

**V-Twin Mfg.
ST Lowering Kit
For use on 2000-08 Models
VT Part No. 54-0520**

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.

Warning – Lowering your motorcycle will reduce ground clearance. Care should be taken to avoid bottoming especially over bumps or in turns. To maintain proper balanced geometry we recommend lowering the front and the rear of the motorcycle equally. Check motorcycle for proper lean angle. Your side stand may also need to be replaced.

Additional Parts Required

To access the shock absorber bolts, a Snap-on Tool Co. adapter (Part Number SRES 24) is required. To adjust the preload, a Shock Absorber Spanner Wrench (Part number VT No.16-0748) Loctite & Anti-Seize is also required.

Shock Removal

1. Place the motorcycle on a lift and raise enough weight off rear wheel so that the stock shocks can be removed.
2. Lift the rear of the motorcycle to allow the rear fork to pivot through its range of travel.
3. Place a jack under the rear wheel to support and adjust the rear fork during shock removal, installation and ride height adjustment.
4. Remove the bolt and washer that fasten each of the shock absorbers to the rear fork.
5. Remove the flanged locknut and cup washer with grommet fastening the shock absorber to the frame bracket and remove the shock absorber.

NOTE: Snap-on Tool Co. adapter, Part Number SRES 24, is necessary to gain access to the shock absorber bolts.

NOTE: Be sure rear wheel is supported when removing rear shocks. If wheel is not supported rear fork will drop down.

Disassemble the Shock

1. Place the shock in a hydraulic press.
2. Press on the shaft to compress the spring in the cannister until the keeper plate drops down away from the retaining ring.
3. Use a mechanics pick to remove the ring.
4. Carefully release the press and separate the parts.
5. Holding the flats on the shock shaft plate under the keeper plate, use a wrench on flats of the existing stub shaft and thread the shaft off the shock.
6. Thread off the jam nut from the existing stub shaft.

Assemble the Shock and Lowering Kit

1. Thread the jam nut and the keeper plate on the stub shaft from the kit.
2. Apply LOCTITE to shock shaft threads.
3. Holding the flats on the shock shaft plate, tighten the stub shaft down to meet the plate on the shock shaft.
4. Thread the keeper plate all the way down the threaded adjustment length to the plate on the shock shaft.

NOTE: This is the minimum preload position. Preload can be adjusted after installation for operating load.

5. Snug the jam nut down on the keeper plate.
6. Assemble the spring, the shock cannister, the nylon rub washers and the shock.
7. In the press, support the fork end of the spring shock assembly and compress the stub shaft until the keeper plate travels below the retaining ring notch in the bore of the shock cannister.
8. Snap the retaining ring into place.
9. Carefully release the press until the spring pushes the keeper plate firmly against the retainer ring and remove the spring/shock assembly from the press.
10. Thread on an adjuster collar from the kit with the flange facing the frame bracket.
11. Slip a cup washer and a rubber grommet over the shaft.
12. Repeat for the second shock absorber.

NOTE:The second shock absorber must be assembled with the keeper plate and the jam nut exposing an identical number of threads on the stub shaft.

Re-Install shocks as per service manual.

Suspension Adjustments

Preload

1. Place a mark in the same position on the keeper plate of each shock.
2. Loosen the jam nut on each shock.
3. Use the shock absorber spanner wrench to rotate each keeper plate to release or compress the springs.
 - A. For heavier loads: Turn the keeper plates OUT (counter clockwise, toward the jam nut), to increase spring preload.
 - B. For lighter loads: Turn the keeper plates IN (clockwise, away from the jam nut), to decrease spring preload.
4. Adjust both shock absorbers equally, the same number of turns, and to the same position relative to the marks.
5. Tighten the jam nut against each of the shock-absorber keeper plates.

Ride Height

NOTE: Ride height is adjusted with the motorcycle suspended and a screw jack under the rear wheel to raise/lower the suspension.

1. Loosen the flanged locknut on the front of the frame bracket.
2. Turn the adjuster collar in the direction of the desired ride height.
 - A. To increase rear wheel travel and raise the height turn the adjuster collar IN towards the shock end of the stub shaft.
 - B. To decrease rear wheel travel and lower ride height turn the adjuster collar OUT towards the frame bracket.
3. When the desired ride height has been reached, tighten the flanged locknut on the front of the frame bracket to 32-39 ft-lbs.
4. Repeat for the opposite shock.

