# INSTALLATION INSTRUCTIONS

Fork Spring Kit
General

## ATTENTION!

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

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

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

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

**Changing the chassis and / or suspension on any vehicle will change the handling characteristics of that vehicle. Care should be taken when operating the vehicle with such modifications while getting accustomed to the new handling characteristics.**

## IMPORTANT NOTICE

**Caution:** Removing and replacing fork springs must be performed by a qualified mechanic or according to steps outlined in a professional workshop manual that relates to your particular make, model and year motorcycle.

***The vehicle must be securely blocked to prevent it from dropping or tipping when the fork springs are removed. Failure to do so can cause serious damage and / or injury.***

Progressive Suspension Fork Springs are designed to work with OEM (Original Equipment) forks. Use of this product on any forks other than OEM may produce an unsatisfactory ride and void the warranty.

## Installation

- Read all the instructions carefully before installing this kit on your motorcycle. Use your factory authorized shop manual as a reference while installing this kit.
- Support and lift the motorcycle securely so the front wheel is off the ground. The balance point is toward the front of the engine.
- The fork caps are under high spring force; care must be taken when removing fork caps!

## LIFETIME LIMITED WARRANTY

Progressive Suspension warrants to the original purchaser 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.

PROGRESSIVE suspension

TECH: 714.523.8700 WWW.PROGRESSIVESUSPENSION.COM



*This instruction is appropriate for the models noted; however you must confirm you have the correct kit part number for your specific bike by contacting Progressive Suspension

- Remove the fork caps.
- Remove fork springs according to instructions contained in you rfactory authorized service manual. For maximum performance we highly recommendthat the forks be thoroughly cleaned, inspected and new fork oil installed.

**NOTE:**
***If your motorcycle comes equipped with two fork springs in each leg (long & short), remove and discard both springs and the flat washer between the springs. If a stcck spacer exists, remove it. If there is a short spring on the damper rod, do not remove it!***

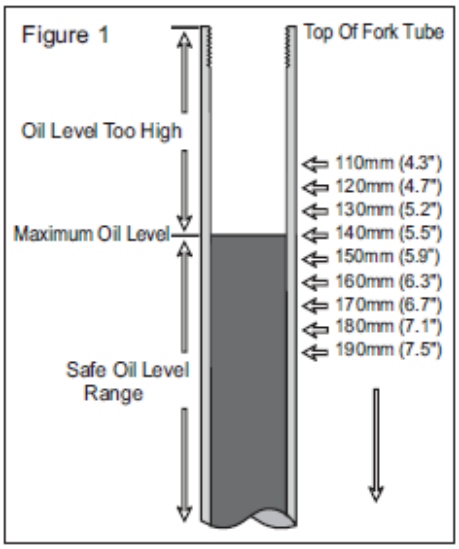
- Unless otherwise noted on the Application Supplement, use the recommended fork oil viscosity as noted in your owner's manual. See FINE TUNING for more information.
- Before installing the new springs & pre-load spacers, it is crucial that you make sure you've installed the proper fork oil and the oil level is correct. Fork oil level / volume should be checked according to the steps outlined in your authorized shop manual. Measurement of your fork oil by level is the preferred method. However, some manuals only specify a volume measurement. Due to the design of a progressive wound fork spring it will displace more oil thus requiring a maximum oil level os 5.5" (140mm).

***This is not a recommendation, it is only a precautionary statement.***

- If your manual specifies an oil level higher than 5.5" (140mm) set the oil level at 5.5" (140mm). (Oil level is the distance from the top of the fork tube to the top of the oil with the fork completely collapsed and the fork spring removed-see Figure 1).

This measurement can be made by using either one of the Progressive Suspension Fork Oil Level Adjusters (FOL-1 or FOL-2).

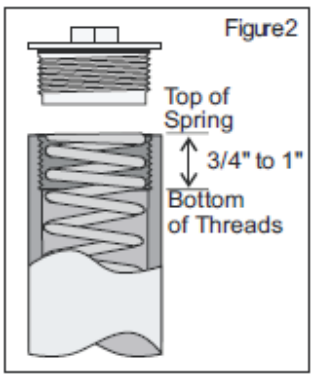
***NEVER ADD TOO MUCH OIL RESULTING IN A MEASUREMENT LESS THAN 150mm WHEN USING THIS SPRING KIT.***

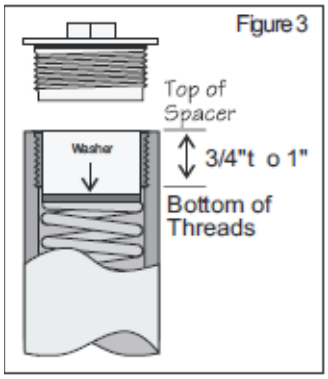



- After confirming the fork oil level is correct, install your new fork springs into the forks. Mechanically, it makes no difference which way the springs are installed. Some manuals will state; install the spring with the close wound end towards the bottom. This is done because sometimes there will be less spring noise with the close wound end towards the bottom. The springs will perform exactly the same regardless of which direction they are placed. Check the spacer length requirement for your motorcycle in the enclosed supplement. If not listed, you must calculate the pre-load. What is pre-load? Pre-load is the distance the spring compresses when a fork cap is installed. You may or may not utilize a spacer to achive proper pre-load. The spacer itself is not "pre-load". It just helps to achive it. Why is pre-load important? It determines the proper ride height which in turn affects how the bike handles.

## Calculating Pre-load

- If your motorcycle is not listed - or a spacer length indicated on the enclosed chart, you will need to calculate pre-load to determine if you need a spacer and the length it must be. Most motorcycles need between 3/4" and 1" of pre-load. As a rough rule of thumb, the fork spring (Figure 2) or fork spring and spacer combination (Figure 3) should be at least flush (or above) the top of the fork tube with the forks fully extended. This is true for most motorcycles because their fork caps are between 3/4" and 1" long, meaning that they will screw into the fork tube the same distance. For fork caps longer than 1" , you must calculate the pre-load length so the fork spring or fork spring combination will be below the edge of the fork tube. If your fork caps have adjustable pre-load settings or are recessed below the edge of the fork tube (circlip type), then they are usually much longer than the 3/4"to 1" caps and must be measured accordingly.




Also check the Notes in the enclosed Application Supplement, the stock spacer in some cases can be modified to fit. If making a spacer, we recommend PVC pipe that is the approximate diameter of the fork springs but will still fit inside the fork tubes. ***Warning:***

If installing a spacer, a flat washer must be installed between the spacer and the spring!

- After installing the fork cap, we recommend no air pressure for a starting point. See FINE TUNING for more information.

- Fork Braces: We have found numerous cases of binding forks due to improperly mounted fork braces. Our experience has led us to conclude that even the slightest misalignment while installing the fork brace will cause the forks to bind. If, after installing the springs a harshness exists (especially on small bumps and freeway expansion joints), remove the fork brace and ride the bike again over the same route. If harshness has disappeared, refer to the fork brace installation instructions for proper and concise installation to eliminate the misalignment. If harshness still exists, your front end (wheel / forks) may be misaligned. Consult your shop manual for proper wheel and fork alignment instructions.

- Fork damper adjustments: Our testing has shown that bikes equipped with fork damping adjusters should be set at the minimum setting for freeway and surface street riding for maximum comfort. On motorcycles equipped with anti-dive or adjustable pre-load, we recommend starting at the minimum settings for each.

- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with it altered handling characteristics.

## TECHNICAL INFO

Our technical staff will assist you if you have any problems or questions. Call (714) 523-8700 from 8am to 4pm PST.

# FINE TUNING

**Pre-load:** Spacer length can be decreased to lower the ride height and soften the ride or increased to raise the ride height and stiffen the ride. Adjust in 1/4" increments.

**Fork Oil:** Except as where previously noted we recommend the stock oil viscosity and level. Oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 5 weight increments (i.e. from 10 weight to 15 weight). Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft, or dive excessively.

**Air Pressure:** Progressive fork springs are designed to be used with no air pressure under normal conditions. A few pounds of air can make a difference, so add air in small increments.

***Technical info: Our technical staff will assist you if you have any problems or questions. Call (714) 523-7800 from 8am to 4pm PST***