

# 12 VDC EGP On-Demand Pump

3A8571A

EN

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

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

**25T818 Gear Pump**

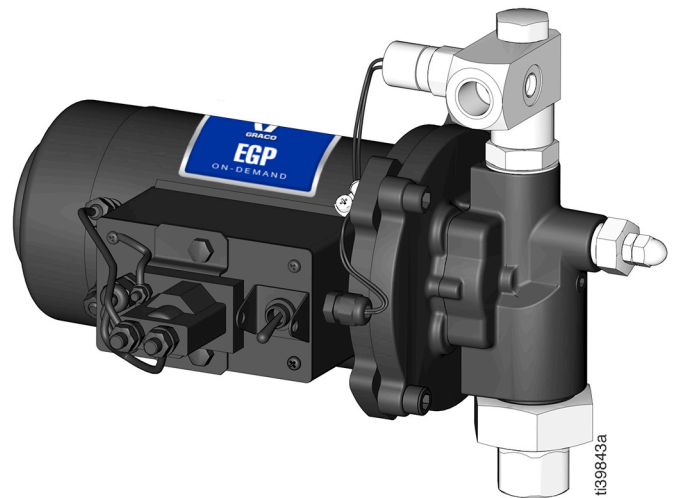
**3.8 gpm (14.4 lpm)**

*300 psi (2.07 MPa, 20.7 bar) Maximum Working Pressure*



## Important Safety Instructions

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









# Contents

<b>Warnings</b> .....	<b>3</b>
<b>Typical Installation</b> .....	<b>5</b>
Component Identification .....	7
Pump Wiring .....	8
<b>Installation</b> .....	<b>9</b>
Grounding .....	9
System Plumbing .....	9
Mount Pump on Tank with Suction Tube .....	9
Electrical Installation .....	10
Priming .....	10
Pressure Relief Procedure .....	11
Duty Cycle .....	11
<b>Operation</b> .....	<b>12</b>
Pressure Switch .....	12
Thermal Induced Pressure Relief .....	12
<b>Recycling and Disposal</b> .....	<b>13</b>
End of Product Life .....	13
<b>Troubleshooting</b> .....	<b>14</b>
<b>Repair</b> .....	<b>16</b>
Replace/Clean Suction Screen P/N 133377 ...	16
Outlet Assembly Kit P/N 133413 .....	17
Pump Housing Assembly P/N 133374 .....	19
Clean and Inspect Pump Gears .....	22
Clean and Inspect Pressure Relief Valve Assembly .....	26
Pump Outlet Check Valve Replacement with Thermal Relief P/N 133097 .....	27
<b>Parts</b> .....	<b>28</b>
<b>Kits and Accessories</b> .....	<b>30</b>
<b>Pump Performance Chart</b> .....	<b>31</b>
<b>Dimensions</b> .....	<b>32</b>
<b>Technical Specifications</b> .....	<b>33</b>
<b>California Proposition 65</b> .....	<b>33</b>
<b>Graco Standard Warranty</b> .....	<b>34</b>

# 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.

 <h1 style="margin: 0;">WARNING</h1>	
 	<p><b>FIRE AND EXPLOSION HAZARD</b></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"> <li>• Use equipment only in well-ventilated area.</li> <li>• Eliminate all ignition sources, such as cigarettes and portable electric lamps.</li> <li>• Ground all equipment in the work area.</li> <li>• Keep work area free of debris, including rags and spilled or open containers of solvent and gasoline.</li> <li>• Do not plug or unplug power cords or turn lights on or off when flammable fumes are present.</li> <li>• Use only grounded hoses.</li> <li>• <b>Stop operation immediately</b> if static sparking occurs or you feel a shock. 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>BURN HAZARD</b></p> <p>Equipment surfaces and fluid that is heated can become very hot during operation. To avoid severe burns:</p> <ul style="list-style-type: none"> <li>• Do not touch hot fluid or equipment.</li> </ul>
 	<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 Specifications</b> in all equipment manuals.</li> <li>• Use fluids and solvents that are compatible with equipment wetted parts. See <b>Technical Specifications</b> 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.</li> <li>• Turn off all equipment and follow the <b>Pressure Relief Procedure</b> when equipment is not in use.</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. Alterations or modifications may void agency approvals and create safety hazards.</li> <li>• Make sure all equipment is rated and approved for the environment in which you are using it.</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>

# **WARNING**



## **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:

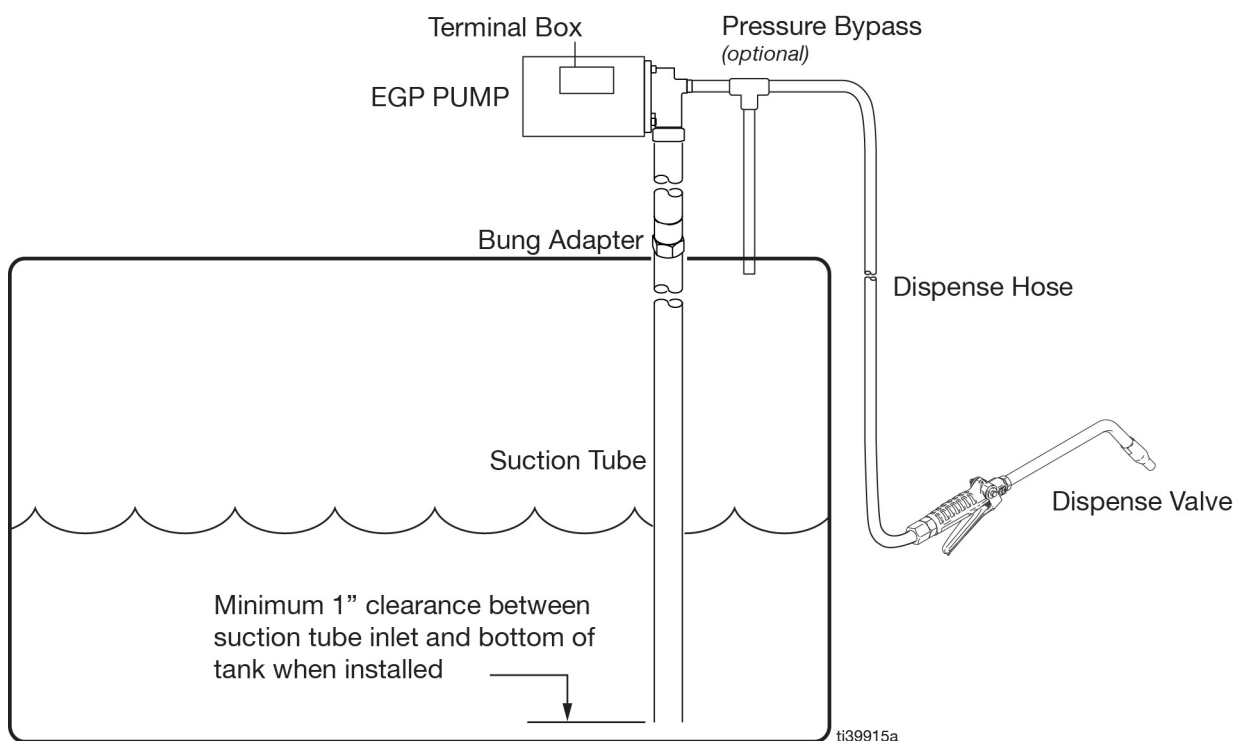
- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

# Typical Installation

The installations shown in FIG. 1 - FIG. 3 are only guides for selecting and installing system components. Contact your local Graco Distributor for assistance with planning a system to suit your needs.

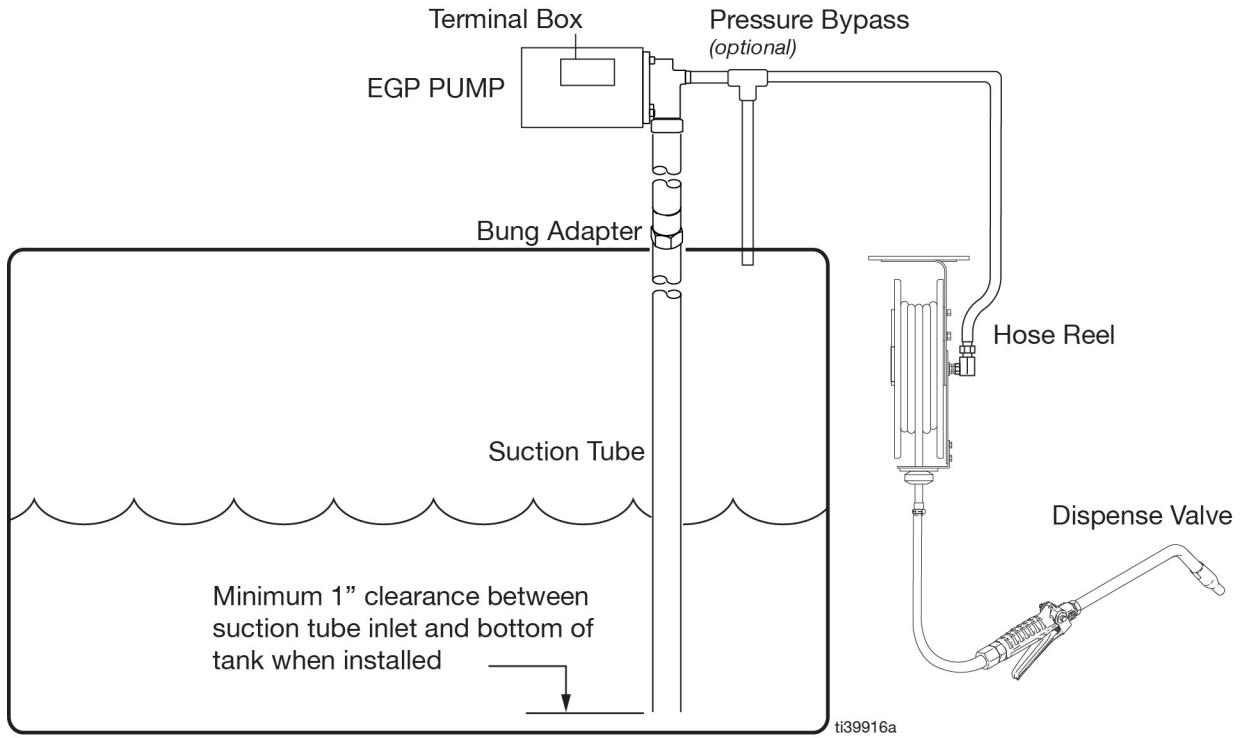
NOTE: The output line fluid pressure should not exceed 200 psi (1.38 MPa, 13.8 bar) while pumping the fluid. Exceeding this pressure can cause the motor to cycle on and off repeatedly.

The output pressure varies at the time of pump shut off. It is determined by many factors including: hose length, type of fittings used, and the speed that the outlet valve is closed. If pressure sensitive devices are installed downstream from the pump, an external pressure relief/bypass must be installed in order to vent excess pressure back to the tank.

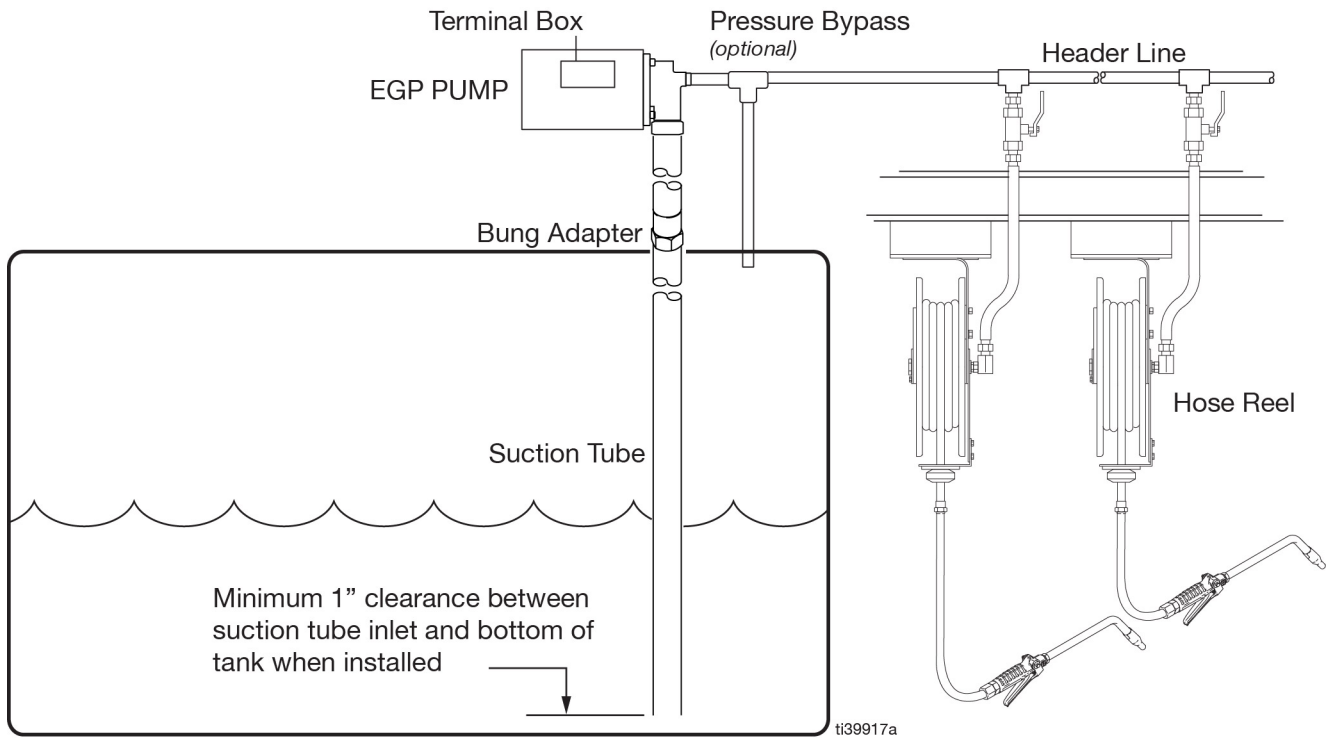


**FIG. 1: Typical Installation - Option 1: Pump and Dispense Valve**

Typical Installation

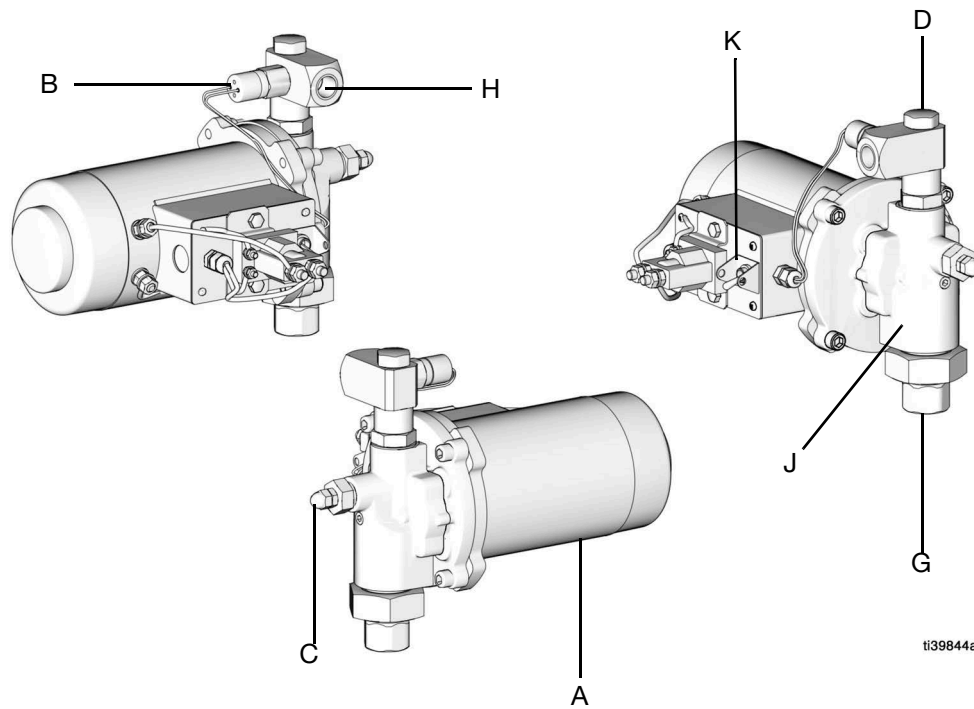


**FIG. 2: Typical Installation - Option 2: Pump with Hose Reel**



**FIG. 3: Typical Installation - Option 3: Pump with More Than One Hose Reel**

# Component Identification

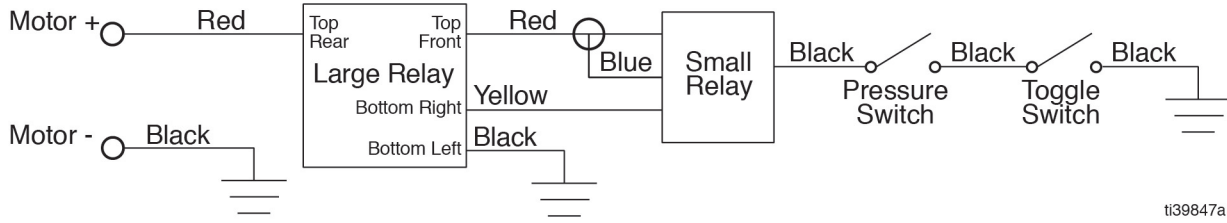


**FIG. 4**

**Key:**

- A Motor with relay
- B Pressure switch
- C Pressure relief valve
- D Outlet check valve
- G Inlet check with thermal relief
- H Outlet 1/2 npt
- J Pump
- K Power Switch

# Pump Wiring



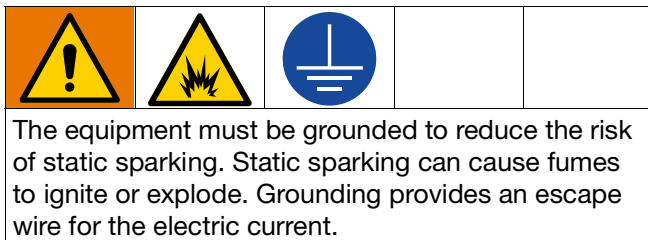
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**FIG. 5**



# Installation

## Grounding



NOTE: The reference numbers in the following instructions refer to **Parts**, page 28.

## System Plumbing

The On-Demand pump delivers a constant output flow, even with a varying load.

It is important that the system plumbing be of adequate size so that the back pressure does not exceed 200 psi (1.38 MPa, 13.8 bar).

All plumbing and hoses used in the installation should have a minimum pressure rating of 325 psi (2.24 MPa, 22.4 bar).

If the system pressure drop at the rated pump flow is greater than, or close to, the pressure switch setting, the motor will cycle on and off when the dispense valve is opened to dispense fluid. If this happens, reduce system pressure by using a larger diameter hose or by using a less restrictive valve.

Graco recommends using 1/2 in. ID hose to keep the working pressure low while the dispense valve is being triggered. The output line fluid pressure should not exceed 200 psi (1.38 MPa, 13.8 bar) while pumping fluid.

The pump design includes a self-contained pressure relief valve (C), **Component Identification**, page 7. When activated, the valve relieves pressure back to the tank.

### 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.

## Mount Pump on Tank with Suction Tube

1. Install the bung adapter (15) in the tank bung and tighten.
2. Use a 3/4 in. (19 mm) steel or PVC pipe with a 3/4 npt pipe threads on one end as a suction tube.
3. Measure the length from the top of the bung adapter to the bottom of the tank. Cut the suction tube length to 1/2 in. (13 mm) less than this measurement.
4. Apply pipe thread sealant to suction tube threads and install the pipe into the pump inlet.
5. Insert suction tube assembly through the bung adapter and lower the pump onto the bung adapter.
6. Position the pump so that the outlet port is in the desired position. Tighten the swivel nut (20) on the pump to the bung adapter.

## Electrical Installation

Motor current rating: 60 amps full load. Use 8 AWG or larger for supply wires.

1. Turn the power switch OFF.
2. Use an appropriate size ring terminal to attach the black (negative) supply wire to the negative post near the back of the motor. Ensure that the existing small black wire remains on the post.

Use an appropriate size ring terminal to connect the red (positive) supply wire to the relay post at the front of the motor. This post is the one closest to the pump inlet and outlet. Do not connect the positive supply wire directly to the positive post of the motor, or the motor will run continuously. Ensure that the small red wire remains on the front post (FIG. 6).

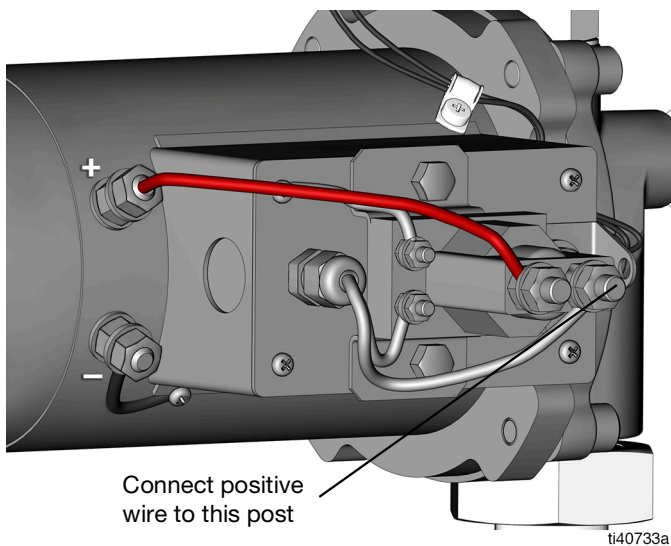


FIG. 6

## Priming

1. Attach a priming hose to the outlet of the pump. Insert the opposite end of the hose into the tank through the fill opening.

2. Turn the power switch ON. The pump should prime in a few seconds.

NOTE: If priming does not start:

Remove the priming plug (21) from the pump housing.

Using an oil can, fill the pump with 8 oz. (0.24 L) of oil.

Replace the priming plug (21).

Turn the power switch ON. The pump should prime in a few seconds.

Once the pump is primed, the inlet check valve will prevent loss of prime.

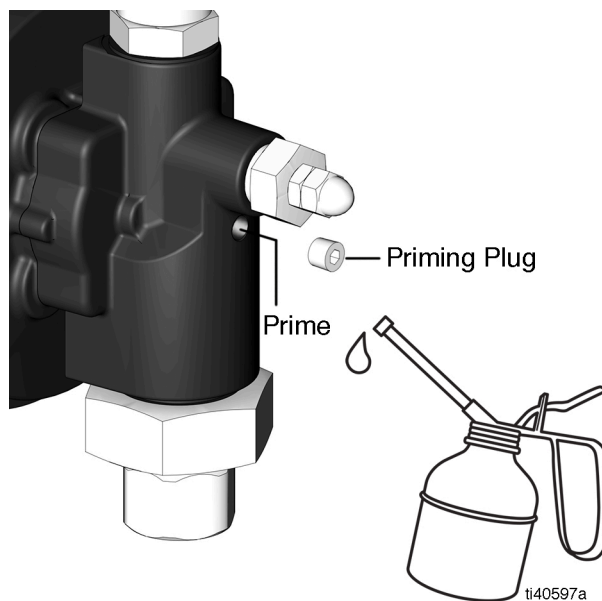


FIG. 7

3. When the pump starts to prime, turn the power switch OFF.
4. Disconnect the priming hose.

Attach system plumbing to the pump outlet.

## 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 to the pump.
2. Open the dispense valve into a grounded waste container to relieve pressure.
3. Close the dispense valve.

## Duty Cycle

The pump is designed to operate at a 50% duty cycle. It can operate up to a maximum of 30 minutes of run time, with an equal amount of down time.

### 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.

# Operation

NOTE: When the system is not in use, always turn the power switch (K) (**Component Identification**, page 7), located on the terminal box of the motor, off. Failure to do so can result in a spill if a hose ruptures or a leak occurs in the system plumbing. If a leak occurs, the pressure in the system will drop, signaling the pump to turn on.

**NOTICE**

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.

See FIG. 4, page 7 for reference numbers.

The on-demand dispensing pump turns on or off depending upon the pump outlet pressure. When the dispensing valve is open, the system pressure decreases and the pump will begin pumping fluid. When the dispensing valve is closed, the system pressure increases and the pump will stop pumping fluid.

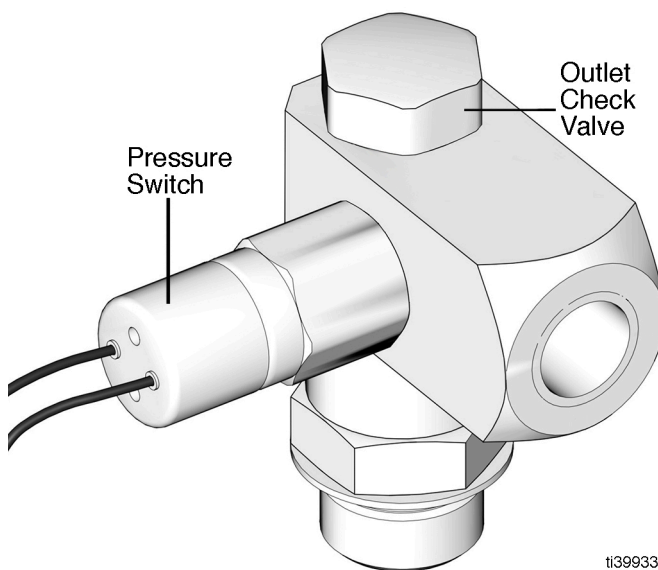
1. Turn the power switch, located on the terminal box of the motor, ON.
2. Place the outlet of the dispensing valve into the fill container.
3. Open the dispensing valve to the full open position, until the desired amount of fluid is dispensed.
4. Close the dispensing valve to stop dispensing.

## Pressure Switch

The pressure switch (B) (**Component Identification**, page 7) is factory set to 290 psi (2.00 MPa, 20.0 bar). Once the pressure in the system reaches 290 psi (2.00 MPa, 20.0 bar), the pressure switch opens and stops the motor (FIG. 8).

## Thermal Induced Pressure Relief

The pump is equipped with a standard outlet check valve (E) (**Component Identification**, page 7). If a check valve with thermal relief is required, purchase PN 133097 and replace the standard check valve (FIG. 8).



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**FIG. 8**

# 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 motor and power cord components. Recycle according to applicable regulations.
- Deliver remaining product to a recycling facility.

# Troubleshooting



1. Follow **Pressure Relief Procedure**, page 11, 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 the prime.	Refer to <b>Priming</b> , page 10.
	There is dirt under the pressure relief valve.	Remove the pressure relief valve and inspect. Clean or replace the pump housing assembly.
	The gears are worn or damaged.	Remove the pump body 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.
	There is an air lock in the system.	Fill the system with fluid by keeping nozzle open by operating the pump.
	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.
	Pressure switch is not activating. Pressure relief is relieving pressure internally.	Pressure switch is faulty. Replace the pump outlet assembly with new pressure switch. Dirt is under the pressure relief valve. Remove the pressure relief valve and inspect. Clean or replace the pump housing assembly.
	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 or replace the tank.
	The tank is not vented.	Vent the tank to atmosphere.
	The gears are worn or damaged.	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, hose, or nozzle is clogged.	Inspect and clean the suction tube, hose, or nozzle, and replace as needed.
	Pressure relief is relieving pressure internally. There is dirt under the pressure relief valve.	Remove the pressure relief valve and inspect. Clean or replace the pump housing assembly.
The motor overheats.	The gears are binding.	Make sure that the gears turn freely. If not, inspect the gears. If damaged, replace the pump housing assembly.
	Pressure relief is relieving pressure internally at low pressure, not reading pressure switch set pressure.	Remove and inspect the pressure relief valve. Clean or replace the pump.
	Operating the pump for more than 30 minutes of continuous duty.	Limit operation to 30 minutes per hour.
	Defective pressure switch or electrical connection is wrong,	Inspect the electrical connection, <b>Electrical Installation</b> , page 10. Replace the pump outlet assembly with pressure switch.
Motor cycle On and Off	System pressure is close to the pressure switch setting.	Reduce system pressure by using a larger diameter hose or using a less restrictive dispense valve.
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. Inspect the electrical connection, <b>Electrical Installation</b> , page 10; and <b>Pump Wiring</b> , page 8.
	There is a defective switch.	Replace the pump
	The motor is damaged or defective.	
	The pressure in the system is not being relieved. The pressure switch is activated.	Relieve pressure by dispensing oil.

# Repair

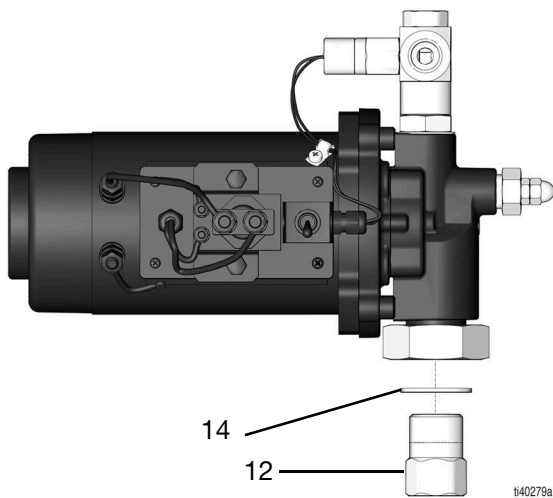


Refer to **Parts**, on page 28 for this section.

## Replace/Clean Suction Screen P/N 133377

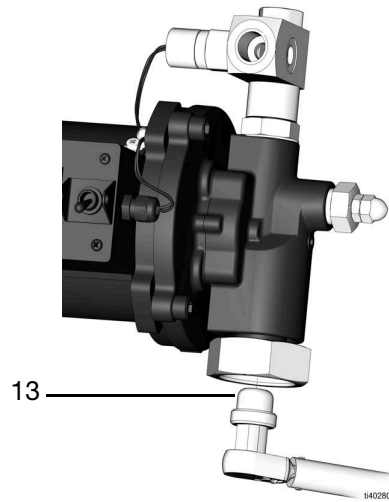
### Disassembly

1. Follow **Pressure Relief Procedure**, page 11.
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 inlet check valve assembly (12) using a 1 3/8 in. wrench (FIG. 9).
6. Remove the seal (14) (FIG. 9).



**FIG. 9**

7. Remove the suction filter (13) using a 3/4 in. (19 mm) hex wrench from the pump inlet (FIG. 10).



**FIG. 10**

8. Inspect the suction filter (13) and either clean or replace, as needed.

### Reassembly

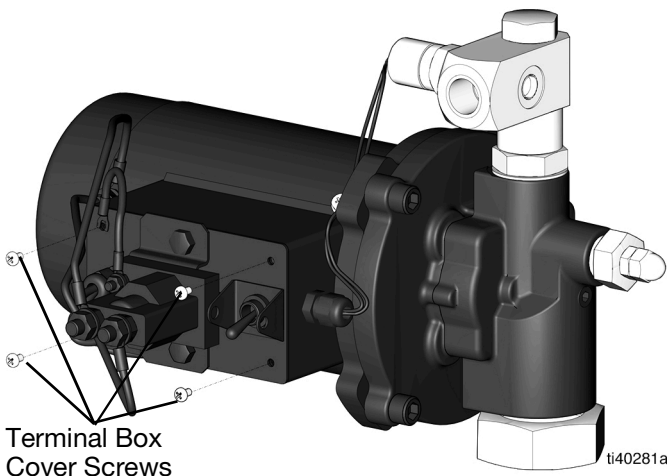
1. Place the suction filter (13) into the pump inlet, using a 3/4 in. (19 mm) hex wrench (Torque 30 ft-lbs, 40.7 N•m) (FIG. 10).
2. Place the seal (14) (FIG. 9).
3. Put PTFE thread seal tape onto the inlet check valve assembly (12) threads.
4. Insert the inlet check valve assembly (12) and hand tighten.
5. Turn the inlet check valve assembly (12) one-half to three-quarters of a turn, using a 1 3/8 in. wrench. Do not over-tighten.
6. Complete using the **Installation** information beginning on page 9.



# Outlet Assembly Kit P/N 133413

## Disassembly

1. Follow **Pressure Relief Procedure**, page 11.
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 terminal box cover screws (FIG. 11).

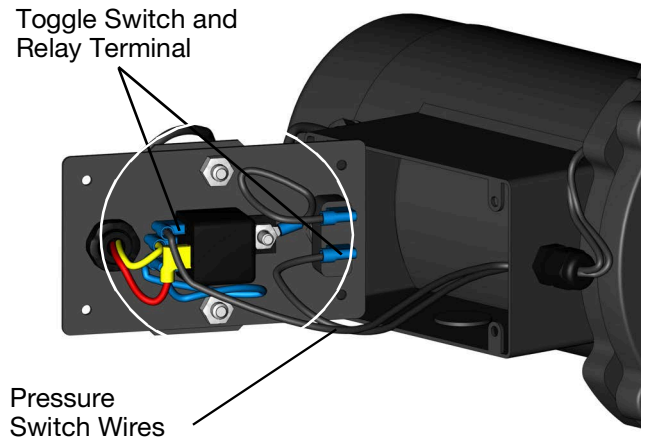


Terminal Box  
Cover Screws

**FIG. 11**

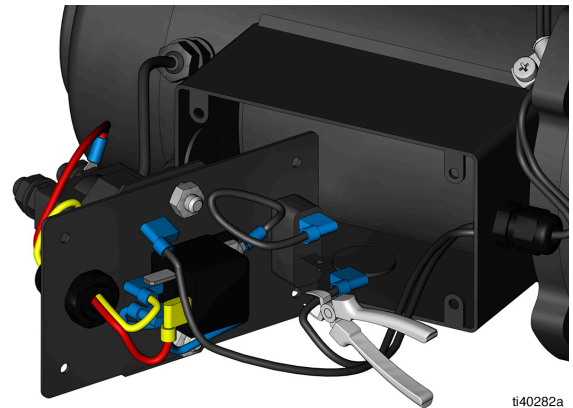
6. Pull the terminal box cover gently upward off of the terminal box (FIG. 12).
7. Remove the gasket.

8. Remove the pressure switch wires from the toggle switch and relay terminal (FIG. 12).



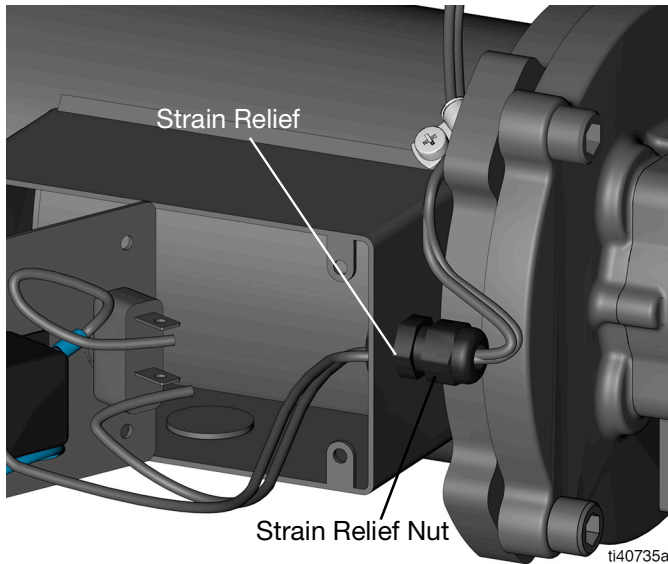
**FIG. 12**

9. Cut the pressure switch wire connectors off of the pressure switch wires (FIG. 13).



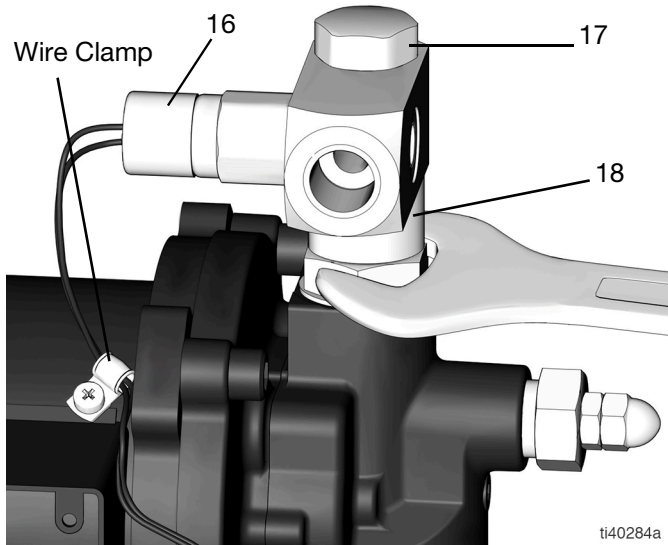
**FIG. 13**

10. Unscrew the strain relief nut (FIG. 14).
11. Pull the pressure switch wires out of the terminal box through the strain relief (FIG. 14).



**FIG. 14**

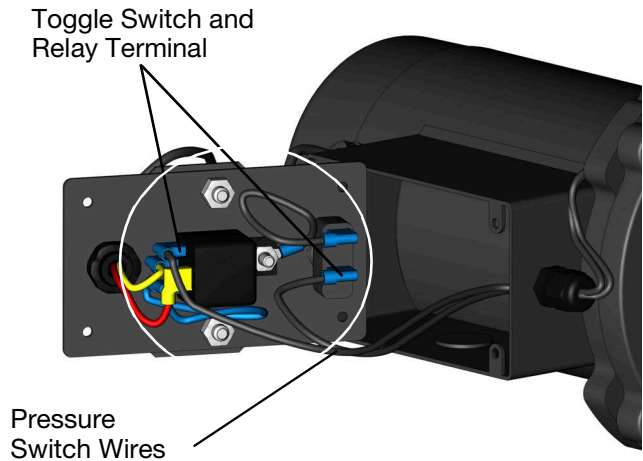
12. Pull the pressure switch wires out of the wire clamp (FIG. 15).
13. Remove the outlet check valve assembly (16, 17, and 18) from the pump (1) (FIG. 15).



**FIG. 15**

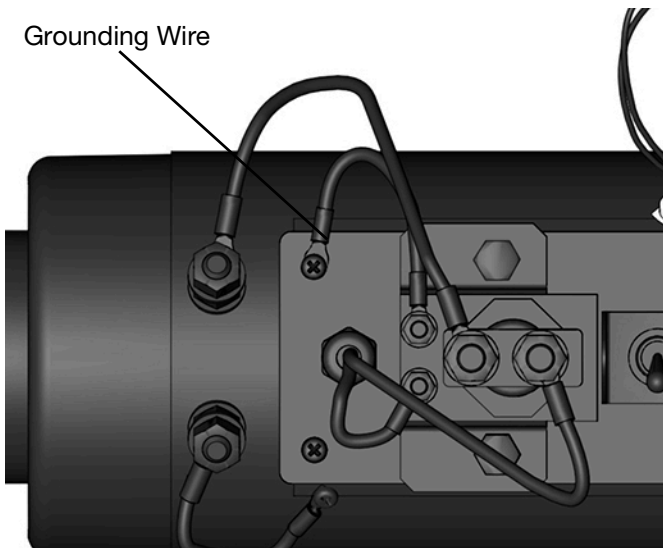
## Reassembly

1. Tighten the new outlet check valve assembly (16, 17, and 18) into the pump (1), so the pressure switch faces the motor (19) (Torque 20 ft-lbs, 27.1 N•m) (see FIG. 15).
2. Push the pressure switch wires into the wire clamp and into the terminal box through the strain relief (FIG. 14 and FIG. 15).
3. Crimp the connectors to the end of the pressure switch wires (FIG. 16).
4. Twist the strain relief nut on using a wrench until tightened (see FIG. 14).
5. Connect the pressure switch wires to the toggle switch and relay terminal (FIG. 16).
6. Place the gasket onto the terminal box.



**FIG. 16**

7. Replace the terminal box cover.
8. Insert the four terminal box cover screws and tighten, making sure that the grounding wire is connected properly (FIG. 17).



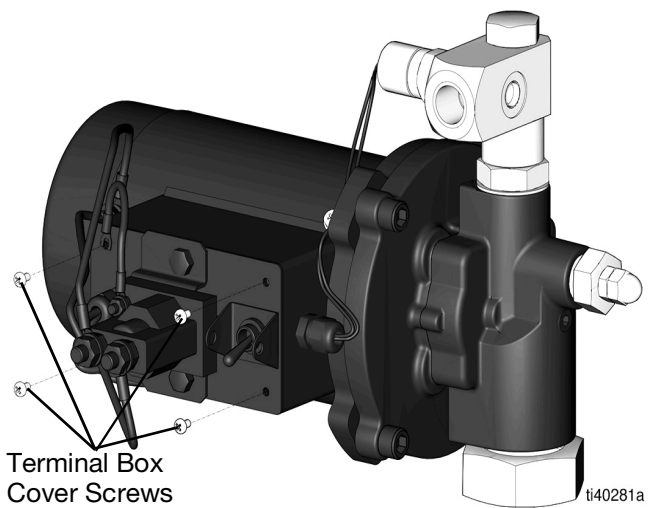
**FIG. 17**

9. Complete using the **Installation** information beginning on page 9.

## Pump Housing Assembly P/N 133374

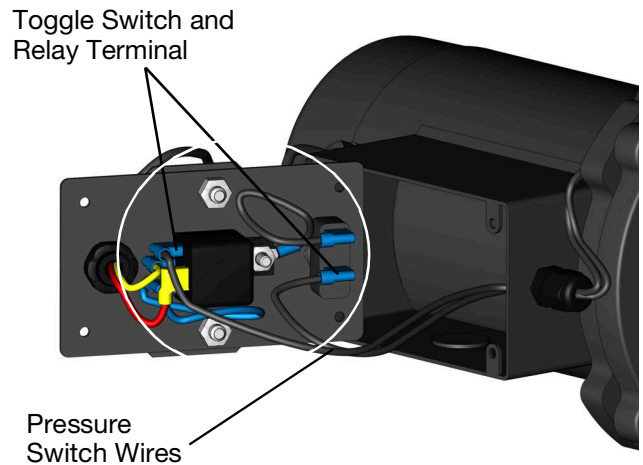
### Disassembly

1. Follow **Pressure Relief Procedure**, page 11.
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 terminal box cover screws (FIG. 18).



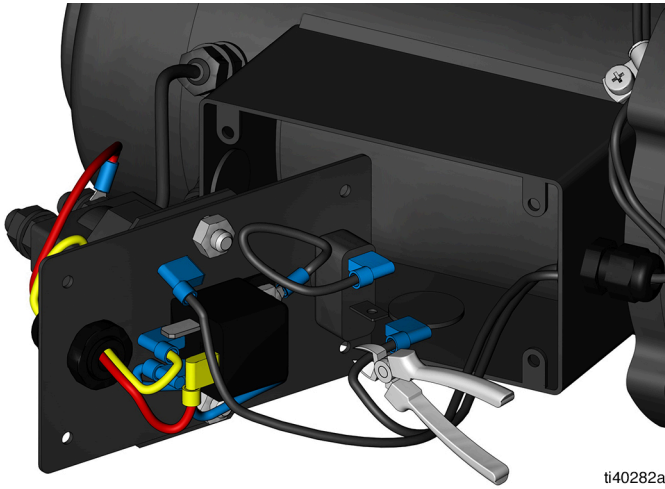
**FIG. 18**

6. Pull the terminal box cover gently upward off of the terminal box.
7. Remove the gasket.
8. Remove the pressure switch wires from the toggle switch and relay terminal (FIG. 19).



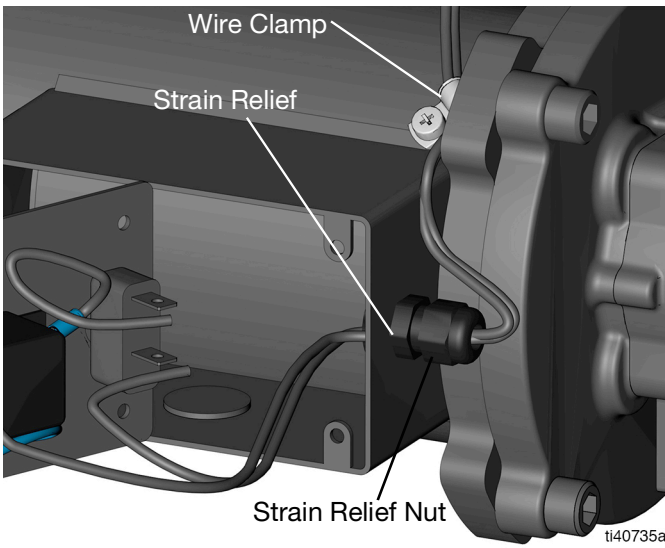
**FIG. 19**

9. Cut the pressure switch wire connectors off of the pressure switch wires (FIG. 20).



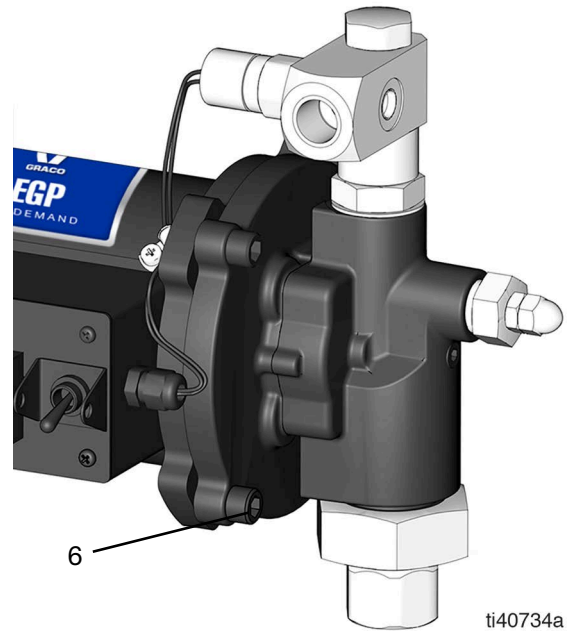
**FIG. 20**

10. Unscrew the strain relief nut (FIG. 21).
11. Pull the pressure switch wires out of the terminal box through the strain relief (FIG. 21).
12. Pull the pressure switch wires out of the wire clamp (FIG. 21).



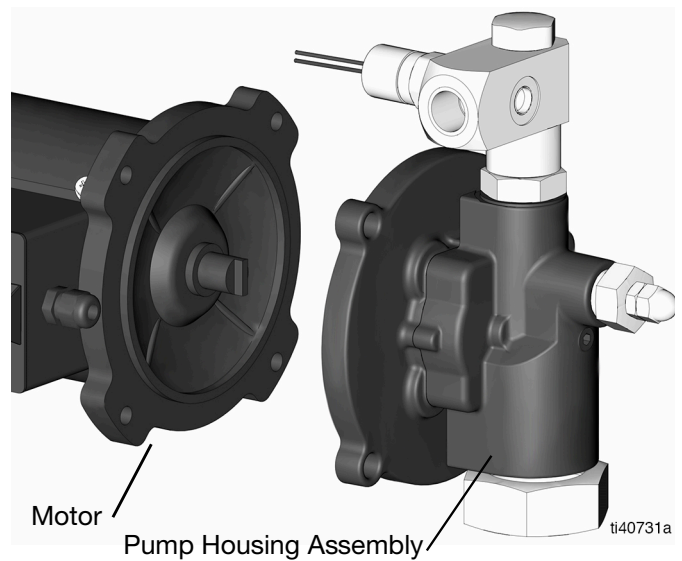
**FIG. 21**

13. Remove the four Allen screws (6) using a 5/16 in. (8 mm) hex wrench (FIG. 22).



**FIG. 22**

14. Remove the pump housing assembly (FIG. 23).



**FIG. 23**

## 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. The pump outlet should face up and the terminal box should be centered between the pump outlet and the pump inlet (FIG. 24 and FIG. 25).

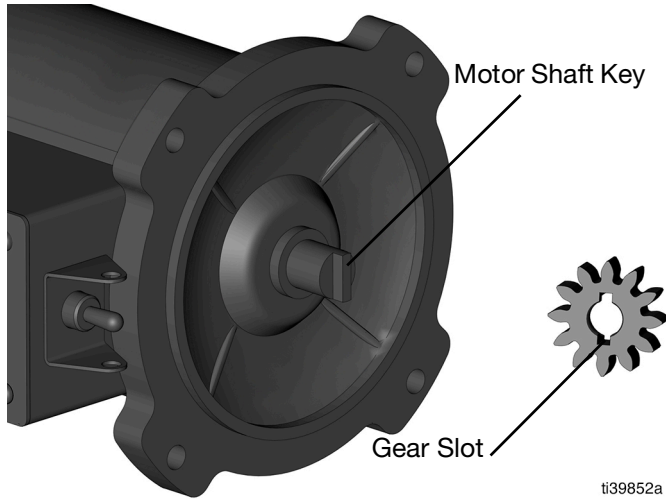


FIG. 24

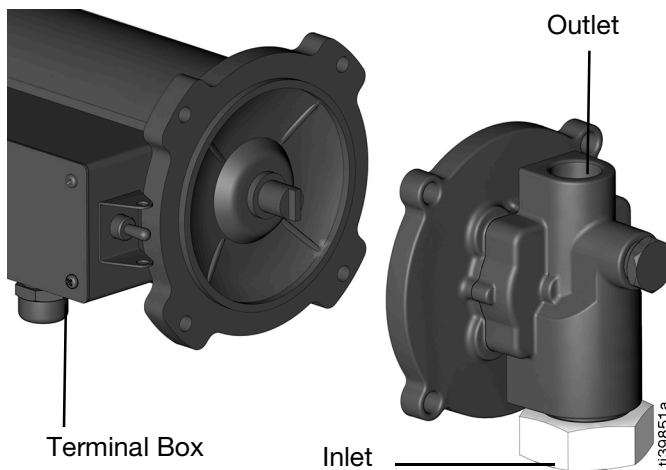


FIG. 25

2. Place and tighten the four Allen screws (6) using an 5/16 in. (8 mm) hex wrench (torque 20 ft-lbs) (FIG. 22).
3. Push the pressure switch wires into the wire clamp, through the terminal box and through the strain relief (see FIG. 21).
4. Crimp the connectors to the end of the pressure switch wires (see FIG. 26).

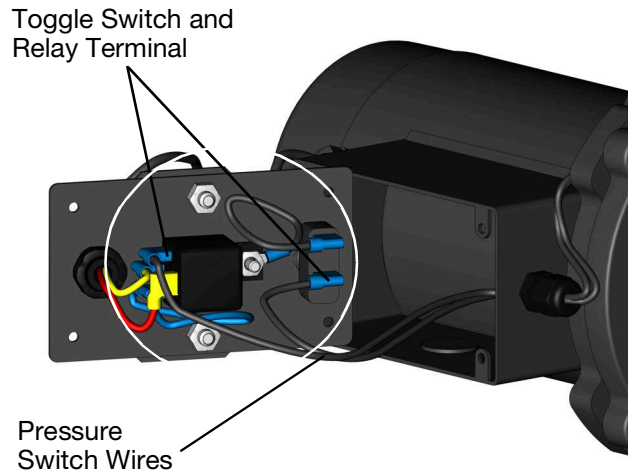
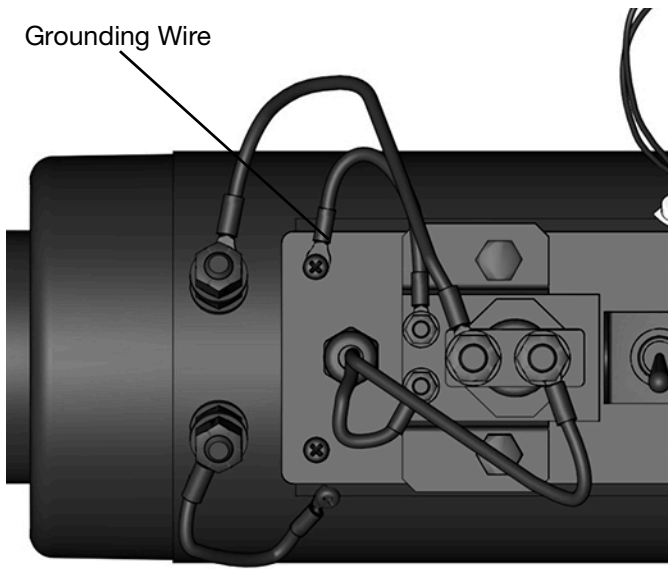


FIG. 26

5. Twist the strain relief nut on using a wrench until tightened (see FIG. 21).
6. Connect the pressure switch wires to the toggle switch and relay terminal (FIG. 26).
7. Place the gasket onto the terminal box.
8. Replace the terminal box cover.
9. Insert the four terminal box cover screws and tighten, making sure that the grounding wire is connected properly (see FIG. 27).





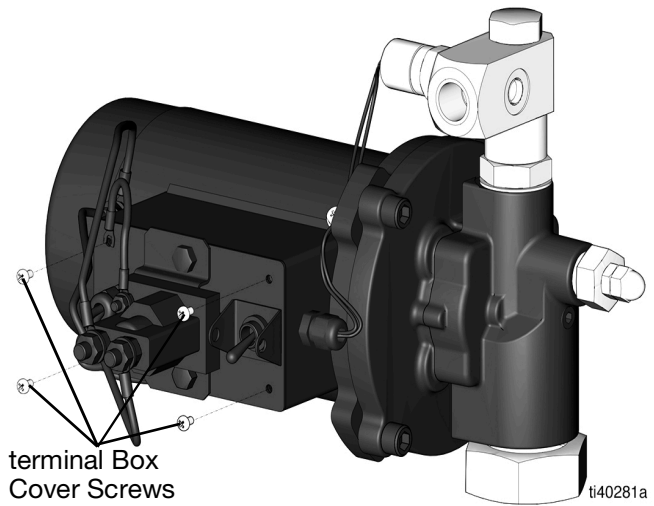
**FIG. 27**

10. Complete using the **Installation** information beginning on page 9.

## Clean and Inspect Pump Gears

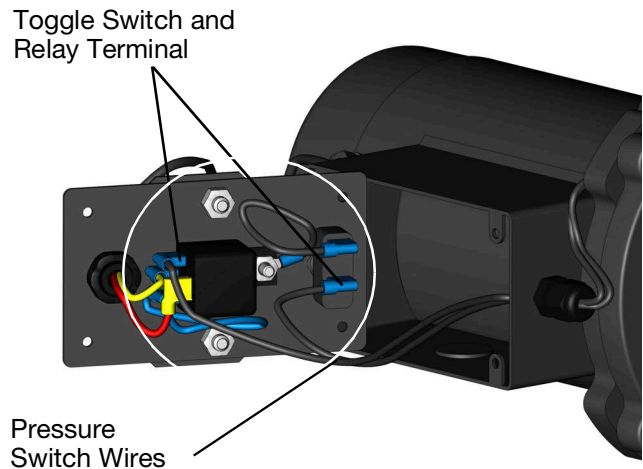
### Disassembly

1. Follow **Pressure Relief Procedure**, page 11.
2. Turn off and disconnect power to the pump.
3. Remove the pump from the tank.
4. Remove the suction tube from the pump.
5. Remove the four terminal box cover screws (FIG. 28).



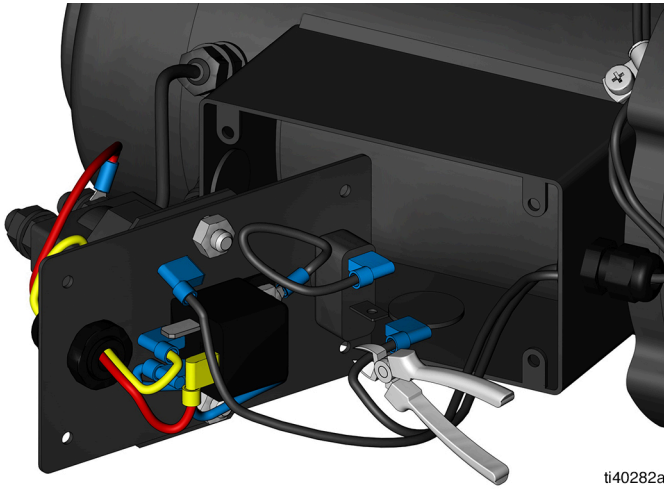
**FIG. 28**

6. Pull the terminal box cover gently upward off of the terminal box.
7. Remove the gasket.
8. Remove the pressure switch wires from the toggle switch and relay terminal (FIG. 29).



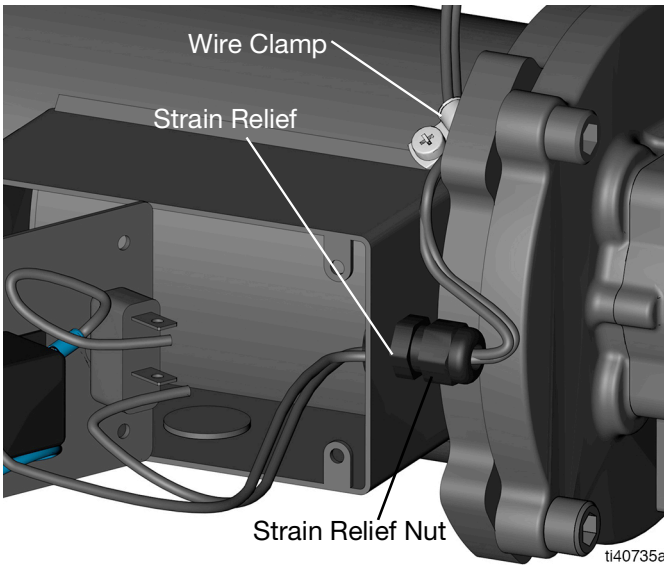
**FIG. 29**

9. Cut the pressure switch wire connectors off of the pressure switch wires (FIG. 30).



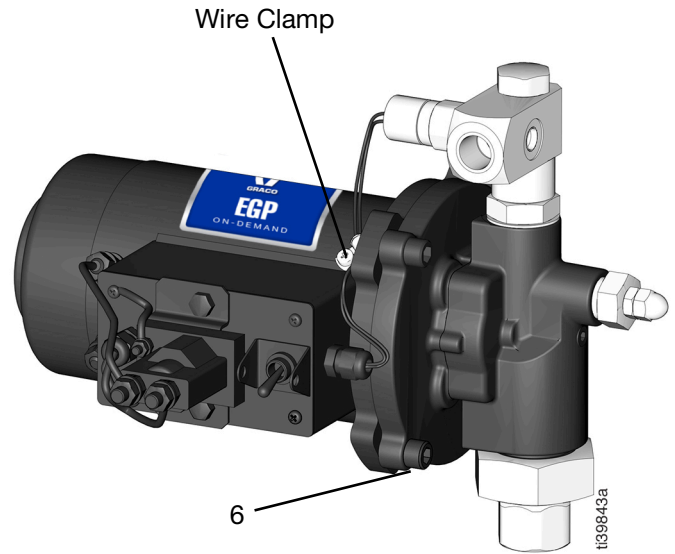
**FIG. 30**

10. Unscrew the strain relief nut (FIG. 31).
11. Pull the pressure switch wires out of the terminal box through the strain relief (FIG. 31).



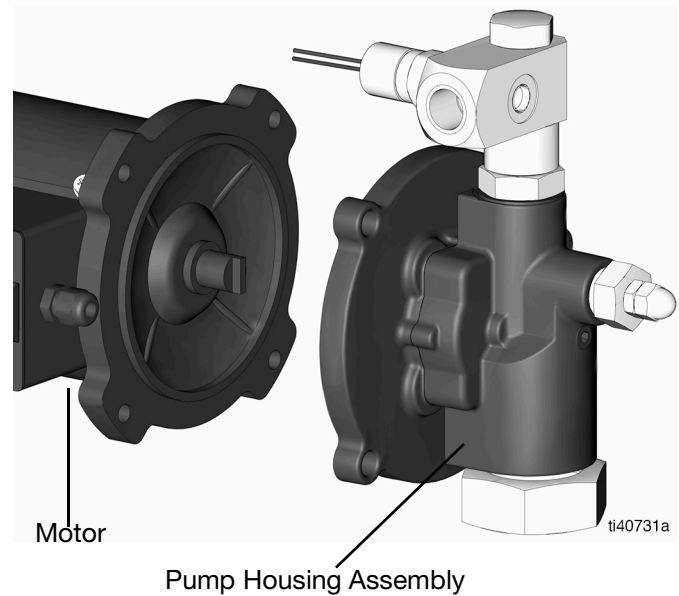
**FIG. 31**

12. Pull the pressure switch wires out of the wire clamp (FIG. 32),
13. Remove the four Allen screws (6) using a 5/16 in. (8 mm) hex wrench (FIG. 32).



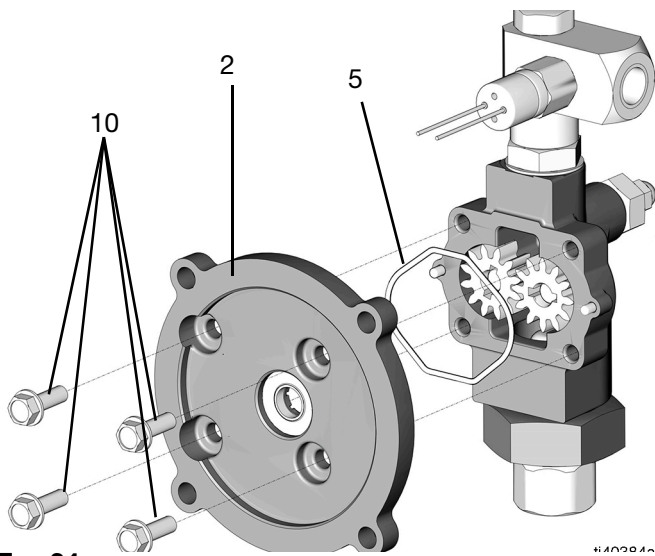
**FIG. 32**

14. Remove the pump housing assembly from the motor (FIG. 23).



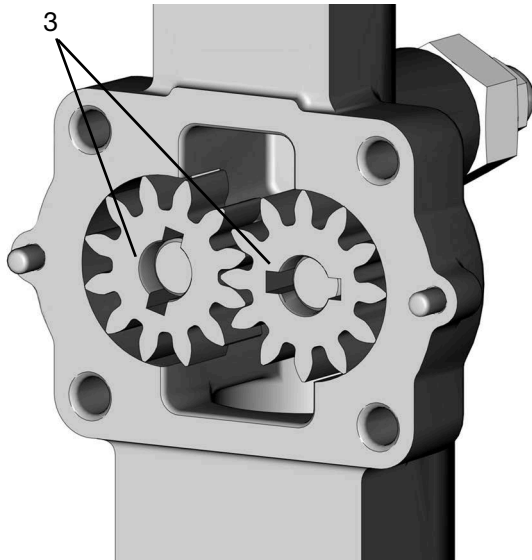
**FIG. 33**

15. Remove four screws (10) on the adapter plate (2) using a 1/2 in. socket wrench (FIG. 34).
16. Remove the adapter plate (2) (FIG. 34).
17. Remove the o-ring (5) (FIG. 34).



**FIG. 34**

18. Remove both of the pump gears (3) (FIG. 35).



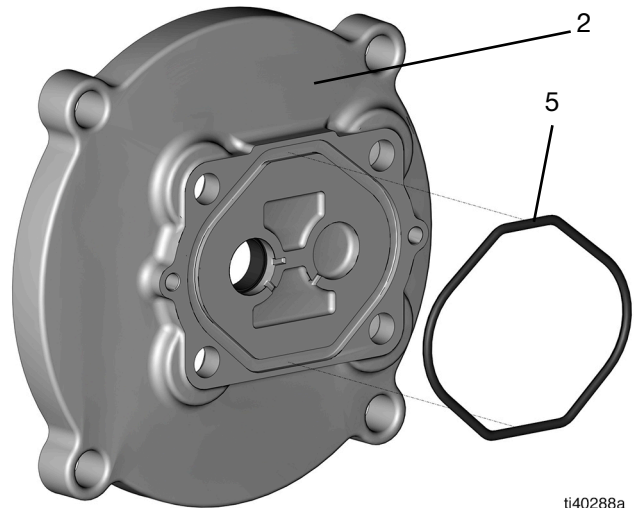
**FIG. 35**

19. 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).

### Reassembly

1. Place the pump gears (3) into the pump cavity, making sure that they spin freely (FIG. 35).

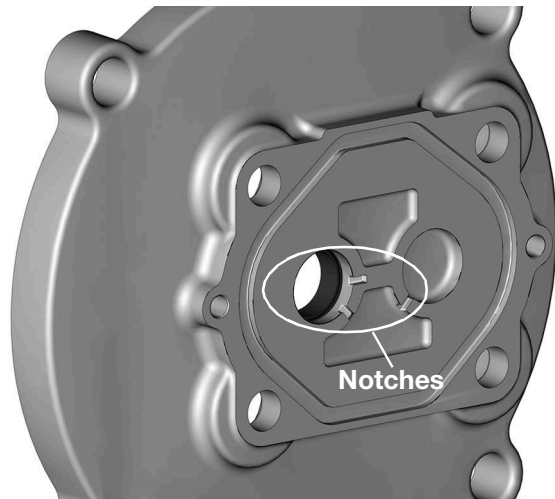
2. Put the o-ring (5) into the groove on the adapter plate (2) cover (FIG. 36).



**FIG. 36**

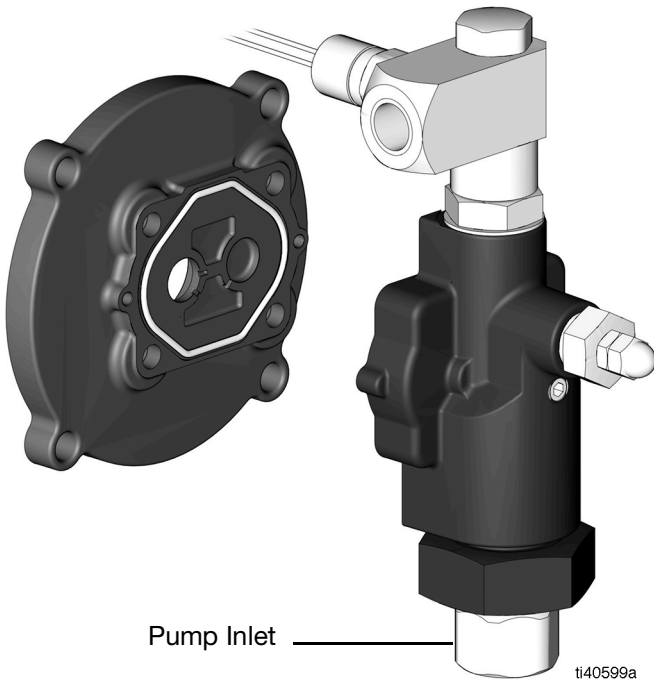
3. Position the adapter plate on the pump housing so that the notches point toward the pump inlet (FIG. 37 and FIG. 38).

4. Push the four screws (10) through the adapter plate (2) and use a 1/2 in. socket wrench to tighten (Torque 30 ft-lbs, 40.7 N•m) (see FIG. 34).



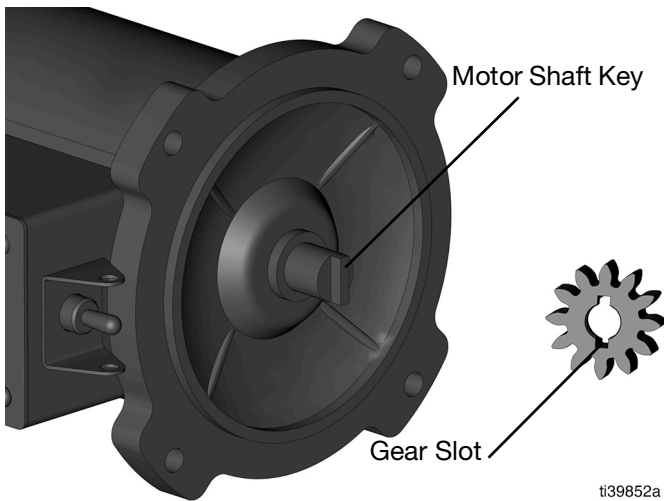
**FIG. 37**



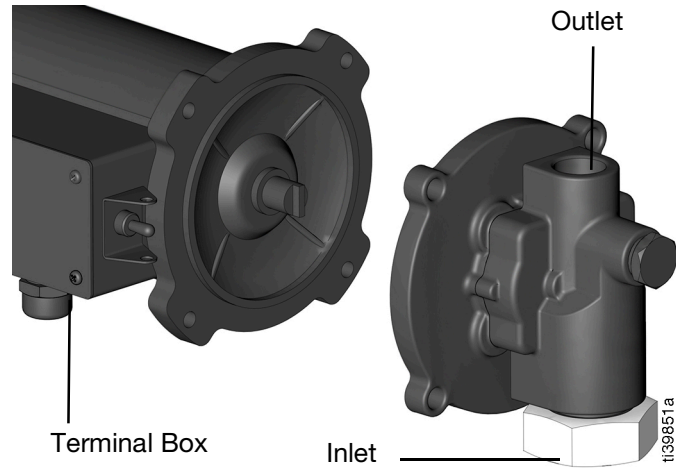


**FIG. 38**

5. Put the pump housing assembly onto the motor. The motor shaft key should match the slot on the gear on the inside cover. The pump outlet should face up and the terminal box should be centered between the pump outlet and the pump inlet (FIG. 39 and FIG. 40).

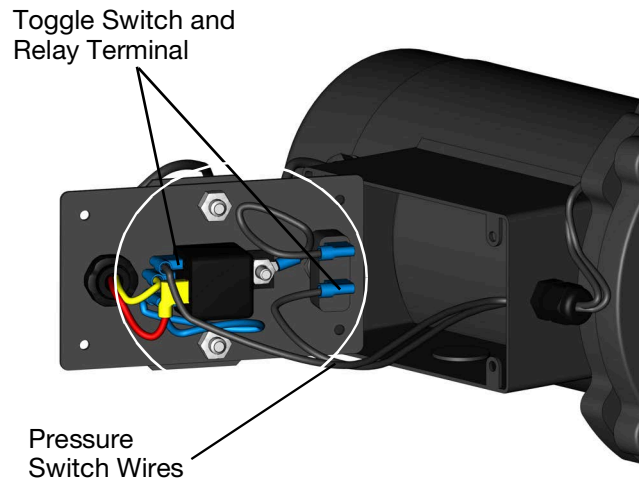


**FIG. 39**



**FIG. 40**

6. Place and tighten the four Allen screws (6) using an 5/16 in. (8 mm) hex wrench (torque 20 ft-lbs) (see FIG. 32).
7. Push the pressure switch wires into the wire clamp, through the terminal box and through the strain relief (see FIG. 31).
8. Crimp the connectors to the end of the pressure switch wires (FIG. 41).
9. Twist the strain relief nut on using a wrench until tightened (see FIG. 31).
10. Connect the pressure switch wires to the toggle switch and relay terminal (FIG. 41).



**FIG. 41**

11. Place the gasket onto the terminal box.
12. Replace the terminal box cover.
13. Insert the four terminal box cover screws and tighten, making sure that the grounding wire is connected properly (see FIG. 42).

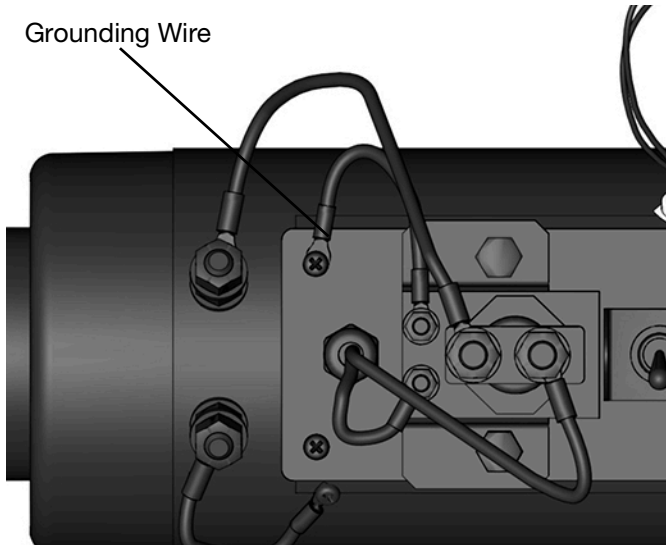


FIG. 42

14. Complete using the **Installation** information beginning on page 9.

## Clean and Inspect Pressure Relief Valve Assembly

### Disassembly

1. Follow **Pressure Relief Procedure**, page 11.
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 housing (FIG. 43).

NOTE: Do not loosen the cap nut and nut since this will change the pressure setting.

6. Remove the spring (9) (FIG. 43).
7. Remove the spring guide (8) (FIG. 43).
8. Remove the relief ball (7) (FIG. 43).

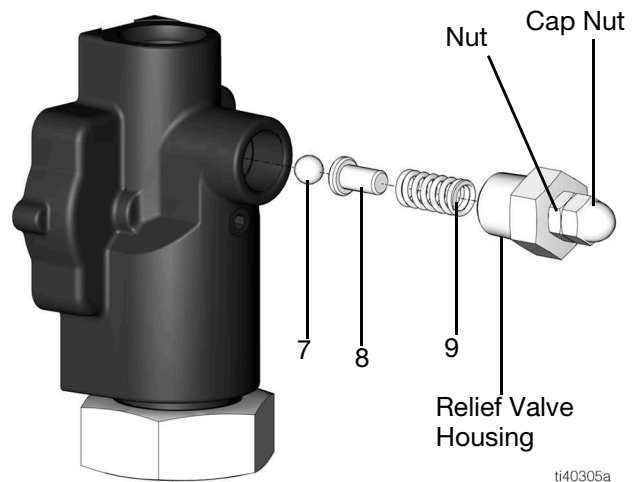


FIG. 43

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. 43).
2. Replace the spring guide (8) (see FIG. 43).
3. Replace the spring (9) (FIG. 43).
4. Tighten the relief valve housing into the pump housing (FIG. 43).

NOTE: Do not loosen the cap nut and nut since this will change the pressure setting.

5. Complete using the **Installation** information beginning on page 9.

## Pump Outlet Check Valve Replacement with Thermal Relief P/N 133097

### Disassembly

1. Follow **Pressure Relief Procedure**, page 11.
2. Turn off and disconnect the power to the pump.
3. Remove the standard check valve (17) from the outlet fitting (18) (FIG. 44).

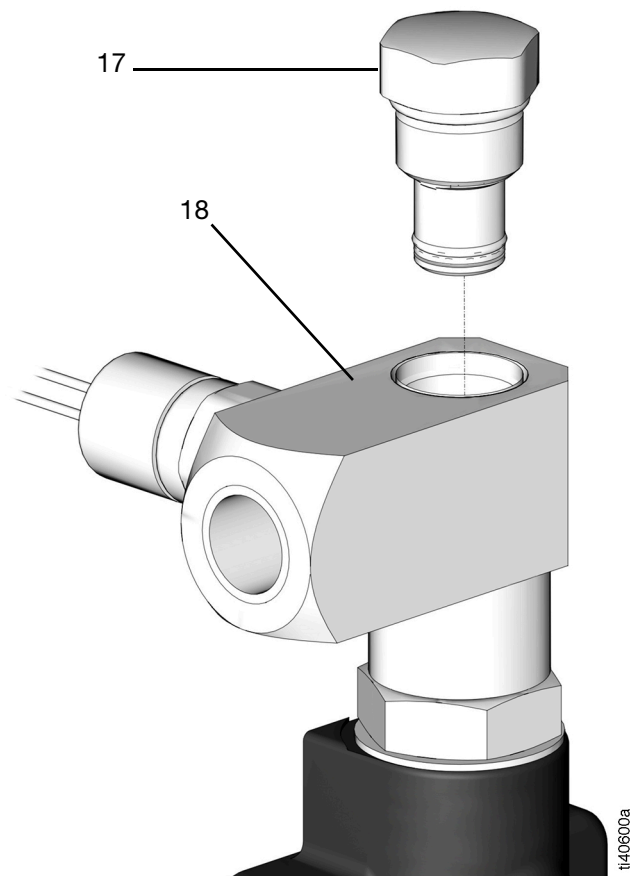
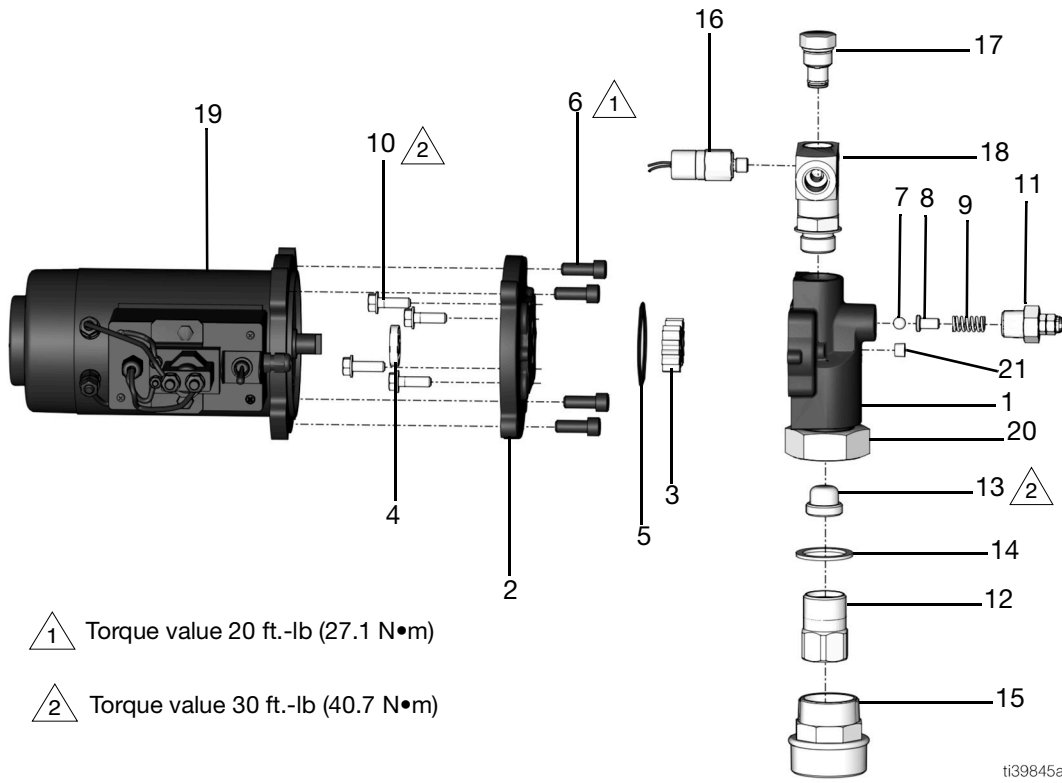


FIG. 44

### Reassembly

1. Tighten the outlet check valve with built-in thermal relief (Torque 30 ft-lbs, 40.7 N•m).
2. Complete using the **Installation** information beginning on page 9.

# Parts



# Parts


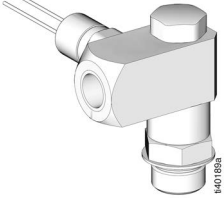
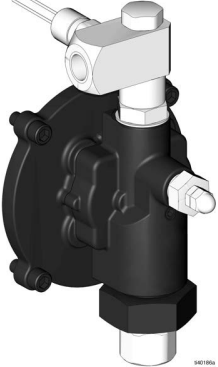

Ref.	Part No.	Description	Qty.
1❖		Pump body	1
2❖		Adapter, pump motor	1
3❖		Gear, pump	2
4❖		Seal, shaft	1
5❖		O-ring	1
6❖		Screw, 3/8 - 16 socket head, cap	4
7❖		Ball, relief valve	1
8❖		Guide, spring	1
9❖		Spring, relief valve	1
10❖		Screw, 5/16 - 18 x 1	4
11❖		Relief valve housing	1
12❖		Inlet check valve assembly	1
13❖	133377	Filter	1
14❖		Seal	1
15	260061	Bung adapter	1
16❖ †		Pressure switch	1
17❖ †		Outlet check valve	1
18❖ †		Outlet fitting	2
19		Motor, 12 VDC	1
20❖		Swivel nut	1
21❖		Priming plug	1
22▲	133464	Warning label (not shown)	1



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

❖ Part of 133374 Pump Housing assembly kit

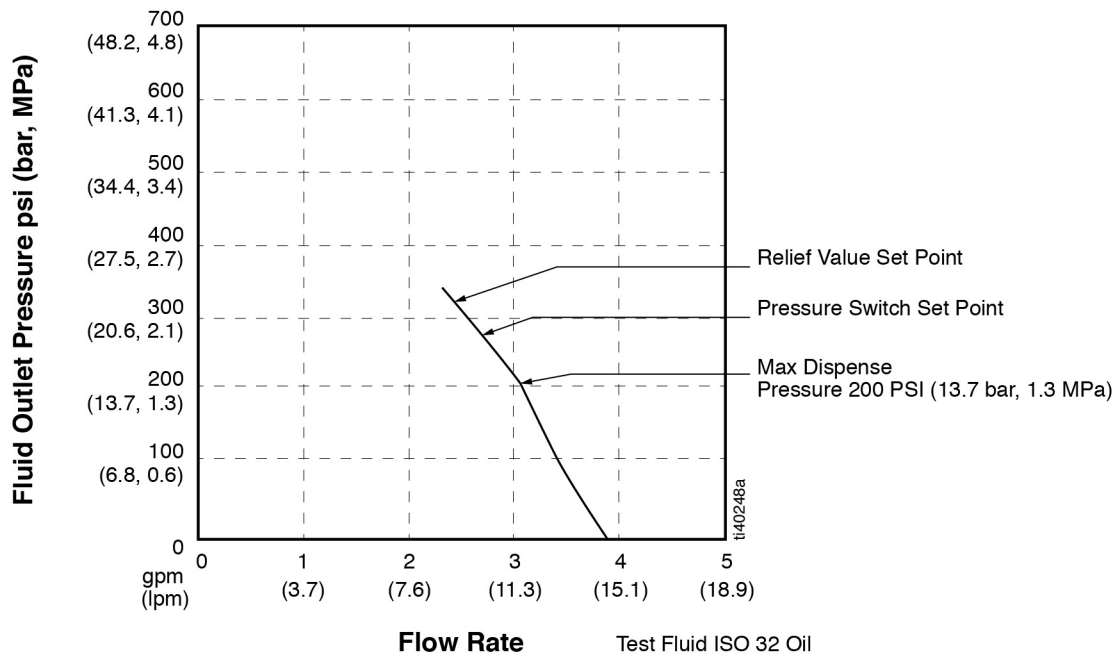
† Part of 133413 Outlet assembly Kit

# Kits and Accessories

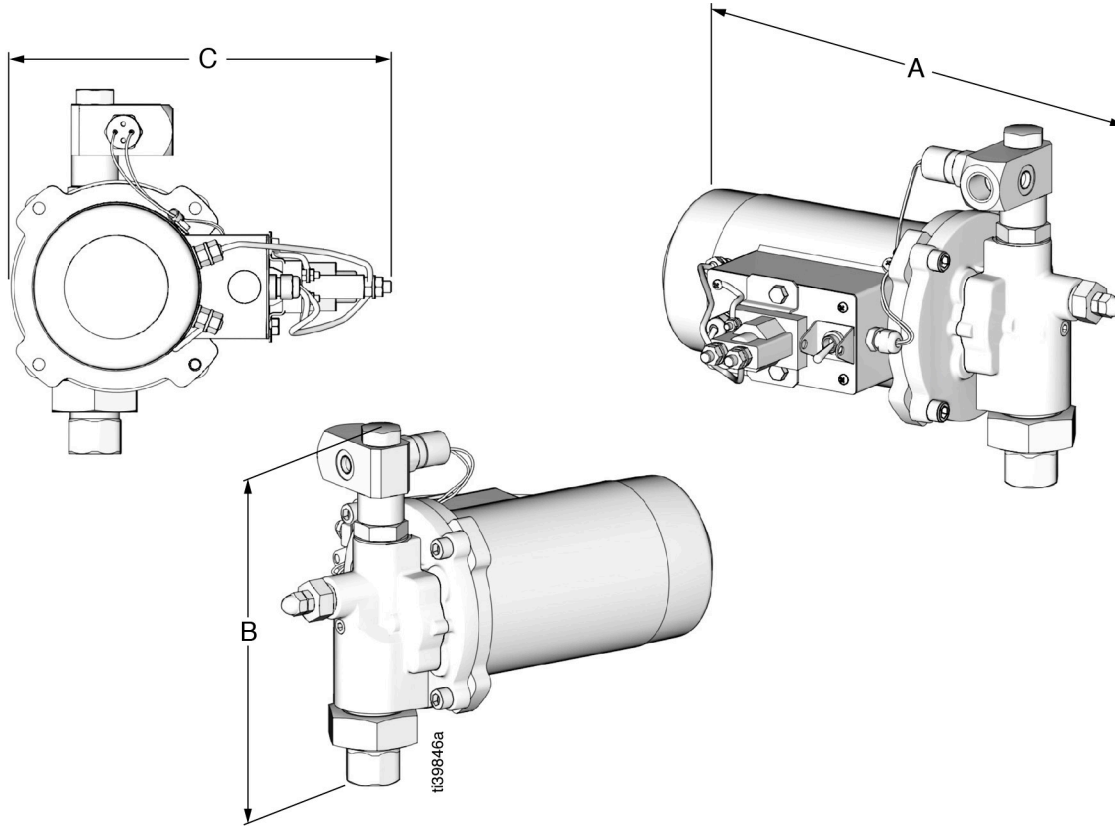
Part Number	Description	
260124	Suction tube with inlet check assembly	
133413	Outlet assembly kit 12 VDC On-Demand Pump	
133374	Pump housing assembly 12 VDC On-Demand Pump	
133377	Suction filter	

Part Number	Description	
133375	Suction kit	
133097	Outlet check valve with built-in thermal relief	

## Pump Performance Chart



# Dimensions



Models	Length (A)		Height (B)		Width (C)	
	Inches	mm	Inches	mm	Inches	mm
25T818	13.43	341.1	9.67	245.6	9.5	241.3



# Technical Specifications

<b>12 VDC Electric Gear On-Demand Pump</b>		
	<b>US</b>	<b>Metric</b>
Maximum working pressure	325 psi	2.24 MPa, 22.4 bar
Automatic Relief Setting	325 psi	2.24 MPa, 22.4 bar
Pressure Switch Setting	290 psi	2.00 MPa, 20.0 bar
Output Flow at 0 psi (0 MPa, 0 bar), see <b>Pump Performance Chart</b> , page 31	3.8 gpm	14.4 L/min
Dimensions	See <b>Dimensions</b> , page 32	
<b>Weight</b>		
All models	36 lb.	16.3 kg
<b>Motor Details</b>		
Voltage	12 VDC	
Current	60 A	
Power	0.75 HP, 600 W	
Enclosure	Totally Enclosed Non Ventilated (TENV)	
RPM	1750	
Wetted Parts	Carbon steel with zinc plating, stainless steel, galvanized steel, aluminum, nitrile, rubber	
<b>Inlet/Outlet Sizes</b>		
Inlet size	3/4 in. npt(f)	
Outlet Size	1/2 in. npt(f)	

## California Proposition 65

### CALIFORNIA RESIDENTS

 **WARNING:** Cancer and reproductive harm – [www.P65warnings.ca.gov](http://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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