



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.

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 springs 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 fork springs are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Fork Springs 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.
- Lift and support the motorcycle securely so the front wheel is off the ground. The balance point is toward the front of the engine.
- Remove fork springs according to instructions contained in your factory authorized shop manual. The removal of the fork spring in the right fork will require a special "inner fork nut" tool - Harley Davidson part number HD-47852 or equivalent.

Note

For maximum performance we highly recommend that the forks be disassembled and thoroughly cleaned, inspected and new fork oil installed. See fine tuning for more information. Fork oil level/volume should be checked according to the steps outlined in your authorized shop manual. Measurement of your fork oil by level is the preferred method. However, some manuals only specify a volume measurement.

- The Progressive Suspension fork spring kit is a direct replacement of your stock springs. You will re-use the stock spacers as indicated.

Caution

While the installation of this Fork Spring 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. through the full range of steering - lock to lock. You must correct any clearance issues prior to installing this kit to avoid vehicle damage and / or vehicle control problems.

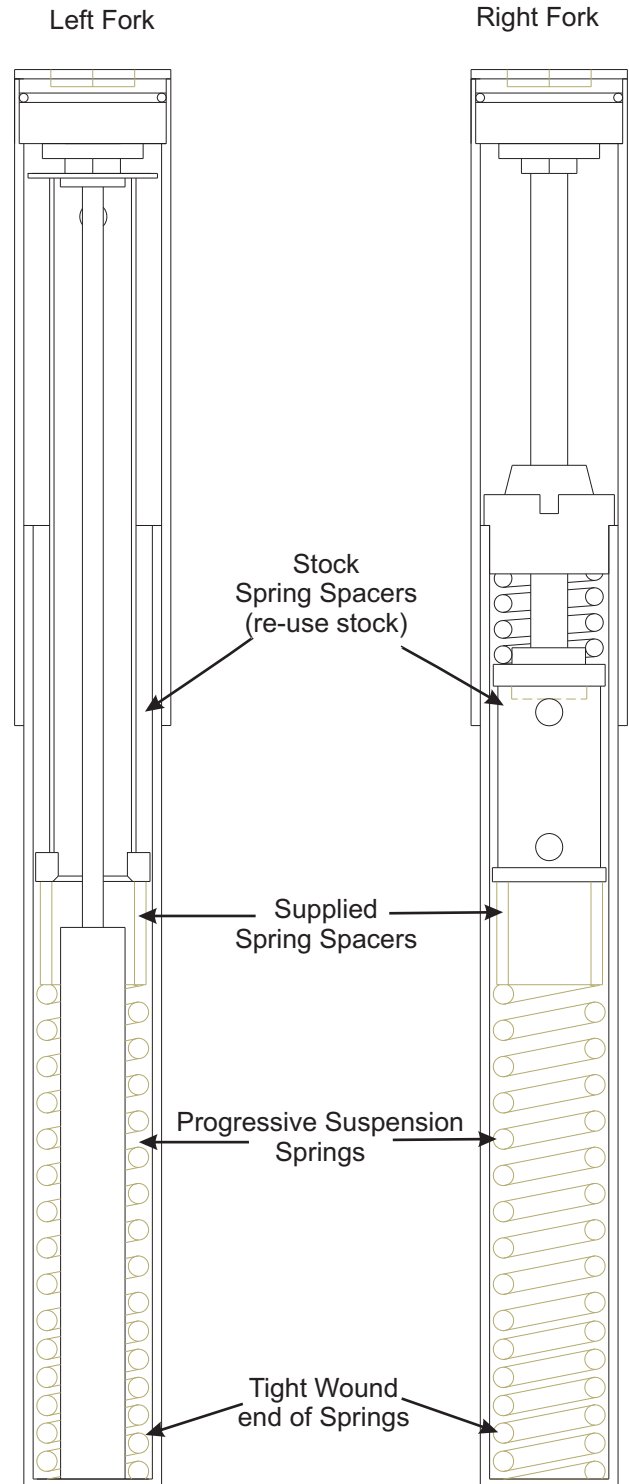
- Before installing the new fork springs, it's important to check the fluid level in the forks - see FINE TUNING below.
- In each fork leg, first install one of the Progressive Suspension fork springs into the fork - tighter wound coils down. Then install one of the supplied spacers, and finally the proper stock spring spacer (shorter one in right fork, longer one in the left) and reassemble the forks as normal using all other stock components (see illustration).
- Torque the inner fork nut and fork caps and reinstall fork, fender, wheel, and all other components per a factory authorized shop manual. Remove motorcycle from lift and re-check all fasteners for proper tightness.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.

FINE TUNING

- Fork Oil: Oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 2.5 weight increments (i.e. from 10 weight to 12.5 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft or dive excessively.

Factory recommended viscosity: Harley type "E" or 10wt

Factory recommended oil level: 87mm-left & 99mm-right
(springs removed, fork completely compressed, from top of tube)



(Illustration NOT to scale)





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IMPORTANT NOTICE

Caution: Removing and replacing fork springs 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 fork springs are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Fork Springs 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 fork springs according to instructions contained in your factory authorized shop manual.

Note

For maximum performance we highly recommend that the forks be disassembled and thoroughly cleaned, inspected and new fork oil installed - we recommend a 20wt. fork oil for the F650's and the OE viscosity for the F700GS. See fine tuning for more information. Fork oil level should be measured with the fork spring(s) removed and the fork completely compressed. The measurement from the top edge of the fork tube to the fluid level should be 165mm for the 1999-2007 standard F650GS & F700GS, 185mm for the F650 GS Dakar, & 155mm for the 2008-2012 standard GS.

- The Progressive Suspension fork spring kit is a direct replacement of your stock springs. You will reuse or shorten the stock spacers (see page 2).
- Before installing the new springs, it is crucial that you make sure you've installed the proper fluid and the fluid level is correct. We recommend a 20wt. fork fluid in all but the F700GS, which we recommend stock viscosity. To check the fluid level properly you must have the springs and spacers removed and the fork completely compressed. You then measure from the top of the fork tube to the fluid level - the recommend measurements are:

- 1999-2007 standard F650GS - 165mm (6.50")
- 1999-2007 GS Dakar - 185mm (7.83")
- 2008-2012 standard GS - 155mm (6.10")
- 2013-2014 F700GS - 165mm (6.50")

Add or remove fluid to achieve this measurement.

■ C a u t i o n ■

**NEVER ADD TOO MUCH FLUID RESULTING IN A MEASUREMENT
LESS THAN 165mm WHEN USING THIS SPRING KIT
(155mm for 2008-2012 standard GS).**

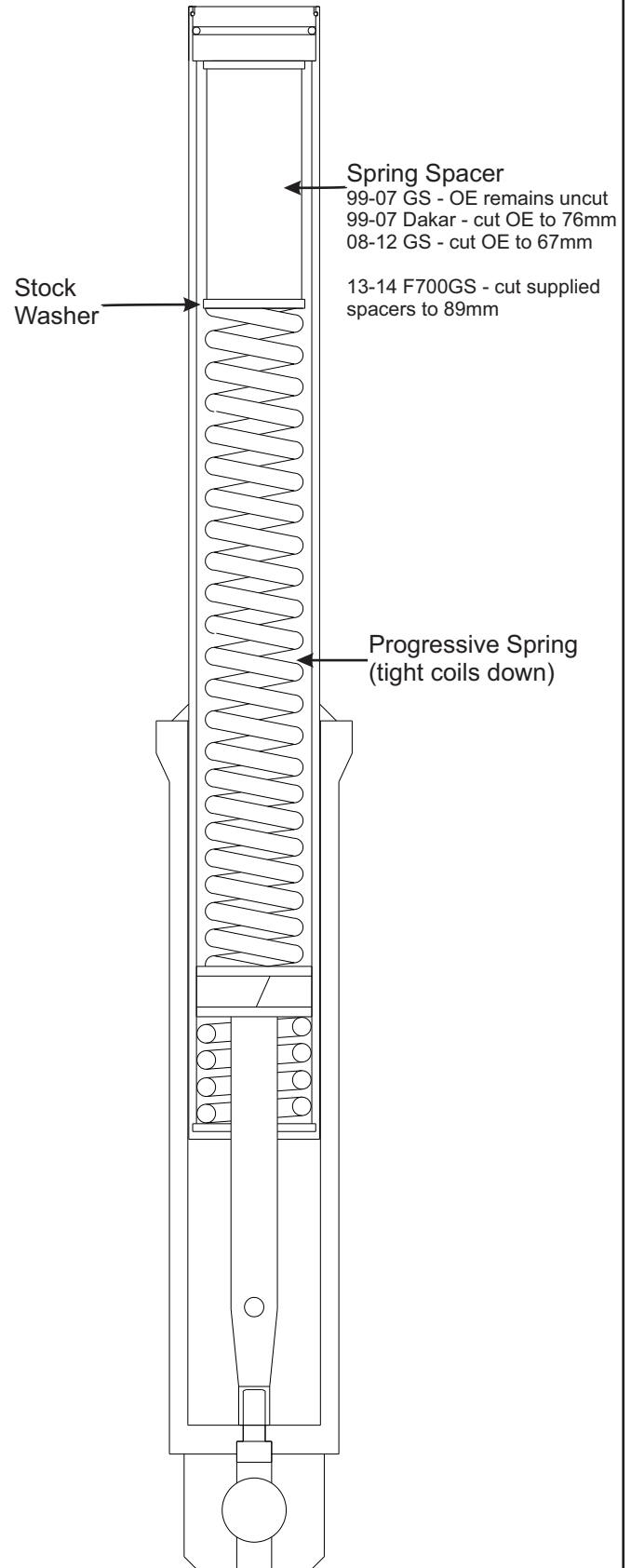
- In each fork leg, install one of the Progressive Suspension fork springs - tighter coils down - into the fork. Then install one of the stock washers followed by one of the stock or supplied spacers (depending on the year/model, spacers may need to be cut - see below), and all other stock components in the reverse order they came apart - essentially replacing only the stock springs with the supplied Progressive Suspension ones (see illustration).

1999-2007 standard GS - use stock uncut spacers
1999-2007 GS Dakar - cut stock spacers to 76mm (3.00")
2008-2012 standard GS - cut stock spacers to 67mm (2.64")
2013-2014 F700GS - cut supplied spacers to 89mm (3.50")

- Reinstall the fork cap being certain the retaining ring is properly seated. Reinstall fork, fender, wheel, and all other components per a factory authorized shop manual. Remove motorcycle from lift and re-check all fasteners for proper tightness per your factory authorized manual.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.

FINE TUNING

- Fork Oil: Though we recommend using a 20wt. fork fluid (except in the F700GS), oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 2.5 weight increments (i.e. from 2.5 weight to 5 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft or dive excessively. As stated previously, when using this spring kit **NEVER adjust the fork oil level to produce a measurement of less than 165mm (155mm for 2008-2012 standard GS) - measured fork springs removed, fork compressed, from the top of the fork tube - or damage will occur.**



(Illustration NOT to scale)





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Caution: Removing and replacing fork springs 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 fork springs are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Fork Springs 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 fork springs according to instructions contained in your factory authorized shop manual.

Note

For maximum performance we highly recommend that the forks be disassembled and thoroughly cleaned, inspected and new fork oil installed - we recommend a 15wt. fork oil. See fine tuning for more information. Fork oil level should be measured with the fork spring(s) removed and the fork completely compressed. The measurement from the top edge of the fork tube to the fluid level should be 150mm.

- The Progressive Suspension fork spring kit is a direct replacement of your stock springs. You will use the supplied preload spacers.
- Before installing the new springs, it is crucial that you make sure you've installed the proper fluid and the fluid level is correct. We recommend a 15wt. fork fluid. To check the fluid level properly you must have the springs and spacers removed and the fork completely compressed. You then measure from the top of the fork tube to the fluid level - the recommend measurement 150mm. Add or remove fluid to achieve this measurement.

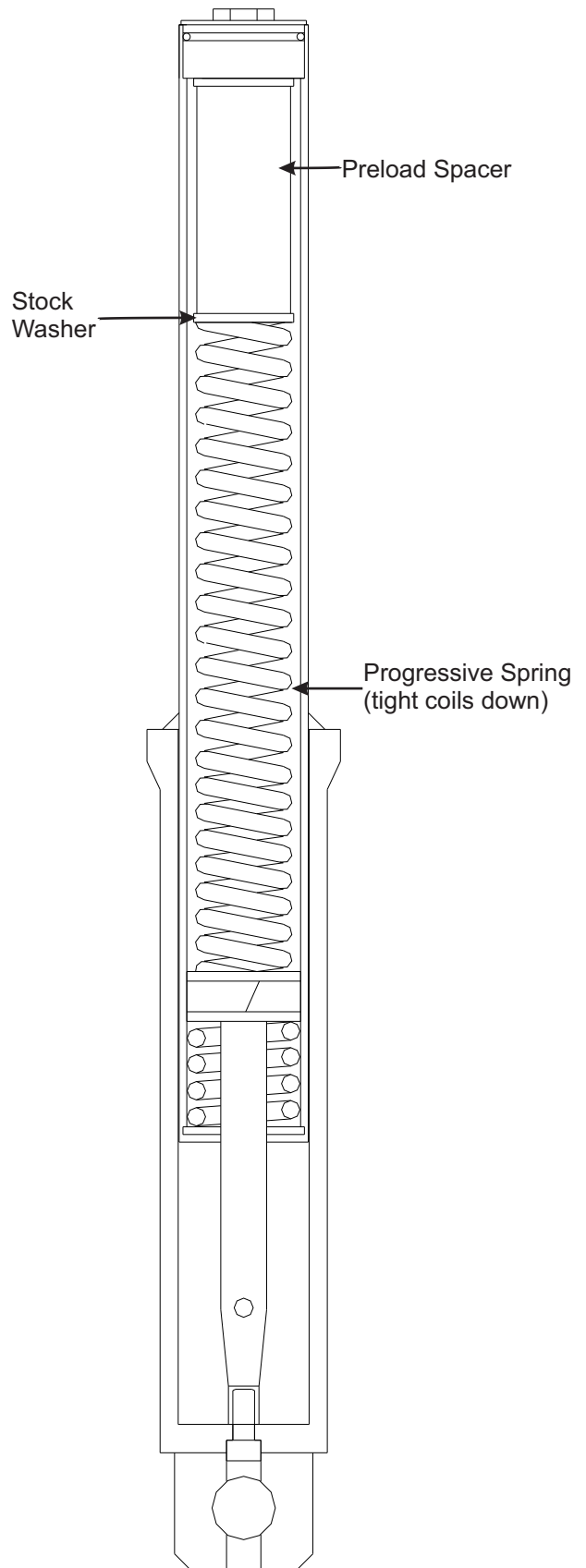
Caution

NEVER ADD TOO MUCH OR TOO LITTLE FLUID RESULTING IN A MEASUREMENT LESS THAN 130mm OR MORE THAN 250mm WHEN USING THIS SPRING KIT.

- Preload spacer length - before going any further make sure you have the proper preload spacer lengths ready to install in your forks. Look for your model and year on the supplemental insert included with this kit, and install the length recommended for it. You may have to cut and reuse your stock spacers depending upon the model.
- In each fork leg, install one of the Progressive Suspension fork springs - tighter coils down - into the fork. Then install one of the stock washers followed by one of the preload spacers (cut to recommended length), and all other stock components in the reverse order they came apart - essentially replacing only the stock springs & preload spacers with the supplied Progressive Suspension ones (see illustration).
- Reinstall the fork cap being certain to torque it to the proper specification per a factory authorized manual. Reinstall fork, fender, wheel, and all other stock components per a factory authorized shop manual. Remove motorcycle from lift and re-check all fasteners for proper tightness per your factory authorized manual.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.

FINE TUNING

- Fork Oil: Though we recommend using a 15wt. fork fluid, oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 2.5 weight increments (i.e. from 2.5 weight to 5 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft or dive excessively. Make oil level adjustments in 10mm increment but as stated previously, when using this spring kit **NEVER adjust the fork oil level to produce a measurement of less than 130mm or more than 250mm (measured fork springs removed, fork compressed, from the top of the fork tube) or damage will occur.**



(Illustration NOT to scale)





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IMPORTANT NOTICE

Caution: Removing and replacing fork springs 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 fork springs are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Fork Springs 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 fork springs according to instructions contained in your factory authorized shop manual.

Note

For maximum performance we highly recommend that the forks be disassembled and thoroughly cleaned, inspected and new fork oil installed - we recommend a Type E or 10wt. fork oil. See fine tuning for more information. Fork oil level should be measured with the fork spring(s) removed, the stock damping valve properly installed and the fork completely compressed. The measurement from the top edge of the fork tube to the fluid level should be 140mm.

- The Progressive Suspension fork spring kit is a direct replacement of your stock springs. You will use the supplied preload spacers.
- Before installing the new springs, it is crucial that you make sure you've installed the proper fluid and the fluid level is correct. We recommend a Type E or 10wt. fork fluid. To check the fluid level properly you must have the springs and spacers removed, stock damping valve properly installed, and the fork completely compressed. You then measure from the top of the fork tube to the fluid level - the recommend measurement 140mm. Add or remove fluid to achieve this measurement.

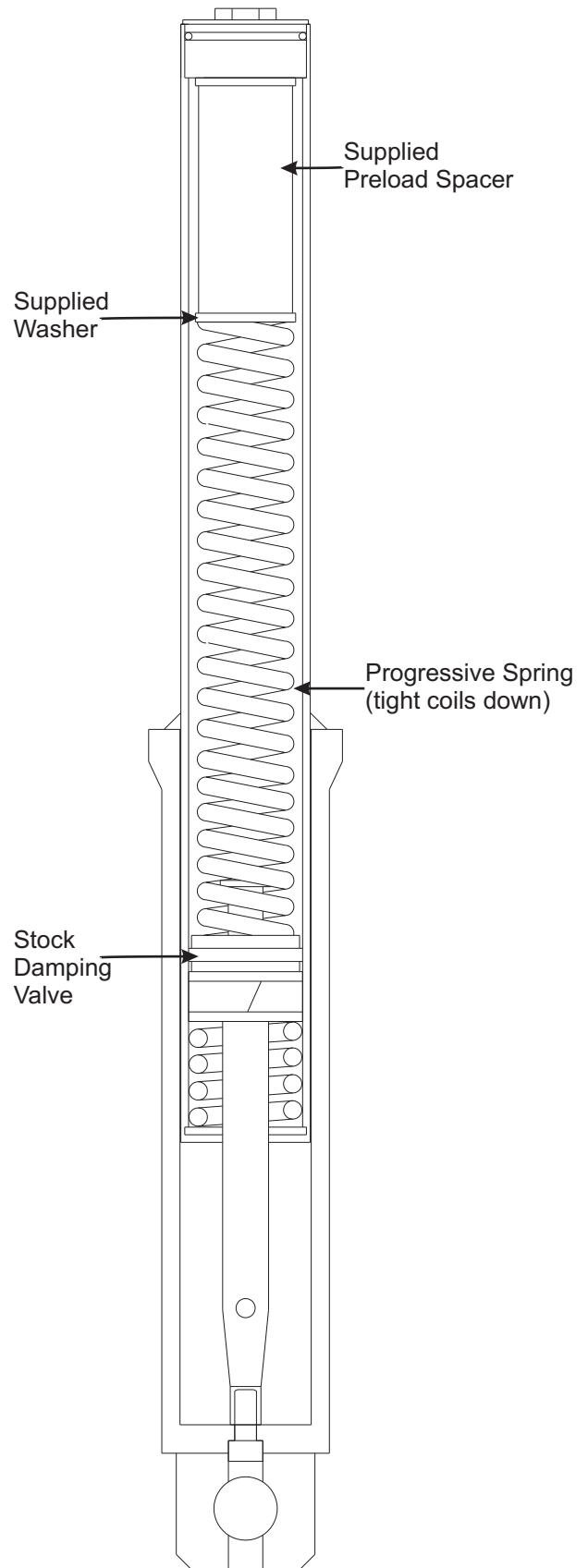
Caution

NEVER ADD TOO MUCH OR TOO LITTLE FLUID RESULTING IN A MEASUREMENT OTHER THAN 140mm WHEN USING THIS SPRING KIT.

- In each fork leg, install one of the Progressive Suspension fork springs - tighter coils down - into the fork. Then install one of the supplied washers followed by one of the supplied spacers, and all other stock components in the reverse order they came apart - essentially replacing only the stock springs with the supplied Progressive Suspension springs, preload spacers & washers (see illustration).
- Reinstall the fork cap being certain to torque it to the proper specification per a factory authorized manual. Reinstall fork, fender, wheel, and all other components per a factory authorized shop manual. Remove motorcycle from lift and re-check all fasteners for proper tightness per your factory authorized manual.
- The installation of this kit will produce a ride height approximately one inch lower than stock, this is by design to improve the front end ride quality and cornering grip.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.

FINE TUNING

- **Fork Oil:** Though we recommend using a Type E or 10wt. fork fluid, oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 2.5 weight increments (i.e. from 2.5 weight to 5 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft or dive excessively. **Adjusting the fork oil level to produce a measurement other than 140mm (measured fork springs removed, stock damping valve properly installed, and fork compressed, from the top of the fork tube) will result in poor performance, and possible fork damage.**



(Illustration NOT to scale)





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IMPORTANT NOTICE

Caution: Removing and replacing fork springs 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. Special tools may be needed. Please read all instructions before beginning this procedure. If you are uncertain about any part of the procedure, then have the work done by a qualified mechanic.

The FLD model is equipped with a damper-rod type fork on right side and a cartridge fork on the left side.

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 Fork Springs 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 balance point is toward the front of the engine.
- Remove fork springs according to instructions contained in your factory authorized shop manual.

Note

For maximum performance we highly recommend that the forks be disassembled and thoroughly cleaned, inspected and new fork oil installed - we recommend a 5wt. fork oil. See fine tuning for more information. Fork oil level should be measured with the fork spring(s) removed and the fork completely compressed. We recommend a measurement from the top edge of the fork tube to the fluid level of 150mm. See fine tuning for more information.

- The Progressive Suspension fork spring kit is a direct replacement of your stock springs. You will use the supplied preload spacers - the short one in the left fork and the long one in the right (replacing the OE one).
- Before installing the new springs, it is crucial that you make sure you've installed the proper fluid and the fluid level is correct. We recommend a 5wt. fork fluid. To check the fluid level properly you must have the springs and spacers removed and the fork completely compressed. You then measure from the top of the fork tube to the fluid level - the recommend measurement 150mm. Add or remove fluid to achieve this measurement.

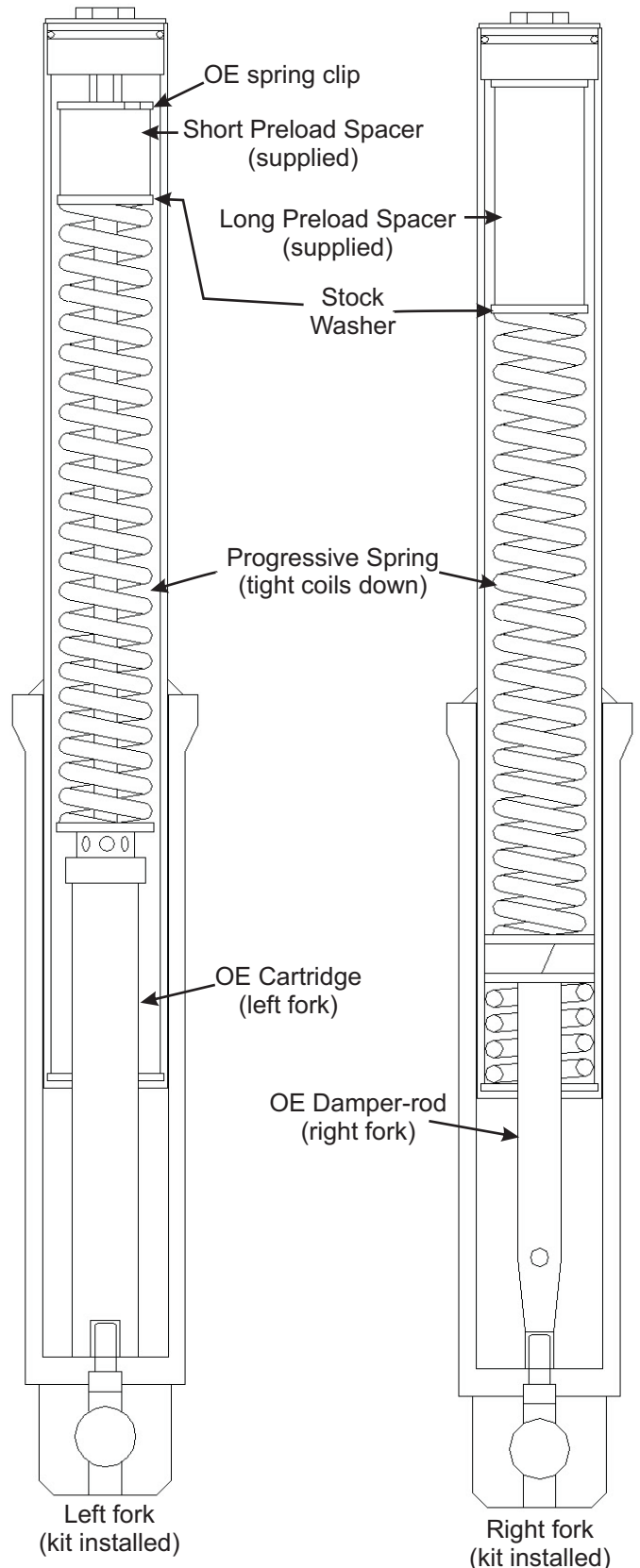
Caution

NEVER ADD TOO MUCH OR TOO LITTLE FLUID RESULTING IN A MEASUREMENT LESS THAN 140mm OR MORE THAN 250mm WHEN USING THIS SPRING KIT.

- Preload spacer length - there are two different length preload spacers included in this kit. Be sure to install the shortest one in the left cartridge fork, and the longer one in the right damper-rod fork.
- In the right - damper-rod - leg, install one of the Progressive Suspension fork springs - tighter coils down - into the fork. Then install one of the stock washers followed by the **long** preload spacer, and finally the stock fork cap - essentially replacing only the stock spring & preload spacer with the supplied Progressive Suspension spring and preload spacer (see illustration).
- In the left - cartridge - leg, install one of the Progressive Suspension fork springs - tighter coils down - onto the cartridge assembly. Then install the stock washer that came out of this fork, followed by the **short** preload spacer included in the kit. Compress the spring and spacer and reinstall the OE spring clip between the spacer and cartridge-rod nut. Reinstall the fork cap onto the cartridge assembly and reassemble the fork per your factory authorized shop manual in the reverse order they came apart - essentially replacing only the stock spring with the supplied Progressive Suspension spring and preload spacer (see illustration).
- Be certain to torque the fork caps to the proper specification per a factory authorized manual. Reinstall fork, fender, wheel, and all other components per a factory authorized shop manual. Remove motorcycle from lift and re-check all fasteners for proper tightness per your factory authorized manual.

FINE TUNING

- Fork Oil: Though we recommend using a 5wt. fork fluid, oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 2.5 weight increments (i.e. from 2.5 weight to 5 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft or dive excessively. Make oil lever adjustments in 10mm increment but as stated previously, when using this spring kit **NEVER adjust the fork oil level to produce a measurement of less than 140mm or more than 250mm (measured fork springs removed, fork compressed, from the top of the fork tube) or damage will occur.**
- 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 Spring kit with a set of Progressive Suspension high performance shocks.



(Illustrations NOT to scale)





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Caution: Removing and replacing fork springs 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 fork springs are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Fork Springs 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 the stock fork springs as well as the spring guides and preload spacers (under the fork springs) according to instructions contained in your factory authorized shop manual. The Progressive Suspension fork spring kit is a direct replacement of your stock springs. You will also be replacing the stock spring guides and preload spacers with the ones supplied in this kit.
- Before installing the new springs & preload spacers, it is crucial that you make sure you've installed the proper fluid and the fluid level is correct. We recommend a 7wt. fork fluid. To check the fluid level properly you must have the springs and spacers removed and the fork completely compressed. You then measure from the top of the fork leg to the fluid level - the recommend measurement is 90mm. Add or remove fluid to achieve this measurement.

Note

For maximum performance we highly recommend that the forks be disassembled and thoroughly cleaned, inspected and new fork oil installed - we recommend a 7wt. fork oil. See fine tuning for more information. Fork oil level should be measured with the fork springs & preload spacers removed and the fork completely compressed. The measurement from the top edge of the fork leg to the fluid level should be 90mm.

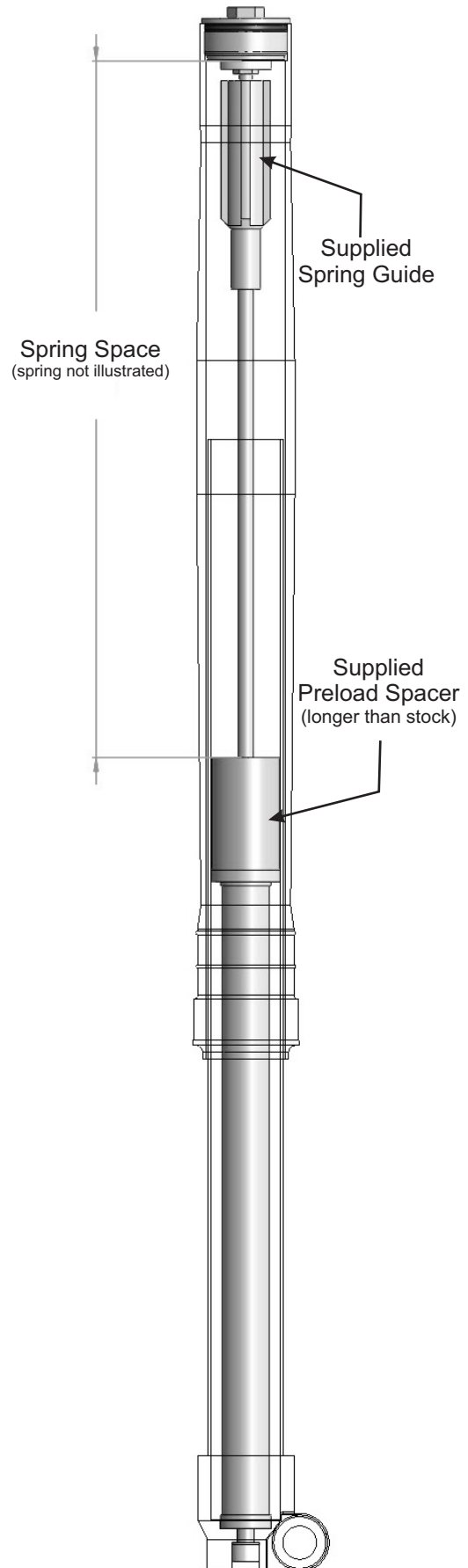
Caution

NEVER ADD TOO MUCH FLUID RESULTING IN A MEASUREMENT LESS THAN 90mm WHEN USING THIS SPRING KIT

- After confirming the fork fluid level, install the supplied preload spacers, spring-guides, and Progressive Suspension fork springs - tighter coils down - into the forks in the same manner you would install the stock components per your factory authorized shop manual - essentially replacing the stock preload spacers, spring guides, and springs with the supplied Progressive Suspension components (see illustration).
- Reinstall the fork cap being certain to torque it to the factory specification noted in your factory authorized shop manual. Reinstall any other components previously removed per a factory authorized shop manual. Remove motorcycle from lift and re-check all fasteners for proper tightness per your factory authorized manual.
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FINE TUNING

- Fork Oil: Though we recommend using a 7wt. fork fluid, oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 2.5 weight increments (i.e. from 2.5 weight to 5 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft or dive excessively. As stated previously, when using this spring kit **NEVER adjust the fork oil level to produce a measurement of less than 90mm - measured fork springs removed, fork compressed, from the top of the fork leg - or damage will occur.**



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Progressive Suspension Fork Springs 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 the fork caps, spring seats, stock preload spring collars and fork springs (under the preload collars) according to instructions contained in your factory authorized shop manual. The Progressive Suspension fork spring kit is a direct replacement of your stock springs. You will be reusing all other stock parts including the stock preload spring collars.
- Before installing the new springs, it is crucial that you make sure you've installed the proper fluid and the fluid level is correct. Using the factory recommended viscosity fork fluid, set the fluid level in each fork to the factory recommended level. To check the fluid level properly you must have the springs and spacers removed and the fork completely compressed. You then measure from the top of the fork leg to the fluid level. Add or remove fluid to achieve this measurement.

Note

For maximum performance we highly recommend that the forks be disassembled and thoroughly cleaned, inspected and new fork fluid installed. See fine tuning for more information. Fork fluid levels should be measured with the fork springs & preload spring collars removed and the fork completely compressed.

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NEVER ADD TOO MUCH FLUID RESULTING IN A MEASUREMENT LESS THAN THE FACTORY RECOMMENDED MINIMUM MEASUREMENT WHEN USING THIS SPRING KIT

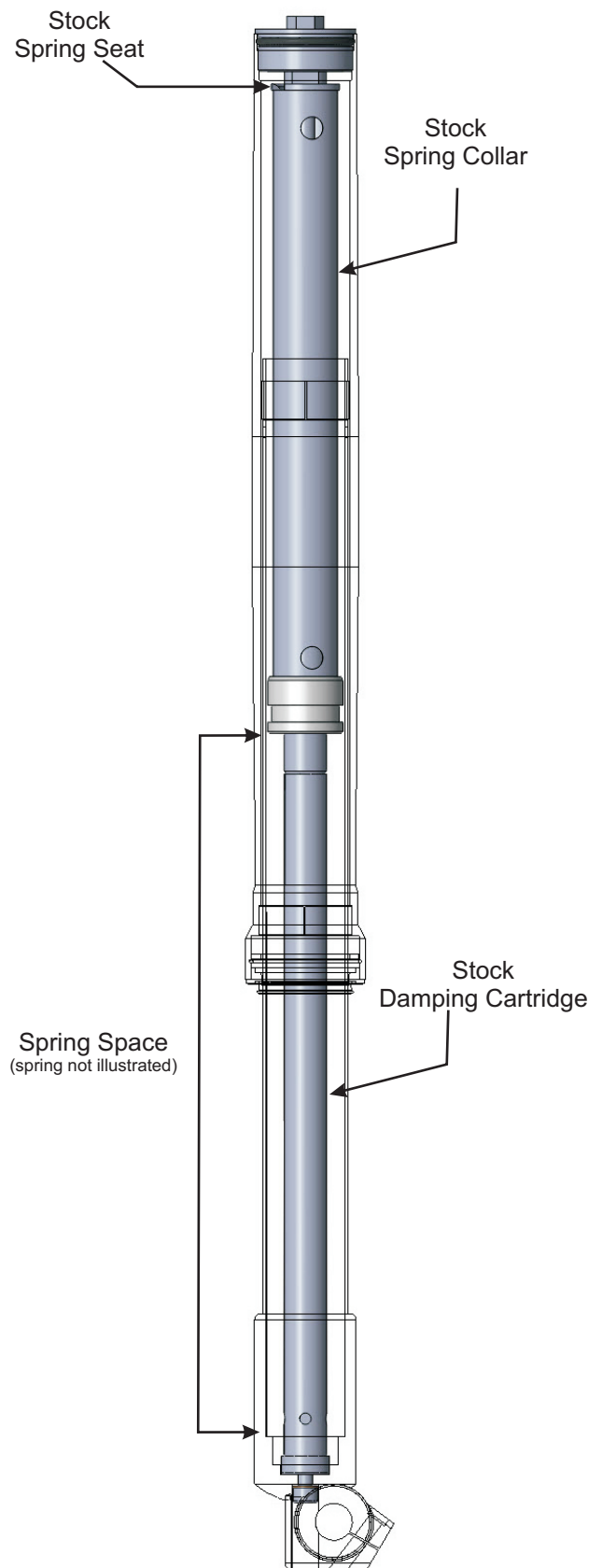
- After confirming the fork fluid level, install the Progressive Suspension fork springs - tighter coils down - into the forks in the same manner you would install the stock springs, followed by the stock preload spring

collars, then the stock spring seats and caps per your factory authorized shop manual - essentially replacing only the stock springs with the supplied Progressive Suspension springs (see illustration).

- When reinstalling the fork caps be certain to torque it to the factory specification noted in your factory authorized shop manual. Reinstall any other components previously removed per a factory authorized shop manual. Remove motorcycle from lift and re-check all fasteners for proper tightness per your factory authorized manual.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.

FINE TUNING

- Fork Oil: Though we recommend using the factory recommended fork fluid, oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 2.5 weight increments (i.e. from 2.5 weight to 5 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft or dive excessively. As stated previously, when using this spring kit **NEVER adjust the fork oil level to produce a measurement of less than the factory recommended minimum measurement - measured fork springs removed, fork compressed, from the top of the fork leg - or damage will occur.**



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IMPORTANT NOTICE

Caution: Removing and replacing fork springs must be performed by a qualified mechanic & 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/fork springs are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Fork Springs 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.

Recommended Tools

- HD-41177 Fork Tube Holder or Equiv.
- HD-45966 Fork Spring Compressing Tool or Equiv.
- HD-45966-2 Fork Spring Compressing Tool Collar or Equiv. (Part numbers shown are for Harley Davidson Tools)

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 balance point is toward the front of the engine.

Warning

- The right fork cap is under high spring force, care must be taken when removing the fork cap!
- Remove the fork caps.
- Remove the OEM fork spacer, washer & spring from the right fork, and the OEM spring from the left fork according to instructions contained in your factory authorized service manual. The Progressive Suspension fork spring kit is a direct replacement of your OEM springs. Replace the spring from the left fork, which is tapered at each end, with the Progressive Suspension spring which is also tapered at each end. The right fork will use the supplied spacer and non-tapered fork spring. You must also re-use the OEM washer between the spacer and fork spring in the right fork.

Note

For maximum performance we highly recommend that the forks be disassembled and thoroughly cleaned, inspected and new fork oil installed.

- Before installing the new springs & preload spacer, it is crucial that you make sure you've installed the proper fork oil and the oil level is correct. We recommend 5wt.fork oil. To check the oil level properly you must have the springs and spacer removed, cycle the forks & cartridge several times to purge any trapped air and then completely compress the forks & cartridge. You then measure from the top of the fork leg to the oil level - the required measurement is 110mm in the left fork & 135mm in the right fork. Add or remove fork oil to achieve these measurements.

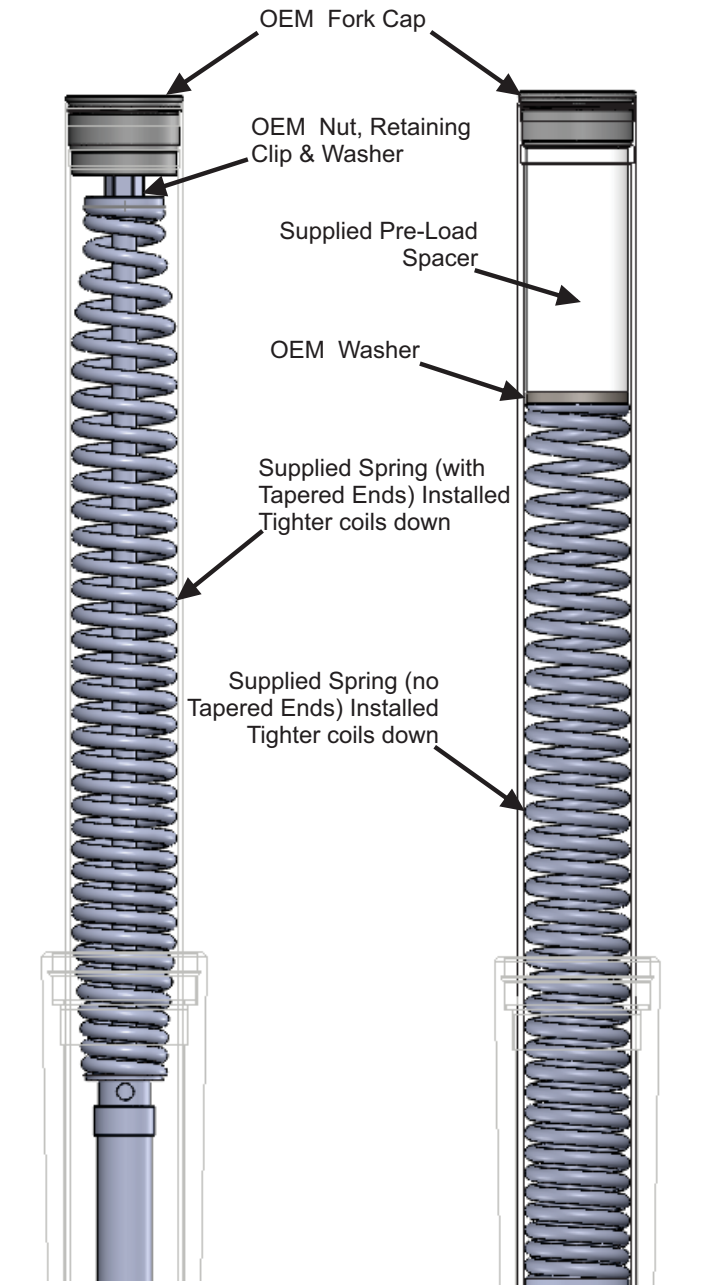
Caution

NEVER ADD TOO MUCH OIL RESULTING IN A MEASUREMENT LESS THAN 110MM IN THE LEFT FORK AND 135MM IN THE RIGHT FORK WHEN USING THIS SPRING KIT

- After confirming the fork oil level in the **Left Fork (110mm)**, install the supplied fork spring with tapered ends (tighter coils down) onto the cartridge in the same manner you would install the OEM components per your factory authorized service manual, reusing the OEM nut, retaining clip and washer - essentially replacing the OEM spring with the supplied Progressive Suspension spring (see illustration). Reinstall the fork cap being certain to torque it and the cartridge nut to the factory specification noted in your factory authorized service manual.
- After confirming the fork oil level in the **Right Fork (135mm)**, install the supplied fork spring (tighter coils down), the OEM washer and the supplied preload spacer, into the forks in the same manner you would install the OEM components per your factory authorized service manual - essentially replacing the OEM preload spacer and spring with the supplied Progressive Suspension components (see illustration). Reinstall the fork cap being certain to torque it to the factory specification noted in your factory authorized service manual.
- Reinstall the forks and any other components previously removed per a factory authorized service manual. Remove motorcycle from lift and re-check all fasteners for proper tightness per your factory authorized manual.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.

FINE TUNING

- Fork Oil:** Though we recommend using 5wt. fork oil, oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Change in 2.5 weight increments (i.e. from 2.5 weight to 5 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil level and the bike will bottom and feel soft or dive excessively. As stated previously, when using this spring kit **NEVER adjust the fork oil level to produce a measurement of less than 110mm in the Left Fork and 135mm in the Right Fork- measured fork springs & spacer removed, forks & cartridge compressed, from the top of the fork leg - or damage will occur.**



Left Fork with 110mm Fork Oil Level (5wt Fork Oil) See instructions to properly set oil level

Right Fork with 135mm Fork Oil Level (5wt Fork Oil) See instructions to properly set oil level





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.

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 springs must be performed by a qualified mechanic & 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/fork springs are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Fork Springs 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.

Recommended Tools

HD-45966 Fork Spring Compressing Tool or Equiv.

(Part number shown is for Harley Davidson Tool)

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 balance point is toward the front of the engine.

Warning

- The right fork cap is under high spring force, care must be taken when removing the fork cap!
- Remove the fork caps.
- Remove the OEM fork spacer, washer & spring from the right fork, and the OEM spring from the left fork according to instructions contained in your factory authorized service manual. The Progressive Suspension fork spring kit is a direct replacement of your OEM springs. Replace the spring from the left fork with one of the Progressive Suspension springs. The right fork will use the other Progressive Suspension fork spring and the OEM spacer and washer. You must re-use the OEM washer between the spacer and fork spring in the right fork.

Note

For maximum performance we highly recommend that the forks be disassembled, thoroughly cleaned, inspected and new Progressive Suspension Standard (Type E) fork oil installed.

- Before installing the new springs & preload 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 oil level properly you must have the springs and spacer removed, cycle the forks & cartridge several times to purge any trapped air and then completely compress the forks & cartridge (left fork). You then measure from the top of the fork tube to the oil level - the required measurement is 175mm in both forks. Add or remove fork oil to achieve this measurement in both forks.

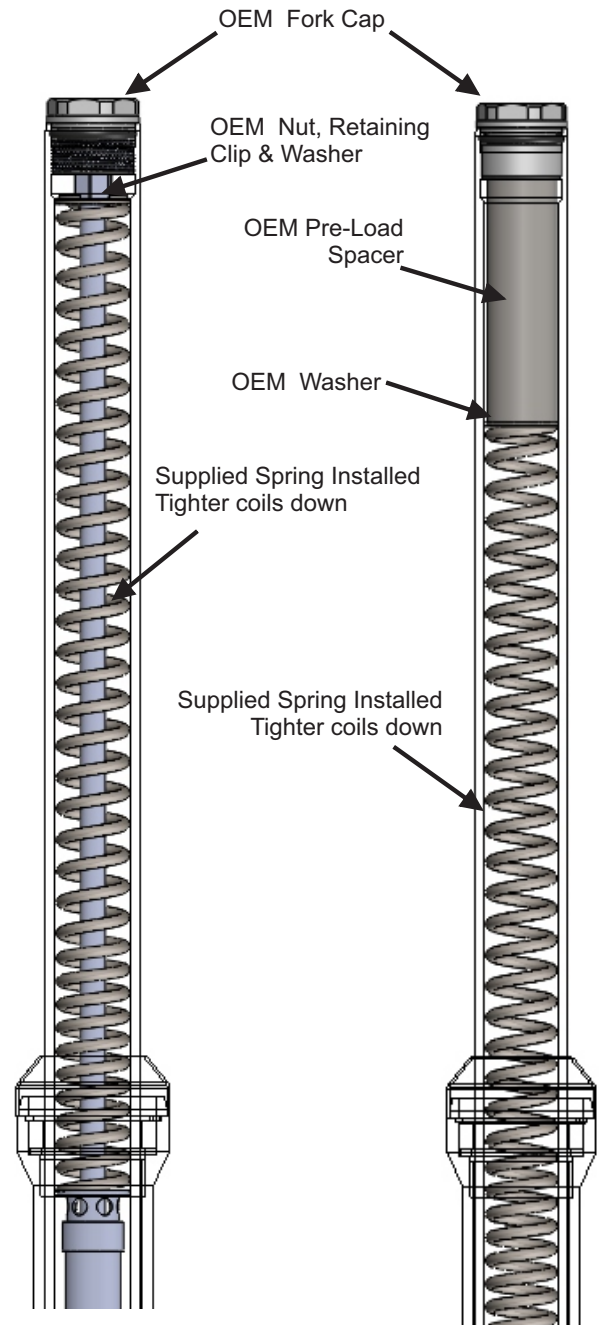
⚠ Caution ⚠

NEVER ADD TOO MUCH OIL RESULTING IN A MEASUREMENT LESS THAN 175MM IN EITHER FORK WHEN USING THIS SPRING KIT

- After confirming the fork oil level in the **Left Fork (175mm)**, install the supplied fork spring, with tighter coils down, onto the cartridge in the same manner you would install the OEM components per your factory authorized service manual, reusing the OEM nut, retaining clip and washer - essentially replacing the OEM spring with the supplied Progressive Suspension spring (see illustration). Reinstall the fork cap being certain to torque it and the cartridge nut to the factory specification noted in your factory authorized service manual.
- After confirming the fork oil level in the **Right Fork (175mm)**, install the supplied fork spring, with tighter coils down, the OEM washer and the OEM pre-load spacer, into the forks in the same manner you would install the OEM components per your factory authorized service manual - essentially replacing the OEM spring with the supplied Progressive Suspension spring (see illustration). Reinstall the fork cap being certain to torque it to the factory specification noted in your factory authorized service manual.
- Reinstall the forks and any other components previously removed per a factory authorized service manual. Remove motorcycle from lift and re-check all fasteners for proper tightness per your factory authorized manual.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics and ground clearance.

FINE TUNING

- Fork Oil:** Though we recommend using Type E (10wt.) fork oil, oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Change in 5 weight increments (i.e. from 10 weight to 15 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil level and the bike will bottom and feel soft or dive excessively. As stated previously, when using this spring kit **NEVER adjust the fork oil level to produce a measurement of less than 175mm in either Fork- measured fork springs & spacer removed, forks & cartridge compressed, from the top of the fork tube - or damage will occur.**



Left Fork with 175mm Fork Oil Level (Type E Fork Oil)
See instructions to properly set oil level

Right Fork with 175mm Fork Oil Level (Type E Fork Oil)
See instructions to properly set oil level





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 springs must be performed by a qualified mechanic & according to steps outlined in a professional workshop manual that relates to your particular make, model and year motorcycle.

Warning

The vehicle must be securely blocked to prevent it from dropping or tipping when the forks/fork springs are removed. Failure to do so can cause serious damage and/or injury.

Progressive Suspension Fork Springs 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

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.

- 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 balance point is toward the front of the engine.
- The fork caps are under high spring force, care must be taken when removing the fork caps!
- Remove the fork caps.
- Remove fork springs according to instructions contained in your shop manual. For maximum performance we highly recommend that the forks be thoroughly cleaned, inspected and new fork oil installed

Note

If your motorcycle comes equipped with two fork springs in each leg (long & short), remove and discard both springs and the flat washer between the springs. If a stock spacer exits, remove it. If there is a short spring on the damper rod, do not remove it!

- Unless otherwise noted on the enclosed Application Supplement, use the recommended fork oil viscosity as noted in your owners manual. See fine tuning for more information.
- Before installing the new springs & pre-load spacers, it is crucial that you make sure you've installed the proper fork oil and the oil level is correct. Fork oil level/volume should be checked according to the steps outlined in your authorized shop manual. Measurement of your fork oil by level is the preferred method. However, some manuals only

specify a volume measurement. Due to the design of a progressive wound fork spring it will displace more oil thus requiring a maximum oil level of 5.5" (140mm).

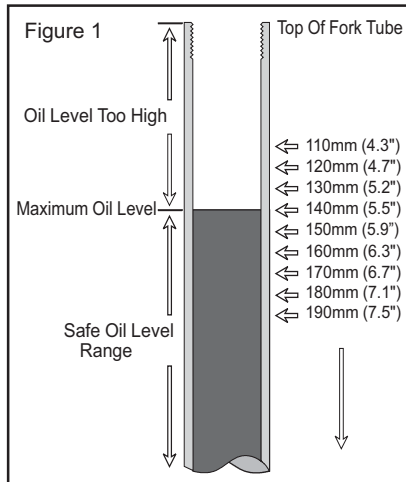
Caution

This is not a recommendation, it is only a precautionary statement.

- If your manual specifies an oil level higher than 5.5" (140mm) set the oil level at 5.5" (140mm). (Oil level is the distance from the top of the fork tube to the top of the oil with the fork completely collapsed and the fork spring removed see figure 1.) This measurement can be made by using either one of the Progressive Suspension Fork Oil Level Adjusters (FOL-1 or FOL-2).

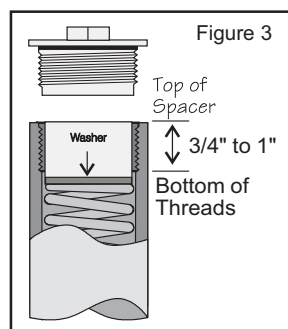
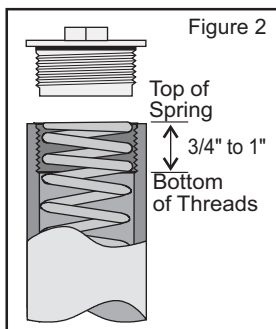
NEVER ADD TOO MUCH OIL RESULTING IN A MEASUREMENT LESS THAN 150MM WHEN USING THIS SPRING KIT

- After confirming the fork oil level is correct, install your new fork springs into the forks. Mechanically, it makes no difference which way the springs are installed. Some manuals will state; install the spring with the close wound end towards the bottom. This is done because sometimes there will be less spring noise. The springs will perform exactly the same regardless of which direction they are placed. Check the spacer length requirement for your motorcycle in the enclosed supplement. If not listed, you must calculate the pre-load. What is pre-load? Pre-load is the distance the spring compresses when the fork cap is installed. You may or may not utilize a spacer to achieve proper pre-load. The spacer in itself is not "pre-load". It just helps to achieve it. Why is pre-load important? It determines the proper ride height which in turn affects how the bike handles.



Calculating pre-load

- If your motorcycle is not listed - or a spacer length indicated on the enclosed chart, you will need to calculate pre-load to determine if you need a spacer and the length it must be. Most motorcycles need between 3/4" and 1" of pre-load. As a rough rule of thumb, the fork spring (figure 2) or fork spring and spacer combination (figure 3) should be at



least flush (or above) the top of the fork tube with the forks fully extended. This is true for most motorcycles because their fork caps are between 3/4" to 1" long meaning that they will screw into the fork tube the same distance. For fork caps longer than 1", you must calculate the pre-load length so the fork spring or fork spring/spacer combination will be below the edge of the fork tube. If your fork caps have adjustable pre-load settings or are recessed below the edge of the fork tube (circlip type), then they are usually much longer than the 3/4" to 1" caps and must be measured accordingly.

- Also check the Notes on the enclosed Application Supplement, the stock spacer in some cases can be modified to fit. If making a spacer, we recommend PVC pipe that is the approximate diameter of the fork springs but will still fit inside the fork tubes. *Warning:*

Caution

if installing a spacer, a flat washer must be installed between the spacer and the spring!

- After installing the fork cap, we recommend no air pressure for a starting point. See fine tuning for more information.
- Fork Braces: We have found numerous cases of binding forks due to improperly mounted fork braces. Our experience has led us to conclude that even the slightest misalignment while installing the fork brace will cause the forks to bind. If, after installing the springs, a harshness exists (especially on small bumps and freeway expansion joints), remove the fork brace and ride the bike again over the same route. If harshness has disappeared, refer to the fork brace installation instructions for proper and concise installation to eliminate the misalignment. If harshness still exists, your front end (wheel/forks) may be misaligned. Consult your shop manual for proper wheel and fork alignment instructions.
- Fork damper adjustments: Our testing has shown that bikes equipped with fork damping adjusters should be set at the minimum setting for freeway and surface street riding for maximum comfort. On motorcycles equipped with antitive or adjustable pre-load, we recommend starting at the minimum settings for each.
- The operator must use extreme caution when operating a modified motorcycle, particularly while getting familiar with its altered handling characteristics.

FINE TUNING

- **Pre-load:** Spacer length can be decreased to lower the ride height and soften the ride or increased to raise the ride height and stiffen the ride. Adjust in 1/4" increments.
- **Fork Oil:** Except as previously noted we recommend the stock oil viscosity and level. Oil viscosity can be changed to alter damping. Heavier oil to increase damping. Lighter oil to decrease damping. Increase in 5 weight increments (i.e. from 10 weight to 15 weight.) Oil viscosity will have more effect on rebound damping than compression damping, too high a viscosity can create harshness on sharp edge bumps. The oil level also affects the ride, too high an oil level and the forks will feel too stiff, too low an oil height and the bike will bottom and feel soft or dive.
- **Air pressure:** Progressive fork springs are designed to be used with no air pressure under normal conditions. A few pounds of air can make a difference, so add air in small increments.

