



INSTALLATION INSTRUCTIONS

Lowered Monotube Cartridge Fork Kit

1" & 2" Low† Monotube Kit with FST for 2017-UP* Harley Davidson FLH/FLT Models

†Standard & 1" Low for FLHTKL

ATTENTION!

Statements in these instructions that are preceded by the following words or symbols 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.



Lowering your motorcycle will decrease initial ground clearance. The motorcycle will be lower to the ground and care should be taken to avoid bottoming, especially over bumps or in turns. Lowering a motorcycle can change the handling characteristics. Always use extreme caution when riding after a change is made and take time to get accustomed to any handling change.

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. **For the installation of this kit, we recommend using a press or some other fork spring compression tool.** If you do not possess such resources, take your bike and this kit to a competent mechanic to have it installed.

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 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.



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 lift point should be toward the front of the engine.
- Remove the forks according to instructions contained in your factory authorized service manual.



- Removing and installing Fork Springs with high-preload:
As noted in the beginning of the instructions, due to the force required to compress the fork-springs and remove the fork-caps in this kit, we recommend using a press as illustrated on page 6, or other fork spring compression tool. Even while using either a press or such tooling, great care must be taken to avoid personal injury or damage to the fork and if you are in any way uncertain about this portion of the procedure - stop here and take your forks to a competent mechanic to have the remainder of the kit installed.

NOTE

For maximum performance we highly recommend that the forks be disassembled, thoroughly cleaned, inspected and reassembled using Progressive Suspension Fork Oil (Standard - Type E). When installing Progressive Suspension Monotube Cartridge fork kit, only a small amount of fork oil is required in each fork for lubricating the internal moving parts. A volumetric quantity - 250cc - is recommended in the right fork leg and a height measurement - 175mm - is recommended in the left fork leg. Changing the volume or viscosity of the oil is not recommended and could cause damage/or loss of control.



- 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-installing 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., while turning left to right - lock to lock. You must correct any clearance issues prior to installing this kit to avoid vehicle damage and / or vehicle control problems.
- This kit replaces your stock fork caps, preload-spacers, fork springs, top-out springs and damper rods. Remove these components and drain the oil out of your forks per the procedure outlined in your factory authorized service manual. Be sure to keep the fork tube fully bottomed out in the lower leg, or slider, to keep the bottoming cup in position at the bottom of the fork for reassembly.
- **Also note that this kit contains components for two different fork configurations, 1" low† (†Standard ride height for FLHTKL) and 2" low† (†1" low for FLHTKL). Decide which configuration you prefer before installing and follow the instructions carefully for that configuration.**
- Starting with the right fork (referencing the illustrations below), first **install either 1 THIN (for 1" low†) or 2 THICK (for 2" low†) of the "C" shaped top out spacers onto the monotube cartridge assembly by snapping each "C" shaped spacer on with its recess toward the plate and then push it fully up against the plate as shown in Figure 1, Figure 2 and the illustrations (page 3).** Then drop the supplied LONG top-out spring into the fork and insert the Monotube cartridge assembly. Make certain the bottoming-cup is properly seated in the bottom of the fork - in the slider - and the bottom of the Monotube cartridge assembly is seated within the bottoming cup. Put a drop of thread locking agent on the bottom fork bolt and thread it (along with the copper sealing washer) into the bottom of the Monotube assembly. Torque the bolt to the factory recommended 30-37 ft.-lbs. If the Monotube assembly tries to rotate, temporarily thread the Monotube assembly into the fork-tube and try applying pressure to the assembly to keep it from rotating by "pulling" on the fork tube while torqueing the bottom fork bolt.





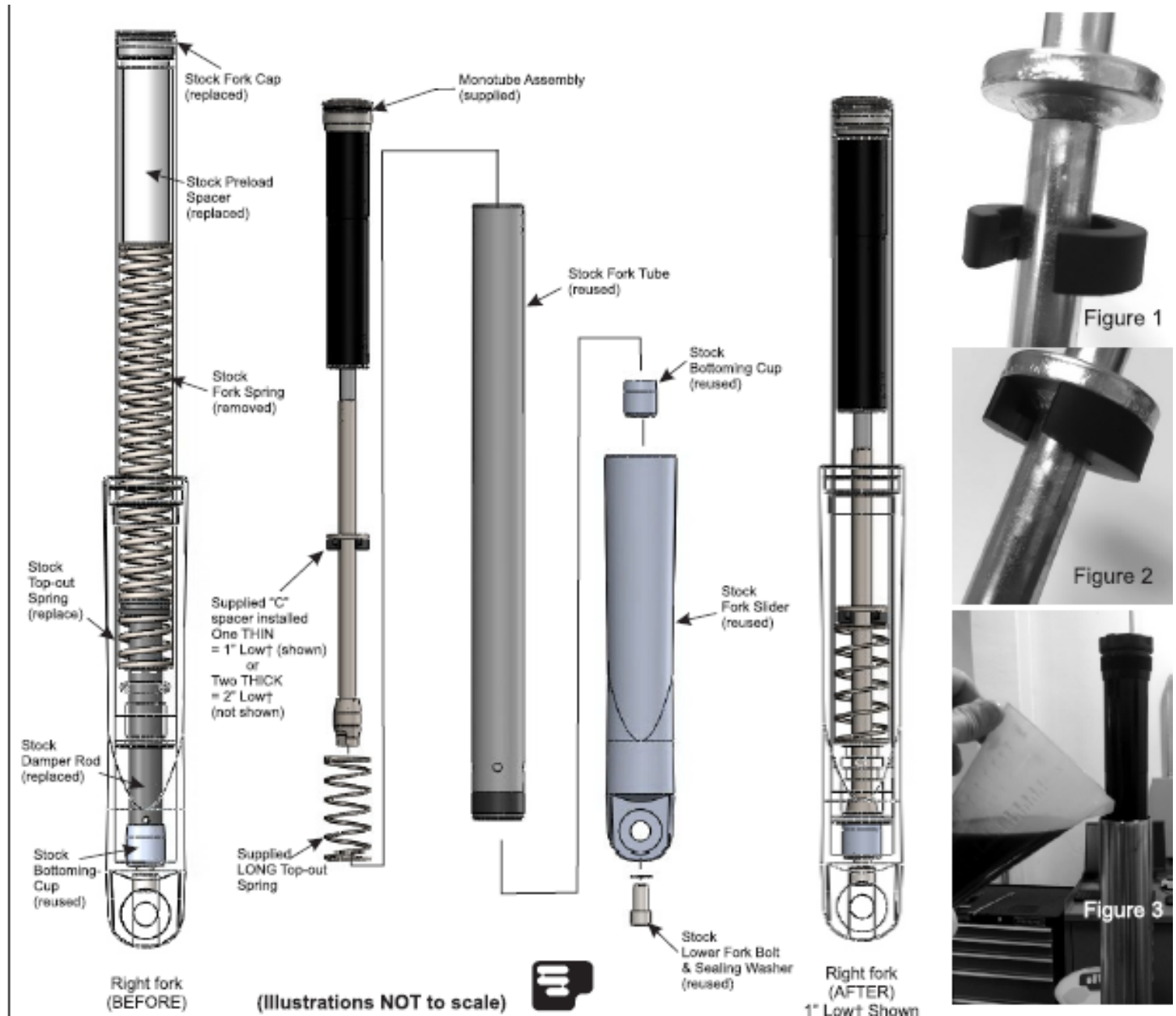
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- **No fork spring is installed in this (the right) fork assembly.** Pour ONLY - 250cc - of Progressive Suspension Fork Oil (Standard type E) or 10wt fork oil into the fork for lubricating purposes (figure 3). Then, using a 19mm Hex Driver, thread the Monotube assembly into your fork tube and torque it to the recommended 16-43 ft.-lbs. This completes the right fork assembly.



DO NOT USE MORE THAN 250cc (VOLUME) OF FORK OIL IN THE RIGHT LEG WITH THE INSTALLATION OF THIS KIT. FILLING THE FORK WITH MORE OIL MAY CAUSE THE FORK TO HYDRAULIC LOCK, WHICH MAY CAUSE SEAL FAILURE, POOR PERFORMANCE AND/OR LOSS OF CONTROL.





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- For the left fork (referencing the page 5 illustrations, first **install either 1THIN (for 1" low†) or 2" THICK (for 2" low†) of the "C" shaped top out spacers onto the supplied Top-out Rod assembly by snapping each "C" shaped spacer on with its recess toward the plate and then push it fully up against the plate as shown in Figure 1, Figure 2 and the page 5 illustration.** Then drop the supplied SHORT top-out spring into the fork-tube followed by the Top-out Rod assembly. Make certain the bottoming-cup is properly seated in the bottom of the fork - in the slider - and the bottom of the Top-out Rod assembly is seated in the bottoming-cup. Put a drop of thread locking agent on the bottom fork bolt and thread it (along with the copper sealing washer) into the bottom of the Top-out Rod assembly. Torque the bolt to the factory recommended 30-37 ft.-lbs. If the Top-out Rod assembly tries to rotate, try applying pressure to the assembly to keep it from rotating by "pulling" on the fork-tube while applying torque to the bottom fork bolt (same as you might while installing a stock damper-rod) or by using a long extension and 12mm socket on the hex atop the Top-out Rod assembly.
- Next fill and set the fork oil level in the Left fork. We recommend using Progressive Suspension Fork Oil (Standard - Type E). To check the oil level properly you must have the spring and spacer removed, cycle the fork several times as you add the oil to purge any trapped air and then completely compress the fork. You then measure from the top of the fork-tube to the oil level - the recommended measurement is 175mm in the left fork. Add or remove fork oil to achieve this measurement. Then drop the supplied Progressive fork spring (tighter coils down) into the fork.
- **For 1" low† - re-install the stock spring flat washer, followed by the included pre-load spacer (you may need to cut the spacer to the 13mm (.05") recommended length).**
- **For 2" low† - DO NOT re-install the stock spring flat washer or any pre-load spacer.**
- Next, install the supplied flat Disc, followed by the Progressive Suspension fork cap - **with the inner portion of the cap temporarily removed from the center of the cap.** If needed (not needed for 1" low†) use a press as illustrated on page 6 to compress the spring to enable you to thread the fork tube onto the outer portion of the fork cap. Then torque the cap to 16-43 ft.-lbs. using a 19mm hex driver.
- Finally, to avoid damage make sure the O-ring inside the outer portion of the fork cap is greased and use a 12mm hex driver to thread the inner portion into the center of the previously installed outer portion of the fork cap, threading it all the way down until it is seated in the outer portion of the fork cap - **it will hit a hard stop and the top of the inner portion will be flush with the bottom of the 19mm hex feature of the outer portion when the inner portion is properly seated.** Torque the inner portion of the fork cap to 15-20 ft.-lbs.
- This completes the left fork assembly.
- Finish reinstalling your left and right fork assemblies and all other components you may have removed per the procedure outlined in your authorized factory service manual.

NOTE: During the re-installation of your forks, the right fork, assembled with the LONG top out spring, may appear slightly shorter due to having no main spring pre-load force. This is normal and can easily be moved up and down by hand during front wheel installation to align for axle insertion.

TECHNICAL ASSISTANCE

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.



The operator must use extreme caution when riding a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.





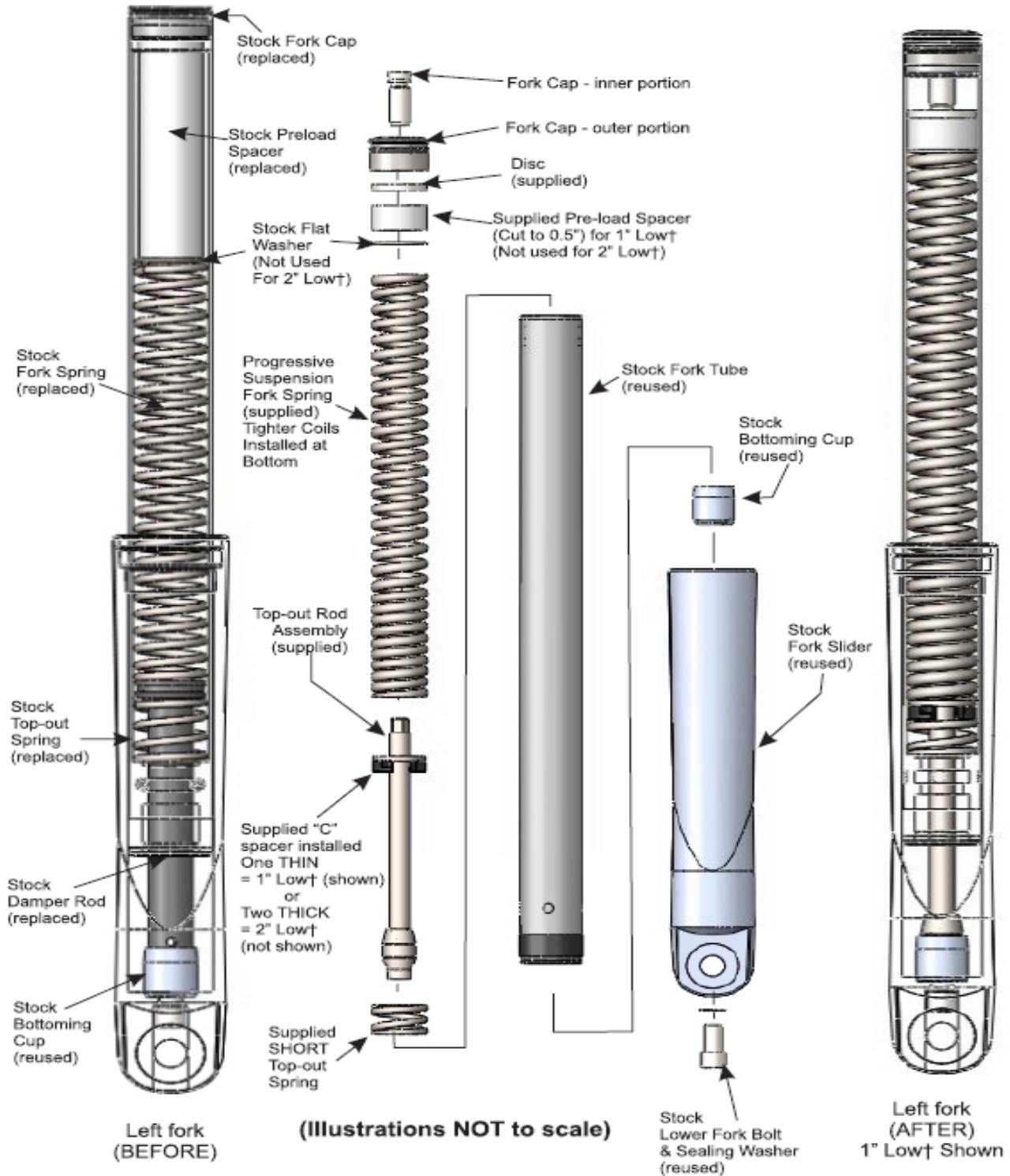
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DO NOT USE MORE THAN 175mm (HEIGHT) OF FORK OIL IN THE LEFT LEG WITH THE INSTALLATION OF THIS KIT. FILLING THE FORK WITH MORE OIL MAY CAUSE THE FORK TO HYDRAULIC LOCK, WHICH MAY CAUSE SEAL FAILURE, POOR PERFORMANCE AND/OR LOSS OF CONTROL.





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Recommended Press Procedure:

1. Loosen the fork-cap one full turn.
2. Position and secure the fork assembly in press so it can be compressed slightly and the fork-tube can be freely rotated - also be sure that the press ram can move upward from that position 3.00" to 4.00" inches to allow the spring to extend once the cap is un-threaded.



THE FORK ASSEMBLY MUST BE HELD IN ALIGNMENT WITH THE PRESS RAM AT ALL TIMES TO ENSURE SAFE SPRING EXPANSION/COMPRESSION WHEN THE FORK-CAP IS UN-THREADED FROM THE FORK TUBE.

3. Compress the fork about .50" to 1.0" inch (figure 1).
4. Now, with the press holding the spring tension, you should be able to unscrew the fork-tube from the cap by hand (figure 2).
5. Once the fork-tube is completely un-threaded from the cap (figure 3) carefully release pressure in the press allowing the fork spring to safely extend fully (figure 4).

To install the Monotube assembly, simply reverse the preceding steps.

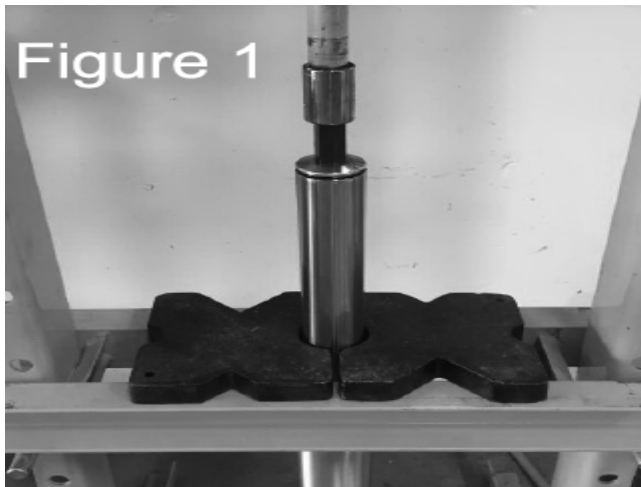


Figure 1



Figure 2



Figure 3

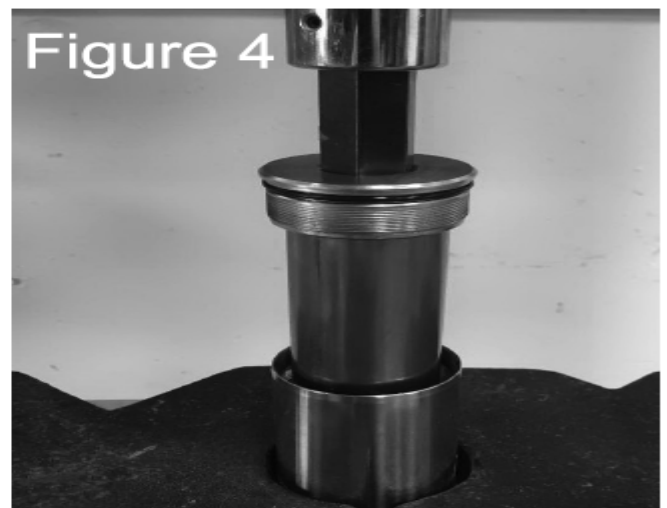


Figure 4

Compliment your Progressive Suspension Fork Monotube Kit with a set of Progressive Suspension high performance shocks.

