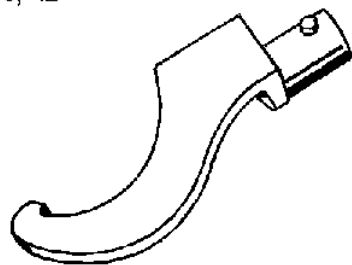




The present document was valid at the time of print. A later version may be available online

WM 427137 Disassembling and assembling rear spring strut - as of 2010 model

Tools

Designation	Type	Number	Description	
hook wrench	Special tool	9647		<p>40, 42</p>  <p>9647 000 721 964 70</p>
spring clamp for spring struts	Commercially available tool			
socket-wrench insert	Commercially available tool	Nr.18		

Information

Notes about adjustment work on the spring struts

NOTICE

Spring strut comes out of the damper tube

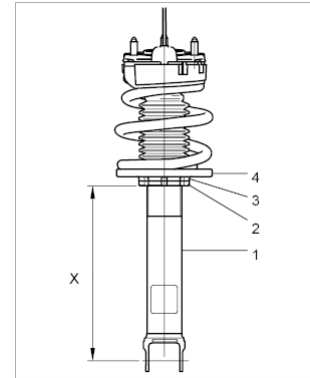
- PASM (damping force adjustment) does not function
- Risk of damage to electric lines

- 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 **-3-** for adjusting the height of the vehicle. The height-adjusting nut **-3-** is prevented from turning by the lock nut **-2-**.

The height-adjusting nut **-3-** and the grooved nut **-2-** are not available as spare parts (these are supplied with replacement dampers).

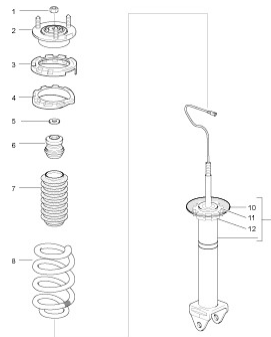
- 2** - Lock nut (grooved nut)
- 3** - Height-adjusting nut/lower concave washer (grooved nut)
- 4** - Rubber support
- X** - Pre-set dimension for production: 268.5 mm (plus/minus 1 mm). The dimension may be different for the prescribed vehicle height. If the vibration damper is to be replaced, the existing dimension must be set on the new vibration damper.



Adjustment dimension on spring strut

Component and assembly overview

PASM chassis is installed as standard.



Rear spring strut - as of 2010 model

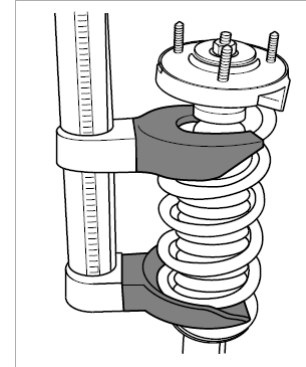
Number	Designation	Qty.	Removal	Installation
-1-	Lock nut M12 x 1	1	Pre-tension the coil spring using the spring clamp. Then loosen the lock nut. Use a socket-wrench insert, e.g. socket-wrench insert Nr.18 to loosen the lock nut. Counter with a suitable lever at two (of the three M8) bolts on the supporting mount. Screw hexagon nuts onto the bolts to avoid damaging the thread.	Use new lock nuts. Position the supporting mount and tighten the hexagon nut to 32 Nm (24 ftlb.). Counter at two (of the three M8) bolts on the supporting mount using a suitable lever while doing this.
-2-	Spring-strut mount	1		Observe allocation as per Spare Parts Catalogue (PET). During fitting, place the lug

				in the groove on the piston rod (twist lock of piston rod opposite the supporting mount).
-3-	Compensating plate (intermediate part) Thickness: 0.5 mm/Colour: natural or Thickness: 4.0 mm/Colour: black	1		Observe allocation, depending on coil spring tolerance range (see assembly instructions). Assemble at the correct position with spring plate -4- .
-4-	Spring plate	1		Replace if necessary.
-5-	Washer	1		
-6-	Additional spring	1		
-7-	Bellows	1		Replace if necessary. Before installation, assemble with additional spring -6- .
-8-	Coil spring (barrel spring with progressive characteristic)	1		Observe allocation as per Spare Parts Catalogue (PET). Replace both coil springs (available only in pairs). Use the required spring plate -3- (thickness of 0.5 or 4.0 mm), depending on coil spring tolerance range (load group).
-9-	Vibration damper	1		The vibration dampers for the right and left side are identical. The item number is shown on the damper tube. No. 10/11/12 is supplied as a spare part.
-10-	Rubber support	1		Replace if necessary.
-11-	Concave washer/height-adjusting nut. Not available as a spare part.	1	Do not remove (not available as a spare part). When replacing the vibration damper -9- , set the existing adjustment dimension X on the new part. Explained further under Preliminary work and in the assembly instructions.	
-12-	Lock nut. Not available as a spare part.	1	Do not remove (not available as a spare part).	Tightening torque: 100 Nm (74 ftlb.).

Disassembling and assembling rear spring strut

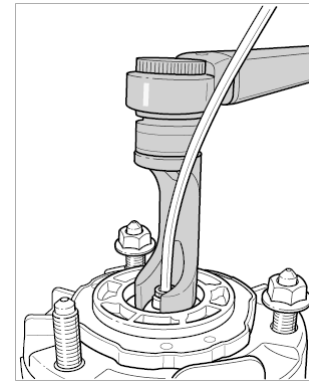
Disassembling rear spring strut

1. Pre-tension coil spring using **spring clamp for spring struts Nr.121** until the piston rod is relieved. The appropriate forks must be inserted into the spring clamp.



Tensioning spring (example)

2. Use a suitable socket-wrench insert, e.g. **socket-wrench insert for ATF temp. switch assembly Nr.18** to loosen the connection between the piston rod and spring-strut mount.
When loosening the connection, counter at the bolts on the spring-strut mount (screw hexagon nuts onto the bolts and use a suitable lever).



Spring-strut mount

3. Remove all parts from the piston rod.

Preliminary work and notes on assembly

- If the vibration damper is to be replaced, set the concave washer/height-adjusting nut **-3-** to the same position as on the old vibration damper (copy the actual dimension **-X-** to the new vibration damper).

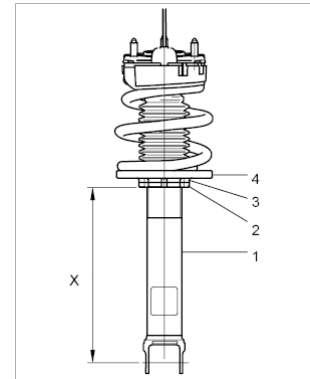
A special tool **hook wrench 9647** is required for this purpose.

The special tool **hook wrench 9647** is required for changing the vehicle height (dimension **-X-**).

The **hook wrench 9647** is used together with a torque wrench to tighten the lock nuts (grooved nuts) **-2-** (tightening torque: 100 Nm (74 ftlb.)).

- 3** - Height-adjusting nut/lower concave washer (grooved nut)
- 2** - Lock nut (grooved nut)/tightening torque: 100 Nm (74 ftlb.)
- X** - Pre-set dimension for production: 268.5 mm (plus/minus 1 mm).

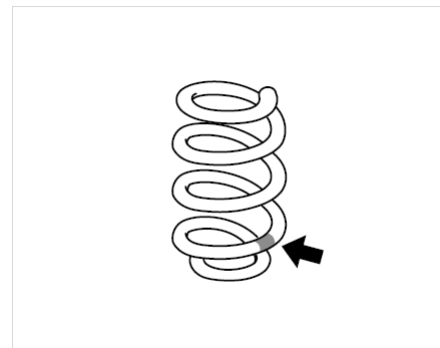
The dimension may be different for the prescribed vehicle height.
If the vibration damper is to be replaced, the actual dimension must be set on the new vibration damper.



Adjustment dimension on spring strut

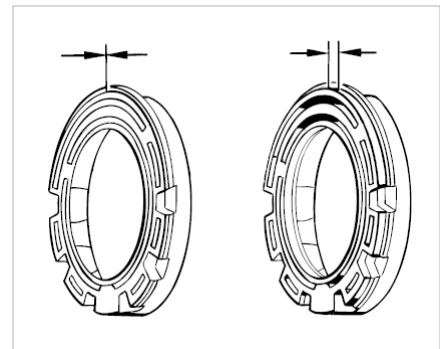
Coil spring/compensating plate allocation

Identification marking **-arrow-** comprising one coloured line indicates the coil spring tolerance range (load group) and determines the thickness of the spring plate.
The coloured line **-arrow-** is either yellow or blue.



Colour marking on coil spring

The compensating plate comes in two thicknesses **-arrows-** .



0.5 mm and 4.0 mm compensating plate

Coil spring colour coding	Compensating plate
One yellow line on the coil spring -arrow-	Compensating plate thickness: 0.5 mm (colour: natural)
One blue line on the coil spring -arrow-	Compensating plate thickness: 4.0 mm (colour: black)

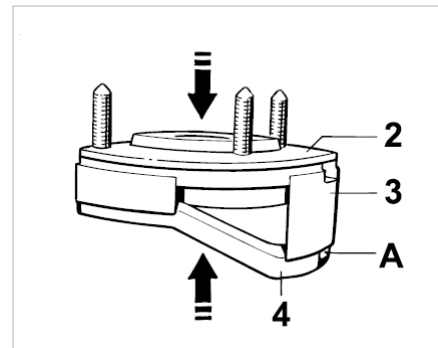
Assembling rear spring strut



Information

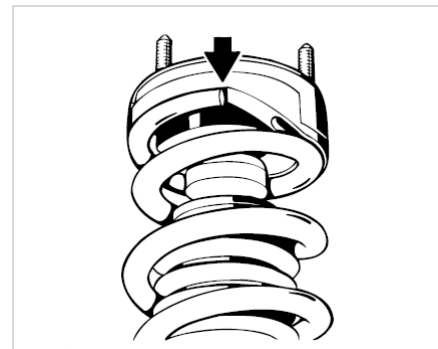
- When installing new parts, observe the allocation as per Spare Parts Catalogue.
- Observe allocation of compensating plate according to the coil spring tolerance range.
- Coil springs are only available in pairs (as a set).

1. Clamp the spring strut at a suitable place in the vice (use jaw liners).
2. When replacing the vibration damper, set the spring preload dimension (height adjustment dimension) from the old damper on the new damper.
3. Place components on the piston rod and fit them on the spring strut.
 - 3.1. Place pre-tensioned coil spring at the correct position on the vibration damper.
 - 3.2. Slide the bellows/additional spring assembly onto the piston rod.
 - 3.3. Fit washer.
 - 3.4. Fit the spring-strut mount **-2-** (supporting mount **-2-** , compensating part **-3-** and spring plate **-4-** assembled at the correct position) on the piston rod. Place the lug on the spring-strut mount in the groove on the piston rod (twist lock of piston rod opposite the supporting mount).



Supporting mount assembly

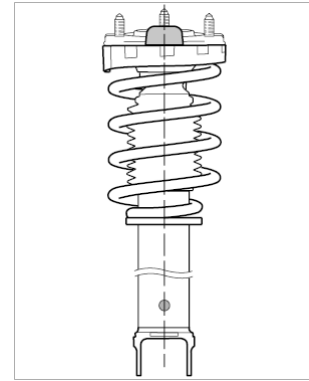
4. Fit new lock nut on the piston rod. Place the end of the coil spring on the concave washer stop **-arrow-** .



Coil spring

5. Align (position) the spring-strut mount with respect to the vibration

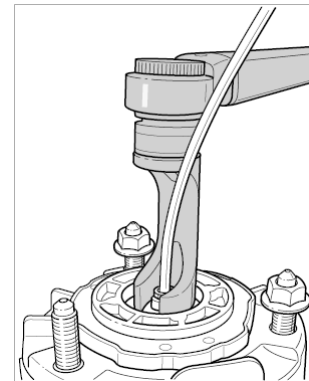
damper. **-Lug-** of spring-strut mount must line up with the middle fork of the lower vibration damper.



Positioning spring-strut mount

6. Tighten lock nut to 32 Nm (24 ftlb.). Counter at the bolts (M8) on the spring-strut mount at the same time.

There is no need to counter at the piston rod because there is a strong grip between the spring-strut mount and piston rod.



Spring-strut mount

997810, 997811, 997850, 997851

Model year as of 2010

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