

Adjustments

⚠ Warning!

Before driving, always make sure that the basic settings made by Öhlins are according to recommended Set-up Data. Read about adjustments and setting up in the Öhlins Owner's Manual before you make any adjustments. Contact an Öhlins dealer if you have any questions about setting up the shock absorber.

The standard preload is 7 mm from a free length of 200 mm, giving 193 mm installed length, see fig ④.

Set-up Data

Recommended set-up

Rebound 10 clicks
Spring preload 7 mm
Shock absorber length 482 mm

Spring

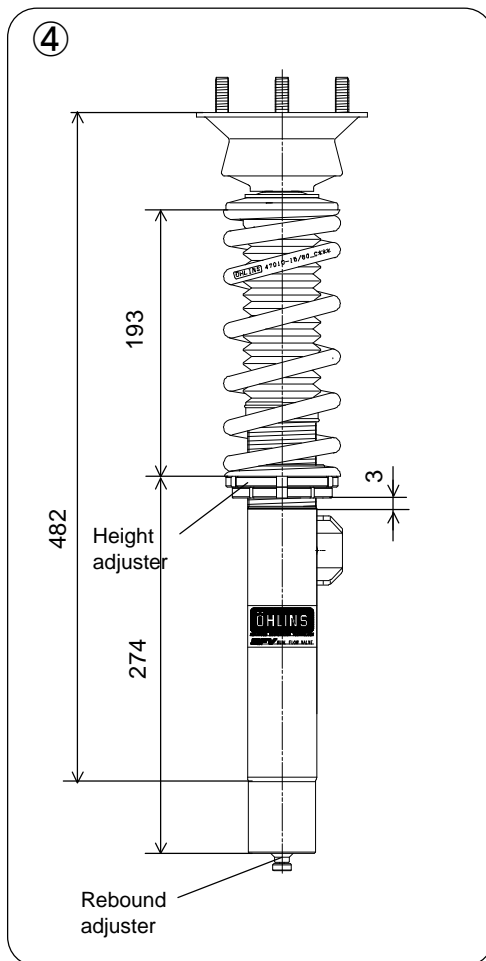
Spec H200, ID65, 60 N/mm

The actual vehicle height

With both the preload and height adjustments in their standard positions, the vehicle is lowered approximately 20 mm when compared to the original suspension. As the height adjuster is turned one rotation, the position moves 2.0 mm.

⚠ Warning!

The adjustment range is the standard position -3 to +15 mm.



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

Kit Contents	Pcs.
Shock absorber	2
Upper spring seat	2
Dust boot	2
Spring	2
Washer	2
Nut M14	2

USED FOR BOTH FRONT AND REAR

C-spanner	1
C-spanner	1
Öhlins sticker	1
Öhlins Owner's Manual	1

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 excess oil/grease with a cloth.

⚠ Warning!

Before installing this product, read the Öhlins Owner's Manual. The shock absorber is an important part of your vehicle and will affect the stability.

© 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.

Part no. BMSM100.0
Issued 2009-05-05



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www.ohlins.com

Shock Absorber Kit for BMW 3 series (E90)

BMS M100 front

Mounting Instructions



How to install

⚠ Warning!

It is advisable to have an Öhlins dealer install the shock absorber.
When installing, read your Vehicle Service Manual.



1
Raise the vehicle and put it on jack stands.

⚠ Warning!

Ensure that it is securely supported.

2
Remove the front wheels.

3
Remove the stabilizer links and brake hose brackets from the standard struts.

4
Loosen the bolts for the lower strut attachments.

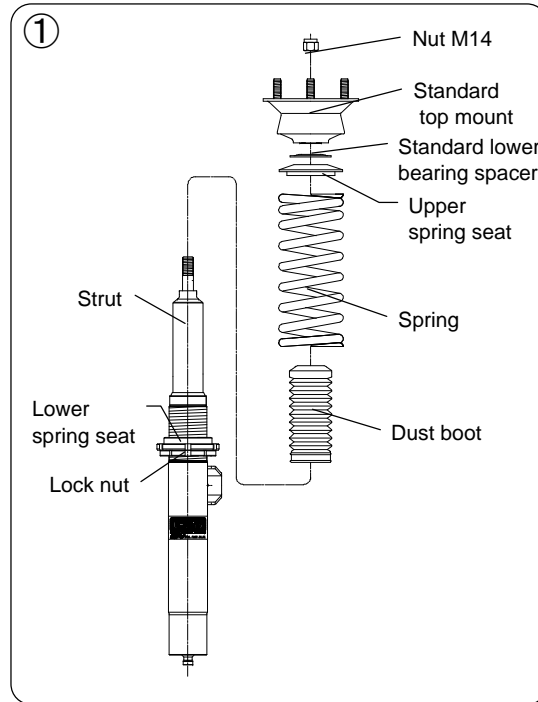
👉 Caution!

Support the wheel hubs in an appropriate way on each side of the vehicle so that the brake hoses can not be damaged.

5
Loosen the upper attachments. Remove the original struts from the car.

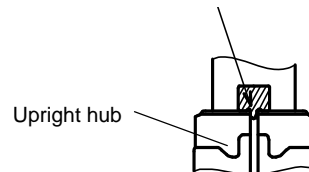
6
Tighten the lower spring seat and the lock nut to 50 - 60 Nm.
Fit the dust boot, the spring and the upper spring seat to the strut according to fig ①.
Fit the standard lower bearing spacer, the standard top mount and the standard top nut. Tighten the top nut to 35 - 40 Nm.

7
Install the Öhlins McPherson struts on the vehicle according to fig ②.



② 👉 Caution!

Match the projection for positioning the shock absorber to the opening of the hub and assemble it



8

Mount the standard stabilizer links and standard brake hose brackets to the Öhlins struts according to fig ③. Tighten the nut to 6 Nm.

👁 Note!

When tightening the top mount nut, the shock absorber shaft must be held in position with a 5 mm Allen key.

9

Fasten the upper attachments.

10

Raise the wheel hub with a jack to remove the freeplay of the lower strut attachment bolts before tightening them.

👁 Note!

Make sure that all bolts are tightened to the correct torque and that nothing fouls or restricts movement of the strut when it is being fully compressed or extended. Test this over the whole steering range from lock to lock.

11

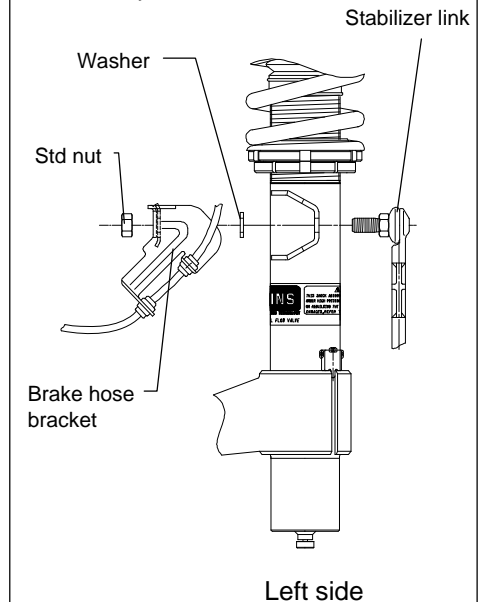
Make sure that all removed parts are reinstalled in the same way as they were before the installation of the Öhlins shock absorber.

How to install

③

👉 Caution!

Assemble this washer.
The brake hose bracket is not correctly fixed without it.



Adjustments

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Set-up Data

Recommended set-up

Rebound 10 clicks
Spring height adjuster 63 mm (see fig ⑤)

Spring

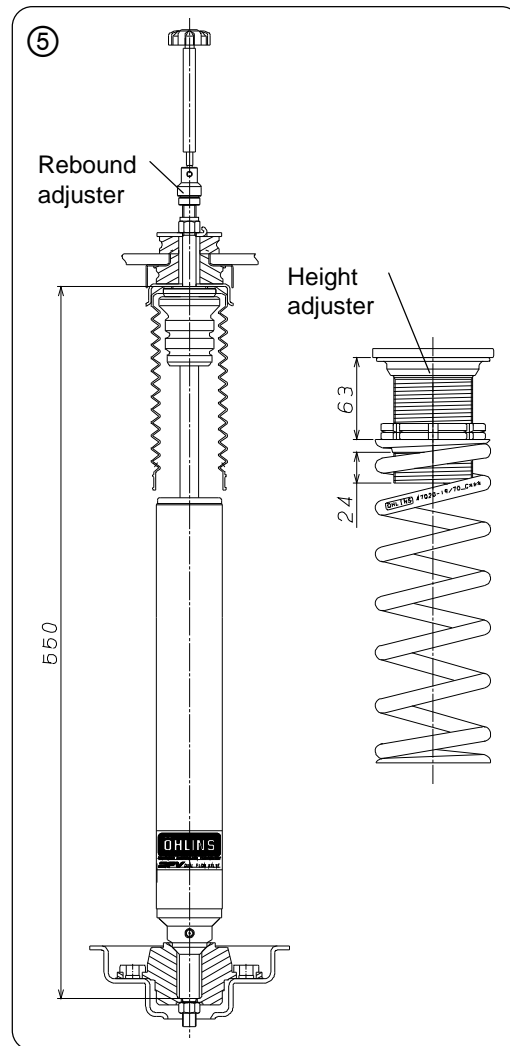
Spec H250, ID65, 70 N/mm

The actual vehicle height

With the height adjustments in their standard positions, the vehicle is lowered approximately 25 mm when compared to the original suspension. As the height adjuster is turned one rotation, the position moves 2.0 mm.

⚠ Warning!

The adjustment range is the standard position ± 15 mm. If the spring height adjuster is moved outside the adjustment range, the spring might drop out.



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

Kit Contents	Pcs.
Shock absorber	2
Nylon nut M10	2
Dust boot	2
Control wire	2
Adjustment knob	2
Screw M4	2
Allen key	1
Spring	2
Spring height adjuster	2

MOUNTED ON SHOCK ABSORBER
Adjuster 2

USED FOR BOTH FRONT AND REAR

C-spanner	1
C-spanner	1
Öhlins sticker	1
Öhlins Owner's Manual	1

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 excess oil/grease with a cloth.

⚠ Warning!

Before installing this product, read the Öhlins Owner's Manual. The shock absorber is an important part of your vehicle and will affect the stability.

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Shock Absorber Kit for BMW 3 series (E90)

BMS M100 rear Mounting Instructions

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How to install

⚠ Warning!

It is advisable to have an Öhlins dealer install the shock absorber.
When installing, read your Vehicle Service Manual.



1
Raise the vehicle and put it on jack stands.

⚠ Warning!

Ensure that it is securely supported.

2
Remove the rear wheels.

3
Remove the lower and the upper attachments and remove the original shock absorbers.

4
Remove the spring.

5
Set the spring seat of the spring height adjuster to the position according to fig ③. It is set at the bottom when delivered.

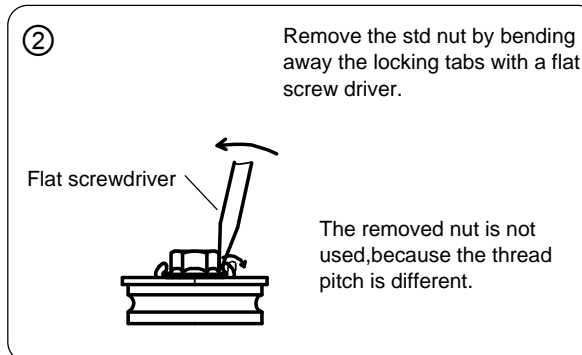
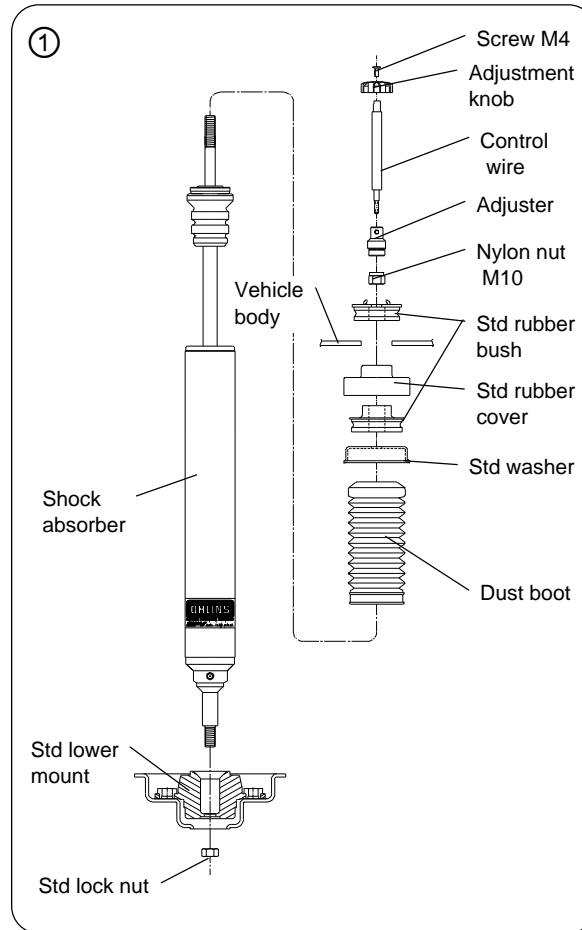
6
Install the Öhlins spring and the spring height adjuster on the vehicle.

7
Fit the dust boot, the std rubber bushes, the std washer and adjuster according to fig ①. Tighten the nylon nut to 20 Nm. The std nut must be removed from the std bush according to fig ②.

👁 Note!

When tightening the lower mount nut, the shock absorber shaft must be held in position with a 4 mm Allen key.

8
Install the Öhlins shock absorbers on the vehicle.



9

Fasten the upper attachments.

👁 Note!

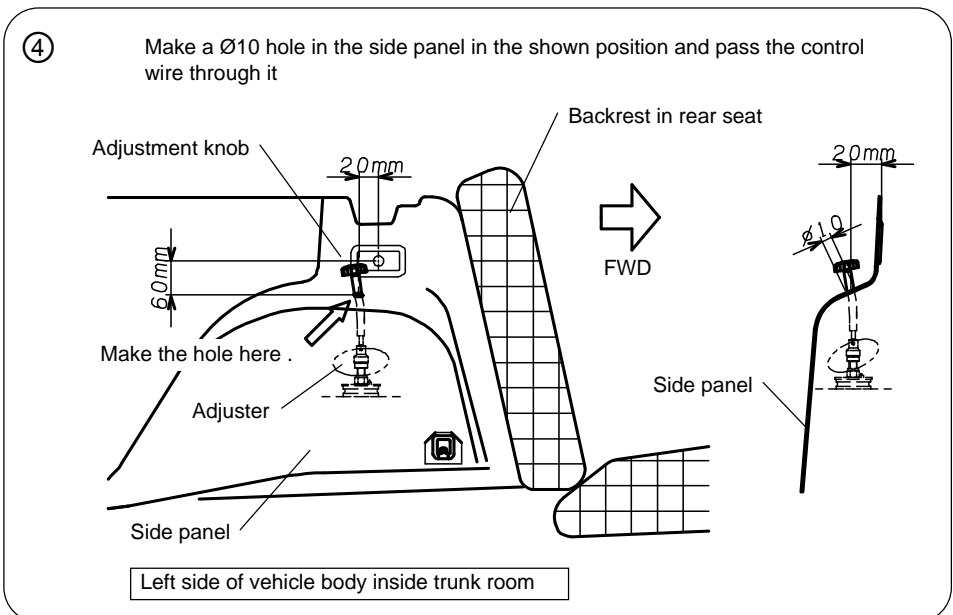
Make sure that all bolts are tightened to the correct torque and that nothing fouls or restricts movement of the shock absorber when it is being fully compressed or extended.

10

Make sure that all removed parts are reinstalled in the same way as they were before the installation of the Öhlins shock absorber.

11

Sub-assemble the wire. (Fasten the adjustment knob by tightening the M4 screw.)
As shown in fig ④, insert the wire through the Ø10 hole which is made in the side panel, and run it inside the panel. Insert the top end of the wire into the adjuster and fasten it with the supplied Allen key.



How to install

3 Set the spring seat of the spring height adjuster to the position in the figure below.

