

Starter Mounting Plate Rotation

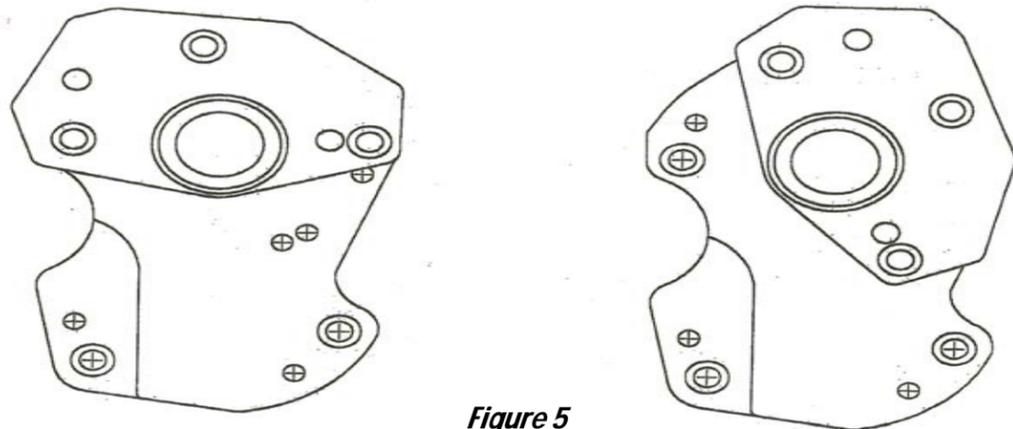
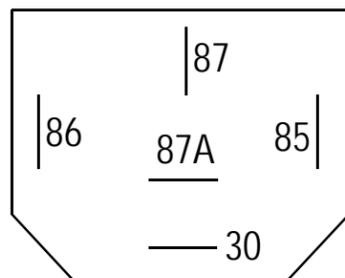


Figure 5

Starter Relay Wiring



Standard Starter Relay

Terminal #30 - To 12V Power w/Fuse

Terminal #85 - To Ground

Terminal #86 - To Starter Button

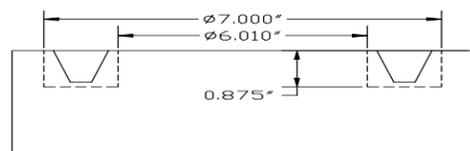
Terminal #87 - To Solenoid Switch Terminal

Terminal #87A - Unused

Figure 6

Mounting of Ring Gear

Primo or BDL w/Tapered Groove and Square Clutch Dogs



Machine tapered groove in backside of pulley to the diameters and depth shown above. Please note that it is recommended that the ring gear adapter be measured before machining to insure a snug fit as some variations may be found. Once the ring gear adapter is set in the machined groove, transfer punch the (6) holes and drill and tap for 1/4"-20 SHCS provided. Use Blue Locktite when attaching the ring gear adapter to the pulley.

Late Model BDL w/ Round Clutch Dogs

RING GEAR INSTALLATION INSTRUCTIONS:
LATE MODEL 3" BDL

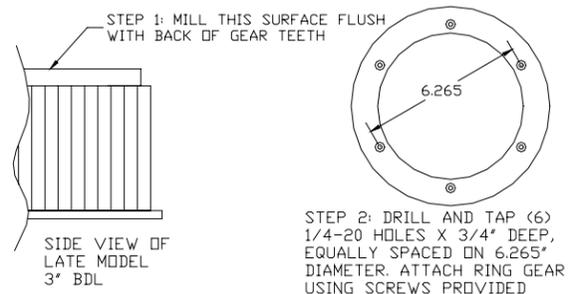


Figure 7

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4-SPEED OPEN PRIMARY ELECTRIC START KIT

MOTOR PLATE INSTALLATION

On the right is an image of a H-D with its primary stripped. To install your new Twister Electric Start Kit, the following tasks must be performed:

- ◆ Drain the primary oil and remove the outer cover.
- ◆ Disconnect and remove the starter, the stock chain primary drive and the inner primary cover (upon completion, your bike should resemble image A).
- ◆ If the kit was ordered with a new electric start oil tank, install it now.
- ◆ If utilizing a Tech clutch arm, install and check for interference (image B).
- ◆ Install new motor plate (if isolator series, then bearing support plate only) using the 5/16"-18 & 3/8"-16 cap screws provided (image C).
- ◆ If Isolator Series, install front rotor cover (image D) and/or great plate.

Note: Tech Cycle Electric Start Kits are designed to fit stock applications. Aftermarket frames and/or engine shafts may necessitate modifications.

- ◆ It is a good idea at this time to test-fit the starter — place the unit into the back of the bearing support plate and check for clearance around the starter, as well as near the electrical connectors. If the starter interferes anywhere, clearancing may be required on the fender, frame, oil tank or transmission. The starter can be rotated and mounted in (4) different positions as shown in Figure #5 on the back page.

CYCLONE DROP-IN CLUTCH INSTALLATION

Image E is a representation of a Cyclone Drop-In Clutch as it comes from the factory.

- ◆ Remove the (4) 5/16"-18 screws securing the retaining plate, and then remove the retaining plate itself.
- ◆ Remove the spring retainers, springs, and spring cups from the pressure plate.
- ◆ Remove all clutch plates & pressure plate from inner hub.
- ◆ Install the inner hub in clutch basket as shown in Figures 1 & 2 below.
- ◆ Install retaining plate and secure 5/16"-18 screws with blue Loctite (fig. 3)

Figure 1

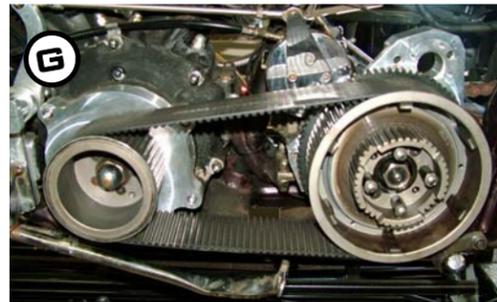
Figure 2

Figure 3



STANDARD BELT DRIVE INSTALLATION

- ◆ If your kit was not supplied with the Ring Gear mounted to the clutch basket, install the ring gear now using the machining instructions found in Figure #7 on the back page.
 - ◆ Install clutch basket and clutch hub onto transmission mainshaft. Install mainshaft nut with seal using blue Loctite and torque to H-D specs. Note that this is a reverse thread nut (image F).
 - ◆ Reinstall clutch plates as per manufacturer's instructions. If installing a Cyclone Drop-In Clutch, start with the thick steel plate than alternate between fiber plates and thin steel plates.
 - ◆ Install pressure plate with adjuster screw as per manufacturer's instructions. If installing a Cyclone Drop-In Clutch see Figure 4 on opposite page for proper installation of pressure plate and springs.
 - ◆ Place the primary belt over the rear pulley, sliding the front pulley through the belt and onto the front mainshaft.
 - ◆ Install washer and nut on front mainshaft. There should be approximately 3/4" - 1" total deflection in the belt. If installing an Isolator Series Kit the transmission may need to be slid toward the rear of the bike.
- Note: Use red Loctite on shaft threads and torque to H-D specifications.
- ◆ Using a long straight edge, check the pulleys' alignment. Any misalignment can be corrected with the supplied shims installed behind front pulley.
 - ◆ Rotate the motor using a socket wrench to check that the belt is tracking straight and not making contact with the motor plate (image G).



CYCLONE BELT DRIVE SYSTEM INSTALLATION

On the right is an image of a Cyclone Clutch as it comes from the factory. However, in order to install your new belt drive, it must be disassembled:

- ◆ Remove the cap screws holding the clutch springs.
- ◆ Remove the spring retainers, springs, and spring cups from the pressure plate.
- ◆ Remove all clutch plates.

Note: Cyclone Belt Drives are designed to fit stock applications. Aftermarket transmissions may cause minor installation difficulties.

- ◆ Install rear pulley/clutch basket assembly onto transmission mainshaft.

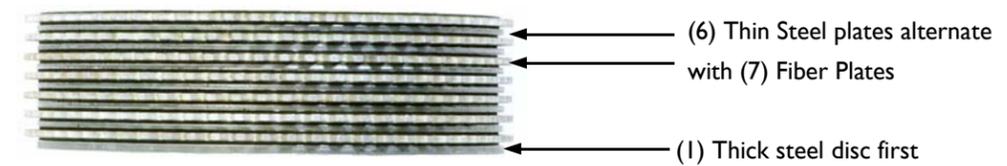
Note: Nut uses **left-hand thread**. Use **red** Loctite on shaft threads and torque nut to H-D specifications.



- ◆ Place the primary belt over the rear pulley, sliding the front pulley through the belt and onto the front mainshaft.
- ◆ Install washer (with counterbore to inside) and nut on front mainshaft.
Note: Use **red** Loctite on shaft threads and torque to H-D specifications.
- ◆ Using a long straight edge, check the pulleys' alignment. Any misalignment can be corrected by installing shims behind front pulley. Call Tech Cycle for Shim Kit.
- ◆ Rotate the motor using a socket wrench to check that the belt is tracking straight and not making contact with the motor plate.

CLUTCH BUILDUP & INSTALLATION

- ◆ Install clutch plates starting with the thickest steel plate and then alternating fiber and steel until all plates have been installed. A fiber plate should be the last disc to go on.



- ◆ The pressure plate must be aligned with the inner clutch hub to work correctly.
- ◆ Locate the small dot on each part — the dots should lie on top of one another when installed.
- ◆ With the dots aligned, place the pressure plate into the clutch basket.
- ◆ If the plate does not sit properly, recheck the dot alignment.

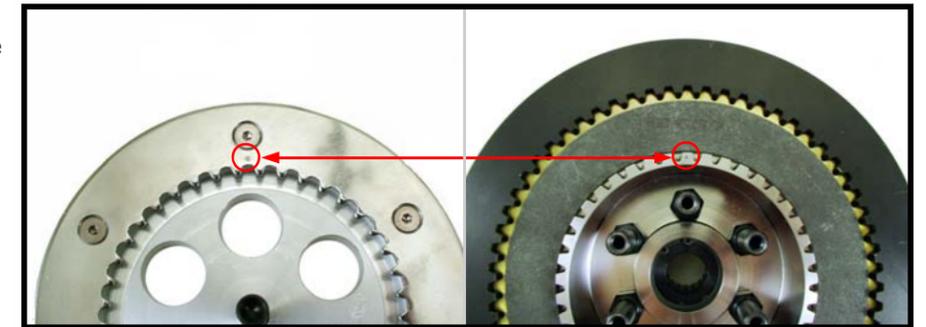


Figure 4

- ◆ Install the spring cups into the pressure plate, followed by the springs, spring retainers, and socket head cap screws, as shown at left.
- ◆ Tighten cap screws until they bottom out.
- ◆ To set the clutch adjuster screw, screw in until the screw is seated against the push rod then back out 1/4 of a turn and lock down the jam nut.

FINAL INSTALLATION

- ◆ Install the starter into the back of the motorplate using the supplied 5/16"-18 cap screws.
- ◆ Bolt the nosecone assembly onto the front of the motorplate using the 1/4"-20 cap screws.
- ◆ Hook up the starter wiring. If utilizing a starter relay, refer to Figure #6 on back page.
- ◆ Install any additional covers and/or belt guards.
- ◆ Your drive should now resemble one of the pictures in Image H.
- ◆ If you are utilizing a Side Belt Guard, install it now using the standoffs and hardware provided.

