


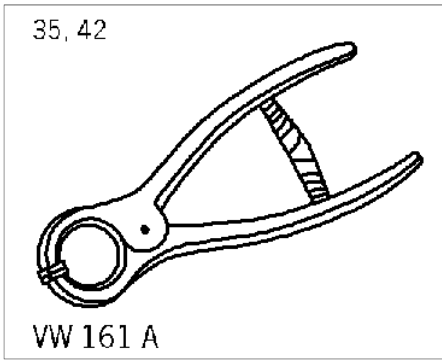


The present document was valid at the time of print. A later version may be available online

WM 427137 Disassembling and assembling rear spring strut - with and without PASM

Tools

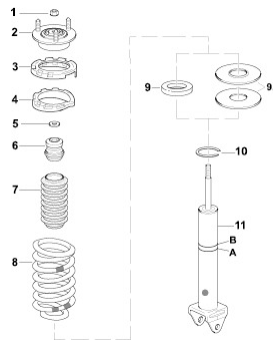
Designation	Type	Number	Description	
spring clamp for spring struts	Commercially available tool	Nr.121		
socket wrench insert for ATF temp. switch assembly	Commercially available tool			
socket wrench insert for ATF temp. switch assembly	Commercially available tool	NR.18		
snap-ring pliers	VW tool	VW 161 A		35, 42  VW 161 A

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.



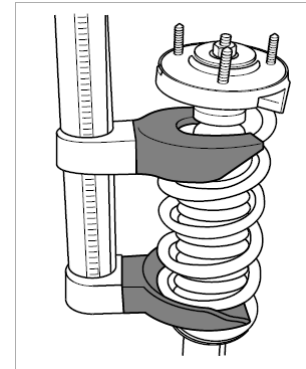
Exploded view of rear spring strut

No.	Designation	Qty.	Removal	Fitting
-1-	Lock nut M12 x 1	1	Pre-tension coil spring using a spring clamp. Then loosen the lock nut. To loosen the lock nut on vehicles with PASM, use a socket wrench insert, e.g. socket wrench insert for ATF temp. switch assembly Nr.18 . Counter with a suitable lever at two bolts (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 -2- and tighten the hexagon nuts to 32 Nm (24 ftlb.). Counter with a suitable lever at two bolts (of the three M8 bolts) on the supporting mount. The tightening torque of 32 Nm (24 ftlb.) applies – even contrary to previously published specifications - for all 997 rear-axle spring struts (conventional and with PASM).
-2-	Spring strut mount	1		Observe allocation as per Spare Parts Catalogue. 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)	1		Observe allocation, depending on coil spring tolerance range (see assembly instructions). Join to spring plate at the correct position -4- .

-4-	Spring plate	1		Replace if necessary.
-5-	Washer	1		
-6-	Additional spring	1		Observe allocation as per Spare Parts Catalogue. PASM and sport-type running gear: approx. 53 mm long. Standard running gear: approx. 67 mm long.
-7-	Bellows	1		Replace if necessary. Before installation, assemble with the additional spring -6- .
-8-	Coil spring	1		Observe allocation as per Spare Parts Catalogue. Always replace both coil springs at the same time (coil springs are only available in pairs).
-9- or -9.1-	Concave washer Variant -9- = 78 mm diameter or Variant -9.1- = 134 mm diameter (consisting of concave washer and rubber support)	1		Fit groove downwards facing snap ring. Ensure perfect fit on snap ring -10- . Observe allocation. Variant -9- for standard running gear and PASM chassis. Variant -9.1- for sport-type running gear (Performance).
-10-	Snap ring	1	Use snap-ring pliers VW 161a for removal and installation.	Replace. Fit in the specified groove using snap-ring pliers VW 161a -A or B- (observe table during assembly). Make sure it fits perfectly in the groove!
-11-	Vibration damper	1		Observe allocation as per Spare Parts Catalogue. The item number is shown on the damper tube.

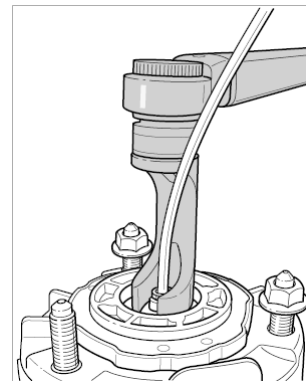
Disassembling rear spring strut

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 rear spring

2. To loosen the connection between piston rod and spring-strut mount, counter at the bolts on the spring-strut mount (screw hexagon nuts onto the bolts and use a suitable lever).



Spring strut mount

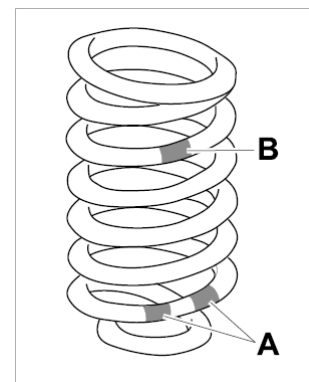
On PASM spring struts, use a suitable socket wrench insert, e.g. **socket wrench insert for ATF temp. switch assembly Nr.18**.

3. Remove all parts from the piston rod.

Coil spring/compensating plate allocation

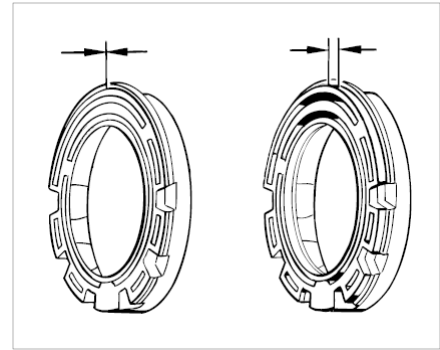
Identification marking **-A-** comprising two different coloured lines (e.g. one red and one white) indicates the spring constant and spring length (depending on the vehicle version and equipment).

Identification marking **-B-** comprising one coloured line indicates the coil spring tolerance group (load group) and determines the thickness of the compensating plate. The coloured line **-B-** is white or green and (depending on the marking) yellow or blue.



Colour marking on coil spring

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



Compensating plate

Coil spring colour coding -B-	Compensating plate
One white line or one yellow line -B-	Thickness: 0.5 mm Colour: natural
One green line or one blue line -B-	Thickness: 4.0 mm Colour: black

Rear vibration damper allocation

See allocation in Spare Parts Catalogue.

The item number and colour dot coding is shown on the damper tube.

Assembling spring strut

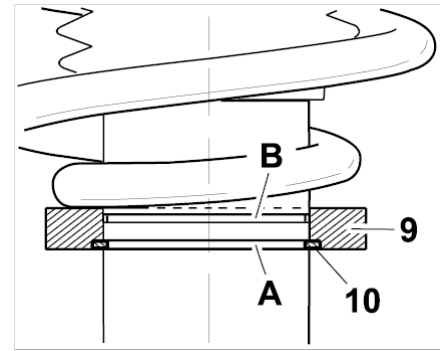


Information

- When installing new components, always check that they are assigned correctly.
- Coil springs are only available in pairs.

1. Clamp the spring strut at a suitable place in the vice (use jaw liners).
2. When replacing the vibration damper, fit a new snap ring -10- - using **snap-ring pliers VW 161 A** - in the relevant groove -A or B- (see allocation in next table).

Fit bottom concave washer -9- with the groove downwards facing the snap ring -10- . Ensure that the snap ring -10- and concave washer -9- are seated correctly.



Snap ring position

Snap ring position: PASM chassis (height -10 mm unlike series C2/C4)

Vehicle version and equipment	Equipment (transmission)	Snap ring in position
C2/C2S/C4/C4S Coupe Rest of the World / USA and Targa Rest of the World / USA	Manual transmission	Groove A
	Tiptronic	Groove B
C2/C2S/C4/C4S Cabriolet Rest of the World / USA	Manual transmission	Groove B
	Tiptronic	Groove A
911 Turbo Coupe Rest of the World / USA	Manual transmission and Tiptronic	Groove A
911 Turbo Cabriolet Rest of the World / USA	Manual transmission and Tiptronic	Groove B

Snap ring position: standard chassis (series C2 / C4 / C4 Targa)

Vehicle version	Equipment (transmission)	Snap ring in position
C2/C4 Coupe Rest of the World / USA and Targa Rest of the World / USA	Manual transmission	Groove A
	Tiptronic	Groove B
C2 Cabriolet Rest of the World	Manual transmission	Groove B
	Tiptronic	Groove A
C2 Cabriolet USA	Manual transmission and Tiptronic	Groove A
C4 Cabriolet Rest of the World / USA	Manual transmission	Groove B
	Tiptronic	Groove A

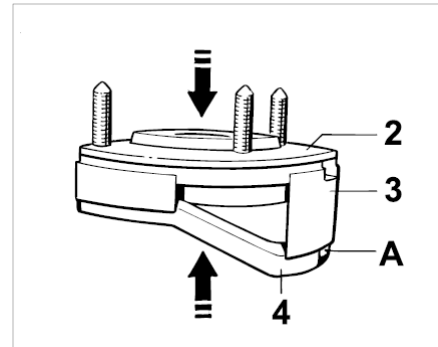
Snap ring position: performance chassis (l 030 / height -20 mm unlike series C2/C4)

Vehicle version	Equipment (transmission)	Snap ring in position
C2/C2S/C4/C4S Coupe Rest of the World	Manual transmission	Groove A

3. Place pre-tensioned coil spring (with the tighter end of the spring) on the vibration damper.
4. Slide the bellows/additional spring assembly onto the piston rod.

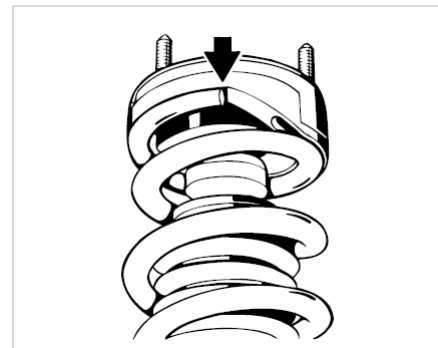
5. Fit washer.
6. Position spring strut mount **-2-** onto the piston rod (with supporting mount **-2-**, compensating part **-3-** and spring support **-4-** assembly in correct position).

Place the lug on the spring strut mount in the groove of the piston rod (twist lock of piston rod opposite the supporting mount).



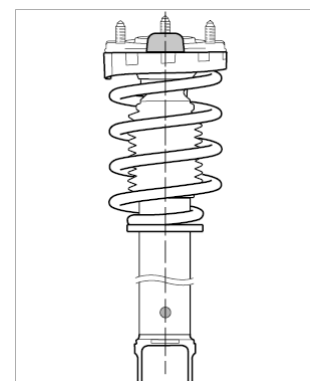
Supporting mount assembly

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



Coil spring

8. Align the spring strut mount with the vibration damper. **-cast-on section-** of spring strut mount must line up with the middle fork of the lower vibration damper.



Positioning spring strut mount

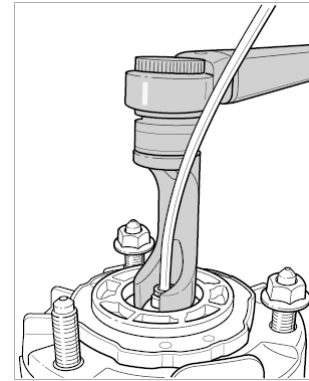
9. Tighten lock nut to 32 Nm (24 ftlb.). Counter at the bolts (M8) on the spring strut mount at the same time.

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

On PASM spring struts, use a suitable socket wrench insert, e.g. **socket wrench insert for ATF temp. switch assembly NR.18**.

Tightening torque for all 997 rear-axle spring struts: 32 Nm (24 ftlb.).

The tightening torque of 32 Nm (24 ftlb.) applies - even contrary to previously published specifications - for all 997 rear-axle spring struts (conventional and with PASM)!



Spring strut mount

997110, 997111, 997120, 997121, 997140, 997141, 997310, 997311, 997320, 997321, 997410, 997411, 997420, 997421, 997430, 997431, 997450, 997451, 997510, 997511, 997520, 997521, 997610, 997611, 997620, 997621, 997630, 997631, 997650, 997651, 997720, 997721

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