

## Clutch Replacement Kit

309890 Rev. A



Read warnings and instructions.

### GMax and LineLazer Airless Paint Sprayers

#### Pressure Relief Procedure

#### **WARNING**



##### **INJECTION HAZARD**

The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment,
- install or clean the spray tip.


1. Engage gun safety latch.
2. Turn ON/OFF switch to OFF.
3. Turn pressure control knob to lowest setting.
4. Unplug power supply cord.
5. Disengage gun safety latch. Hold metal part of gun firmly to grounded metal pail. Trigger gun to relieve pressure.
6. Engage gun safety latch.
7. Open pressure drain valve. Leave pressure drain valve open until ready to spray again.

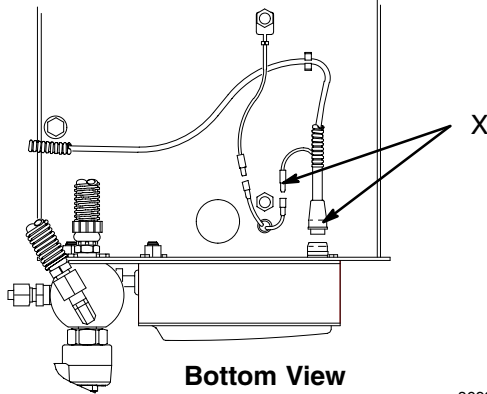
*If you suspect that the spray tip or hose is completely clogged or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen the tip guard retaining nut or hose end coupling and relieve pressure gradually, then loosen completely. Now clear the tip or hose obstruction.*

# Clutch

## Removal

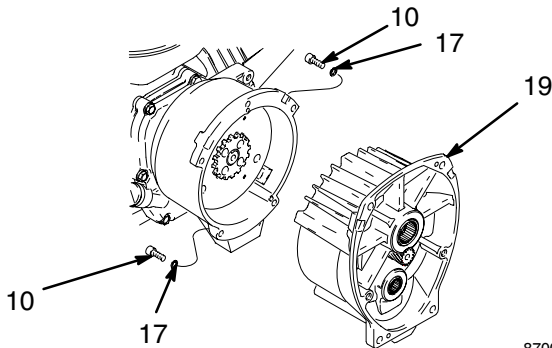
If pinion assembly (19) is not removed from clutch housing (5), do 1. through 4. Otherwise, start at 5.

1.  Relieve pressure; page 1.
2. Disconnect field cable (X) from pressure control.



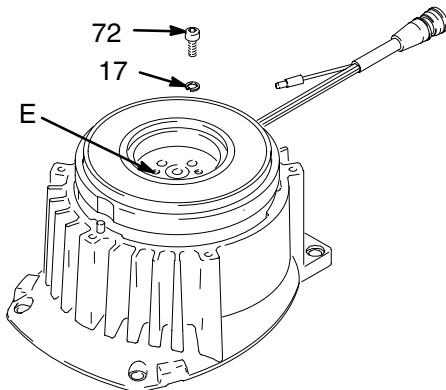
**Fig. 1** 8699A

3. Fig. 2. Remove five screws (10) and lockwashers (17) and pinion assembly (19).



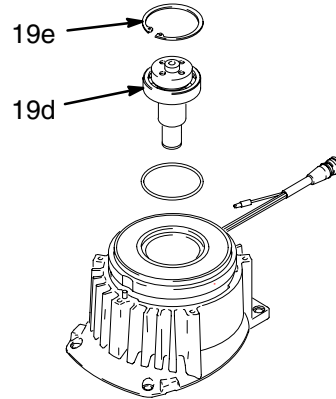
**Fig. 2** 8700A

4. Fig. 3. Place pinion assembly (19) on bench with rotor side up.
5. Remove four screws (72) and lockwashers (17). Install two screws in threaded holes (E) in rotor. Alternately tighten screws until rotor comes off.



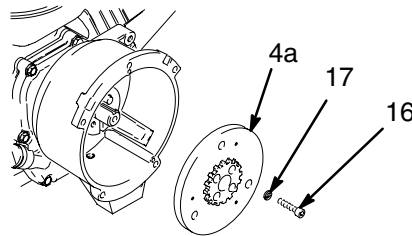
**Fig. 3** 8701A

6. Fig. 4. Remove retaining ring (19e).
7. Tap pinion shaft (19d) out with plastic mallet.



**Fig. 4** 8703A

8. Fig. 5. Use an impact wrench or wedge something between armature (4a) and clutch housing to hold engine shaft during removal.
9. Remove four screws (16) and lockwashers (17).
10. Remove armature (4a).

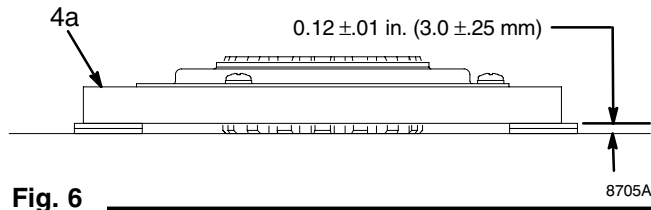


**Fig. 5** 8704A

# Clutch

## Installation

1. Fig. 6. Lay two stacks of two dimes on smooth bench surface.
2. Lay armature (4a) on two stacks of dimes.
3. Press center of clutch down on bench surface.



**Fig. 6**

4. Install armature (4a) on engine drive shaft.
5. Install four screws (16) and lockwashers (17) with torque of 125 in-lb.

6. Fig. 4. Tap pinion shaft (A) in with plastic mallet.
7. Install retaining ring (Z) with beveled side facing field (Y).
8. Fig. 3. Place pinion assembly on bench with rotor side up.
9. Apply locktite to screws. Install four screws (16) and lockwashers (17). Alternately torque screws to 125 in-lb until rotor is secure. Use threaded holes to hold rotor.
10. Fig. 2. Install pinion assembly (19) with five screws (10) and lockwashers (17).
11. Fig. 5. Connect field cable (X) to pressure control. Turn field cable coupling ring until you feel detent lock into position. This prevents field cable from loosening or disconnecting when spraying.

# Clamp

## Removal

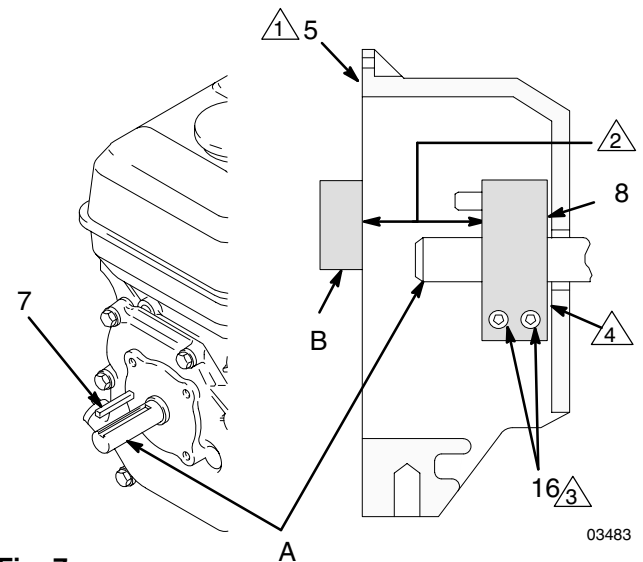
1. Fig. 7. Loosen two screws (16) on clamp (8),
2. Push screwdriver into slot in clamp (8) and remove clamp.

## Installation

1. Fig. 7. Install engine shaft key (7).
2. Tap clamp (8) on engine shaft (A) with plastic mallet.
3. Press clamp (8) onto engine shaft (A). Maintain dimension shown note 2 in Fig. 7. Chamfer must face engine.

Check dimension: Place rigid, straight steel bar (B) across face of clutch housing (5). Use accurate measuring device to measure distance between bar and face of clamp. Adjust clamp as necessary. Torque two screws (16) to 125 ± 10 in-lb (14 ± 1.1 N·m).

- 1 Face of clutch housing
- 2 1.550 ± 0.010 in. (39.37 ± 0.25 mm); GMax 3900  
1.812 ± 0.010 in. (46.02 ± 0.25 mm); GMax 5900
- 3 Torque to 125 ± 10 in-lb (14 ± 1.1 N·m)
- 4 Chamfer this side



**Fig. 7**

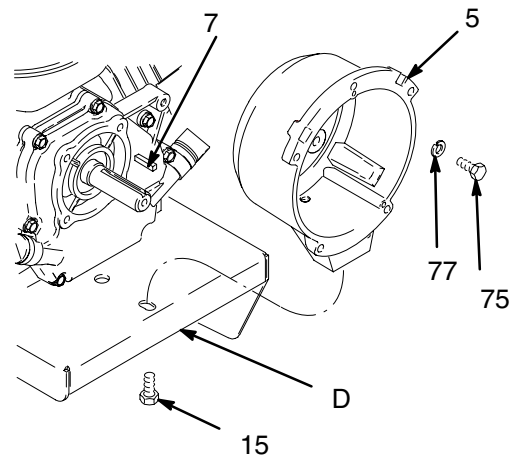
# Clutch Housing

## Removal

1. Fig. 8. Remove four capscrews (75) and lockwashers (77) which hold clutch housing (5) to engine.
2. Remove screw (15) from under mounting plate (D).
3. Remove engine key (7).
4. Pull off clutch housing (5).

## Installation

1. Fig. 8. Push on clutch housing (5).
2. Install four capscrews (75) and lockwashers (77) and secure clutch housing (5) to engine. Torque to 200 in-lb (22.6 N•m).
3. Install capscrew (15) from beneath mounting plate (D). Torque to 26 ft-lb (35.2 N•m).



**Fig. 8**

8708A

## Graco Phone Number

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**1-800-690-2894 Toll Free.**

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