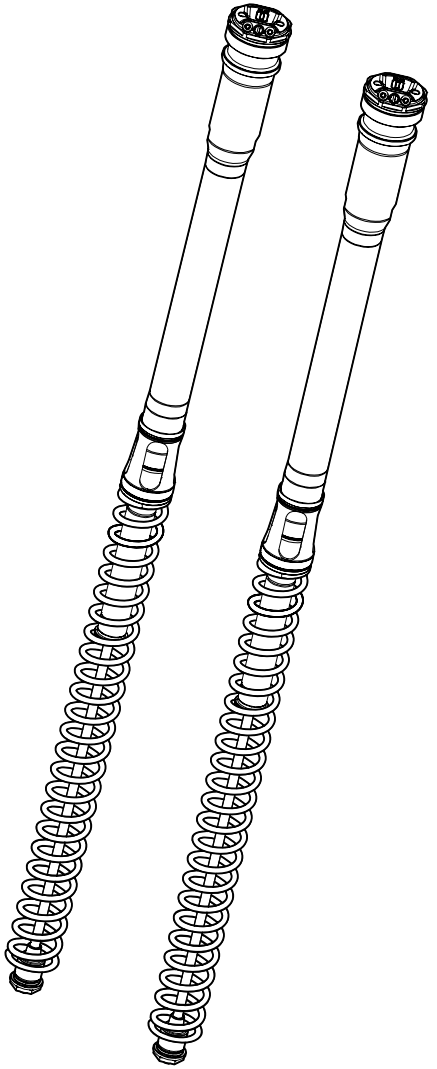


Before installing this product, check the contents of the kit. If anything is missing, please contact your Öhlins dealer.

Kit Contents

	Part No	Pcs
Front fork kit	FGHO 994	1
Sticker TTX Cartridge	00191-29	2
Sticker Öhlins	00197-01	2
O-ring	00338-10	2
O-ring	00438-12	2
Base plug TTX FG	15430-03	2
Circlip	15440-01	2
Spacer 2 mm	15443-02	4
Spacer 3 mm	15443-03	2
Owner's Manual/ Mounting Instr.	07296-12	1

Note!

Order Oil and Spring Kit separately. For correct spring rate see Spring Guide in this manual. Use Öhlins Front Fork fluid 01312-xx only.

Please note that during storage and transportation, especially at high ambient temperature, some of the oil and grease used for assembling may leak and stain the packaging. This is in no way detrimental to the product, wipe off the excessive oil/grease with a cloth.

Warning!

Before installing this product, read this manual carefully. The front fork is an important part of your vehicle and may affect the stability. The installation procedure requires certain tools.

Front Fork Kit for Honda CRF 450R
FGHO 994

Owner's Manual - Mounting Instructions

Öhlins products are subject to continuous improvement and development, therefore, although these instructions include the most up-to-date information available at the time of printing, minor updates may occur.

To find the latest information contact your Öhlins distributor. Please consult your Öhlins dealer if you have any questions regarding the contents in this document.

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ÖHLINS ADVANCED SUSPENSION TECHNOLOGY

www.ohlins.com

ÖHLINS ADVANCED SUSPENSION TECHNOLOGY

Note!

The front fork is a very important part of the vehicle and will therefore affect the stability.

Read and make sure that you understand the information in this manual and the mounting instructions before you use this product. If you have any questions regarding installation or maintenance please contact an Öhlins dealer.

Öhlins Racing AB can not be held responsible for any damage to the front fork, vehicle, other property or injury to persons, if the instructions for installing and maintenance are not followed exactly.

⚠ Warning!

This product was developed and designed exclusively for a specific vehicle model and shall only be installed on the intended vehicle model in its original condition as delivered from the vehicle manufacturer.

⚠ This product contains pressurized nitrogen gas (N_2). Do not open, service or modify this product without proper education (authorized Öhlins dealer/distributor) and proper tools.

⚠ After installing this product, take a test ride at low speed to make sure that your vehicle has maintained its stability.

⚠ If the suspension makes an abnormal noise, or the function is irregular, or if you notice any leakage from the product, please stop the vehicle immediately and return the product to an Öhlins Service Centre.

Note!

When working on this product, always consult your Vehicle Service Manual.

This Manual shall be considered as a part of the product and shall therefore accompany the product throughout its life cycle.

Safety Symbols

In this manual, mounting instructions and other technical documents, important information concerning safety is distinguished by the following symbols:

⚠

The Safety Alert Symbol means: Warning! Your safety is involved.

⚠ Warning!

The Warning Symbol means: Failure to follow warning instructions can result in severe or fatal injury to anyone working with, inspecting or using the front fork, or to bystanders.

Caution!

The Caution Symbol means: Special precautions must be taken to avoid damage to the front fork.

Note!

The Note Symbol indicates information that is important regarding procedures.

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Brand	Rider's weight* kg/pounds	Spring	Spring rate N/mm
Honda CRF 450R	70/154	08775-44	4,4
	75/165	08775-46	4,6
	80/176	08775-46	4,6
	85/187	08775-48	4,8
	90/198	08775-50	5,0
	95/209	08775-52	5,2

* Rider's weight: Rider wearing all riding equipment

Inspection and Maintenance

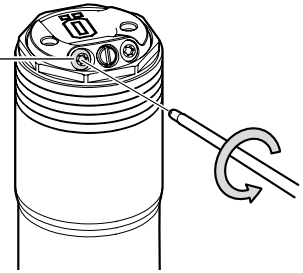
Preventive maintenance and regular inspection reduces the risk of functional disturbance.

Breather plug

Make sure to aerate the front fork at regular intervals:

1. Put the motorcycle on a workstand so that the front wheel barely touches the ground.
2. Loosen the breather plug to release excessive pressure in the front fork.

Breather plug



Recommended Service Intervals

Every 25 hours. Make your service and maintenance according to Öhlins Workshop manual.

Disposal

Discarded Öhlins products should be handed over to an authorized Öhlins workshop or distributor for proper disposal.

Compression damping adjuster

The compression adjuster is located at the top of the fork leg. Adjust by turning the slotted screw with a screwdriver.

Rebound damping adjuster

The rebound adjuster is located at the bottom of the fork leg. Adjust by turning the slotted screw with a screwdriver.

To Reset

The adjusters have a normal right hand thread. Turn the damping adjusters gently clockwise to fully closed (pos. zero [0]). To open, turn counter clockwise, and count the clicks until you reach the recommended number. For recommended clicks see Set-up data. Static sag can only be changed with softer or harder spring rate.

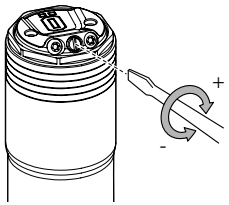
Caution!

Do not use too much force, delicate sealing surfaces can be damaged.

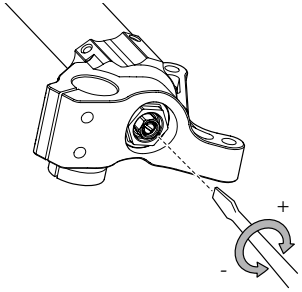
Note!

The total stroke of the front fork may differ from the original stroke, so that more or less of the steel tube will be visible when the fork is fully compressed.

Compression damping adjuster

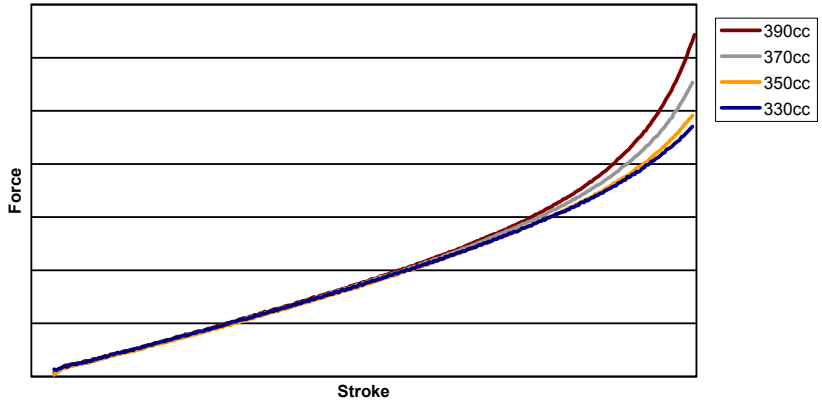


Rebound damping adjuster



Diagram

Oil volume - Force



In This Manual

Recommended Tools	2
How to Install	3
Replace Spring	6
Set-up	7
Set-up Data	8
Spring Preload	8
Adjustments	9
Oil Volume - Force Diagram	9
Spring Guide	10
Inspection and Maintenance	10

Recommended Tools

Standard OEM Top Cap Tool
Socket 20 mm (Bottom Plug)
Socket 12 mm (Shaft end Adjuster Housing)
Pliers (for the security snapring)
Tool 01890-01 Plug

Remove the fork legs from the vehicle

⚠ Warning!

It is advisable to have an Öhlins dealer install the front fork kit.

When installing, consult your Vehicle Service Manual.

1

Put the motorcycle on a workstand so that the front wheel barely touches the ground.

⚠ Warning!

Make sure the vehicle is securely supported so that it will not tip.

2

Remove the front wheel and the brake caliper.

3

Measure the distance from the top of the fork leg to the top of the upper triple clamp according to figure.

Note!

Note this dimension as fork height position.

4

Loosen the upper triple clamp by loosening the screws.

5

Loosen (but not remove) the top cap 1/2 turn. Use a standard tool from the motorcycle manufacturer.

6

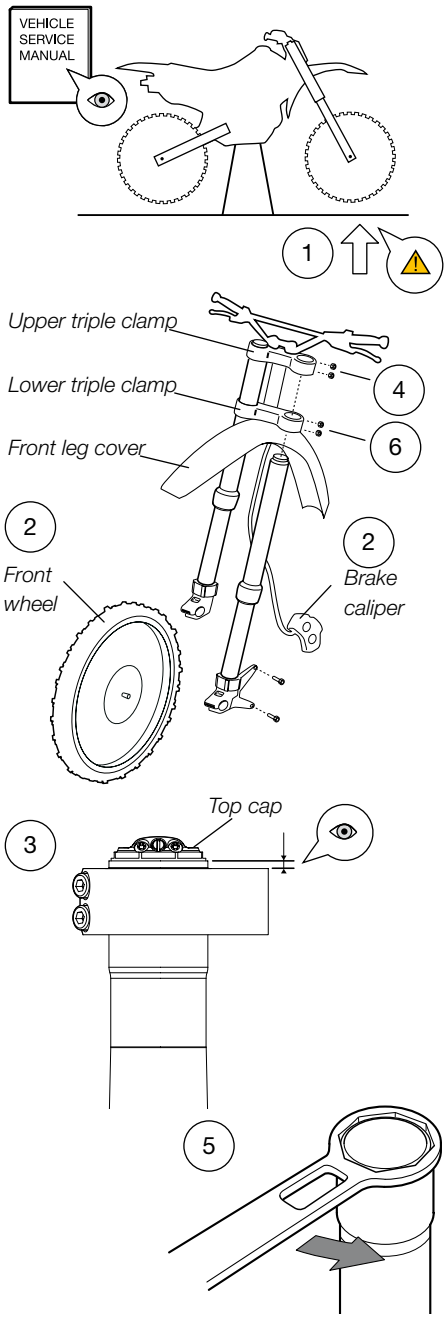
Loosen the lower triple clamp by loosening the screws.

7

Remove the front fork legs from the motorcycle.

8

Clean the fork legs thoroughly. Make sure to clean underneath the fork bottoms.



Set-up Data

Rebound damping	10 click
Compression damping	15 click
Spring preload	2 mm
Oil volume	0,350 litre
Spring preload range (can be adjusted by adding/removing washers 15443-xx)	-2 to 8 mm
Oil volume range	0,330-0,400 litre
Öhlins Front Fork fluid	01312-xx

Fork springs may differ in length. Therefore we recommend you to check the preload on each fork leg and, if necessary, install preload washers to get the correct value. A negative preload of up to minus 2 mm is possible, since the top-out spring still gives a small compression on the main spring.

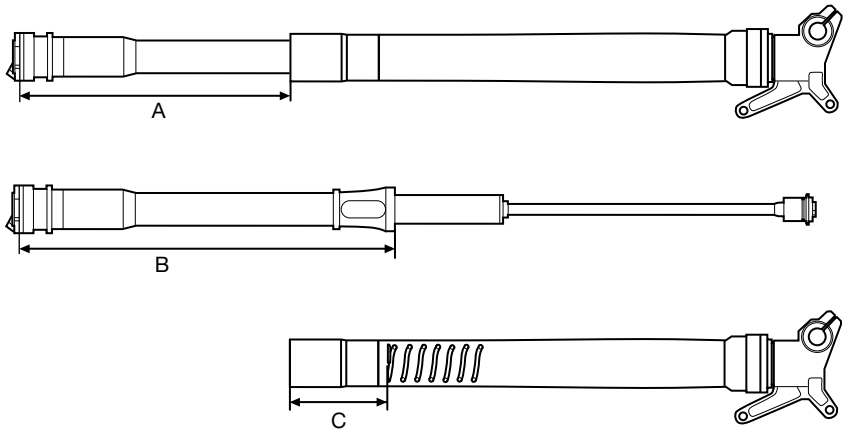
Preload less than -2 mm will make the fork spring loose when the front wheel is off the ground, which increases wear inside the fork.

Caution!

Preload washers must be placed below the spring, otherwise they will restrict oil flow and the fork may break.

Measure Spring Preload

Measure the spring preload according to the following steps;
1. Measure A. Fork outer tube should be slid down to stop and cartridge pulled out to distinct stop (requires a force of about 30 kg).
2. Measure B.
3. Measure C.
4. Calculate preload: Preload = B – A – C
5. Adjust preload according to the desired value according to set-up data, by adding/removing preload washers below the spring.



⚠ Warning!

Before riding, always ensure that the basic settings made by Öhlins are intact. Take notes, adjust in small steps and make only one adjustment at a time.

Step 1

Check Sag and Ride Height

👁 Note!

The following procedure should be performed on a flat surface.

1. Put the motorcycle on a workstand 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. (See figure below: 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 procedures. (R3 and F3)

Recommended Measures

If no other recommendations are given in the Vehicle Manual follow the measures below:

Free sag (R1-R2)

Rear 30±10 mm

Ride height (R1-R3), (F1-F3)

Rear 100±10 mm

Front 45±10 mm

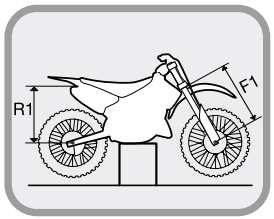
Step 2

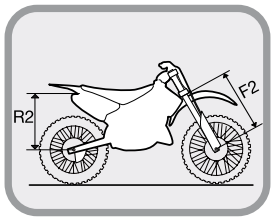
Adjust spring preload

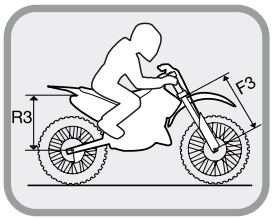
1. If your measurements differ significantly from the recommendations from the table above, adjust the spring preload. (See section Spring Preload in this manual).
2. If the ride height still differs from the recomendations, you may need to change spring. Contact your Öhlins dealer for advise.

⚠ Warning!

Incorrect spring rate may produce a fork angle that is too steep or too flat. This in turn will give a tendency for over- or understeering, which could seriously affect the handling characteristics of the motorcycle.







Disassemble the original front fork

9

Follow your vehicle service manual to remove the original front fork kit from the fork leg. Turn the fork leg upside down to pour out the oil. *Make sure that the fork spring does not fall out*.

Install the Öhlins front fork kit

10

Smear some red grease or similar on the o-rings and install them onto the base plug according to figure.

11

Install and tighten the base plug into the fork bottom, use a 20 mm socket (tightening torque 45 Nm).

12

Install the preload washer(s) 15443-xx *(optional - see **Set-up data**, Spring preload)*, the recommended Öhlins spring *(see **Spring guide**)* and the cartridge kit into the standard fork leg.

👁 Note!

The preload washers must be below the spring, at the bottom end of the fork leg.

13

Tighten the cartridge shaft end into the base plug by turning counter clockwise. Use a 12 mm socket (tightening torque 18 Nm).

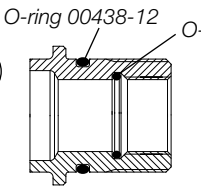
14

Install the security snap-ring at the shaft end groove according to figure.

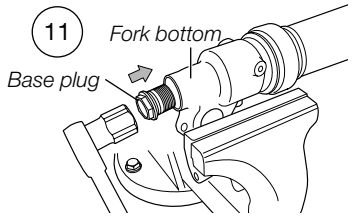
15

Pour Öhlins Front Fork Fluid in the fork leg according to the recommended settings.

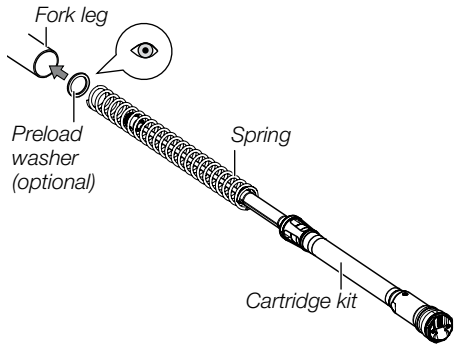
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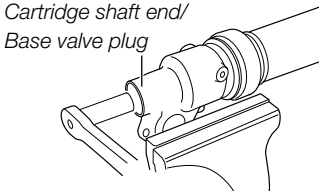
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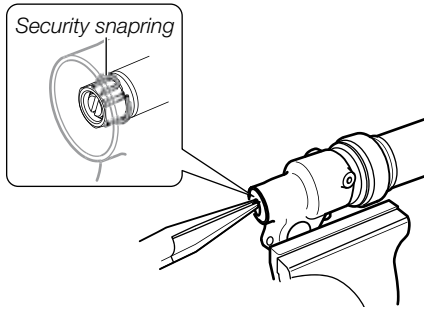
12



13



14



16

Tighten the Öhlins fork top cap gently. Use the standard top cap tool from the motorcycle manufacturer. Handtighten only!

17

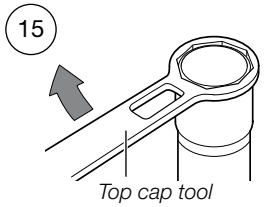
Check and set the rebound and compression valves click positions according to the recommended settings in **Set-up data**.

18

Install the front fork legs into the triple clamps. Use, to begin with, the same height position as before. Tightening torque - see your Vehicle Service Manual.

Note!

It is very important that the triple clamps are tightened to the correct torque. See your Vehicle Service Manual.



Replace Spring (only)

1

Put the motorcycle on a work stand.

2

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

3

Open up the top cap on the fork leg. Use the proper fork top cap tool from the motorcycle manufacturer.

4

Remove the security snapring in the bottom of the fork with a pair of pliers.

5

Loosen the bottom end of the cartridge kit by turning clockwise.

6

Install the tool 01890-01 (oil plug) by pushing it into the fork bottom. The plug will keep the oil in the fork while changing the spring.

7

Remove the cartridge kit from the fork leg and change the spring. Note the preload washer (if any).

Note!

The preload washers must be below the spring, at the bottom end of the fork leg.

8

Install the cartridge kit into the fork leg and push out the oil plug tool 01890-01.

9

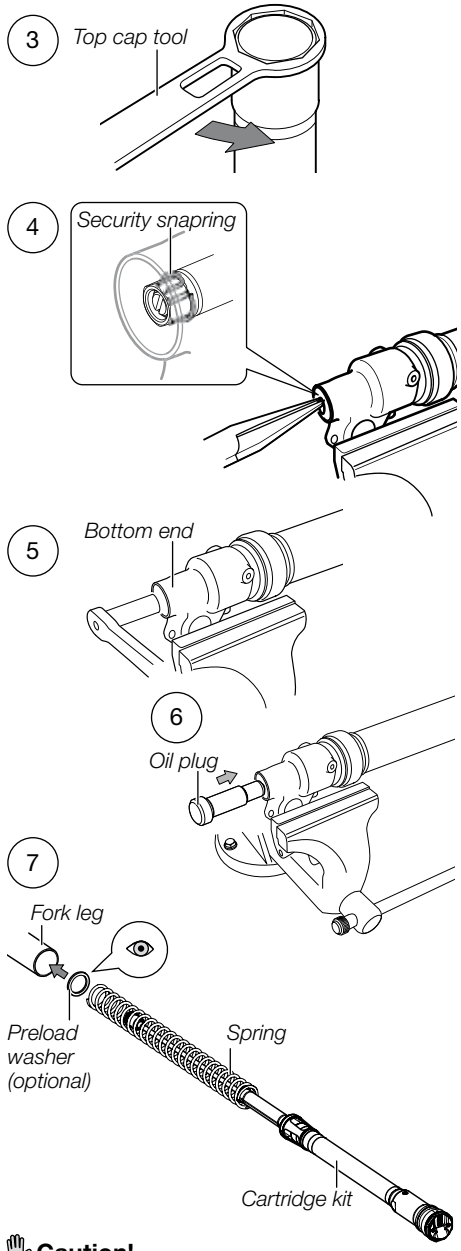
Tighten the shaft end (counter clockwise) into the fork bottom with tightening torque 18 Nm.

10

Install the security snapring.

11

Tighten the Öhlins fork top cap gently. Use the standard top cap tool from the motorcycle manufacturer. Handtighten only!



Caution!

The top cap should only be tightened by hand or maximum torque of 10 Nm into the fork leg.