



## Installation Instructions 435 Series Front Shock BMW R1100/1150RT

### ATTENTION

Statements in these instructions that are preceded by the following words are of special significance:

#### **Warning**

This means there is the possibility of injury to yourself or others.

#### **Caution**

This means there is the possibility of damage to the vehicle.

#### **Note**

*Information of particular importance has been placed in italics.*

### Warranty

Progressive Suspension warrants to the original purchaser of this Part to be free of manufacturing defects in materials and workmanship with a lifetime limited warranty. In the event warranty service is required, you must call Progressive Suspension immediately with a description of the problem.

If it is deemed necessary for Progressive Suspension to make an evaluation to determine whether the part is defective, a return authorization number will be given by Progressive Suspension. The parts must be packaged properly so as to not cause further damage and returned prepaid to Progressive Suspension with a copy of the original invoice of purchase and a detailed letter outlining the nature of the problem. If after the evaluation by Progressive Suspension the part was found to be defective it will be repaired or replaced at no cost to you. If we replace it, we may replace it with a reconditioned one of the same design.

Progressive Suspension shall not be held liable for any consequential or incidental damages resulting from the failure of a Progressive Suspension part. Progressive Suspension shall have no obligation if a part becomes defective as a result of improper installation or abuse.

#### **Warning**

Changing the suspension on your vehicle can drastically change the handling characteristics. Always use extreme caution when riding after a change is made and take time to get accustomed to any handling change.

### IMPORTANT NOTICE

Note: Please read the following instructions completely before starting installation!

Follow instructions in an factory authorized shop manual or take the vehicle to a competent dealer.

#### **Warning**

The vehicle must be securely blocked to prevent it from tipping over when the shock is removed. Failure to do so can cause serious damage and/or injury.

The use of lowering blocks on Progressive Suspension shocks is not recommended. Use of a lowering kit may void the warranty or damage the shock/vehicle.

Progressive Suspension shocks are designed to work on the OEM (Original Equipment) frame and chassis. Use of this shock on a frame or chassis other than OEM may produce an unsatisfactory ride and void the warranty.

Make sure that proper bushings/sleeves are installed in the shock. Improper bushings/sleeves can cause unsatisfactory and/or unsafe operation (see the instructions packaged with the mounting hardware).

*Be sure to refer to instruction supplements provided in any included mounting hardware*

### Installation

Per your factory authorized shop manual, remove the front shock and note location of mounting hardware. This will entail the following steps:

1. Place a quality jack or sufficient blocks under the vehicle to securely lift the front wheel slightly off the ground.
2. Remove the seat, then remove the fuel tank bolts and slide the tank back a few inches to facilitate getting to the top shock mount post/nut. There should be no need to disconnect any hoses or wires. If additional accessories are installed on your vehicle, please refer to their mounting instructions for removal to gain access to your shock. Remove the top nut and the bottom bolt, then remove the stock shock (see figure 1).

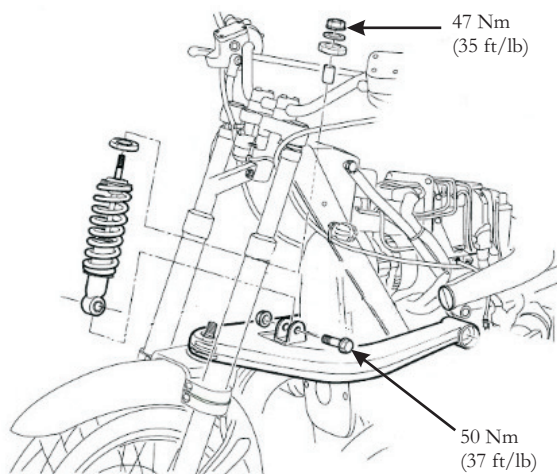


Figure 1

3. Shouldered sleeves with O-rings should already be installed in the lower eye of your new 435 shock. If not, insert sleeves with O-rings into the shock eye (figure 2).

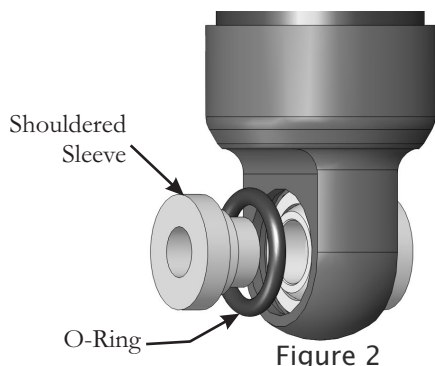


Figure 2

4. Install the supplied sleeve onto the top-post of your 435 series shock, followed by one of the supplied top-mount bushings - sliding the bushing over the sleeve. Then install the post end of your 435 shock through the frame, install the other supplied bushing, then the flat washer, and finally the nut (see figure 3). Using a hex key to keep the upper post from rotating, torque the nut to the factory recommended 47 Nm (35 ft/lb).

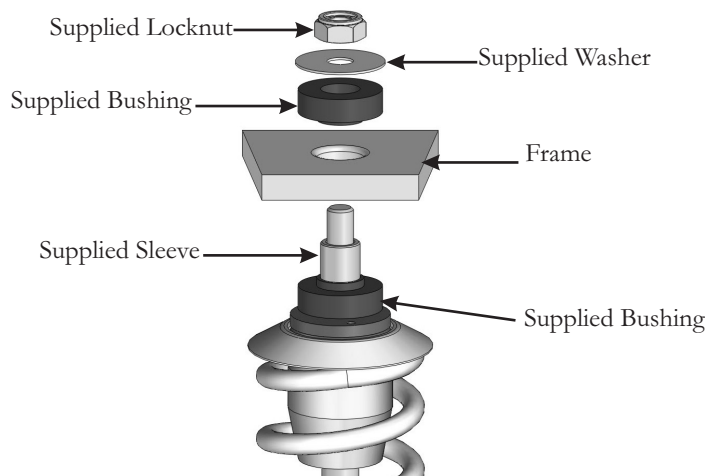


Figure 3

Make sure the pressure valve is facing rearward - toward the engine.

**Caution**

**The internal gas pressure has been set from the factory - DO NOT attempt to adjust the gas pressure. Failure to heed this warning may void your warranty and result in damage to the shocks and/or vehicle.**

5. Install the lower eye of your new 435 shock (with shouldered bushings and O-rings installed) into the Telelever clevis. Align the lower mount hole and reinstall the lower nut and bolt, torque to the factory recommended 50 Nm (37 ft/lb).

6. Reinstall the fuel tank and seat according to your factory authorized shop manual, and be sure to torque the fuel-tank-to-frame bolt to the factory recommended 22 Nm (16 ft/lb). Also reinstall any other accessories removed in accord with their mounting instructions. Make sure accessories do not interfere with the shock throughout it's full travel.

**Preload Adjustment**

Preload adjustment greatly affects handling & ride quality. When the preload is adjusted properly on your bike, the front suspension should "sag" or compress from full extension about 35mm-45mm (1.38"-1.77") with rider(s) & gear on the bike ready to ride - this is referred to as "rider sag". To accurately adjust your preload we recommend the following procedure.

1. Begin by lifting/jacking the front end up just high enough to extend the front suspension until it's completely topped out (wheel slightly off the ground) then measure the exposed inner fork tube as illustrated in figure 4. Write this measurement on the "Ext." (or extended) line in **Rider Sag Worksheet** on page 3.

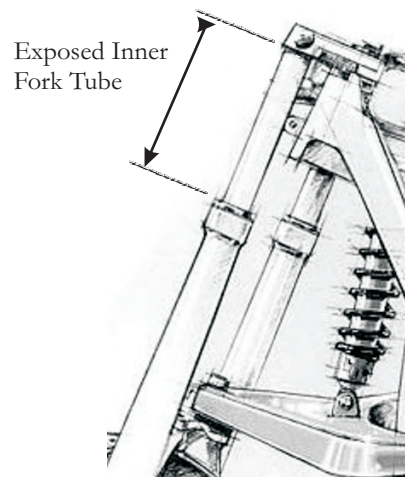


Figure 4

2. Now, using a helper, sit on the bike with gear ready to ride and give the bike a few good bounces. Once it's settled, while balancing on the bike as evenly as you can, have the helper take the same measurement - note it down on the "With Rider(s) & gear" line of the **Rider Sag Worksheet** below.

3. Subtract the "With Rider & Gear" line from the "Ext." line, and that is your actual Sag. Again, the proper spring pre-load setting will permit the front suspension to sag, or compress, approximately 35mm-45mm (1.38"- 1.77") from full extension. If the bike is sagging too much, you'll need to increase the pre-load. If it's not sagging enough, you'll need to reduce the preload.

4. Spring pre-load adjustments are made with the supplied preload adjusting wrench by first loosening the lower locking ring, then adjusting the upper preload ring (figure 5). Once the proper preload has been achieved, re-tighten the locking ring against the adjusting ring. With the shock fully extended, the spring installed length must never be adjusted to a length longer than 245mm (9.65") or shorter than 190mm (7.48").

**Caution**

***The preload adjustment must not be set to allow for a spring installed length longer than 245mm (9.65") or shorter than 190mm (7.48").***

8. Test ride: If excessive bottoming occurs you need to increase your spring pre-load setting as described above.

9. Then ride and enjoy.....Safely.

Compliment your new front shock with a Progressive Suspension rear shock.

<p align="center"><b><u>Rider Sag Worksheet</u></b></p> <p align="center">Ext.      _____</p> <p>With Rider(s) &amp; gear - _____</p> <p align="center"><b>Actual Sag =</b>      _____</p> <p>Adjust preload until <b>Actual Sag</b> is 50mm-60mm.</p>
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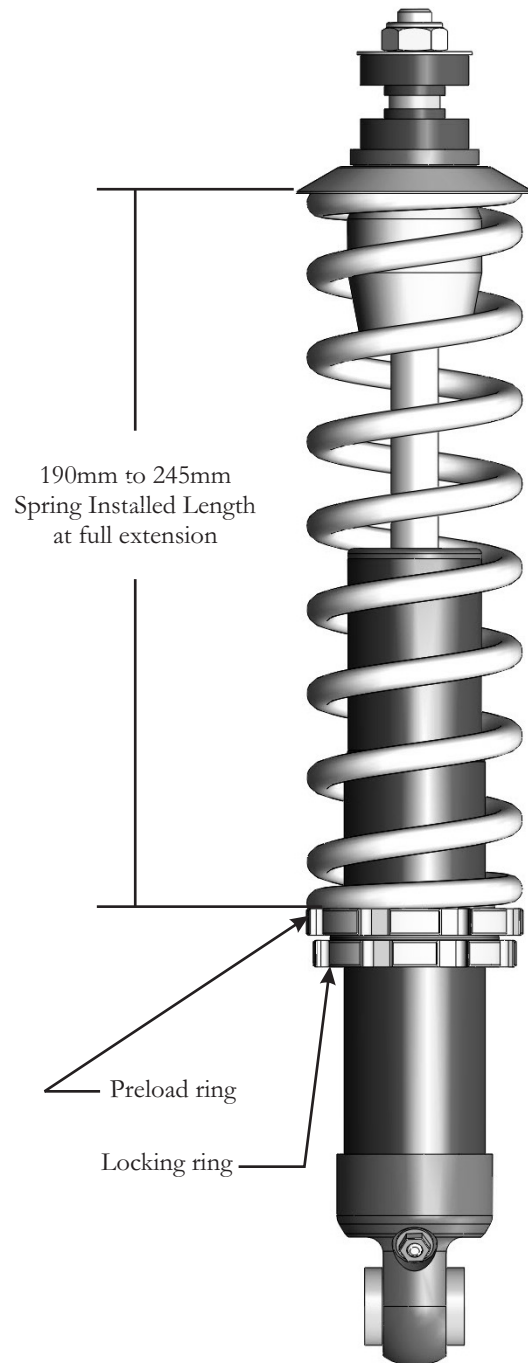


Figure 5