Suspension Adjustment: Rear Shock Absorber

The rear shock absorber on the motorcycle can be adjusted for the weight the motorcycle is carrying. To adjust the shock absorber spring, you will need an appropriate spanner wrench.

Chief Rear Shock Absorber

A simple visual reference of proper rear suspension adjustment is the swingarm. With rider, passenger and all gear loaded on the motorcycle, the swingarm should be parallel to the ground. Increase or decrease the rear shock absorber spring preload to achieve parallelism. Another reference is the axle and swingarm pivot point *(See figure13)*.

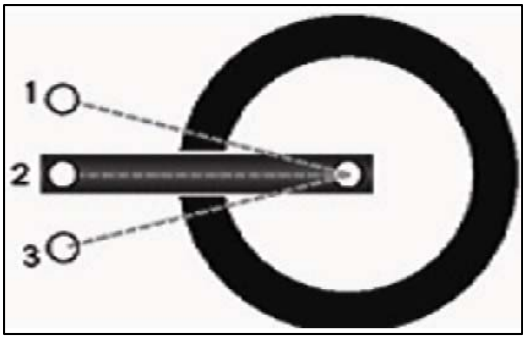

Figure 13: *Suspension Adjustment*

Again, the motorcycle must be loaded with rider passenger and all gear. If the axle is higher than the swingarm pivot point (3), increase the preload of the shock spring. Decrease the spring preload when the swingarm pivot point is higher than the axle (1).

Each revolution of the preload ring is equivalent to 26 ½ pounds. To increase the preload turn the ring in a clockwise direction. To decrease the decrease the preload turn the ring in a counterclockwise direction *(See figure 14)*.

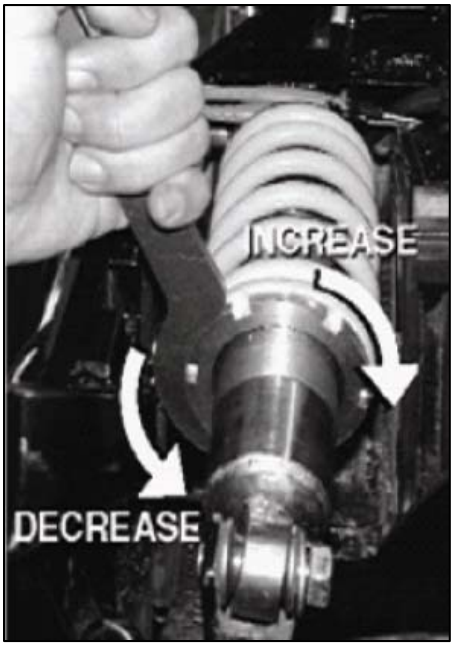

Figure 14: *Spring Adjustment*

Measuring rear suspension sag for a solo rider

Place a piece of masking tape on the fender directly over the rear axle *(See figure 15)*.

1. Extend the rear shock completely by placing a lift under the motorcycle and raise until the rear tire is fully off the ground.

Suspension Adjustment

2. Place a piece of masking tape on the fender directly over the rear axle *(See figure 15).*
3. Measure the distance from the top of the axle to the top of the masking tape. Measuring in millimeters and performing the adjustments in millimeters is much easier. Write this measurement onto a piece of paper and label as M1.
4. Lower the motorcycle and remove the lift. Sit on the motorcycle with helmet and all riding gear. Have another person measure the distance from the top of the axle to the top of the masking tape. Write down the measurement and label as M2.

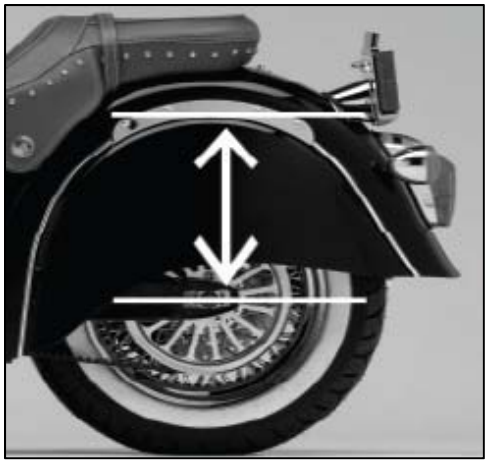

Figure 15: *Measuring Suspension Sag*

5. Subtract M1 from M2. The correct rider sag is between 27-33mm (1.06″–1.28″).
6. Increase the spring preload if the sag is greater than33mm (1.28″) and decrease the preload if the sag is less than 27mm (1.06″). Nominal sag is 30mm (1.2″).
7. Repeat step 5 again after the preload has been adjusted. Again subtract M1 from M2.
8. Continue the preload adjustment until the sag is within 27-33mm (1.06″–1.28″).
9. Once adjusted, measure the spring length and record in the maintenance records section of your owners manual for future reference along with the items loaded on the motorcycle.

Example: M1 = 100mm 100
M2 = 60mm - 60
40mm of measured rider sag

40 (measured static sag)
-30 (nominal static sag)
10mm

The spring will require an increase in preload (decrease the length of the spring). Try adding 2 turns of preload and check the sag again.

Suspension Adjustment

Measuring Spring Sag for Heavy Laden or 2-Up Riding

When riding with another person or a heavy amount of gear, the spring preload should be adjusted for the load. Perform the above listed 10 steps and adjust the spring accordingly. Step 5 should be done with passenger rider and all gear placed on the motorcycle.

CAUTION!

When riding solo with the spring adjusted for two-up riding the rear suspension will feel stiff and top out easily. Adjust the spring to the factory length or to a length that fits rider weight and riding style.