

APEX Oil Transfer Pump

311306 rev.B

For pumping non-flammable fluids including motor oils, hydraulic fluid, and antifreeze. Do not use to pump water.

Model 260105, 3.0 gpm (11 lpm), 115 VAC (wall mount)

Model 260106, 3.0 gpm (11 lpm), 115 VAC

Model 260108, 4.2 gpm (16 lpm), 115 VAC

Model 260109, 7.9 gpm (30 lpm), 115 VAC

Model 260240, 6.3 gpm (24 lpm), 12 VDC (reversible)

150 psi (1.03 MPa, 10.3 bar) Maximum Working Pressure

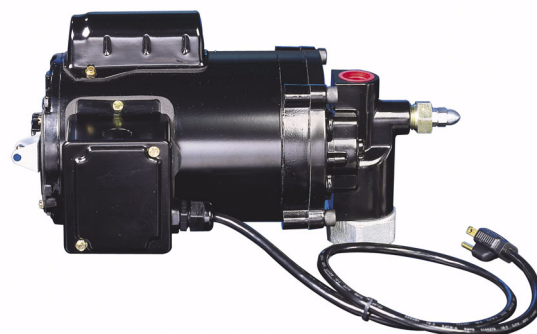


Important Safety Instructions

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

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PROVEN QUALITY. LEADING TECHNOLOGY.

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>ELECTRIC SHOCK HAZARD</p> <p>Improper grounding, setup, or usage of the system can cause electric shock.</p> <ul style="list-style-type: none"> • Turn off and disconnect power at main switch before disconnecting any cables and before servicing equipment. • Connect only to grounded power source. • All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.
	<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

 WARNING	
	<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"> • Follow Pressure Relief Procedure in this manual, when you stop dispensing and before cleaning, checking, or servicing equipment. • Tighten all fluid connections before operating the equipment. • Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.
	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • 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.
	<p>BURN HAZARD</p> <p>Equipment surfaces and fluid that's heated can become very hot during operation. To avoid severe burns, do not touch hot fluid or equipment. Wait until equipment/fluid has cooled completely.</p>

Installation




These pumps are positive displacement gear pumps. The models with AC motors are 115 VAC, and use UL and CSA listed TENV motors. The motors use sealed bearings and require minimal maintenance. These pumps are for use with motor oil, hydraulic fluid, anti-freeze, gear lubes and other oil-based products. Models 260106, 260108, and 260109 include a bung adapter for mounting on any standard 2 inch barrel or tank bung.

When unpacking check for shipping damage. Report any shipping damage to delivering carrier immediately. See **Parts**, page 6.

Mounting Pump on Barrel or Tank

1. Install bung adapter in 2 in. bung and tighten.
2. Use a 1 in. (25 mm) steel or PVC pipe with 1 in. npt pipe threads on one end as a suction tube.
3. Cut tube to a length 1/2 in. (13 mm) less than the distance from the top of the bung to the bottom of the tank.

4. Apply pipe sealant to threads and install pipe into pump inlet.

 If you are pumping used oil, install suction tube assembly with inlet suction screen (260306), to filter large contaminants.


If tank depth is greater than 60 in. (1524 mm), an intake check valve (260217) may be required to retain pump prime.

5. Insert the suction tube through the bung adapter into the tank, and lower the pump onto the bung adapter.
6. Tighten swivel nut on pump to the thread on the bung adapter.
7. The pump outlet port is a 3/4 in. npt pipe port. Make sure hose or pipe used on the pump discharge is rated greater than the maximum working pressure rating of the pump
8. Fill pump outlet with fluid to aid initial priming.

Mounting Pump In-line

Model 260105 comes with a mounting bracket and can be wall mounted.

The pump has a 1 in. npt inlet and a 3/4 in. npt outlet.

 If you are pumping used oil, install suction screen (260238) to filter large contaminants.

Electrical Installation

115VAC

The pump comes pre-wired with a 30 in. (762 mm) power cord with a 3 prong grounded plug. Power to the pump must be 115VAC, 60Hz, single phase. If an extension cord is used it should be a 3-wire cord with a ground.

To permanently hardwire the pump, remove the conduit box cover and remove the power cord strain relief. The conduit box wiring opening is for a 1/2 in. conduit pipe. The motors are all 115 VAC single phase, requiring a 3-wire grounded electrical service.

Electrical Installation


12 VDC



The 12 VDC model (260100) is not shipped with a power cord since the installation will determine the length of the power cord.

1. Verify the on/off switch is in the off position.
2. Remove the wiring junction box cover by removing the four screws.
3. Use 10 AWG wire to connect the red (+) and black (-) wires to the 12 VDC supply.
4. Reattach the wiring junction box cover with the four screws.

Operation

 Before servicing, turn pump off and open the nozzle to relieve pressure.

CAUTION

Do not operate pump dry. Make sure pump has fluid in it when pump is initially installed. Do not run the pump for more than 2 minutes with the pump discharge blocked.

Follow these instructions for operation of the 260105, 260106, 260108, 260109, and 260240 oil transfer pumps. See **Parts**, page 8 for reference.

1. To start the pump, turn power switch ON. Power switch is located on the back side of the motor. For model 260240 (reversible), ensure the switch is moved to the desired flow direction.
2. The pump has an internal bypass valve that will open when the pump discharge pressure exceeds 150 psi (1.03 MPa, 10.3 bar). If flow is blocked the fluid will bypass within the pump.
3. Transfer or dispense fluids by opening the required valves in your system.
4. Immediately after dispensing, turn power switch to off position.

Troubleshooting

Problem	Cause	Solution
Motor runs but pump will not prime.	Dirt under pressure relief valve or seal.	Remove pressure relief valve and inspect, clean, or replace if damaged.
	Worn or damaged gears.	Remove cover and inspect gears. Replace if worn or damaged.
	Fluid level low.	Refill tank.
	Cover seal damaged.	Replace if worn or damaged.
	Inlet strainer clogged.	Remove and clean or replace.
	Air leak in suction tube.	Inspect all joints in suction tube, make sure all joints have sealant applied.
	Air lock in system.	This may occur if filter or meter or automatic shut-off nozzle is used. If this occurs, fill pump and meter with fuel through top of pump.
	Motor does not run at proper speed.	Check electric connections. Check supply voltage for proper voltage level.
Oil leaking in motor mount.	Faulty or damaged motor shaft seal.	Replace shaft seal
	Operating pump extended time with nozzle closed.	Do not exceed 5 minutes of operation with nozzle closed.
	Motor shaft worn.	Replace motor if shaft has groove worn in seal area.

Problem	Cause	Solution
Unit pumps but output flow is low.	Clogged inlet strainer (12).	Clean or replace.
	Air leak in suction tube.	Check to make sure all joints in suction tube are sealed.
	Suction tube too close to tank bottom.	Suction tube must have a 2 in. (51 mm) minimum clearance.
	Tank empty.	Refill tank.
	Tank not vented.	Tank must be vented to atmosphere.
	Worn or damaged gears.	Remove cover and inspect gears. Replace if worn or damaged.
	Damaged motor.	Replace motor.
	Clogged suction tube, hose, or nozzle.	Inspect and clean.
Motor stalls when nozzle is closed.	Bypass relief valve is stuck.	Inspect relief valve, making sure ball is free. Replace if damaged.
	Low supply voltage.	Check supply voltage.
	Gears damaged and binding.	Inspect gears. Gears should turn freely. Replace if damaged.
	Faulty motor.	Replace motor.
Motor overheating.	Gears binding.	Check to make sure gears turn freely on shaft.
	Operating pump extended time with nozzle closed.	Do not exceed 5 minutes of operation with nozzle closed.
	Clogged strainer.	Clean or replace.
	Clogged suction tube, hose, or nozzle.	Inspect and clean if required.
	Operating pump more than 30 minutes continuous duty.	Limit operation to 30 minutes per hour.
Switch will not turn pump on.	Blown fuse or circuit breaker.	Replace fuse or reset breaker.
	Electrical problem.	Check that supply voltage is proper to the pump motor.
	Defective switch (model 260240).	Check and replace if defective.
	Damaged or defective motor.	Check motor, replace if damaged or defective.

This exploded view diagram illustrates the components of a 12VDC 100W LED light fixture. The parts are numbered as follows:

- 1: LED light module
- 2: LED light module mounting bracket
- 3: LED light module mounting bracket
- 4: LED light module mounting bracket
- 5: LED light module
- 6: Power cable
- 7: LED light module mounting bracket
- 8: LED light module mounting bracket
- 9: LED light module mounting bracket
- 10: LED light module mounting bracket
- 11: LED light module mounting bracket
- 12: LED light module mounting bracket
- 13: LED light module mounting bracket
- 14: LED light module mounting bracket
- 15: LED light module mounting bracket

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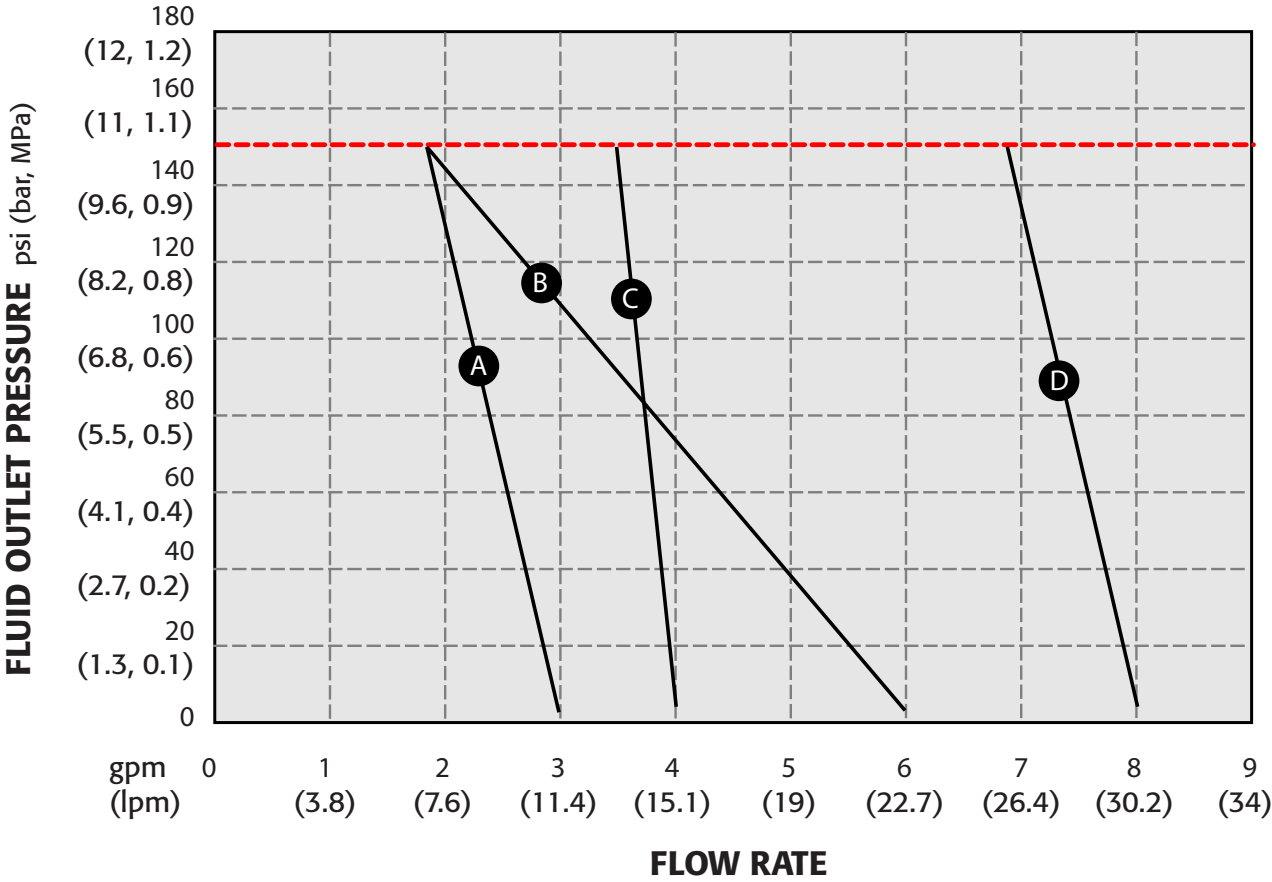
Kits**Kit**

Number	Description	Includes Items
260061	ADAPTER, bung	11
260245	KIT, fluid, 3 gpm with swivel (model 260106)	1a, 2, 3a, 4, 7, 8, 9, 10, 14, 15
260246	KIT, fluid, 3 gpm without swivel (model 260105)	1b, 2, 3a, 4, 7, 8, 9, 10, 14, 15
260247	KIT, fluid with swivel (models 260108, 260109, 260240)	1c, 2, 3b, 4, 7, 8, 9, 10, 14, 15
260248	KIT, motor, 115 VAC 3/4 HP (models 260105, 260106, 260108)	5a, 6, 12
260249	KIT, motor, 115 VAC 1 HP (model 260109)	5b, 6, 12
260292	KIT, packing	4, 7
260293	KIT, gear, high flow (models 260108, 260109, 260240)	3b, 4, 7
260294	KIT, gear (models 260105, 260106)	3a, 4, 7
260295	KIT, pressure relief	8, 9, 10
260541	KIT, MOTOR, 12 VDC 3/4 HP (model 260240)	5c, 12

Technical Data

Maximum working pressure	150 psi (1.05 MPa, 10.5 bar)
Output flow	Model 260105: 3.0 gpm (11 lpm) Model 260106: 3.0 gpm (11 lpm) Model 260108: 4.2 gpm (16 lpm) Model 260109: 7.9 gpm (30 lpm) Model 260240: 6.3 gpm (24 lpm)
Inlet size	1 in. npt
Outlet size	3/4 in. npt
Weight	Model 260105, 260106, 260108: 25 lb (11.25 kg) Model 260109: 30 lb (13.5 kg) Model 260240: 28 lb (12.7 kg)
Power cord	30 in. (762 mm), 3 prong grounded (AC models only)
Horsepower	Model 260105, 260106, 260108, 260240: 3/4 hp Model 260109: 1 hp
Max current	Model 260105, 7.5 amps Model 260106, 7.5 amps Model 260108: 9.0 amps Model 260109: 11.0 amps Model 260240: 60 amps
Wetted parts	carbon steel with zinc plating, stainless steel, galvanized steel, aluminum, nitrile, rubber

Performance Chart



PART NUMBERS	LEGEND
(A)=260105, 260106	Relief valve -----
(B)=260108	setting at 150 psi
(C)=260240	(10.3 bar, 1.0 MPa)
(D)=260109	

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

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