

## VT No. 27-1731 and 27-1820 XL Reduced Reach Conversion Kit

### Additional Parts Required

Loctite® 243 Medium Strength Threadlocker and Sealant - Blue (Part No. 99642-97) is required for proper installation of this kit.

LOCTITE® Anti-Seize Lubricant (Part No. 98960-97) is required for proper installation of this kit.

### WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a dealer perform the installation. Improper installation of this kit could result in death or serious injury.

**NOTE:** This instruction sheet references service manual information. A service manual for your model motorcycle is required for this installation and is available from a dealer.

### INSTALLATION

#### Shifter Assembly

### WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, remove main fuse before proceeding.

1. See the owner's manual remove the main fuse.

2. See Figure 2. Remove two screws (D and E) and shift rod assembly (7). Save the mounting hardware for later installation.

3. Remove two stock screws (3) from the shifter bracket, leaving the shifter lever assembly and footpeg attached. Discard screws.

### NOTE

See Figure 2. The reduced reach plate (1) is installed between the shifter bracket (B) and frame.

4. Position the reduced reach plate (1) on the frame where the shifter bracket was mounted with the tapped holes toward the rear and the counter bores facing out. Secure using two new screws (2) and tighten to 41–47 N·m(30–35 ft-lbs).

5. Install the shifter bracket (B) onto the reduced reach plate using two new screws (3). Tighten to 41–47 N·m(30–35 ft-lbs).

6. If necessary, adjust shifter rod length as follows:

- Loosen the jam nut on the shifter rod.
- Turn the ball joint or shifter rod to adjust rod length. Temporarily attach ball joint to shifter lever assembly and check angle.
- Adjust the length so that the foot shifter lever is at a 45 degree angle to the ground.

7. Install the shifter rod to the transmission shift lever and secure with screw (E). Tighten to 13.6–20.4 N·m(120–180 in-lbs).

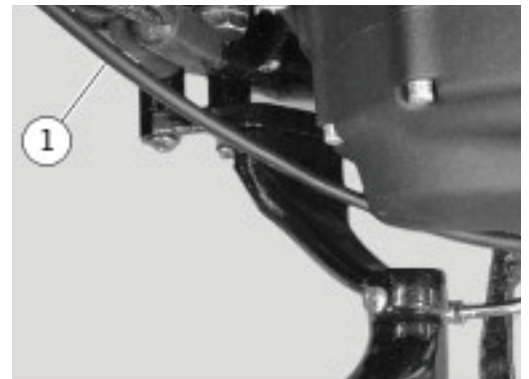
8. Install the shifter rod to the foot shift lever and secure with screw (D). Tighten to 13.6–20.4 N·m(120–180 in-lbs).

9. See Figure 1. To prevent premature wear of the clutch cable (1), route the cable as shown.

### NOTE

After all shifter components are installed, move shifter through entire range of motion and check for interference with other components. The length of shift rod can be adjusted for clearance to primary case.

1 Clutch cable



**Figure 1. Clutch Cable Routing**

#### Brake Pedal and Linkage Assembly

1. See Figure 2. Loosen the ball stud screws and remove the stock brake rod (6). Discard brake rod and save mounting hardware for later installation.

2. Remove the two stock screws (3), J-clip (C) and the right side brake pedal bracket (A) and brake pedal as an assembly.

### NOTE

The reduced reach plate (3) is installed between the brake pedal bracket (A) and the J-clip (C).

3. Install the reduced reach plate (1) to the frame as follows:

- Turn the J-clip (C) over, so that when it is installed on the frame, the wire retaining portion of the J-clip is on the inboard side of the motorcycle. Position the J-clip in the original mounting location.
- Position the reduced reach plate (1) on the frame with the two tapped holes toward the rear and the counterbores facing out.
- Secure using screw (4) in the lower hole and align the upper hole with the threaded hole in the frame. Tighten to 61–68 N·m(45–50 ft-lbs).

4. Fasten the brake pedal bracket (A) with assembled brake pedal to the frame and reduced reach plate (1) using screws (3). Tighten the screws to 61–68 N·m(45–50 ft-lbs).

5. See Figure 2. Apply two drops of Loctite 243 (blue) to threads of both brake rod ball stud screws.

6. Thread one end of brake rod (6) into master cylinder bell crank. Tighten to 13.6–20.4 N·m(120–180 in-lbs).

7. Thread other end of brake rod (6) into brake pedal. Tighten to 13.6–20.4 N·m(120–180 in-lbs).

8. See the owner's manual and install the main fuse.

#### WARNING

After repairing the brake system, test brakes at low speed. If brakes are not operating properly, testing at high speeds can cause loss of control, which could result in death or serious injury.

9. Test brakes for proper operation before riding vehicle.

#### Parts List

Item	Description (Quantity)
1	Plate, reduced reach (2) Not sold separately
2	Button head screw, 3/8-16 x 1.0 in (2)
3	Socket head screw, (4)
4	Button head screw (2)
5	Spacer (2) Not sold separately
6	Brake rod Not sold separately
7	Shifter rod assembly Not sold separately

#### Items mentioned in text, but not included in kit:

A	Brake pedal bracket
B	Shifter bracket

**Figure 2. XL Reduced Reach Conversion Kit**

