




# 234037 Repair Kit

309575A

## REPLACEMENT MOTOR BRUSHES FOR ALL REACTOR PROPORTIONERS WITH ELECTRIC MOTORS


*ALWAYS USE GENUINE GRACO PARTS AND ACCESSORIES*

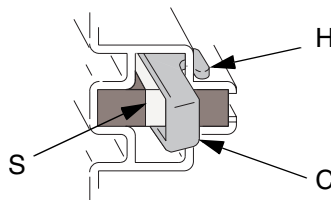
**⚠ WARNING**

To reduce the risk of serious injury including fluid injection, splashing in the eyes or on the skin, injury from moving parts, or electric shock, always shut off and unplug the equipment and trigger the gun to relieve pressure before changing brushes.


### Brush Removal

1. Turn Reactor main power OFF . Disconnect power supply. Wait 5 min for stored voltage to discharge (E-30 and E-XP2 models only).
2. Relieve pressure. See Reactor manual.
3. Remove motor cover, screws, and washers. Remove inspection covers, screws, and gaskets from left end of motor.
4. Push in spring clip (C) to release hooks (H) from brush holder. Pull out clip and spring (S).

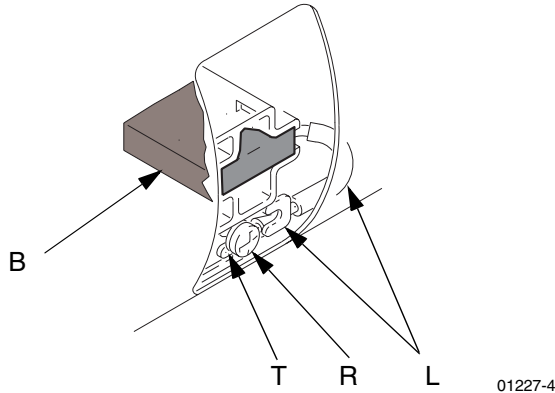


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PROVEN QUALITY. LEADING TECHNOLOGY.

 One brush has a wire on top for brush wear signal. Note which side of motor it is on. Unplug at spade connector provided.

5. Loosen terminal screw (R). Pull away brush lead (L), being careful motor lead terminal (T) remains in place. Remove and discard brush (B).




6. Inspect commutator for excessive pitting, burning, or gouging. Black color on commutator is normal. Have commutator resurfaced by qualified motor repair shop if brushes wear too quickly, or replace motor.

7. Repeat for other side.

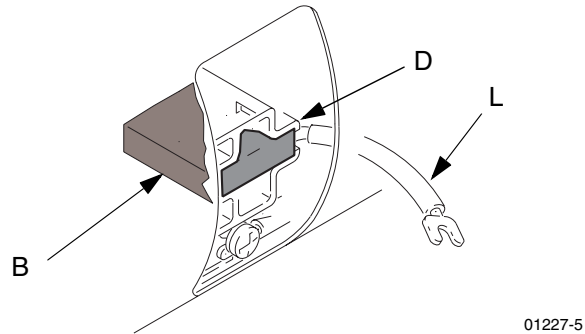
## Brush Installation

### CAUTION

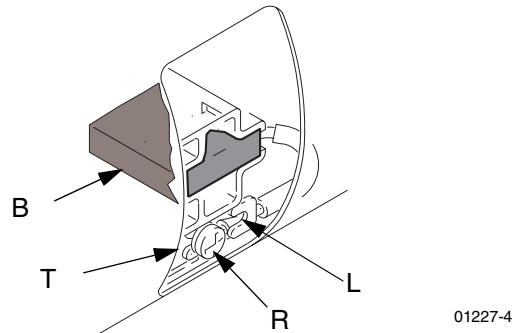
When installing brushes, follow steps carefully. Improper installation damages parts beyond use.

 Install brush with brush wear signal wires on same side of motor as before. Plug spade terminal into connector.

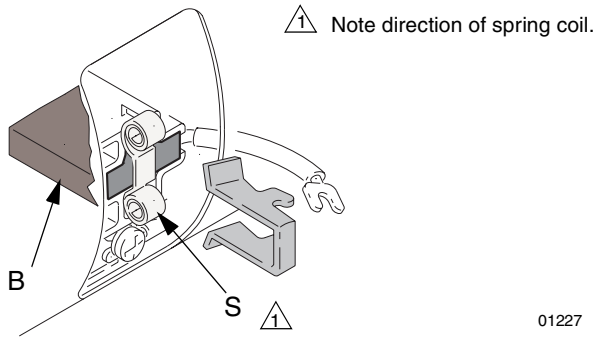
1. Install new brush (B) so lead (L) is in long slot (D) of holder.



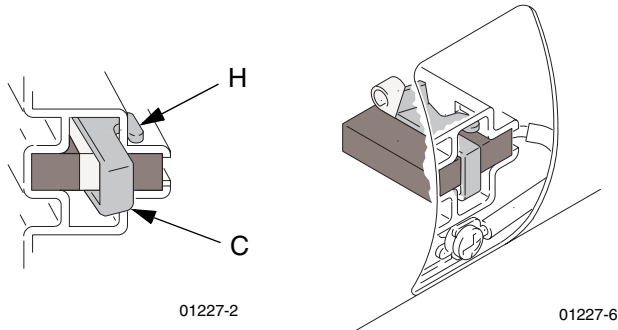
2. Slide terminal (L) under terminal screw (R). Make sure motor lead terminal (T) is still connected at screw. Tighten screw. Be sure brush is free to move down as it wears.



3. Install spring (S) so it will uncoil onto brush (B), as shown. Spring will be damaged if installed backwards.



4. Install spring clip (C) and push in until hooks (H) catch slots in housing. Incorrect installation may jam clip.



**WARNING**




Do not touch brushes, leads, springs, or brush holders while equipment is plugged in, to reduce the risk of electric shock and serious injury.

**CAUTION**

Do not run pumps dry for more than 30 sec while checking brushes, to avoid damaging pumps.

5. Reinstall brush inspection covers, gaskets, and screws. Reinstall motor cover, screws, washers, and drive housing/pump assemblies.
6. Test brushes with both pump pins disconnected, see Reactor repair manual.

Select J 1 (jog mode). Press motor  to start motor. Slowly increase jog setting to J 6. Inspect brush and commutator contact area for excessive arcing. Arcs should not "trail" or circle around commutator surface.

Run motor for 20-30 min at J 6 to seat brushes.

7. Reconnect pump rods and pins, see Reactor repair manual.

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