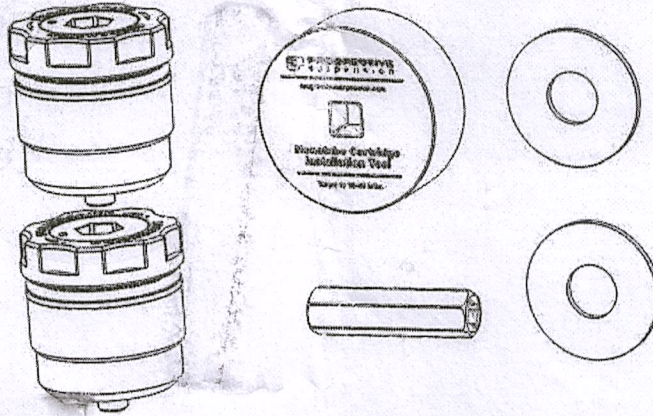




INSTALLATION INSTRUCTIONS

PRELOAD ADJUSTABLE FORK CAPS, 49MM



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.

LIMITED WARRANTY

Progressive Suspension warrants to the original purchaser this part to be free of manufacturing defects in materials and workmanship with a 1 year 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.

IMPORTANT NOTICE

- This kit is designed to fit Harley-Davidson OEM fork-tubes.
- These adjustable preload fork caps are longer than many OE fork caps (even when adjusted to the minimum preload setting). You may choose to shorten any pre-load spacers by the same length difference to maintain current fork spring preload as your new minimum setting.
- **It is crucial that the amount of additional preload added NEVER ALLOWS THE FORK SPRINGS TO GO SOLID.** Failure to heed this warning may result in damage, loss of control, injury or death.
- Do not attempt to install, tighten, or loosen adjustable preload fork caps using the 1/2" hex tool in the center - it is **ONLY** for adjusting preload



RECOMMENDED TOOLS

3/8" Ratchet
1/2" socket



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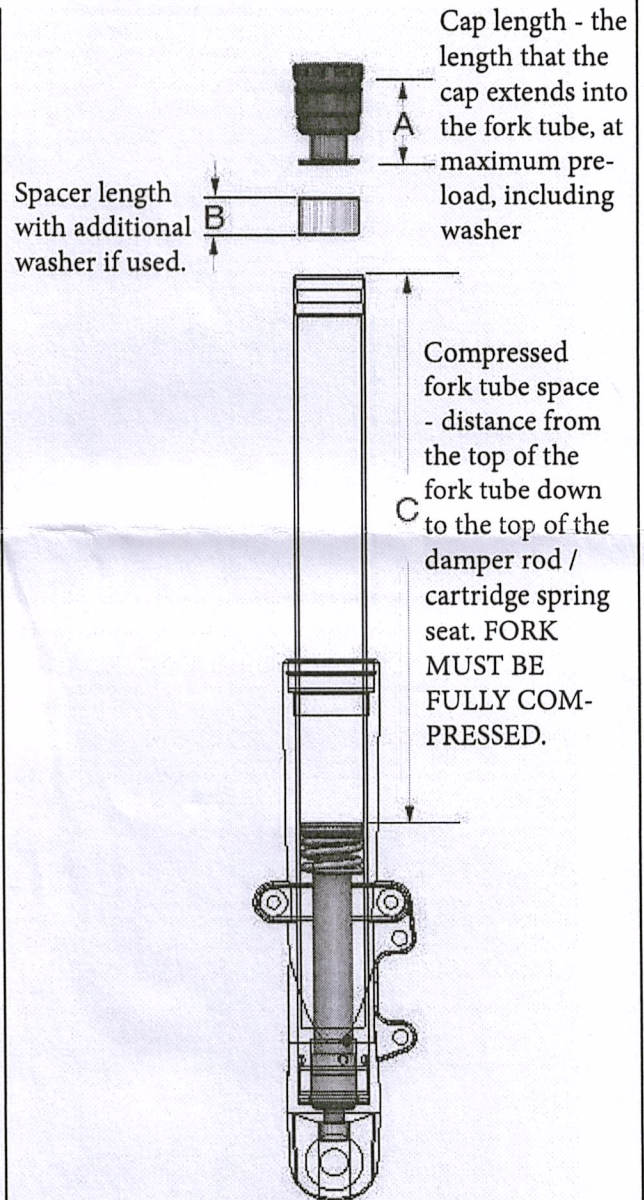


CHANGING THE CHASSIS AND/OR SUSPENSION ON ANY VEHICLE WILL CHANGE THE HANDLING CHARACTERISTICS OF THAT VEHICLE. CARE SHOULD BE TAKEN WHEN OPERATING THE VEHICLE WITH SUCH MODIFICATIONS WHILE GETTING ACCUSTOMED TO THE NEW HANDLING CHARACTERISTICS.

INSTALLATION

Read all the instructions carefully before installing this kit on your motorcycle. Use your factory authorized service manual as a reference while installing this kit.

- These caps are a direct replacement for your stock fork caps, but with the ability to adjust fork spring preload externally. To install them simply remove your stock fork caps and reinstall your new Progressive Suspension preload adjustable caps per the procedure outlined in your authorized Harley Davidson service manual as well as the following important details
- *It is crucial that your fork springs NEVER "go solid" or to "coil bind". This means that when your forks are fully compressed and your Progressive Suspension adjustable preload fork caps are adjusted to their maximum preload setting, the remaining fork spring space (minimum spring space) must never be less than the solid length of your fork springs. If it is, you will need to shorten your preload spacers or choose different fork springs with a shorter solid length.*
- Minimum Spring Space can be calculated by fully compressing the fork assembly and measuring the distance from the lower spring seat (typically the top of the damper-rod in the fork) to the top of the fork tube (C), then subtract the portion of the cap, set to maximum pre-load, including the washer, that extends into the fork (22mm (.87")) plus the length of any additional preload spacer & washer (if used). $C - (A + B) = \text{Minimum Spring Space}$. Now measure the WIRE diameter of the fork spring and multiply that number by the number of coils the spring has - that is the spring's solid length, for



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example $4.8\text{mm} \times 45 = 216\text{mm}$ ($0.189" \times 45 = 8.5"$) The spring's solid length MUST be less than the Minimum Spring Space of your fork assembly.



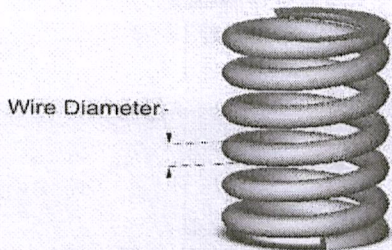
Use the illustrations and provided worksheet to verify these critical measurements.

Calculating Minimum Spring Space

$$\begin{aligned}
 &C \quad \underline{\hspace{2cm}} \\
 &- A \quad \underline{\hspace{2cm}} \\
 &- B \quad \underline{\hspace{2cm}} \text{ (if used)} \\
 &= D \quad \underline{\hspace{2cm}}
 \end{aligned}$$

Using the worksheet above, "D" must be greater than the solid length of the fork spring used - the solid length of the fork spring being the wire diameter times the number of coils (see "Calculating Spring Solid Length" below).

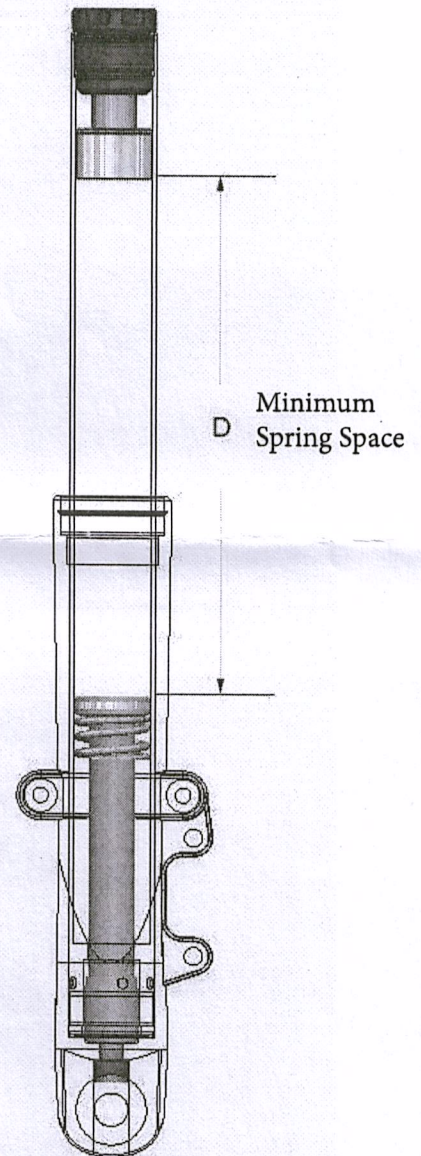
Calculating Spring Solid Length



To calculate the solid length of a spring first measure the Diameter of the Wire used, then multiply that by the number of coils. The number of coils is the number of revolutions the wire is wound, in the example above there are 6 and a half revolutions, thus the coil count would be 6.5 coils. A typical fork spring has many more coils than this example.

$$\text{Wire Dia.} \quad \underline{\hspace{2cm}} \quad \times \quad \text{Coil Count} \quad \underline{\hspace{2cm}} \quad = \quad \underline{\hspace{2cm}}$$

SPRING SOLID LENGTH MUST BE LESS THAN "D" ABOVE.





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- Before installing the new adjustable fork caps, make sure the caps are adjusted to their minimum setting by rotating the adjuster counterclockwise until it stops rotating and has contracted to its shortest length. (Approximately 12 turns = 20mm (0.79") of total pre-load adjustment)
- Place the supplied flat-washer between the top of the spring (or preload spacer, if used) and the bottom of the cap.
- Using the supplied fork cap socket, install and tighten the Progressive Suspension preload adjustable fork caps to the factory recommended torque for your particular year, make & model bike. DO NOT attempt to tighten or loosen the cap using the supplied 1/2" hex tool in the center. This tool is for adjusting the preload ONLY.

RIDE SAG & PRELOAD ADJUSTMENT

- Optimum ride sag is approximately one-third or 33% of your total suspension travel. You must first know what your total travel is, and to accurately know that you need to two measurements – fully extended and fully compressed – getting the fully compressed measurement typically involves re-assembling the suspension without the spring(s) and compressing it all the way to bottom. Subtracting the compressed from the extended is the most reliable way to know your true total travel. A few other less reliable methods of knowing your bike's total travel is to check with your local dealer, look at the manufacturer's claimed specifications, or check with other owners of the same bike. However you get it, multiplying your total travel by 0.33 will get you your target ride sag
- Measuring your forks ride sag involves two steps. First with the front wheel lifted slightly

off the ground with the forks fully extended, measure from the axle to a fixed point on the sprung part of the chassis – the lower triple-clamp for example. Then while sitting on the bike ready to ride take the same measurement. Subtract the second measurement from the first – that is your current front ride sag.

- Compare the target ride sag to the current ride sag. If the current ride sag is more than the target, increase the preload until you hit the target ride sag. Conversely if the current ride sag is less than the target, reduce the preload until the target ride sag is achieved.
- Your new Progressive Suspension preload adjustable fork caps allow you to adjust your preload up to 20mm (0.79") and to do this all you need do is rotate the hex socket in the center of the cap - clockwise increases preload, counterclockwise reduces preload. Be careful not to over rotate the adjuster tightening it against its stops, when you feel it stop it has reached the end of its adjustment. It is recommended that if you reach a stop at either end of the adjustment, turn the adjuster a half turn back away from that stop. Make your adjustments evenly on both sides by counting the rotations from minimum preload - back the adjuster all the way out counterclockwise then turn each adjuster clockwise the same number of rotations until the desired preload is archived.

FINE TUNING

- When installed and adjusted to their minimum preload setting, your new Progressive Suspension preload adjustable fork caps produce no additional preload over your stock fork caps. (Provided you followed the steps found on Page 1 under "Important Notice") If you require less preload than stock and your forks have preload spacers, you can cut them



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to a shorter length to reduce your initial preload. If you need less preload and your forks do not have preload spacers then you'll need different fork springs. If you've adjusted your Progressive Suspension preload adjustable fork caps to their maximum setting and still need more preload, you can make longer preload spacers out of metal or PVC tubing of the appropriate diameter. We recommend increasing or decreasing the spacer lengths in 13mm (0.50") increments. Never use preload spacers that allow the springs to go solid when the adjusters are adjusted to maximum preload (see page 2).

NOTES

Lined area for notes, consisting of approximately 22 horizontal lines.

TECHNICAL INFO

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



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