

# INSTALLATION INSTRUCTIONS

## DRAG SPECIALTIES PREMIUM ADJUSTABLE RIDE-HEIGHT SHOCK ABSORBERS 1310-1827 THRU 1832

**ATTENTION INSTALLER** (if other than owner): Please forward this Instruction Sheet to the purchaser of this product. These instructions contain valuable information necessary to the end user.

**INTRODUCTION:** These instructions describe the procedure for properly adjusting the Drag Specialties Premium Adjustable Ride-Height Shock Absorbers. Review instructions carefully before beginning, as they contain important information. Please retain for future reference.

Particularly important information is distinguished in these instructions by the following notations:

**NOTE:** A NOTE provides key information to make procedures easier or clearer.

**CAUTION:** A CAUTION indicates special procedures that must be followed to avoid damage to the motorcycle and/or accessories.

**WARNING!:** A WARNING! indicates special procedures that must be followed to avoid injury to a motorcycle operator or person inspecting or repairing the motorcycle.



### TOOLS REQUIRED:

Ruler

Shock spanner wrench (2) (We suggest using the Moose brand of adjustable spanner wrench, Drag Specialties PART #3805-0121. Testing has determined that this wrench works best of all available wrenches.)

### PROCEDURE:

Setting Shock Length:

1. Loosen the locking ring on the bottom of the shock absorber body. See Figure 1.

**NOTE:** Use the correct spanner wrench on the locking rings. Using the wrong tool will cause damage to the soft aluminum locking rings.

2. Lengthen the shock body by screwing the bottom mounting clevis up or down. Do not exceed the adjustment as listed in the chart on last page.

**WARNING!:** Adjusting the shock to a longer or shorter length than what is listed in the adjusting range could cause shock failure, leading to possible injury.

3. Use the ruler to measure from the center of the mounting eyelet on the top of the shock to the center of the mounting eyelet on the shock bottom. Make sure that after adjustment, both shocks remain the same length within the measurement on the chart.
4. Tighten the lock ring against the bottom of the adjustable shock body. Rotate the shock body so that both mounting eyelets are parallel. Make sure the lock rings do not come loose when turning the shock body.
5. Place the bike on a jack and raise until all weight is off the rear wheel, but do not raise the wheel off the ground.

6. Remove the original rear shocks and set aside.

7. Install the shock absorbers with the upper mounting bolts. You will probably find that the stock shock covers will not clear with the new shocks. If so, install without covers.

**NOTE:** XL and FXR shocks come with spacers that are placed between the shock and the mount to provide additional clearance. You will use the four stepped spacers, with the larger OD against the frame and the smaller OD end against the shock. You will also install the four thick spacer washers between the stepped spacers and the frame. On XL models it will go in this order: frame, thick washer, stepped spacer, shock, nut.

8. Carefully raise or lower the bike with the jack until the lower mounting bolt will slide through the lower mount and shock absorber.

9. Tighten both upper bolt and lower bolt to following torque specifications:

Mounting Bolt Torque:

XL/FXR: Upper = 21-27 ft-lbs.

XL/FXR: Lower = 45-50 ft-lbs.

**NOTE:** Make sure that there is sufficient bolt or stud length available after shocks are installed.

**CAUTION:** Check to make sure there is sufficient clearance between the swingarm, fender, and belt guard. Put two people on the bike to compress the suspension as much as possible and check carefully at the front swingarm around the belt guard and fender. Adjust clearance as necessary to prevent the swingarm or belt guard from hitting on the rear fender.



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### Setting Shock Spring Preload:

**NOTE:** This initial setting is just a starting point for shock spring preload. Further fine-tuning may be required.

1. With the shock fully extended, loosen the two lock rings on the bottom of the shock spring. Back off the adjuster until the spring is loose in the shock.
2. Tighten the adjuster back up until there is no free play in the spring.
3. For solo riding tighten until the maximum shock spring length listed in the chart for your shock is obtained.  
For 2-up riding, tighten until the minimum shock spring length listed for your shock is obtained.
4. Lock the two adjuster rings together with the shock spanner wrenches.
5. Check all mounting bolts for correct torque.
6. Test ride the motorcycle with the amount of weight on it that you would most likely carry most often.
7. Adjust both of the shocks one turn at a time to fine tune the shocks for best ride.

**NOTE:** Tighten the adjuster to shorten the spring if you feel the shocks bottoming out too often. If the ride is too stiff, loosen the adjusters by lengthening the spring.

**WARNING!** Never adjust the shock springs to a length shorter than the minimum spring length stated for the shock length. Doing so may cause spring coil bind, shock failure, and injury or death. Adjusting the shocks to a spring length longer than that listed on the chart may cause excessive shock bottoming and damage the shock absorbers.

8. Make sure to tighten the adjuster lock rings before the next test ride.

**WARNING!:** Before operating motorcycle, be sure all hardware is tight.

Figure 1. Lower shock with locking ring loosened for adjusting shock length.

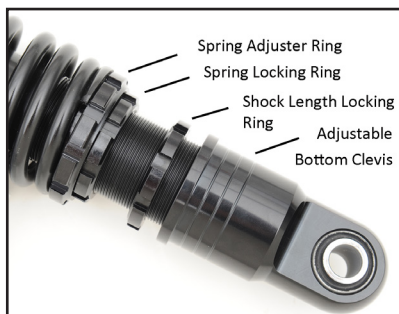


Figure 2. Lower shock with shock shortened to minimum length.



Figure 3. Lower shock extended to maximum length.



### ADJUSTABLE SHOCK DIMENSIONS

**NOTE:** LENGTH MUST REMAIN WITHIN THE LENGTHS LISTED BELOW FOR EACH SHOCK PART NUMBER. SPRING LENGTH MUST ALSO REMAIN BETWEEN THE MAXIMUM AND MINIMUM LENGTHS. THE MINIMUM LENGTH WILL GIVE YOU A STIFFER RIDE AND THE MAXIMUM LENGTH WILL GIVE YOU A SOFTER RIDE.

DRAG #	LENGTH ADJUSTMENT RANGE	MAX. SPRING LENGTH	MIN. SPRING LENGTH
1310-1827	10.5-11.5"	6.12"	5.52"
1310-1828	10.5-11.5"	6.12"	5.52"
1310-1829	11.5-12.5"	7.08"	6.48"
1310-1830	11.5-12.5"	7.08"	6.48"
1310-1831	12.5-13.5"	8.07"	7.47"
1310-1832	12.5-13.5"	8.07"	7.47"

