



# Installation Instructions Monotube Fork Kit Harley Davidson Sportsters: 07-12 XL1200N, 10-Later\* XL1200X, 07-10 XL883L, 10-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.*

## 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 installation of this kit will require 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 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.

## 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.

## 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.

### 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 10wt 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.*

- The Progressive Suspension Monotube Fork kit is a direct replacement of your stock internal fork components and fork caps. You will however be re-using the stock bottoming-cones.

### 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.

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

**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!**

- Removing and installing Fork Springs with high-preload:** As noted in the beginning of the instructions, the force required to compress the fork-spring and remove & reinstall the fork-cap in this kit requires 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.

To use a press, we recommend this procedure:

- Loosen the fork-cap one full turn.
- 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 removed.

**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.

- Compress the fork about .50" to 1.00" inch (figure 1).
- Now, with the press holding the spring tension, you should be able to unscrew the fork-tube from the cap by hand (figure 2).
- 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.

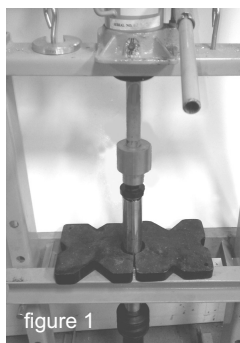


figure 1



figure 2

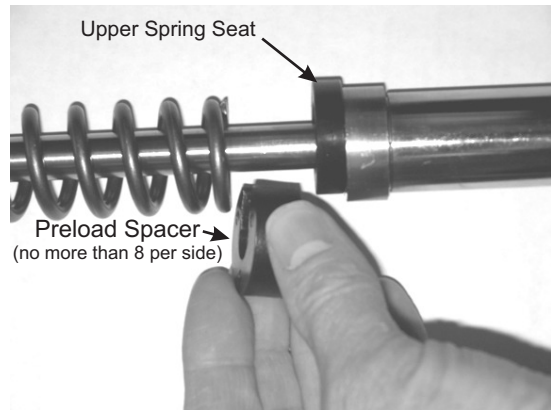


figure 3



figure 4

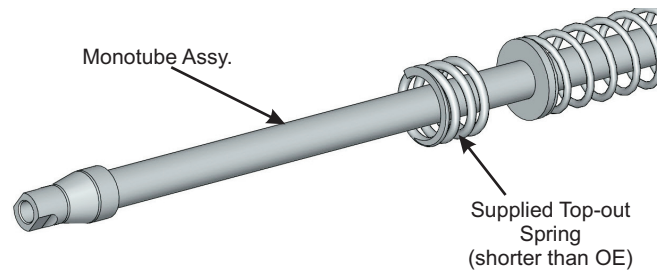
- Replacing internals:** Drain the fork oil, and remove the bottom fork center bolt and sealing washer. If the damper rod spins, temporarily re-install the spring, spacer, & cap and then try again.
- While keeping the fork compressed (to hold the bottoming cup in place) remove the damper rod & top-out spring from the fork.
- Though there are 16 preload spacers included with this kit, we recommend installing 6 on each side. Put 6 of the supplied "C" shaped preload 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 preload, see **Preload fine tuning** (on page 3) before going to the next step.



**Warning**

DO NOT INSTALL MORE THAN EIGHT PRELOAD 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 one of the supplied (shorter than stock) top-out springs onto the Monotube assembly as illustrated.



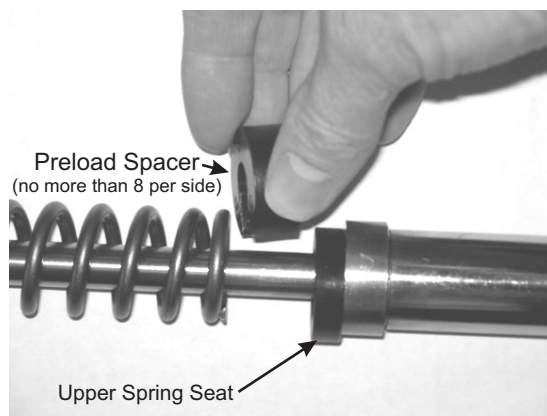
- Slide the Monotube assembly into the fork tube assembly, until the Monotube assembly is seated in the bottom of it, then put a drop of red thread-locking agent on the bolt that came out of the bottom of the fork and reinstall it (along with the sealing washer), tightening it up into the Progressive 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 THE 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 10wt 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.

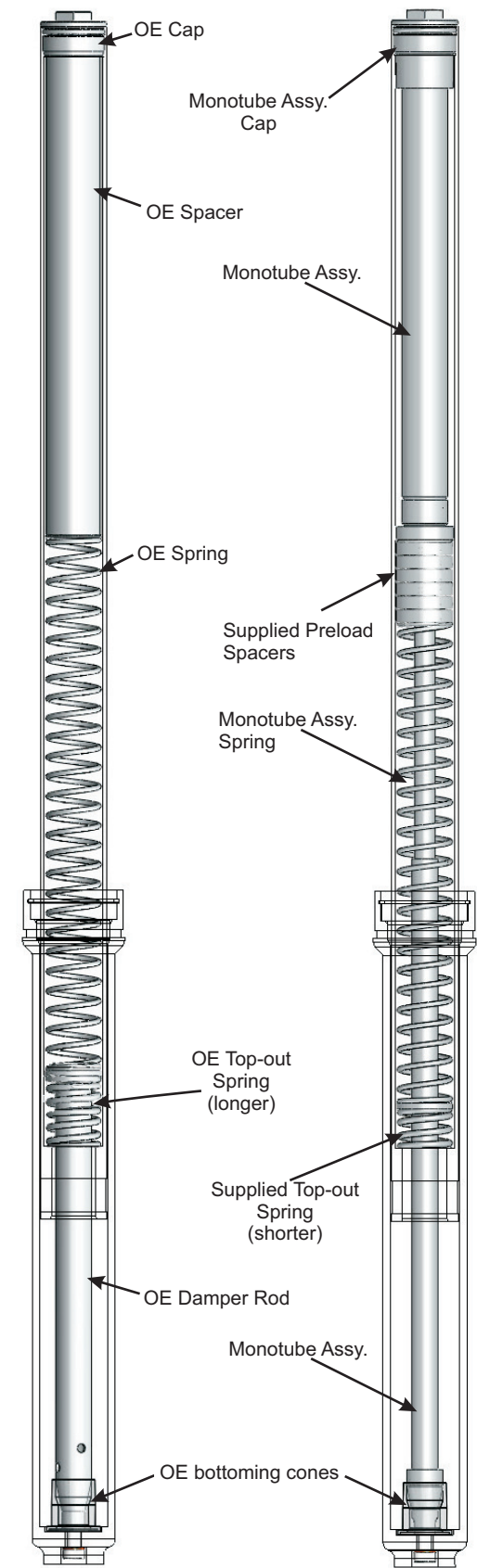
- Once the proper amount of fluid is in the fork assembly, slide the inner fork-tube up and install the supplied fork-cap (refer back to **"Removing and installing Fork Springs with high-preload"** section). Torque the cap to the factory recommended specification of 54N-m (40ft. lbs.).
- Repeat the last 9 steps on the other fork and then proceed to the next step.
- To the right is an illustration 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 preload spacers on each cartridge assembly should be optimum in most cases, preload can be increased to raise the ride height and stiffen the ride by adding up to 2 more of the supplied preload spacers on each cartridge assembly. Conversely, preload can also be reduced to lower the ride height and soften the ride by removing up to 2 of the supplied preload spacers on each cartridge assembly - the recommend range thus being 4 to 8 spacers per side. To increase or reduce preload simply add or remove the supplied "C" shaped preload spacers between the top of the fork spring and the upper spring seat on each Monotube Assembly as illustrated to the below.



**Warning**

DO NOT INSTALL MORE THAN EIGHT (8) PRELOAD 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.



fork - BEFORE (not to scale) fork - AFTER