

INSTALLATION INSTRUCTIONS
17-289 BIG WHEEL KIT
APPLICATION: 1986-UP 5-SPEED SOFTTAILS

You will need to have access to a good set of wrenches, sockets, a soft mallet, and an impact wrench with a 3/4", 1 1/2" and 1 3/16" sockets to install this kit.

1. Disconnect and remove battery.
2. Safely rise bike up until you have 6" minimum clearance under the rear wheel. Unbolt the 6 bolts retaining the rear fender, disconnect the wires for the lighting from the wire harness, and lift the rear fender off the bike.
3. Use a 1/2" socket to remove lower beltguard.
4. Loosen rear axle adjusters. Slide rear wheel forward in frame to get belt loose on the pulley. Remove the axle from the bike, supporting the rear wheel. Be sure to support the caliper on the swing arm to keep it from dangling on the brake hose. Remove the rear wheel.
5. Remove the two bolts retaining upper belt guard with a 1/2" sockets. Remove upper belt guard.
6. Remove the rear exhaust pipe.
7. Remove the oil tank.
8. Use a 3/16" Allen wrench to remove the drain plug on the bottom of the outer primary.
9. Remove outer primary.
10. Remove the retaining ring from the clutch adjuster. Remove the adjuster.
11. Bend down the lock tabs on the chain adjuster nuts with a screwdriver. Remove the two bolts with a 7/16" socket, and the one nut with a 9/16" socket holding on the primary chain adjuster. Remove the adjuster.
12. With an impact wrench fitted with 1 3/16" socket, remove the clutch hub nut. Pay heed-this nut is a *left hand thread*. It is removed with a clockwise motion (backward from normal hardware). Also use the impact wrench with a 1 1/2" socket to remove the compensator nut (the one on the motor). This one is a conventional, right hand thread. You must use an impact wrench on these nuts; a normal wrench or socket will damage the nuts without loosening them.
13. Slide the primary chain drive straight off. Remove the inner compensator sleeve and the sprocket shaft shim, if there is one.
14. Remove the cotter pin on the starter gear, and use a 7/16" socket to remove the bolt retaining the starter shaft. Remove the starter shaft.
15. Use a 1/4" Allen wrench to remove the two bolts retaining the starter to the inner primary.
16. On the left side of the bike, bend down the six lock washers on the six retaining bolts. Remove the six bolts in side the inner primary and two bolts at the front of the inner primary cover where it bolts to the engine with a 1/2" socket. Remove the inner primary.
17. Unbolt the shifter linkage from the top of the gear selector on the transmission.

18. Use the impact wrench and a $\frac{3}{4}$ " socket to remove the front shock mount bolts. Drop the shocks down in front to gain access to the underside of the transmission. Detach the rear brake hose from transmission.
19. Use $\frac{7}{32}$ " short head Allen wrench and a $\frac{9}{16}$ " wrench to remove the four bolts holding the transmission sub plate to the frame. The fifth bolt is on the right side of the bike, and is easily accessible with a $\frac{9}{16}$ " wrench from the left side. Use a $\frac{5}{8}$ " socket to remove the four nuts holding the transmission to the sub plate. Lift up the transmission slightly and slide the old sub plate out of the bike.
20. Cut a notch at least $\frac{1}{4}$ " long in the "L" shaped bracket that holds the fifth bolt. Trim the stud that goes through this bracket about $\frac{1}{8}$ " to prevent it from hitting the shock absorber.
21. Install the new transmission sub plate supplied with the kit. Drop the transmission into the appropriate holes, but do not torque anything down yet.
22. Install the alternator ring supplied with the kit. Install one of the two O-rings supplied on each side of the alternator ring. Slip the inner primary onto the ring and install one bolt temporarily into the upper front engine mount to hold the inner primary in place.
23. Slide the transmission toward the inner primary until everything is flush and even. Remove the inner primary and torque down the transmission sub plate bolts then the transmission nuts and fifth bolt. Reinstall shock absorber bolts and torque to 130 ft/lbs.
24. Slide the belt over the front pulley and install the inner primary.
25. Put the small ring in the kit onto the engine sprocket shaft, then the factory spacer (if there is one) and the inner compensator sleeve.
26. Reinstall the starter motor and starter shaft. Use a fresh cotter pin on the starter shaft.
27. Slide the primary drive back onto the shafts and reinstall nuts with the impact. Again, remember the clutch hub nut is a left hand thread. The compensator nut is torqued to 150-165 ft/lbs and the clutch nut to 80 ft/lbs. Re-install the chain tensioner and set the primary chain tension per your service manual ($\frac{5}{8}$ " - $\frac{7}{8}$ " free play). Reinstall the outer cover with fresh gasket. Use a fresh lock tab washers on the adjuster nuts. Refill your primary.
28. Reinstall the oil tank, inner splashguard, and exhaust system.
29. Remove the pulley from your rear wheel and install the large ring from the kit between the wheel and pulley. Reinstall rear wheel assembly with rear brake caliper and rear axle. Adjust the rear belt tension.
30. At this point you can measure and see how much larger your rear tire can be. Install the new tire and/or wheel. Readjust the belt, and replace the rear fender. Replace the battery.
31. Anytime you perform a project this involved, it is a good idea to double check your work to make sure everything is torqued down. Also make sure you have adequate clearance for your rear fender.

Note: The idea of this kit is to move your belt over $\frac{1}{4}$ ". This means a $\frac{1}{2}$ " wider tire will fit... anything larger is up to the installer. Every Softail varies, so do your own measuring. Also remember your fender area is only so wide and a stock wheel properly accepts maybe one size larger tire.