

# ZF Aftermarket Service Information

Replacing air spring  
BMW E39

Manufacturer BMW

Product

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Document number 40932 EN



AFTERMARKET

LEMFÖRDER  SACHS  TRW



## 1 Replacing air spring

Vehicle manufacturers	Model range	Model
BMW	E39	5-Series Touring

Tab. 1

 Vehicle identification: Check OE item number.

Storing air springs	
Temperature	-15°C (min.) / +50°C (max.)
UV radiation	Avoid direct sunlight.
Storage environment	Ensure a clean storage environment. Avoid contamination.

Tab. 2 Storing air springs

### 1.1 Removing air spring, rear axle

Requirements:

- Vehicle has been raised safely. Observe the vehicle manufacturer specifications.
- Wheel has been removed.
- Electrical fuse of the air suspension has been removed. Observe the vehicle manufacturer specifications.
- Front lashing eyes in trunk have been removed.
- Trunk floor has been removed.

Loosening air line

1. Carefully loosen air line nipple.

→ Air pressure escapes.

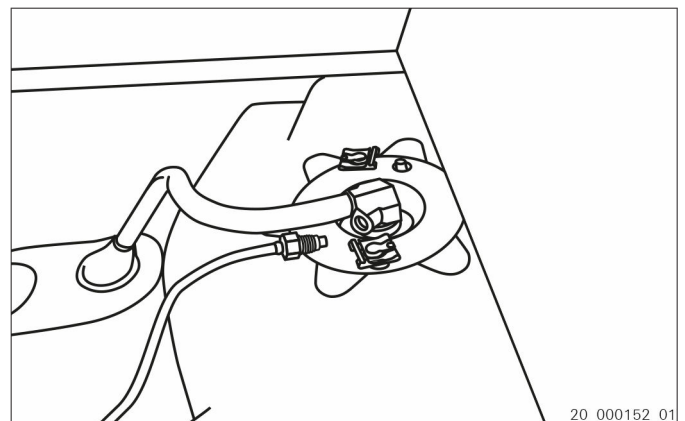


Fig. 1



## Tightening air line

2. Tighten air line nipple to the specified tightening torque. Observe the vehicle manufacturer specifications.

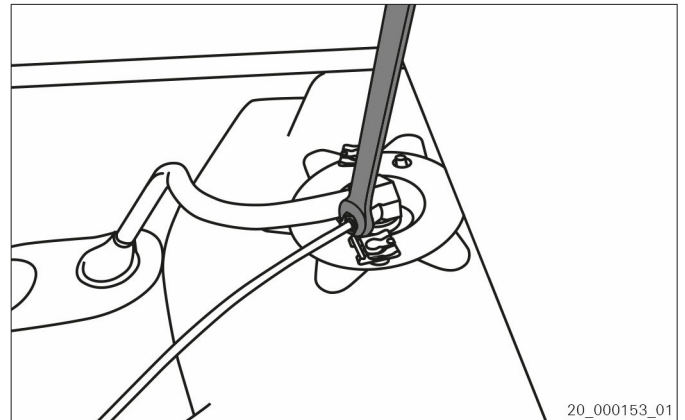


Fig. 2

## Removing air spring

3. Loosen and dispose of air line fitting safety clip.

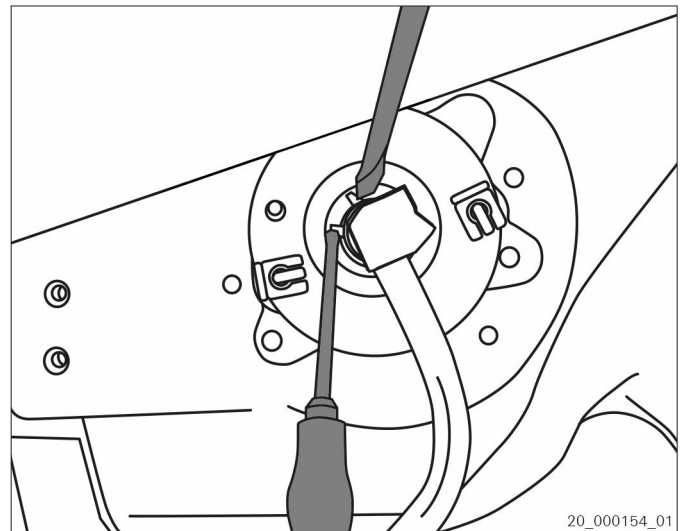


Fig. 3



4. Pull up and loosen air line fitting (1) on upper side of air spring (2).

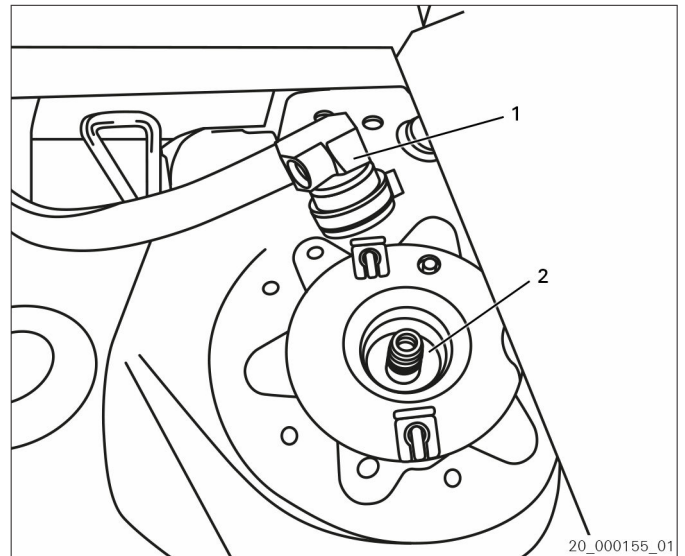


Fig. 4

- 1 Air line fitting
- 2 Air spring

5. Loosen and dispose of retaining clips (1).

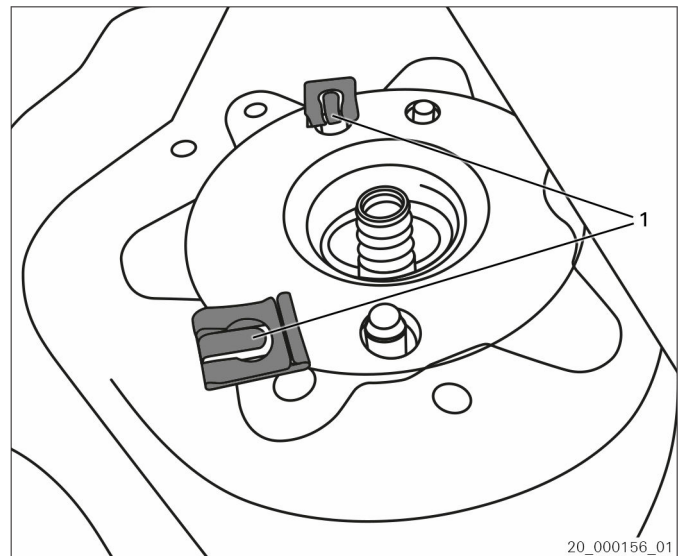


Fig. 5

- 1 Retaining clips



6. Loosen and remove bottom screw of damper strut.

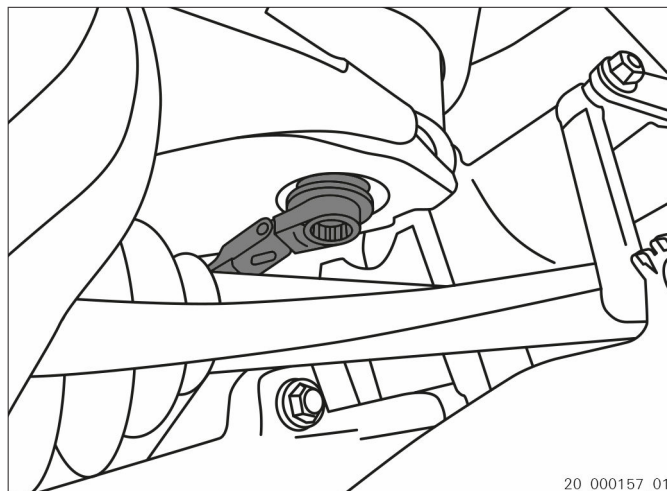


Fig. 6

7. Pull out air spring.

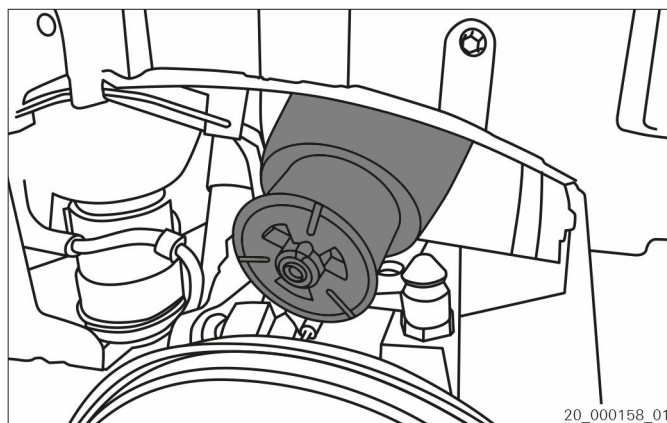


Fig. 7

## 1.2 Installing air spring, rear axle

Requirements:

- Supporting surfaces are clean.

### Observe marking on the part

- LH = Installation on the left side in driving direction
- RH = Installation on the right side in driving direction

### CAUTION

Risk of injury due to flying parts.  
Slight to moderate injury possible.

- ⇒ Wear protective goggles.
- ⇒ Wear hearing protection.
- ⇒ Wear protective gloves.



## Installing air spring

1. Insert air spring.

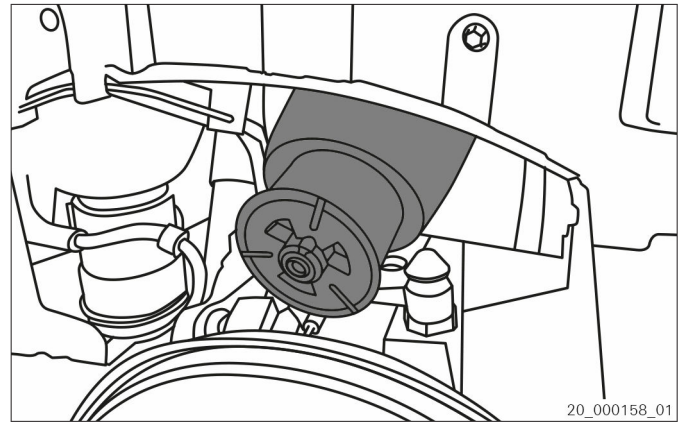


Fig. 8

2. Secure air springs with **new** retaining clips(1).

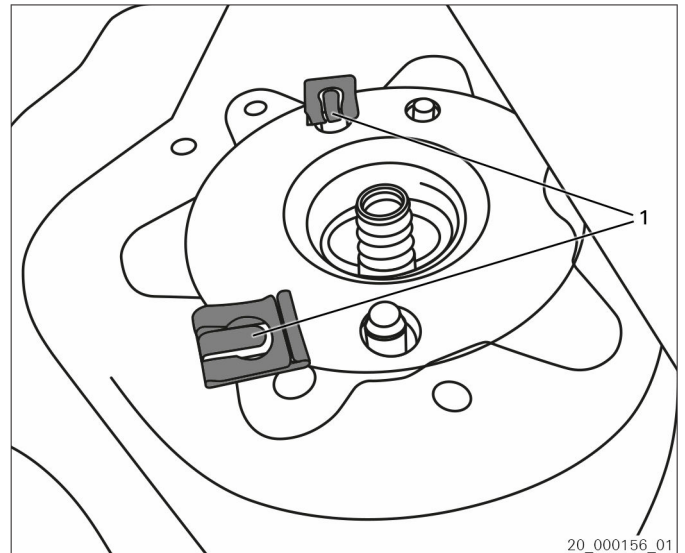


Fig. 9

1 Retaining clips

3. Align air spring lug with steering knuckle recess.



- Screw in bottom screw of damper strut and tighten it by applying the appropriate tightening torque. Observe the vehicle manufacturer specifications.

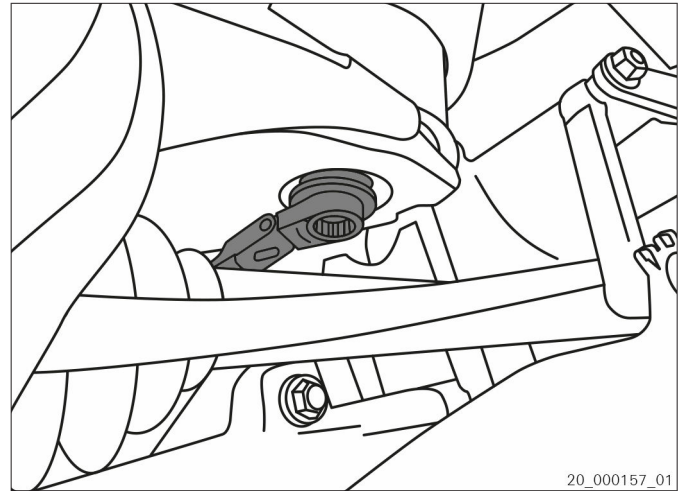


Fig. 10

## Connecting air line

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### **NOTICE**

**Material damage of air suspension possible.  
Pressure loss due to scratches or cuts on air line possible.**  
⇒ Check air line for damage before connecting it.  
⇒ Replace damaged air line.

### **NOTICE**

**Material damage possible on air suspension.**  
⇒ Do **not** lubricate sealing rings.

Check if sealing rings fit correctly.

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- Remove transport safety device (protection cap).



7. Install air line fitting (1) on upper side of air spring (2).

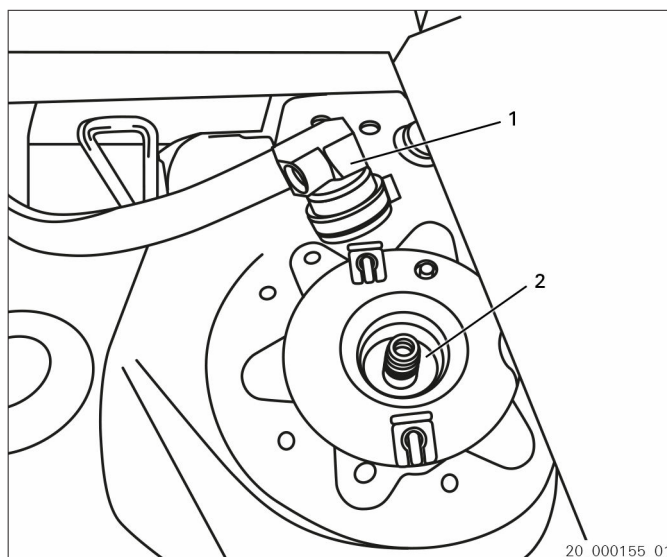



Fig. 11

- 1 Air line fitting
- 2 Air spring

8. Secure air line fitting with **new** safety clip.

 Chamfered edge of safety clip must point towards air spring.

9. Check secure fit of air line fitting.

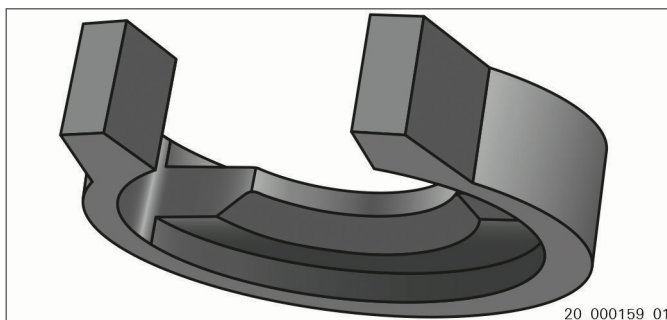


Fig. 12

## Filling air springs

10. **NOTICE**

**Material damage possible on air suspension.**

⇒ Only lower vehicle from lifting platform onto wheels with filled air springs.

Insert electrical fuse of the air suspension. Observe the vehicle manufacturer specifications.

→ Compressor starts up and fills the air suspension with compressed air.