



Contents:

- **Certificate** (removable) **for:**
 - BMW 1er (F20/F21) B14 -**
 - BMW 2er (F22/F23) B14 -**
 - BMW 3er (F30/F31/F34) B14 -**
 - BMW 4er (F32/F33/F36) B14 -**
 - inclusive xDrive -**

- **mounting instruction**



**Before installation please observe
the following points:**

- Read all information in this manual carefully.
All suspension components are fitted and removed acc. to the manufacturer's specifications for installing and removal, if not otherwise required in these instructions.
- Check that your vehicle type is listed in the certificate as being specified for this kit.
- Check the product for all components before starting installation!
- Check that dimensions and fastening points are comparable between the original and BILSTEIN shock absorbers.
- Directional references (left, right, front, rear) are always with reference to the driving direction.
- Remove the negative battery pole.
- The tested vehicles are left- hand drive vehicles.

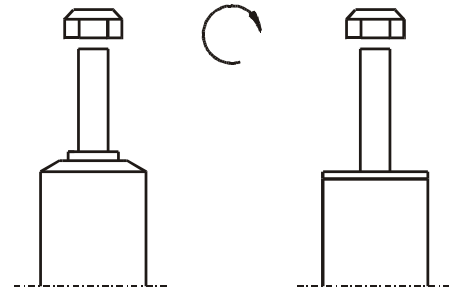
**After installation please observe
the following points:**

- Set the vehicle height by adjusting spring plates and lock nuts on the new dampers. Only use the supplied spanner wrenches.
- All rubber- mounted strut/ damper attachments must not be fully tightened until AFTER the suspension system is loaded (wheels on the ground). Other mounting fasteners (for example brackets) must be securely tightened BEFORE load is placed on the suspension system.
- Because the vehicle has been lowered, freedom of movement for all wheel-/ tire- combinations must be checked.
- Connect the negative battery pole.
- After installing the suspension system, caster and camber must be checked and adjusted according to manufacturer's specifications.
- Check and reset load- dependent brake compensator and ABS system according to manufacturer's specifications.
- Check and adjust headlight setting.

All diagrams are generalized
and not to scale!
brackets, etc. specific to
strut are not shown!



| list of torques | | | | | | |
|-----------------|-----|------|------|------|------|-----------------|
| | M 8 | M 10 | M 12 | M 14 | M 16 | Thread |
| | 13 | 25 | 45 | 72 | 110 | Torque Nm |
| | 10 | 19 | 34 | 54 | 83 | Torque ft lb |



Do not use an impact tool to loosen or tighten fasteners due to possible damage to the product.
Self- locking nuts must only be used once!

Removal

Place vehicle on a wheel- free car hoist, lift it and remove wheels.

Vehicles equipped **with xenon headlight** the movable element of sensor for the headlamp levelling controller must removed before.



Pay attention that support wires of brake system are strain-free during removal. Stabilization by suitable means is demanded.

Remove bottom mount.

Remove top fixing nuts from support bearing.
Do not remove central nut at this time!

Remove complete strut and clamp it in an appropriate strut vice.

Using a suitable spring compressor, compress suspension spring until tension on support bearing is free to move.

Release central nut and remove original mounting parts and coil spring. Please refer to diagram to identify which parts will be replaced with BILSTEIN- supplied components.

Installation

The original dust cover must cut up to ~40 mm (see sketch).

Assemble BILSTEIN and/ or original mounting parts, as well as the new BILSTEIN spring on the BILSTEIN strut in reverse order as removal.



IMPORTANT! Spring plates must not be adjusted outside the ranges specified in the certificate!

The correct mounting position of the suspension springs can be determined by the printing on the springs; install them with the print upright.

Do not reuse original- bumper, since BILSTEIN- strut has built in bump stop.

Fit assembled BILSTEIN strut to the vehicle in reverse order as removal.



IFM

Institute for Vehicle Technology and Mobility



TGA Art. 8. C C I
TÜV NORD PART CERTIFICATE
TGA-Art: 8.1

Nr.: TU-026315-A0-014

on the compliance of a vehicle when parts are properly installed and fitted to the car in accordance with §19 Par.3 No.4 StVZO

for the part / scope of modification : *Height adjustable suspension system*

of the type : **47-264625; 47-264632**

from the manufacturer : **ThyssenKrupp Bilstein GmbH**

0.

Instructions for vehicle owner

note from the translator: *The following instructions refer to the German regulations. In other countries different regulations may apply. In any case carefully read and follow the technical guidelines given for your safety and driving pleasure!*

Performance and confirmation without delay of modification acceptance:

With the modification the type approval of the vehicle will expire if the modification acceptance provided for in StVZO § 19 Par. 3 is not performed and confirmed without delay or if conditions laid down are not complied with !

After performance of the technical modification, the vehicle must be presented without delay together with the present TÜV approval to an officially recognised inspector or tester at a Technical Inspection Centre or an inspection engineer from an officially recognised inspection organisation to perform and confirm the specified modification acceptance.



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TÜV Nord part certificate No.:

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object tested : Height adjustable suspension system

type : 47-264625; 47-264632

Compliance with instructions and conditions:

The instructions and conditions given in III. and IV. must be complied with.

availability of documents:

After the acceptance procedure the certificate with confirmation of the modification acceptance must be available in the car and presented to authorised persons on demand; this will not apply once the vehicle documents have been amended.

Amendment of vehicle documents:

The vehicle owner must apply, in accordance with the provision in the confirmation concerning correct modification, for the competent licensing authority to amend the vehicle documents.

Further conditions can be found in the confirmation of correct modification.



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I.

Area of use

| | |
|----------------------|------------------------|
| Vehicle manufacturer | Bayer. Mot. Werke, BMW |
|----------------------|------------------------|

| | | | |
|------------------------|---------------------------|--|---|
| model: sales name | BMW 1 (F20) | BMW 1 (F21) | BMW 2 (F22), (F23) <i>Coupe and convertible</i> |
| model: internal code | 1K4 | 1K2 | 1C |
| EC type approval No.*) | e1*2007/46*0283*.. | e1*2007/46*0273*05 <i>...and following</i> | e1*2007/46*0277*08* <i>...and following</i> |

| | | | |
|------------------------|---|---------------------------|---------------------------|
| model: sales name | BMW 3er Reihe (F30, F31, F34) <i>BMW 3 series</i> | | |
| model: internal code | 3L | 3K | 3-V |
| EC type approval No.*) | e1*2007/46*0314*05 <i>...and following</i> | e1*2007/46*0315*.. | e1*2007/46*0559*.. |

| | |
|------------------------|---|
| model: sales name | 4 series Coupe, Convertible and Gran Coupe (F32, F33, F36) |
| Type of vehicle | 3C |
| EC type approval No.*) | e1*2007/46*0316*08 <i>...and following</i> |

*) with regard to Directive /0/156/EEC or 2007/46/EC as last amended by Directive xxxx/xx/EC



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I.1

Limitations of area of use

| | | |
|--|--|--|
| FRONT AXLE: | <i>related to permissible axle loads and adjustment dimensions:</i> | |
| <i>Spring design and Damper- / strut design</i> | E4-FD1-Y226B00 <i>(mainspring)</i> | |
| | 35-264934 (2WD) 35-264941 (li., 4WD) 35-264958 (re., 4WD) <i>without damper force adjustment</i> | |
| <i>Drive</i> | 2WD | 4WD |
| <i>for permissible axle loads</i> | up to max. 1035 kg 215 mm to 235 mm | up to max. 1095 kg 205 mm to 215 mm |
| <i>with permissible adjustment range of spring plate height:</i> | <i>related to spring seat till centre of strut fixation-bolt</i> | |

I.2

Limitations of area of use

| | | |
|---|--|--|
| REAR AXLE: | <i>related to permissible axle loads and adjustment dimensions:</i> | |
| <i>Spring design and Damper- / strut design</i> | E4-FD1-Y183B00 <i>(mainspring)</i> | |
| | 24-264563 <i>without damper force adjustment</i> | |
| <i>with permissible adjustment range of spring plate height</i> | up to max 1120 kg 25 to 50 mm | up to max 1285 kg 30 to 50 mm |
| | <i>related to adjustable spring plate till original springseat</i> | |



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II.

Description of the part / Scope of modification

Lowering of the body and change of suspension tuning by means of special suspension springs and dampers.

Front axle

complete strut with main-and helper spring on height adjustable spring plates , exchange bump stop, bump travel: original, lowering up to 45 mm

Rear axle

Mainspring on special height adjustable spring seats, bump travel : original, lowering up to 45 mm

II.1

Description of

FRONT AXLE SUSPENSION PARTS

II.1.1

Springs

| | |
|----------------------------|--|
| Design | coil spring |
| Identification | E4-FD1-Y226B00 (mainspring) |
| Manufacturer's mark : | Bilstein and date of manufacture coded |
| Type / Location of marking | |
| Surface protection | powder coating |
| Characteristic | progressive |
| Outer diameter (mm) | 121 - 95 |
| Wire diameter (mm) | 12,0 |
| untensioned length | 220 |
| Total number of coils | 6,7 |



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II.1.2

Damping

| | |
|-------------------------------|--|
| <i>Design</i> | <i>complete strut / monotube, gas pressure</i> |
| <i>Damping-characteristic</i> | <i>non-adjustable</i> |
| <i>Identification</i> | 35-264934 (2WD) 35-264941 (li., 4WD) 35-264958 (re., 4WD) |
| <i>Manufacturer's mark :</i> | Bilstein |
| <i>Type of marking</i> | <i>rolled in and foil sticker</i> |
| <i>Surface protection</i> | <i>Galvanisation</i> |

II.1.3

Height adjustment system

| | |
|-------------------------------------|---|
| <i>Type:</i> | <i>Spring plate nut with counternut on damper tube thread</i> |
| <i>Permissible adjustment range</i> | <i>see page 4</i> |

II.1.4

Bump stops and bump travel

| | |
|-------------------------------|---------------------------------|
| <i>type of part / system:</i> | <i>replacement PUR bumpstop</i> |
| <i>manufacturer:</i> | <i>Serienteil o.e. part</i> |
| <i>mounting position:</i> | <i>on the piston rod</i> |
| <i>height / Ø</i> | 65 / 36 |
| <i>bump travel</i> | <i>original</i> |



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II.2

Description of

REAR AXLE SUSPENSION PARTS

II.2.1

Springs

| | |
|----------------------------|--|
| Design | coil spring |
| Identification | E4-FD1-Y183B00 (mainspring) |
| Manufacturer's mark : | Bilstein and date of manufacture coded |
| Type / Location of marking | printed on area of centre coil |
| Surface protection | powder coating |
| Characteristic | progressive |
| Outer diameter (mm) | 100 |
| Wire diameter (mm) | 12,75 |
| untensioned length | 260 |
| Total number of coils | 9,75 |

II.2.2

Damping

| | |
|------------------------|----------------------------|
| Design | monotube, gas pressure |
| Damping-characteristic | non-adjustable |
| Identification: | 24-264563 |
| Manufacturer's mark : | Bilstein |
| Type of marking | rolled in and foil sticker |
| Surface protection | paint |



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II.2.3

Height adjustment system

| | |
|------------------------------|--|
| Type: | <i>special spring seat (threaded tube with springseat nut) sticked on upper original spring seat</i> |
| Permissible adjustment range | <i>see page 4</i> |

II.2.4

Bumpstops and bump travel

| | |
|------------------------|--|
| type of part / system: | <i>without damperforce adjustment o.e. PUR-bumpstops</i> |
| mounting position: | <i>on the piston rod</i> |
| height / \varnothing | <i>81 / 67</i> |
| bump travel | <i>original</i> |

III.

Notes on possible combination with other modifications

III.1

Wheel/tyre combinations

Series wheel/tyre combinations

There are no technical objections against the use of all O.E. wheel/tyre combinations.



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Special wheel/tyre combinations

There is also no technical reason to object to the use of special wheel/tyre combinations, provided the following conditions are met:

- *Special TÜV assessments or approvals have been obtained for the relevant wheel/tyre combination and the necessary conditions are met.*
- *If the series bump travel limitation has to be modified as a result of conditions laid down in these test reports (e.g. change of O.E. bump stops or installation of additional bump travel limiters), the characteristic line of the axle suspension has to be verified and assessed new (assessment according to §21 StVZO)*

III.2

Aerodynamic devices, special exhaust systems etc.

The ground clearance in unladen state is reduced by the installation of special springs. It is the approximately equivalent of that of a partially laden series vehicle. When the vehicle is loaded to the admissible axle loads the ground clearance does not change as compared to the series vehicle. If spoilers, rear aprons and special exhaust systems are mounted, however, the reduced angle of slope must be noted (travelling on ramps etc.).

III.3

Trailer coupling

The specified minimum height of the coupling ball above the road surface with the permissible total weight of the vehicle (acc. DIN 74058) is 350 mm.



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IV.

Notes and conditions

Notes and conditions for the installation shop and modification acceptance

IV.1

Headlamp adjustment must be checked.

IV.2

After modification an axle alignment must be carried out on the vehicle.

IV.3

The bump stops must correspond to the descriptions in this report. Additional bump travel limiters are not allowed.

IV.4

The limitations with regard to the area of use (see Point 1) must be observed.

IV.5

The adjustment range of the spring plates is only approved within the range of the values given in Point 1.

Adjustment must be carried out so that the body is level when the vehicle is empty apart from the driver.

The lowest approved adjustment and the permissible adjustment range are to be entered, stating the fixed axle reference points. (Example, see below).

IV.6

For controlling purposes the distance between centre of wheel and edge of wheel housing above is to be measured and entered into the confirmation of the installation.

Notes and conditions for mounting:

Disassembly and installation must be carried out in accordance with the manufacturer's instructions as contained in the workshop manual.



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Amendment of vehicle documents:

Correction of the vehicle documents is necessary, but has been postponed.

The competent licensing authority must be notified by the vehicle owner accordingly the next time they deal with the vehicle documents. The following example is suggested for the entry:

| item | entry |
|----------------|--|
| 20 (height) | to remeasure |
| 22 | <p>MODIFIED SPECIAL SUSPENSION, THYSENKRUPP BILSTEIN GMBH, TYPE: 47-264625; 47-2646232 *), CONSISTING OF SPRINGS, IDENTIFICATION F/R: E4-FD1-Y226B00 / E4-FD1-Y183B00 AND DAMPERS, IDENTIFICATION: F/R::see page 4; PERMISSIBLE ADJUSTMENT RANGE FRONT:205 215*) TILL 215 ... 235 *) MM DISTANCE SPRING PLATE TO CENTRE OF FIXING BOLT OF STRUT; 25 / 30 TILL 50 MM; FROM TOP EDGE OF SPRING PLATE TO BOTTOM OF ORIGINAL SPRINGSEAT*SUSPENSION TRAVEL: FRONT ORIGINAL / REAR ORIGINAL*CONTROL MEASUREMENT: ... MM**</p> |

*) cross out not valid

V.

Basis of tests and test results

The test vehicle and the modification parts were subjected to a test in accordance with the test conditions regarding raising / lowering of vehicles contained in VdTÜV Merkblatt 751.

The test conditions were fulfilled.

VI.

Annexes

none



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VII.

Concluding certification

It is hereby certified that the vehicles described under area of use satisfy the regulations of StVZO in the current version after modification and implemented and verified modification acceptance, provided the notes / conditions given in the present TÜV Nord part certificate are observed.

The manufacturer (owner of the TÜV Nord part certificate) has furnished evidence (Reg-Nr.: 97031) that he maintains a quality system in accordance with Annex XIX, Section 2 StVZO.

The TÜV Nord part certificate consists of pages 1 – 12 including the annexes listed under VI. and it may only be reproduced and passed on in its unabbreviated form.

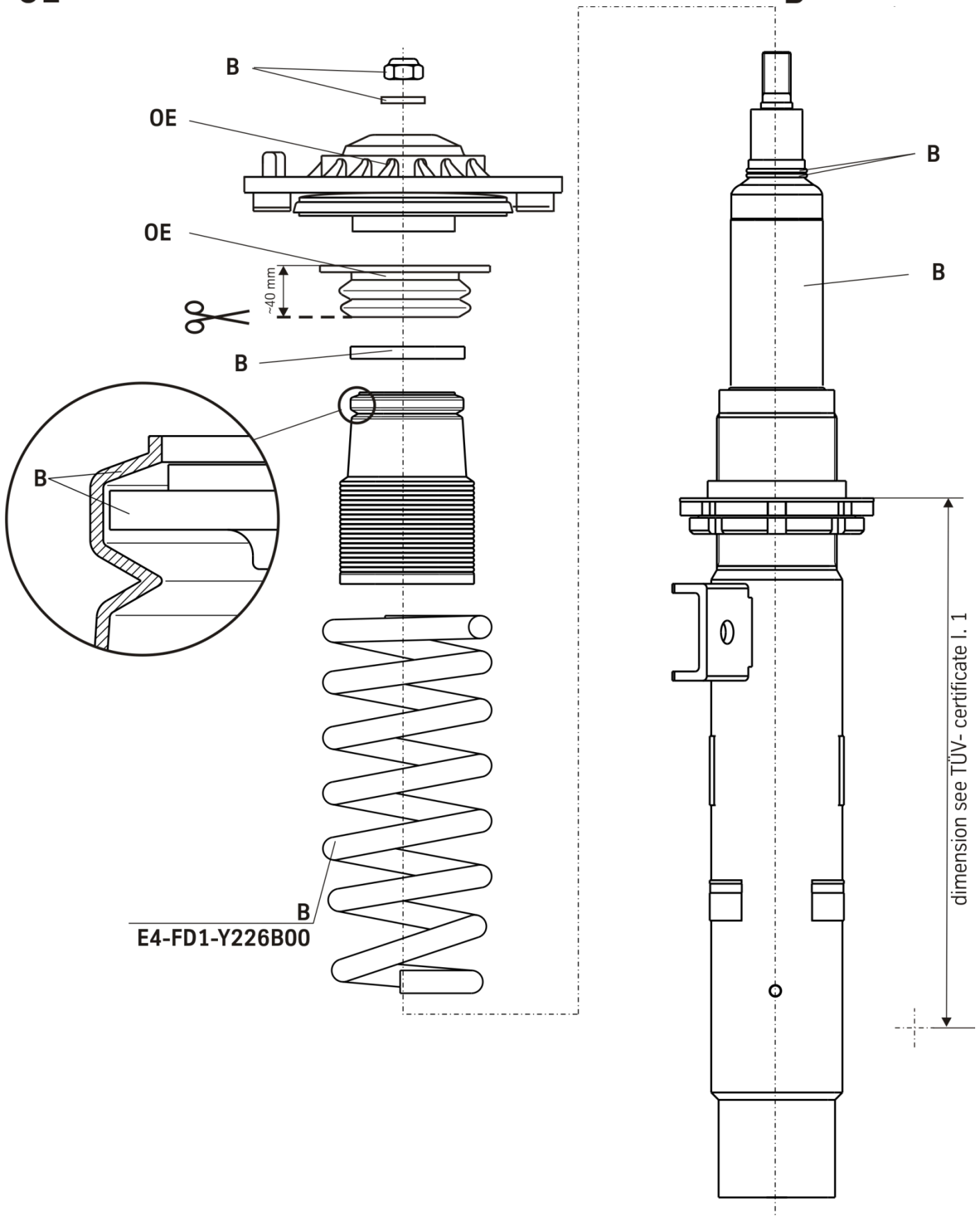
The TÜV Nord part certificate shall cease to be valid if technical modifications are made to the vehicle part or if modifications made to the vehicle type described affect use of the part and in the case of any changes to the statutory specifications.



(2WD) **front axles**
(4WD) **front axles left/right**

OE = Original Equipment

B = Delivered by BILSTEIN



wrong



correct



mounting instruction for rear axles

Removal

Place vehicle on a wheel- free car hoist, lift it and remove wheels.



Pay attention that support wires of brake system are strain-free during removal. Stabilization by suitable means is demanded.

Remove top fixing mount and bottom fixing mount from support bearing.

Remove original shock absorber.

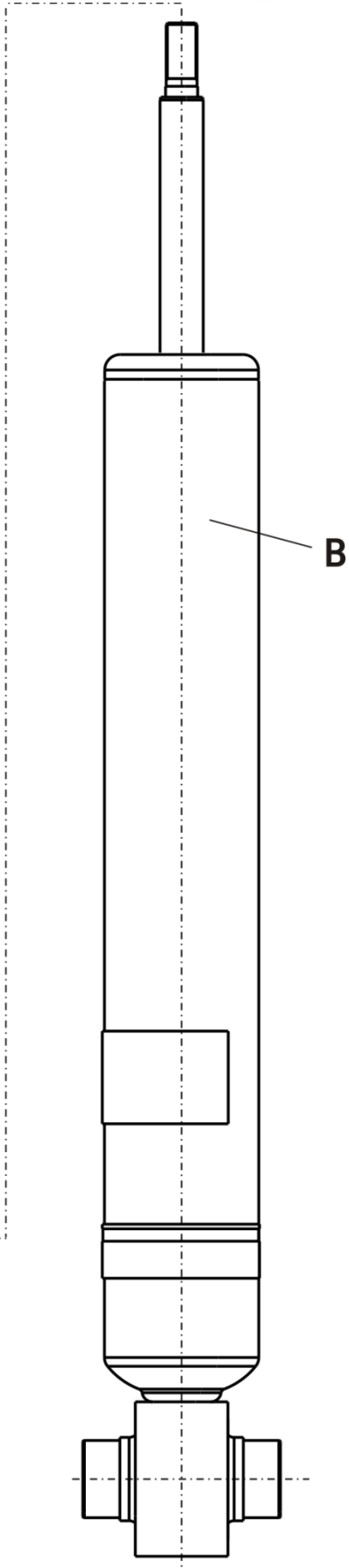
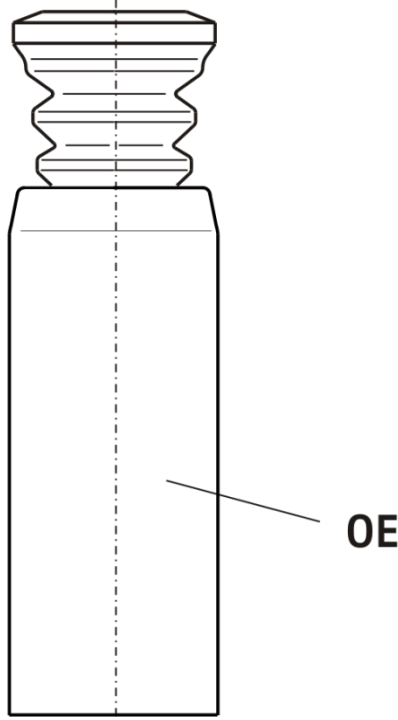
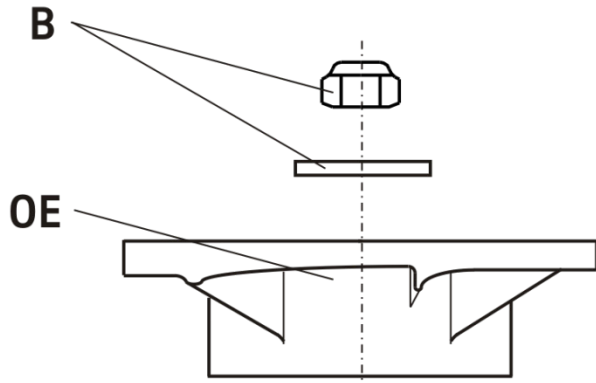
Installation

Fit BILSTEIN mounting parts on BILSTEIN shock absorber according to the sketch next page.

Fit BILSTEIN shock absorber to the vehicle in reverse order as removal.

OE = Original Equipment

B = Delivered by BILSTEIN



OE = Original Equipment

B = Delivered by BILSTEIN

