

# Instructions



## Gear/Drive Kit for Magnum X5, X7, M3+, M5+, L10+, LTS 15, LTS 17, Project Painter™ Plus, Pro Plus™ A20, Pro Plus™ A30, Pro Plus™ A45

3A0978B  
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*This manual contains kit installation instructions only*

Kit: 16E778, 16E835



### Important Safety Instructions

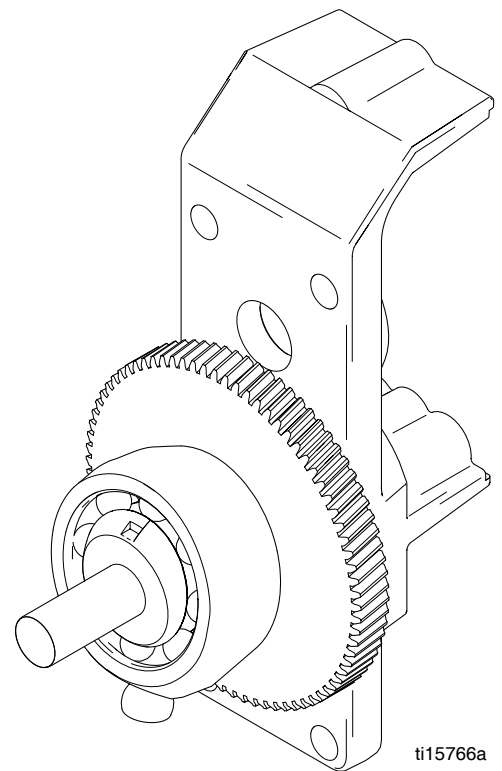
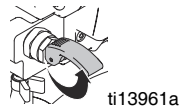
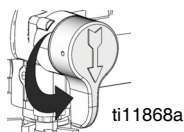
For detailed sprayer information and warnings, see Operation manual.

### Pressure Relief Procedure

To help prevent injection injuries, follow this procedure when you stop spraying and before you service or clean the sprayer, remove parts, or repair leaks.							

1. Turn Power switch OFF. Unplug sprayer.
2. Turn Spray/Prime valve to PRIME to relieve pressure. Turn pressure control knob left (counterclockwise) to minimize pressure.
3. Trigger gun.
4. Put trigger safety in safety ON position.

**NOTE:** Leave Spray/Prime valve in PRIME position until you are ready to spray again.



*If you suspect that the spray tip or hose is completely clogged or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen the tip guard retaining nut or hose end coupling to relieve pressure gradually. Then loosen it completely. Clear the tip or hose obstruction.*

## Disassembly



### ELECTRIC SHOCK HAZARD MOVING PARTS HAZARD

To reduce risk of serious injury, including electric shock, do not touch moving or electrical parts with fingers or tools while testing repair. Unplug sprayer when power is not required for testing. Install all covers, gaskets, screws, and washers before you operate sprayer.

1. Unplug electrical cord (A) and perform **Pressure Relief Procedure** (see page 1, or Operation manuals).
2. Remove suction hose and drain tubes from pump.
3. Remove front cover screws (B) (T-30 Torx).
4. Remove side shroud screws (C) (T-20 Torx), and remove left shroud (D). Remove underside shroud screw (E) if needed.
5. Loosen screw (F) retaining the green ground wire to the back of the drive assembly and remove the ground wire.
6. Disconnect all leads from control board (G), then remove the power cord.
7. Remove right shroud (H) and front cover (J).
8. Remove fan cover (K) by gently prying adjacent to the narrow retention bars with a flat blade screwdriver to lift them up and over the retention hooks. **NOTE:** Prying on the bars themselves can fracture them.
9. Loosen two motor screws (T-20) then pull the motor from the pump/drive assembly. **NOTE:** Be careful not to damage the cooling fan.
10. Remove gear cover (L). Remove the two screws (M) at the bottom of the pump/drive assembly then remove the pump/drive assembly.
11. Place the pump/drive assembly in a vise, with the jaws clamping on the flat sides at the bottom of the pump.
12. If the bearing on the motor shaft remains in the drive assembly, remove it from the drive and replace it on the motor.
13. Remove the remaining two screws (M) holding the drive to the pump, then rotate the drive bracket approximately 90°.

14. Pull the drive assembly and pump piston from the pump. If necessary, tap on the shorter leg of the drive with a plastic hammer to separate the parts.

### NOTICE

Prying between the pump and drive can damage the drive and lead to failure of equipment.

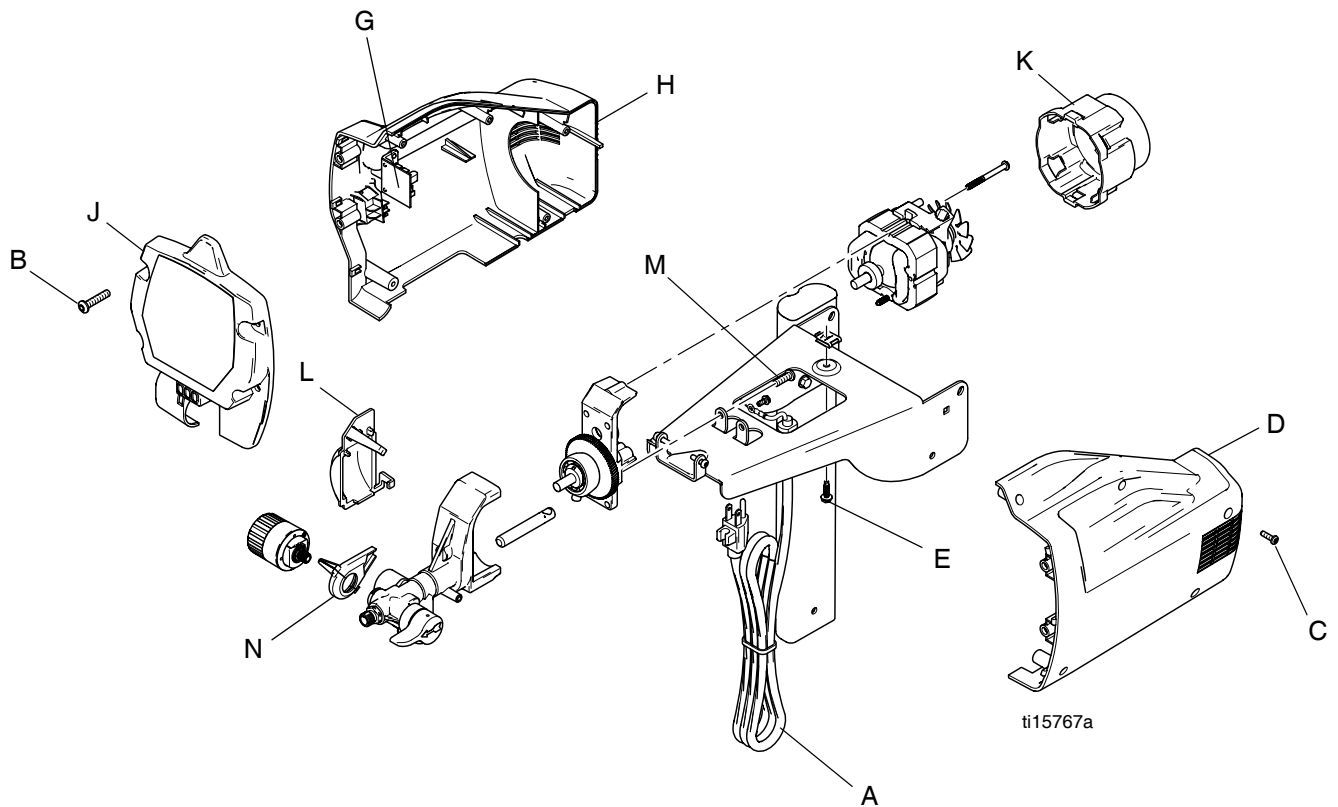
## Assembly

1. Apply a thin coat of oil to the pump piston and place it partially into the pump. Apply some oil to the small bronze bushing in the pump.
2. Verify the stud on the new drive assembly is still pre-greased. If that lubricant has been lost, apply a small amount of chassis grease to the drive pocket in the piston.
3. Rotate the drive gear to bring the stud towards the pump, then insert the stud into the piston pocket. Align the drive shaft with the pump bushing, then push the drive into the pump, rotating the gear to draw the drive inward. Press the drive and pump fully together (if necessary) by tapping on the bottom of the drive with a plastic hammer to seat the piston in the pump.
4. Insert the two screws (M) at the top of the drive. Tighten to 80-90 in-lb (9-10.2 N•m).
5. Assemble the motor to the drive with its thermal overload switch on the pressure control side of the sprayer. Tighten the screws to 26-32 in-lb (2.9-3.6 N•m). **NOTE:** The gear is internally lubricated; no grease is necessary.
6. Route the motor leads through the ports in fan cover (K), then snap the cover onto the motor.
7. Place the pump/drive/motor assembly on the sprayer frame, then install the two screws (M) at the bottom of the drive. Tighten to 80-90 in-lb (9-10.2 N•m). Replace gear cover (L).
8. Route the pressure control harness through setting indicator (N) then install the indicator around the pressure control and snap together. Pass the harness through the front cover (J), aligning the indicator with the opening in the front cover as they are positioned loosely on the pump.
9. Assemble right shroud (H) to the front cover with two screws (B) and tighten to 26-32 in-lb (2.9-3.6 N•m).

10. Route the power cord and motor leads between the motor and right shroud (H). Then connect all leads to the control board (G). Press the strain relief on power cord (A) into the recess in the right shroud (H).
11. Align the hole at the bottom of right shroud (H) with the holes in the pump and sprayer frame. Verify that no electrical leads are pinched between the shroud and motor, then install one side screw (C). Tighten to 20-25 in-lb (2.26-2.8 N•m). Install underside

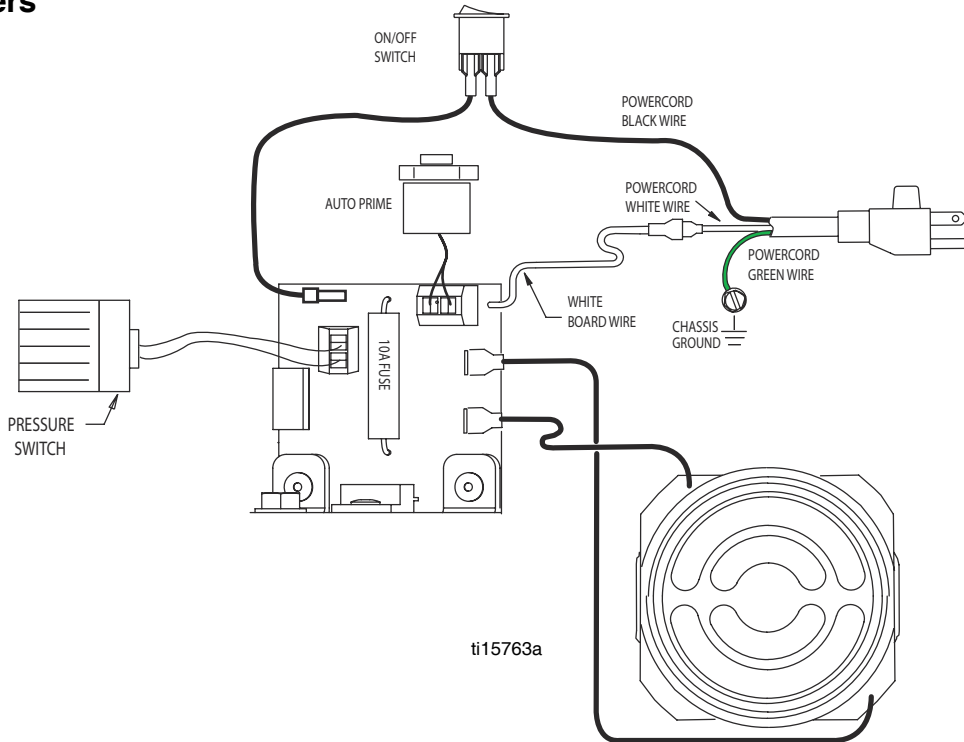
shroud screw (E) and tighten to 25-35 in-lb (2.8-3.9 N•m).

12. Install left shroud (D) to shroud (H) and the front cover. Verify that no electrical leads are pinched between the shroud halves then install side shroud screws (C) (T-20). Tighten to 20-25 in-lb (2.26-2.8 N•m). Install screws (B) through the front cover and tighten to 26-32 in-lb (2.9-3.6 N•m).
13. Replace the suction and drain hoses on the pump, and secure with their clamps.

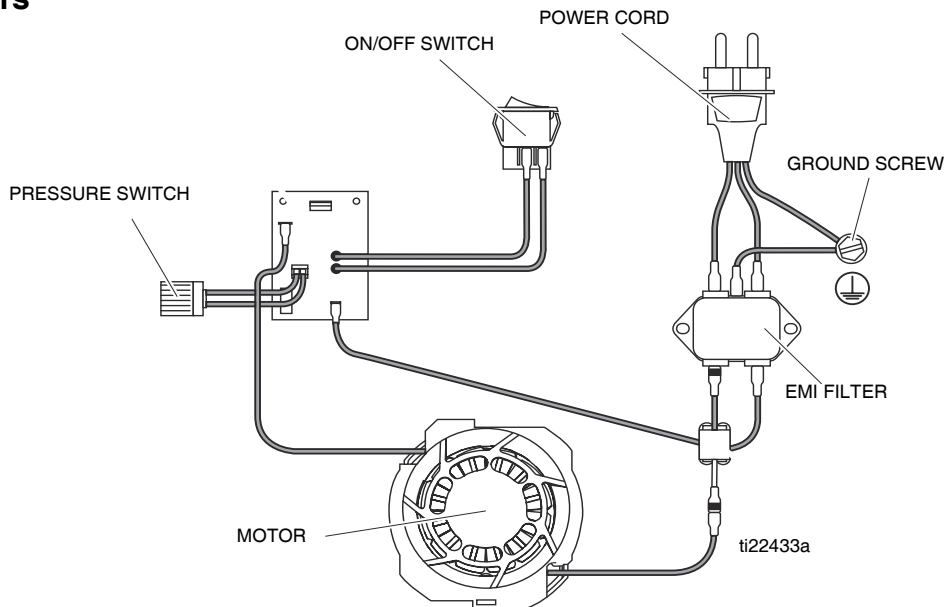


# Wiring Diagram

## 120V Sprayers



## 240V Sprayers



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 3A0978

**Graco Headquarters:** Minneapolis  
**International Offices:** Belgium, China, Japan, Korea

**GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440-1441**

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