

PART LIST

Quantity	Part Number	Part Description
1		Clutch Basket/Hub Assembly
1	TC-13-RED	Clutch Plate Package
1	TC-13-860003	Pressure Plate
6	TC-13-154301	Spring Cup
6	TC-13-154355	Spring Retainer
6	TC-13-154403	Spring (gray)
6	TC-50-154701	1/4-20 x 1 Stainless SHCS
1	TC-13-5ADJSCR	Adjusting Screw
1	TC-50-154601	Adjusting Screw Jam Nut
1	TC-13-860000	Front Pulley
1	TC-50-36368	Front Pulley Nut
1	TC-50-74213554	Front Pulley Washer
1	TC-13-37144-3	3" Primary Belt
1	TC-13-110910	Rear Mainshaft Nut
1	TC-1-5SMP1	Motor Plate
1	TC-11-ONC	Open Nose Cone
1	TC-8-SBGPL	Side Belt Guard
2	TC-50-73882	1/4-20 x 3/4 Flat SHCS
2		1/4-20 x 1-1/4 Stud
2		Aluminum Standoff
3	TC-50-23202SS	1/4-20 x 5/8 Stainless SHCS
4	TC-50-73504SS	5/16-18 x 2-3/4 Stainless SHCS
4	TC-50-23259SS	5/16-18 x 1-1/2 Stainless SHCS
8		10-32 x 5/8 Stainless SHCS

TECH WARRANTY

All items intended to be returned to Tech Cycle Performance Products, Inc. must first receive an RGA number from Tech. The RGA number must be displayed on the exterior of the shipping container.

WARRANTY:

Unconditional ninety (90) day warranty. At Tech's discretion, starters will be repaired or replaced free of charge. Tech is not responsible for shipping and handling charges. Potential warranty items will not be repaired or replaced without first returning the defective part(s) to Tech, along with the original invoice, for inspection.

REFUNDS:

If the unit is returned within ten (10) days of shipment from Tech and has not been altered or defaced in any way, (i.e. painted, plated, damaged, etc...) a refund will be issued for the cost of the product solely. After ten (10) days, a twenty-five (25) percent (%) restocking fee will be imposed. After fifteen (15) days, the purchaser will be issued a merchandise credit only.

Important!!! Do not bench test starter!!!

All starters have been tested by Tech prior to packaging. Bench testing starters improperly will result in damage to the starter gears and gearbox.

Tech Cycle Performance Products, Inc. will not warranty any starter that has been damaged in this manner!!!

TECH CYCLE PERFORMANCE PRODUCTS, INC.
55 HULMEVILLE AVE., PENNDEL, PA 19047
PHONE: (215) 702-1482 FAX: (215) 752-2448 EMAIL: INFO@TECHCYCLE.COM
WWW.TECHCYCLE.COM



PERFORMANCE PRODUCTS, INC.

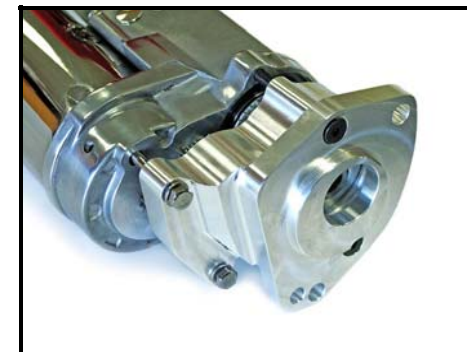
OVERVIEW

This manual will cover the following topics:

- ◆ Starter Extension Shaft Installation
- ◆ Motor Plate & Belt Drive Installation
- ◆ Clutch Buildup & Installation
- ◆ Final Assembly

STARTER EXTENSION SHAFT INSTALLATION

Before your new Tech starter can be used, the extension shaft must first be installed.



1. Remove the (2) screws and (2) bolts that secure the gearbox housing to the starter and then remove the gearbox.



2. Remove the shaft and clutch assembly from the starter.



3. Clamp the clutch and shaft in vise as shown, forcing the shaft to extend out of the clutch assembly.



4. Once the extension shaft has been slid onto the jack shaft, place the copper retaining ring into the groove in the extension shaft. Tap the ring around the groove until it protrudes from the other side of the shaft and then bend the remaining copper ring over, as shown above.

5. Reinstall the clutch assembly in the starter and secure the gearbox housing.

Note: Be sure the steel ball is in the bottom end of the starter jack shaft **before** reinstallation.

LATE MODEL SOFTAIL OPEN PRIMARY ELECTRIC START KIT ASSEMBLY MANUAL

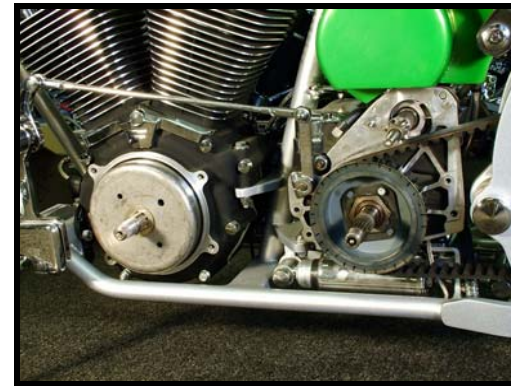
Note: Unless otherwise specified, use **blue Loctite (242)** on all threads in this assembly.

MOTOR PLATE INSTALLATION

On the right is an image of a H-D with its primary stripped. To install your new Cyclone belt drive system, the following tasks must be performed:

- ◆ Drain the primary oil and remove the outer cover.
- ◆ Disconnect and remove the starter, the starter extension shaft, and the inner primary cover.
- ◆ Install new motor plate (if basic kit, then bearing support plate only) using the 5/16-18 cap screws provided.
- ◆ Bolt starter into place using cap screws provided.

Note: Tech Cycle Electric Start Kits are designed to fit stock applications. Aftermarket frames and/or engine shafts may cause minor installation difficulties.



CYCLONE BELT DRIVE INSTALLATION

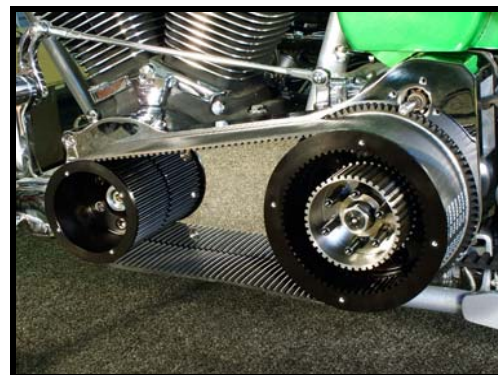
On the right is an image of a Cyclone Clutch as it comes from the factory. However, in order to install your new belt drive, it must be disassembled:

- ◆ 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.

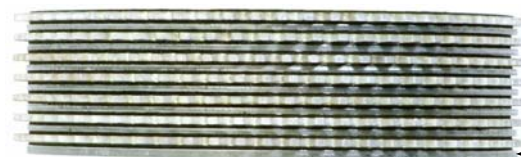
Note: Nut uses **left-hand thread**. Use **red** Loctite on shaft threads and torque nut to H-D specifications.



- ◆ 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 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.

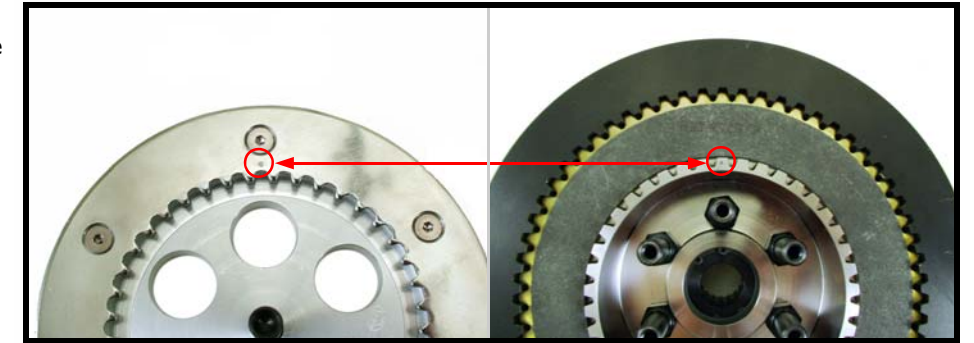
CLUTCH BUILDUP & INSTALLATION

- ◆ 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.



← Thick disc goes in first

- ◆ 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.



- ◆ 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.

The final step of clutch installation is the adjustment of the clutch itself.

- ◆ Tighten adjuster screw until it lightly seats on the clutch pushrod.
- ◆ Back screw out 1/2 turn and lock in place using the jam nut provided, using **red** loctite on threads.

FINAL ASSEMBLY

Note: The front and rear pulley covers are optional accessories for this kit.

- ◆ Screw the 1/4-20 studs into the aluminum standoffs until they bottom out.
- ◆ Install the standoffs into the motor plate.
- ◆ Install the pulley covers using the 10-32 cap screws.
- ◆ Install the nosecone using the 1/4-20 x 5/8 cap screws.
- ◆ Install the side belt guard using the 1/4-20 x 3/4 flat cap screws.

INSTALLATION COMPLETE!

