



2016-19' Sachs 48mm Closed Cartridge Fork Service Manual
Fork Disassembly and Assembly including lowering

CONFIDENTIALITY NOTICE

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7-2019

Work must be performed by trained technician.
Beta USA, Inc.

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*The spring change only procedures are noted with this symbol ⚙

*The seal change only procedures are noted with this symbol ▼

Introduction

The procedures in this manual must take place in a clean environment using professional and some specific tools.

Use caution not to damage the surface of the fork tubes, cartridge, rod, or any other suspension components.

When using a the bench vise, always use protective jaws made from brass, aluminum or plastic. Always clean suspension components before assembly, using appropriate solvents and lint free towels to prevent contamination. Replace common wear parts such as seals, gaskets, bushings and O-rings every service interval.

CAUTION:

Always wear protective eyewear, gloves and appropriate clothing.
Before you perform any maintenance, be sure to read and carefully follow the detailed instructions described in this manual.

Incorrect disassembly/assembly of the fork may cause serious damage, injury, or death to the rider and property.

Special tools

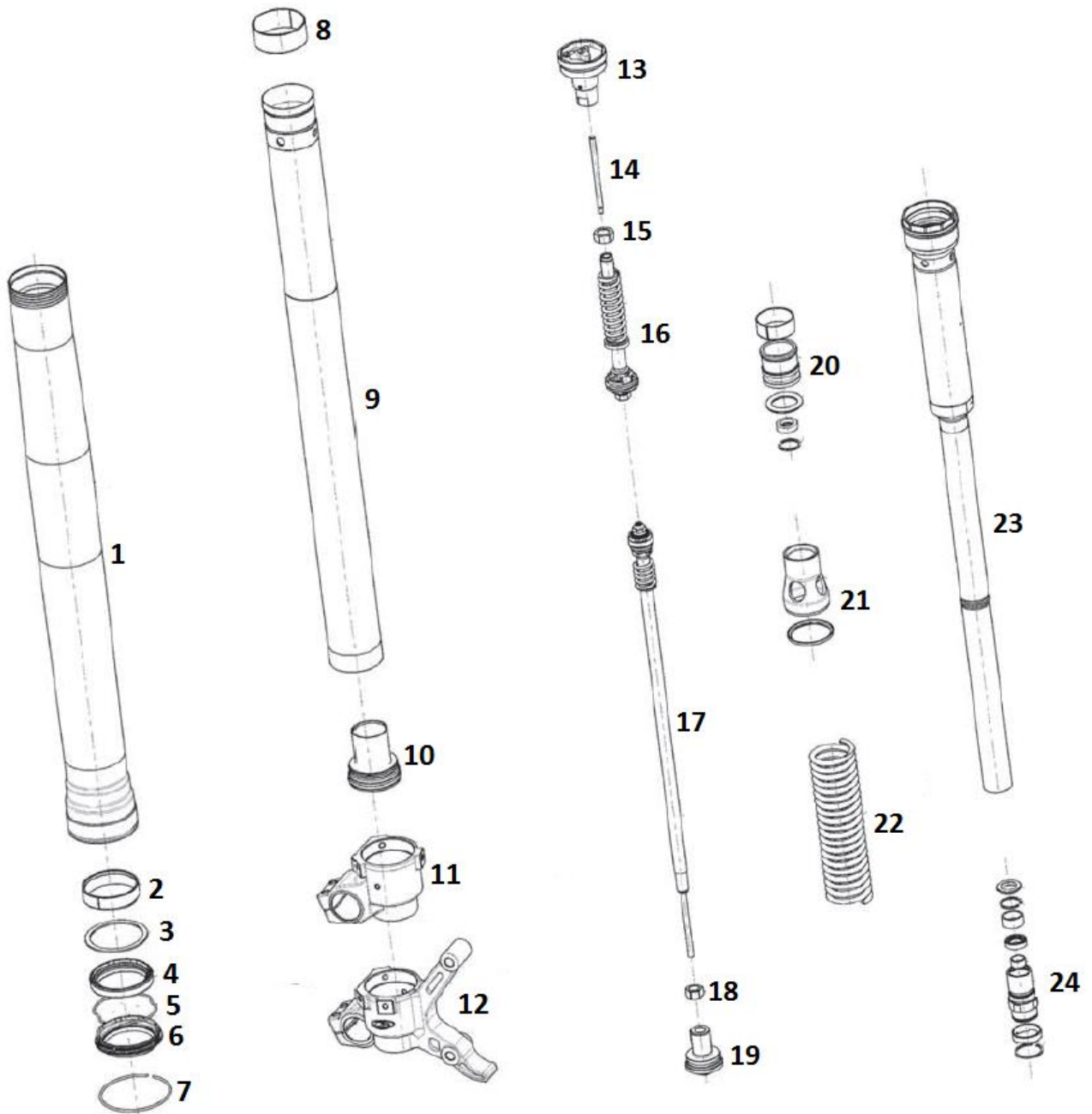


Needed tools

Medium thread locking agent
High strength thread locking agent

1. 26mm Open end wrench
2. 10 Point fork cap wrench AB-15021
3. Fork internal cap tool AB-15018
4. Cartridge holding clamp
5. Cartridge rod holding tool AB-15027
6. Cartridge rod holding clamp
7. 48mm seal driver
8. 48mm seal bullet
9. Measuring beaker

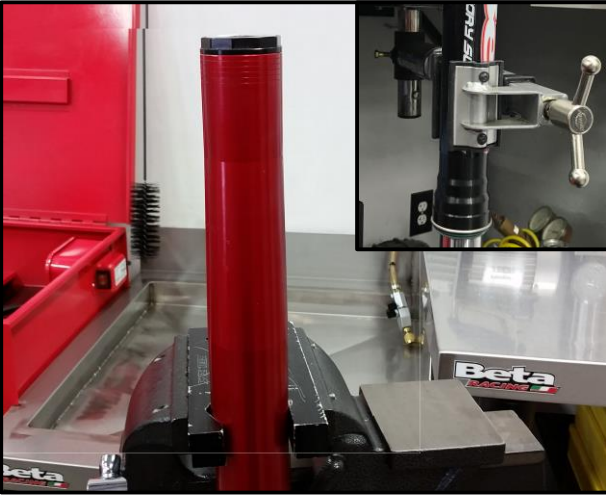
Fork Diagram and Component Description



1. Outer fork tube
2. Guide bushing
3. Oil seal support washer
4. Fork oil seal
5. Retainer clip
6. Dust seal
7. Outer tube wear ring
8. Slide bushing
9. Inner fork tube
10. Oil lock chamber
11. Right axle lug
12. Left axle lug

13. Fork cap/ compression adjuster
14. Compression adjuster rod
15. Jam nut
16. Compression shaft assembly
17. Cartridge rod
18. Jam nut
19. Rebound adjuster
20. Floating piston assembly
21. Spring perch
22. Coil spring
23. Cartridge
24. Rod case guide

Fork Disassembly



Secure the fork in a soft jaw vise or Park tool and loosen the cap from the outer fork with the 10Pt. wrench(AB-15021).



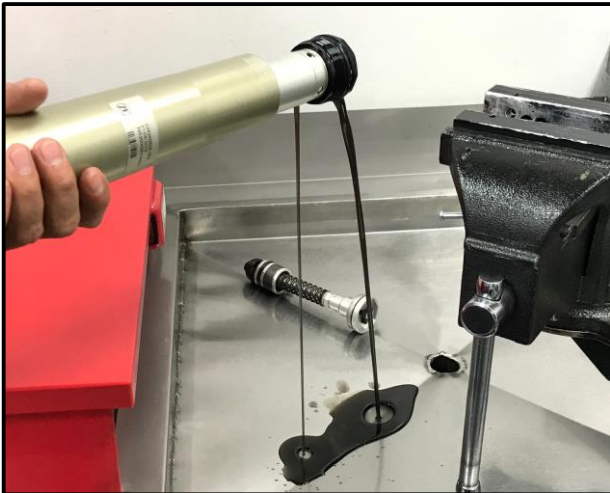
Use the 10Pt. wrench (AB-15021) to loosen the the outer fork tube. ▼☀



Loosen 19mm hex from the lower fork leg then remove the cartridge from outer fork tube.



Push down on the outer fork tube to push up the compression assembly and remove.



Drain oil from both inner and outer chambers for complete service.

Only drain the outer fork fluid ▼☀



Loosen 19mm hex from the lower fork leg. ▼☀



Compress the inner cartridge exposing the cartridge rod and insert the holding tool AB-15027. ▼☀



While holding the 15mm jam nut, loosen and remove the rebound assembly. ▼☀



Compress the cartridge to release pressure on the holding tool, remove the tool. ▼☀



Remove the cartridge. ▼☀



Remove the rebound adjuster rod. ▼☀



Remove the spring. ▼☀

Cartridge Disassembly



Use a screw driver to remove the oil lock collar circlip.



Remove circlip and oil lock collar noting the orientation of the crown shaped edge.



Remove the spring seat perch.



Secure the cartridge using the cartridge holding clamp in the vise.

Apply heat for 10-15 seconds to loosen the factory thread locking agent on the rod case guide.



Remove rod case guide assembly using a 26m wrench.



Pull the cartridge rod from the cartridge.

Remove the Teflon Z band from the rebound piston.

Note: For fork lowering, proceed now to pages 20-22.

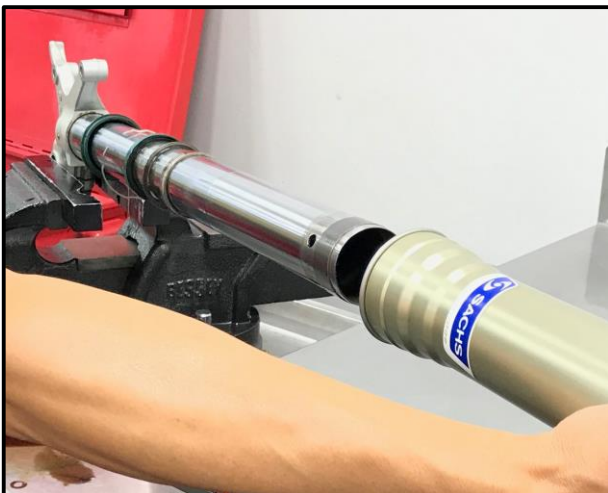
Fork External Disassembly



Lightly pry the dust seal to unseat it from the outer fork tube. ▼



Remove the circlip. ▼



Using a vice to hold the fork, and with one quick motion, pull the outer tube off. ▼

Remove the bushings, support washer, oil seal, retaining clip and dust seal paying attention to the order of removal and orientation.

Clean and inspect all parts, replace bushings and seals.

Cartridge Assembly



Apply grease to the compression assembly O-rings.

Set the cleaned compression assembly in enough fork oil to cover the piston.
This will help with bleeding.



Wrap the Teflon Z band around a screwdriver.

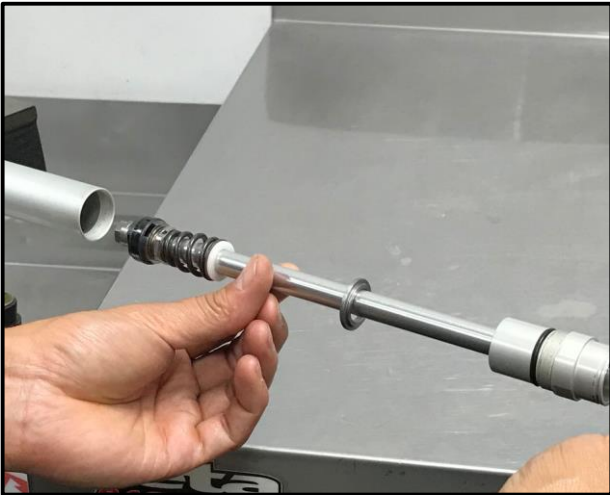
Having it in a tight spiral will help keep it on the rebound piston during installation.



Install the Z band around the rebound piston.



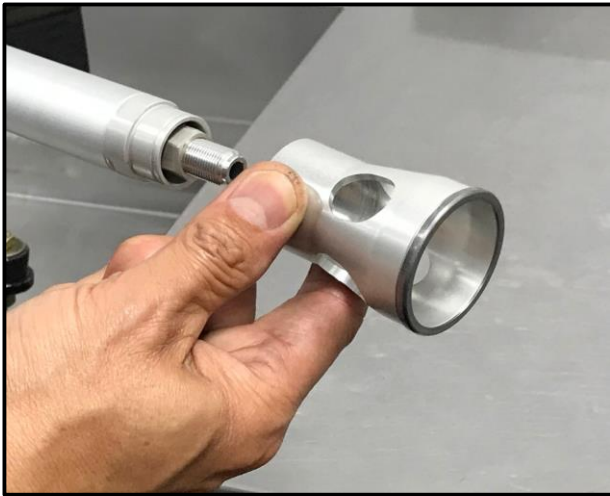
Apply a medium thread locking agent to the case guide threads.



Carefully insert the cartridge rod into the cartridge.



Tighten the rod case guide.



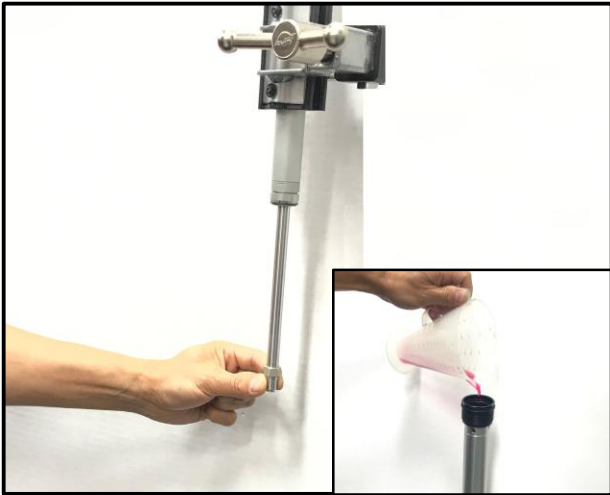
Install the spring perch.



With the crown shaped edge facing out, install the oil lock collar on the case guide.



Install the oil lock collar circlip.



Measure 200cc's of fork oil and pour it into the cartridge.

Raise and lower the rod in 8" strokes until all air is bled from the cartridge.



Insert the compression assembly into the cartridge and tighten.



Lay the cartridge downward and cover one of the two small bleed holes, located on the side of the cylinder with your finger.

Compress the cartridge rod until it bottoms, forcing oil out of the other bleed hole.

Release the cartridge rod and it should fully extended by itself.

Fork External Assembly



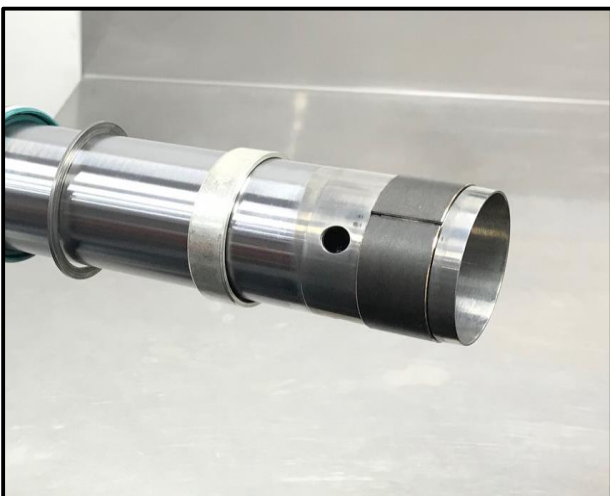
Use 600 grit sandpaper with a twisting motion back and forth to clean up any nick's, or burrs on the inner fork tube. ▼



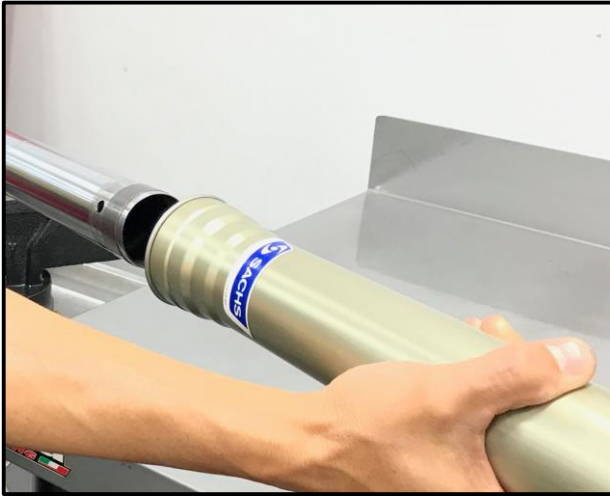
Apply grease to the inside edge of the new dust seal and inner and outer edge of the new oil seal.

Install the 48mm seal bullet then install the dust seal, clip , oil seal and support washer paying attention to orientation.

The spring side of the dust seal should face down and the groove on the oil seal should face up. ▼



Remove the seal bullet then install the new slide and guide bushings. ▼



Slide the outer fork tube over the slide bushing, located on the inner tube. ▼



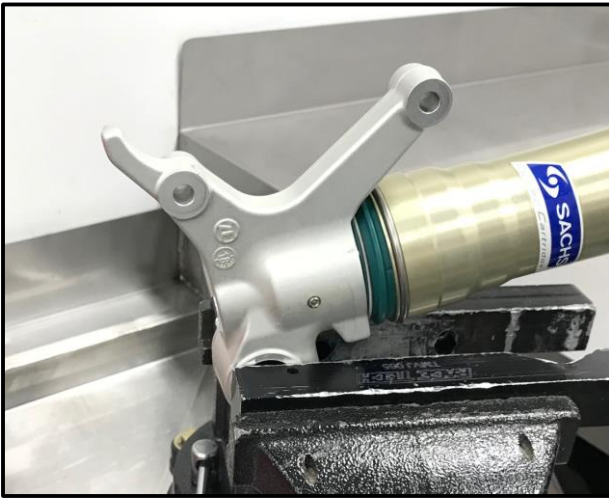
Use the 48mm seal driver against the support washer to insert the slide bushing into the outer fork leg. ▼



Use the 48mm seal driver to insert the oil seal into the outer fork leg. ▼

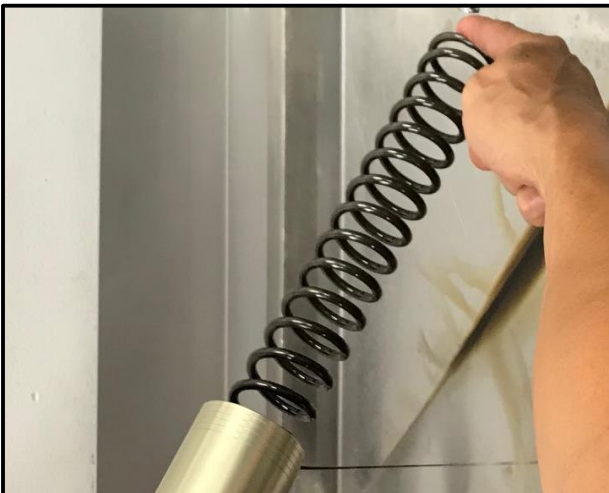


Insert the oil seal retaining clip making sure it is fully seated.

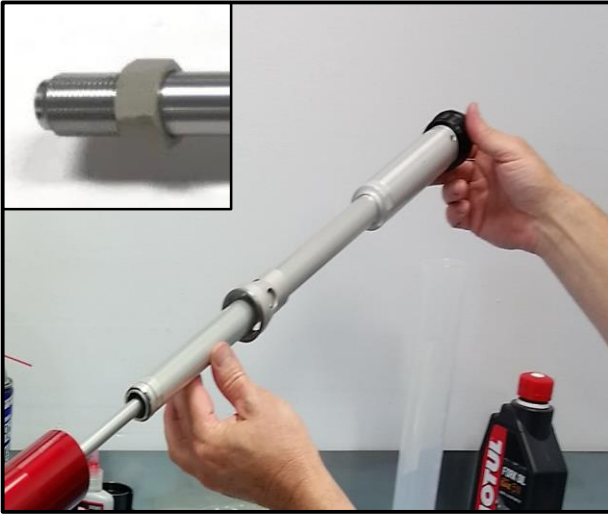


Push the outer fork leg against the axel lug until the dust seal is completely seated.

Fork Assembly

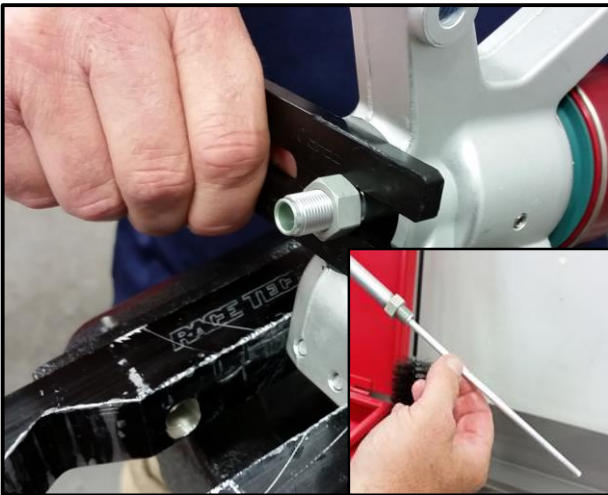


Install the fork spring.



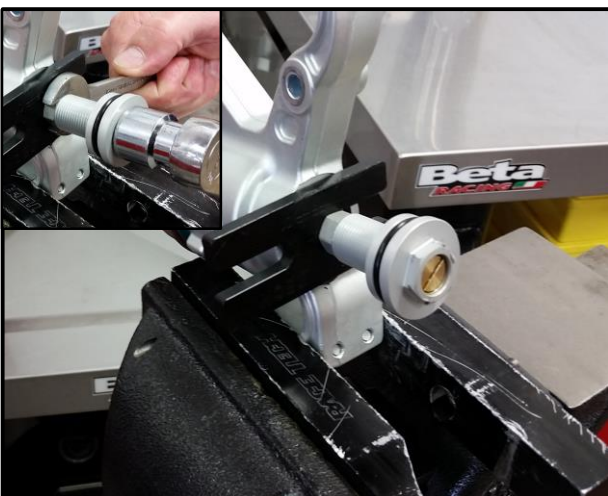
Make sure the jam nut is completely threaded on the cartridge rod.

Insert the cartridge into the fork leg. ▼☀



Compress the cartridge far enough to allow room for the cartridge rod holding tool.

Apply grease to rebound adjuster rod and reinstall it in the cartridge rod. ▼☀



Thread the rebound adjuster on the cartridge rod until it bottoms out. There should be space between the rebound adjuster and the jam nut assuring the adjuster is completely bottomed.

Holding the jam nut with a 15mm wrench, tighten the 19mm hex of the rebound adjuster to the jam nut until tightened securely. ▼☀



Apply grease to the O-ring, compress the cylinder downwards then remove the holding tool and tighten the rebound adjuster to 35Nm. ▼☀



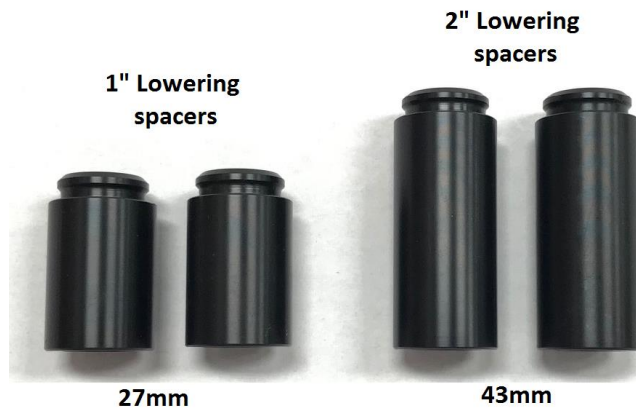
Measure 350 CC's of high quality 5w fork oil then pour it into the outer fork tube. ▼☀

Oil Range: 325-400cc for standard models



Apply grease to the cylinder O-ring then thread the outer cylinder into the outer tube and tighten. ▼☀

Fork Lowering Procedure



Lowering spacer placement on the cartridge rod.



1. Follow the fork disassembly procedures on pages 4-7.

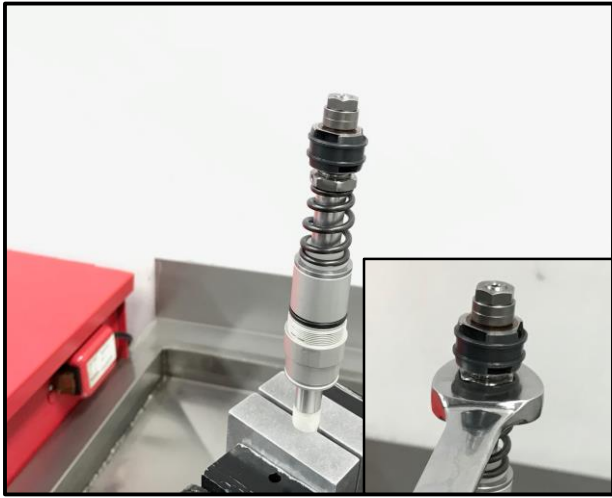


2. Wrap the cartridge rod with paper and secure the rod with a cartridge rod holding clamp. Secure holding clamp with a soft jaw vise.

(Continued)

Fork Lowering Procedure

continued



3. Use a 17mm wrench to loosen the rebound piston assembly.



4. Remove the rebound piston assembly from the cartridge rod.



5. Remove the top out spring from the cartridge rod, then remove the white spacer from the spring.

(Continued)

Fork Lowering Procedure

continued



6. Use a vise to press the lowering spacer into the top out spring.

The side of the spacer with the groove goes towards inside the spring.



7. Install the lowering spacer with spring on the rod with the smaller end of the spring towards the top.

Apply a high strength thread locking agent to the threads on the rebound assembly.



8. Tighten the rebound assembly.

9. Proceed to pages 11-19 for reassembly procedures.