



## 3" ELECTRIC START DRIVES FOR DYNA MODELS (Kit Number: EVO-12S)

Be sure to read the [Warranty](#), [Introduction](#), [belt tracking](#) and starter [gear problems](#), [alignment procedure](#) and disconnect battery.

1. Remove inner primary.

2. Remove exhaust to allow access to the swing arm pivot bolt. (Fig.1)



**Fig.1 Remove exhaust to allow access to the swing arm pivot bolt**

3. Remove castle nut on pivot bolt to allow pivot bolt to be removed. (Fig. 2)



**Fig. 2 Remove castle nut on drive side to allow pivot bolt to be removed**

4. Push pivot shaft through by using a blunt drift, as you follow the shaft through with drift, swing arm will stay in place. (Fig. 3)



**Fig. 3 Push shaft through by using a blunt drift, so that the swing arm stays intact**

5. Install special seal, supplied with kit, and replace pivot bolt with head on drive side. (Fig. 4)



**Fig. 4 Use special seal supplied with kit, countersunk side facing head of pivot bolt. Replace shaft with bolt on drive side of bike. Install spacer supplied using stock o-ring, and install castle nut.**

6. Install motor plate in place on stock inner primary. Refer to alignment procedure. (Fig. 5)



**Fig. 5 Install motor plate and check for proper fit**

7. Remove stock starter pinion gear and complete starter gear assembly from starter. Bolt starter into back side of motor plate.

8. Install front and rear pulleys and check for proper fit. At this time you should determine if the front pulley will need shimming or not depending on how the pulleys align with each other. Remove pulleys and make any modifications necessary.

9. Re-install belt drive placing front pulley, rear pulley and belt on at the same time. (Fig. 6)

Apply Loctite® and install and tighten to HD specifications, mainshaft hub nut. We supply a special hub nut with seal for all spline shaft models 1990 and later.



**Fig. 6 Install belt drive, both pulleys and belt at the same time.**

Engine shaft spline should not protrude from pulley. Be sure to red Loctite® front engine nut and torque to HD specifications. (Electric impact is preferred). (Fig. 7)



**Fig. 7 When using any of the BDL inserts with special nut, please note that the nut is counter-bored to cover the splines should they protrude.  
COVERING THE SPLINE IS VERY IMPORTANT**

9a. For spline mainshaft models, 1990-up, apply red Loctite® into the back side of our hub inside of the spline and let the Loctite® flow onto the mainshaft when sliding on the rear basket assembly. This procedure is necessary so that the hub and mainshaft will fit together properly and will not let the mainshaft spin inside of our hub. (Fig. 8)



**Fig. 8 Use Loctite® on spline hubs to ensure proper fit on mainshaft.**

**FAILURE TO LOCTITE® THE SPLINED HUB PROPERLY WILL CAUSE THE SPLINES TO WASH OUT**

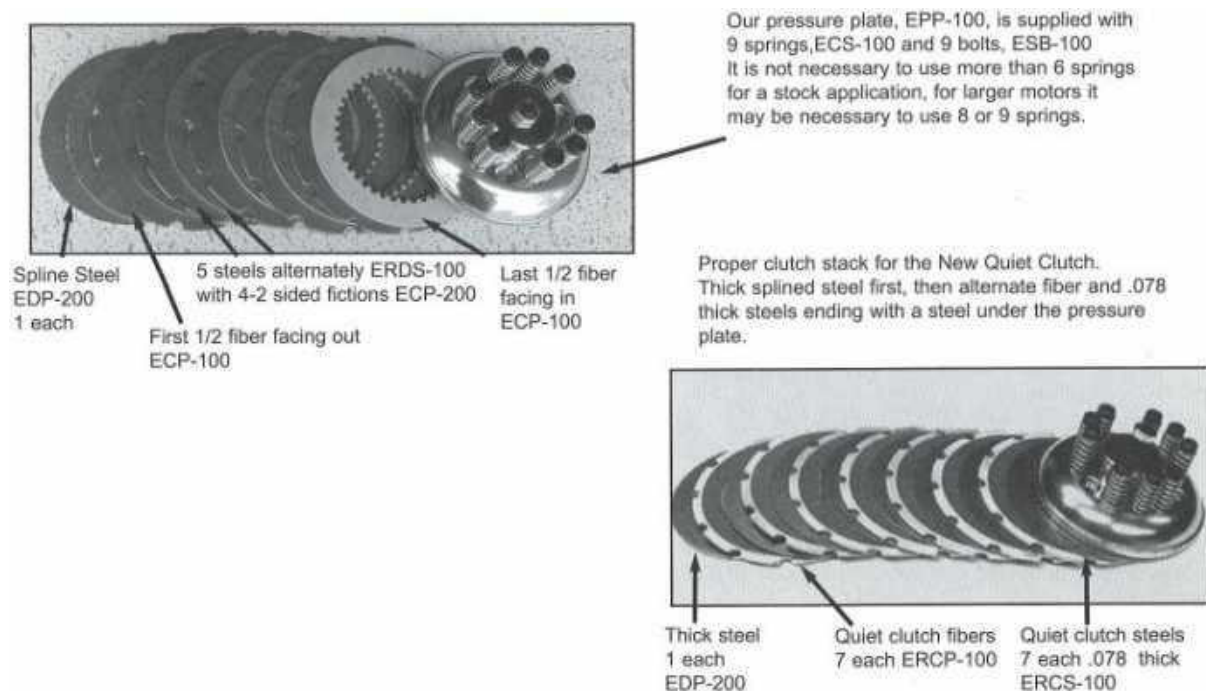
10. Rotate the motor using a socket wrench, the belt should track straight and away from the motor plate but not so that it may come in contact with the outside pulley flanges. Be sure that the belt drive is not making contact with the motor plate.

11. Grease starter shaft and install our starter pinion gear onto starter shaft, apply red Loctite® to starter bolt and tighten to HD specifications. (We supply 2 starter bolts with the kit, one is a 1/4-20 x 2-1/2" for 1990-93 starters the other is a 10-32 x 2-1/2" for 1994 and up starters. Be sure not to tighten starter bolt too tight as this may interfere with proper engagement of the starter pinion gear.) (Fig. 9)



**Fig. 9 Install starter pinion, supplied with kit. There are 2 bolts supplied, one for 1990-93 and one for 1994-up.**

12. Install clutch pack, refer to schematic below) spline steel first, 1/2 sided friction plate with fiber facing out, then alternate steel and two sided fiber plates ending with the other 1/2 sided friction plate with fiber facing in. If your kit contains the new Quiet clutch then refer to the lower diagram. (Fig. 10)



**Fig. 10**

13. Install pressure plate, springs and shoulder bolts. To install shoulder bolts apply red Loctite® to a bolt and install it one turn, go on to the next bolt with same procedure until all 6 bolts are in place, then tighten them all the way down until they bottom out. There is no adjustment to the spring pressure, this is all pre-determined with the length of the shoulder bolt and exact dimensions of our pressure plate.

14. Install the 4 hexagon extensions into motor plate and mount side guard with the 4 buttonhead allen bolts.

14. Clutch screw adjustment. should be approximately 1/4 turn loose from lightly seated. (Note when clutch is hot the adjustment screw should not be seated). Tighten rod nut when adjustment is complete. (We supply a clutch adjusting rod and nut for all models 1990-up only). (Fig. 11)



**Fig. 11 Install clutch adjusting rod supplied with kit 1986-up. and adjust clutch.**