

**V-Twin Mfg.**  
**E-Z ADJUSTABLE LOWERING KIT**  
**FITS 1989-1999 ST**  
**VT No. 54-0434**

**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.**

**Note:** This kit is designed for Harley-Davidson OEM shocks. This kit is used to adjust the height from between 1/2" above stock or to lower the bike 2" lower than stock. V-Twin Mfg. does not recommend lower the motorcycle beyond 1.25" from the stock height. When lowering the motorcycle the rider must use extreme caution when operating. A lowered motorcycle will directly effect the handling characteristics. The lean angle of the motorcycle should also be checked to assure that the OEM jiffy stand will still function correctly.

**Installation Instructions:**

1. The motorcycle must be securely supported with the rear wheel slightly off the ground.
2. Remove your OEM shocks as described in your OEM service manual.

**Note:** Do not discard the stock mounting hardware as it will be reused with your new lowering kit.

3. You will need to disassemble your shock using a hydraulic press.
4. Support the shock in the press. Leave approximately 2" of space between the end of the ram and the top of the shock mount.
5. Press straight down on the shock. You will need to compress the shock down approximately 1/4" so that you can remove ring on the bottom of the shock. Remove the wire ring using a pick or similar tool
6. Slowly release the hydraulic pressure separate the damper from the shock body and spring.
7. Using a vise with soft jaws, clamp the damper across the flat sides of the long heim mount.
8. Loosen the spring plate lock nut with a wrench and spin it several turns to make sure you have the enough clearance
9. Loosen the spring plate a couple of turns in the same direction. Unscrew the damper shaft from the long heim mount with a wrench. The long heim mount is normally assembled with loctite and may need to be heated slightly before it can be disassembled.
10. Remove the spring plate and jam nut from the stock heim mount. Install these parts on the new adjustable mount. Make sure you turn the spring plate a few turns past the end of the mount so the damper will seat on the end when it is screwed in.
11. Us a drop of red loctite on the damper threads and screw it into the adjustable mount. Make sure it seats against the end of the mount. Torque the damper shaft to 30 ft. lbs.
12. Rotate the spring plate until it bottoms against the damper shaft and tighten the jam nut against it. This will be the lowest pre-load setting.
13. Install the damper assembly into the spring and spring cover. Be sure the smaller ID of the spring points toward the front of the motorcycle.
14. Using the hydraulic press re-assemble the shock by reversing the order of disassembly. Be sure the wire ring is seated in the groove before releasing hydraulic pressure.
15. After repeating the installation on the other shock, adjust the heim and jam nuts to the shortest overall shock length. Now measure the eye-to eye length and match the measurements so both shocks are the same length. Grease both heim balls with heavy grease. Shocks should also be re-greased every 3-4 months depending on riding habits.
16. Re-install the adjustable shocks on your motorcycle as per your OEM service manual. Install the bolts, washers, O-rings and spacers into the heim as shown in figure below. Use caution so as not to pinch the o-rings during installation.
17. Adjust pre-load as needed. See service manual for procedures.

**Instructions for Adjustment:**

1. In or to lower the ride height you must loosen the adjuster jam nut then turn the hex shaft and spring cover clockwise, (toward the cam side) this will lengthen the shocks and lower the motorcycle.
2. When making your adjustments be sure to turn the shocks one hex at a time. This will insure that they are adjusted evenly.

**Caution:** Do not lower the motorcycle more than 2" or do not raise it more than a 1/2" over the stock ride height.

3. After making your adjustments tighten the jam nuts.
4. After making the ride height adjustment you will need to re-adjust the pre-load. Refer to your OEM service manual for this procedure.
5. In order to raise the motorcycle, follow the same procedure as in step 1, however you will have to turn the hex shaft and spring counter clockwise.

