



Story by Tim Wagner - Photos by Tim Wagner

Everyone wants their bike to stand out in a crowd. With some of the newer Harley-Davidson® models, that can be somewhat difficult because they are so new that parts are still being developed for them. Tech Cycle can make standing out a little easier to accomplish with their new Open Belt Drive System for '07 and newer Harley-Davidson Softails and Dynas. The Cyclone line of Open Belt Drives are made using only the highest quality materials and work with high horsepower engines. The Cyclone comes standard in polished aluminum but is also sold in chrome upon request. We installed one of their 2" Cyclone Belt Drives on our shop mule '07 Softail Standard. We also needed two specialty tools that we got from George's Garage. A mainshaft sprocket wrench and a mainshaft bearing race tool.



Here is the factory primary assembly on our shop '07 Softail Standard.



And here is the brand spanking new Open Primary Belt Drive System from Tech Cycle.



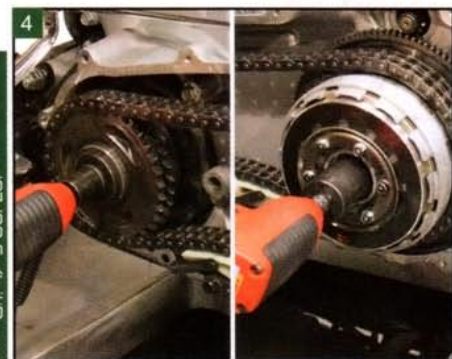
1 Start by draining the primary fluid and loosening the outer primary bolts.



2 Once the primary fluid has been drained, carefully remove the outer primary cover.



3 Use snap ring pliers to remove the retaining clip and remove the clutch adjustment plate.



4 Now use an impact wrench to remove the front pulley nut and the clutch hub nut.



5 Remove the automatic primary chain adjuster mounting bolts and adjuster.



6 Then remove the primary chain assembly from the inner primary.



7 Loosen and remove the inner primary mounting bolts, and the two starter bolts from the other side of the bike.



8 Now remove the inner primary from the engine and transmission cases.



9 Carefully remove the stator rotor. This rotor needs to have the compensator assembly machined to fit.



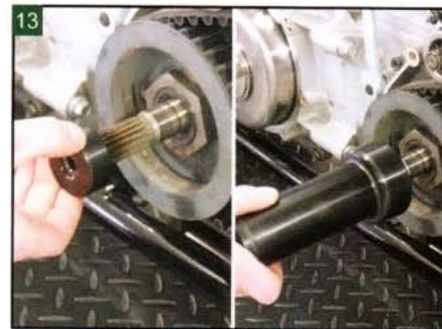
10 This is the George's Garage specialty tool used to remove the race from the transmission mainshaft.



11 Here is the George's Garage specialty tool in action.



12 This is the second George's Garage tool we used; this tool removes the transmission mainshaft lock nut.



13 The first piece protects the mainshaft threads while the deep socket removes the mainshaft lock nut.



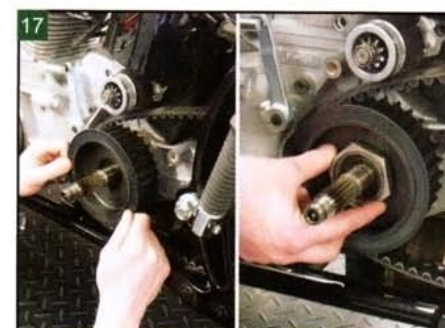
14 Remove the lock nut. NOTE: On the '07 Softail this nut has left hand threads as opposed to older models.



15 Then remove the factory belt sprocket from the transmission mainshaft.



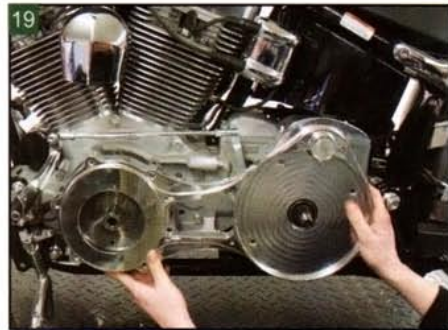
16 Here is the new belt sprocket provided by Tech Cycles.



17 Now install the new belt sprocket. Place some red Threadlocker onto the mainshaft lock nut before installing.



18 Use an impact wrench to install the locknut and then install the locknut lock plate and tighten the bolts.



Now place the Tech Cycle backside plate loosely on to the engine and transmission cases.



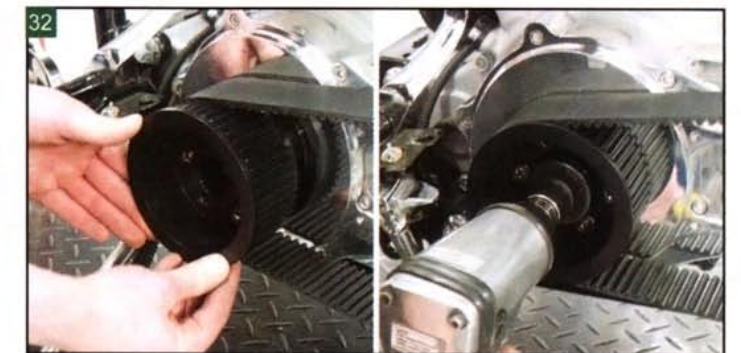
Start the backside plate mounting bolts, but do not tighten them now.



Install the starter into the backside plate and tighten the two starter mounting bolts.



Line up the two dots and slide the pressure plate into the clutch basket. Install the springs, spring retainers, and cap screws into the pressure plate.



Place the primary belt over the rear pulley and slide the front pulley through the belt and onto the mainshaft. Secure the front pulley with the factory bolt.



With the starter in place, the backside plate hardware can be tightened.



To install the clutch hub assembly, first loosen and remove the cap screws, spring retainers, and springs.



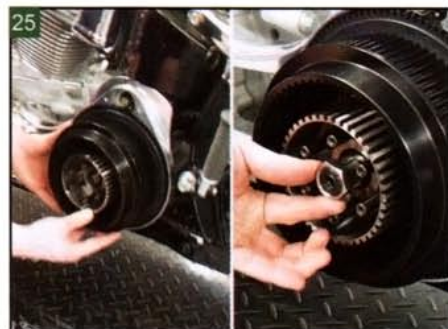
Then remove the pressure plate, spring cups, and clutch plates from the clutch hub.



Install the nose piece covering the starter.



Collapse the clutch cable adjuster and adjust the clutch by turning the set screw until it touches the transmission push rod, then back off 1/2 turn and set the locking nut.



Install the new clutch plate, and apply red Threadlocker to the retaining nut and start the threads.



Use an impact wrench to install the clutch hub retaining nut.



Install the clutch plates starting with the thickest metal one, then alternating fiber and steel plates.



Adjust the clutch cable accordingly.



The last plate to be installed is a fiber friction plate.



This is the dot on the clutch basket.

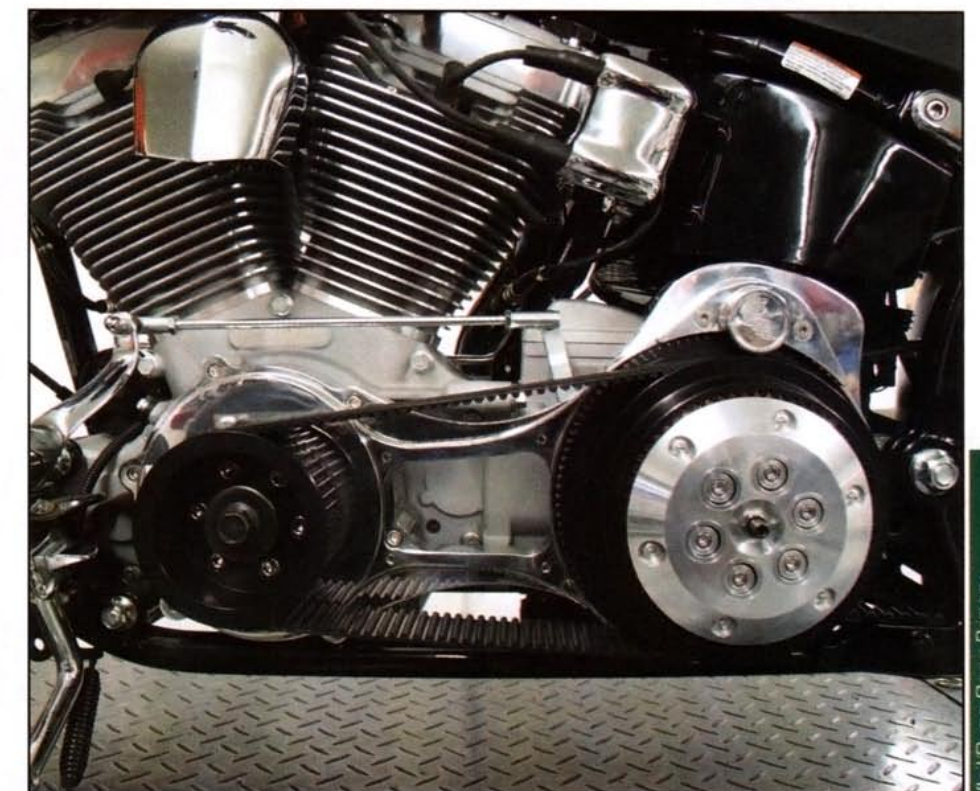


This is the dot on the inside of the pressure plate.

**Tech Cycle**  
Cyclone Belt Drive System  
Softail 2" - Part # TC-13-07CS2  
215.702.TECH (8324)  
www.techcycle.com

**Georges Garage**  
Mainshaft Sprocket Wrench  
Part #620040  
Mainshaft Bearing Race Tool  
Part #620060  
909.843.7043  
www.georges-garage.com

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Finally the open primary belt drive system is on our '07 Softail. This primary is both attractive and functional, two of our favorite words around here.