



Installation Instructions Monotube Kit w/Adjustable Preload Harley Davidson 2016 - Later* XL Models with 49MM Forks

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.

Limited Lifetime Warranty

Progressive Suspension 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.

IMPORTANT NOTICE

Caution: Removing and replacing fork internal components must be performed by a qualified mechanic or according to steps outlined in a factory authorized professional service manual that relates to your particular make, model and year motorcycle. Special tools may be needed. Please read all instructions before beginning this procedure. If you lack any of the tools or resources or are uncertain about any part of the procedure, then have the work done by a qualified mechanic.

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 kits with Preload Adjuster 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 service manual as a reference while installing this kit.

Note

The left and right forks have different internals in these models.

- 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 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 250CC of type "E" or 10wt. fork oil is required in the RIGHT 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 recommended fork oil LEVEL for the LEFT fork, when installing this kit, is 195MM. We recommend Progressive Suspension Fork oil

- This kit replaces your stock fork caps, pre-load spacer, fork springs, damper-rod & cartridge. Remove these components and drain the oil out of your forks per the procedure outlined in your factory authorized service manual.
- Also note that this kit contains components for two different fork configurations - standard height and approximately 1" inch lowered. Decide which configuration you prefer before installing, and follow the instructions carefully for that configuration.

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. 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.

- Starting with the right fork (referencing the illustrations below), first drop **either TWO of the supplied top-out springs into the fork for Standard Ride Height - OR - THREE of the supplied top-out springs for 1" lower.** then 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 said bottoming-cup. Put a drop of thread locking agent on the bottom **14mm bolt** and thread it (along with the copper sealing washer) into the bottom of the Monotube assembly. **Torque the 14mm 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 torquing the bottom fork bolt.
- **No fork spring is installed in this (the right) fork assembly.** Pour **ONLY** a small amount - 250cc for **either configuration** – of Progressive Suspension Standard (Type E) or 10wt. fork oil into the fork for lubricating purposes as seen in figure 1. Then using the supplied Monotube Installation Tool (p/n 5503-200) thread the Monotube assembly into your fork-tube and torque it to the recommended 16-43 ft-lbs. This completes the right fork assembly.

Warning

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

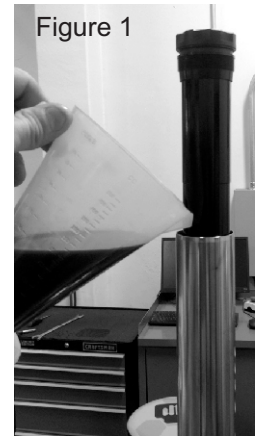
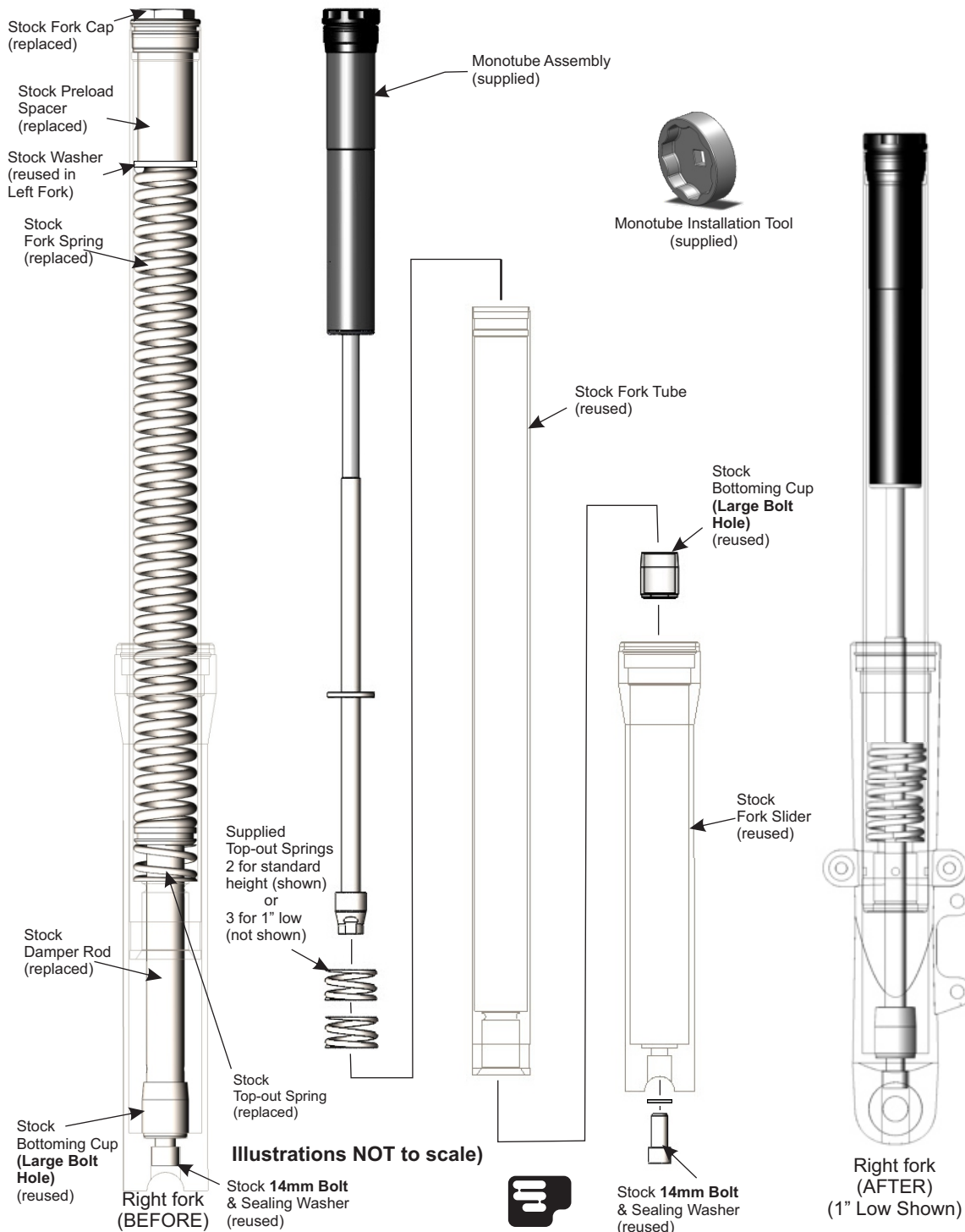


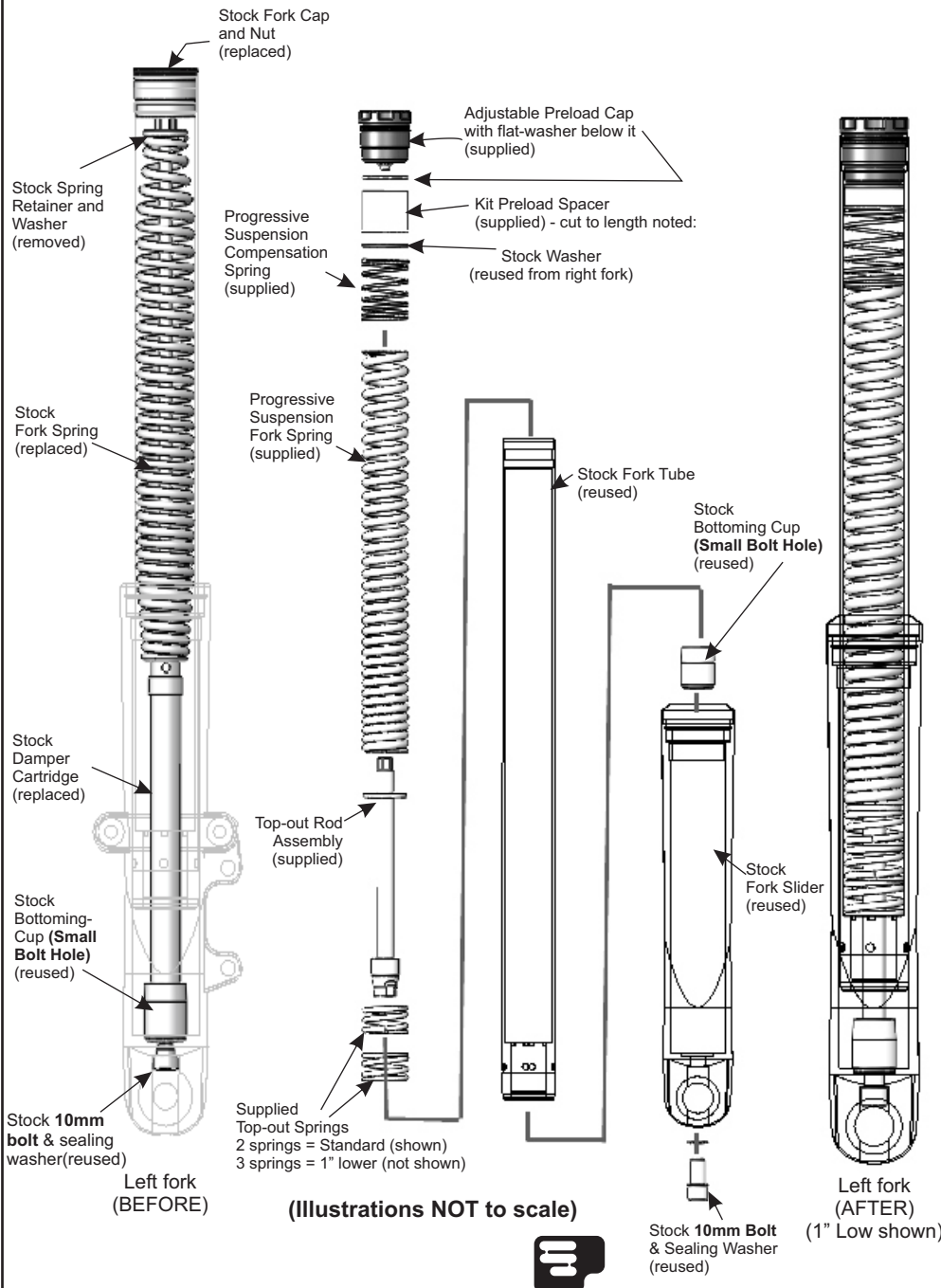
Figure 1

- For the left fork (referencing the illustrations below), drop **either TWO of the remaining supplied top-out springs into the fork for Standard Ride Height - OR - THREE of the remaining supplied top-out springs for 1" lower (same number as in the other fork)**. Next insert the supplied Top-out Rod assembly. Make certain the **OEM bottoming-cup (small bolt hole for 10mm bottom bolt)** 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 **10mm bolt** and thread it (along with the copper sealing washer) into the bottom of the Top-out Rod assembly. **Torque the 10mm bolt to the factory recommended 22 - 30 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 or by using a long extension and 12mm socket on the hex atop the Top-out Rod assembly.

Warning

NEVER ADD TOO MUCH OIL RESULTING IN A MEASUREMENT LESS THAN 195MM IN THE LEFT FORK WHEN USING THIS KIT. TOO MUCH OIL MAY CAUSE THE FORK TO HYDRAULIC LOCK, WHICH MAY CAUSE SEAL FAILURE, POOR PERFORMANCE AND/OR LOSS OF CONTROL.

Application	Spacer Length Standard fork	Spacer Length Lowered fork
2016 XL1200X	1.8" (46mm)	0.67" (17mm)



- Before installing the new springs & pre-load spacer, it is crucial that you make sure you've installed the proper fork oil and the oil level is correct. We recommend Progressive Suspension Standard (Type E) fork oil. To check the fork oil level properly you must have the springs and spacer removed, cycle the forks several times 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 required measurement for the left fork oil level is 195mm. Add or remove fork oil to achieve this measurement.**
- Drop the supplied Progressive Suspension fork spring, with tighter wound coils down, into the fork first, then the flat wire Compensation spring.
- Referring to the pre-load spacer chart (above left), cut the supplied pre-load spacer to the recommended length appropriate for your make/model/year and intended configuration - standard or lowered kit.
- After cutting the supplied pre-load spacer to the proper length, put it into the left fork assembly, being sure to place the stock washer (from the right fork) between the compensation spring and the pre-load spacer.
- Finally, with the fork either secured in a vice (or clamped back into the triple-clamps), install the supplied flat washer and, making sure the Progressive Suspension pre-load cap is adjusted to its minimum (shortest) position, install the cap and torque to 16-43 ft-lbs using the supplied Monotube Installation Tool (p/n 5503-200). Store this tool in a safe place for future fork maintenance. This completes the left fork assembly.
- Reinstall your left and right fork assemblies and all other components you may have removed per the procedure outlined in your authorized factory service manual.
- Proceed to RIDE SAG & PRELOAD ADJUSTMENT section.

RIDE SAG & PRE-LOAD ADJUSTMENT

Optimum ride sag is approximately one-third or 33% of your total suspension travel. Depending upon the chosen installation configuration, 33% of your travel would equal 1.14" for the standard ride height configuration (2 top-out springs installed in each fork) OR 0.86" for the lowered configuration (3 top-out springs installed in each fork). One of these two numbers is your target ride sag number, and again it depends upon your installation configuration.

STANDARD CONFIGURATION = 1.14" TARGET RIDE SAG

LOWERED CONFIGURATION = 0.86" TARGET RIDE SAG

Measuring your forks ride sag involves two steps, and will require a helper. 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 have your helper take the same measurement. Subtract the second measurement from the first – the difference is your current front ride sag.

Compare the appropriate target ride sag (1.14" if 2 top-out springs were installed in each fork, or 0.86" if 3 top-out springs were installed in each fork) to your current ride sag. If the current ride sag is less than the target, reduce the pre-load until you hit the target ride sag. Conversely if the current ride sag is more than the target, increase the pre-load until the target ride sag is achieved.

To adjust your pre-load, simply rotate the center of your left fork cap – your adjustable pre-load cap – with the supplied ½" inch Allen-wrench. Rotating it clockwise will increase your pre-load, counterclockwise will reduce it. NOTE: the adjusting portion of the cap does not extend or recede as an indication of how much pre-load is applied, it simply stops rotating at either end of the adjustment range – when the end of the range is felt STOP ROTATING THE ADJUSTER.

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 operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.

Compliment your Progressive Suspension Fork Monotube kit with Pre-load Adjuster with a set of Progressive Suspension high performance shocks.



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

714.523.8700 | 877.690.7411
WWW.PROGRESSIVE SUSPENSION.COM



Instr# 3081-031 Rev B

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

714.523.8700 | 877.690.7411
WWW.PROGRESSIVE SUSPENSION.COM



Instr# 3081-031 Rev B