PROGRESSIVE suspension

Installation Instructions
1" Low Monotube Fork Kit
Harley Davidson 2016- Later*
XL883N

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.

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 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 and ground clearance.

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 a press or some other fork spring compression tool. If you do not posses 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 when the forks are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Monotube 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 shop 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.
- When removing or installing forks, do so according to instructions contained in your factory authorized shop manual.
- The Progressive Suspension Monotube Fork kit is a direct replacement of your stock internal fork components and fork caps.

Note

- ***The left and right forks have different stock internals in these models which requires that you replace the stock bottoming cone in the left fork with the supplied bottoming cone in this kit. You will however be re-using the stock bottoming cone in the right fork.***

Warning

For maximum performance we highly recommend that the forks be disassembled, thoroughly cleaned, and inspected. When installing Progressive Suspension Monotube Fork kit, only 123cc of 20wt fork oil is required in each of the forks for lubricating the internal moving parts - the Monotube dampers are sealed. Changing the volume or viscosity of the oil is not recommended and could cause damage and/or loss of control.

Caution

While the installation of this Monotube 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, lower triple-clamp 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, lower triple-clamp, 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.

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*This instruction is appropriate for the models noted; however you must confirm you have the correct kit part number for your specific bike by contacting Progressive Suspension

- Remove the front wheel, fender, brake caliper(s), and forks per your factory authorized shop manual.

START WITH THE RIGHT FORK AS FOLLOWS

Warning

CAUTION The right 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!

- **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-spring and remove & reinstall the right fork-cap in this kit, we recommend using a press as illustrated below, 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.

Recommended Press Procedure:

1. Loosen the fork-cap one full turn.
2. Position and secure fork assembly in press so as it can be compressed slightly and the inner fork-tube can be freely rotated – also be sure that the 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.

Warning

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 1.00" 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 (figure3), 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.

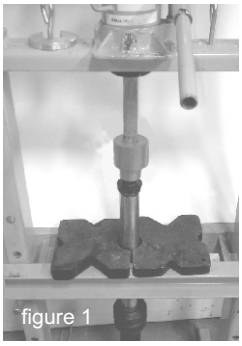
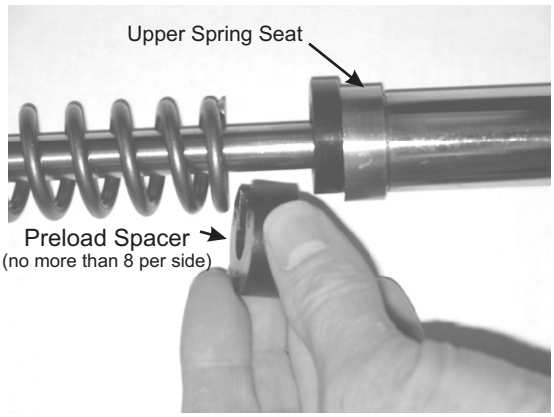

figure 1


figure 2


figure 3


figure 4

- Remove spacer, washer and fork spring. Drain the fork oil, and remove the bottom fork center bolt and sealing washer. If the damper rod spins, temporarily re-install the spring, spacer, & cap and then try again.
- While keeping the fork compressed **(to hold the bottoming cone in place)** remove the damper rod & top-out spring from the fork.
- There are 16 pre-load spacers included with this kit, we recommend installing 6 on each side. Put 6 of the supplied "C" shaped pre-load spacers between the top of the fork-spring and the upper spring seat on each Monotube Assembly as illustrated below. If you feel you may need more or less pre-load, see **Pre-load fine tuning** (on page 3) before going to the next step.

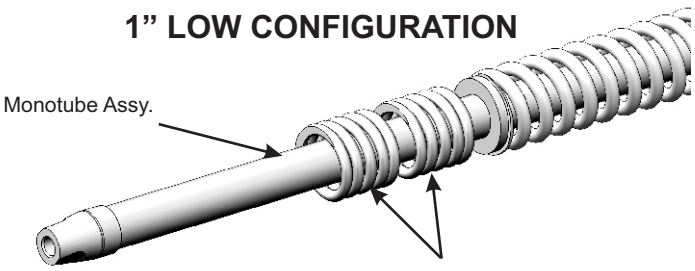


Warning

DO NOT INSTALL MORE THAN EIGHT PRE-LOAD SPACERS PER MONOTUBE ASSEMBLY (EACH SIDE). DOING SO COULD RESULT IN THE FORK SPRING GOING SOLID, CAUSING DAMAGE AND/OR LOSS OF CONTROL.

- Now put two of the supplied (shorter than stock) top-out springs onto the Monotube assembly as illustrated below and continue on page 3.

1" LOW CONFIGURATION



2 of the Supplied Top-out Springs for **1" low**

- Slide the Monotube assembly into the fork assembly, until the Monotube assembly is seated into the bottoming cone at the bottom of the fork, then 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 assembly. Torque the bolt to the factory recommended specification of 30 N-m (22ft. lbs.).
- Filling the forks with fluid requires stroking the assembly to draw the fluid from the inner fork-tube into the outer fork slider, so first secure the fork assembly so you can do this while filling it.

Warning

DO NOT USE MORE THAN 123cc OF FORK OIL IN EACH FORK LEG WITH THE INSTALLATION OF THIS KIT. FILLING A FORK LEG WITH MORE THAN 123cc OF FORK OIL MAY CAUSE THE FORKS TO HYDRAULIC LOCK, WHICH MAY CAUSE SEAL FAILURE, POOR PERFORMANCE AND/OR LOSS OF CONTROL.

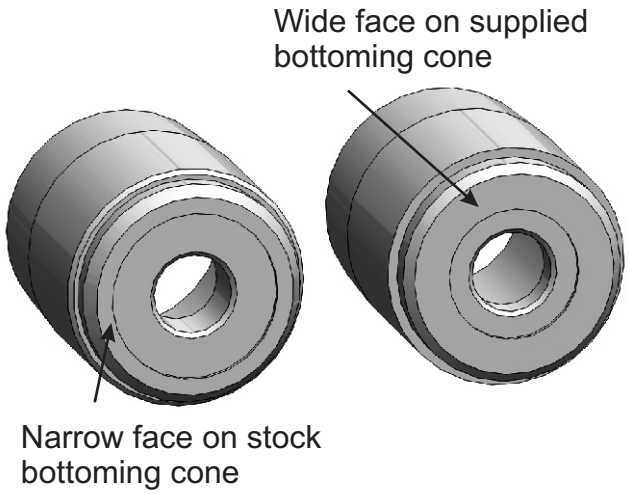
- Pour 123cc of Progressive Suspension Heavy or 20wt fork fluid into each fork, pausing to stroke the assembly to get the fluid into the outer fork slider. Failure to do this will cause the required amount of fluid to overflow. This fluid is to lubricate moving parts and to assure proper function.
- Once the proper amount of fluid is in the fork assembly, slide the inner fork-tube up and install the supplied fork-cap (refer back to "**Removing and installing Fork Springs with high-preload**" section). Torque the cap to the factory recommended specification of 54N-m (40ft. lbs.).

NOW THE LEFT FORK

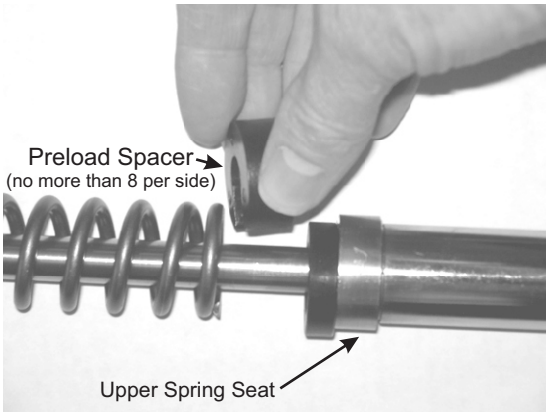
- Repeat the last 9 steps on the LEFT FORK with the following differences.
- The fork cap on the stock left fork can easily be un-threaded from the fork tube and the fork tube slid down to expose the stock fork spring and cartridge assembly.
- The stock fork spring and cartridge assembly can be removed from the left fork as a unit after you drain the oil and remove the bottom fork center bolt and sealing washer.
- Be sure to also remove the stock bottoming cone from the left fork. If it does not come out with the stock fork spring and cartridge assembly, with the fork tube fully compressed (fork bottomed out) hold the fork in a vertical position with the open fork tube at the bottom and gently tap the assembly against a cushioned table top to knock the bottoming cone out.

Caution

YOU MUST USE THE SUPPLIED BOTTOMING CONE IN THE LEFT FORK WHEN INSTALLING THIS MONOTUBE KIT



- See page 4 for helpful illustrations of "before" and "after" basic assembly of the forks.
- Reinstall the forks and all other components on the motorcycle per your factory authorized shop manual being sure to double check all fasteners for proper torque per said manual.
- **Pre-load fine tuning**: Though we feel recommending 6 pre-load spacers on each cartridge assembly should be optimum in most cases, pre-load can be increased to raise the ride height and stiffen the ride by adding up to 2 more of the supplied pre-load spacers. Conversely, pre-load can also be reduced to lower the ride height and soften the ride by removing 1, 2, 3 or even all of the supplied pre-load spacers on each cartridge assembly - the recommend range thus being 0 to 8 spacers per side. To increase or reduce pre-load simply add or remove the supplied "C" shaped pre-load spacers between the top of the fork spring and the upper spring seat on each Monotube Assembly as illustrated above below.



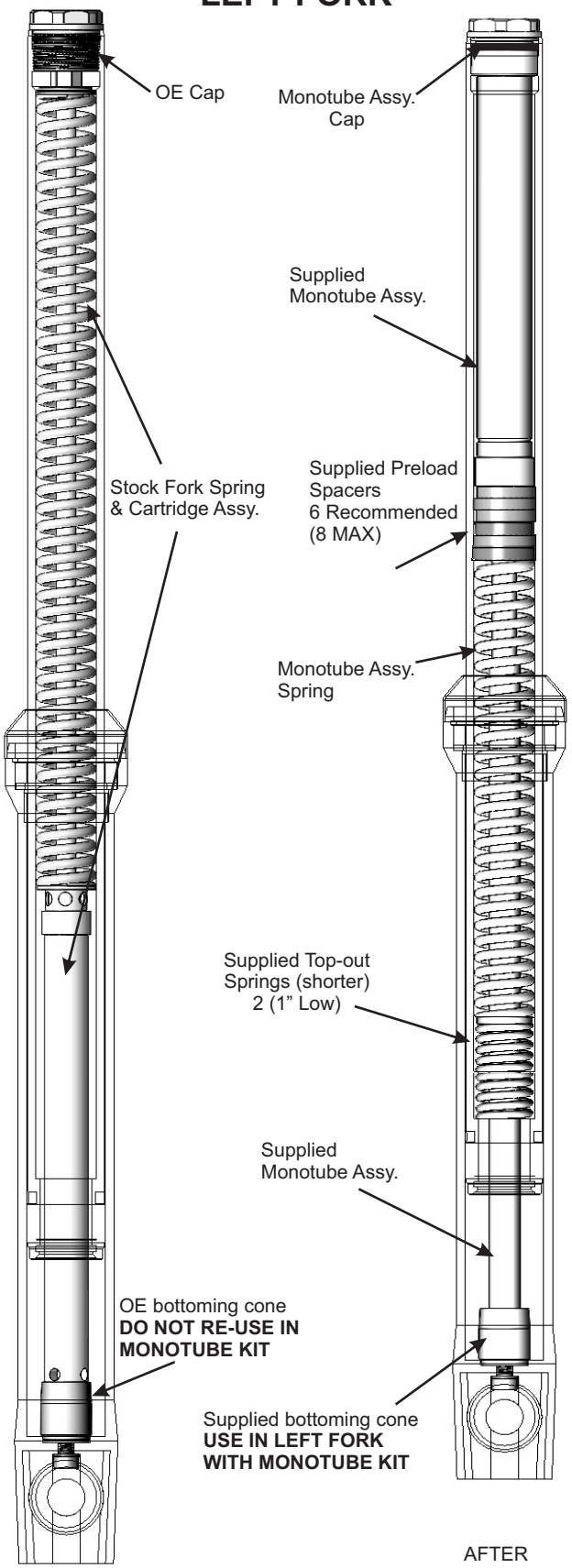
Warning

DO NOT INSTALL MORE THAN EIGHT (8) PRE-LOAD SPACERS PER MONOTUBE ASSEMBLY (EACH SIDE). DOING SO COULD RESULT IN THE FORK SPRING GOING SOLID, CAUSING DAMAGE AND/OR LOSS OF CONTROL.

- 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.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics.
- Compliment your Monotube Fork kit with a pair of 412, 430, 444, or 970 Series shocks.

PROGRESSIVE® suspension

LEFT FORK

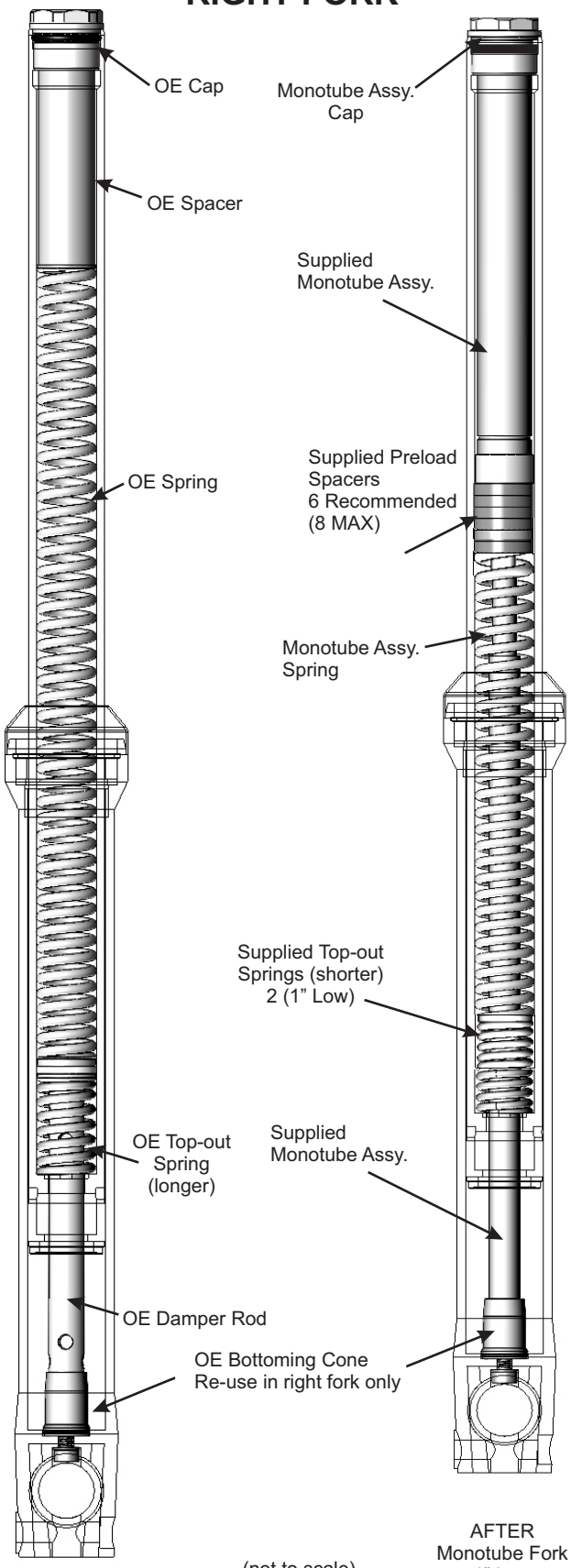


BEFORE Stock Fork

(not to scale)

AFTER Monotube Fork 1" Low

RIGHT FORK



BEFORE Stock Fork

(not to scale)

AFTER Monotube Fork 1" Low

PROGRESSIVE® suspension