

PART NUMBER

34661-80

Orig. 5-81

INSTRUCTIONS**TRANSMISSION SHIFTER KIT****HARLEY-DAVIDSON****GENUINE PARTS
AND ACCESSORIES**

This kit is designed for use on 1979 and later FL/FX model motorcycles. This kit contains the following parts.

Description	Qty
Shifter cam	1
Shifter shaft	1
Pawl stops	2
Spring	1

DISASSEMBLY

1. Remove the battery, battery carrier and oil tank.
2. See Figure 1. Remove the five mounting bolts and washers. The bolt shown with the wrench on it can only be loosened for cover removal. The shifter linkage must be disassembled to remove the screw from the cover.
3. Remove the shifter cover and gasket.
4. See Figure 2. To disassemble the linkage, remove the nut and washer (5).

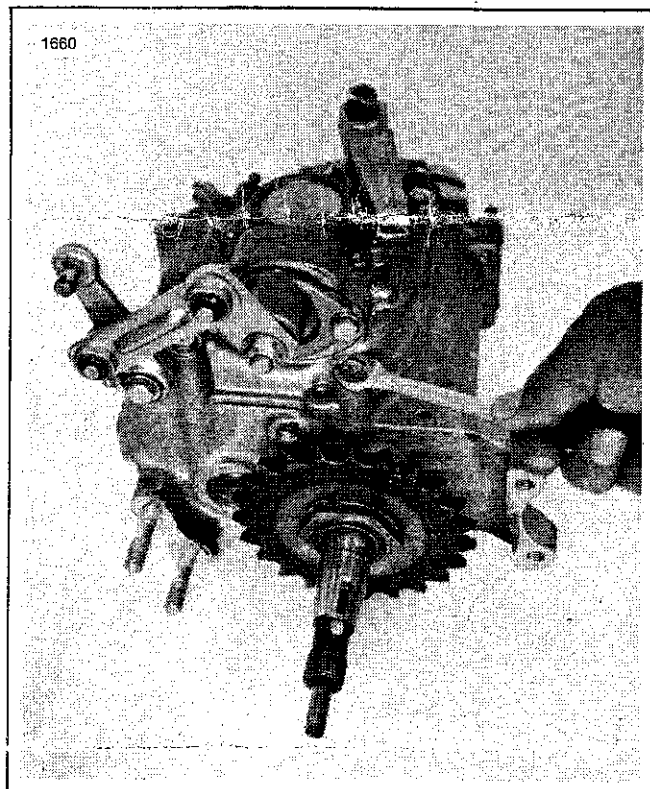
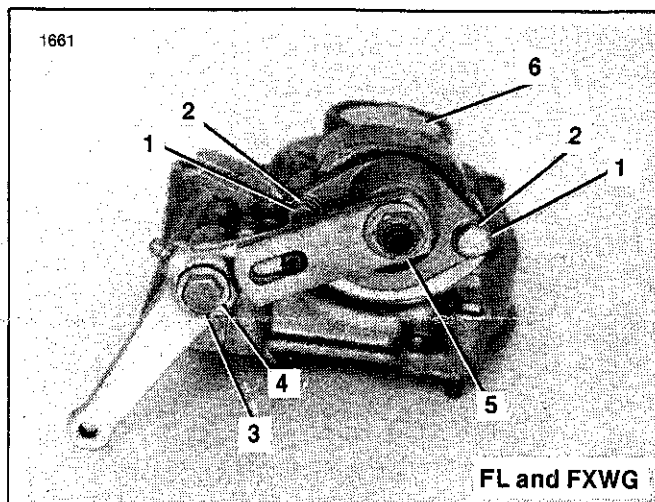
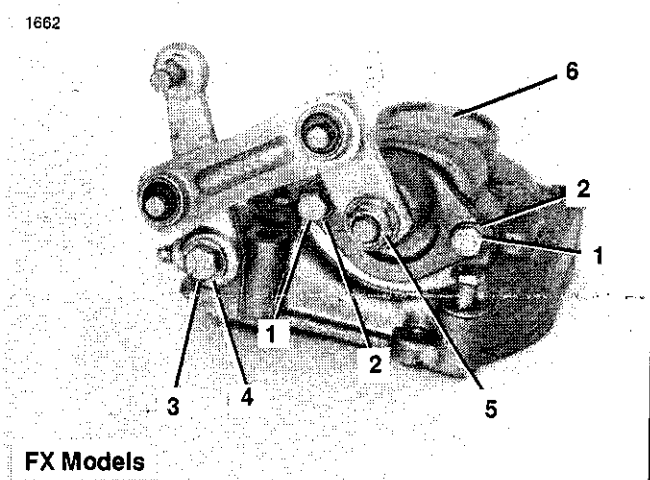


Figure 1. Plate Shifter Cover

**FL and FXWG**

1. Bolt
2. Lockwasher
3. Shifter lever bolt

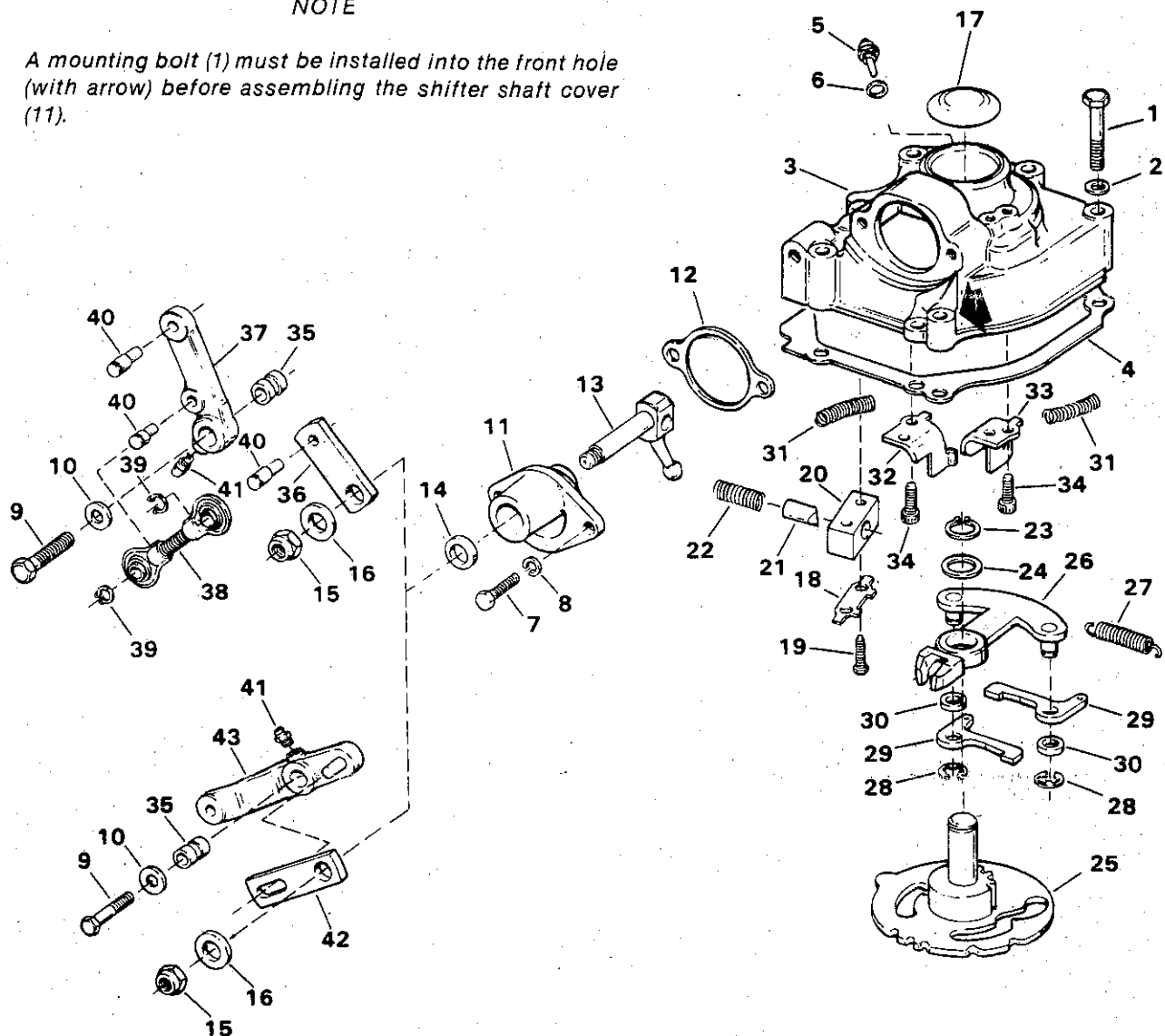
**FX Models**

4. Shifter lever washer
5. Nut and washer
6. Plug

Figure 2. Shifter Lever - Shifter Plate

NOTE

A mounting bolt (1) must be installed into the front hole (with arrow) before assembling the shifter shaft cover (11).



- 1. Bolt (5)
- 2. Washer (5)
- 3. Shift cover
- 4. Gasket
- 5. Neutral indicator switch
- 6. Washer
- 7. Bolt (2)
- 8. Lockwasher (2)
- 9. Bolt
- 10. Washer (2)
- 11. Shifter shaft cover
- 12. Gasket
- *13. Shifter shaft
- 14. Oil seal
- 15. Nut

- 16. Washer
- 17. Plug
- 18. Lock plate
- 19. Bolt (2)
- 20. Plunger body
- 21. Plunger
- *22. Spring
- 23. Retaining ring
- 24. Thrust washer
- *25. Shifter cam
- 26. Pawl carrier
- 27. Shifter pawl spring
- 28. Retaining ring (2)
- 29. Pawl (2)
- 30. Spacer (2)

- 31. Pawl carrier spring (2)
- *32. Shifter pawl stop, rear
- *33. Shifter pawl stop, front
- 34. Socket head screw (4)
- 35. Bushing
- 36. Shifter lever arm (FX)
- 37. Shifter lever (FX)
- 38. Shifter linkage arm (FX)
- 39. Retaining ring (2) (FX)
- 40. Pivot pin (3) (FX)
- 41. Grease fitting
- 42. Shifter lever arm (FL)
- 43. Shift lever (FL)

* Parts in kit

Figure 3. Shifter Cover — Exploded View

5. See Figure 2. Remove the two shifter shaft cover bolts (1) and lockwashers (2). Remove the shift lever bolt (3) and washer (4). Remove the shifter linkage assembly from the transmission cover. Remove the remaining transmission cover bolt and washer.
6. See Figure 2. Remove the plug (6) by drilling a 1/4 in. hole through it and prying it loose. Discard the plug.
7. See Figure 3. Remove the retaining ring (23) and washer (24) located under the plug and remove the shifter cam (25) and pawl assembly (26 through 30).
8. See Figure 4. Remove the cam follower (1) and spring (2).
Remove the four screws (4), pawl stops (5) and springs (6).

CLEANING, INSPECTION AND REPAIR

1. Clean all parts except gaskets and neutral indicator switch in solvent.

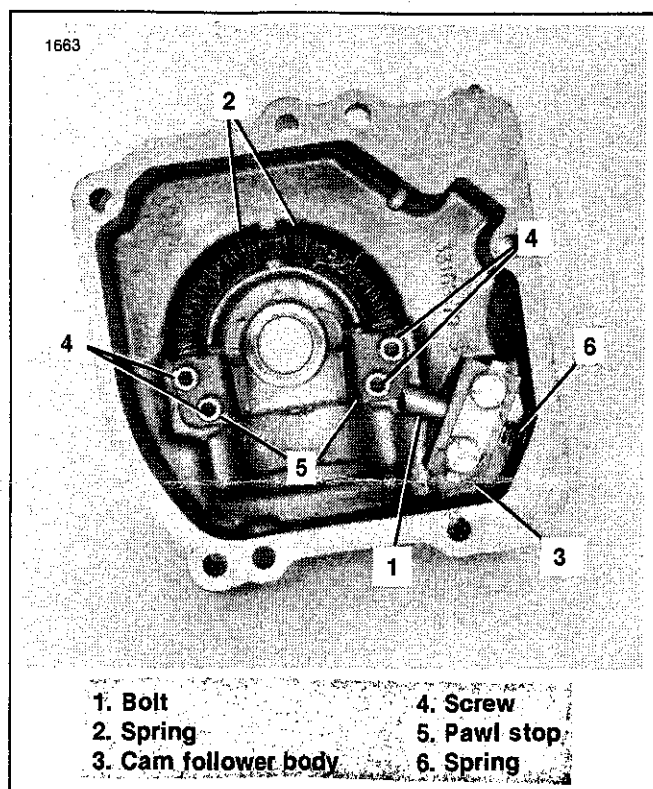


Figure 4. Inside the Shifter Cover

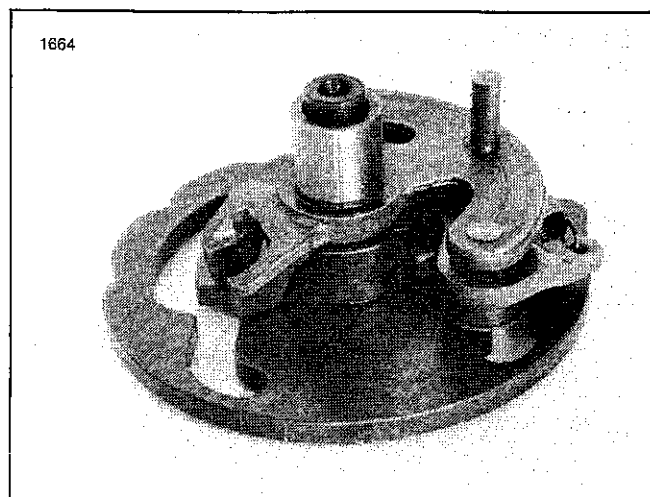


Figure 5. Shifter Cam and Pawl Assembly

2. Inspect the neutral switch. If the plunger does not spring back when depressed, replace the switch.
3. Inspect the cam follower and pawls. Relace them if they are rounded or worn.
4. Inspect the springs and remaining parts for damage or wear and replace as necessary.

ASSEMBLY

1. See Figure 4. Lubricate the spring (2) with a multi-purpose grease. Install the screws (4), pawl stops (5) from kit and springs (2). Tighten screws to 16 ft-lbs. torque.

NOTE

PAWL STOPS MUST BE INSTALLED AS CLOSE TO SHIFTER CAM SHAFT AS POSSIBLE, WITHOUT TOUCHING THE SHIFTER CAM SHAFT.

2. See Figure 4. Install the new spring in the cam follower body (3), then place cam follower (1) over spring (6).
3. See Figure 5. Install the pawl assembly on the shifter cam. Make sure pawls engage on shifter cam gear teeth.

Install the assembly into the shifter cover. Place the tab on the pawl carrier between the two springs. Secure it with washer and retaining ring (23, 24, Figure 3).

4. See Figure 3. Install new shifter shaft (13) from kit and oil seal (14) in shifter shaft cover (11). Install assembly into shifter cover (3) with shifter shaft end seated in pawl carrier (26).
5. See Figure 2. Assemble the linkage as shown using the original nut and washer (5).
6. At this time manually shift assembly repeatedly, if end of shifter shaft jumps out of pawl carriers (26, Figure 3), re-adjust pawl stops (5, Figure 4) as described in Step 1.
7. See Figure 2. Insert one transmission cover bolt and washer into the left rear mounting hole of the cover. Install the shifter linkage to the cover using shift lever bolt (3) and washer (4). Install the shifter shaft bolts (1) and lockwashers (2).
8. See Figure 2. Install a new plug (6) into the transmission cover, Part No. 650. Coat the plug edges with SEAL-ALL, place plug in recess (dome side up) and hit the middle of the plug with a ball peen hammer to seat it.
9. Install the cover and gasket on the transmission. Install the mounting bolts and tighten them to 7-9 ft-lbs. torque.
10. Install the battery, carrier and oil tank.

NOTE

A MOUNTING BOLT MUST BE INSTALLED INTO THE COVER PRIOR TO COVER INSTALLATION. SEE FIGURE 1. (BOLT WITH WRENCH ON IT.)