

V-Twin Mfg.
BDL Belt Drive Kit 8mm
Includes a polished pressure plate, Kevlar clutch & sealed inner primary bearing
VT No. 20-0605

This is a custom application and rider safety depends on proper installation. This product should only be installed by a knowledgeable and trained motorcycle technician. V-Twin Mfg. accepts no responsibility for improper installation.

Installation Instructions:

1. Remove springs, shoulder bolts and clutch plates from clutch basket. This makes installation easier.
2. Install front and rear pulleys and check for clearance. 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 if necessary. (Fig. 1)

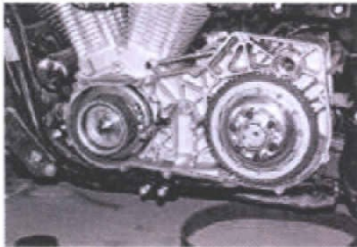


Fig. 1 Install pulleys and check for fit; some clearance may be necessary. Also check for alignment to determine if shimming may be necessary behind front pulley.

Grind bottom of aluminum fork (.030") clearance between belt and fork. Steel forks do not need this modification.

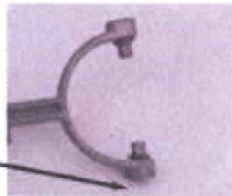


Fig. 2

(On early FXR, you may have to grind bottom of starter fork, aluminum fork only.) (Fig. 2)

Note: You must remove main shaft bearing brace for this installation.

3. Grease the support bearing & install seal, included with kit or remove inner primary and install sealed bearing that is also supplied with kit. (Fig. 3 & 4)

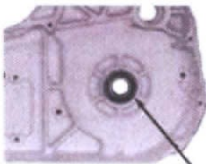


Fig. 3

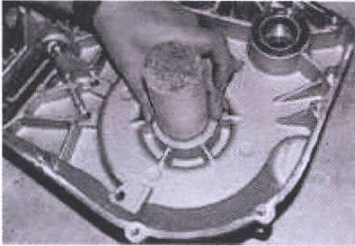
Grease support bearing and install seal



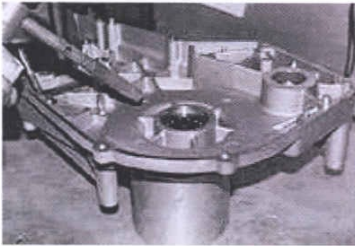
Fig. 4 BDL includes a sealed primary bearing to replace stock support bearing.



If you are using the stock bearing, then install enclosed seal, flat side facing in.



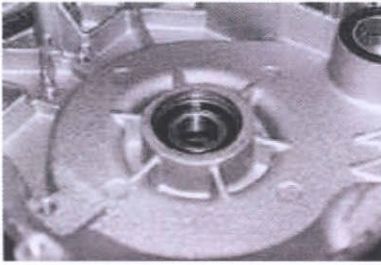
Grease bearing and install seal. It may be easier to use a solid bar to press seal into place. It may be necessary to re-pack bearing and replace seal during yearly maintenance.



If you are going to remove the stock bearing and use the sealed bearing, then remove primary, remove retaining rings and heat area around bearing for removal.



Press stock bearing out of the primary.



Freeze sealed bearing and re-heat area around bearing housing, the bearing should fall into place without a problem. Replace retaining ring.

4. Make sure motor & transmission shafts are square with each other. (Refer to section on Alignment procedure)
Clean mainshaft spline area so that there is no oil residue to interfere with the loctite bonding.

5. 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 the rear basket assembly on. (Fig. 5)



Fig. 5 Apply red loctite to spline hub before installing it onto mainshaft. This is for 1990-up models only.

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. (This procedure is not necessary on taper shaft models 1986-89)

Failure to Loctite the splined hub properly will cause the splines to wash out.

6. If front pulley shimming was necessary be sure that the shims are in place, now install rear pulley, belt and front pulley at the same time. (Fig. 6)

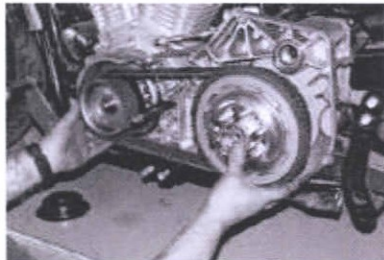


Fig. 6 Install both pulleys and belt at the same time.

Engine shaft spline should not protrude from pulley. (Fig. 7)

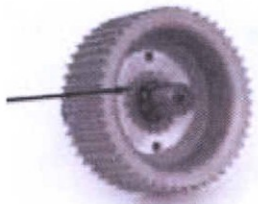


Fig. 7 If engine shaft spline protrudes as pictured, a washer is needed to compensate for protrusion of spline before washer and nut is installed.

7. Rotate the motor by hand using a socket wrench, the belt should track straight and away from motor but not off of the front pulley. Be sure to red loctite front engine nut and torque to HD specifications. (Electric impact is preferred). (Fig. 8)

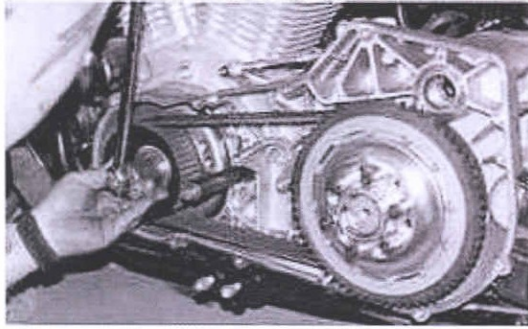


Fig. 8

8. Apply loctite to 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.

9. Install sealed mainshaft nut supplied with 1990-up kits only. For 1986-89 you must use stock hub nut and the seal kit enclosed with kit. For Shovelhead you must use the stock hub nut with seal. Apply loctite to nut before installation. (Fig. 9)

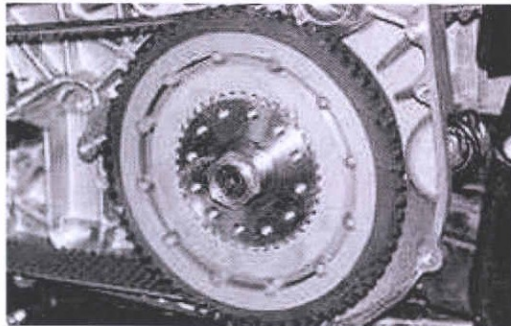


Fig. 9 Install sealed mainshaft nut supplied with 1990-up kits only. For 1986-89 you must use stock hub nut and the seal kit enclosed with kit. For Shovelhead you must use the stock hub nut with seal. Apply loctite to nut before installation.

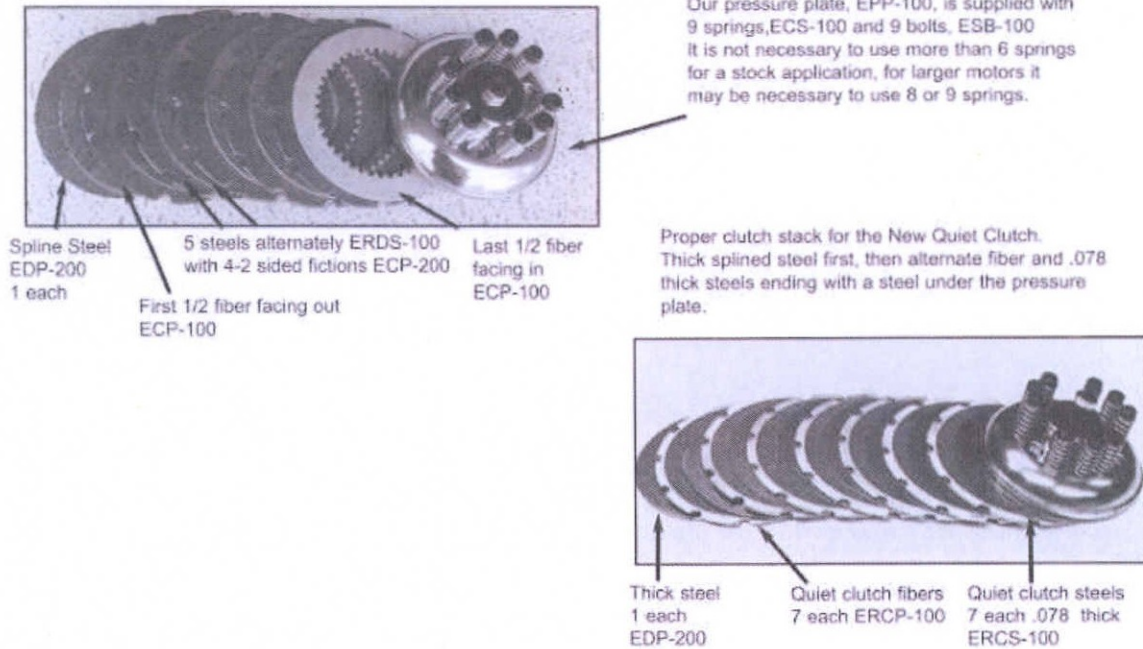
Pictured here is the seal kit installation which is supplied with all 1986-89 belt drives only. A sealed hub nut is supplied with all kits 1990- up. A stock HD hub nut with seal must be used with all 1983 and earlier kits.



10. 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 below. 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. (Fig. 10)



11. 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. 11a)

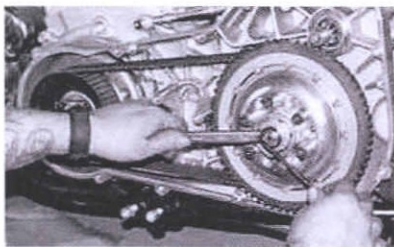


Fig.11 Install clutch adjusting rod supplied with kit 1986-up. and adjust clutch.

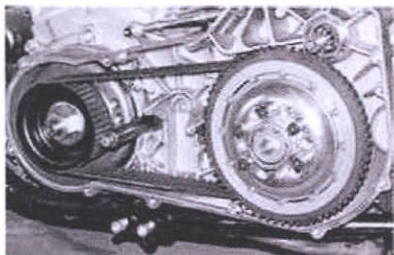


Fig. 11a Finished installation. Be sure to check clearance of outer cover to drive.

12. Install outer primary cover with gasket and check for clearance between drive and cover. Tighten all bolts to HD specifications. (Fig. 12)



Fig. 12 Install outer primary cover with gasket

Note: We do not supply a sealed hub nut or adjusting screw and nut on 1986-89 models. You must use the stock adjusting screw and nut and stock hub nut with ESK-1 seal kit provided in the kit.