

Fuel Meter

311309 rev.B

For metering fuels.

80 psi (0.55 MPa, 5.5 bar) Maximum Working Pressure

Model 260405, measures in gallons

Model 260414, measures in liters



Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.

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Warnings

The following general warnings are for the setup, use, grounding, maintenance, and repair of this equipment. Additional, more specific warnings may be found throughout the body of this manual where applicable. *Symbols appearing in the body of the manual refer to these general warnings. When these symbols appear throughout the manual, refer back to these pages for a description of the specific hazard.*

 WARNING	
	<p>FIRE AND EXPLOSION HAZARD</p> <p>When flammable fluids are present in the work area, such as gasoline and windshield wiper fluid, be aware that flammable fumes can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Eliminate all ignition sources, such as cigarettes and portable electric lamps. • Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline. • Do not plug or unplug power cords or turn lights on or off when flammable fumes are present. • Ground all equipment in the work area. • Use only grounded hoses. • If there is static sparking or you feel a shock, stop operation immediately. Do not use equipment until you identify and correct the problem. • Keep a fire extinguisher in the work area.
	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of toxic fumes, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eyewear • Clothing and respirator as recommended by the fluid and solvent manufacturer • Gloves • Hearing protection
	<p>PRESSURIZED EQUIPMENT HAZARD</p> <p>Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.</p> <ul style="list-style-type: none"> • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

**WARNING****EQUIPMENT MISUSE HAZARD**

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine Graco replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your Graco distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

Installation



Meter

See **Parts**, page 8.

1. When unpacking meter, check for shipping damage. Report any shipping damage to delivering carrier immediately.
2. To install meter on pump, apply PTFE tape or pipe sealer to 3/4 in. npt nipple (20) and screw into meter inlet port. Apply PTFE tape or pipe sealant to opposite end of nipple and screw nipple into pump outlet port by turning the meter assembly clockwise. Do not overtighten.
3. The meter is shipped with the counter assembly positioned so the meter outlet port is in the straight down position, with the hose out the bottom of the meter. To locate the hose on the sides or top, position the meter as desired (see step 2 above).

To rotate the counter assembly (16), see steps 2-3 under **Meter Assembly and Disassembly**, page 5. Rotate the counter assembly so that the number wheels are horizontal. To reassemble meter, install parts in reverse order, making sure all seals are in place.

4. Apply PTFE tape or sealant to all threaded joints, then install hose in meter outlet port.

Meter Calibration

The meter is factory calibrated for use with diesel fuel. To recalibrate meter for different fluids, or to recalibrate meter after service work has been performed, use the following procedure. See **Parts**, page 8.

1. Operate the pump to fill the meter, hose, and system with fluid. Make sure all air is out of system.
2. Reset counter to 000 by turning the reset knob (9) counterclockwise.
3. Fill a measured container to the 5 gallon mark (19.0 liters).
4. Note meter reading. If reading is less than 5.0 gallons (19.0 liters), turn adjustment screw (18) clockwise. If meter reading is more than 5.0 gallons (19.0 liters), turn screw (18) counterclockwise. Repeat above procedure until counter reading agrees with measured amount of fluid.

Operation

The 260405 registers the fluid in gallons. The top (larger) number wheel can be reset to zero by turning the reset knob (9) counterclockwise. The bottom (smaller) number wheels are a totalizing counter and cannot be reset. The resettable counter registers up to 99.9 gallons. The totalizer registers up to 9999.9 gallons.

The 260414 registers the fluid in liters. The operation of the 260414 is the same as the 260405. The resettable counter registers up to 99.9 liters. The totalizer registers up to 9999.9 liters.

Repair

Meter Assembly and Disassembly

To replace any of the major assemblies, disassemble meter as follows. See **Parts**, page 8.

1. Remove the reset knob (9) by pulling it straight out.
2. Remove two screws (11) and take off counter cover (14).
3. Remove four hex head bolts (15) to remove counter assembly (16).
4. To remove disk assembly (3, 4, 5), remove two screws (7) and washers (6). Disk parts must be replaced as an assembly; order kit number 260429 for model 260405 (gallons) and kit number 260430 for model 260414 (liters).
5. Reassemble in reverse order of disassembly. Make sure all seals are in place.

Troubleshooting

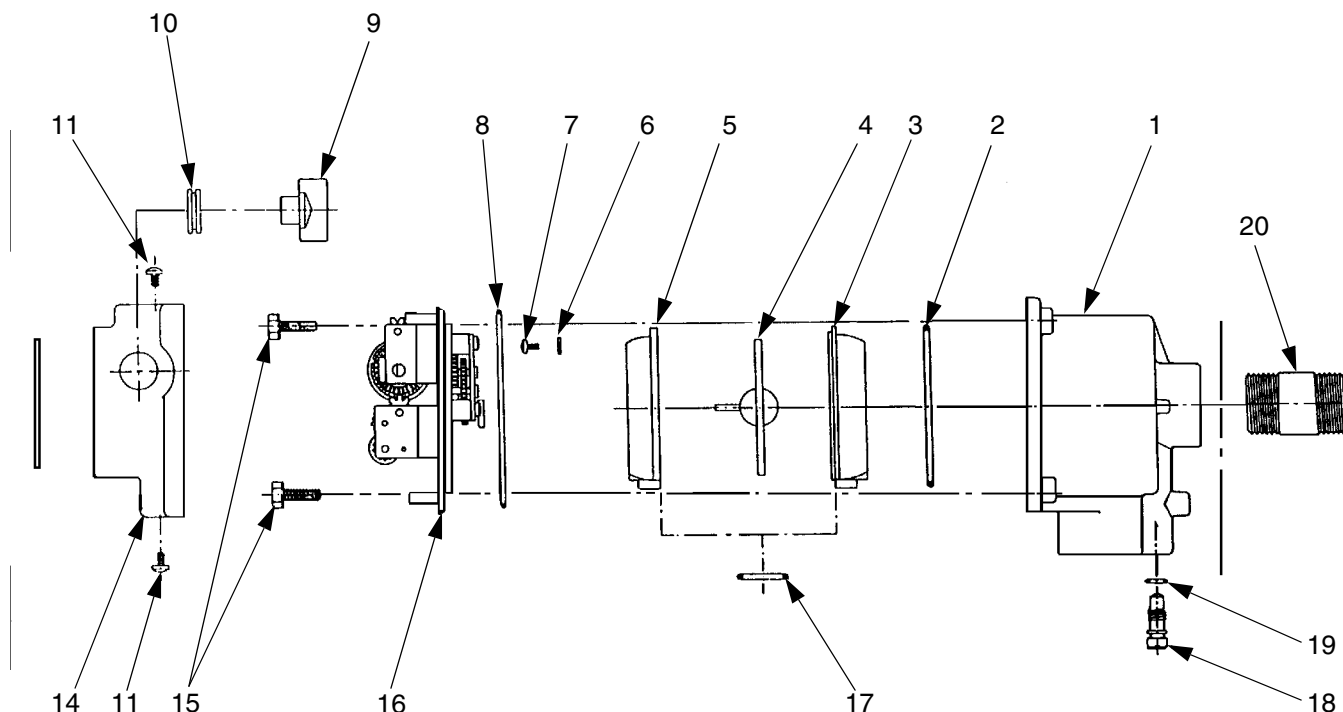
Problem	Cause	Solution
Meter runs in reverse.	Meter installed backward.	Install meter with port marked "inlet" to pump outlet.
Fluid leakage in counter.	Seal on counter input shaft leaking.	Replace counter assembly.
Dust and dirt in counter cover.	Cover seal (8) or knob seal (10) missing or improperly installed.	Install missing seal, or correct installation.
Meter counter does not operate, fuel delivery normal.	Broken parts in counter assembly.	Replace counter assembly.
	Broken drive pin on disk (4).	Replace disk assembly.
	Foreign material in counter assembly.	Clean or replace counter assembly.
	Misaligned disk assembly.	Check disk assembly and clean; make sure alignment is correct. Make sure outlet is engaged with hole in outlet port, that o-ring seal (17) is installed, and that hold down screw (7) and washer (6) are tight.
	Defective or worn disk assembly.	Replace disk assembly.
Fluid Leaks from meter.	Pipe fitting or hose installed without sealant.	Apply pipe sealant and reinstall.
	O-ring seal (2) worn or improperly installed.	Replace seal.
	Fastener (15) loose.	Tighten fastener.
Low or no outlet flow.	System problem other than meter.	Check other system components for problem.
	Foreign material in disk assembly.	Clean or replace damaged disk assembly.



A series of horizontal lines for writing, alternating between black and purple lines.

Parts

Models 260405, 260414



Ref.

No. Description

- 1 HOUSING, meter
- 2 SEAL, o-ring
- 3 CHAMBER, lower
- 4 DISK
- 5 CHAMBER, upper
- 6 WASHER
- 7 SCREW; 6-32 x 1/4 in.
- 8 SEAL, o-ring
- 9 KNOB, reset

Qty.

- 1
- 1
- 1
- 1
- 1
- 2
- 2
- 1
- 1

Ref.

No. Description

- 10 SEAL, grommet
- 11 SCREW; 8-32 x 1/4 in.
- 14 HOUSING, counter, cover
- 15 HEX BOLT; 1/4-20 x 3/4 in.
- 16a COUNTER, assembly, gallons
- 16b COUNTER, assembly, liters
- 17 SEAL, o-ring
- 18 SCREW, adjustment
- 19 SEAL, o-ring
- 20 NIPPLE, pipe; 3/4 in. npt x 2.0 in.

Qty.

- 1
- 2
- 1
- 4
- 1
- 1
- 1
- 1
- 1
- 1

Kits

Kit

Number Description

- 260427 KIT, Knob
- 260428 KIT, Air Adjustment
- 260429 KIT, Metering (gallons)
- 260430 KIT, Metering (liters)

Includes Items

- 9, 10
- 18, 19
- 2, 3, 4, 5, 7, 8, 15, 16a, 17
- 2, 3, 4, 5, 7, 8, 15, 16b, 17

Technical Data

Working Pressure	80 psi (0.55 MPa, 5.5 bar)
Inlet Size	3/4 in. npt
Outlet Size	3/4 in. npt
Weight	2.5 lb (1.1 kg)
Wetted Parts	diecast aluminum, carbon steel with zinc plating, 12L14 steel with zinc plating, 416 stainless steel, Valox [®] , nylon, fluoroelastomer

Valox[®] is a registered trademark of GE Plastics

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale 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.

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Graco Information

TO PLACE AN ORDER, contact your Graco distributor or call to identify the nearest distributor.

Phone: 612-623-6928 **or Toll Free:** 1-800-533-9655, **Fax:** 612-378-3590

*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.*

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