

Requirements for a Successful Clutch Application/Installation

AWARNING Failure to follow these instructions may result in product damage, equipment damage, and serious or fatal injury to personnel.

Critical Requirements

The most important requirements for a successful installation are the following:

Anti-rotation device must allow for axial and radial free play. Failure to allow this free play will result in field bearing failure.

Scan to view Installation Video or visit www.warnerptodirect.com/install

Shaft

Ground drive pulley or spacer must be chamfered to clear

this radius on the engine shaft



Thread size	Grade Class	Torque ft.lb.	Torque N-m
3/8-24" UNF	Grade 8	45-49 ft.lb.	61-66 N-m
7/16-20" UNF	Grade 5 or 8	55-60 ft.lb.	75-81 N-m
M 10 X 1.50	Grade 10.9	40-48 ft.lb.	55-65 N-m

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

A WARNING Failure to properly torque bolt can allow the clutch to separate from shaft causing product damage, equipment damage and personnel injury.

Electrical inspection: Voltage should be 12 to 14Vdc with engine at full throttle and PTO engaged if voltage is less than 12Vdc repair electrical circuit, battery, PTO switch, or engine

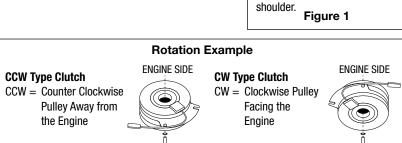
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- Prepare to remove old clutch/brake by referring to the garden tractor manufacturer's repair manual or exploded view.
- Inspect all wiring to clutch/brake for pinched wires, broken connectors / wires, inspect for any corrosion in connectors. Clean or repair as needed.
- 3. Remove clutch/brake and note order in which you remove components. Note orientation of pulley. See Figure 2.
- Inspect engine shaft, spacers, ground drive pulley (if used) for any damage. Engine shaft should not have any burrs, gouges, rust, fretting etc. Spacers and ground drive pulley should have square shoulders and clean bores, all items should have nice smooth fit on motor shaft. Replace as necessary. See Figure 1.
- Remove new clutch/brake from box and verify that it is the correct replacement and in new condition.
- 6. Assemble clutch/brake, spacers and pulley onto

motor shaft in same order as removed. If unknown, please refer to mower manufacturer's installation manual or exploded view of mower model.

7. The clutch/brake product is manufactured to be directional and will only be designed for one direction. See Figure 2.

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Please note: CW & CCW ARE clutch rotation terms - NOT the engine rotation Figure 2

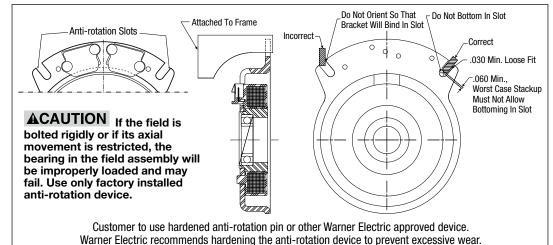


Figure 3

 Clutch/brake should fit into anti-rotation device as shown and allow for free play in a rotational direction.
See Figure 3 for one example of anti-rotation device.

> Note: Failure to allow this free play will result in field bearing failure.

 End of engine shaft and D-drive spacer, if equipped, should NOT touch. See Figure 4. If this occurs, clutch will not have the correct amount of clamp pressure when bolt is installed and torqued to correct value.

Note: If old clutch/brake did not have D-drive spacer please discard and use old washer hardware.

 Secure clutch/brake to shaft, install correct bolt and torque bolt to correct value in **Chart 1.**

Engine

Shaft

Ground

Drive Pulley

ACAUTION

Shoulder

Shaft

Note: Engine shaft should not rotate during this process; shaft should be stalled or use the D-Drive spacer to prevent shaft from rotating during this process.

Shaft end and

D-drive spacer

must not touch

Field

Rotor

D-drive Spacer

Assembly

Field

Figure 4

Assembly

Bearing

Note: DO NOT USE AIR OR ELECTRIC IMPACT DRIVE.

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- 11. Once above has been completed, ensure all wires to clutch/brake are secure and allow for some movement as clutch will oscillate slightly. Secure wires in place as necessary with clamps or wire ties. Do not damage wires during this process.
- 12. Inspection of mower deck, ensure that all fasteners are secure, belts are not damaged, and all pulleys turn freely. Any pulleys that are damaged or bearings that are noisy or have large amount of drag should be replaced.
- 13. Install belt per mower manufacturer's installation manual or exploded view.
- 14. Burnishing of new clutch/brake will be required. This procedure will be performed with load attached. (mower deck, snowblower, pump, etc.) DO NOT ADD ADDITIONAL LOAD (e.g. cutting grass)
 - 1. Move throttle lever to half speed position. Allow engine to warm 60 seconds.

Must have faces parallel to each other

Ground Drive Spacer (or spacer if no ground

Always bottom the clutch against a

flat surface: never against radius.

drive used)

(within .003") and be perpendicular to the bore.

- 2. Engage PTO and run mower for 5 seconds.
- 3. Disengage PTO and wait 15 seconds for clutch to cool.
- 4. Repeat this cycle 3 times
- 5. Move throttle lever to full speed position.
- 6. Repeat engagements in steps 2 and 3 a total of 7 more times.

Note: To maximize deck drive train life, always engage clutch at half throttle in normal operation.

15. If any problems occur with any of the above procedures, please refer to trouble shooting guide on our website at **www.WarnerPTODirect.com**



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Optional Washer

.250 Inch

(6.35 mm)

Minimum

Thickness.

Washer

Washer

Diameter

Must Not

Exceed OD

of Bearing

Inner Race

Armature-

Bearing

A REGAL REXNORD BRAND

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