

Parts and Accessories.

Installation instructions.



Retrofit - John Cooper Works sports suspension

MINI ONE (R50) with option 226

MINI COOPER (R50)

MINI COOPER S (R53)

Retrofit kit no.: 31 30 0 308 861
31 30 0 308 862

Installation time

The installation time of 5.0 hours for retrofit kit 31 30 0 308 861 and approx. 2.5 hours for retrofit kit 31 30 0 308 862 can vary depending on the vehicle equipment.

An additional time of 2.0 hours is required for optical measurement (alignment) and the adjustment of the suspension.

Important information

These installation instructions are mainly intended for use in the MINI dealership network as well as by authorised BMW Service Centres; the target group of these installation instructions are technical personnel trained on MINI vehicles with corresponding technical know-how.

All work is to be carried out with the aid of currently valid MINI repair instructions, schematic circuit diagrams, maintenance manuals and working instructions in rational order with the specified tools (special tools) while paying particular attention to valid safety regulations.

All illustrations show LHD vehicles. Carry out the same procedure analogously on RHD vehicles.

The installation instructions describe the procedure on the left-hand side of the vehicle only. The same procedure should be followed analogously on the right-hand side of the vehicle.

Pictographs:



identifies information that draws attention to danger/hazards.



identifies information that draws attention to specific requirements.

◀ identifies the end of an information or warning text.

For key to pictographs, see EBA-CD or Aftersales Portal.

Do not archive the printout of these installation instructions as they are updated daily via the Aftersales Portal!

Subject to technical modifications.

Installation information

Corresponding to the optional equipment, the correct coil springs must be ordered based on the table of coil springs in the EPC.

The steering angle limiter must be additionally installed if 18" John Cooper Works light alloy wheels are fitted.

Following installation, the sports suspension must be optically measured and readjusted (for values see under Point 4 of the Installation instructions).

All fine thread nuts must be replaced.

Required special tools

31 2 210 Wrench for shock absorber strut tower, top

31 3 341 Spring tensioner

31 3 355 Spring holder

32 1 190 Extractor

32 3 090 Press-off tool

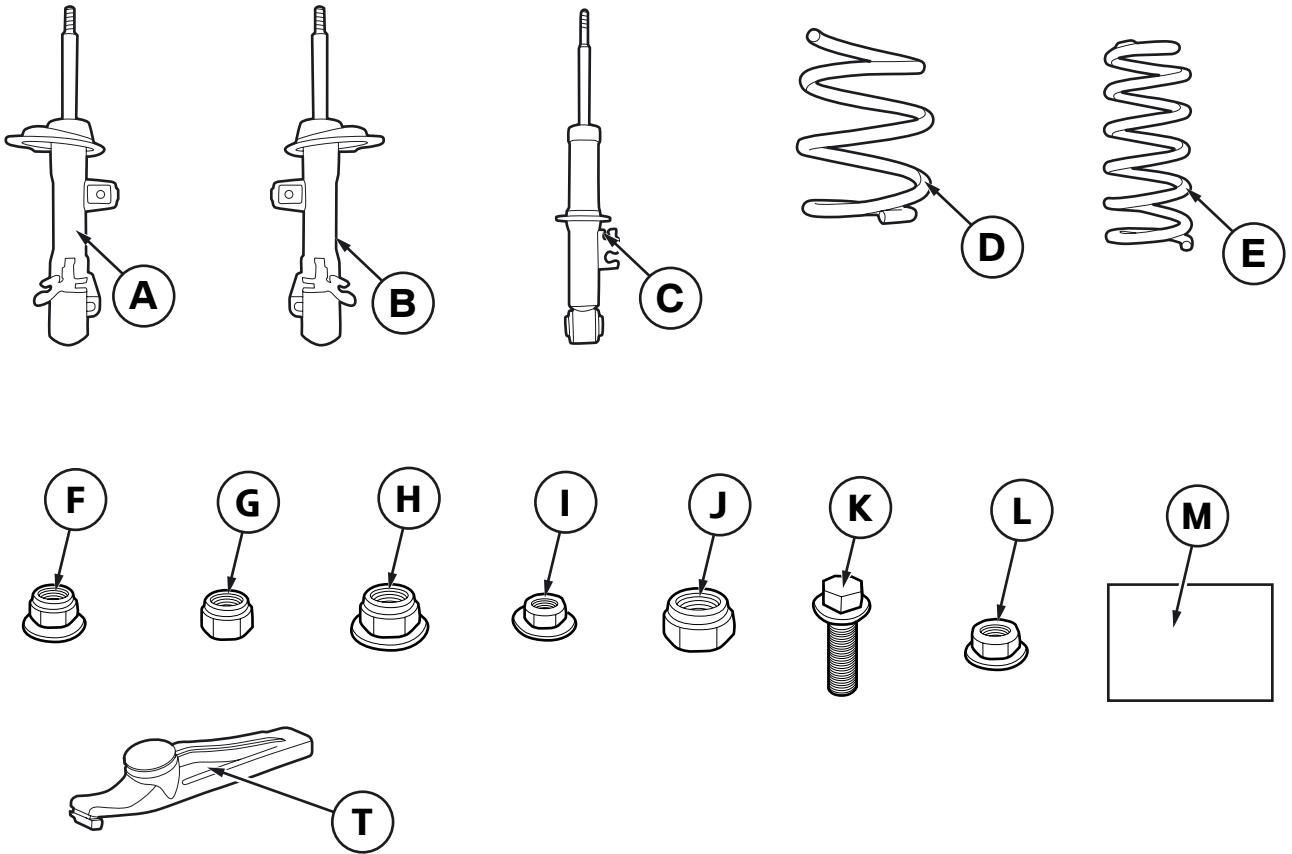
31 2 240 Puller

31 3 353 Spring holder

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1. Parts overview



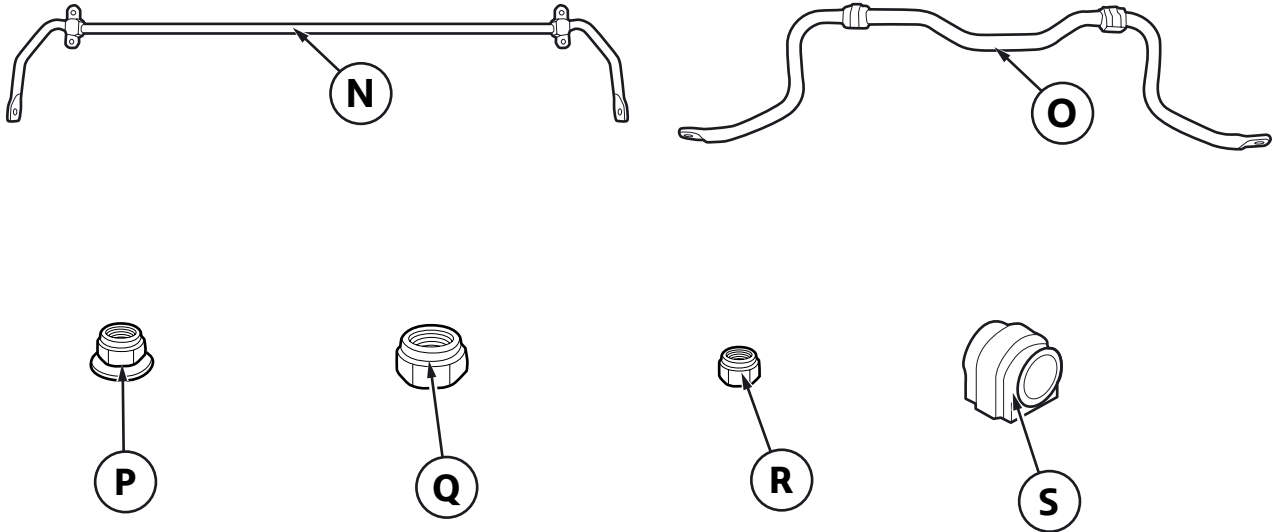
050 0487 V

Key

- A Shock absorber strut, front left
- B Shock absorber strut, front right
- C Shock absorber strut, rear (2x)
- D Coil spring, front (2x) (not included in parts kit)
- E Coil spring, rear (2x) (not included in parts kit)
- F M10 x 1.5 nut (2x)
- G M10 x 1.25 nut (2x)
- H M12 x 1.5 nut (2x)
- I M8 x 1.25 nut (6x)
- J M14 x 1.5 nut (2x)
- K M10 bolt (4x)
- L M10 x 1 nut (2x)
- M Sticker
- T Bump stop (2x)

1. Parts overview

Additionally included in retrofit kit for MINI One with option 226 and MINI Cooper



050 0466 V


Key

- N Stabilizer bar, rear
- O Stabilizer bar, front
- P M10 x 1.5 nut (4x)
- Q M14 x 1.5 nut (2x)
- R M8 nut
- S Rubber mount, front stabilizer bar

2. Preparatory work

	TIS No.
Perform quick test	---
Disconnect negative terminal of battery	12 00 ...
Remove the following components	
Shock absorber strut, front left and right	31 31 031
Front stabilizer bar (only on MINI One with option 226 and MINI Cooper)	31 35 000
Shock absorber strut, rear left and right	33 53 000

3. Installation


-  The stabilizer bars need to be replaced only on the MINI One with SA 226 and MINI Cooper. ◀

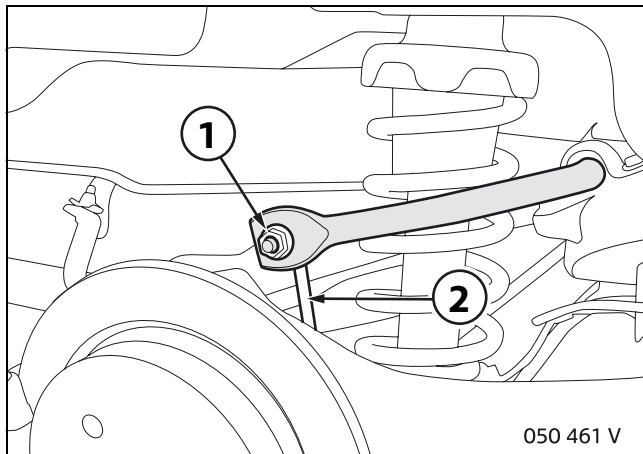
Front axle

Install front coil spring **D** according to TIS in the shock absorber struts **A** and **B**.
Install front stabilizer bar **O** and front shock absorber struts **A** and **B** according to TIS in the vehicle.

Rear axle

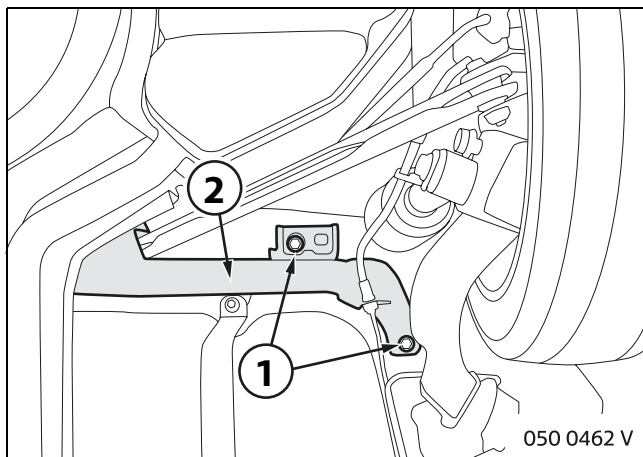
Install rear coil springs **E** according to TIS in the shock absorber struts **C**.

-  Simplified disassembly and assembly of the stabilizer bar are described in the following. ◀

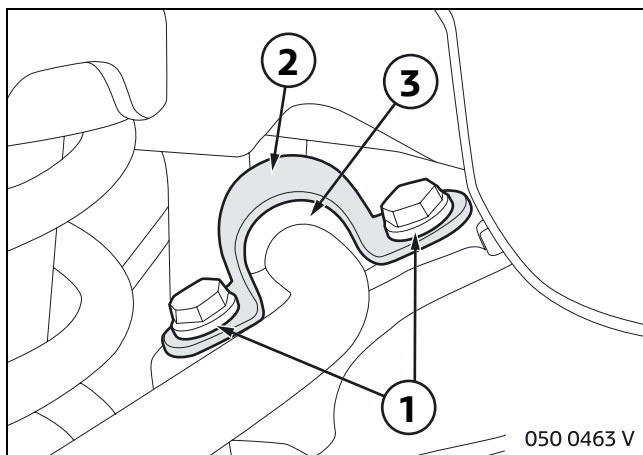


Release nut (1) and detach stabilizer link (2) from the rear stabilizer bar.


-  When reinstalling, use nuts **P** from the parts kit. ◀



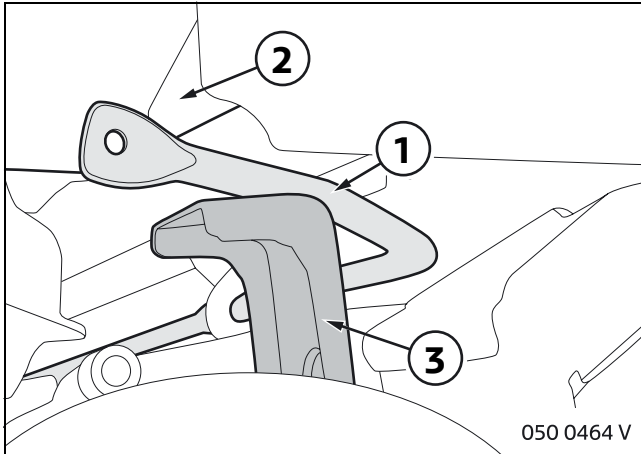
Undo bolts (1). Slightly lower support member (2).



Undo bolts (1) and remove clip (2).

-  Reuse the old rubber mount (3). ◀

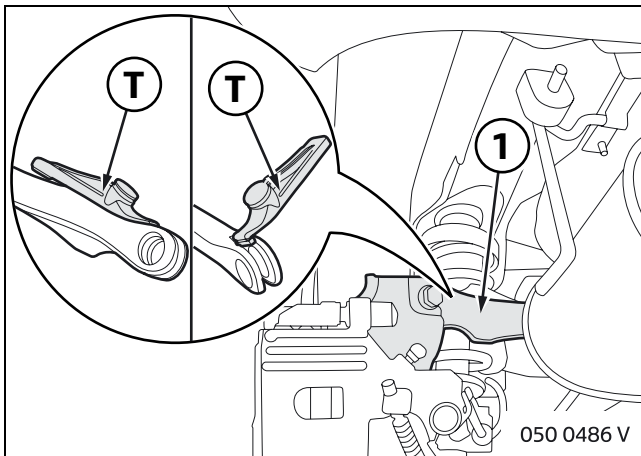
3. Installation



Pull stabilizer bar (1) through the cavity between the body (2) and support member (3) and remove.

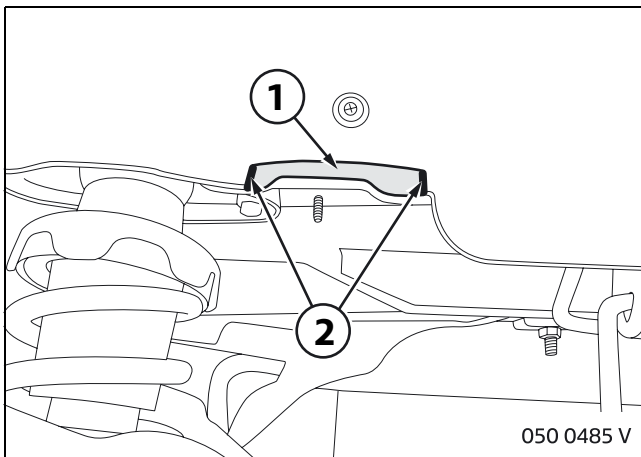
Install rear stabilizer bar **N** in reverse order of removal.

Install shock absorber struts **C** according to TIS in the vehicle.



Fit bump stop **T** at 90° with respect to the control arm such that one side locks into position. Turn bump stop **T** and push forward.

Using a rubber-headed hammer, tap in the rear part of the bump stop **T** until it locks in position.

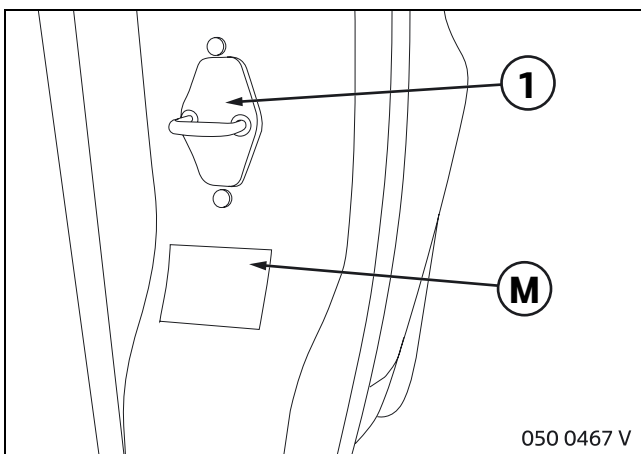


▶ The following work is not necessary if the recess is already provided in the area (1). ◀

Use a suitable tool to make two recesses (2) in the area of the body flange above the bump stop. Use a hammer to bend over area (1).

▶ If necessary cut off the wheel arch panel in area (1). ◀

⚠ Treat the flanged body panel in accordance with standard BMW anti-corrosion measures. ◀



For all vehicles:

▶ The adhesion area for the sticker must be free of dust and grease. ◀

Affix sticker **M** on the driver's side B-pillar under the door lock (1).

4. Concluding operations and encoding

The retrofit system does not require encoding.

- Reconnect battery
- Perform quick test
- Reassemble vehicle in reverse order
- Optically measure and readjust suspension (see below for values)

Wheel alignment MINI One, MINI Cooper and MINI Cooper S with John Cooper Works suspension

Front axle

Total toe	$0^{\circ} 18' \pm 5'$
Camber	$-35' \pm 25'$
Toe offset angle	$-1^{\circ} 16' \pm 30'$
Caster	$4^{\circ} 59' \pm 30'$
Max. steering lock angle at inside of wheel	$36^{\circ} 10'$

Rear axle

Total toe	$0^{\circ} 24' \pm 8'$
Camber	$-1^{\circ} 52' \pm 30'$
Geometric axial difference	$0^{\circ} \pm 10'$

Height at front in normal position

16" rim	662 mm \pm 10 mm
17" rim	677 mm \pm 10 mm
18" rim	690 mm \pm 10 mm

Height at rear in normal position

16" rim	546 mm \pm 10 mm
17" rim	561 mm \pm 10 mm
18" rim	574 mm \pm 10 mm