

## Reduced Reach Conversion Kit VT No. 22-1679

### Additional Parts Required

Separate purchase of LOCTITE® Anti-Seize Lubricant is required for proper installation of this kit. This can be purchased from any dealer.

### WARNING

Rider and passenger safety depend 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.

### Kit Contents

See Figure 1 and Table 1.

### INSTALLATION

#### Shifter Assembly

### WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (-) battery cable before proceeding.

1. Disconnect battery cables, negative (-) cable first.

2. Remove the two fasteners from the left side footrest bracket, leaving the shifter lever assembly, linkage and footpeg attached. Discard fasteners.

### NOTE

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

3. 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).

4. Install the shifter bracket onto the reduced reach plate using two new screws (2). Tighten to 41–47 N·m (30–35 ft-lbs).

5. Adjust foot shift lever for rider comfort. Tighten pinch bolt to 24.4–29.8 N·m (18–22 ft-lbs)

### 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.

#### Brake Pedal and Linkage Assembly

1. Remove the right side rider footrest from the mount clevis. Retain the footrest and hardware for installation.

2. See Figure 1. Loosen the brake rod jam nut (D) at the rear brake master cylinder.

### NOTE

Use the flats on the push rod (E) to remove the brake rod from the master cylinder.

3. Rotate the master cylinder push rod to remove the original brake rod.

4. Remove jam nut and retain for installation. Discard the original brake rod.

5. Remove the two fasteners from the right side footrest bracket.

6. Remove footrest clevis (B) and brake pedal pivot shaft (4). Discard pivot shaft and retain clevis and screw (C) for assembly.

### NOTE

The reduced reach plate (3) is installed between the brake pedal bracket (A) and frame.

7. Position the reduced reach plate (3) on the frame with the tapped hole toward the front and the counter bores facing out. Secure using screw (2) in the lower hole and align the upper hole with the threaded hole in the frame. Tighten to 41–47 N·m (30–35 ft-lbs).

8. Fasten the brake pedal bracket (A) to the frame and reduced reach plate using screws (2 and 5). Tighten the screws to 41–47 N·m (30–35 ft-lbs).

9. Coat the new brake pedal pivot shaft (4) with Loctite Anti-Seize.

10. Fasten the new brake pedal pivot shaft (4), brake pedal and footrest mount clevis (B) to the brake pedal bracket (A) using the long Torx screw (C). Tighten the screw to 44–47 N·m (32–35 ft-lbs).

11. Install the jam nut (D) all the way onto the new brake rod (6).

### WARNING

When adjusting brake control rod, never allow more than nine threads to be exposed between control rod and jam nut. If more than nine threads are exposed, brake rod can come apart resulting in loss of rear brake, which could cause death or serious injury. (00306c)

12. Turn the master cylinder push rod onto the brake rod until about half the threads are used.

13. Connect the brake rod (6) to the brake pedal using the original clevis pin, washer and cotter pin. Bend the legs of the cotter pin around the clevis

pin shaft.

14. Verify that the water drain hole in the rubber boot (covering the brake rod) is on the bottom of the rubber boot.
15. Turn the push rod on the brake rod until the brake pedal is elevated to an effective rider angle, and using at least half the threads available on the brake rod. Tighten the jam nut against the master cylinder push rod.
16. Fasten the original footrest to the footrest mount clevis (B) using the original fasteners.
- NOTE
- After all brake components are installed, move brake pedal through entire range of motion and check for interference with other components. The length of the brake rod can be adjusted for clearance to the exhaust system if needed.

**WARNING**

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury.

17. Connect the battery cables, positive (+) cable first.

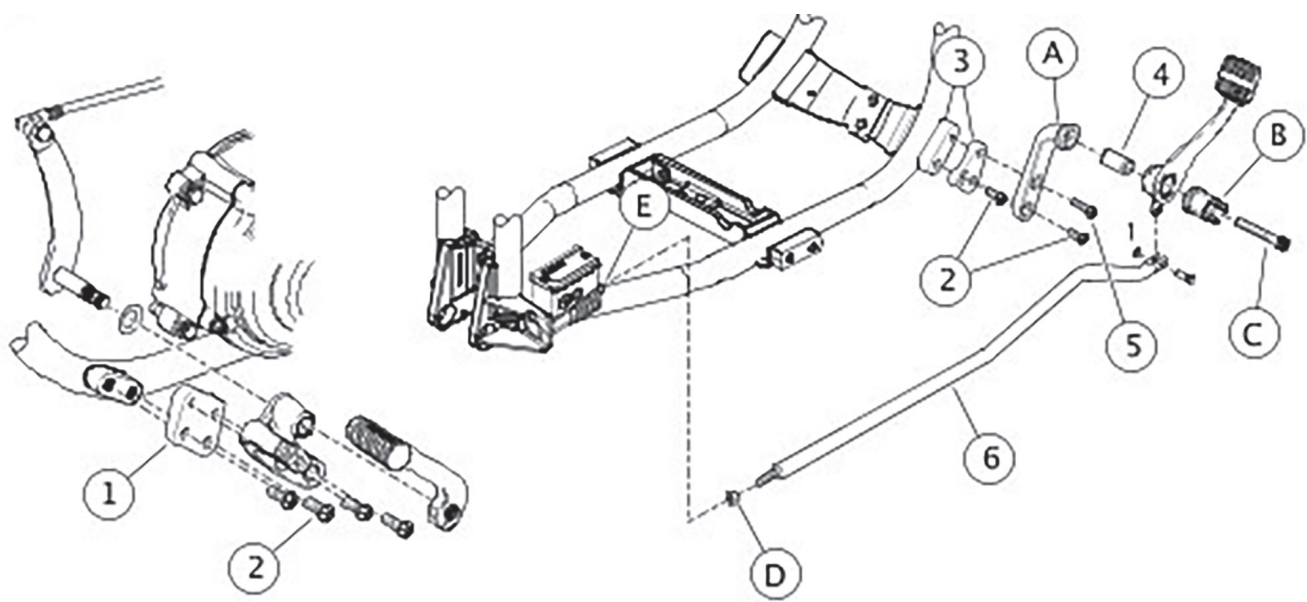
**WARNING**

After servicing brakes and before moving motorcycle, pump brakes to build brake system pressure. Insufficient pressure can adversely affect brake performance, which could result in death or serious injury.

**WARNING**

Brakes are a critical safety component. Contact a dealer for brake repair or replacement. Improperly serviced brakes can adversely affect brake performance, which could result in death or serious injury.

18. Test brakes for proper operation before riding vehicle.



**SERVICE PARTS**

Figure 1. Service Parts: Reduced Reach Conversion Kit

Table 1. Service Parts Table

Item	Description (Quantity)	Part Number
1	Plate, reduced reach, left	Not sold separately
2	Torx screw, 3/8-16 x 1.0 in. (6)	4512A
3	Plate, reduced reach, right	Not sold separately
4	Brake pedal pivot shaft	Not sold separately
5	Torx screw, 3/8-16 x 1.5 in.	Not sold separately
6	Brake rod	Not sold separately
Items mentioned in text, but not included in kit:		
A	Brake pedal bracket	Reference only
B	Footrest mount clevis	Reference only
C	Torx screw, 3/8-16 x 2-3/4 in.	Reference only
D	Jam nut	Reference only
E	Master cylinder push rod	Reference only