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.

Transmission Assembly Instructions:
The transmission case is designed to adapt the EVO 5-speed transmission to non-rubber mount frames with chain final drive.

The following modifications are necessary for installation:
HD has made their transmission in 4 versions:
  Early: up to 1984 dry clutch. chain drive.
  Mid: 1985 only, wet clutch. chain drive.
  Late A: 1986 up rubber mount.
  Late B: 1986 up softtail.

The early and mid model transmissions can be installed in the case with only the modifications listed in steps 1, 2 & 3. Late transmissions are identical internally to the early models except the parts listed below which must be replaced with their corresponding early parts.

Mainshaft dry clutch: 35042-79
  wet clutch: 35042-84
Clutch push rod right end dry clutch only 37089-79
Clutch push rod center dry clutch 37088-79
Clutch push rod center wet clutch 37088-84
Clutch push rod right dry clutch only 37090-79
Fifth gear 35029-79
Fifth gear bearing 8978
Fifth gear bearing retaining ring 11057
Sprocket spacer 33334-79
Sprocket 22 tooth HD 33336-83

1. The needle bearing end of the countershaft must be shortened .250". Because the shaft is case hardened, this must be done by grinding.
2. Shorten the shifter fork shaft 1/8".
3. Relieve side access cover to correspond with starter motor relief on the transmission case.
4. Install layshaft needle bearing with the closed end flush with the surface.
5. Loctite studs and fifth stud bolts in place.
6. Assemble the transmission in the normal way as specified in the HD service manual.
7. Install the drive sprocket with the convex side out. (Note: some inner primary covers interfere with the sprocket nut. Before installing the transmission pre-assemble the transmission and inner cover to check. Also make certain that there is adequate clearance for the chain that you plan to use.)
8. Check finger spool to primary pilot bearing boss clearance relieve as necessary.
9. Install metric pilot bearing and sleeve in the inner primary cover.

NOTE: Consult your HD parts manual for the shift linkage and clutch release assembly most suitable for your installation.

NOTE: We can supply the following accessories:
NOTE: If you wish to run a belt final drive you must still use a chain drive mainshaft VT part #17-9898 or OEM part # 35042-84 and the early drive gear VT part #17-0577.

To fabricate a pulley you must:
1. Turn the teeth off of a pre 86 sprocket so that you have a suitable hub.
2. Bore the existing hub out of either a 4 or 5 speed pulley.
3. Weld the two together so that the new pulley is spaced in the same relationship to the mainshaft as on a belt 4-speed transmission.
4. Bare in mind that a belt final drive severely restricts your choice in gearing. Both 4-speed and 5-speed transmission are 1 to 1 in high gear, and first gear is much lower in a 5-speed than a 4-speed.
5. If a belt final drive is installed in a chassis designed for chain drive, the frame and swing arm will need to be modified for clearance.

Special Instructions for ST models:
A. Remove part of the oil tank bracket.
B. Use HD part 37098-83 clutch cable bracket.
C. Use HD part 37096-85 release arm.
D. Use 58.5" clutch cable HD part 38599-83.
E. Shorten trans plate studs to clear springs.
F. Replace the drain plug with an engine timing plug for spring clearance. (Note: Drain oil through lower access cover boll holes.)

07.22.2019