

# V-Twin Mfg. Speed Kicker Kit

For use on Stock BT 5/6 Speed Transmission  
VT No. 17-0858



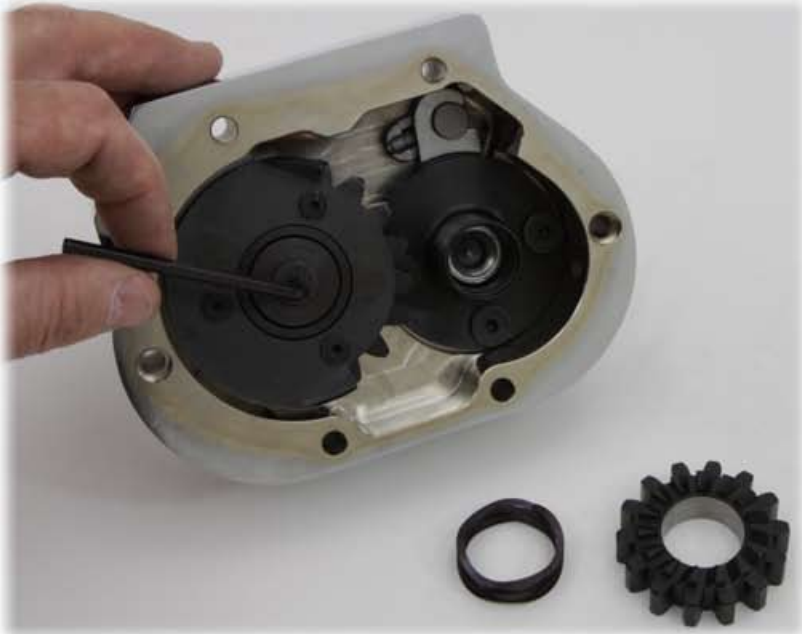
This is a custom application and rider safety depends on proper installation. This product should only be installed by a knowledgeable and trained motorcycle technician. V-Twin Mfg. accepts no responsibility for improper installation.

1. Support the motorcycle on a suitable lift. Refer to service manual, drain the transmission case oil and remove the clutch release cover.
2. Disconnect the clutch cable from the inner ramp coupling in the clutch release cover and remove the clutch cable from the OEM cover.
3. Remove clutch push rod with slinger.
4. Remove nut and washer from main shaft, Apply Loctite and install special ratchet clutch gear nut on main shaft. Torque to 45-55 ft lbs.
5. Reinstall new longer clutch push rod. Remove original thrust washer and bearing from clutch pushrod. Reinstall on new extended pushrod (oil slinger not required).
6. Install the clutch cable in the kicker cover as follows (an extra set of thrust washers and bearing has been included).

6A.. Remove the main kicker spring and rotate the large gear clockwise to allow the release of the (small) clutch gear and spring. Then remove from Main shaft.



**6B. Remove the Allen screw securing the large gear from the kicker shaft. Remove the gear.**



**6C. Remove the 3 Allen screws securing the outer ramp assembly and remove the ramp coupling.**



**6D. Install the clutch cable into the kicker housing. Attach the cable onto the ramp coupling.**



**6E. Install the ramp coupling insuring the 3 balls are properly positioned (see inset). Apply Loctite and secure the Allen bolts.**



**Note: Steps 6F and 6G are critical to correctly time the spring tension for the kicker pedal to properly return.**

**6F. With the kicker spring removed, rotate the kicker shaft with the spring slot into the 10 o'clock position.**



**6G. Place the large gear with the bottom half moon retainer at the bottom as shown. Apply Loctite to the Allen screw and secure it on the shaft.**



**6H. Using a wrench turn the kicker shaft 90 degrees (clockwise). While holding the shaft in this position install the clutch gear over the spring while at the same time compressing the spring.**



**6I. Return the kicker shaft back to it's previous position. If done correctly the half moon retainer will hold the clutch gear in place as shown.**



**7. Place the kicker return spring in the slot on the main shaft and rotate it over the dowel.**

**8. Using a new gasket install the cover on to the transmission with the bolts provided.**



9. Install the kicker arm and pedal assembly (sold separately).
10. Remove the pipe plug at the rear of the cover. Fill the transmission until oil runs out the plug hole. Install the plug and the transmission oil filler cap.
11. Adjust the free play using the factory service manual instructions.



**WARNING: THE MOTORCYCLE MUST BE IN NEUTRAL WHILE USING THE KICKER TO START THE MOTORCYCLE!**

**Thank You For  
Choosing  
V-Twin MFG.**