



Kit Contents			
	Description	Part No	Pcs
1	Spacer	24629-15	2
2.1	Shock absorber	BMS 1R40	1
2.2	Shock absorber	BMS 2R40	1
3	Dust boot	10216-01	2
4	Plastic spring spacer	25602-01	2
5	Spring	49200-27	2
6	Rubber spring spacer	25601-01	2
7	Upper spring seat	25618-10	2
8	Top pin spacer	24629-31	2
9	Washer	24619-03	2
10	Lock nut M12	24627-02	2
11	Nut M6	24628-03	2
12	C-spanner	24639-04	1
13	C-spanner	24639-01	1
14	Öhlins sticker kit	10207-01	1
15	Öhlins Owners Manual		1

**Note!**

Please note that this image is a general representation of the product and may differ slightly from your product.

**Note!**

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.

**Note!**

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

**Warning!**

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

## Shock absorber Kit for BMW M2, M3, M4 (F87, F80, F82) – front

# BMS MR40S1

## Mounting Instructions



**ÖHLINS**

# MOUNTING INSTRUCTIONS

## **⚠ Warning!**

We strongly recommend to have an Öhlins dealer install this product.

## **⚠ Warning!**

If working on a raised vehicle, ensure that it is securely supported to prevent it from tipping over.

## **👁 Note!**

When working on this product, see the Vehicle Service Manual for vehicle specific procedures and important data.

### **1**

Raise the vehicle and put it on jack stands.

## **⚠ Warning!**

Ensure that it is securely supported.

### **2**

Remove the front wheels.

### **3**

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.

### **4**

Loosen the upper attachments and sway bar. Remove the original struts from the car.

### **5**

Cut the dust boot 42 mm from the lower end with a pair of scissors according to fig 2.

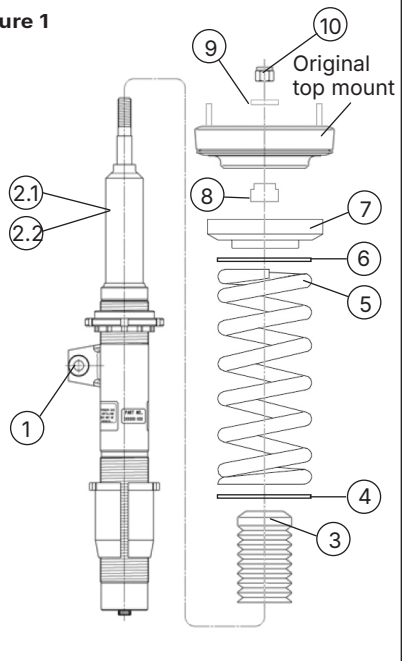
### **6**

According to fig 1: Fit the dust boot (3), the plastic spring spacer (4), the spring (5), the rubber spring spacer (6), the upper spring seat (7), the spacer (8), the original top mount with bearing, the washer (9) and the M12 lock nut (10) to the shock absorber. Tighten the lock nut (10) to 35-40 Nm. Tighten the lower spring seat and the lock ring to 50 - 60 Nm.

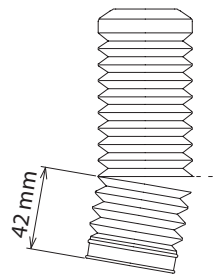
## **👁 Note!**

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

**Figure 1**



**Figure 2**



# MOUNTING INSTRUCTIONS

7

Install the Öhlins McPherson struts on the vehicle according to fig 3. Fit the stabilizer link according to fig 4.

Shock position for BMW M3 & M4 without EDC:  
BMS 1R40 = Left hand side  
BMS 2R40 = Right hand side

Shock position for M3 & M4 with EDC and all BMW M2:  
BMS 1R40 = Right hand side  
BMS 2R40 = Left hand side

8

Fasten the strut to the top mount of the vehicle.

9

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

## 👁 Note!

*Make sure the Öhlins sticker on the strut is facing outwards and that the anti roll bar bracket clears the ABS cable bracket during full wheel turn.*

## 👁 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*

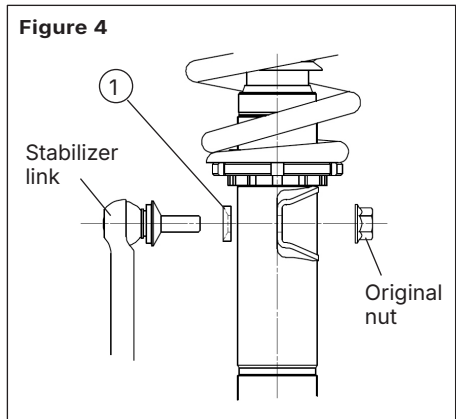
10

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



Figure 3

Figure 4



# ADJUSTMENTS

## ⚠ Warning!

Before riding, 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 standard preload is 10 mm, see fig 5. Make sure to measure the length of the spring only.

## SETUP DATA

Recommended set-up		
Setting adjustment		
Track	2-7	clicks
Winding road	5-10	clicks
Street	10-20	clicks
Spring preload	10	mm

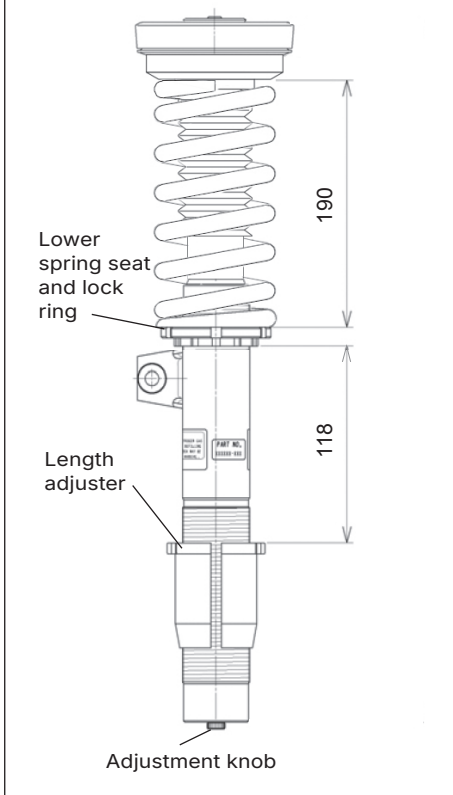
### Recommended spring

49200-27 (90N/mm)

### The actual vehicle height

With both the preload and length adjustments in their recommended positions, the vehicle is lowered approximately 10 mm when compared to the original suspension. As the length adjuster is turned one rotation, the position moves 1.5 mm.

Figure 5



## ⚠ Warning!

The length adjuster range is the standard position  $\pm 15$  mm.

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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### Kit Contents

	Description	Part No	Pcs
1	Shock absorber	BMS 6R40	2
2	Bushing spacer	24629-32	4
3	Dust boot	10216-03	2
4.1	Accelerometer bracket Left	24650-08	1
4.2	Accelerometer bracket Right	24650-07	1
5	Screw M5	04757-13	4
6	Stop screw M5	01502-06	2
7	Nut M6	24626-03	2
8	Rubber seat	25601-04	2
9	Spring preload adjuster	24651-02	2
10	Lock ring	24636-03	2
11	Spring seat	24635-03	2
12	Plastic spring spacer	25602-01	2
13	Spring	47010-67	2
14	Lower plastic seat	25618-04	2

#### 👁 Note!

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#### 👁 Note!

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#### 👁 Note!

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

#### ⚠ Warning!

Before installing this product, read the Öhlins Owner's Manual. The shock absorber/front fork/steering damper is an important part of the vehicle and the vehicle stability.

## Shock absorber Kit for BMW M2, M3, M4 (F87, F80, F82) – rear

# BMS MR40S1

## Mounting Instructions



# ÖHLINS

# MOUNTING INSTRUCTIONS

## **⚠ Warning!**

We strongly recommend to have an Öhlins dealer install this product.

## **⚠ Warning!**

If working on a raised vehicle, ensure that it is securely supported to prevent it from tipping over.

## **👁 Note!**

When working on this product, see the Vehicle Service Manual for vehicle specific procedures and important data.

**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 springs.

**5**

Set the spring seat on the spring preload adjuster to the position according to figure 5.

**6**

Remove the OEM upper spring cup according to figure 2.

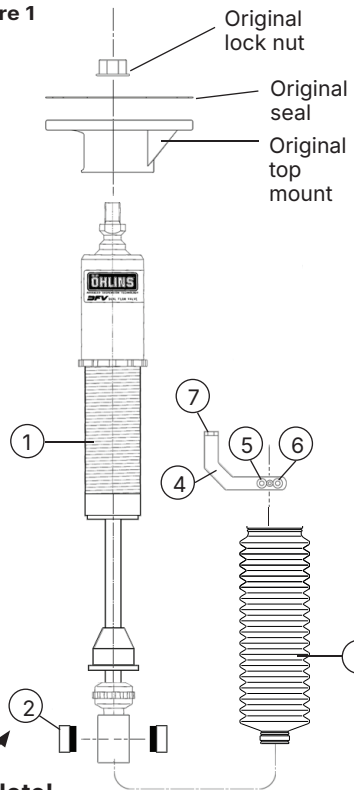
**7**

Assemble the spring adjuster assembly as figure 4. Tighten the lock ring (10) and spring seat (11) to 50-60 Nm. Mount the Öhlins spring assembly on the vehicle.

**8**

Set the length of the rear shock absorber according to figure 5 and cut the dust boot (3) and mount it on the shock absorber according to figure 3. Mount the OEM top mount to the shock absorber according to figure 1.

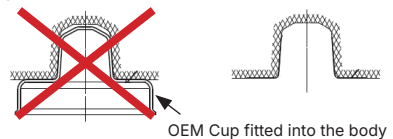
**Figure 1**



## **👁 Note!**

Bushing spacer. Fit the spacers into the bushing.

**Figure 2**



# MOUNTING INSTRUCTIONS

9

**For cars equipped with EDC suspension:**

Mount the accelerometer bracket (4) with the screws (5 & 6) and tighten them to 3Nm. Mount the accelerometer to the bracket with the OEM screw and lock nut (7).

Do not use the OEM top mount spacer that is mounted between the car and top mount. Necessary parts are included in Öhlins cancellation kit 35020-02.

10

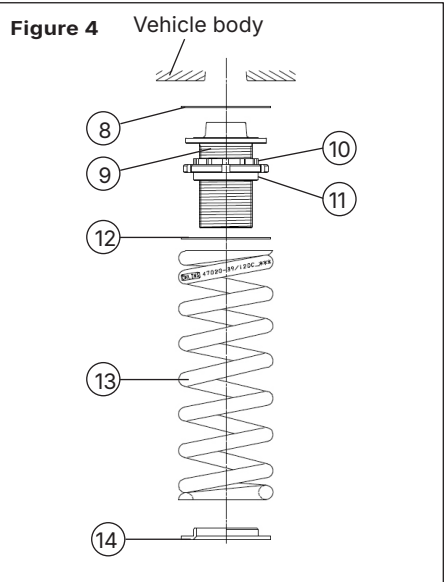
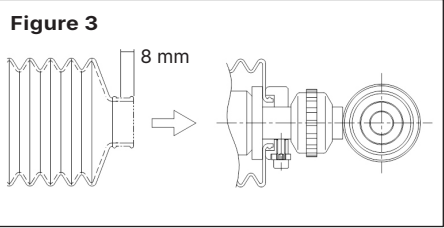
Install the Öhlins shock absorbers on the vehicle.

11

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

**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.*



# ADJUSTMENTS

## ⚠ Warning!

Before riding, 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.

# SETUP DATA

Recommended set-up		
Setting adjustment		
Track	2-7	clicks
Winding road	5-10	clicks
Street	10-20	clicks
Spring adjuster height M2	X=40	mm
Spring adjuster height M3/M4	X=45	mm
Shock absorber length	500	mm

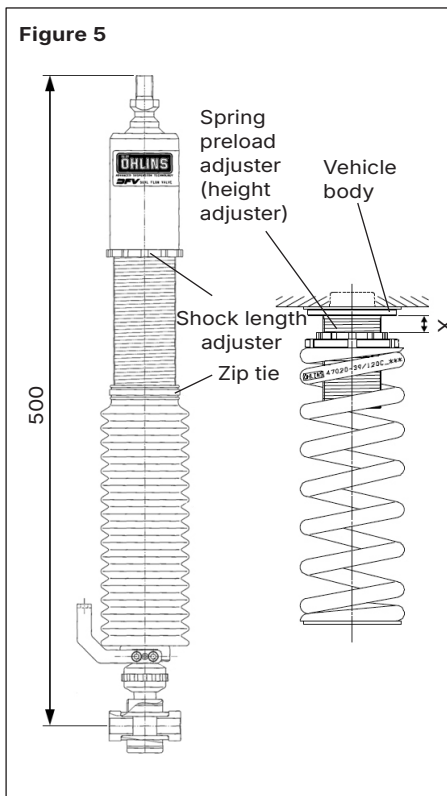
## Recommended spring

M2/M3/M4: 47010-67 (190N/mm)

## The actual vehicle height

With both the preload and height adjustments in their recommended positions, the vehicle is lowered approximately 10 mm when compared to the original suspension. As the height adjuster is turned one rotation, the position moves 1.5 mm.

Figure 5



## ⚠ Warning!

The adjustment range is the standard position  $\pm 15$  mm. If the bracket is moved outside the adjustment range, it may come loose.

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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