

#### **Note!**

Please note that there can be small differences between your product and the images in these instructions.

#### **Note!**

Please note that during storage and transport, especially at high ambient temperature, some of the oil and grease used for assembly may leak and stain the packaging. This will not cause damage to the product, wipe off the excessive oil or grease with a cloth.

Kit Contents		
Description	Part No	Pcs
Front Fork kit	FGK233	1
Öhlins Sticker (60x23) white	00191-32	2
Öhlins Sticker (60x23) blue	00191-33	2
Owner's manual	07284-01	1

#### **Warning!**

This kit should only be installed by an authorized Öhlins dealer. The installation procedure requires certain tools.

#### **Note!**

If the vehicle is equipped with DDC (Dynamic Damping Control) you must use a 60 mm long bottom screw (same as used in the passive fork leg) in the active DDC fork leg to install the cartridge. Please contact BMW for more information.

#### **Note!**

Before you install this product, check the kit contents. If anything is missing, please contact an Öhlins dealer.

#### **Warning!**

Before you install this product, read the Öhlins Owner's manual. This product is an important part of the vehicle and the vehicle stability.

## Front Fork Kit for BMW S1000R

# **FGK 233**

## Mounting Instructions

# MOUNTING INSTRUCTIONS

## General Warnings

### **Note!**

The shock absorber/front fork/steering damper is an important part of the vehicle and will affect the stability.

### **Note!**

Read and ensure you understand the information in this manual and other technical documents provided by Öhlins, before using the product.

### **Note!**

Öhlins Racing AB can not be held responsible for any damage to the shock absorber/front fork/steering damper, vehicle, other property or injury to persons, if the instructions for mounting, usage and maintenance are not followed exactly.

### **Warning!**

After installing the Öhlins product, take a test ride at low speed to ensure your vehicle has maintained stability.

### **Warning!**

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

### **Warning!**

The product warranty shall only apply if the product has been operated and maintained in accordance with recommendations in this manual. If you have any questions regarding usage, service, inspection and/or maintenance please contact Öhlins.

### **Note!**

When working with the Öhlins product, always read the vehicle service manual.

## 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 shock absorber, or to bystanders.



### **Caution!**

The Caution Symbol means: Special precautions must be taken to avoid damage to the shock absorber.

### **Note!**

The Note Symbol indicates information that is important regarding procedures.

### **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.

### **Note!**

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

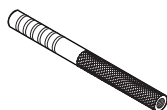
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## TOOLS

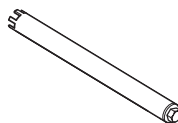
Tool 00797-08



Tool 01765-03



Tool 01797-07



# MOUNTING INSTRUCTIONS

## **⚠ Warning!**

*We strongly recommend to let an Öhlins dealer install this product.*

## **⚠ Warning!**

*If you work with a lifted vehicle, make sure that it is safely supported to prevent it from tipping over.*

## **👁 Note!**

*When you work with this product, see the vehicle service manual for vehicle specific procedures and important data.*

## **👁 Note!**

*Before you install this product clean the vehicle.*

### **1.1**

Put the motorcycle on a work stand so that the rear wheel barely touches the ground.

### **1.2**

Remove the front fender, the brake calipers and the front wheel.

### **1.3**

Release the spring preload.

### **1.4**

Loosen the screws to loosen the upper triple clamp.

### **1.5**

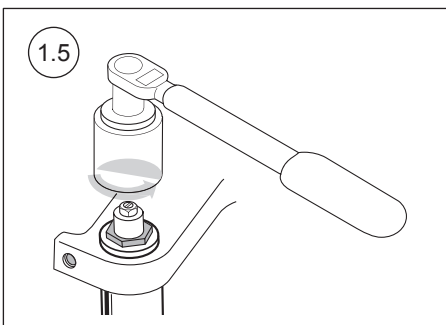
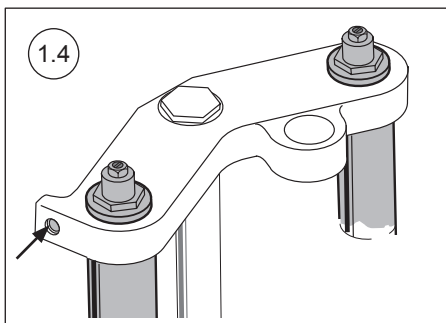
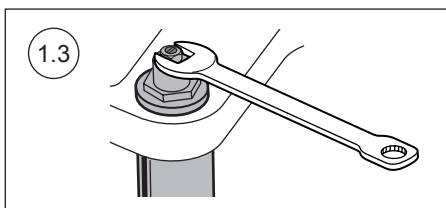
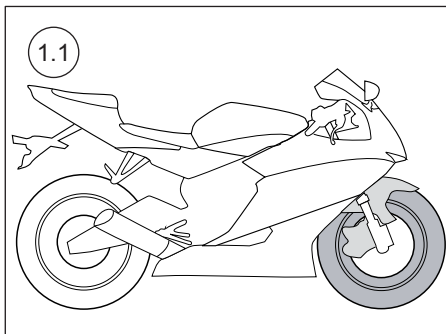
Loosen (do not remove) the top cap ½ turn.

### **1.6**

Loosen the screws to loosen the lower triple clamp.

### **1.7**

Remove the front fork legs from the triple clamps.



# MOUNTING INSTRUCTIONS

## 2.1

Loosen the top cap from the outer tube.

## 2.2

Pull down the outer tube.

## 2.3

Loosen the top cap from the shaft to remove it.

Refer to the vehicle service manual for correct tool.

## 2.4

Remove the spring and surrounding parts from the fork leg. Note that the two [2] plastic tubes shall not be removed.

### **⚠ Warning!**

*It is important that the two plastic tubes inside the outer tube are not removed since this can cause the front fork to work improperly and therefore risk of danger when using the product.*

## 2.5

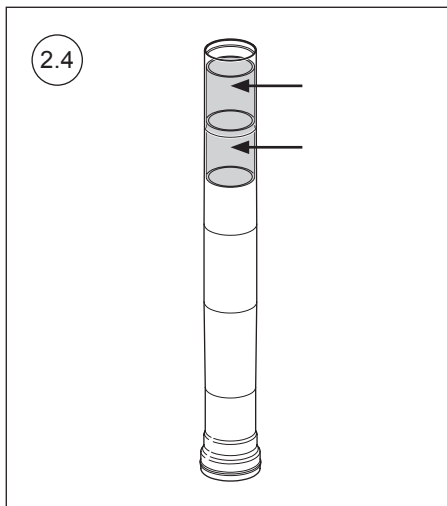
Drain the fork leg from oil.

## 2.5

Loosen the cartridge. Refer to the vehicle service manual for correct tool.

## 2.6

Remove the cartridge from the fork leg.



# MOUNTING INSTRUCTIONS

## **⚠ Warning!**

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

## **👉 Caution!**

*The front fork kit is divided into one compression cartridge and one rebound cartridge. Important:*

- Install the cartridge marked “Reb” (Rebound) in the right side fork leg.
- Install the cartridge marked “Comp” (Compression) in the left side fork leg.

### **3.1**

Remove the top cap.

### **3.2**

Remove the spring support and preload tube.

### **3.3**

Remove the cylinder tube from the cartridge.

## **👉 Caution!**

*Be careful not to damage the piston ring.*

### **3.4**

Put the cylinder tube carefully into the fork leg. Tighten the cylinder tube's adaptor to the bottom screw using an extended 17 mm allen key at the adaptor and an appropriate tool at the bottom screw. Apply Loctite 243 on the bottom screw's thread. Use torque according to your vehicle service manual.

## **👉 Caution!**

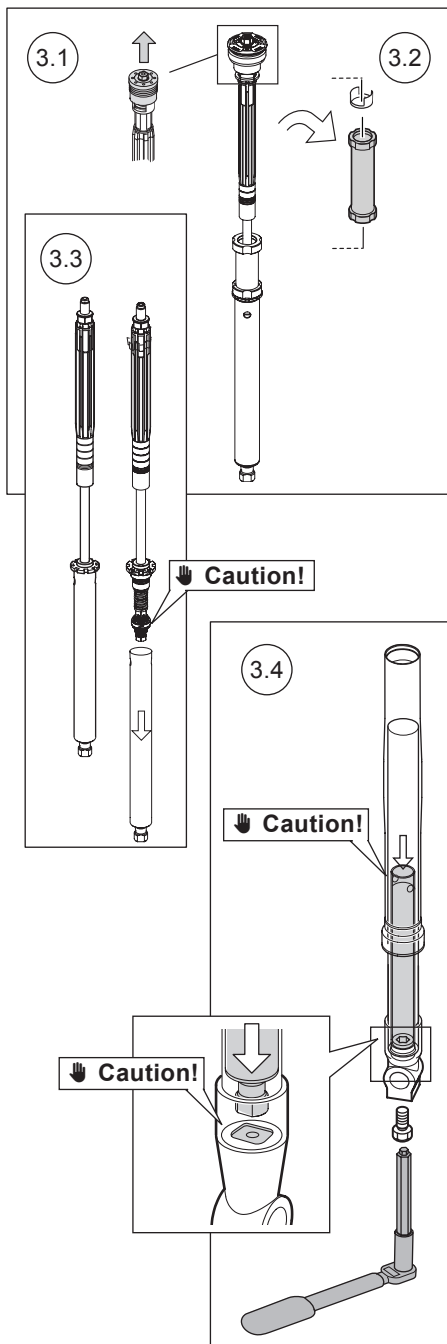
*Be careful not to damage the inside of the cylinder tube when tightening with the extended allen key.*

## **👉 Caution!**

*Make sure that the cylinder tube adapter connects to the fork bottom properly.*

### **3.5**

Pour 0,5 litre Öhlins Front Fork fluid into the fork leg.



# MOUNTING INSTRUCTIONS

## **Caution!**

*Make sure that the piston ring is in its correct position and be careful not to damage it.*

### 3.6

Put the cartridge carefully in the fork leg. Tighten it to the cylinder tube. Use tool 01797-07. Apply red grease on the seal head's thread. Tighten to 20 Nm.

### 3.7

Open the compression and rebound adjusters fully. Install the top cap directly to the shaft extension. No spring or preload tube. Pull up the outer tube and tighten it to the top cap. Tighten by hand only.

### 3.8

Pump out all air from the cartridge by pulling the outer tube up and down 10-15 times.

### 3.9

Remove the top cap from the fork leg.

### 3.10

Make sure 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 set-up data and oil level-force diagram in this folder.

### 3.11

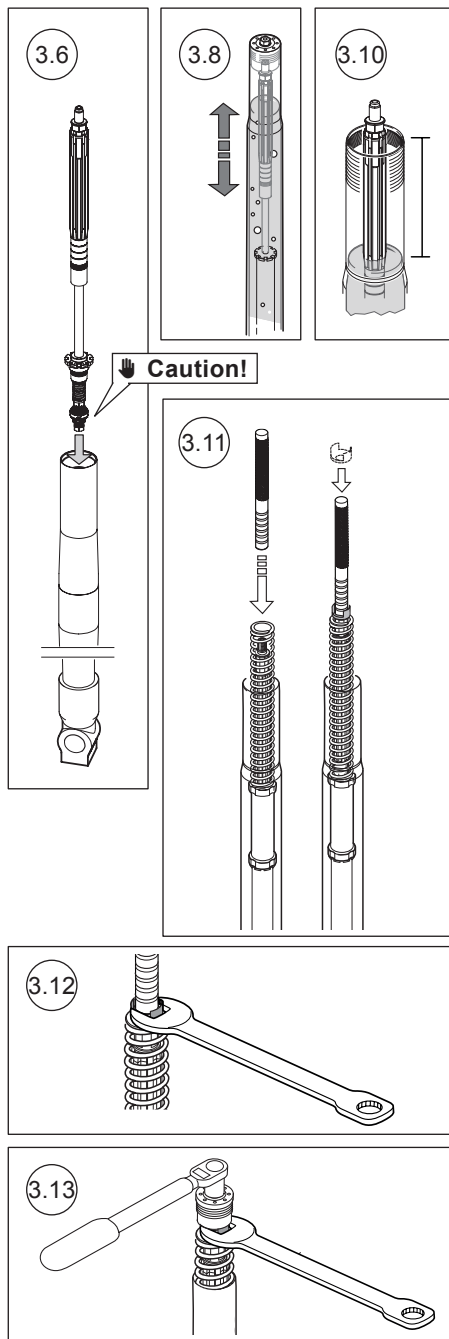
Fasten tool 01765-03 on the top of the shaft extensioner, install preload tube, spring and upper spring support by leading them over the tool. See the Owner's Manual for available springs.

### 3.12

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

### 3.13

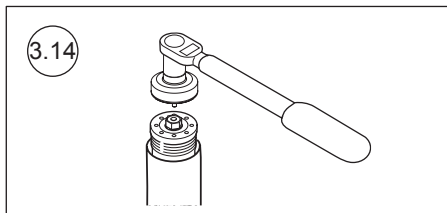
Make sure that the compression/rebound adjusters are fully open before installing the top cap. Remove the pull-up tool and install the top cap to the shaft extensioner. Tighten to 15 Nm.



# MOUNTING INSTRUCTIONS

## 3.14

Pull up the outer tube. Make sure the fork leg is in a fully extended position. Use tool 00797-08 to tighten the top cap to the outer tube. Torque 10 Nm.



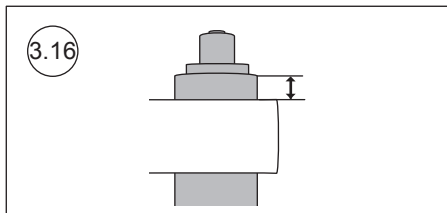
## 3.15

Set the spring preload, rebound and compression adjusters according to adjustments and set-up data in this manual.

## 3.16

Install the front fork legs into the triple clamps at the position recommended in set-up data, *Fork leg position*.

Refer to the vehicle service manual for correct tightening torque.



### **Note!**

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

# SETUP DATA

Recommended set-up		
Compression	16	clicks
Rebound	14	clicks
Spring rate	9.0	N/mm
Spring preload	12	mm
Oil level	130	mm
Fork leg position	Standard position	
Öhlins Front Fork fluid	part no. 01309-01	

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 an Öhlins distributor. Please contact Öhlins if you have any questions regarding the contents in this document.

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