



# Installation Instructions 970 Series Rear Shocks with Remote Reservoirs

### 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 motorcycle.

#### 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

Raising or lowering the rear of your motorcycle will affect the steering and initial ground clearance. If the motorcycle is lower to the ground care should be taken to avoid bottoming, especially over bumps or in turns. Raising the rear of a motorcycle can change the steering head angle. 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 authorized shop manual or take the motorcycle to a competent dealer.

#### Warning

The motorcycle must be securely blocked to prevent it from tipping over when the shocks are 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/motorcycle.

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

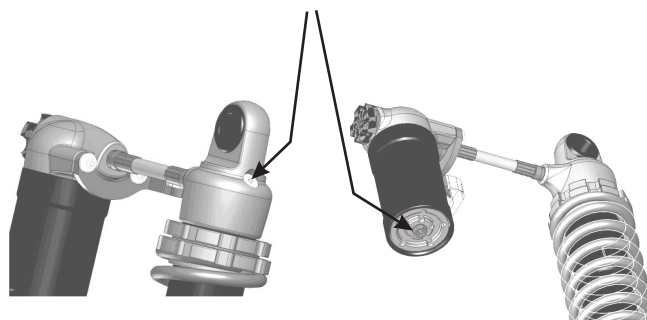
Make sure that proper bushings/sleeves are installed in the shocks. Improper bushings/sleeves can cause unsatisfactory and/or unsafe operation (see the instructions packaged with the mounting hardware).

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

#### Caution

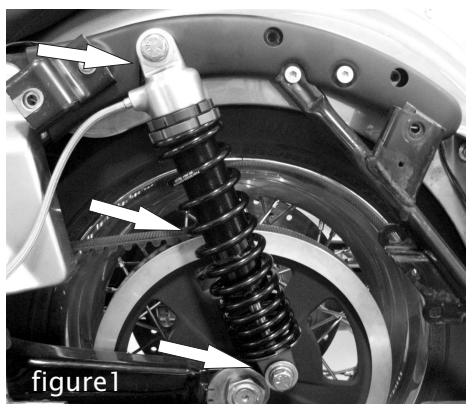
NOTE: The internal pressure and fluid level of your 970 shocks are set from the factory and NOT to be adjusted by the customer. Do NOT attempt to add/remove any fluid or pressure from any fill/bleed ports on the shocks (see below) as damage and/or injury will result and the warranty will be voided.

DO NOT ADJUST/REMOVE

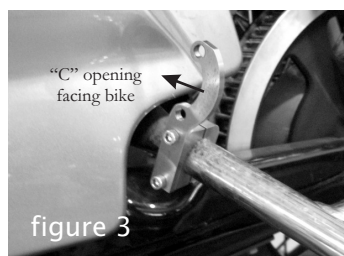
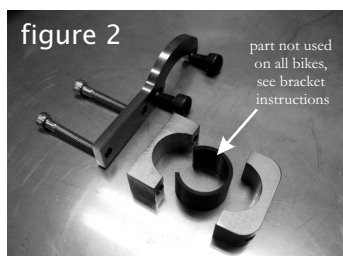


## Installation

1. Place a quality jack or sufficient blocks under the motorcycle to securely lift the rear wheel slightly off the ground.
2. Using the correct shop manual for your bike, remove the Bags and old shocks noting the location of mounting hardware. If additional accessories are installed on your motorcycle, please refer to their mounting instructions for removal to gain access to your shocks.
3. Using the included hardware, install the shock assemblies onto the motorcycle with the reservoir hydraulic lines at the top and pointing forward. Note any special instructions in the hardware kit. Tighten bolts / nuts to their proper torque. Check the clearances of the shock to the frame, shock to chain or belt, shock to chain or belt guard and shock to brake caliper and/or linkage. See arrows in Fig 1 , check both sides.



4. Install the reservoir mounting brackets (figure 2) on either the 7/8" diameter crash-bars or if your model does not have crash-bars on the 3/4" saddle-bag support - see supplemental instructions in mounting bracket kit for details. Be sure the tall flat piece is mounted towards the front, and the "C" opening is facing inward toward the motorcycle (figure 3). Leave the bracket assemblies loose enough to be adjusted, and they will be tightened later.



5. Using the included hardware, attach the shock reservoirs to the front face of the mounting brackets as shown (figure 4) and tighten the fasteners into the reservoirs.



6. Carefully reinstall the saddle bags making sure the reservoirs, hydraulic lines, and brackets do not contact the saddle bags. Adjust the mounts by sliding them in or out and/or tilting them forward or back to achieve optimum clearance of all components as shown (figure 5 & 6). Then remove the bags and tighten the brackets.



7. Reinstall any accessories removed in accord with their mounting instructions, while watching for possible clearance issues. The bushings in the shock eyes are designed to allow a certain amount of rotation and deflection necessary for proper operation, and binding and/or metal-to-metal contact must NOT occur throughout this range of movement. If any accessories bolt to – or near – the shock mounting points it is crucial that there is no metal to metal contact with a minimum clearance of .02" from the shock be maintained through its range of motion to insure no binding or contact occurs..

### Sag & Preload Adjustment

Preload adjustment greatly affects ride quality. When the preload is adjusted properly, the suspension should “sag” or compress about one third of the total available travel with rider(s) & gear on the bike ready to ride – this is referred to as “ride sag”. Start by extending the suspension until it's completely topped out then measure from the axle to a point on the chassis directly above it - this is “Ext.” (or extended) in ride sag worksheet below. Then get a helper to take the same measurement with you - and any passenger or gear - on the bike ready to ride, note that measurement down on the next line “With Rider(s) & gear” and subtract it from the first line. The result is your “Actual Sag”. Your target ride sag is listed for your shock part number below (see “Rider Sag Worksheet” below).

#### Ride Sag Worksheet

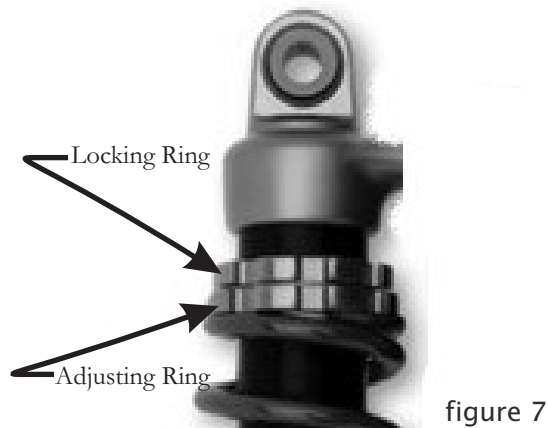
Ext. \_\_\_\_\_  
 With Rider(s) & gear - \_\_\_\_\_  
**Actual Sag =** \_\_\_\_\_

| p/n           | Target Ride Sag |
|---------------|-----------------|
| 970-2001..... | 1.00"-1.25"     |
| 970-2002..... | 1.00"-1.25"     |
| 970-2003..... | .75" -1.00"     |
| 970-2004..... | .75" -1.00"     |

Adjust preload until **Actual Sag** matches **Target Sag**.

If the bike is sagging too much, you will need to increase the pre-load. If it's not sagging enough, you need to decrease the pre-load.

Spring pre-load adjustments are made by using the supplied preload wrench to loosen the preload locking ring, and then turn the preload adjusting ring (figure 7). Turn this adjuster clockwise (looking at the shock from the reservoir end) to increase spring pre-load and counterclockwise to decrease spring pre-load. Set the pre-load equally on both shocks, measuring the installed spring lengths making sure they are the same.

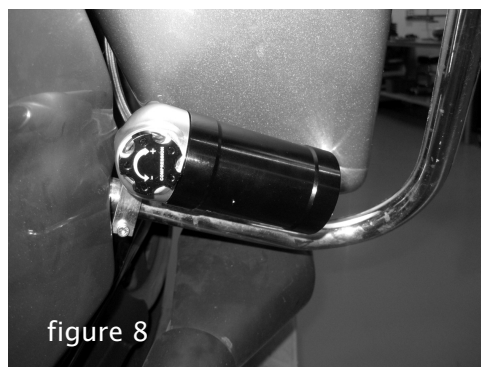


Never adjust the preload to produce a spring length less than the minimum installed springs lengths listed below for each shock part number, or damage will occur. Once you've adjusted the preload, be sure to tighten the preload lock ring back down on the adjuster ring.

| Part Number | Minimum Installed Spring Length |
|-------------|---------------------------------|
| 970-2001    | 6.92" inches (176mm)            |
| 970-2002    | 7.12" inches (181mm)            |
| 970-2003    | 5.80" inches (147mm)            |
| 970-2004    | 5.90" inches (150mm)            |

### Compression Adjustment

Another adjustment that can be made on your 970 Series shocks is compression damping. Compression damping is the hydraulic force generated by the damper portion of the shock during the compression of the shock. To increase the compression damping, simply turn the knob on the reservoir clockwise and to reduce the compression damping turn it counter clockwise (figure 8). Adjust both shocks equally by counting the “clicks” from all the way in (MAX compression).



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

Then ride and enjoy....Safely.

