

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 |
| Cartridge kit | FKR 105 | 1 |
| O-ring 33x2 | 00438-50 | 2 |
| O-ring 40x2.5 | 00576-02 | 2 |
| Main spring 9.5 N/mm | 04744-95 | 2 |
| Main spring 10.0 N/mm | 04744-10 | 2 |
| Main spring 10.5 N/mm | 04744-05 | 2 |
| Sticker | 00191-32 | 2 |
| Sticker | 00191-33 | 2 |
| Owner's manual | 07291-01 | 1 |

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.

Cartridge kit for Kawasaki ZX-10R, Suzuki GSX-R1000R

FKR 105

Mounting Instructions



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.

⚠ Warning!

Spring compression creates a potential danger because of the violent force that loaded springs are capable of. Beware of this when you work with the front fork.

| Tool | Part no | Applies | Size |
|------------------------|----------|----------------------------------|-------|
| Vehicle service manual | | | |
| Torque wrench 10-60 Nm | | Torque | |
| Heat gun | | Soften thread locker | |
| Hex key | | Compression and rebound adjuster | 3 mm |
| Extended hex key | | Cylinder tube assembly | 14 mm |
| Socket | | Main preload adjuster | 14 mm |
| Wrench | | Spring support | 19 mm |
| Suspension fluid | 01309-xx | | |
| Grease | 00146-01 | | 100 g |
| Loctite 2400 | 01791-25 | | 50 ml |
| Loctite 2700 | 01791-27 | | 50 ml |
| Shaft extension tool | 01765-03 | | |
| Seal head tool | 01797-07 | | |
| Clip | 02810-01 | | |
| Top cap tool | 00797-08 | | |
| Inner tube tool | 00786-05 | | 43 mm |

MOUNTING INSTRUCTIONS

1 Remove original front fork

Note!

The following procedure applies to both front fork legs.

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 fall over.

2

Remove front fender, brake calipers, speed sensor (if present) and front wheel.

3

Release main spring preload fully (if present).

4

Note front fork leg position.

5

Loosen upper triple clamp.

6

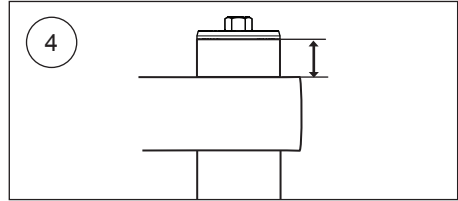
Loosen (do not remove) top cap ½ turn.

7

Loosen lower triple clamp.

8

Remove front fork legs from triple clamps.



MOUNTING INSTRUCTIONS

2 Disassemble original front fork

Note!

The following procedure applies to both front fork legs.

1

Remove top cap from outer tube.

2

Slide outer tube down until it stops.

3

Remove top cap from shaft according to instructions in the vehicle service manual.

4

Release pressure from gas reservoir according to instructions in the vehicle service manual.

5

Remove main spring and associated parts according to instructions in the vehicle service manual.

6

Drain front fork leg from suspension fluid.

7

Remove outer tube from inner tube according to instructions in the vehicle service manual.

8

Remove inner tube lock screw.

Warning!

If lock screw is not removed inner tube and fork bottom will be damaged.

Warning!

Inner tube thread must be repaired before removing inner tube.

9

Install inner tube tool on inner tube. Do not place tool at sealing or gliding surface.

[00786-05 inner tube tool]

10

Soften thread locker between inner tube and fork bottom with a heat gun.

[Heat gun]

11

Remove inner tube from fork bottom.

12

Remove and replace o-ring if worn or damaged.

[Part no according to the vehicle spare part list]

13

Remove cartridge from inner tube.

14

Fill gas reservoir with pressure approximately 5 bar, according to instructions in the vehicle service manual.

MOUNTING INSTRUCTIONS

3 Install Öhlins cartridge kit

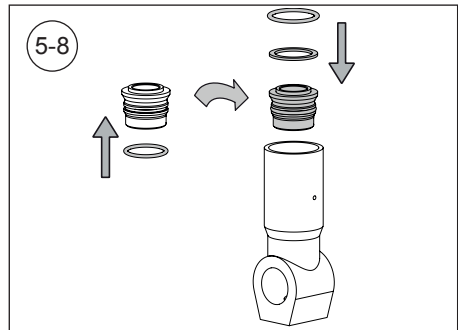
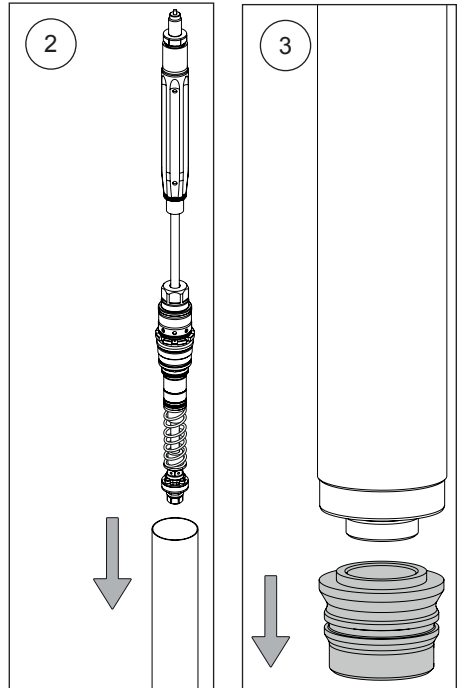
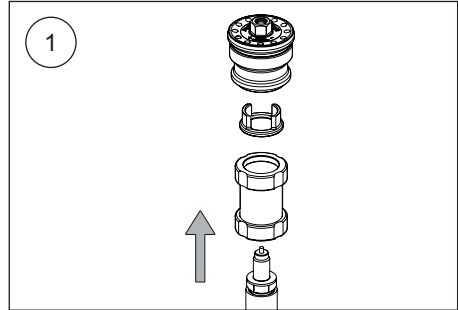
👁 **Note!**

The following procedure applies to both front fork legs.

👉 **Caution!**

The cartridge kit is divided into compression and rebound cartridges. Install compression cartridge marked "COMP" in left hand side front fork leg. Install rebound cartridge marked "REB" in right hand side front fork leg.

- 1 Remove top cap, spring support and preload tube.
- 2 Remove cylinder tube assembly from shaft assembly.
- 3 Remove adaptor ring from cylinder tube assembly.
- 4 Clean and degrease inner tube, fork bottom, adaptor ring and washer.
- 5 Install o-ring on adaptor ring. Apply grease on o-ring.
[00438-50 o-ring]
[00146-01 grease]
- 6 Install adaptor ring in fork bottom.
- 7 Install washer in fork bottom.
- 8 Install o-ring in fork bottom. Apply grease on o-ring.
[00146-01 grease]



MOUNTING INSTRUCTIONS

9

Install inner tube using inner tube tool.
Apply Loctite 2700. Tighten to 130 Nm.
[00786-05 inner tube tool]
[01791-27 Loctite 2700]

10

Install cylinder tube assembly in front fork leg
with an extended hex key. Apply Loctite 2400
on adaptor thread. Tighten to 60 Nm.
[Extended hex key 14 mm]
[01791-25 Loctite 2400]

11

Install outer tube according to instructions in
the vehicle service manual.

12

Pour approximately 0.5 litre Öhlins suspension
fluid in front fork leg.

⚠ Warning!

*Fluid level must be approximately 50 mm
above top of cylinder tube assembly.*

13

Install tool on shaft extension.
[01765-03 shaft extension tool]

14

Install tool on seal head.
[01797-07 seal head tool]

👁 Note!

*Make sure teeth are securely connected to seal
head.*

15

Compress top out spring fully and insert clip.
[02810-01 clip]

⚠ Warning!

*If top out spring is not completely compressed,
adjust shaft extension tool to achieve complete
compression of top out spring.*

16

Insert shaft assembly in front fork leg.

⚠ Warning!

*Make sure no air is trapped in piston by
carefully pumping shaft assembly up and down
with piston below fluid surface.*

17

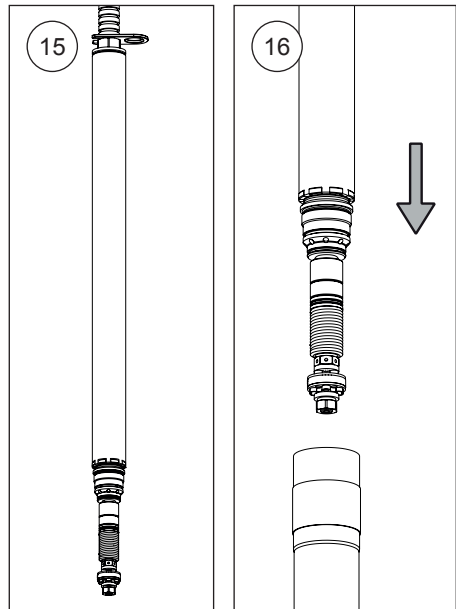
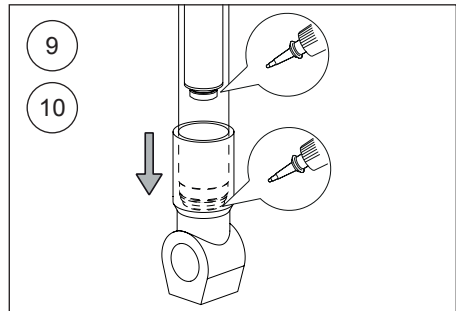
Install shaft assembly and tighten with your
hand.

18

Remove clip and shaft extension tool.

19

Tighten seal head to 30 Nm and remove seal
head tool.



MOUNTING INSTRUCTIONS

20

Make sure that shaft assembly and outer tube are in their bottom positions.

Set suspension fluid level according to chapter "Setup Data".

21

Install tool on shaft extension.

Install preload tube (A), main spring (B) and spring support (C) over shaft extension tool. Select main spring according to chapter "Main spring guide".

[01765-03 shaft extension tool]

22

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

[Wrench 19 mm]

23

Remove shaft extension tool.

24

Make sure that compression and rebound adjusters are fully open before installing top cap. Use a hex key to open compression and rebound adjusters.

[Hex key 3 mm]

25

Install o-ring on top cap. Apply grease on o-ring and thread.

[00576-02 o-ring]

[00146-01 grease]

26

Install top cap on shaft extension. Tighten to 20 Nm.

[Socket 14 mm]

27

Remove wrench from spring support.

28

Pull up outer tube. Make sure front fork leg is in a fully extended position. Use top cap tool to tighten top cap to outer tube.

[00797-08 top cap tool]

29

Set compression, rebound and main spring adjusters according to chapter "Setup Data".

Use a hex key for compression and rebound adjusters. Use a socket for main spring preload adjuster.

[Hex key 3 mm]

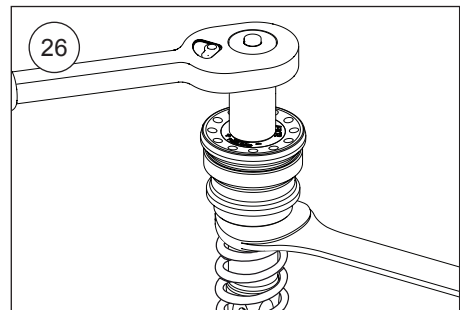
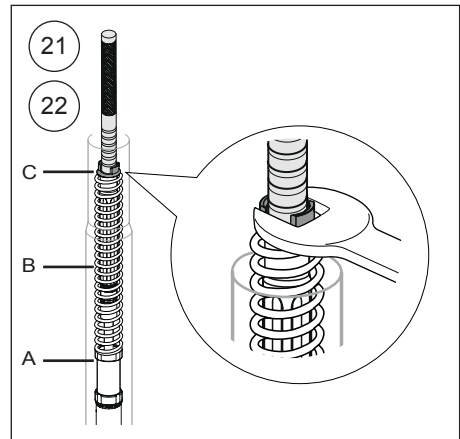
[Socket 14 mm]

30

Install front fork legs in vehicle at recommended front fork leg position, according to chapter "Setup data".

31

Remaining installation, instructions according to vehicle service manual.



SETUP DATA

Recommended setup

| | | |
|--------------------------------|----------|--------|
| Compression adjustment | 14 | clicks |
| Rebound adjustment | 14 | clicks |
| Suspension fluid level | 180 | mm |
| Minimum suspension fluid level | 208 | mm |
| Suspension fluid part number | 01309-xx | |
| Front fork leg position | Standard | |

MAIN SPRING GUIDE

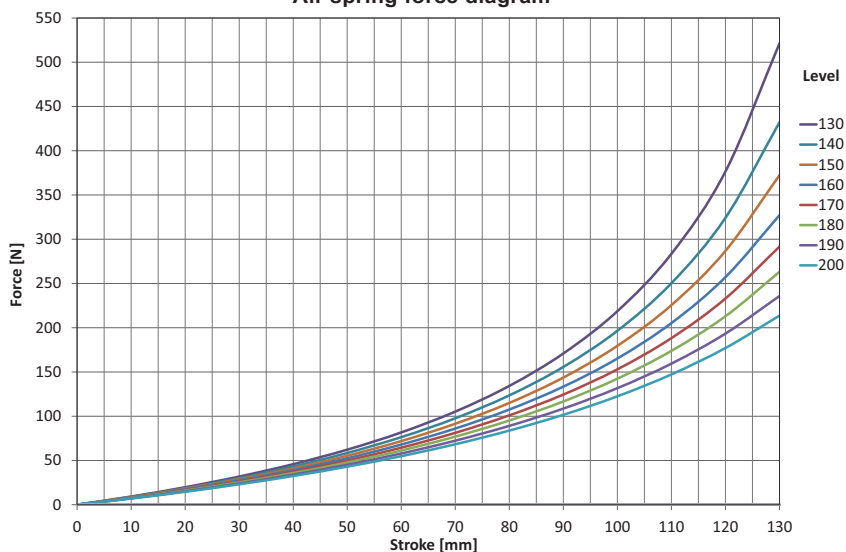
Make sure you choose the correct main spring for your rider weight, driving style and preferences. Below you find a general recommendation of main spring rate for your weight. Contact an authorized Öhlins service center for advice.

👁 **Note!**

Only 8790-xx main springs are packed in pairs.

| | | | | | | | |
|----------------------|----------|----------|----------|----------|----------|----------|----------|
| Rider weight [kg] | 50 | 60 | 70 | 80 | 90 | 100 | 110 |
| Spring rate [N/mm] | 9 | 9,5 | 10 | 10 | 10,5 | 11 | 11 |
| Preload [mm] | 5 | 4 | 4 | 6 | 5 | 5 | 7 |
| Part number (pair) | 08790-90 | 08790-95 | 08790-10 | 08790-10 | 08790-05 | 08790-11 | 08790-11 |
| Part number (single) | 04744-90 | 04744-95 | 04744-10 | 04744-10 | 04744-05 | 04744-11 | 04744-11 |

Air spring force diagram



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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