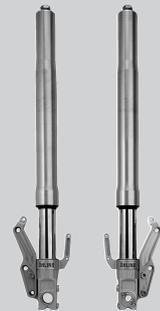


Owners manual

Öhlins road & track front fork Ø 43



Including:

Setting up
your fork

Changing
springs
and seals

Service
the fork

Trouble
shooting

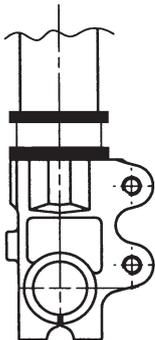
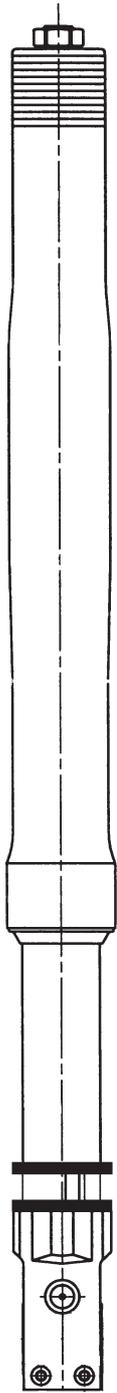
Technical info

Parts & tools



ADVANCED SUSPENSION TECHNOLOGY

Öhlins road & track
front fork Ø 43



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Safety signals

Important information concerning safety is distinguished in this manual by the following notations



The Safety alert symbol means:
Caution! Your safety is involved.

WARNING!

Failure to follow warning instructions could result in **severe or fatal injury** to anyone working with, inspecting or using the suspension, or to bystanders.

CAUTION!

Caution indicates that special precautions must be taken to avoid damage to the suspension.

NOTE!

This indicates information that is of importance with regards to procedures

NOTE!

During storage and transportation, especially at high ambient temperature, the oil and grease used for assembling may run out inside the packing and damage the expanded polystyrene packing material. This is not unusual and is in no way detrimental to the suspension.

Before you start

WARNING!

Installing a suspension, that is not approved by the vehicle manufacturer, may affect the stability of your vehicle. Öhlins Racing AB cannot be held responsible for any personal injury or damage whatsoever that may occur after fitting the suspension. Contact an Öhlins dealer or other qualified person for advice.

Öhlins Racing AB can not be held responsible for any damage whatsoever to suspension or vehicle, or injury to persons, if the instructions for fitting and maintenance are not followed exactly. Similarly, the warranty will become null and void if the instructions are not adhered to.

WARNING!

Please study and make certain that you fully understand all the mounting instructions and the owner's manuals before handling this suspension kit. If you have any questions regarding proper installation procedures, contact an Öhlins dealer or other qualified person.

WARNING!

The vehicle service manual must be referred to when installing the Öhlins suspension.

NOTE!

Öhlins products are subject to continual improvement and development. Consequently, although these instructions include the most up-to-date information available at the time of printing, there may be minor differences between your suspension and this manual. Please consult your Öhlins dealer if you have any questions with regard to the contents of the manual.

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Introduction

The Öhlins front forks use a cartridge system for damping. This gives a damping force which depends on the speed of the piston in the cartridge system.

The combination of spring and air volume (oil level) gives a possibility to adjust the characteristics of the fork to suit different tracks and riders.

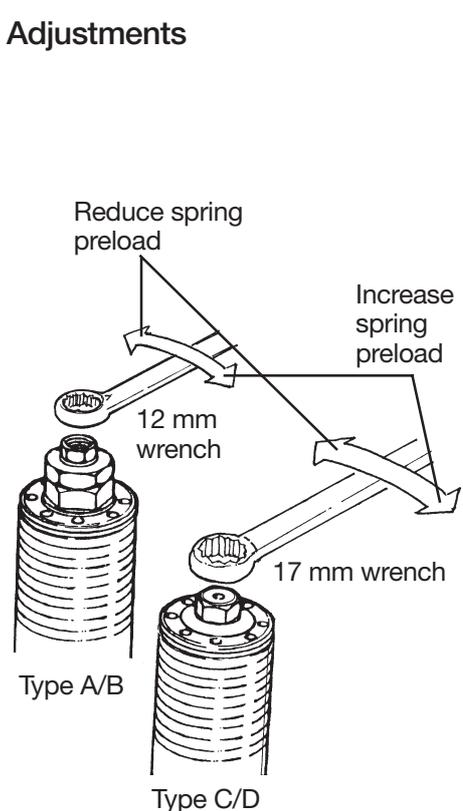
For example a soft spring in combination with a small air volume (high oil level) gives progressive action of the front forks.

For better understanding, please refer to our oil level chart, see page 5.

A telescopic front fork depends on smooth friction-free action.

Make sure your front forks are serviced regularly and don't use strong solvents such as brake cleaner to clean the front forks. This will dry out the seals and steel tubes and cause friction. Put a little Öhlins grease (148-01) regularly on the steel tube and work it in by pushing the forks up and down.

Adjustments



Spring preload adjustment

Using a 12 mm or a 17 mm wrench, turn the upper adjustment screw. Maximum adjustment range is 18 mm. One turn of the adjustment screw will cause 1 mm change in spring preload. Adjust so the front forks are lowered 25-30 mm from the top, unloaded position.

Setting up your forks

Here are some basic guidelines for setting up your Öhlins front forks. However, you must remember that the front forks are just one part of your motorcycle and to get it to work properly, the whole motorcycle has to be set up in conformance with its manual.

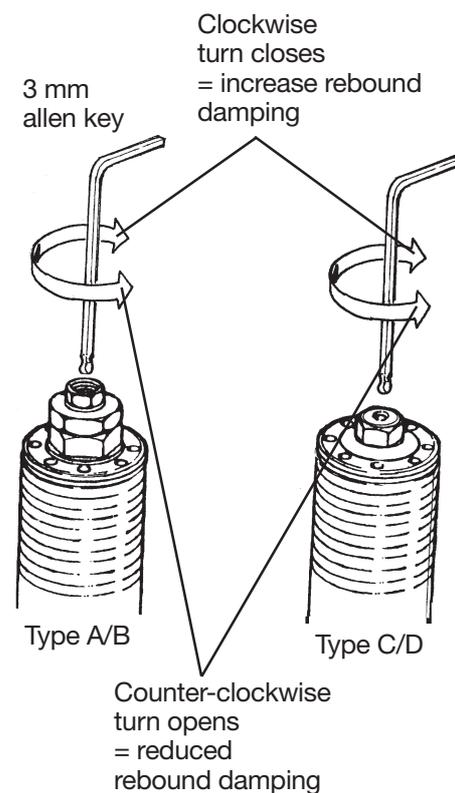
1 Put your bike on a front stand so you can fit the front forks.

Maximum torque on the bottom triple clamp and steering damper bracket (if it is located on the diameter of the outer tube) is 15-18 Nm.

Dismantle the front wheel and brakes.

2 Unscrew the adjustment housing on top of the fork (use tool 4703-01) on both upper tubes and slide the fork up and down gently to make sure everything works correctly.

3 Assemble the adjustment housing again and set your initial preload of the spring by using a 12 mm or a 17 mm wrench until you get a "static sag" of 25-30 mm. Each turn gives 1 mm in preload. Maximum preload is 18 mm.

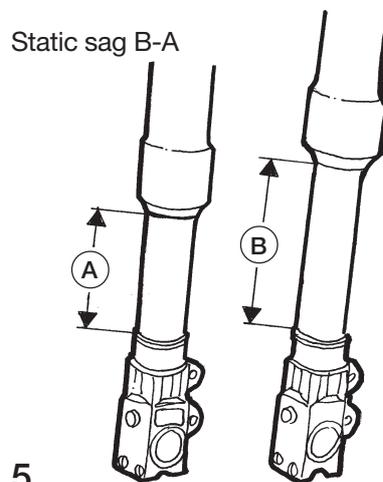


Rebound adjustment

Adjust the rebound rate on the adjustment screws positioned at the top centre of the front forks. Use a 3 mm allen key with a spherical head (use tool 794-01). Adjustment range from closed valve (clockwise) to maximum open valve (counter-clockwise) is 20 "clicks". See mounting instruction for recommended adjustment "clicks", from closed position.

4

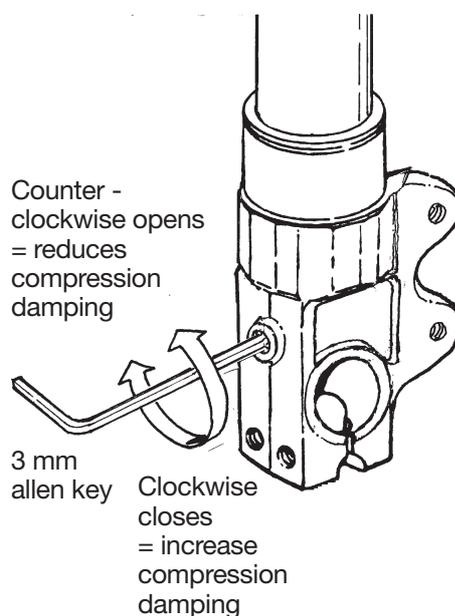
The best way to check the "static sag" is to put the bike on the ground in running condition. Measure the distance between the bottom of the outer tube to the fork bottom. Then lift the front end of the bike, so the fork is fully extended. Measure again. The difference between these two figures is the "static sag".



5

The "clicks" are a "bleed function", separate for rebound and compression damping. Rebound adjustment is made on the top centre of the fork and compression adjustment at the bottom part of the fork.

You start to count from fully closed (clockwise) and set it to the recommended "click" (use a 3 mm Allen key). For recommended start setting, please refer to the mounting instruction.



Compression adjustment

Adjust the compression rate on the lower part of the front forks (compression valve). Use a 3 mm allen key with spherical head (use tool 794-01). Adjustment range from closed valve (clockwise) to maximum open valve (counter-clockwise) is 20 "clicks". See mounting instruction for recommended adjustment "clicks", from closed position.

Changing springs

1

Loosen the screws that hold the fork legs in the upper triple clamps.

2

Loosen the top nut assy (page 7) about two turns (use tool 4703-01).

3

Remove the fork legs from the motorcycle.

4

Grip a fork leg in a vice. Use soft jaws.

5

Unload the spring completely by turning the adjustment screw anticlockwise. Use a 12 mm or a 17 mm wrench.

6

CAUTION!

Do not damage the O-ring and do not drop the flat key into the fork leg. Carefully remove the adjustment housing.

7

Remove the preload tube and spring. (Free spring length; see page 6).

8

Pull out the piston rod as far as possible and turn the compression adjustment screw fully clockwise. This will keep the piston rod in top position, which will make the continued assembly easier.

9

Install the new spring and preload tube.

10

Install the top nut assy.

CAUTION!

The flat key must be guided in the slot of the top nut assy.

11

Fasten the adjustment housing in the fork leg. Make sure that the fork leg is fully extended when tightening the adjustment housing.

12

Install the fork legs on the motorcycle and adjust the preload, compression and rebound according to the instructions at page 3.

Changing seals

Put the fork legs upright for 15 minutes.

1

Grip the fork leg in a vice. Use soft jaws.

2

Unload the spring preload completely by turning the adjustment screw counter-clockwise. Use a 12 mm or a 17 mm wrench.

Make a note of the number of turns.

3

Carefully remove the top nut assy.

CAUTION!

Do not damage the O-ring and do not drop the flat key into the fork leg.

4

Remove the preload tube.

5

Slide the outer fork leg up until the top bushing is just above the inner leg. (Approx. 140 mm from complete bottom position. This is to make sure there is no oil above the top bushing).

6

Slide the outer tube completely down. (Fork seal touching fork bottom).

7

Push the piston rod down completely.

NOTE!

When measuring the oil level, always have the spring installed.

Measure the oil level using the top of the outer tube as the zero mark.

Note the measurement.

8

Remove the spring and tip the oil in a clean container.

9

Remove the outer tube, clean the seals and check for damage, if the seals are damaged remove and replace. If the seals are OK, then apply Öhlins grease (green grease 148-01).

10

Apply Öhlins fork oil on the seals and on the inner tube.

11

Carefully mount outer tube (slide completely down), install spring and set the oil level.

12

Carry on with 9 to 12 according to page 3 "Changing springs".

Dismantling the forks

1

Carry out 1 to 7 of page 3 "Changing springs".

2

Free the fork leg from the vice and drain the oil.

3

Pull up the outer tube and remove the seals.

4

Grip the inner tube on the fork bottom in a vice. Use soft jaws.

5

Unscrew the seal head (page 7) from the cartridge system (use tool 4702-01) and remove the piston rod unit. Drain the remaining oil.

6

Remove the compression valve assembly (page 7).

7

Remove the piston and the shims from the piston rod and compression valve. Place the shims in their correct position on the work bench.

8

Clean all parts thoroughly and dry with compressed air.

Assembling the forks

1

Apply a thin layer of Öhlins green grease (148-01) on the scraper ring and on the sealing surfaces of the fork seal. Install the seals in the outer tube. Please note that it is important to use the correct grease in order to achieve optimum fork function.

2

Install the piston and the shims on the piston rod and the compression valve. Tighten the 8 mm lock nuts with a torque of 8 Nm.

Check the piston ring for damage. Replace if necessary.

3

Install the compression valve assembly into the cartridge system. Assemble the seal head (tool 4702-01). Use: loctite 270 (part no. 1791-05) and tighten firmly.

4

Apply some front fork oil 1309-01 on the inner steel tube surface and install the outer aluminium tube. Measure the correct amount of 1309-01 oil according to the mounting instruction.

CAUTION!

Be careful not to damage the fork leg seals.

NOTE!

Use Öhlins oil (0309-01) only. Other brands may affect the function of the front fork.

5

Raise the outer tube approximately 120 mm and fill the oil.

6

Install the cartridge assembly using red grease (146-01) on the thread going into the fork bottom.

7

Pump the piston rod up and down and the oil will be sucked into the cartridge tube. Close the "clickers" and check the function.

8

Pull the piston rod out as far as possible and close the compression valve by screwing fully (clockwise).

9

Carry on with 9 to 12 according to page 4 "Changing springs".

Oil level adjustment

Compared to conventional type of front forks, the upside down front forks are very sensitive to variations in oil level. Therefore, adjust the oil level with special care.

A change in the fork oil level will not affect damping force in the early stage of fork travel, but will have a great effect in the later stage.

When the oil level is raised:

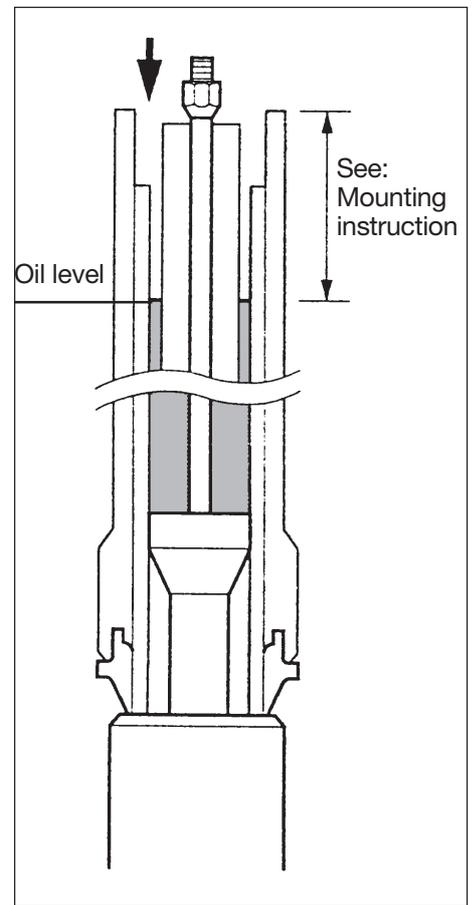
The air spring in the later half stage of travel is stronger, and thus the front forks harder.

When the oil level is lowered:

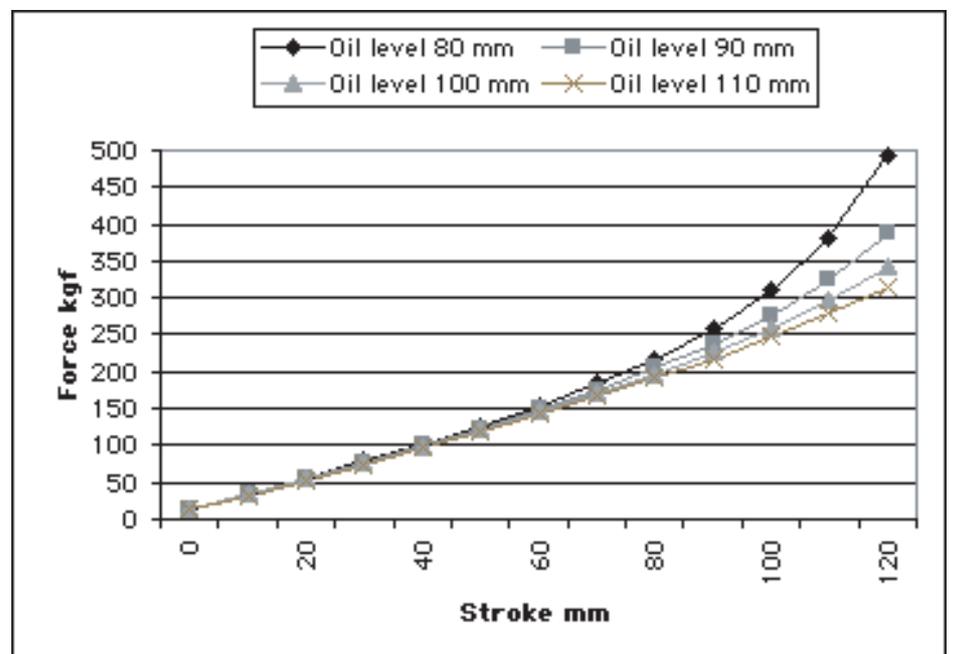
The air spring in the later half stage of travel is lessened, and thus the front forks are softer. The oil level works most effectively at the end of the fork travel. Air spring characteristics shown, refer to a general card description to facilitate understanding of the difference when the oil level is changed.

NOTE!

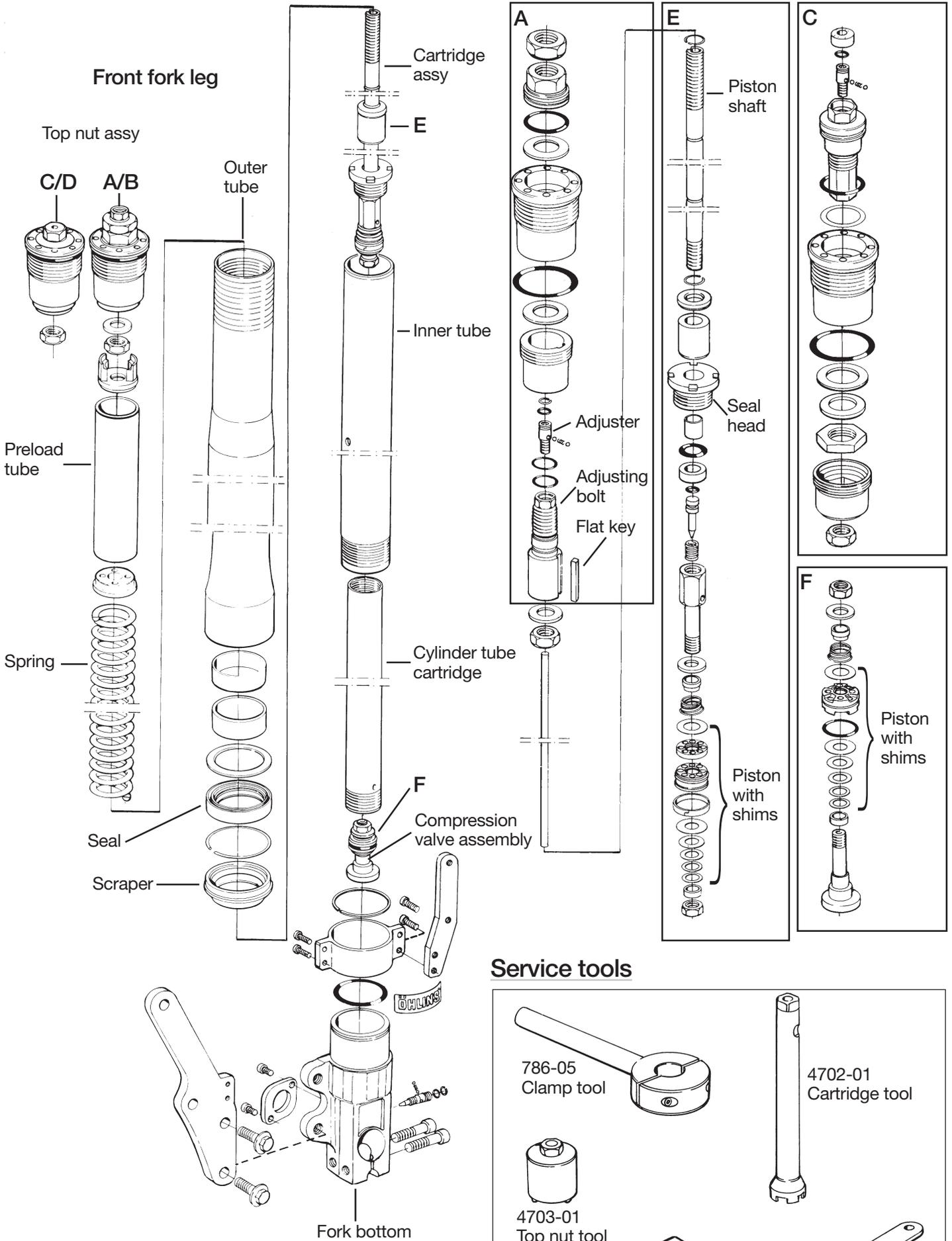
Adjust the oil level in mm according to the figure with the fork fully compressed and with the spring mounted. For the right recommended level, please see the mounting instruction.



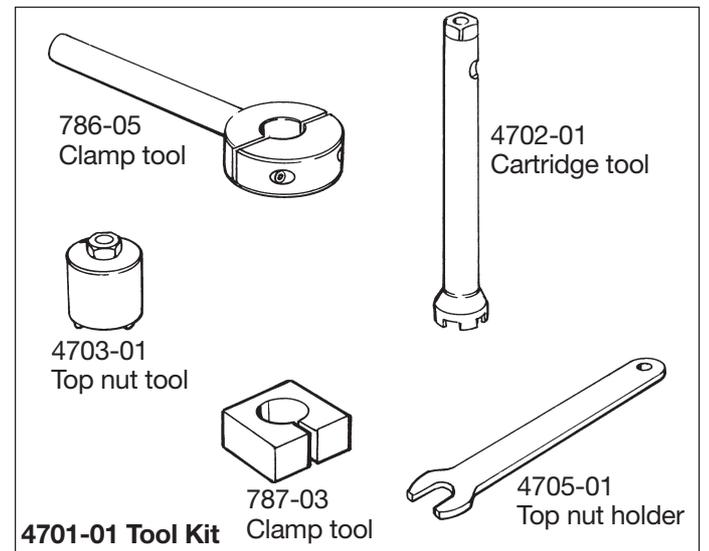
Air spring characteristics



Parts and Service tools



Service tools



NOTE!

For correct part number please refer to spare parts list.

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Two Wheels I Umeå AB, Umeå, Tel. 090-187 595, Fax 090-18 77 61

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