



Installation Instructions Lowered Monotube Cartridge Fork Kits Harley Davidson FLST (kit 31-2502) Harley Davidson FXST (kit 31-2503)

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.

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 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 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 forks according to instructions contained in your factory authorized shop manual.

Warning

For maximum performance we highly recommend that the forks be disassembled, thoroughly cleaned, and inspected. When installing Progressive Suspension Monotube Cartridge fork kit, only a small amount (5oz.) of 10wt. fork oil is required in each fork for lubricating the internal moving parts - the cartridge dampers are 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 fork caps and internal fork components.

Caution

While the installation of this Monotube Cartridge fork kit will not change the compressed length of the front forks, we have found that some bikes may not have adequate clearance between the fender, fairing and / or accessories. So we recommend with the fork 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 bike 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.

Limited Lifetime Warranty

Progressive Suspension Inc. warrants to the original purchaser this Part to be free of manufacturing defects in materials and workmanship with a Limited Lifetime 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 expenses or 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 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.

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

Warning

CAUTION 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 un-threaded

BE CAREFUL!

- Drain the fork oil, and then with the fork completely compressed remove the damper rod & top-out spring by removing the bolt in the bottom of the fork. Keep the fork assembly fully compressed at this point to keep bottoming cup properly located.
- **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 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 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 figure 1) – AND install two (2) of the supplied "C" shaped preload spacers. 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 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, tightening it up into the Progressive Suspension Monotube cartridge. 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 in to the outer fork slider.

Warning

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 MAY CAUSE THE FORKS TO HYDRAULIC LOCK, WHICH MAY CAUSE SEAL FAILURE, POOR PERFORMANCE AND/OR LOSS OF CONTROL.

- Pour 5 ounces of 10 wt. 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 figure 4). This fluid is just to lubricate 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 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.
- **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 8 am to 4 PM Pacific time.

- To compliment your suspension, we recommend installing a pair of our 422 Series Softail Shocks, or better yet our AirTail System.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics.

Illustrations

