Instruction Manual - Parts and Repair

115 VAC EGP Oil Transfer Pump

3A8945B

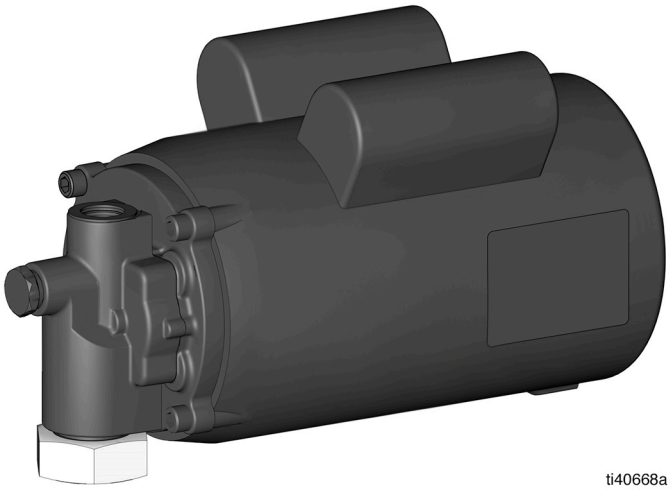
EN

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

Not approved for use in explosive atmospheres or hazardous (classified) locations.

25U346 Electric Gear Pump
Motor Approvals:
7.7 gpm (29.1 lpm)
120 psi (0.83 MPa, 8.3 bar)

Important Safety Instructions
Read all warnings and instructions in this manual before using the equipment. Save these instructions.



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Contents

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 symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

⚠WARNING




FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. Paint or solvent flowing through the equipment can cause static sparking. To help prevent fire and explosion:

- Use equipment only in well-ventilated area.
- Eliminate all ignition sources, such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static sparking).
- Ground all equipment in the work area. See **Grounding** instructions.
- Never spray or flush solvent at high pressure.
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail. Do not use pail liners unless they are anti-static or conductive.
- **Stop operation immediately** if static sparking occurs or you feel a shock**.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.


ELECTRIC SHOCK HAZARD

This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.

- Turn off and disconnect power cord before servicing equipment.
- Connect only to grounded electrical outlets.
- Use only 3-wire extension cords.
- Ensure ground prongs are intact on power and extension cords.
- Do not expose to rain. Store indoors.

BURN HAZARD

Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:

- Do not touch hot fluid or equipment.


MOVING PARTS HAZARD

Moving parts can pinch, cut or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.

⚠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 Specifications** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Specifications** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request Safety Data Sheets (SDSs) from distributor or retailer.
- Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.
- Use equipment only for its intended purpose. Call your 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.

PRESSURIZED EQUIPMENT HAZARD

Fluid from the equipment, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow the **Pressure Relief Procedure** when you stop spraying/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.

PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. Protective equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Typical Installation

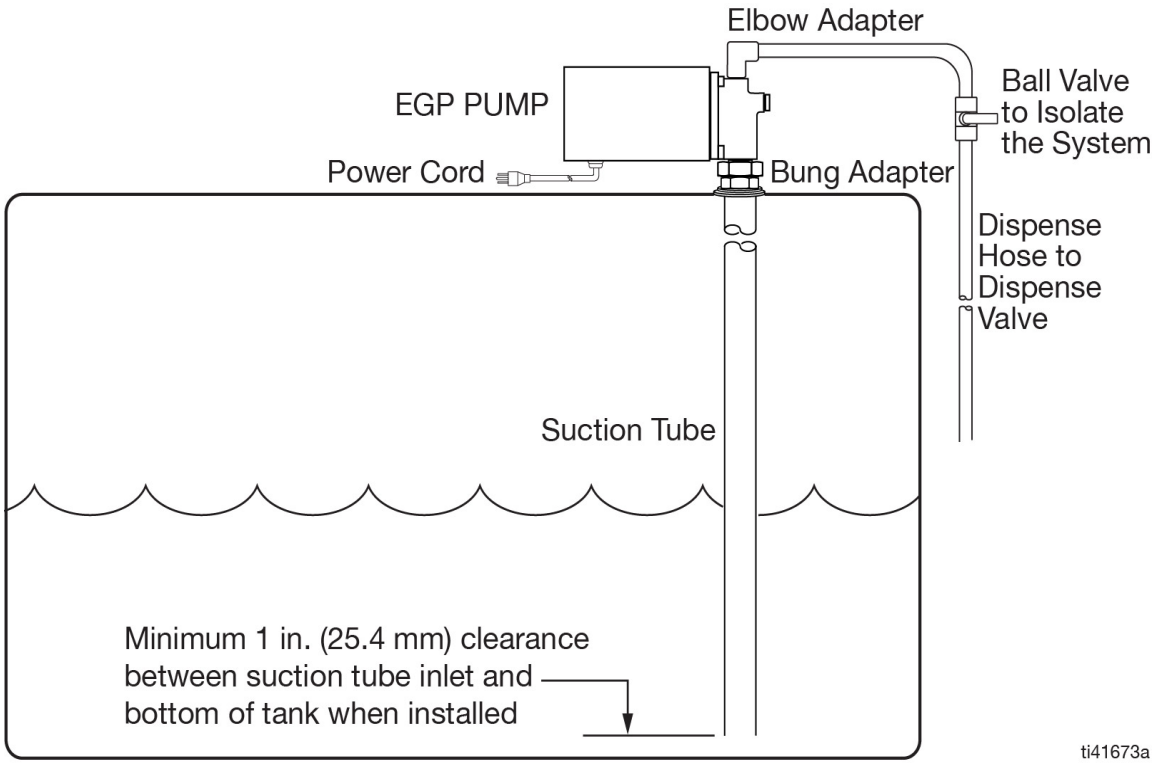


FIG. 1: Typical Installation

Component Identification

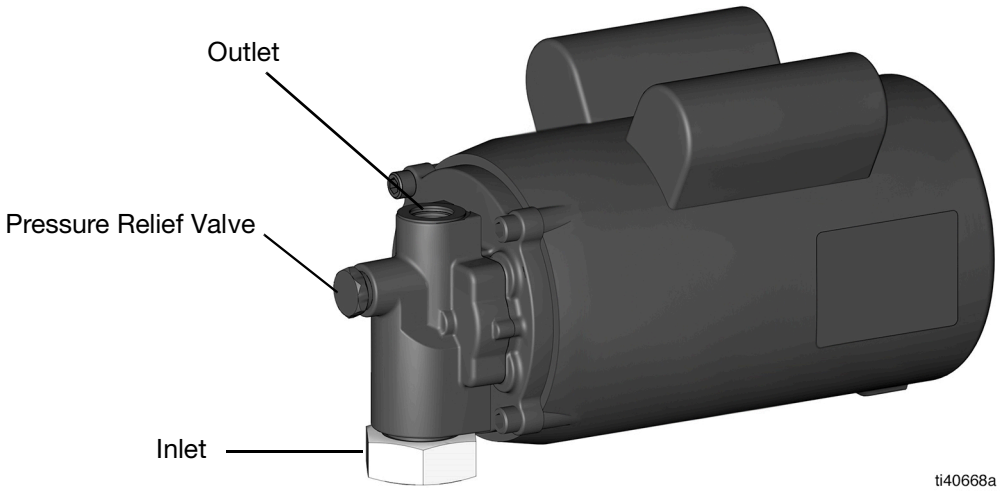


FIG. 2: Component Identification

Installation

Grounding

The equipment must be grounded to reduce the risk of static sparking and electric shock. Electric or static sparking can cause fumes to ignite or explode. Improper grounding can cause electric shock. Grounding provides an escape wire for the electric current.

All electrical wiring must be done by a qualified electrician and comply with all local codes and regulations.

The pump should be plugged into a grounded outlet.

If using an extension cord, use only a 3-wire extension cord and a grounded outlet.

Mount Pump on Drum

NOTE: The reference numbers in the following instructions refer to **Parts**, page 16.

The oil transfer pumps are positive displacement pumps. The motor is TENV and has sealed bearings and require minimal maintenance. All models come with a bung adapter (13).

1. Install the bung adapter (13) in 2 in. bung and tighten.
2. Use a 1 in. (25.4 mm) steel or PVC pipe with 1 in. npt pipe threads on one end as a suction tube.
3. Cut the tube to a length 1 in. (25.4 mm) less that the distance from the top of the bung to the bottom of the tank.
4. Apply pipe sealant (not supplied) to the threads and install the pipe into the pump inlet.
5. Insert the suction tube through the bung adapter into the tank, and lower the pump onto the bung adapter.
6. Tighten the swivel nut (15) on the pump to the thread on the bung adapter.
7. The pump outlet port is a 3/4 npt pipe port. Make sure that the hose or pipe used on the pump discharge is rated greater than the maximum working pressure rating of the pump.
8. Pour 8 oz. (0.24L) of fluid into the pump outlet port, before connecting the hose to the pump, to aid priming.

Operation

Pressure Relief Procedure

Follow the Pressure Relief Procedure whenever you see this symbol.

This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as splashing fluid and moving parts, follow the Pressure Relief Procedure when you stop dispensing and before cleaning, checking, or servicing the equipment.

1. Turn off and disconnect the power supply and close the upstream ball valve.
2. Open the dispense valve into a grounded waste container to relieve pressure.

Duty Cycle

The pump is designed to operate for a short duty cycle (S2) using ISO 32 oil. It can operate up to a maximum of 30 minutes of run time, with enough down time for the pump to reach ambient temperature.

NOTE: If the motor is shutting down due to overheating, reduce the run time to less than 30 minutes.

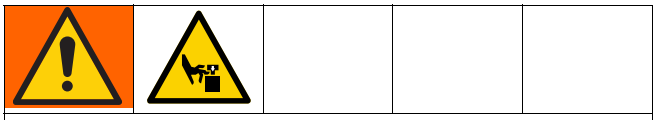
Overheating may occur due to a higher ambient temperature, a higher oil viscosity/temperature, or other conditions.

NOTICE

Never allow the pump to operate dry. Make sure that the pump has fluid in it when the pump is initially installed. Do not run the pump for more than five (5) minutes with the pump discharge blocked. Do not operate the pump continuously more than 30 minutes in one (1) hour. Failure to follow these instructions can result in damage to the pump.

Thermal Overload

The motor has a thermal overload switch that shuts the motor down when overheated. If the unit overheats, allow approximately 45 minutes for the unit to cool. Once the unit has cooled down, the switch will close and the unit will restart.



To reduce risk of injury from motor starting unexpectedly when it cools, always turn the power switch to OFF if the motor shuts down.

Pump Start Up

1. To start the pump, turn power switch ON. The power switch is located on the back side of the motor.
2. The pump has an internal bypass valve that opens when the pump discharge pressure exceeds 120 psi (0.83 MPa, 8. bar). If flow is blocked, the fluid will bypass within the pump.
3. Transfer or dispense fluids by opening the required valves in the system.
4. Immediately after the dispense, turn the power switch to OFF.Recycling and Disposal

End of Product Life

At the end of the product's useful life, dismantle and recycle it in a responsible manner.

- Perform the **Pressure Relief Procedure**.
- Drain and dispose of fluids according to applicable regulations. Refer to the material manufacturer's Safety Data Sheet.
- Remove motors and power cord components. Recycle according to applicable regulations.
- Deliver remaining product to a recycling facility.

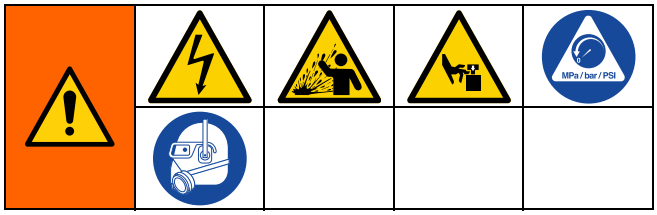
Troubleshooting

1. Follow **Pressure Relief Procedure**, page 7, before checking or repairing the equipment.
2. Check all possible problems and causes before disassembling the equipment.

Problem	Cause	Solution
Motor is running, but the pump will not prime.	The pump lost prime.	Remove the pump outlet hose and pour 8 oz. (0.24L) of oil into the pump outlet port to aid priming.
	There is dirt under the pressure relief valve.	Remove the pressure relief valve and inspect. Clean or replace pressure relief valve.
	The gears are worn or damaged.	Remove the cover and inspect the gears. If damaged, replace the pump housing assembly.
	The oil level is low.	Refill or replace the tank.
	There is an air leak in the suction tube.	Inspect all joints in the suction tube making sure that all threaded joints have sealant applied properly. Fill pump outlet port with oil.
	The motor does not run at the proper speed.	Check the electric connections. Ensure the supply voltage is at the proper level.
Oil is leaking in the motor mount.	A faulty or damaged motor shaft seal.	Replace the pump housing assembly.
	The system was closed for an extended period of time during pump operation.	Do not exceed five (5) minutes of operation with the system closed.
	A worn motor shaft.	Replace with a new pump.

Problem	Cause	Solution
The unit pumps, but the output flow is low.	The inlet suction screen is clogged (used oil).	Remove the inlet suction screen using a 3/4 in. (19 mm) hex wrench. Clean or replace the inlet suction screen.
	There is an air leak in the suction tube.	Inspect all joints in the suction tube making sure that they are sealed.
	The suction tube is too close to the tank bottom.	The suction tube must have a 1 in. (25.4 mm) minimum clearance.
	The tank is empty.	Refill the or replace the tank.
	The tank is not vented.	Vent the tank to atmosphere.
	The gears are worn or damaged.	Remove the cover and inspect the gears. If damaged, replace the pump housing assembly.
	The motor does not run at the proper speed.	Check the electrical connection and verify the supply voltage.
	The suction tube is clogged.	Inspect and clean the suction tube.
The motor stalls.	The bypass relief valve is stuck.	Remove and inspect the pressure relief valve. Clean, or replace if it is damaged.
	The supply voltage is low.	Check the supply voltage.
	The gears are damaged and binding.	Inspect the gears. If they do not turn freely, or are damaged, replace the pump housing assembly.
	The motor is faulty.	Replace with a new pump.
The motor overheats.	The gears are binding.	Inspect the gears. If they do not turn freely, or are damaged, replace the pump housing assembly.
	The system was closed for an extended time during pump operation.	Do not exceed five (5) minutes of operation with the system closed.
	The inlet suction screen is clogged.	Remove the inlet suction screen using a 3/4 in. (19 mm) hex wrench. Clean or replace the inlet suction screen.
	The suction tube is clogged.	Inspect and clean the suction tube.
	Operating the pump for more than 30 minutes of continuous duty.	Limit operation to 30 minutes per hour.
The switch does not turn the pump on.	The fuse or circuit breaker is blown.	Check the electrical supply.
	There is an electrical problem.	Check that proper supply voltage is getting to the pump.
	There is a defective switch.	Replace with a new pump.
	The motor is damaged or defective.	
	The motor thermal overload switch is activated.	Allow the unit to cool down for approximately 45 minutes. After it has cooled down, inspect the pump for any overload condition.

Repair



Refer to **Parts**, on page 16 for the numbers in this section.

Replace/Clean Suction Filter P/N 133377

Disassembly

1. Follow **Pressure Relief Procedure**. page 7.
2. Turn off and disconnect the power to the pump.
3. Remove the pump from the tank.
4. Remove the suction tube from the pump.
5. Remove the suction filter (22) using a 3/4 in. (19 mm) hex wrench (FIG. 3).

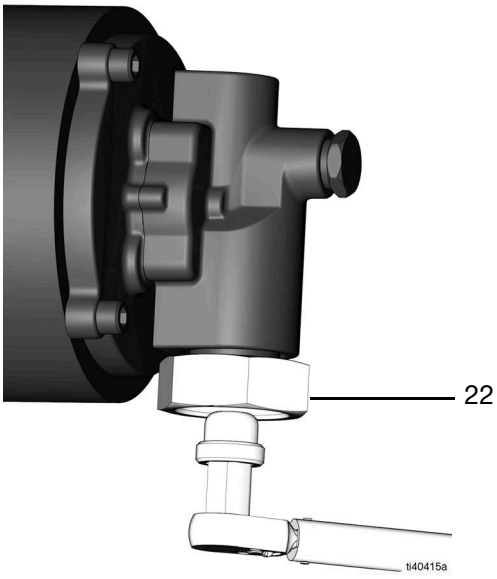


FIG. 3

6. Inspect the suction filter (22) and either clean or replace, as needed.

Reassembly

1. Tighten the suction filter (22) into the pump inlet, using a 3/4 in. (19 mm) hex wrench (Torque 30 ft-lb, 40.7 N•m) (FIG. 3).
2. Complete using the **Installation** information beginning on page 6.

Pump Housing Assembly P/N 134034

Disassembly

1. Follow **Pressure Relief Procedure**. page 7.
2. Turn off and disconnect the power to the pump.
3. Remove the pump from the tank.
4. Remove the suction tube from the pump.
5. Remove the four Allen screws (6) using a 5/16 in. (8 mm) hex wrench (FIG. 4).

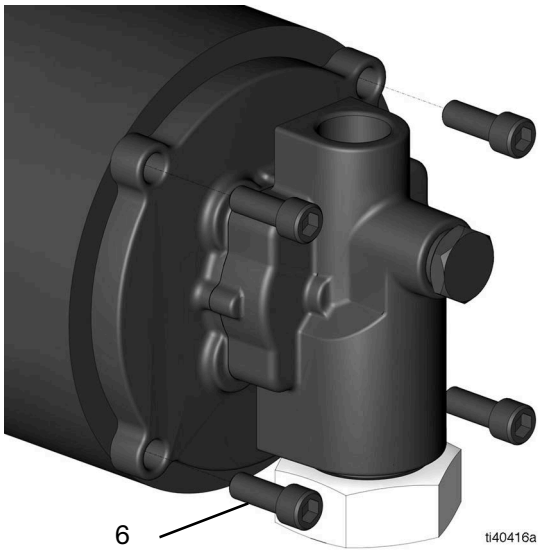


FIG. 4

6. Remove the pump housing assembly from the motor (FIG. 5).

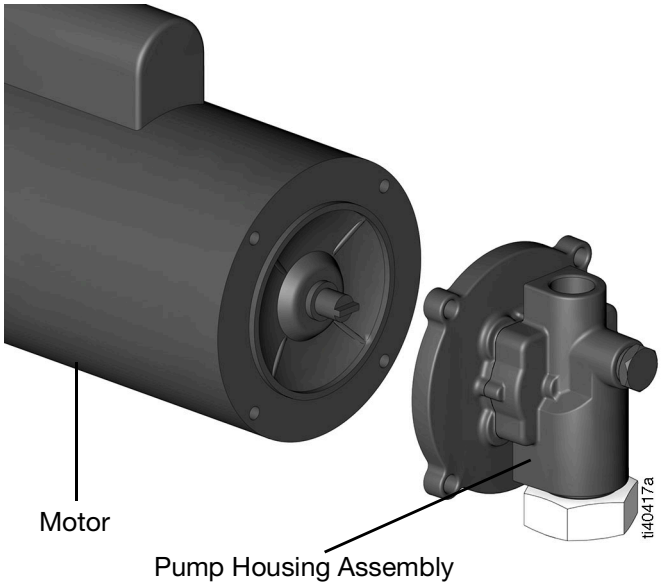


FIG. 5

Reassembly

1. Put the pump housing assembly onto the motor. The motor shaft key should match the slot on the gear on the inside cover (FIG. 6).

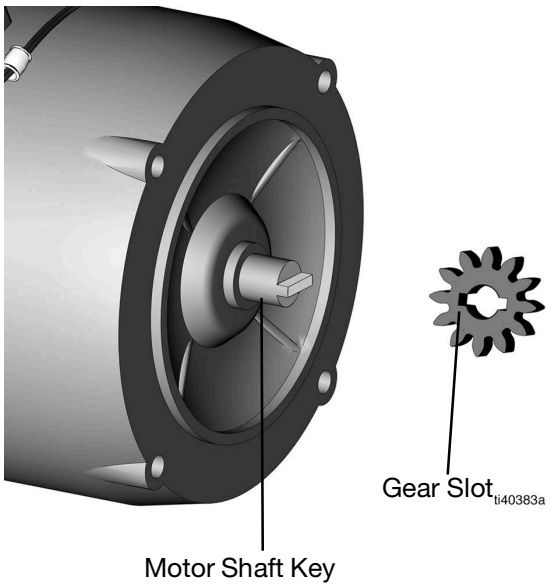


FIG. 6

2. The pump outlet should face up and the motor capacitor and the outlet should both be on top (FIG. 7).

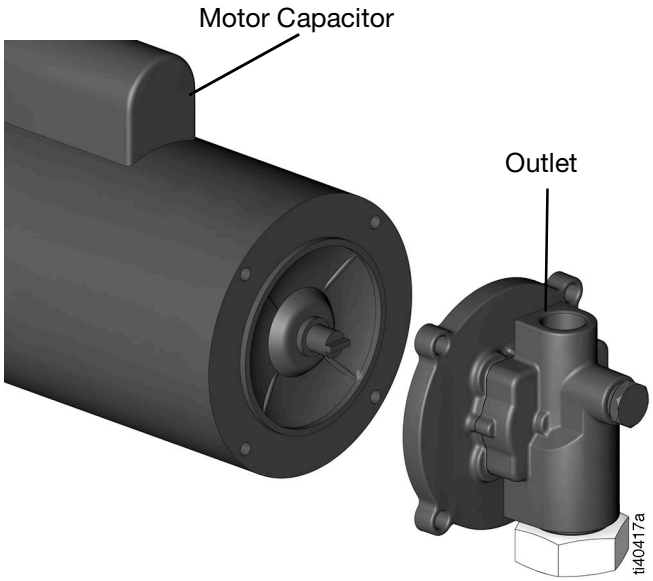


FIG. 7

3. Place and tighten the four Allen screws (6) using an 5/16 in. (8 mm) hex wrench (Torque 20 ft-lb, 27.1 N•m) (see FIG. 4).

4. Complete using the **Installation** information beginning on page 6.

Clean and Inspect Pump Gears

Disassembly

1. Follow **Pressure Relief Procedure**. page 7.
2. Turn off and disconnect the power to the pump.
3. Remove the pump from the tank.
4. Remove the suction tube from the pump.
5. Remove the four Allen screws (6) using an 5/16 in. (8 mm) hex wrench (FIG. 8).

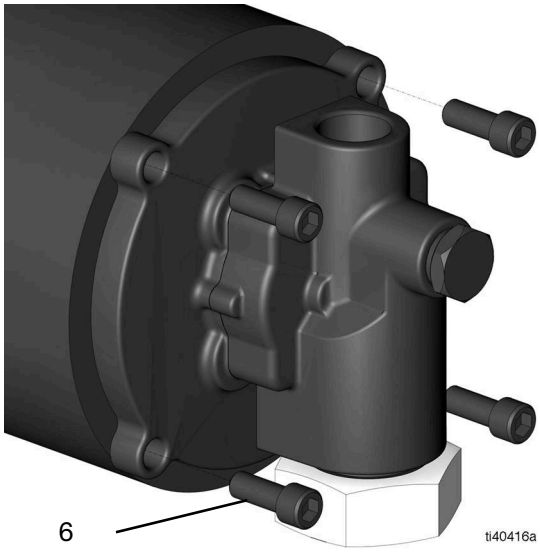


FIG. 8

6. Remove the pump housing assembly from the motor (FIG. 9).

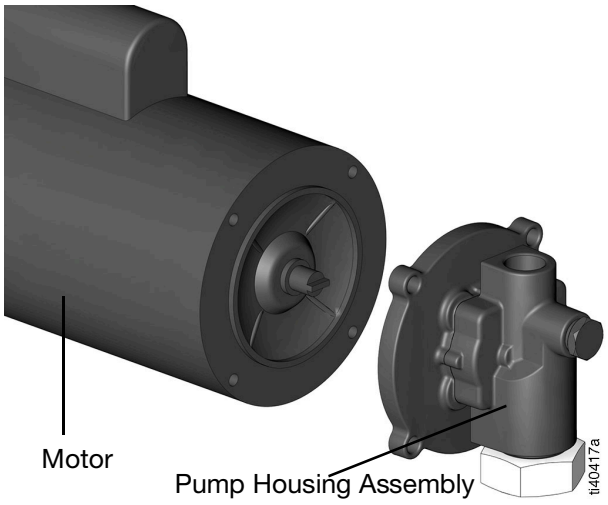


FIG. 9

7. Remove four screws (13) on the adapter plate (2) using a 1/2 in. socket wrench (FIG. 10).
8. Remove the adapter plate (2) (FIG. 10).
9. Remove the o-ring (5) (FIG. 10).

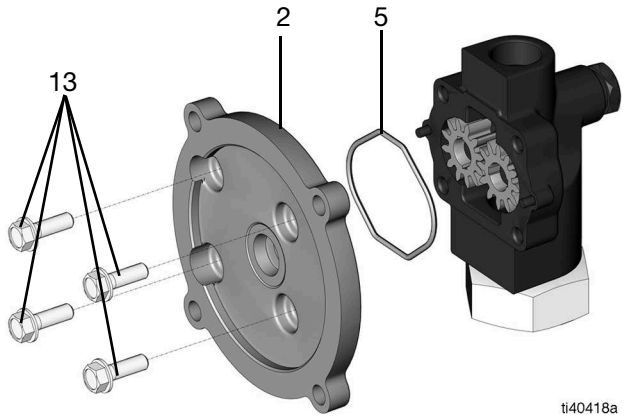


FIG. 10

10. Remove both of the pump gears (3) (FIG. 11).
11. Inspect the pump cavity and pump gears (3) for damage or excessive wear. If there is damage or wear, replace the pump housing assembly. If neither is present, clean the pump cavity and gears (3) (FIG. 11).

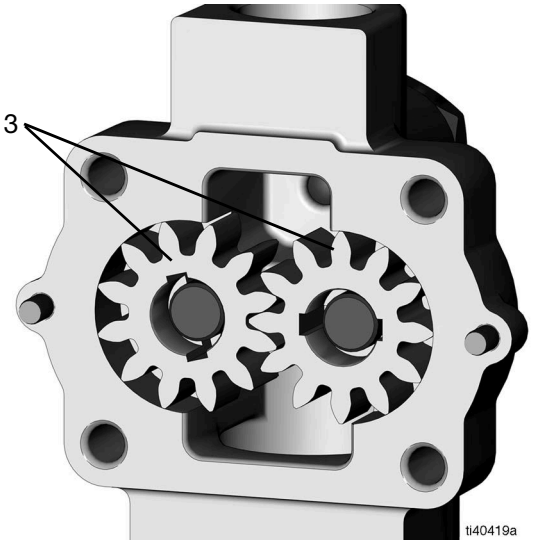


FIG. 11

Reassembly

1. Place the pump gears (3) into the pump cavity, making sure that they spin freely (see FIG. 11).

2. Put the o-ring (5) into the groove on the adapter plate (2) cover (FIG. 12).

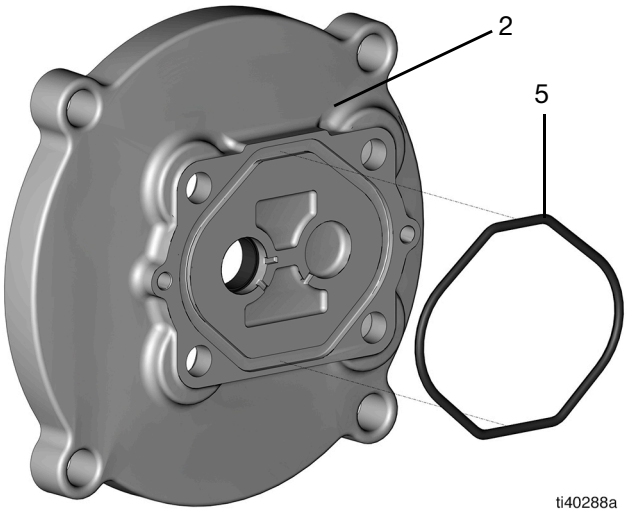


FIG. 12

3. Position the adapter plate on the pump housing so that the notches point toward the pump inlet (FIG. 13 and FIG. 14).

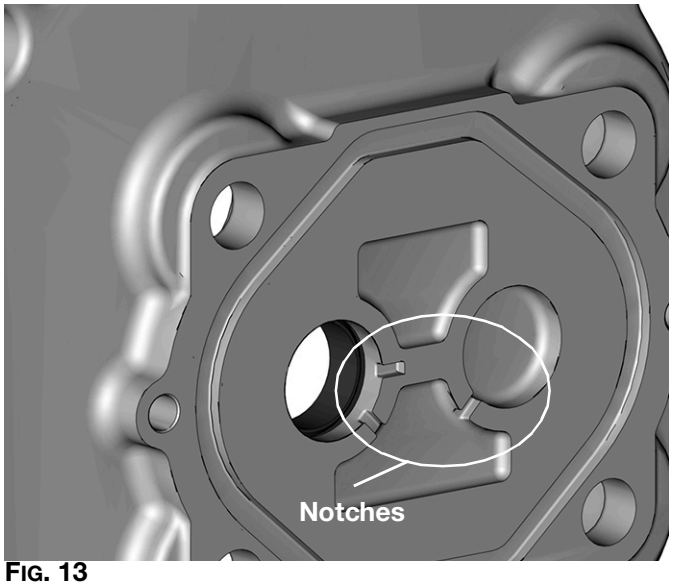


FIG. 13

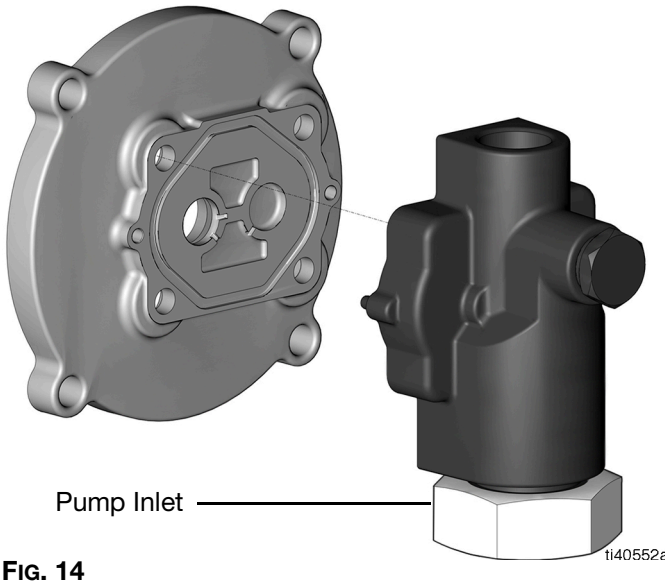


FIG. 14

4. Push the four screws (13) through the adapter plate (2) and use a 1/2 in. socket wrench to tighten (Torque 142 in-lb, 16 N•m) (see FIG. 10).

5. Put the pump housing assembly onto the motor (9). The motor shaft key should match the slot on the gear on the inside cover (FIG. 15).

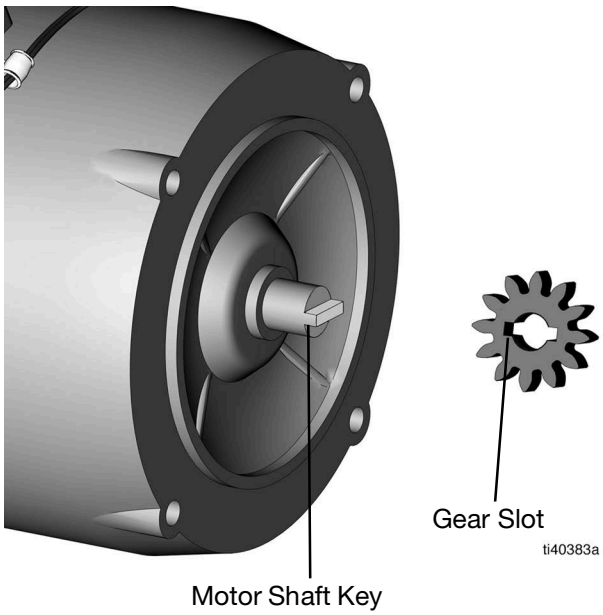


FIG. 15

6. The pump outlet should face up and the motor capacitor and the outlet should both be on top (FIG. 16).

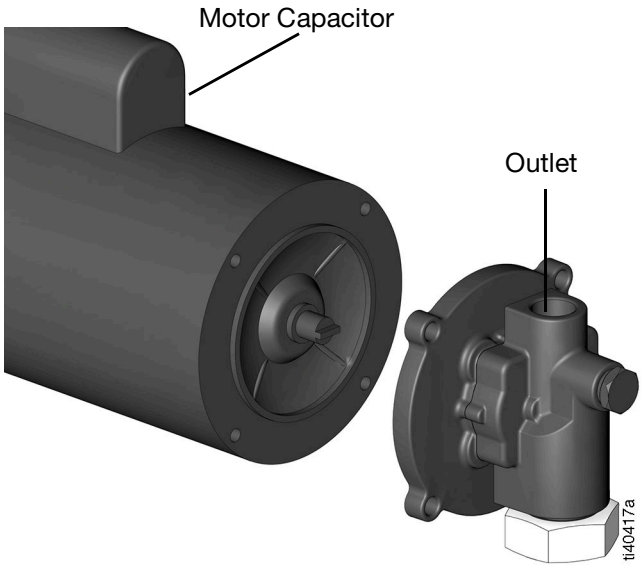


FIG. 16

7. Place and tighten the four Allen screws (6) using an 5/15 in. (8 mm) hex wrench (Torque 20 ft-lb, 27.1 N•m) (see FIG. 8).

8. Complete using the **Installation** information beginning on page 6.

Clean and Inspect Pressure Relief Valve Assembly

Disassembly

1. Follow **Pressure Relief Procedure**. page 7.
2. Turn off and disconnect the power to the pump.
3. Remove the pump from the tank.
4. Remove the suction tube from the pump.
5. Remove the relief valve plug (11) (FIG. 17).
6. Remove the spring (10) (FIG. 17).
7. Remove the ball guide (8) (FIG. 17).
8. Remove the relief ball (7) (FIG. 17).

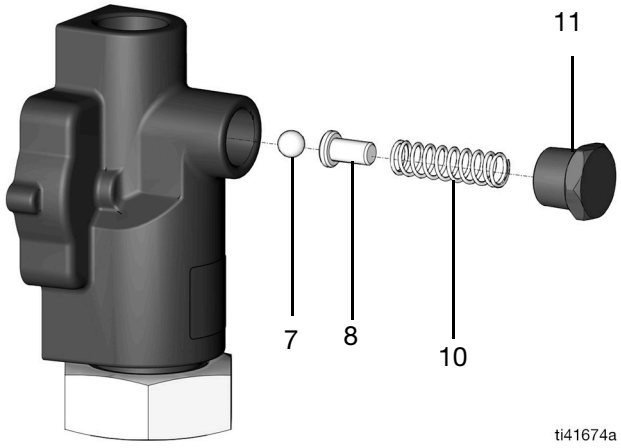


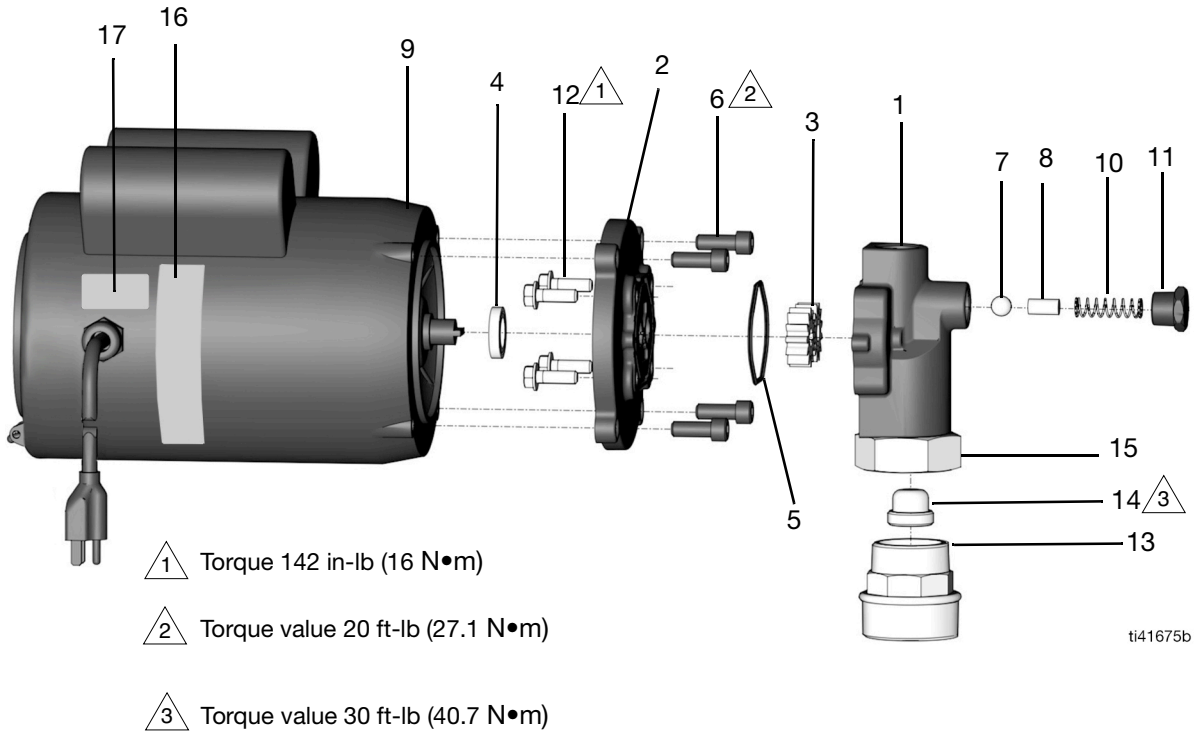
FIG. 17

9. Inspect for damage, excessive wear of the ball and the ball seat, and for any contamination. If damaged or excessive wear is present, replace the pump housing assembly. If neither is present, proceed to reassembly.

Reassembly

1. Place the relief ball (7) into position in the pump housing (see FIG. 17).
2. Replace the ball guide (8) and spring (10) (see FIG. 17).
3. Tighten the relief valve plug (11) (see FIG. 17).
4. Complete using the **Installation** information beginning on page 6.

Parts



1 Torque 142 in-lb (16 N•m)

2 Torque value 20 ft-lb (27.1 N•m)

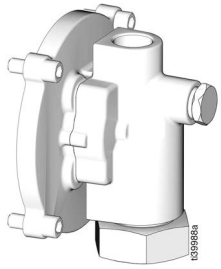
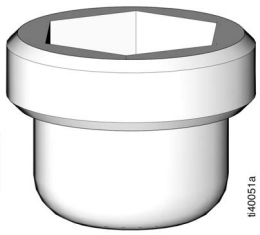
3 Torque value 30 ft-lb (40.7 N•m)

Ref.	Part No.	Description	Qty.
1❖		Pump body	1
2❖		Adapter, pump motor	1
3❖		Gear, pump	2
4❖		Seal, shaft	1
5❖		O-ring	1
6❖		Screw, 3/8 - 16 socket head, cap	4
7❖		Ball, relief valve	1
8❖		Ball guide	1
9		MOTOR, 115 VAC	1
10❖		SPRING, relief valve	1
11❖		PLUG, 12 npt	1
12❖		SCREW, cap, 5/16-18	4
13		ADAPTER, bung	1
14	133377	Inlet Suction Screen	1
15❖		Swivel Nut	1
16▲	134096	Warning label	1
17▲	134095	Warning label	1

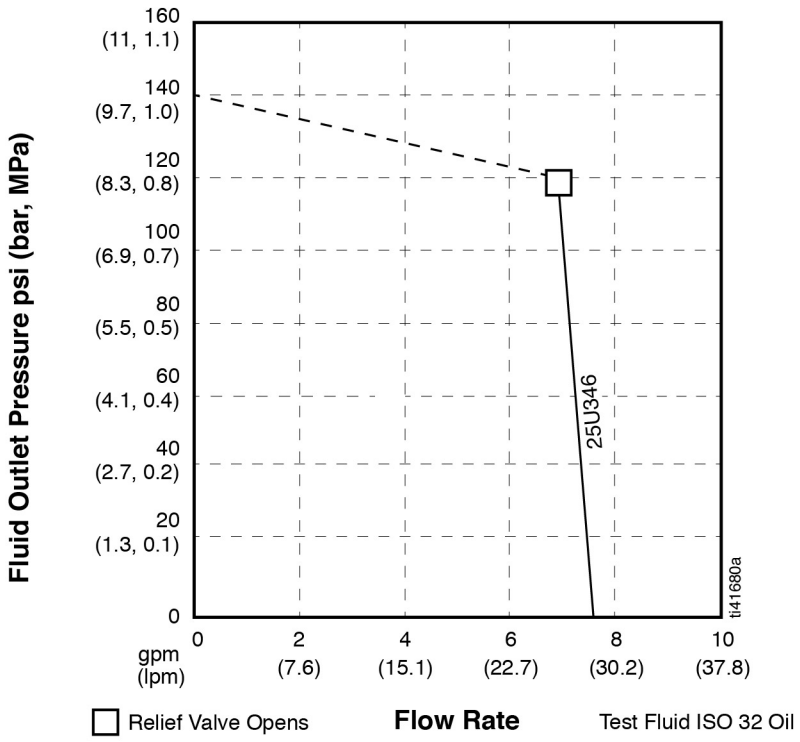
▲ *Replacement safety labels, tags, and cards are available at no cost.*

❖ *Part of 134034 Pump Housing assembly*

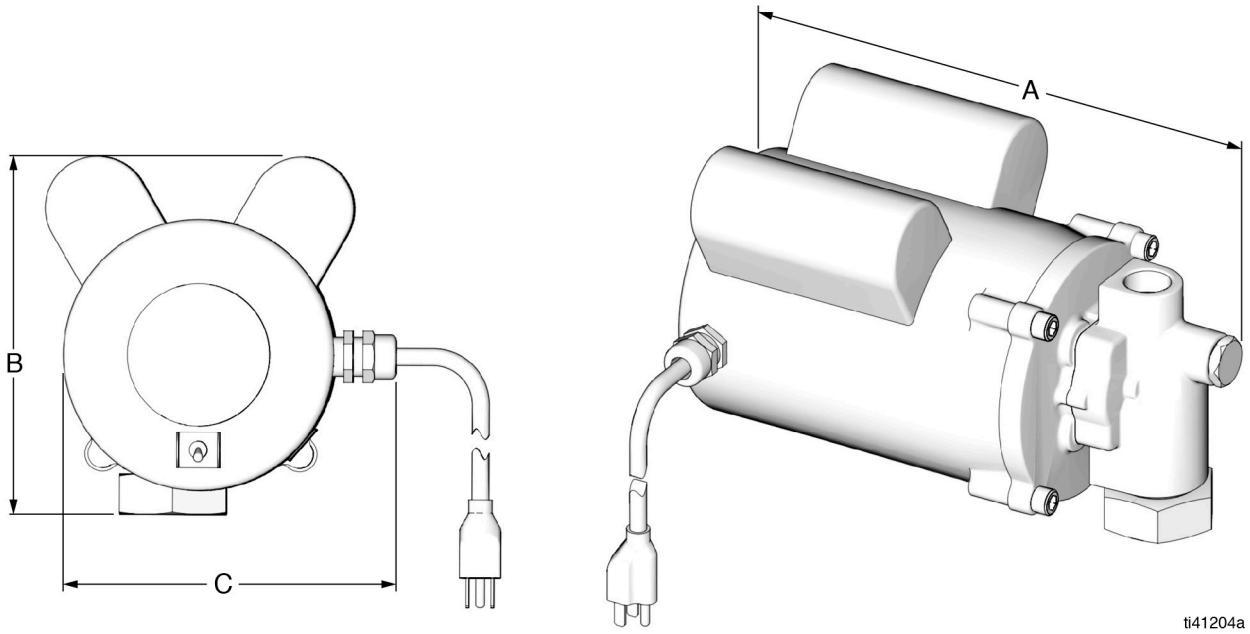
Kits and Accessories

Part Number	Description	
133412	Wall mounting kit	
260124	Suction tube with inlet check assembly	
134034	Pump housing assembly 120 psi	
133377	Suction filter	
133375	Suction kit	

Pump Performance Chart



Dimensions



	Length (A)		Height (B)		Width (C)	
Models	**Inches**	**mm**	**Inches**	**mm**	**Inches**	**mm**
25U346	12.5	317.5	7.75	196.8	6.75	171.5

Technical Specifications

115 VAC Transfer Pump			
		US	**Metric**
Maximum working pressure		120 psi	0.83 MPa, 8.3 bar
Automatic Relief Setting		120 psi	0.83 MPa, 8.3 bar
Output Flow		7.7 gpm	29.1 lpm
Dimensions		See **Dimensions**, page 19	
Power Cord		30 in.	762 mm
Weight			
All models		25 lb.	11.34 kg
Motor Details			
Voltage		115 VAC, 60 Hz	
Current		10.5 A	
Power		1.0 HP, 746 W	
Enclosure		Totally Enclosed Non-Ventilated (TENV)	
IP Protection		IP55	
RPM		3500	
Wetted Parts	Carbon steel with zinc plating, stainless steel, galvanized steel, aluminum, nitrile, rubber		
Inlet/Outlet Sizes			
Inlet size		1 npt(f)	
Outlet Size		3/4 npt(f)	

California Proposition 65

CALIFORNIA RESIDENTS

⚠ **WARNING:** Cancer and reproductive harm – www.P65warnings.ca.gov.

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.

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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.

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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.

Original instructions. This manual contains English. MM 3A8945
Graco Headquarters: Minneapolis
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