



INSTALLATION INSTRUCTIONS

Lowered Monotube Cartridge Fork Kit

Harley-Davidson 2013-2017 FLS, 2016-2017 FLSS/FLSTFBS,
2000-2017 FLST (kit 31-2504), 2000-2005 FXDWG, 2000-2015 FXST (kit 31-2505)



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.

IMPORTANT NOTICE

Caution: Removing and replacing fork components 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 forks are removed. Failure to do so can cause serious damage and/or injury.

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



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.

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.



TECH: 714.523.8700

WWW.PROGRESSIVESUSPENSION.COM



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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.
- Support and lift the motorcycle securely so the front wheel is off the ground. The balance point is toward the front of the engine.
- Remove the forks according to instructions contained in your factory authorized service manual.



For maximum performance, we highly recommend that the forks be disassembled, thoroughly cleaned, inspected and reassembled with Progressive Suspension Fork Oil (Standard type E). When installing Progressive Suspension Monotube cartridge kit, ONLY - 150cc (5 oz.) - of type "E" or 10wt. fork oil is required in each fork for lubricating the internal moving parts - The cartridge damper is sealed. Changing the volume or viscosity of the oil is not recommended and could cause damage and / or loss of control.

- The Progressive Suspension Monotube Cartridge fork kit is a direct replacement of your stock caps and internal fork components.



While the installation of this Monotube Cartridge fork kit will not change the compressed length of the front forks, we have found that some motorcycles may not have adequate clearance between the fender, fairing and / or accessories. So we recommend with the forks springs removed from both forks, re-install the forks, fender, wheel and anything else you may have removed and lift the front forks, or lower the motorcycle to completely compress the front forks. With the forks fully compressed, check for adequate clearance between the tire, fender, fairing, crash bar, accessories, etc. You must correct any clearance issues prior to installing this kit to avoid vehicle damage and/or vehicle control problems.

- After removing both forks, start with one of the forks and remove the fork cap, then remove the fork spring.



Cautions *The fork cap is under spring pressure and care must be taken as it is removed to avoid injury!*

Keep downward pressure on the cap as you unscrew the final threads, this will minimize the spring "jump" that will occur as soon as the cap is fully in-threaded.

BE CAREFUL!!

- Drain the fork oil. Then with the fork completely compressed, remove the damper rod and top-out spring by removing the bolt in the bottom of the fork. Keep the fork assembly fully compressed at this point to keep the bottoming cup properly loaded.





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■ Lowering 1" inch or 2" inches?...

- - If lowering the fork 1" inch, install one of the **long** top-out springs on each Progressive Suspension Monotube cartridge assembly as shown (see pg 4, figure 1) AND four (4) of the supplied "C" shaped preload spacers between the top of the fork spring and the upper spring seat (see pg 4, figure 2). Go to next step.
- - If lowering the fork 2" inches, install one **long** top out spring AND one **Stock** top-out spring on each Progressive Suspension Monotube cartridge assembly as shown (see pg 4, figure 1) -AND install two (2) of the supplied "C" shaped preload spacers (see pg 4, figure 2). Go to next step.
- After installing the proper combination of supplied top-out spring(s) & spacers onto the Progressive Suspension Monotube cartridge assembly, insert it into the fork assembly as shown (see pg 4, figure 3).
- Put a drop of red thread-locking agent on the bolt that came out of the bottom of the fork and reinstall it - along with the sealing washer, tightening it up into the Progressive Suspension Monotube cartridge assembly. Torque the bolt to the factory recommended specification of 11-18 ft.-lbs
- Repeat the process on the other fork and proceed to next step.
- Secure the fork assembly so you can fill it with fluid. This may require stroking the assembly to draw fluid from the inner fork tube into the outer fork slider.



DO NOT USE MORE THAN 5 FLUID OUNCES OF FORK OIL IN EACH FORK LEG WITH THE INSTALLATION OF THIS KIT. FILLING EACH FORK WITH MORE THAN 5 FLUID OUNCES OF FORK OIL MAE CAUSE THE FORKS TO HYDRAULIC LOCK, WHICH MAY CAUSE SEAL FAILURE, POOR PERFORMANCE AND / OR LOSS OF CONTROL.

- Pour 5 ounces of 10 wt. fork fluid in each fork, pausing to stroke the assembly to get the fluid into the outer fork slider. Failure to do this will cause the required amount of fluid to overflow (see pg, 4, figure 4). This fluid is just to lubricate the moving parts and has no effect on the actual damping action of the sealed Monotube cartridge fork insert.
- Once the proper amount of fluid is in the fork assembly, slide the inner fork tube up and install the supplied fork cap. Torque the cap to the factory recommended specification of 50-60 ft.-lbs.
- Reinstall the forks and all other components on the motorcycle per your factory authorized manual being sure to double check all fasteners for proper torque per said manual.

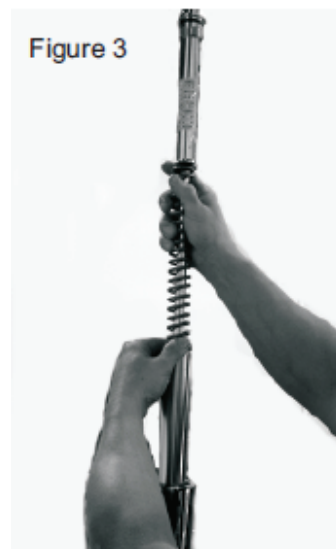
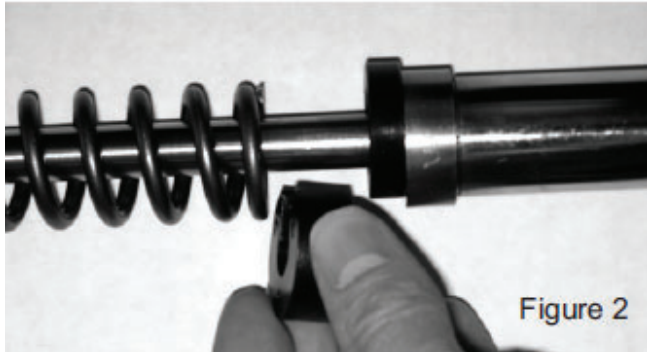
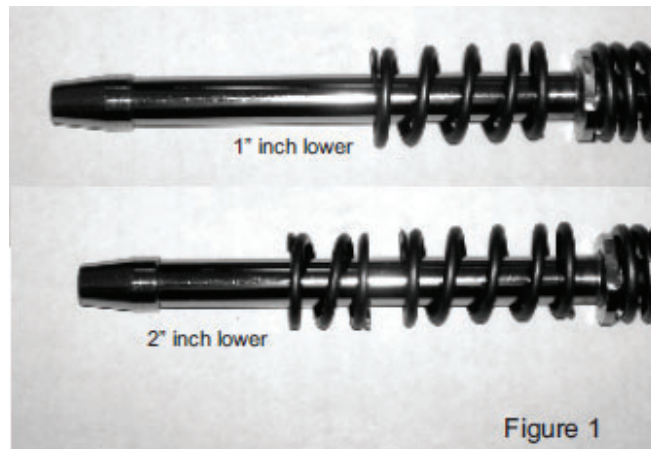




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- **Pre-load fine tuning:** Though we feel the recommendation above should be optimum in most cases, preload can be decreased to lower the ride height and soften the ride or increased to raise the ride height and stiffen the ride by adding or subtracting the supplied preload spacers.

TECHNICAL INFO

Our technical staff will assist you if you have any problems or questions.

Call (714) 523-8700 from 8am to 4pm PST.

- To compliment your Softail suspension, we recommend installing a pair of our 422 Series Softail Shocks. To compliment the 2000-2005 FXDWG suspension, we recommend installing a pair of our 412 Series Shocks, 444 Series F.S.T. Shocks, 490 Series Sport Shocks or our 990 Series High Performance Shocks.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics.



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FORK MONOTUBE KIT PACKAGING SUPPLEMENT

VERY IMPORTANT!

BE SURE TO REMOVE THE PLASTIC TUBING FROM INSIDE THE MAIN SPRINGS ON BOTH MONOTUBE ASSEMBLIES PRIOR TO INSTALLING THEM INTO YOUR FORKS!

THESE PLASTIC TUBES ARE FOR SHIPPING PURPOSES ONLY.

ONCE THE TUBES ARE REMOVED CARE SHOULD BE USED TO NOT ALLOW THE SPRINGS TO STRIKE THE DAMPER TOR SHAFT AS DAMAGE TO THE SHAFT MAY OCCURE WHICH COULD LEAD TO SEAL FAILURE



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Monotube Fork Kit

WARNING

THIS KIT REQUIRES FORK OIL VOLUMES THAT ARE DIFFERENT THAN FACTORY SPECIFICATIONS.

CAREFULLY FOLLOW INSTALLATION INSTRUCTIONS USING THE FORK OIL VOLUMES AS SPECIFIED IN THE INCLUDED INSTRUCTIONS.

**DO NOT USE MORE FORK OIL THAN SPECIFIED
IN THE INCLUDED INSTRUCTIONS!**

LOSS OF VEHICLE CONTROL AND / OR DAMAGE TO YOUR FORKS OR THE CONTENTS OF THIS KIT MAY RESULT

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Instr# 3081-031 Rev B

Monotube Fork Kit

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