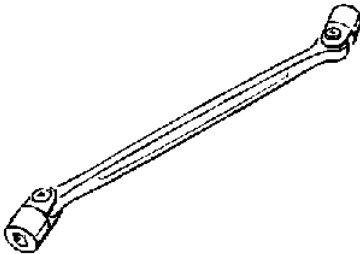
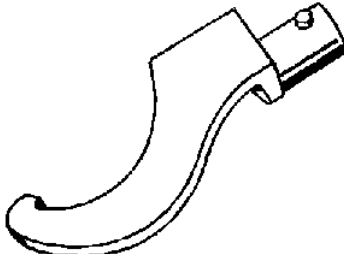

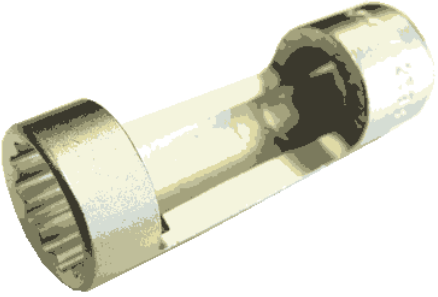


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## WM 408537 Disassembling and assembling front spring strut

### Tools

Designation	Type	Number	Description	
counter-hold tool	Special tool	9630		<p>40</p>  <p>9630 000 721 963 00</p>
hook wrench	Special tool	9647		<p>40, 42</p>  <p>9647 000 721 964 70</p>
spring clamp for spring struts	Commercially available tool	Nr.121		
socket-wrench insert	Commercially available tool	Nr.187		

### Information

## Notes about adjustment work on the spring struts

### NOTICE

#### Spring strut comes out of the damper tube

- PASM (damping force adjustment) does not function
- Risk of damage to electric lines

- Protect electric lines when removing and installing the spring strut.
- Do not lift/transport the spring strut/vibration damper at the electric lines.
- Do not damage electric lines when transporting, unpacking, storing or disassembling and assembling the spring strut.

The spring strut has a thread and a height-adjusting nut **-12-** for adjusting the ride-height of the vehicle. The height-adjusting nut **-12-** is prevented from turning by the lock nut **-11-**.

The thread also comes with an adjusting nut (grooved nut) **-13-** for installation (correct position of spring strut in the wheel carrier).

The height-adjusting nut **-12-** and the grooved nuts **-11 and 13-** are not available as spare parts (these are supplied with replacement dampers).

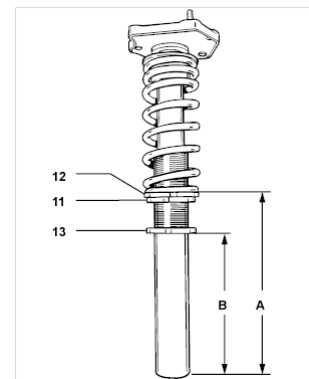
**11** - Lock nut (grooved nut)

**12** - Height-adjusting nut (grooved nut)

**13** - Adjusting nut (grooved nut)

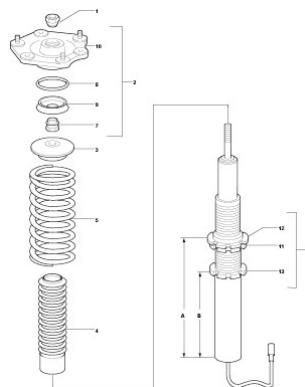
**A** - Pre-set dimension for production = 254 mm (plus/minus 1.0 mm). The dimension may be different for the prescribed vehicle height. If the damper is to be replaced, the actual dimension must be copied to the new damper.

**B** - Pre-set dimension for installation = 196 mm (plus/minus 1.0 mm)



*Adjustment dimensions on spring strut*

## Component and assembly overview



*Front spring strut, exploded view*

No.	Designation	Qty.	Removal	Installation
-1-	Hexagon nut	1	Pre-tension the coil	Use a new hexagon nut.

	M14 x 1.5		<p>spring with the spring clamp before loosening the hexagon nut (not generally required/depends on the installation pre-tension of the coil spring following adjustment).</p> <p>Loosen the hexagon nut using a <b>socket-wrench insert Nr.187</b>. Counter at the piston rod when loosening (and tightening) the nut. Use a <b>counter-hold tool 9630</b> or 7 mm Allen key to do this.</p>	Secure on the thread (to prevent it from loosening) with a drop of Loctite 270. Then tighten the hexagon nut immediately. Tightening torque: 80 Nm (59 ftlb.).
-2-	Spring strut/supporting mount assembly Stop plate	1	Remove complete assembly (consisting of Nos. 7/8/9/10).	The spring strut mounts for the right and left sides are identical parts.
-3-	Spring hanger	1		
-4-	Bellows	1		Replace if necessary.
-5-	Coil spring	1		<p>Only available as a set if replacement is required. Observe allocation according to the Spare Parts Catalogue.</p> <p><b>Installation position (coil spring with uniform winding/linear spring rate):</b> Technically, there is no prescribed installation position. For easy identification/differentiation, install the coil spring in such a way that the inscription (part number and spring rate) is legible.</p> <p><b>For your information:</b> On coil springs with tighter winding at the end, the tighter winding must be facing upwards (towards the spring strut mount).</p>
-6-	Vibration damper	1		<p>The vibration dampers for the right and left sides are identical parts.</p> <p>When replacing the vibration damper, set <b>adjustment dimension A</b> on the new part.</p>
-7-	Spacer sleeve	1		Fit in correct position.
-8-	Retainer spring	1		Fit on protective bellows (No. 9).
-9-	Protective bellows	1		Replace if necessary.
-10-	Spring strut mount	1		The spring strut mounts for the

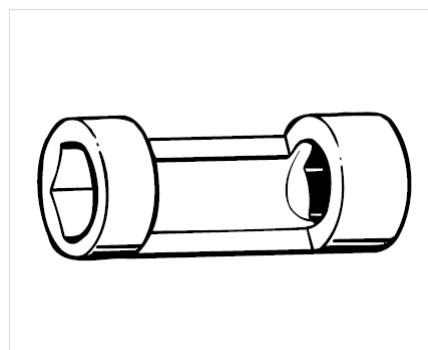
				right and left sides are identical parts. In the case of used spring strut mounts, the bearing shell can be re-greased with Autol Top 2000 (100 g tube/Part No. 000.043.205.34).
-11-	Lock nut (grooved nut)	1	Not available as a spare part.	Tightening torque: 50 Nm (37 ftlb.).
-12-	Height-adjusting nut/lower concave washer	1	Not available as a spare part.	<b>Dimension A</b> <sup>1)</sup> must be set by turning the height-adjusting nut as required.
-13-	Adjusting nut (grooved nut)	1	Not available as a spare part.	Before installing the spring strut, check <b>dimension B</b> and adjust it if necessary by turning the adjusting nut as required.  Required value for dimension B = 196 mm (plus/minus 1.0 mm). February 2007.

<sup>1)</sup> Pre-set dimension for production = 254 mm (plus/minus 1.0 mm). The dimension may be different for the prescribed vehicle height. If the damper is to be replaced, the actual dimension must be copied to the new damper.

### Disassembling front spring strut

- To prevent damage (deformation), clamp the spring strut in a suitable clamping block (tensioning device for McPherson spring struts). Alternatively, the spring clamp can also be held in a retaining device.
- Pre-tension the coil spring using a **spring clamp for spring struts Nr.121** until the piston rod is relieved (not generally required as this depends on the installation pretension on the coil spring). The appropriate forks must be inserted into the spring clamp.
- Use a **socket-wrench insert Nr.187** to loosen the lock nut (securing piston rod to spring strut mount).

Counter at the piston rod when loosening the nut. Tools required:  
**Brace 9630** or 7-mm Allen key.



Socket-wrench insert No. 187

- Remove all parts from the piston rod.

### Preliminary work and notes on assembly

- If the vibration damper is to be replaced, set the height-adjusting nut **-12-** to the same position as on the old vibration damper (copy the actual dimension **-A-** to the new vibration damper).

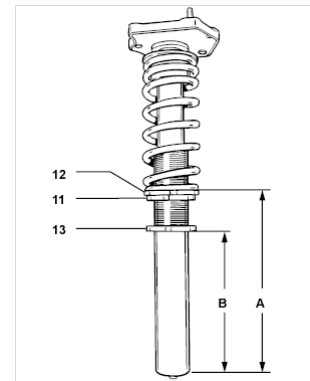
A special tool **hook wrench 9647** is required for this purpose.

Tightening torque for lock nut **-11-** = 50 Nm (37 ftlb.).

The special tool **hook wrench 9647** is required for changing the vehicle height (dimension A) and for setting dimension B.

The **hook wrench 9647** is used together with a torque wrench to tighten the lock nuts (grooved nuts) **-11-** on the spring strut. Tightening torque: 50 Nm (37 ftlb.).

The adjustment dimension **-B-** for installation (position of spring strut in wheel carrier) is 196 mm (plus/minus 1.0 mm). Determine the actual dimension **-B-** and set the required value **-B-** if necessary.



Adjustment dimensions on spring strut

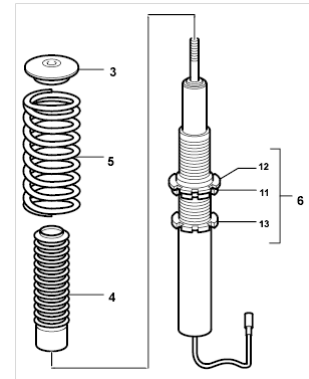
## Assembling front spring strut



### Information

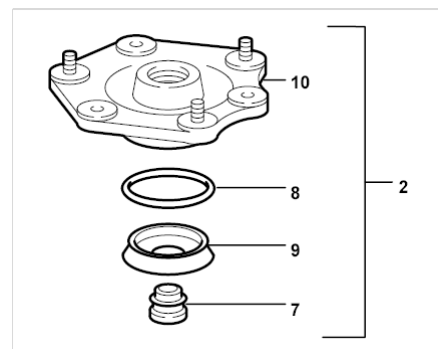
- When installing new parts, observe the allocation according to the Spare Parts Catalogue.
  - The coil springs are only available in pairs (as a set).
  - The spring strut mounts for the right and left sides are identical parts.
  - In the case of used spring strut mounts, the bearing shell can be re-greased with Autol Top 2000 (100 g tube/Part No. 000.043.205.34).
  - Replace hexagon nut for securing the piston rod to the spring strut mount. Secure nut on the thread (to prevent it from loosening) with a drop of Loctite 270.
1. Place coil spring **-5-** , bellows **-4-** and spring plate **-3-** on the vibration damper **-6-** .

**Installation position** of coil spring **-5-** (uniform winding/linear spring rate): Technically, there is no prescribed installation position. For easy identification/differentiation, install the coil spring in such a way that the inscription (part number and spring rate) is legible.



*Completing spring strut*

2. Slide the spring strut/supporting mount assembly **-2-** onto the piston rod.

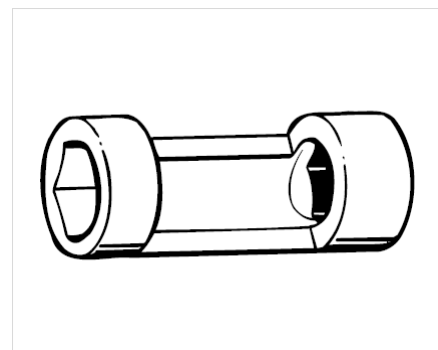


*Spring strut/supporting mount assembly*

3. Secure the thread on the piston rod or on the new hexagon nut with a drop of Loctite 270 (to prevent loosening; on front axle only).  
Fit the hexagon nut and tighten to 80 Nm (59 ftlb.) immediately after coating it with Loctite 270.

Use a **socket-wrench insert Nr.187** (a/f 22 mm) that is open on one side to tighten the hexagon nut on the spring strut mount.

When tightening the hexagon nut, counter at the piston rod with a **brace 9630** or a 7-mm Allen key.



*Socket-wrench insert No. 187*

997810, 997811, 997840, 997841, 997850, 997851, 997860, 997861, 997880, 997881, 997150, 997151, 997350, 997351, 997420, 997421, 997450, 997451, 997480, 997481, 997630, 997631, 997650, 997651, 997670, 997671, 997680, 997681, 997110, 997111, 997120, 997121, 997140, 997141, 997160, 997161, 997170, 997310, 997311, 997320, 997321, 997360, 997361, 997370, 997410, 997411, 997430, 997431, 997460, 997461, 997470, 997471, 997510, 997511, 997520, 997521, 997560, 997561, 997610, 997611, 997620, 997621, 997660, 997661, 997720, 997721

Model year as of 2007

C00, C02, C05, C06, C07, C08, C09, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C22, C23, C24, C25, C26, C27, C28, C32, C33, C34, C35, C36, C37, C38, C39, C41, C45, C45, C46, C96, C97, C98, C99