

# Viscount<sup>®</sup> I Hydraulic Motor

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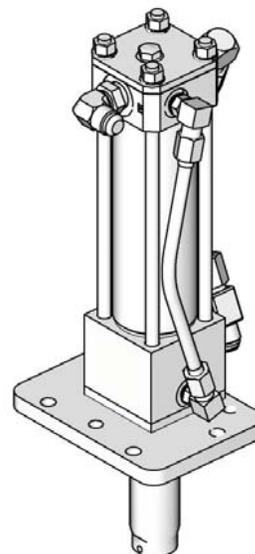
## Model 255345, Series A

*1500 psi (10 MPa, 102 bar) Maximum Hydraulic Input Pressure*



### Important Safety Instructions

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



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# Table of Contents

- Warnings** ..... 3
- Installation** ..... 5
  - General Information ..... 5
  - Grounding ..... 5
  - Startup ..... 5
  - Pressure Relief Procedure ..... 6
- Troubleshooting** ..... 7
- Service** ..... 7
  - Required Tools ..... 7
  - Hydraulic Motor Disassembly ..... 8
  - Hydraulic Motor Reassembly ..... 10
- Viscount I Hydraulic Motor Parts** ..... 12
- Accessories** ..... 14
  - Graco-Approved Hydraulic Fluid ..... 14
- Technical Data** ..... 14
- Notes** ..... 15
- Graco Standard Warranty** ..... 16
- Graco Information** ..... 16

# Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure-specific risk. Refer back to these warnings. Additional, product-specific warnings may be found throughout the body of this manual where applicable.

 <b>WARNING</b>	
	<p><b>EQUIPMENT MISUSE HAZARD</b></p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> <li>• Do not operate the unit when fatigued or under the influence of drugs or alcohol.</li> <li>• Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See <b>Technical Data</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See <b>Technical Data</b> in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS forms from distributor or retailer.</li> <li>• Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.</li> <li>• Do not alter or modify equipment.</li> <li>• Use equipment only for its intended purpose. Call your distributor for information.</li> <li>• Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.</li> <li>• Do not kink or over bend hoses or use hoses to pull equipment.</li> <li>• Keep children and animals away from work area.</li> <li>• Comply with all applicable safety regulations.</li> </ul>
 	<p><b>SKIN INJECTION HAZARD</b></p> <p>High-pressure fluid from gun, hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. <b>Get immediate surgical treatment.</b></p> <ul style="list-style-type: none"> <li>• Do not point gun at anyone or at any part of the body.</li> <li>• Do not put your hand over the spray tip.</li> <li>• Do not stop or deflect leaks with your hand, body, glove, or rag.</li> <li>• Do not spray without tip guard and trigger guard installed.</li> <li>• Engage trigger lock when not spraying.</li> <li>• Follow <b>Pressure Relief Procedure</b> in this manual, when you stop spraying and before cleaning, checking, or servicing equipment.</li> </ul>
	<p><b>MOVING PARTS HAZARD</b></p> <p>Moving parts can pinch or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> <li>• Keep clear of moving parts.</li> <li>• Do not operate equipment with protective guards or covers removed.</li> <li>• Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the <b>Pressure Relief Procedure</b> in this manual. Disconnect power or air supply.</li> </ul>
	<p><b>BURN HAZARD</b></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>

# ! WARNING

	<p><b>FIRE AND EXPLOSION HAZARD</b></p> <p>Flammable fumes, such as solvent and paint fumes, in <b>work area</b> can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> <li>• Use equipment only in well ventilated area.</li> <li>• Do not fill fuel tank while engine is running or hot; shut off engine and let it cool. Fuel is flammable and can ignite or explode if spilled on hot surface.</li> <li>• Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).</li> <li>• Keep work area free of debris, including solvent, rags and gasoline.</li> <li>• Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.</li> <li>• Ground all equipment in the work area. See <b>Grounding</b> instructions.</li> <li>• Use only grounded hoses.</li> <li>• Hold gun firmly to side of grounded pail when triggering into pail.</li> <li>• If there is static sparking or you feel a shock, <b>stop operation immediately</b>. Do not use equipment until you identify and correct the problem.</li> <li>• Keep a working fire extinguisher in the work area.</li> </ul>
	<p><b>TOXIC FLUID OR FUMES HAZARD</b></p> <p>Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.</p> <ul style="list-style-type: none"> <li>• Read MSDS's to know the specific hazards of the fluids you are using.</li> <li>• Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.</li> <li>• Always wear impervious gloves when spraying or cleaning equipment.</li> </ul>
	<p><b>PERSONAL PROTECTIVE EQUIPMENT</b></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"> <li>• Protective eyewear</li> <li>• Clothing and respirator as recommended by the fluid and solvent manufacturer</li> <li>• Gloves</li> <li>• Hearing protection</li> </ul>

# Installation

## General Information

Reference numbers and letters in parentheses in the text refer to the callouts in the figures and the parts drawing.

Always use Genuine Graco Parts and Accessories, available from your Graco distributor.

## Grounding



- **Pump:** Use a ground wire and clamp. See separate system manual.
- **Hydraulic, and fluid hoses:** Use only electrically conductive hoses.
- **Hydraulic power supply:** Follow manufacturer's recommendations.
- **Spray gun:** Ground through connection to a properly grounded fluid hose and pump.
- **Fluid supply container:** Follow your local code.
- **Object being sprayed:** Follow your local code.
- **Solvent pails used when flushing:** Follow your local code. Use only metal pails, which are conductive, placed on a grounded surface. Do not place the pail on a nonconductive surface, such as paper or cardboard, which interrupts the grounding continuity.
- To maintain grounding continuity when flushing or relieving pressure, hold a metal part of the spray gun firmly to the side of a grounded metal pail, then trigger the gun.

## Startup

Before each use, check the hydraulic fluid level and add fluid as necessary to fill the lines.



### FIRE AND EXPLOSION HAZARD

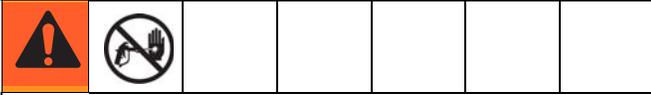
If hydraulic oil becomes too hot, it can reach its flash point and cause a fire. Operating at too high an oil temperature can also cause faster motor seal wear and leakage. The recommended hydraulic oil operating temperature is 80 to 115° F (27 to 45° C). If the oil temperature approaches 130° F (54° C), shut off the motor and check the hydraulic oil supply cooling system, filters, etc. Clean or repair as needed.

Always use Graco-approved Hydraulic Oil or equivalent (see Accessories). Do not substitute a lower grade oil or one with a lower flash point.

The equivalent is a premium, ISO grade 46

petroleum-based hydraulic oil containing rust and oxidation inhibitors and anti-wear agents. Before using any other type of oil in this equipment, call your Graco distributor. Unauthorized use of lesser grade oil or substitutes will void the warranty.

## Pressure Relief Procedure



### SKIN INJECTION HAZARD

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the Pressure Relief Procedure whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- or install or clean the spray tip.

1. Engage the gun safety latch.
2. Shut off the hydraulic power supply.
3. Close the supply line shutoff valve, and then the return line shutoff valve.
4. Disengage the gun safety latch.
5. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
6. Engage the gun safety latch.
7. Open the drain valve (required in your system), and have a container ready to catch drainage.
8. Leave the drain valve open until you are ready to spray again.

If you suspect that the spray gun or hose is completely clogged or that pressure has not been fully relieved after following the steps above, very slowly loosen the hose end coupling and relieve pressure gradually, then loosen completely, then clear the valve or hose.

# Troubleshooting

Problem	Cause	Solution
Hydraulic Motor stops running.	Worn valve or valve balls (3); broken valve spring (18).	Repair valve. See page 8.
	Broken trip rod (17), spring (12) or retainers (11).	Repair valve. See page 8.
Poor performance or reduced efficiency.	Worn piston seals (5, 6, 7).	Repair valve. See page 8.
Oil leaking around cylinder.	Worn cylinder o-rings (2).	Replace o-rings. See page 8.
Oil leaking around inlet or return tube fittings.	Loose fittings or worn fitting o-rings (31, 34, and 38).	Tighten nuts (27). See page 10.
Excessive oil in drain bottle, or bottle needs frequent emptying.	Worn seals (2, 15, 14, and 49) in bottom cylinder cap.	Replace seals. See page 8.

## Service

### Required Tools

- Set of allen wrenches
- Set of socket or box wrenches
- Adjustable wrench
- Torque wrench
- Spanner wrench
- O-ring pick
- 10-24 unc-2b tap
- Vise
- Shallow metal or plastic pan (approx. 12 x 20 in.)
- Repair Tool 189305 (see page 14)
- Thread lubricant
- Lithium-base grease
- Fresh Loctiter 242 thread sealant and Loctiter Primer T or Perma-Loctr 115 thread sealant and Perma-Bondr Surface Conditioner I
- Chlorinated solvent

## Hydraulic Motor Disassembly

**NOTE:** Repair Kit 247557 is available. For best results, use all the parts in the kit. Kit parts are marked with an asterisk in the Parts List.

When disassembling, lay out all parts in sequence, to make reassembly easier. Clean and inspect all parts for wear or damage before reassembling. Replace as necessary.

1. Remove the hydraulic motor from the pump as explained in the separate system manual. Lay it on its side in a pan.
2. Unthread the tie rods (37) from the retainer (36) and the tie plate, and pull them out through the top of the hydraulic motor. It will be necessary to remove the lower four nuts (27) and lockwashers (28).
3. Unscrew the four fluid tube nuts (N) and remove the tubes (32, 39). See FIG. 1. Allow excess oil to drain from the hydraulic motor, then plug the fluid fittings.

### NOTICE

**Keep the hydraulic system clean.** Always plug the hydraulic inlets, outlets and lines when disconnecting them for any reason to avoid introducing dirt and other contaminants into the system.

4. Pull the top valve spool (1), cylinder (33), and displacement rod (9) together off the bottom cylinder cap (35). Remove the o-ring (2) from the bottom cap.
5. Grasp the valve spool(1) and pull the cylinder (33) off. Slide the cylinder off the displacement rod (9). Be careful not to damage the rod. Remove the o-ring (2) from the valve spool.
6. Lay the valve spool (1) and displacement rod (9) on a table. Place a clean rag around the yoke (4) to prevent the detent balls (3) from popping out. Push the yoke (4) sideways off the valve sleeve (19) while holding the balls (3) and spring (18) with the rag, then carefully remove the balls and spring.
7. Inspect the valve sleeve (19), valve stop (25), and spool (S) for damage. See FIG. 2. If any of these parts requires replacement, unscrew the two screws (26) holding the stop (25) to the spool (S). Remove the stop and slide the sleeve (19) off the spool. If the spool is damaged, replace the valve spool (1).

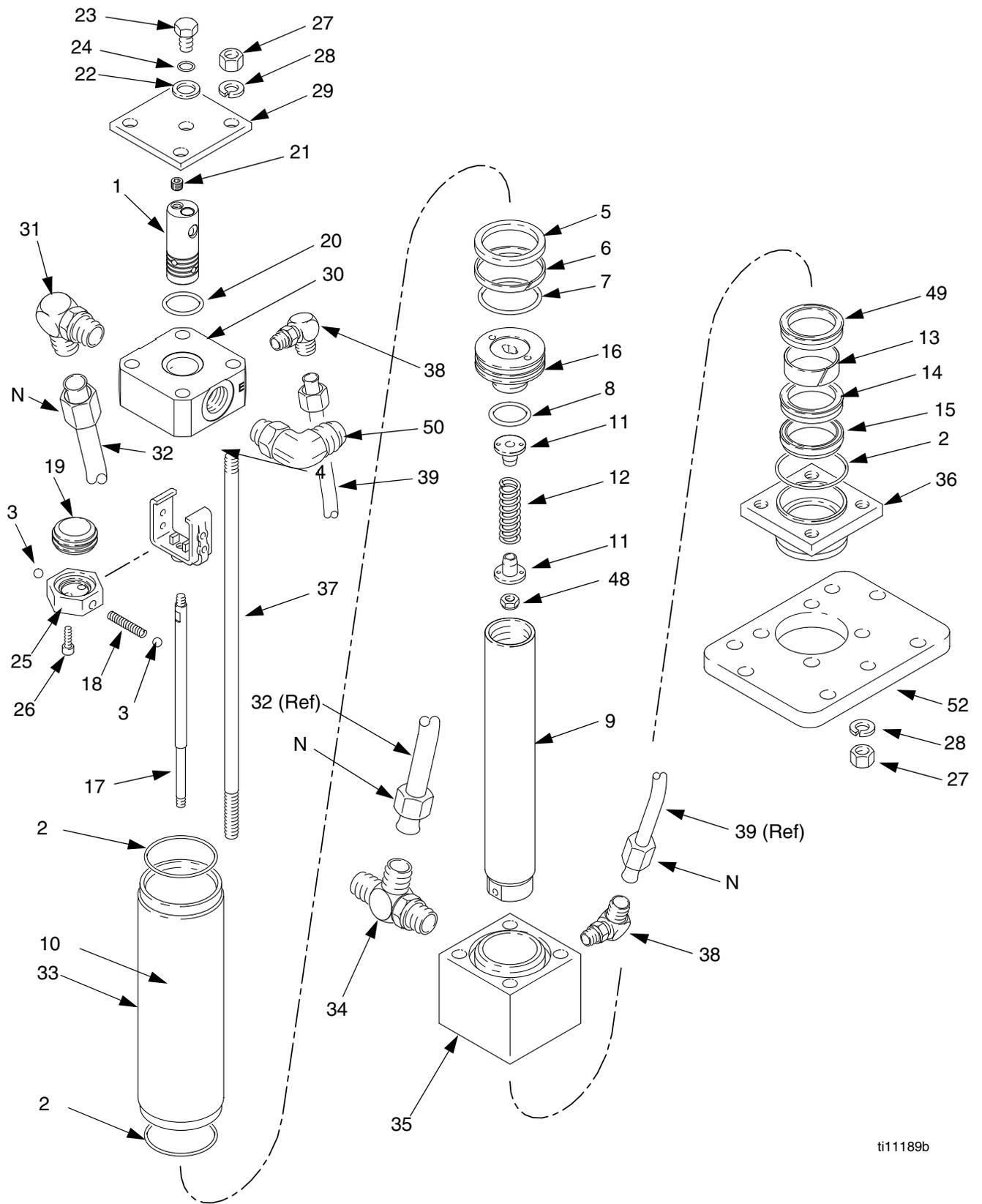
**NOTE:** If any of these parts are being reused, thoroughly clean any adhesive residue from the screws and female threads of the spool. Use a surface cleaner such as chlorinated solvent on the threads and blow dry with compressed air. If necessary, use a 10-24 unc-2b tap to remove adhesive from the female threads.

8. Remove the capscrew (23), sealing washer (22) and o-ring (24) from the cap plate (29). Lift off the cap plate and remove the o-ring (20).
9. Hold the flats of the displacement rod (9) in a vise and use a spanner wrench in the pin holes of the piston (16) to screw it off the rod. Remove the trip rod (17) from the displacement rod.

### NOTICE

Be careful not to scratch the outside of the displacement rod.

10. Unscrew the nut (48) and remove the retainers (11) and spring (12) from the trip rod (17).
11. Slide the piston (16) off the trip rod (17). Remove the bearing (5), seal (6), and o-rings (7 and 8) from the piston.
12. Inspect the yoke (4) and trip rod (17) for damage. If either part requires replacement, slide the yoke into Repair Tool 189-305 and set the tool in a vise. See FIG. 2. Use a wrench on the flats of the trip rod and unscrew the rod from the yoke.
13. Pull the housing retainer (36) away from the bottom cylinder cap (35).
14. Remove the block packings (14 and 49), wiper (15), bearing (13), and o-ring (2) from the housing retainer and bottom cylinder cap.



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FIG. 1

## Hydraulic Motor Reassembly

1. Install the block packing (14\*) and wiper (15\*) in the housing retainer (36). The spring of the block packing and the lips of the wiper must face up. Install the o-ring (2\*) on the top surface of the retainer. See FIG. 2.
2. Install the bearing (13\*) and block packing (49\*) in the bottom cylinder cap (35). The lips of the block packing must face up.
3. Reassemble the housing retainer (36) and the bottom cylinder cap (35).
4. To reassemble the yoke (4) and trip rod (17), clean the threads with primer or chlorinated solvent and let dry for 3 to 4 minutes. Apply thread sealant to the female threads of the yoke. Slide the yoke into Repair Tool 189-305 and place the tool in a vise. Using a wrench on the flats of the trip rod, screw the rod into the yoke. Torque to 54 to 56 in-lb (6.1 to 6.3 N•m).
5. Install the bearing (5\*), o-ring (7\*), and seal (6\*) on the piston (16). Install the second o-ring (8\*) on the underside of the piston. Slide the piston onto the trip rod (17) so the wide end of the piston faces the yoke (4).
6. Install the retainers (11) and spring (12\*) on the trip rod (17). Thread the nut (48\*) onto the rod until it runs out of thread, so that it bottoms out on the shoulder of the rod. See the Detail in FIG. 2.
7. Hold the flats of the displacement rod (9) in a vise. Slide the trip rod (17) into the displacement rod. Use a spanner wrench in the pin holes of the piston (16) to screw it into the displacement rod. Torque to 30 to 40 ft-lb (41 to 54 N•m).
8. Install the o-ring (20\*) in the top cylinder cap (1), then install the cap plate (29), o-ring (24\*), sealing washer (22), and capscrew (23).
9. To reassemble the valve sleeve (19) and valve stop (25), slide the sleeve (19) onto the valve spool (S). (Either side of the sleeve can face up.) Apply primer to the threads of the screws (26) and let dry for 3 to 4 minutes. Apply 1 or 2 drops of thread sealant to the female threads of the spool (S). Install the stop (25) and torque the screws (26) to 42 to 45 in-lb (4.7 to 5.1 N•m).
10. To assemble the valve mechanism, use Repair Tool 189305 as follows:
  - a. Slide the yoke (4) into the repair tool, as shown in the Detail in FIG. 2. Align the upper detent holes (H) of the yoke with the center line of the tool.
  - b. Insert the spring (18\*) and one ball (3\*) into the valve stop (25). Tilt the valve stop and start guiding it into the tool, making sure the ball is sliding into the rounded slot in the tool.
  - c. Place the second ball (3\*) at the other end of the spring (18\*) and push it in with your thumb while rotating the valve stop (25) until the spring is horizontal and the balls are in place. Continue holding this assembly together.
  - d. Align the curved ends of the yoke with the valve sleeve groove, then press the assemblies firmly together. Make sure the balls snap into the upper detent holes (H) of the yoke (4), and the curved ends of the yoke engage the valve sleeve (19) groove. To remove the tool, slide it over the trip rod (17).
11. Place the bottom cylinder cap (35) in a vise. Install the o-ring (2\*) in the cap. Set the cylinder (33) on the bottom cap.
12. Install the o-ring (2\*) in the top valve spool (1). Make sure the hydraulic fittings (31, 34, and 38) are oriented as shown in FIG. 1, then slide the displacement rod (9) and piston (16) into the cylinder (33) until it seats in the top cap.

### NOTICE

When inserting the piston into the cylinder, carefully guide the piston seal (6\*) and bearing (5\*) to prevent damage to these parts.

13. Install the tie rods (37). If the nuts and washers were removed, screw them onto the ends with short threads.
14. Remove the plugs from the fluid fittings (31, 34, and 38). Install the tubes (32, 39) and tighten the four fluid tube nuts (N).
15. Install the hydraulic motor on the pump as explained in the separate system manual.

- △1 Spring faces up.
- △2 Lips face up.
- △3 Apply thread sealant to female threads.
- △4 Torque to 54 to 56 in.-lb (6.1 to 6.3 N•m).
- △5 Wide end faces yoke (4).
- △6 Apply primer to threads and let dry 3 to 4 minutes
- △7 Apply 1 or 2 drops of thread sealant to female threads.
- △8 Torque to 42 to 45 in.-lb (4.7 to 5.1 N•m).
- △9 Torque to 30 to 40 ft-lb (41 to 54 N•m).

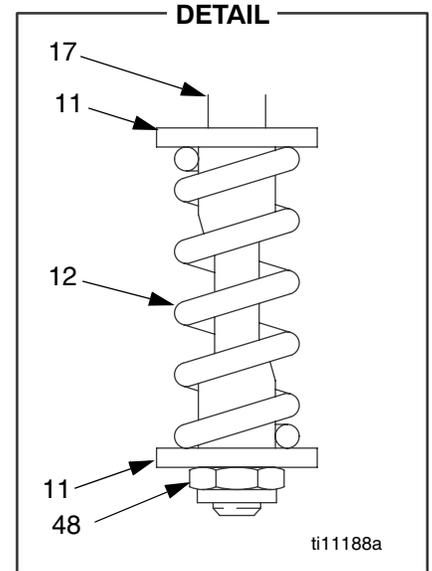
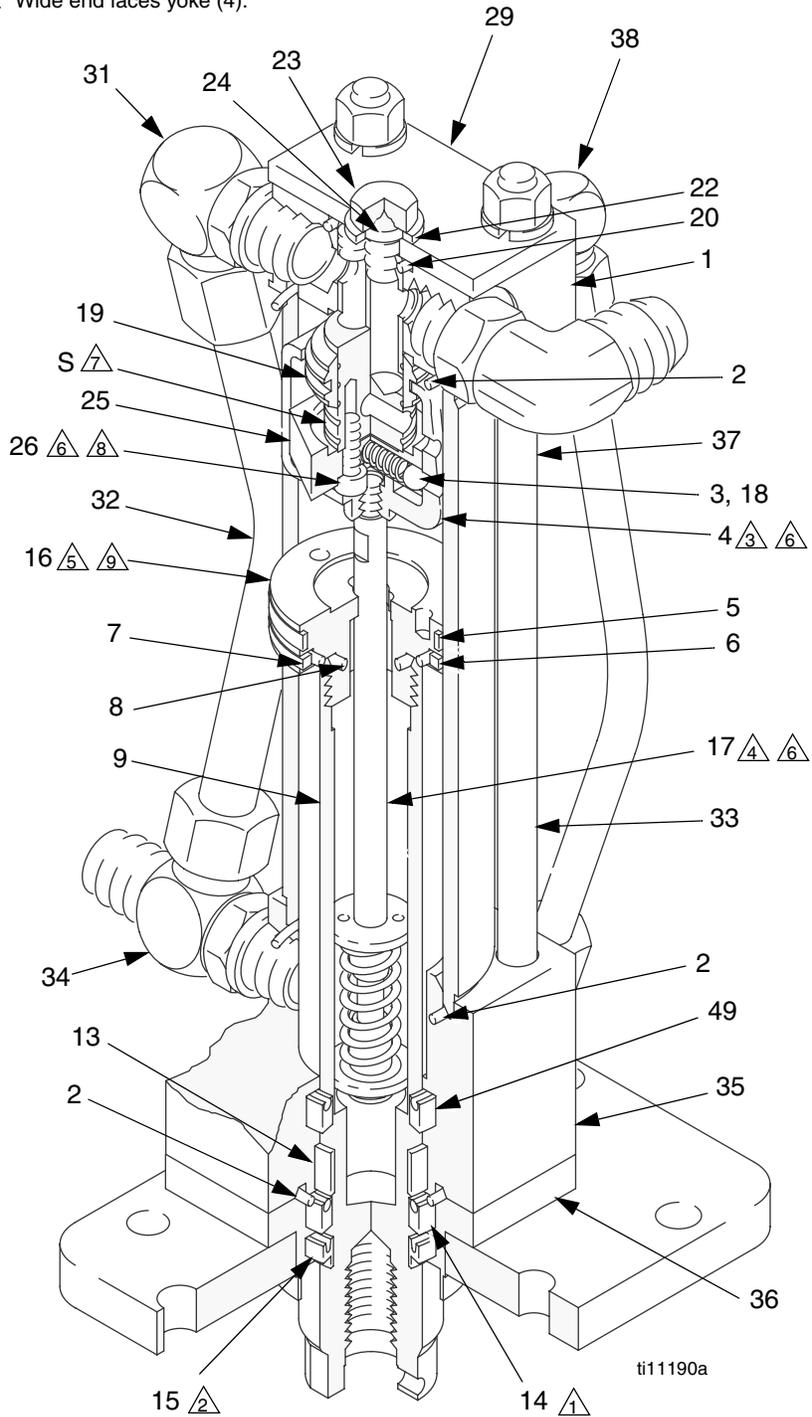
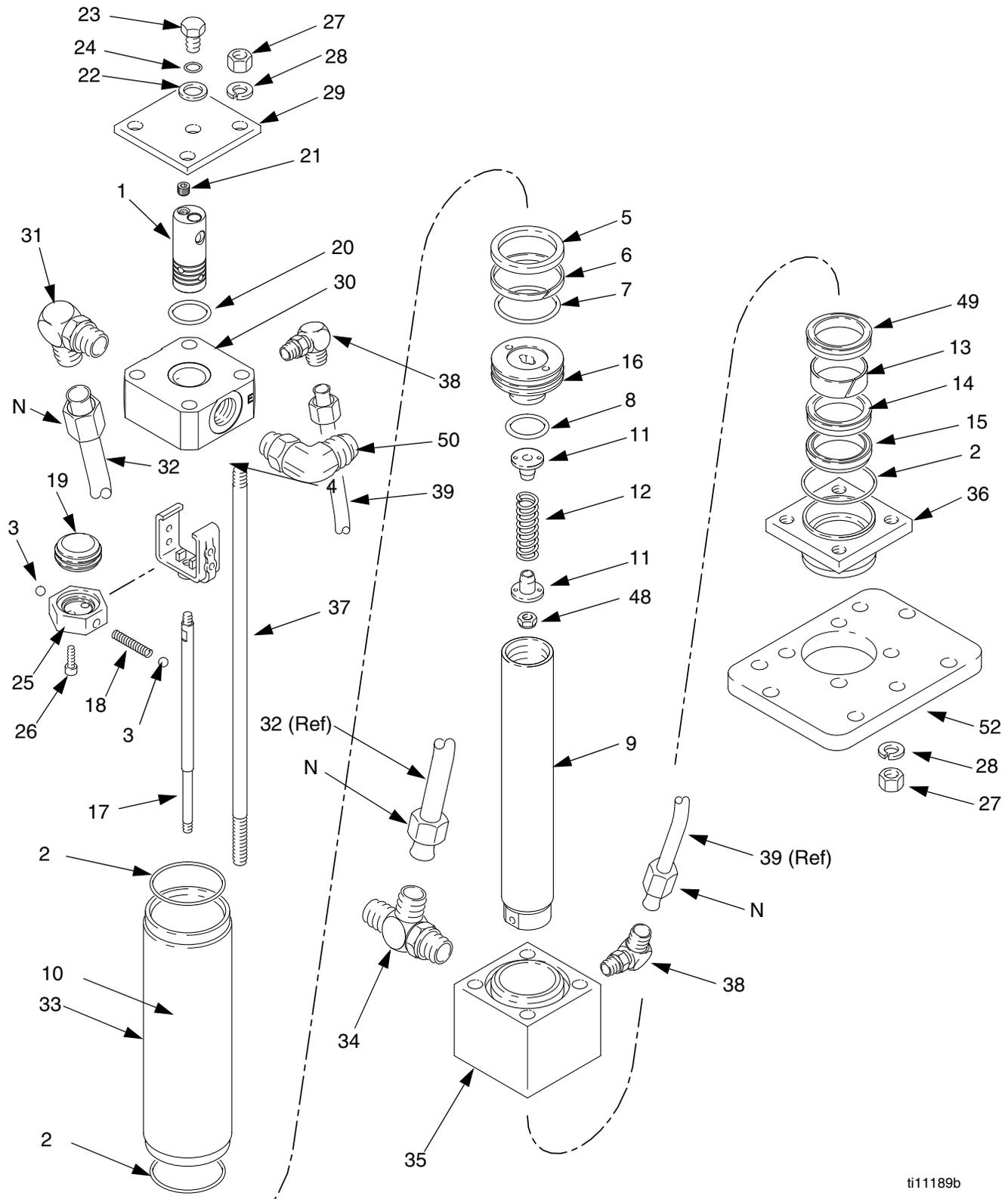


FIG. 2

# Viscount I Hydraulic Motor Parts

## Model 255345, Series A



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**Model 255435, Series A**

Ref. No.	Part No.	Description	Qty.	Ref. No.	Part No.	Description	Qty.
1*		VALVE, spool	1	39	236420	TUBE, drain; w/9/16-18 unf-2b fittings	1
2*	106274	O-RING; buna-N	3	48*		NUT, hex, self locking; 1/4-28 UNF-2B	1
3*		BALL; carbon steel	2	49	112561	PACKING, block; urethane	1
4*		YOKE, valve	1	50	113585	ELBOW, 90_; 7/8-14 unf 2a x 3/4-16 unf-2a;	1
5*	178207	BEARING, piston; bronze-filled PTFE	1	52	191216	PLATE, tie	1
6*	178226	SEAL, piston; glass-filled PTFE	1	53	189305	TOOL, assy (used to assemble Kit 247557)	1
7*	108014	O-RING; buna-N	1				
8*	105765	O-RING; buna-N	1				
9*		ROD, displacement	1				
10▲	188070	LABEL, warning	1				
11*		RETAINER, spring	2				
12*		SPRING, compression	1				
13	112342	BEARING, rod; bronze-filled PTFE	1				
14	112340	PACKING, block; nitrile rubber	1				
15	112341	WIPER, rod; nitrile rubber	1				
16*		PISTON	1				
17*		ROD, trip	1				
18*		SPRING, compression	1				
19*		SLEEVE, valve	1				
20*	104093	O-RING; buna-N	1				
21*	103147	PLUG, pipe	1				
22	178179	WASHER, sealing	1				
23	106276	SCREW, cap, hex hd; 3/8-24 unf-2a; 0.625 (16 mm) long	1				
24*	155685	O-RING; buna-N	1				
25*		STOP, valve	1				
26*		SCREW, cap, socket hd; 10-24 unrc-3a; 0.625 (16 mm) long	2				
27	106292	NUT, hex; 3/8-24 unf-2b	8				
28	100133	WASHER, lock; 3/8 in. size	8				
29	178181	PLATE, cap	1				
30*		CAP, cylinder top	1				
31	106470	ELBOW, 90_; 3/4-16 unf-2a; fits 1/2 in. (13 mm) diameter tube	1				
32	236419	TUBE, inlet; w/3/4-16 unf-2b fittings	1				
33	178229	CYLINDER	1				
34	113584	TEE; 3/4-16 unf-2a	1				
35	189073	CAP, cylinder, bottom	1				
36	189074	RETAINER, housing	1				
37	189075	ROD, tie	4				
38	110792	ELBOW, 90_; 7/16-20 unf-2a x 9/16-18 unf-2a; fits 3/8 in. (10 mm) diameter tube	2				

\* These parts are included in Repair Kit 247557, which may be purchased separately. See manual 312486.

▲ Replacement Danger and Warning labels, tags and cards are available at no cost.

# Accessories

**NOTE:** Use Only Genuine Graco Parts and Accessories.

## Graco-Approved Hydraulic Fluid

Premium, ISO Grade 46 petroleum-based hydraulic oil containing rust and oxidation exhibitors and anti-wear agents. 210° F (99° C) Flash Point.

Parts	Description
169236	5 gallon (20 liter)
207428	1 gallon (3.8 liter)

## Technical Data

Maximum hydraulic fluid input pressure . . . . .	1,500 psi (10 MPa, 102 bar)
Maximum hydraulic fluid input volume . . . . .	3 gpm (11.3 liter/min)
Fluid consumption rate . . . . .	6.5 ounces (0.195 liter) per cycle or 1 gallon per 19.5 cycles
Minimum operating temperature . . . . .	40° F (4° C)
Maximum water content of hydraulic fluid . . . . .	1 percent
Maximum fluid temperature . . . . .	130° F (54° C)
Effective piston area . . . . .	1.48 sq in. (9.55 cm <sup>2</sup> )
Piston rod diameter . . . . .	1 3/8 in. (34.9 mm)
Stroke . . . . .	4 in. (101.6 mm)
Thrust at 1,500 psi (10 MPa, 102 bar) . . . . .	2,220 lb (9,875 N)
Weight . . . . .	17.5 lb (7.93 Kg)

*Loctite® is a registered trademark of the Loctite Corporation.*

*Perma-Loc® and Perma-Bond® are registered trademarks of Perma-Loc Company.*



# 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.

## **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 Information

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

**TO PLACE AN ORDER**, contact your Graco distributor or call 1-800-690-2894 to identify the nearest distributor.

*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.*

*For patent information, see [www.graco.com/patents](http://www.graco.com/patents).*

Original instructions. This manual contains English. MM 312484

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