

INSTRUCTIONS

This manual contains **IMPORTANT**
WARNINGS and INFORMATION
READ AND RETAIN FOR REFERENCE



308-100

Rev A

CLUTCH REPLACEMENT KIT 221-044

FOR THE GM 3500 GASOLINE-POWERED AIRLESS SPRAYERS

WARNING

Pressure Relief Procedure

To reduce the risk of serious bodily injury, including fluid injection, splashing fluid or solvent in the eyes or on the skin, or injury from moving parts or electric shock, follow this procedure whenever you shut off the sprayer, when checking or servicing any part of the spray system, when installing, cleaning or changing spray tips, and whenever you stop spraying.

1. Engage the gun safety latch.
2. Turn the engine ON/OFF switch to OFF.
3. Flip the pressure control switch to OFF.
4. Disengage the gun safety latch. Hold a metal part of the gun firmly to the side of a grounded metal pail, and trigger the gun to relieve pressure.
5. Engage the gun safety latch.
6. Open the pressure drain valve, having a container ready to catch the drainage. Leave the valve open until you are ready to spray again.
7. Disconnect the spark plug cable.

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, wrap a rag around the tip guard retaining nut or hose end coupling and VERY SLOWLY loosen the part to relieve pressure gradually, then loosen completely.

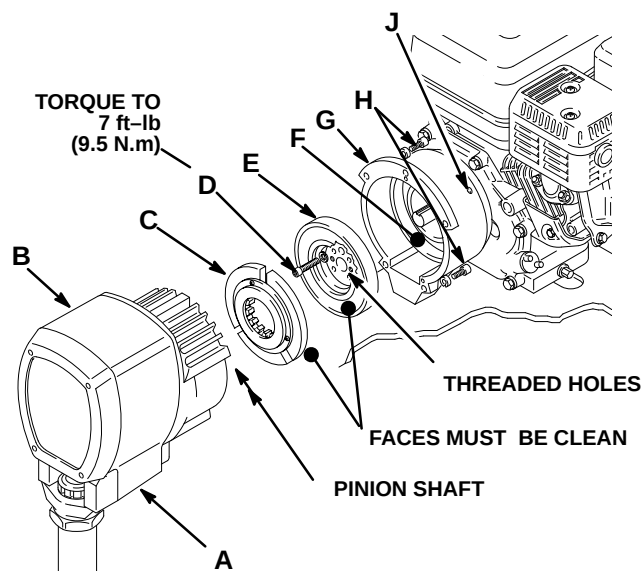


Fig 1

Disassembly

NOTE: The clutch assembly includes the armature (C) and rotor (E) which must be replaced together so they wear evenly.

1. Follow the **Pressure Relief Procedure Warning**.
2. Remove the bottom two screws (H) from the clutch housing (G) and then remove the remaining screws.
3. Tap lightly on the back of the bearing housing (A) with a plastic mallet to loosen the assembly (B) from the clutch housing (G). Pull the assembly away; the armature (C) will come with it. Remove the armature from the pinion shaft.
4. Remove the capscrews (D). Install two of the screws in the threaded holes in the rotor (E). Alternately tighten the screws until the rotor comes off.

Reassembly

NOTE: This kit includes a cardboard spacer which is used only during installation. Be sure to remove it after installing the clutch.

1. Be sure the faces of the rotor (E) and the armature (C) are free of all oil and contaminants. Install the rotor and capscrews (D). Torque the capscrews to 7 ft-lb (9.5 N.m). See Fig 1.
2. Pull the engine recoil rope to assure the engine turns freely, and there is no friction between the outside of the rotor (E) and the field (F). If there is friction, loosen the setscrews (J) and reposition the field as necessary. Tighten the setscrews oppositely and evenly to 25 in-lb (2.8 N.m). Also make sure there are no burrs on the outside edge of the rotor.

CLUTCH

NOTE: With the autogap-style armature, the gap between the rotor and armature is critical for proper operation. The clutch kits with an autogap-style armature include a cardboard spacer (p/n 186-857) to set the proper gap.

3. Clean the face of the armature (C). With the flat side of the armature facing the rotor (E), slide the armature onto the hub (T) in the drive/pinion assembly (B) just until the chamfered end of the hub protrudes through the armature. See Fig 2. There will be significant resistance. Attach the cardboard spacer, supplied with the clutch kit, to the face of the armature. Engage the tabs on the spacer with the slots in the armature.

Brace the sprayer against a wall to prevent it from rolling. Push the drive/pinion assembly (B) onto the clutch housing (G). There will be significant resistance. When the mating surfaces of the drive/pinion assembly and the clutch housing are flush, remove the drive/pinion assembly. **Remove the cardboard spacer.**

4. Assemble the drive/pinion assembly (B) to the clutch housing (G), using the capscrews (H). See Fig 1.

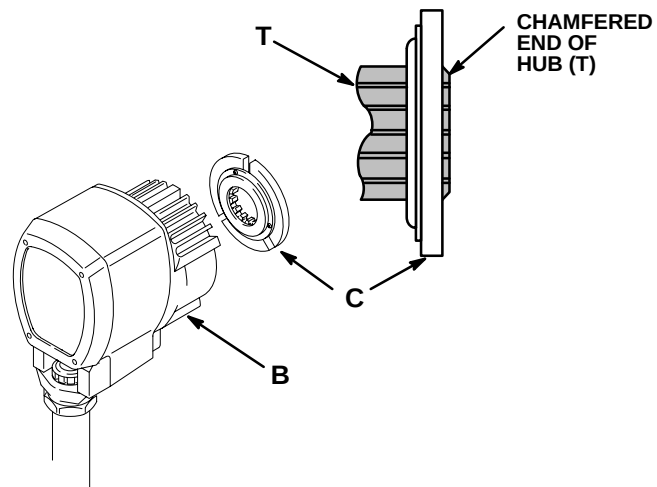


Fig 2

THE GRACO WARRANTY AND DISCLAIMERS

WARRANTY

Graco warrants all equipment manufactured by it and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. As purchaser's sole remedy for breach of this warranty, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment proven defective, with the exception of defects in parts on the drive train/gear box, which will be repaired or replaced for twenty-four months from the date of sale and the electric motor (excluding brush replacement, which is routine maintenance) or pressure control assembly which will be repaired or replaced for twenty-four months from the date of sale. 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, 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 with Graco equipment of 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 claim. 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.

DISCLAIMERS AND LIMITATIONS

The terms of this warranty constitute purchaser's sole and exclusive remedy and are in lieu of any other warranties (express or implied), including warranty of merchantability or warranty of fitness for a particular purpose, and of any non-contractual liabilities, including product liabilities, based on negligence or strict liability. Every form of liability for direct, special or consequential damages or loss is expressly excluded and denied. In no case shall Graco's liability exceed the amount of the purchase price. Any action for breach of warranty must be brought within two (2) years of the date of sale.

EQUIPMENT NOT COVERED BY GRACO WARRANTY

Graco makes no warranty, and disclaims all implied warranties of merchantability and fitness for a particular purpose, with respect to accessories, equipment, materials, or components sold but not manufactured by Graco. These items sold, but not manufactured by Graco (such as electric motor, switches, hose, etc.) are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

Factory Branches: Atlanta, Chicago, Dallas, Detroit, Los Angeles, West Caldwell (N.J.)

Subsidiary and Affiliate Companies: Canada; England; Switzerland; France; Germany; Hong Kong; Japan

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

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