

Electric CVX & Magstop PTO Clutches

P-1247
819-0461

Installation Instructions

CVX and Mag Stop clutches are bearing mounted style clutches and clutch/brakes. The clutch is designed to be bottomed on a step in the crankshaft or jackshaft. When the mounting bolt is torqued to the prescribed torque, the rotor hub is captured between the armature and field bearing inner races. The entire assembly (armature bearing rotor, and field bearing form a "column in compression" that rotates as a single unit. This column when properly torqued is held together with approximately 6000 lbs of clamping force. Bearing retaining washer must be at least 1/4" thick, two thin washers cannot be substituted as they will yield under mounting torque causing clutch failure.

⚠ WARNING Anything less than required mounting torque will result in clutch failure. Use OEM mounting bolt (do not substitute unless it the same length and grade as OEM bolt).

Ground drive pulley or spacer (if used) must be chamfered to clear the radius on the engine shaft shoulder. Ground drive or spacer surfaces must be perpendicular to the bore, parallel to each other and to the mounting surface within .003". See figure 1.

Non parallel and non-perpendicular spacers will result in excessive vibration and shortened clutch life. Use OEM spacers and install in the same orientation and in the same order as removed.

Anti rotation device is to keep the field and wires from rotating on the shaft. Anti rotation pin, strap or cable must not restrict the bearing in the field assembly from either axial or radial runout. See figure 2.

Clamping the field tight will preload the field bearing and will cause the bearing to fail. Use OEM anti rotation device to prevent clutch from rotating on the shaft.

Read owners manual prior to servicing tractor.

1. Make sure that tractor ignition is turned off. Disconnect electrical connection to the clutch.
2. Remove the belt from the clutch.
3. Remove mounting bolt. Making sure that mounting bolt and washer is saved for installation of new clutch. If a D-drive is used on a Mag Stop style clutch, the new clutch will have the D-drive installed. See figure 3.
4. Remove the clutch from the shaft, being careful not to misplace any spacers that are installed between the clutch and the engine or ground drive assembly. Use OEM spacers and install in the same orientation and in the same order as removed.
5. Install the new clutch making sure that the anti rotation device is engaged in the clutch. Make sure that the field has a little free play and is not bound up. See figure 2.
6. Install mounting bolt and retaining washer and torque to spec. Grade 5 or Grade 8 bolt only. Minimum torque. See figure 1.

Thread Size	Torque Required	N-m
3/8-24" UNF*	40-45 lb.ft.	54-61
7/16-20" UNF**	50-55 lb.ft.	67-75
M 10 X 1.50	55-60 N-m	55-60

* 3/8 -24 UNF Grade 5 bolt is unacceptable

** 7/16-20 UNF Grade 5 or 8 bolt is acceptable

Note: All values are for dry (unlubricated) plated bolts, please consult fastener manufacturer if any type of locking element (thread lock compound, patch etc.) is to be used.

⚠ WARNING Failure to torque bolt to requirements will degrade clamping and can allow the clutch to separate from the shaft, causing risk of personal injury.

7. Install belt and reconnect electrical connection. Replace any guards removed previously.

Typical Engine Installation with Ground Drive Pulley

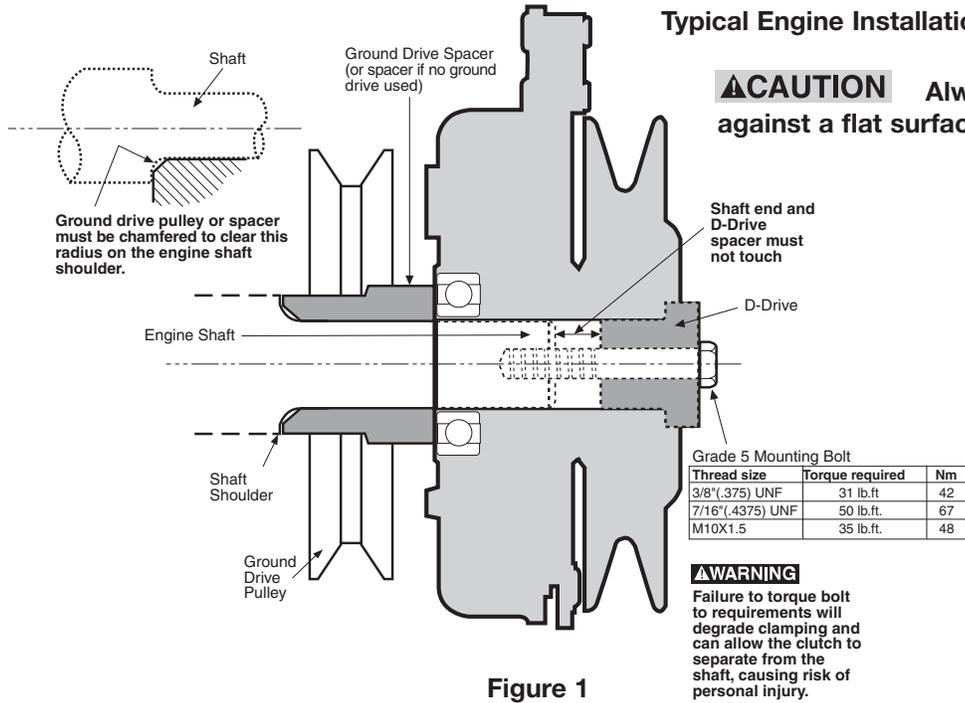


Figure 1

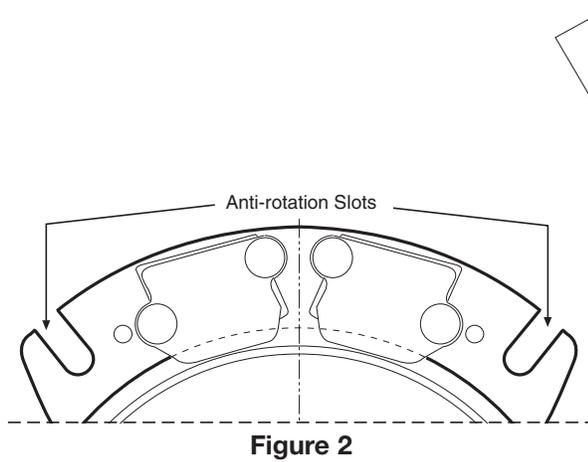


Figure 2

CAUTION If the field is bolted rigidly or if its axial movement is restricted, the bearing in the field assembly will be improperly loaded and may fail. Use only factory installed anti rotation device.

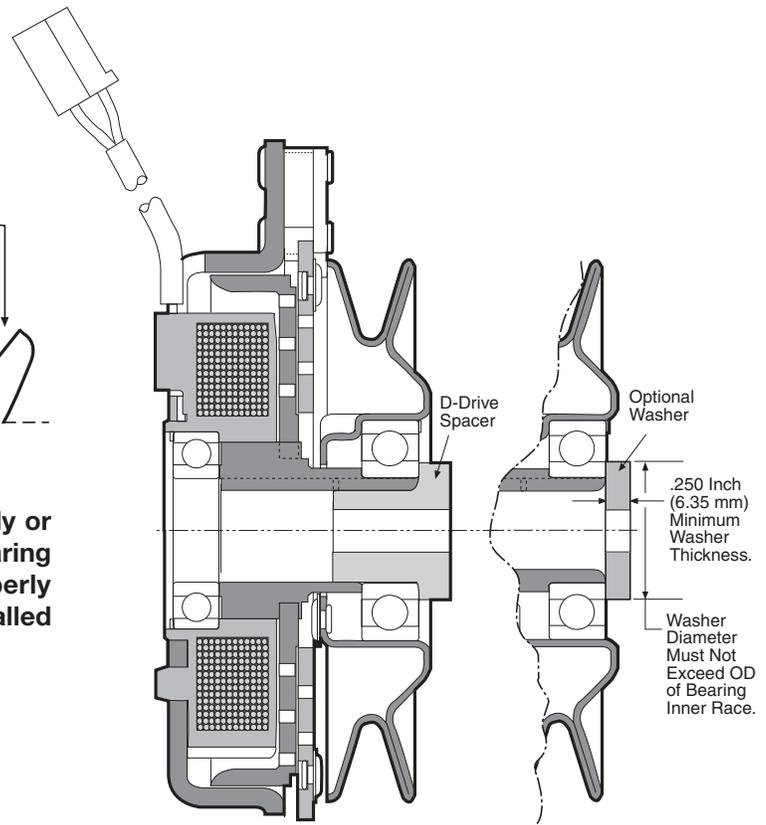


Figure 3



Warner Electric LLC
449 Gardner Street • South Beloit, IL 61080
815-389-3771 • Fax: 815-389-2582
www.warnerelectric.com