Big Twin Belt-Drive SuperClutch Installation Instructions:

CAUTION: You've just purchased the best clutch money can buy. Please take the time to read these instructions completely and carefully before you start. We at **BANDIT** recommend that a qualified mechanic does the installation of this product. **Since open primaries present an obvious danger to riders, we at BANDIT recommend that a protective shield be installed over the belt and pulleys to prevent serious injury.**

1. Disassembly of your new clutch: Lay the clutch with the pressure plate down on a clean, sturdy surface and remove the retaining ring holding the bearing hub in the bearing. (The smaller of the two.) Turn the clutch over, the pressure plate up, and remove the (6) spring retaining nuts. **Caution! The springs may be under pressure.** Lift the pressure plate, spring cups, springs, and spring collars off as an assembly and set aside. Remove the (6) socket head cap screws holding the splined center hub to the bearing hub. Lift the center hub and the clutch pack from the pulley. Remove the bearing hub.

2. For **pre-'90** models with a tapered main shaft: Check the bearing hub for proper fit on the transmission input shaft, and for clearance with the motor plate. Clean the input shaft and remove any burrs or high spots on the taper. Lap the bearing hub to the shaft with valve grinding compound. What you want is a light gray pattern on the shaft and in the hub. This insures the hub and shaft fit each other well with **no** high spots. Now clean everything again. Lapping the hub to the shaft is not absolutely necessary for bikes equipped with street tires, but we recommend it for all high performance applications. **Lapping is a must for any bike that uses a drag slick!**

2a. For **'90 and later** models with a splined main shaft: Check the bearing hub for proper fit on the transmission input shaft and for clearance with the motor plate.

Note: The clutch bearing is pre-installed. If the bearing must be removed, reinstall as follows: **DO NOT INSTALL THE BEARING DRY!** Coat the outside diameter of the bearing and the bearing bore with silicone grease or grease with molybdenum disulfide. Support the pulley at the base of the bearing bore, **not** at the outer edge of the shell, and press the bearing in with an arbor press and a proper size driver. This is a light press fit. Install the large snap ring with the tapered side facing the transmission.

3. Assembly and installation: Coat the inside diameter of the bearing with silicone grease or grease with molybdenum disulfide. With the pulley lying on its back, slip the bearing hub into the bearing. Remove the clutch pack from the splined center hub and place the center hub on the bearing hub. Clean, and apply Loctite to the (6) 3/8 -16 x 3/4" socket head cap screws provided, and secure the center hub to the bearing hub. Torque to 35 ft./lbs. Turn the clutch over and install the retaining ring with the tapered surface facing the transmission.

4. Test installation of the clutch assembly on the main shaft: On models with a tapered main

shaft, be sure the key is in place. Make sure the key **does not** bottom in the bearing hub keyway and prevent the hub from seating on the taper properly. The **'84 -'89** key is taller than the **pre-'84** key and the corners may require chamfering to clear the radius in our keyway. On models with a splined main shaft, align the spline and slide the clutch assembly into position.

5. Mount the front pulley and check the belt alignment. Adjust by shimming the front pulley as needed. Shims of various sizes are available from any Harley Davidson dealer.

6. Final installation: Remove the front & rear pulleys. Apply a grease with molybdenum disulfide to the mainshaft splines. **Do not** use anti-seize or never-seize. Re-install with the belt wrapped around both pulleys and gently push the unit into place. Install the transmission main shaft nut. On **pre -'90** tapered mainshaft models, use the hub wrench (PN 195001) to hold the splined center hub, then lubricate and torque the mainshaft nut to a minimum of 140 ft./lbs. We have successfully torqued the mainshaft nut on high output bikes to over 250 ft/lbs. On **'90-up** models with a splined main shaft apply loctite to the threads and torque to 80 ft/lbs. This can usually be achieved with an impact wrench. A spacer is provided for use with the **'84 -'89** wet clutch shaft. Install a **pre '84** pushrod seal in the mainshaft nut.

7. Installing the clutch pack: Inspect the drive slots in the friction plates, deburr as necessary and remove any overlapping lining. The plates must move freely on the drive keys for the clutch to release freely. Clean the rust preventive from all of the steel plates with a brake cleaner or similar product. Place the .120" thick steel plate over the splined hub first. Next, install a .047" thick steel plate onto the hub followed by a friction plate and continue until nine friction plates and ten steels are installed with the last plate being a steel plate. Hold the plates into the assembly with firm finger pressure and measure the distance from the last plate to the end of the splined center hub. This should be a minimum of 0.180" and a maximum of 0.300". Adjust this clearance by adding steel plates between the .120" thick plate and first friction plate. Inspect periodically and adjust this clearance dimension as the lining wears.

8. Installing the pressure plate: Align the timing mark on the pressure plate with the timing mark on the splined hub and install. Insert the spring cups into the pressure plate. Insert the springs into the cups, followed by the spring collars. Install the retaining nuts and tighten until the spring collars are flush with the pressure plate. Adjust the free play with the center adjusting screw and tighten the jam nut. To increase the spring pressure for high output engines, the spring collars may be set as much as .250" below the pressure plate face without coil-bind.

Suggestions and Recommendations

Use a dial indicator to true the pressure plate. Adjust the spring retaining nuts until the pressure plate run out is less than .010" when the clutch is released. The more true the pressure plate runs, the less total release travel will be required. On **pre '84** models, the clutch pushrod and the adjusting screw mating surfaces must be flat and true. Check these surfaces for wear if the pressure plate will **not** run true.
Be sure that you have at least .060" travel on the pressure plate. On **4-speed** bikes, adjust the throw out lever as far forward as possible without hitting the transmission top. This will increase the pressure plate travel approximately .010". If you cannot achieve sufficient free play and sufficient pressure plate travel, the throw out lever can be shortened to increase the travel.

Shortening the lever by 1" increases the travel by .030". If your clutch does not release freely at .060" travel you have some warped drive plates. Make sure that there is enough free play in your release cable. We recommend a minimum of 1/8" free play measured at the cable, however 3/16" free play is ideal.

This clutch uses a great deal less spring pressure than other clutches for the big twin and what might seem like enough free play could be holding the pressure plate slightly released. If adequate pressure plate travel can not be created on **'90 and '91** bikes, update the release mechanism with **'87** parts as per H-D service bulletin using **PN 25452-87A** (inner ramp) and **25453-87** (outer ramp).

The clutch can be removed as a unit without removing the splined hub but **DO NOT USE THE 1/4" STUDS TO PULL THE ASSEMBLY FROM THE SHAFT!** On **pre'90** tapered shaft transmissions, remove three of the 3/8-16 socket head cap screws and use those holes to pull the hub. When installing puller bolts into those holes be careful not to allow the bolts to contact the bearing seal which lies behind those holes. If the seal is damaged, lubricant will leak out onto the friction plates, the bearing will run dry and will fail prematurely. Inspect the mainshaft nut each time it is removed and replace it when the threads start to show evidence of damage. If the threads are **not** perfect the nut will **not** hold proper torque and will **not** hold the hub securely to the shaft. We recommend replacing the nut after it has been torqued 6 times.

Springs	**Light PN154406(short gold)(1.75")**	**Standard PN154401(long gold)(1.875")**	**Medium PN154402(red)**	**Heavy Duty PN154403(gray)**
Minimum Pressure (lbs)	144	210	258	276
Maximum Pressure (lbs)	240	300	372	507

Click here to go to Home Page