

Replacement Kits for Sprayers

333498E

EN



IMPORTANT SAFETY INSTRUCTIONS

For detailed sprayer information and warnings, see the Owners manual included with your sprayer.

Includes instructions for:

Enclosure Replacement
Variable Speed Enclosure Replacement
Control Assembly with motor Replacement
Control Assembly with motor Replacement (Dual Speed)
Pump Assembly Replacement
Reciprocator Replacement
Prime Pump/Spray Valve Replacement
Prime Pump/Spray Knob Replacement

For Replacement Kit part numbers, see the Owners Manual included with your sprayer.

Pressure Relief Procedure

⚠WARNING

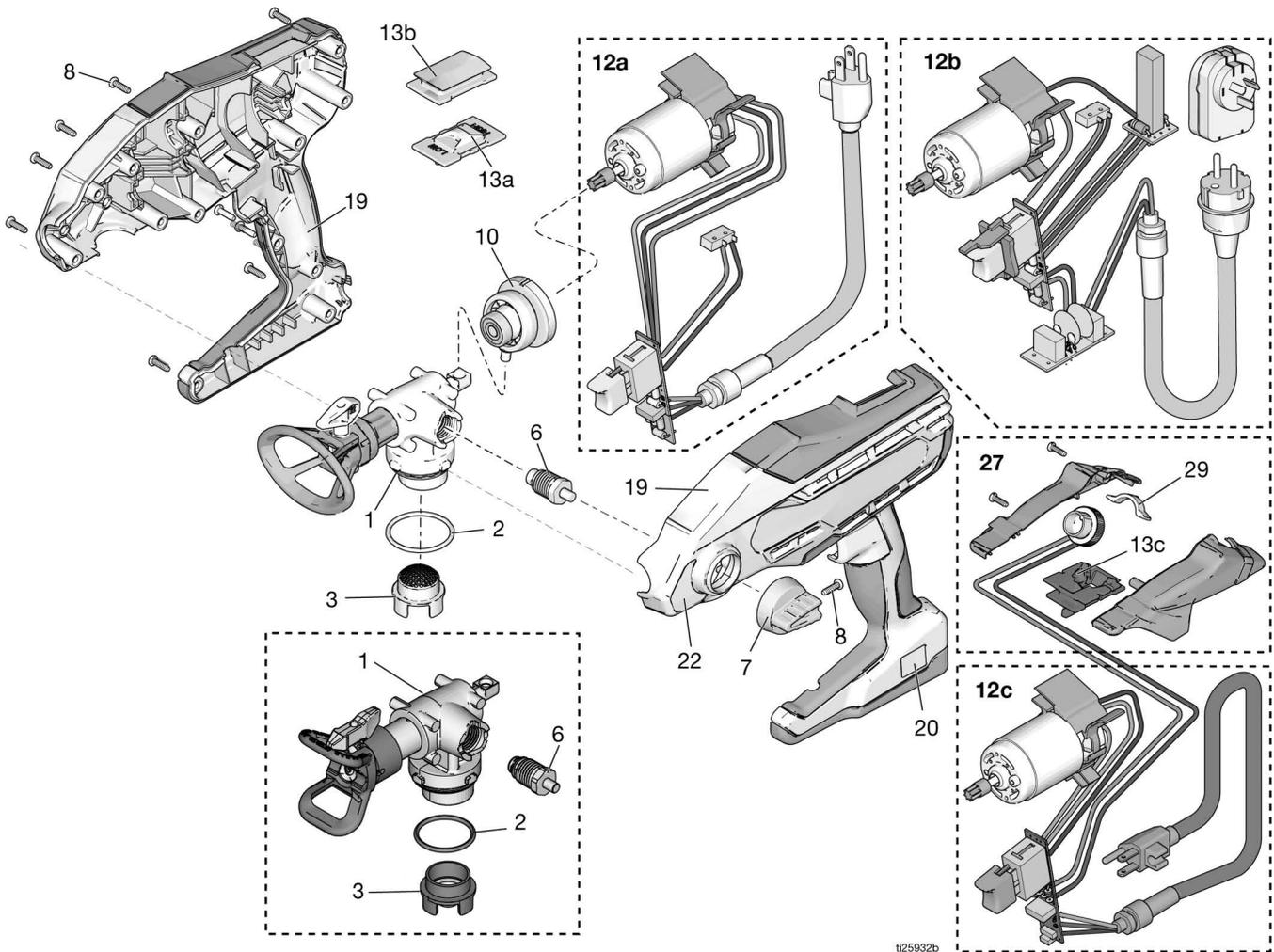
SKIN INJECTION HAZARD: This sprayer builds up an internal pressure of 2000 psi (14 MPa, 138 bar) during use. Follow this **Pressure Relief Procedure** whenever you stop spraying and before cleaning, checking, servicing, or transporting equipment to prevent serious injury.

ELECTRIC SHOCK HAZARD: AC powered equipment must be grounded. Improper grounding, setup, or usage of the equipment can cause electric shock. Turn off and disconnect power cord before servicing the equipment.

1. Disconnect power (unplug power cord).
2. Turn Prime Pump/Spray Knob down to Prime Pump position to relieve pressure.



Assembly Drawing



Ref.	Description
1	Pump assembly
2	O-ring
3	Filter, pump inlet
6	Prime Pump/Spray valve
7	Prime Pump/Spray knob
8	Screw, T15 (torque 8–10 in-lb / 0.9–1.1 N·m)
10	Reciprocator assembly
12a	Control, electronic 120V (dual speed shown)

Ref.	Description
12b	Control, electronic 230V (dual speed shown)
12c	Control, electronic 120V (variable speed shown)
13a	Switch, dual speed control
13b	Plug
13c	Variable speed control adapter
19	Enclosure
27	Variable speed enclosure
29	Sight glass

Enclosure Disassembly

Before servicing the sprayer, pump pressure must be relieved and sprayer enclosure separated.

1. Perform **Pressure Relief Procedure**, on page 1.
2. Unplug sprayer.
3. If replacing enclosure, remove label with model and serial number information from the right enclosure half. Save for placement on new enclosure.
4. Remove cup assembly and extra spray tip from holder.
5. Use a T15 Torx driver to remove the 13 screws from the right side of sprayer enclosure. On the **variable speed** models remove the two screws from the variable speed enclosure.

NOTE: There is a clear sight glass secured by the two halves of the variable speed enclosure. Do not lose the sight glass. It is required at reassembly.

6. Before removing pump assembly, remove the Prime Pump/Spray knob,
 - a. Use a T15 Torx driver to remove the screw from the knob.
 - b. Pull knob off the Prime Pump/Spray valve.

NOTE: The Prime Pump/Spray knob does not need to be removed if the pump assembly is not being replaced.

7. Proceed to the appropriate page for the replacement kit you are using:

Control Assembly with Motor Replacement, on page 3

Pump Assembly Replacement, on page 4

Reciprocator Replacement, on page 4

Prime Pump/Spray Valve and Knob Replacement, on page 5

Control Assembly with Motor Replacement

To replace the motor and control assembly you must first disassemble the enclosure. See **Enclosure Disassembly**, on page 3.

1. Remove the motor and control assembly.
2. Place left half of enclosure on a flat surface.
3. Route wires in enclosure.
 - a. The **single speed** sprayer uses a plug and there are no wires to route.
 - b. If you have a **dual speed** sprayer with a speed control switch install control switch into slot in left half of enclosure and route yellow wires through channel. Motor is installed over these wires.
 - c. If you have a **variable speed** sprayer route speed control wires through slot in variable speed control adapter. Install speed control and

knob into variable speed control adapter. Insert adapter assembly into top slot on left half of sprayer enclosure. Route wires through the channel. Motor is installed over these wires.

4. Slide air duct onto rear of motor. Align the split in the air duct with the motor ground spade. Make certain the air duct openings align with the motor exhaust vents.
 5. Place motor into enclosure, aligning the motor screw at the gear end with the enclosure slot. When properly installed, motor gear should mesh with reciprocator gear. Air duct vents should align with the motor exhaust vents and enclosure vents.
 6. On 120V models, verify that green wire from power cord is plugged into male ground spade on motor.
 - a. Make sure green wire is routed under control assembly.
 - b. Make sure female terminal is pushed all the way onto the ground spade.
 7. Verify that red and white wires from control assembly are plugged into male spades on motor.
 - a. On 120V models, make sure red wire is routed under control board.
 - b. Make sure red wire is plugged into male spade with red dot on end of motor.
 - c. Make sure female connector on white wire is plugged into male spade on end of motor.
 8. Install control assembly into enclosure. Make sure wires are routed through handle without sharp bends and away from edges.
 9. On **single speed** models install plug. On **dual speed** models install speed control switch in top slot of sprayer.
- NOTE: If installing a speed control switch (dual speed) verify HIGH is visible and positioned toward rear of sprayer.**
10. Verify pump, reciprocator, and motor placement by manually spinning reciprocator gear, which will spin motor shaft gear and actuate the pump piston.
 11. Install right enclosure half onto left enclosure half using 13 screws and a T15 Torx driver. Torque to 8–10 in-lb (0.9–1.1N•m).

NOTE: Make sure wires are not pinched when enclosure halves are put together. Verify that dual speed control switch moves from LOW to HIGH.

12. On **variable speed** models install the left variable speed enclosure. Install sight glass with arrow at the top into the pocket in the left half of variable speed enclosure. Secure right variable speed enclosure with two screws using a T15 Torx driver. Torque to 8–10 in-lb (0.9–1.1N•m).
13. After assembly is complete, perform **Assembly Verification**, on page 5.

Reciprocator Replacement

To replace a reciprocator, you must first separate the enclosure and remove the right half to access the reciprocator. See **Enclosure Disassembly**, on page 3.

Removal and replacement of the reciprocator can be accomplished without removing any of the other internal components of the sprayer.

1. Lift reciprocator off the pump and away from the motor gear.
2. Locate new reciprocator and lubricant.
3. Apply supplied lubricant to pump piston pocket.
4. Insert reciprocator stem into pump piston pocket and press reciprocator bearings into enclosure bearing slots.
5. Verify pump, reciprocator, and motor placement by manually spinning reciprocator gear which will spin motor shaft gear and actuate the pump piston.
6. Install right enclosure half onto left enclosure half using 13 screws and a T15 Torx driver, torque to 8–10 in-lb (0.9–1.1N•m).

NOTE: Make sure wires are not pinched when enclosure halves are put together. Verify that dual speed switch moves from LOW to HIGH.

7. On **variable speed** models install the left variable speed enclosure. Install sight glass with arrow at the top into the pocket in the left half of variable speed enclosure. Secure right variable speed enclosure with two screws using a T15 Torx driver. Torque to 8–10 in-lb (0.9–1.1N•m).
8. After assembly is complete, perform **Assembly Verification**, on page 5.

Pump Assembly Replacement

To replace a pump assembly, remove the Prime Pump/Spray knob, then separate the enclosure and remove the right enclosure half to access the pump assembly. See **Enclosure Disassembly**, on page 3.

Removal and replacement of the pump assembly can be accomplished without removing any of the other internal components of the sprayer.

1. Lift pump assembly off the reciprocator stem.
2. Locate new pump assembly and lubricant.
3. Apply supplied lubricant to pump piston pocket.
4. Place pump assembly into enclosure, while making sure the reciprocator stem is in the pump piston pocket.
5. With reciprocator in enclosure, insert reciprocator stem into pump piston pocket and align bosses on pump with counter bore bosses in enclosure.

NOTE: Make sure pump port for prime pump/spray valve is oriented through the left enclosure side hole.

6. Verify pump, reciprocator, and motor placement by manually spinning reciprocator gear which will spin motor shaft gear and actuate the pump piston.
7. Install right enclosure half onto left enclosure half using 13 screws and a T15 Torx driver, torque to 8–10 in-lb (0.9–1.1N•m).

NOTE: Make sure wires are not pinched when enclosure halves are put together. Verify that dual speed switch moves from LOW to HIGH.

8. On **variable speed** models install the left variable speed enclosure. Install sight glass with arrow at the top into the pocket in the left half of variable speed enclosure. Secure right variable speed enclosure with two screws using a T15 Torx driver. Torque to 8–10 in-lb (0.9–1.1N•m).
9. Place sprayer on right side to install prime pump/spray knob. Align knob onto valve stem so that the valve stem pocket is open to the rear of the knob and knob is pointing forward. Install T15 screw and torque 8–10 in-lb (0.9–1.1N•m).

NOTE: Knob will only rotate forward and down.

10. After assembly is complete, perform **Assembly Verification**, on page 5.

Prime Pump/Spray Valve and Knob Replacement

Replacement of the Prime Pump/Spray valve or the Prime Pump/Spray knob can be accomplished without removing any of the internal components of the sprayer. Perform **Pressure Relief Procedure**, on page 1.

1. Remove T15 screw from Prime Pump/Spray knob
2. Using a 5/8 in. (16mm) deep socket, remove Prime Pump/Spray valve from pump housing.
3. Place sprayer on right side to install prime pump/spray valve.
4. Using a 5/8 in. (16mm) deep socket, thread Prime Pump/Spray valve into pump. Torque to 10–15 in-lb (1.1–1.7N•m).
5. Place sprayer on right side to install prime pump/spray knob. Align knob onto valve stem so that the valve stem pocket is open to the rear of the knob and knob is pointing forward. Install T15 screw and torque to 8–10 in-lb (0.9–1.1N•m).

NOTE: Knob will only rotate forward and down.

6. After assembly is complete, perform **Assembly Verification**, on page 5.

Assembly Verification

After assembly is complete, perform the following steps to verify proper operation. If sprayer fails one of the steps, repeat Sprayer Disassembly and Replacement procedures.

- Visually inspect for gaps between enclosure halves. A gap larger than 1/32 in (0.8mm). may be caused by a pinched wire or an internal component not seated properly. If disassembly and inspection indicates that no wire has been pinched and all internal components are seated properly, carefully reassemble and repeat verification steps.
- Verify the dual speed control switch moves from LOW to HIGH.
- Verify the variable speed control adjusts from 1 to 10.
- Fill cup assembly with water and verify sprayer primes and sprays. Follow setup instructions in sprayer operation manual for proper priming and spraying procedure.
- Rotate Prime Pump/Spray knob to make sure it rotates forward to the spray position and down to the prime pump position.

*All written and visual data contained in this document reflects the latest product information available at the time of publication.
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For patent information, see www.graco.com/patents.

Original instructions. This manual contains English. MM 333498

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Revision E, September 2022