

1 DESIGN

Oil Level

The upside down front forks are very sensitive to oil level variations compared to the conventional front fork types. Therefore, adjust the oil level with special care. A change in the front fork oil level will not affect the air spring force in the early stage of the movement, but will have a greater effect in the later stage.

Oil level Diagram

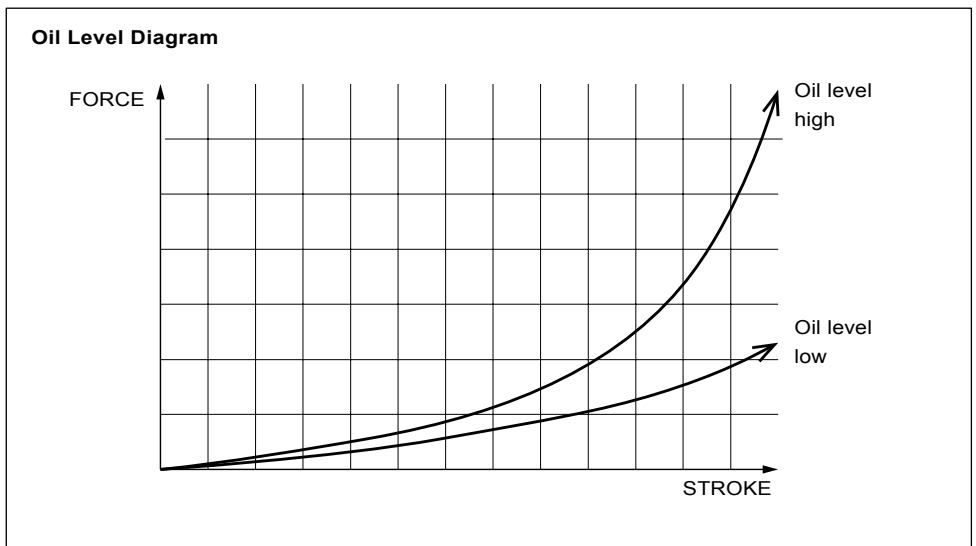
The diagram below shows two different types of curves for the force that equals to a specific oil level.

Raised Oil Level

The air spring in the later half stage of travel is stronger which makes the front fork *firmer*.

Lowered Oil Level

The air spring in the later half stage of travel is lessened which makes the front fork *softer*.



2 OIL

2.1 Fill Oil and Aerate

⚠ Warning!

Always aerate the damping system after changing/ adding oil. Air in the system may cause poor or no function at all.

👁 Note!

The following process applies to: cartridge kit installed in the fork legs without spring support, guide sleeve or spring.

2.1.1

Make sure the shaft assembly is in bottom position. Pour Öhlins front fork fluid into the fork leg. Fill up so that the oil level is above the top of the seal head during the aeration process.

👁 Note!

Note that the oil level drops during the aeration process since the air goes out of the system.

2.1.2

Open the adjusters fully. Install the top cap directly to the shaft extension (No spring, guide sleeve or spring support).

2.1.3

Pull up the outer tube and tighten it to the top cap. Hand tighten only. Make sure that the fork leg is fully extended.

2.1.4

Close the adjusters fully and pump out all air from the damping system by pulling the outer tube up and down, from fully extended to fully compressed, ~ 15-20 times.

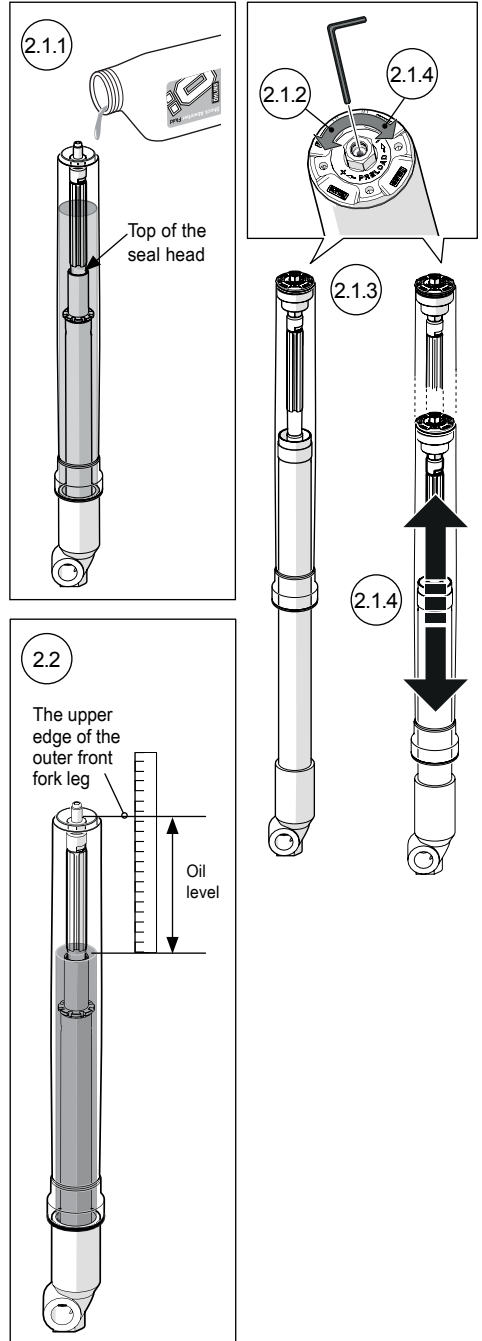
2.1.5

→ If aeration process was successful, continue with step 2.2 Measure Oil Level.

→ If after aerating, the oil level is below the top of the seal head, fill up with more oil and repeat the aeration process. *If the oil level is below the top of the seal head there may be air trapped in the damping system which may cause poor or no function at all.*

2.2 Measure Oil Level

Make sure that the shaft assembly is in the bottom of the fork leg and that the outer tube is in its bottom position. Measure the oil level with a ruler. See figure. For recommended oil level, see the Mounting Instructions or contact an Öhlins dealer. Add or remove oil to adjust to the recommended level.



3 SET UP

3.1 Measure Sag

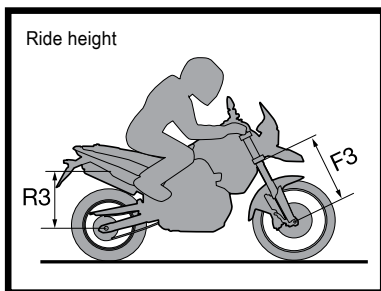
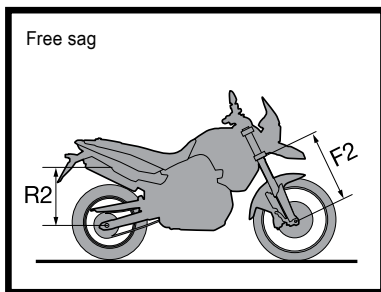
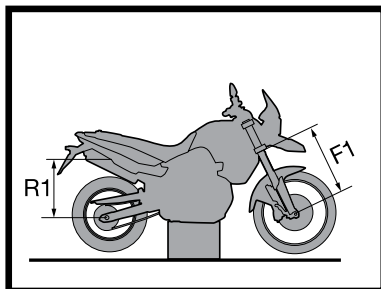
Spring Preload - Free Sag - Ride Height

Spring preload is a crucial part of setting your motorcycle since it affects the height of the motorcycle and the fork angle. Before setting the preload, measure the sag:

👁 Note!

The following procedure should be performed on a flat surface.

1. Put the motorcycle on a work stand so that both wheels are off the ground and the suspension is unloaded.
2. Mark, for example with a piece of tape, a point immediately above the rear wheel axle.
3. Measure the distance from the marked point to a fixed point, for example the wheel axle (R1).
4. Measure the distance from the bottom of the upper triple clamp to a fixed point, for example the front wheel axle (F1).
5. Put the motorcycle on the ground so that the front and the rear suspensions are slightly compressed. Repeat the measuring procedures (R2 and F2).
6. Sit on the motorcycle in normal riding position, properly outfitted in your riding gear. Repeat the measuring procedure (R3 and F3).



Note measures			
R1		F1	
R2		F2	
R3		F3	

Recommended Measures

If no other recommendations are given in the Mounting Instructions follow these measures:

Sag pos.	Formula	Rec.
Free sag	$\frac{(F1-F2)}{\text{wheel travel}} \times 100$	~15-30 %
Ride height	$\frac{(F1-F3)}{\text{wheel travel}} \times 100$	~20-40 %

3.2 Adjust spring preload

1. If your measures differ significantly from the recommendations, adjust the spring preload. (See chapter Spring Preload in this manual).
2. If the ride height still differs from the recommendations, you may need to change to softer/harder spring. Contact an Öhlins dealer for advice.

⚠ Warning!

Incorrect spring rate may result in a front geometry that is either too steep or too flat. This can result in a tendency of under or over steering, that could seriously affect the handling characteristics of the motorcycle.

5 CHANGE SPRING AND/OR OIL LEVEL

Warning!

This procedure requires high technical knowledge and/or experience of working with front forks. Contact an Öhlins dealer for advice. See the Vehicle Service Manual.

Caution!

Work with only one fork leg at a time. Do not mix the parts.

1
Release the spring preload fully (counter clockwise).

2
Loosen the upper triple clamp by loosening the screws. Loosen the top cap ½ turn, do not remove it, use tool (00797-08).

3
Remove the front fork from the vehicle according to the vehicle service manual.

4
Loosen the top cap from the outer tube, use tool (00797-08).

5
Use a 19 and a 14 mm wrench to loosen the top cap and remove it from the shaft extension.

6
Remove the spring support, guide sleeve and spring.

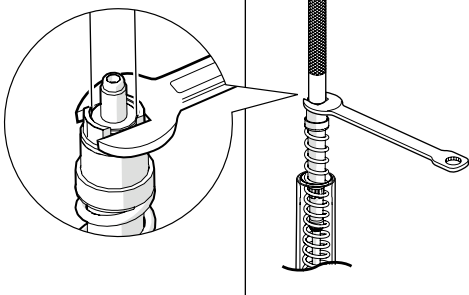
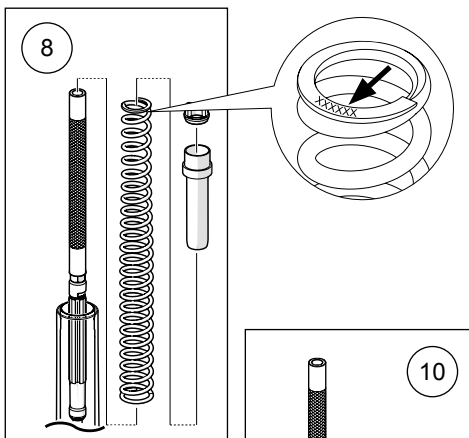
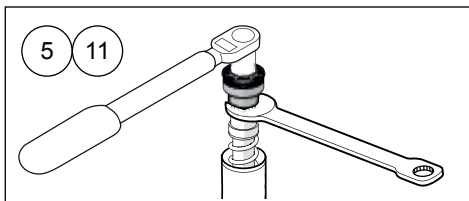
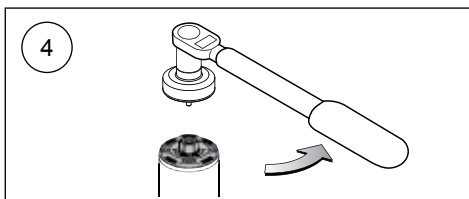
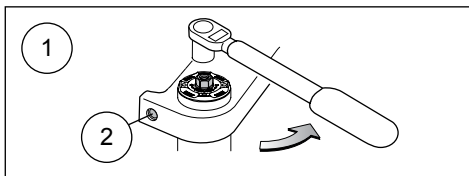
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Measure the oil level and adjust if necessary. See chapter 2.2.

8
See the Spring recommendation in the Mounting Instructions or contact an Öhlins dealer for correct spring. Install Pull up tool (01765-04) on top of the shaft extension. Install the spring, with the marking up, over the tool.

9
Install the guide sleeve and spring support over the tool.

10
Pull up the shaft assembly and grab the spring support with a 19 mm wrench.

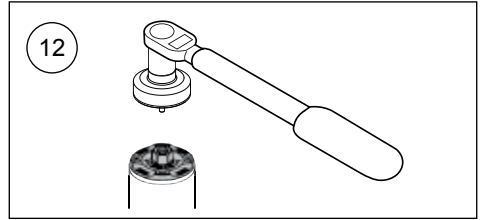
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Make sure that the compression/rebound adjusters are fully open. Remove the Pull-up tool (01765-04) and mount the top cap on the shaft extension. Use a 14 mm socket wrench. Tightening torque 30 Nm.



5 CHANGE SPRING AND/OR OIL LEVEL

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Make sure the fork leg is in a fully extended position. Use Sleeve pin tool (00797-08) to tighten the top cap to the outer tube. Tightening torque 10 Nm.

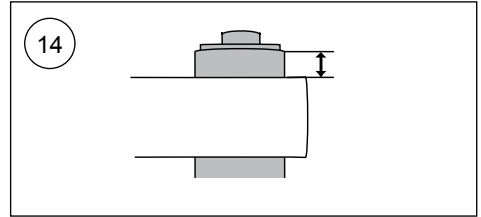


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Set the compression, rebound and spring preload adjusters according to the Setup Data in the Mounting Instructions.

14

Install the front fork legs into the triple clamps at the recommended Fork leg position according to Setup data in the Mounting instructions. Tightening torque according to vehicle service manual.



Note!

Measure the fork leg position from the upper triple clamp to the top of the outer tube.

15

Reinstall all removed parts in the same way as they were before the installation. See the vehicle service manual for correct procedure and torque specifications.

6 INSPECTION AND MAINTENANCE

Preventive maintenance and regular inspection reduces the risk of poor performance. If there is any need for additional service, please contact an Öhlins dealer.

Caution!

Never use strong detergents that can damage the surfaces of the front fork. Thinner and brake cleaner will dry out seals, increase the risk of friction, oil leakage or even poor function.

Caution!

Always use Öhlins High Performance Front Fork fluid (01309--).

Inspection points

1. Check the front fork for external oil leakage.
2. Check the inner fork leg for scratches, dents or other defects that may damage the seal/bushing.
3. Check the fender brackets and brake calliper attachments.
4. Check the front fork attachments to the vehicle.

Inspection Intervals

Normal use: Once a year or every 5000km
Race track: Every 10 hours

Once every 2nd year (or 20 000km)

1. Change front fork fluid.
2. Remove the outer fork leg and inspect the bushings, seals and the full length of the inner fork leg.
3. Check and replace seals and bushings if necessary.

Note!

Discarded Öhlins products should be handed over to an Öhlins dealer for proper disposal.