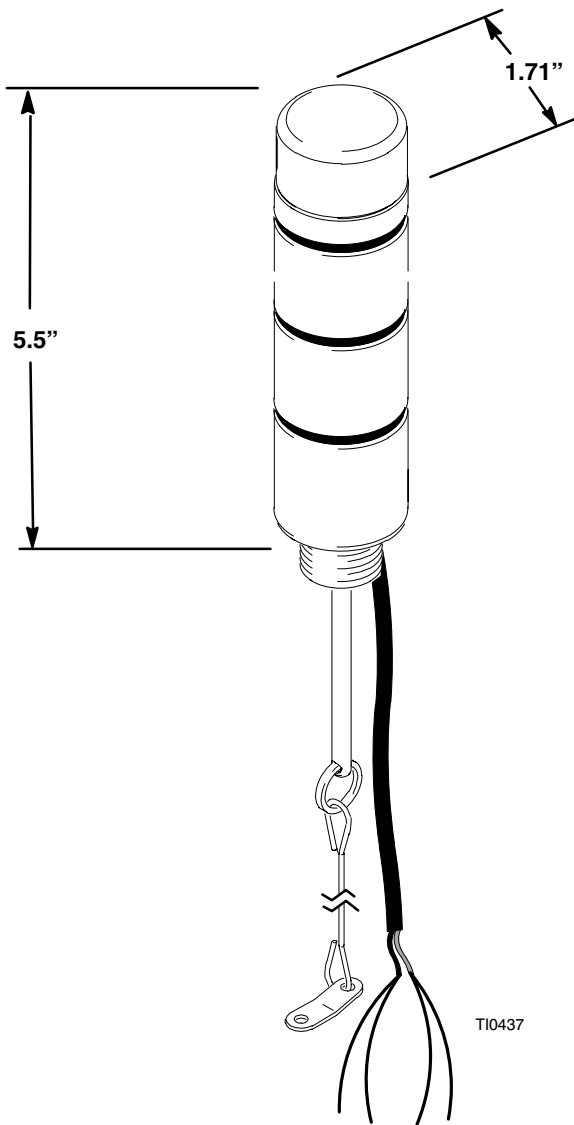
Model 244023

Ref No.	Part No.	Description	Qty	Ref No.	Part No.	Description	Qty
3	116123	CABLE, linkage	1	9	116119	CLIP, retaining	1
4	116124	RING, split	1	10	244025	CAP, assembly	1
6	196894	SPRING, support	1	20	112948	SCREW, phillips pan HD 10-32x1/2"	1
7	244024	ROD, assembly					

Technical Data

Low level sensor switch	Normally open sensor switch, closes upon low level
High level sensor switch	Normally open sensor switch, closes upon full level
Operating temperature range	-50° F to 150° F (-45° C to 65° C)
Electrical Ratings	
Switching Power	10 Watt Max.
Switching Current	.0.4 A – Max.
Switching Voltage	170 VDC – Max.
Contact Resistance	.0.150 Initial Ohms – Max.

Dimensions



Graco Standard Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose in connection with accessories, equipment, materials or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

FOR GRACO CANADA CUSTOMERS

The parties acknowledge that they have required that the present document, as well as all documents, notices and legal proceedings entered into, given or instituted pursuant hereto or relating directly or indirectly hereto, be drawn up in English. Les parties reconnaissent avoir convenu que la rédaction du présente document sera en Anglais, ainsi que tous documents, avis et procédures judiciaires exécutés, donnés ou intentés à la suite de ou en rapport, directement ou indirectement, avec les procédures concernées.

Graco Phone Number

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you:
1-800-533-9655 Toll Free

*All written and visual data contained in this document reflects the latest product information available at the time of publication.
Graco reserves the right to make changes at any time without notice.*

Sales Offices: Minneapolis, Detroit
International Offices: Belgium, Korea, Hong Kong, Japan

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441

www.graco.com

PRINTED IN USA 309200 July 2000