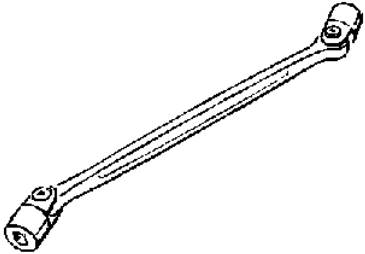
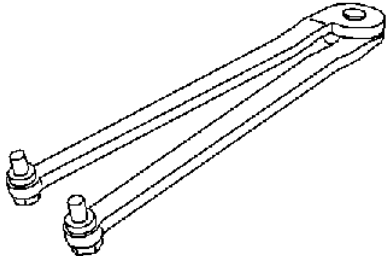
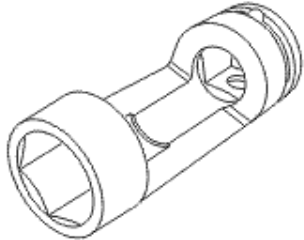



The present document was valid at the time of print. A later version may be available online

WM 408537 Disassembling and assembling front spring strut - with and without PASM

Tools

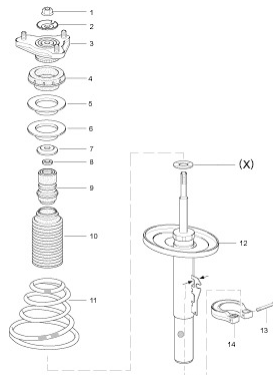
Designation	Type	Number	Description	
counter-hold tool	Special tool	9630		<p>40</p>  <p>9630 000 721 963 00</p>
retaining tool	Special tool			<p>40, 42</p>  <p>9630/1 000 721 963 01</p>
socket-wrench insert	Special tool	9630/2		<p>40, 42</p>  <p>9630/2 000 721 963 02</p>
spring clamp for spring struts	Commercially available tool	Nr.121		

Information

Component and assembly overview (with and without PASM)

There are three different types of running gear: standard running gear, sport-type running gear (Performance) and PASM chassis.

The 911 Carrera S comes with the PASM chassis as standard.



Front spring strut, exploded view

No.	Designation	Qty.	Removal	Installation
-1-	Lock nut M14 x 1.5	1	Tension the coil springs using a spring clamp. Then loosen the lock nut using the socket-wrench insert 9630/2 . Counter when loosening at the piston rod or stop plate -2- . To do this for PASM spring struts, use retaining tool 9630/1 and for conventional spring struts counter-hold tool 9630 .	Use a new fastening nut. Tighten to 80 Nm (59 ftlb.). On PASM spring struts, first align the stop plate -2- with the supporting mount -3- (offset 45° from direction of travel marking).
-2-	Stop plate (2 versions). PASM version: With two grooves (two cut-outs), for counteracting when loosening and tightening lock nut -1- .	1		Fit dome upwards, towards lock nut. On PASM spring struts, align (position) the stop plate with the supporting mount.
-3-	Spring strut mount	1		
-4-	Bearing with housing	1		Make sure it is seated properly in the spring strut mount
-5-	Support ring	1		

-6-	Spring plate (compensating plate)	1		Observe allocation according to the coil spring tolerance range.
-7-	Stop plate	1		Fit dome downwards.
-8-	Cone washer	1		Mount in correct position.
-9-	Additional spring (rubber stop)	1		Observe allocation as per Spare Parts Catalogue. Sport-type running gear (Performance): approx. 52 mm long. Standard and PASM running gear: approx. 80 mm long.
-10-	Bellows	1		Replace if necessary. Fit to additional spring -9- .
-11-	Coil spring	1		Observe allocation as per Spare Parts Catalogue. Replace coil springs only in pairs.
-X-	Washer (only present on Performance running gear)	1	Remove from damper tube (not always present).	Only install on sport suspension (Performance) (conventional spring struts with -20 mm). Installation position: Ventilation grooves must point to the additional spring -9- .
-12-	Vibration damper	1		Observe allocation as per Spare Parts Catalogue. The item number is shown on the damper tube.
-13-	Mount for clip (vibration balancer)	1		
-14-	Clip (vibration balancer). Not always present.	1		

Disassembling and assembling spring strut

Disassembling spring strut

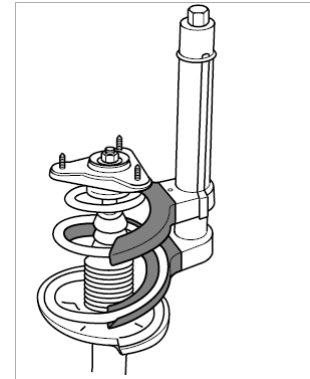


Preloaded or pressurised components

- Risk of squashing or bruising

- Do not reach into the danger area.
- Relieve the tension on components before starting work.

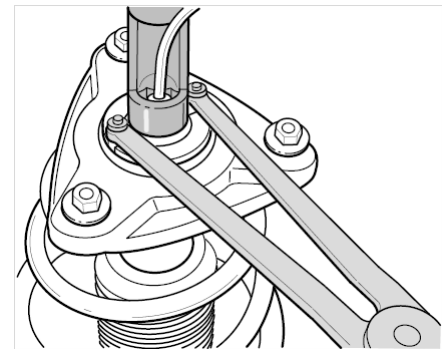
- Secure components to prevent them from loosening suddenly.
1. To prevent damage (deformation), clamp the spring strut in a suitable clamping block (tensioning device for MacPherson spring struts). Alternatively, the spring clamp can also be held in a retaining device.
 2. Pre-tension the coil spring 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 front spring

3. Use a **socket-wrench insert 9630/2** to loosen the lock nut (securing piston rod to spring strut mount).

When loosening the nut, counter it at the piston rod (for conventional spring struts) or at the two grooves (cut-outs) of the stop plate (for PASM spring struts). Tools required: **retaining tool 9630/1** and for conventional spring struts **arm bracket 9630**.

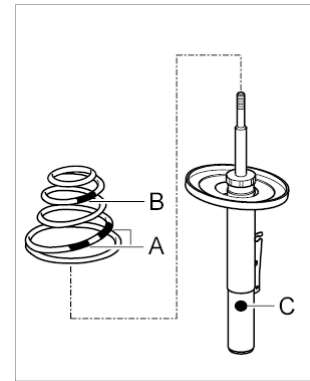


Spring strut supporting mount (PASM version)

4. Remove all parts from the piston rod.

Coil spring/compensating plate allocation

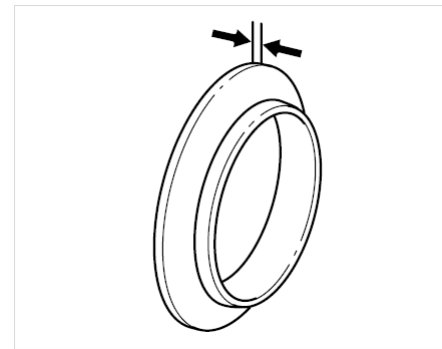
Identification marking **-A-** comprising two coloured lines is for the spring constant and spring length (depending on vehicle version and equipment).



Colour identification of spring/damper

Identification marking **-B-** comprising one coloured line (white or green) is for the coil spring tolerance range (load group) and determines the thickness of the spring plate (compensating plate).

The spring plate (compensating plate) comes in two thicknesses **-arrows-** .



Spring plate (compensating plate)

Colour identification A of coil spring	Vehicle version and equipment
Example violet/red	Standard running gear C2 RoW/USA - Coupe with manual transmission
Example red/yellow	PASM running gear C2/C2S RoW/USA - Cabriolet with manual transmission and Tiptronic

Colour identification B of coil spring	Spring plate (compensating plate) ¹⁾
One white line (colour identification B)	Thickness 3.5 mm ²⁾
One green line (colour identification B)	Thickness 6.5 mm ²⁾

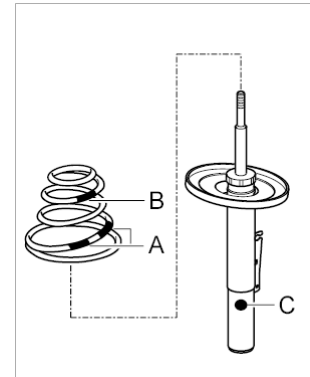
¹⁾ If you are installing new coil springs, then order the 3.5 mm and 6.5 mm spring plates (compensating plate) at the same time. As coil springs of load group 1 or 2 will be supplied, the correct spring plates (compensating plates) will then be present for installation.

²⁾ In production there have been deviations from the general allocation of spring plates (thickness of compensating plate), in some cases different spring plates (compensating plates) have been installed. This was necessary due to the tolerances of the coil springs. This means that in the event of replacement: If the coil spring is to be re-used, then install the spring plate (compensating plate) with the same thickness. If the coil springs are to be replaced (only replace in pairs) then the allocation given above applies.

Allocation of vibration dampers

See allocation in Spare Parts Catalogue.

The marking, item number and colour dot coding **-C-** are shown on the damper tube.



Colour marking of spring/damper

Assembling spring strut



WARNING

Preloaded or pressurised components

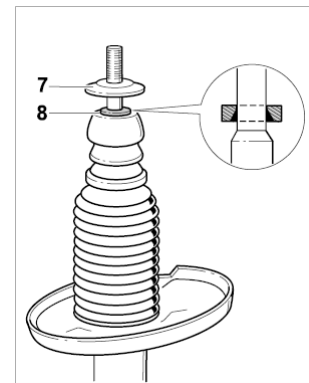
- Risk of squashing or bruising

- Do not reach into the danger area.
- Relieve the tension on components before starting work.
- Secure components to prevent them from loosening suddenly.



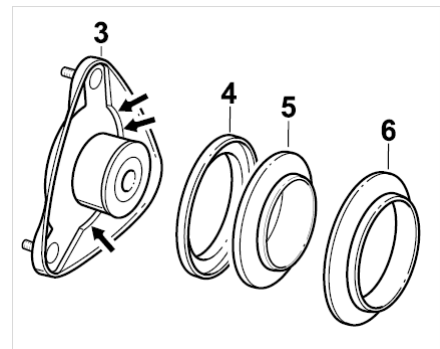
Information

- When installing new components, always check that they are assigned correctly.
 - Coil springs are only available in pairs.
1. Clamp the spring strut in a suitable clamping block (tensioning device for MacPherson spring struts). Alternatively, the spring clamp can also be held in a retaining device.
 2. Slide the bellows/additional spring assembly onto the piston rod.
 3. Mount cone washer **-8-** and stop plate **-7-** in correct position.



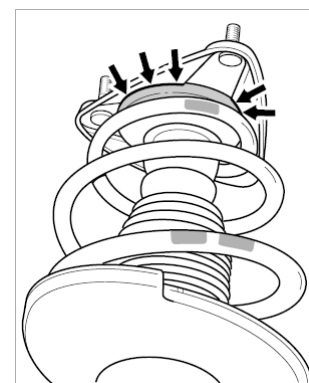
Cone washer

4. Push the pretensioned coil spring onto the vibration damper so that the end of the coil spring rests against the stop of the spring plate.
5. Completely assemble the spring plate (compensating plate) -6- , support ring -5- and bearing with its housing -4- with the spring strut supporting mount -3- . Then slide the assembly onto the piston rod.



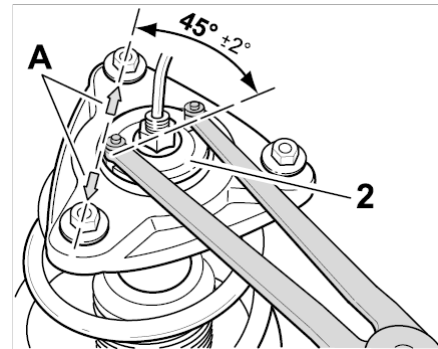
Supporting mount assembly

6. Place spring strut supporting mount assembly onto the piston rod so that the end of the coil spring is located inside the spring plate.
7. Fit stop plate in the correct position (domed side upwards) and screw a new lock nut onto the piston rod. Important: For PASM spring struts, place the lug of the stop plate (in area of spring strut mount) in the groove of the piston rod (twist lock of piston rod opposite the supporting mount). Make sure that the plastic part of the bearing sits correctly in the recess of the supporting mount **-arrows-** .



Supporting mount (correct seat)

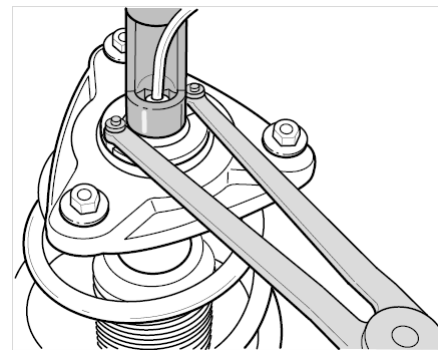
8. On PASM spring struts, before tightening the lock nut, align the stop plate -2- offset 45° from direction of travel marking **-arrows A-** of the supporting mount.



Stop plate position (PASM only)

The value: $45^\circ + - 2^\circ$ is necessary so that the two grooves of the stop plate (cut-outs for counterung) are positioned over or between the recesses (pockets in the rubber part) which lie below.

9. Tighten lock nut to the specified tightening torque. For PASM spring struts, counter at the stop plate using **retaining tool 9630/1**. For conventional spring struts, counter at the hexagon socket of the piston rod using **special tool 9630**.



Spring strut mount

10. If present, push on clip (vibration balancer) at damper tube of vibration damper. Final assembly (tightening) only on completion of wheel carrier.

997110, 997111, 997120, 997121, 997310, 997311, 997320, 997321, 997410, 997411, 997420, 997421, 997430, 997431, 997510, 997511, 997520, 997521, 997610, 997611, 997620, 997621, 997630, 997631

Model year as of 2005

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