Manthey Chassis GT3 992.2

Vehicle Type: **992.2 GT3**

Model Year: **As of 2025**

Information: **Retrofitting**

Information

Please pass all this information on to the customer.

In addition, provide the customer with the Race Circuit brochure included with the scope of parts.

Parts Info:

99204485815	1 x	992-II GT3 Manthey KW no Lift
or		
99204485810	1 x	992-II GT3 Manthey KW with Lift
PAF.108.749	8 x	⇒ Hexagon flange bolt, M8 x 42, for upper axle guide
N 102.723.02	2 x	⇒ Hexagon collar nut, M10, for connecting rod
N 107.847.02	2 x	⇒ Hexagon flange bolt, M12 x 1.5 x 85, for lower axle guide
PAF.003.923	12 x	⇒ Hexagon nut, M8, for upper strut bearing
WHT.004.985	2 x	⇒ Hexagon shoulder nut, M14 x 1.5, for front shock absorber piston rod
PAF.104.513	2 x	⇒ Cheese head bolt with internal multiple-tooth head, M12 x 1.5 x 55
PAF.912.572	6 x	⇒ Hexagon flange bolt M8 x 22
PAF.908.088	2 x	⇒ Hexagon flange bolt, M12 x 1.5

Suspension alignment: Intermediate plates may be required for adjusting the camber values on the front axle. Order the required intermediate plates accordingly:

9F1.401.443.H	2 x	⇒ Intermediate plate, 2.0 mm / 0.79 in

Work Procedure:

Information

- Some of the repair illustrations show only one side of the vehicle or a similar component.
- Naturally, some steps also have to be performed on the opposite side of the vehicle as well.

WARNING

Preloaded or pressurised components

- **Risk of squashing or bruising**

⇒ **Do not reach into the danger area.**

⇒ **Relieve tension on components before starting work.**

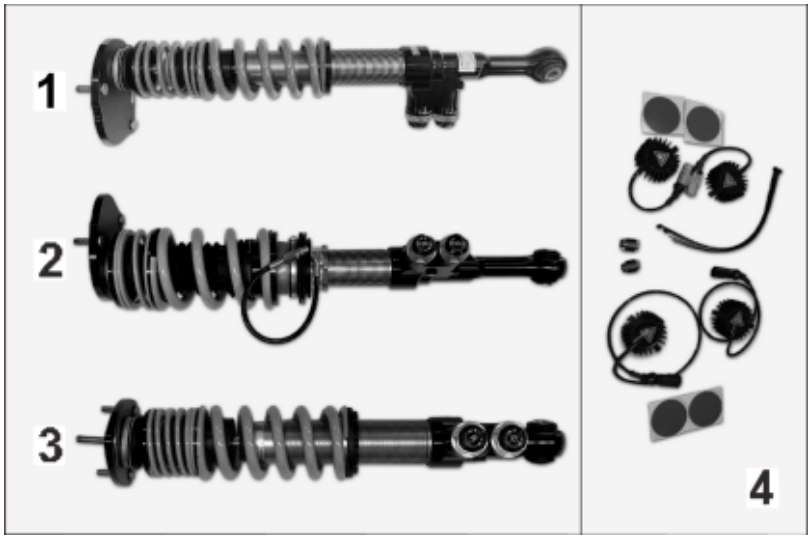
⇒ **Secure components to prevent them from loosening suddenly.**

1 Chassis assembly

Leave all four wheels removed as described in the Chassis section.

Information

Do not press the piston rod into an upside-down position (overhead damper) – this can lead to a permanent gas lock in the workspace and thus to a malfunction of the damper.



Chassis overview

1. – Front axle spring strut without lift
2. – Front axle spring strut with lift
3. – Rear-axle spring strut
4. – PASM deactivation kit

1.1 Remove all four wheels. ⇒*Workshop Manual '440519 Removing and installing wheel with central bolt'*

1.2 Removing front spring strut. ⇒*Workshop Manual '408519 Removing and installing front spring strut'*

1.3 Disassembling front spring strut

1.3.1 Disassembling spring strut. ⇒*Workshop Manual '408537 Disassembling and assembling front spring strut'*

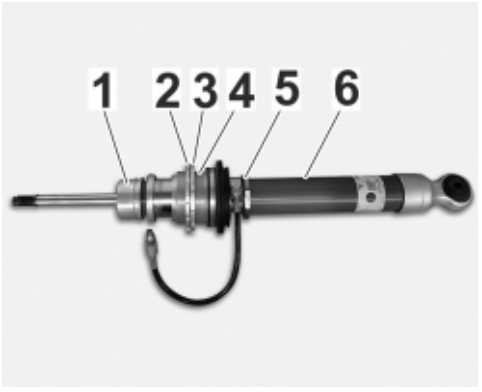
1.3.2 Remove front axle lift.

1.3.3 Remove height-adjusting nut ⇒*5* **-2-** and lock nut ⇒*5* **-3-**.

1.3.4 Screw the front axle lift ⇒*5* **-4-** up until the dust boot detaches ⇒*5* **-1-** and remove dust boot ⇒*5* **-1-**.

1.3.5 Remove front axle lift ⇒*5* **-4-** and lock nut ⇒*5* **-5-** from the spring strut ⇒*5* **-6-** (use open-ended spanner 700 17 171 and open-ended spanner 700 17 184).

1 – Dust boot
2 – Height-adjusting nut
3 – Lock nut
4 – Front axle lift system
5 – Lock nut
6 – Spring strut



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1.4 Assembling new front spring strut **with** front axle lift

1.4.1 Mount lock nut ⇒*6* **-5-** and lift system ⇒*6* **-4-** on the spring strut ⇒*6* **-6-**.
Do **not** tighten to the specified torque yet. Height adjustment dimension X = 103 mm / 4.06 in⇒*Adjustment dimensions on spring strut* **-1-**.

1.4.2 Install plastic cap ⇒*6* **-13-** on the shock absorber housing (use impact sleeve 700 17 169 and a plastic hammer).

1.4.3 Screw-on the spring support ⇒*6* **-12-**.
Then mount the bellows ⇒ 1.4.4.
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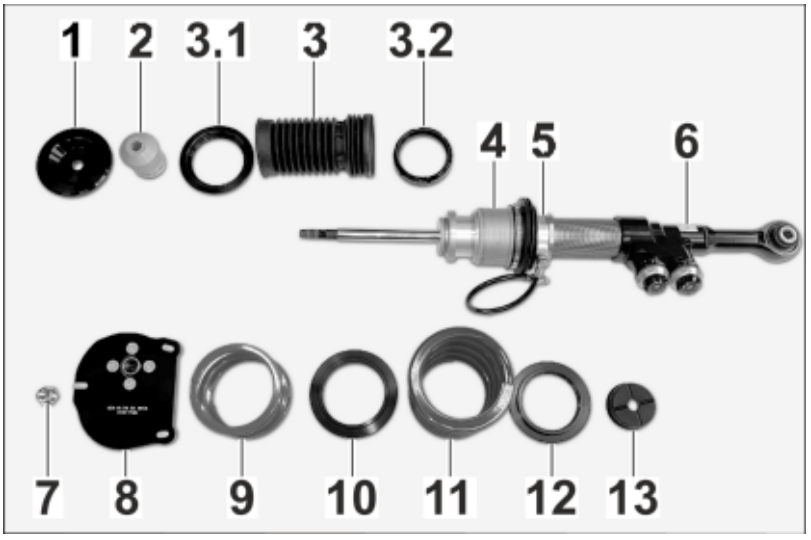

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1 – Upper ring on bellows
2 – Rubber stop
3.1 – Spring plate, upper
3 – Bellows
3.2 – Mounting ring on bellows
4 – Lift system (carried over from standard chassis)
5 – Lock nut
6 – Spring strut
7 – Nut
8 – Supporting mount - 65A.49.376 (LH)/65A.49.377 (RH)
9 – Auxiliary spring
10 – Intermediate ring
11 – Coil spring
12 – Lower spring plate (install with a distance of 10 mm / 0.39 in from the lift system)
13 – Plastic cap

1.4.4 Mounting bellows:

Installing bellows mounting ring: Secure lift unit to prevent turning by fully screwing down lower spring plate ⇒*6* **-12-** and securing with grub screw. **Tightening torque 1 Nm (0.7 ftlb.)**
Tighten mounting ring for bellows ⇒*6* **-3.2-** (use hook spanner 685 11 296), countering at lower spring plate ⇒*6* **-12-** (use hook spanner 685 11 295). **Tightening torque 15 Nm (11.1 ftlb.)**

Install the short end of the bellows ⇒*6* **-3-** to the mounting ring ⇒*6* **-3.2-**.

Push coil spring ⇒*6* **-11-**, spacer ring, ⇒*6* **-10-** and auxiliary spring ⇒*6* **-9-** onto the piston rod. Install upper spring support ⇒*6* **-3.1-** onto bellows ⇒*6* **-3-**.

Install rubber stop ⇒*6* **-2-**, top bellows ring ⇒*6* **-1-** (Bellows is fixed between ⇒*6* **-3.1-** and ⇒*6* **-1-**) and supporting mount ⇒*6* **-8-** on the piston rod and tighten nut ⇒*6* **-7-** (use special tool KW 685 10 179).

Ensure that the rubber stops ⇒*6* **-2-** are installed correctly: Pointed end must point upwards as shown ⇒*6* **-7-** . Use Loctite to secure. **Tightening torque: 40 Nm (30 ftlb.)**

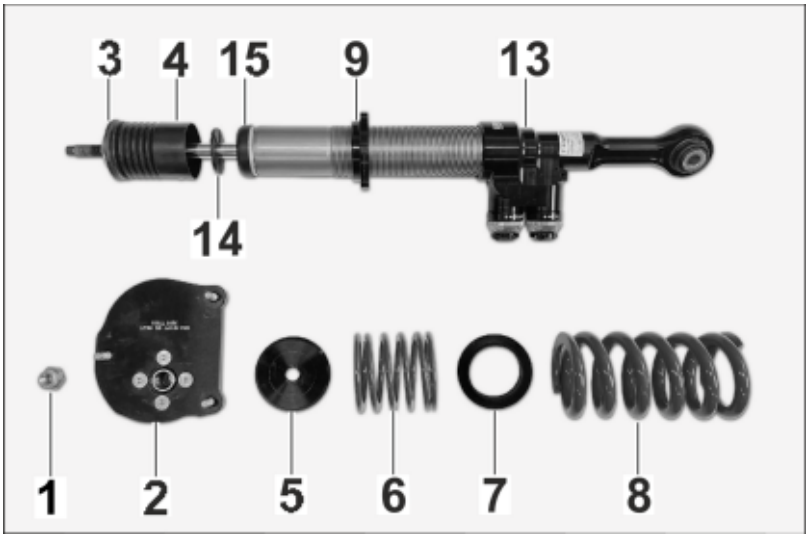
The bellows ⇒*6* **-3-** is clipped onto the plastic cap when the spring strut is completely installed

1.5 Assembling new front spring strut **without** front axle lift

Information

The new front spring strut **without** front axle lift comes pre-mounted. The assembly instructions are provided for the sake of completeness.

1.5.1 Screw-on the spring support ⇒*7* **-5-**. Then push the plastic cap⇒*7* **-15-**, wheel spacers and ⇒*7* **-14-** stop rubber ⇒*7* **-3-** onto the piston rod using bellows ⇒*7* **-4-**. Install coil spring⇒*7* **-8-**, intermediate ring⇒*7* **-7-**, auxiliary spring⇒*7* **-6-**, spring support top ⇒*7* **-5-** and support bearing ⇒*7* **-2-**. Tighten support bearing ⇒*7* **-2-** with nut ⇒*7* **-1-**. (Use special tool CW 685 10 179).
Medium-strength Loctite is to be used. Tightening torque 40 Nm (29.5 ftlb.)



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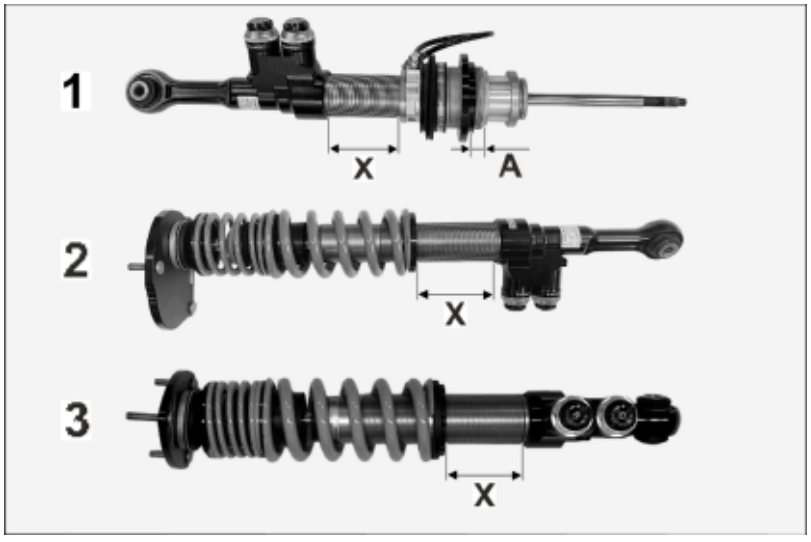
1 – Nut
2 – Supporting mount - 65A.49.376 (LH)/65A.49.377 (RH)
3 – Rubber stop
4 – Bellows
5 – Spring plate, upper
6 – Auxiliary spring

7 – Intermediate ring
8 – Coil spring
9 – Spring plate, lower
13 – Spring strut
14 – Wheel spacer
15 – Plastic cap

1.6 Adjust the relevant dimension X.
On vehicles with a lift system, ensure that the lift system line is aligned with the center of the damping force adjustment wheel (A).



Adjustment dimensions on spring strut

1 – Front axle with front axle lift
2 – Front axle without front axle lift
3 – Rear axle

1	Front axle **with front axle lift**	Dimension A
	Lower edge of spring seat to shoulder of lift unit	16 mm / 0.63 in
	Front axle **with front axle lift**	Dimension X
	Lower edge of lift unit lock nut to shoulder of shock absorber-valve foot	88 mm / 3.46 in

2	Front axle **without front axle lift**	Dimension X
	Lower edge of spring seat to shoulder of damper-valve foot	117 mm / 4.61 in

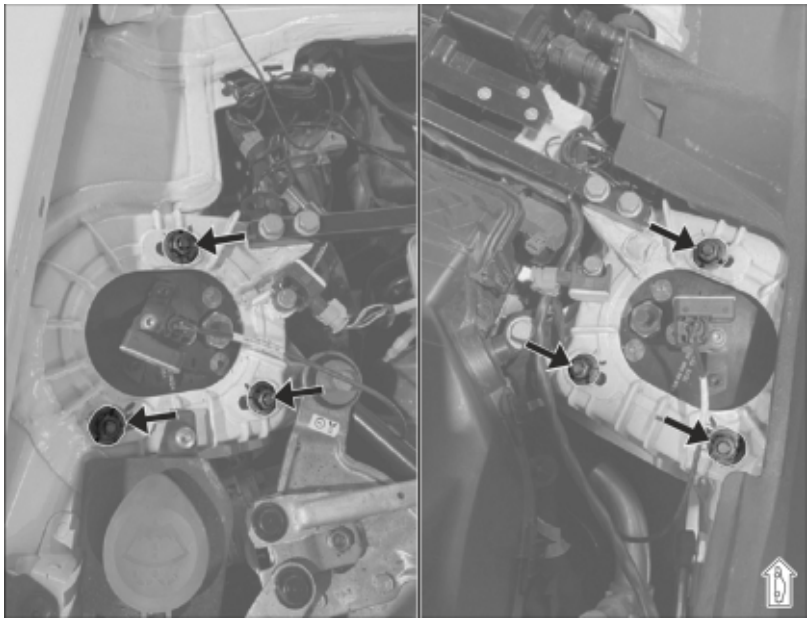
3	**Rear axle**	Dimension X
	Lower edge of spring seat to shoulder of damper-valve foot	74 mm / 2.91 in

1.7 Tighten spring plate grub screws.
Tightening torque 1 Nm (0.7 ftlb.)

1.8 Only for spring strut **with lift system**: Tighten lift system lock nut (use open-ended spanner 700 17 171 and open-ended spanner 700 17 184).
Tightening torque 66 Nm (48.7 ftlb.)

1.9 Install front spring strut. ⇒*Workshop Manual '408519 Removing and installing front spring strut'*
Ensure the lift system line is not twisted or under strain.

When installing the spring strut, slide the strut bearing plate in the body connection as far as possible towards the outside of the vehicle.



Observe installation position for dome bearing

1. – Left picture "front left" on the front axle, the support bearing plate must be pushed outwards to the maximum extent to ensure free movement between spring and body.

2. – Picture on the right "front right" on the front axle, the support bearing plate must be pushed outwards to a maximum to ensure free movement between spring and body.

1.10 Replacing rear spring strut

1.10.1 Remove rear spring strut. ⇒*Workshop Manual '427119 Removing and installing spring strut, rear'*

1.10.2 Check height dimension X and adjust if necessary.

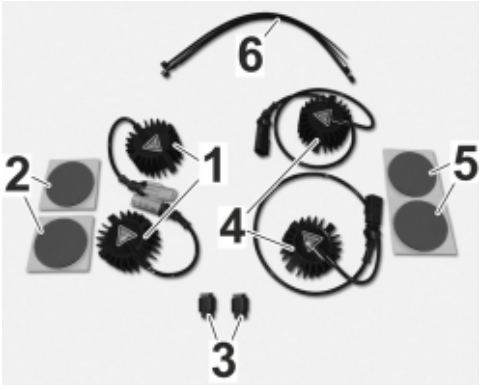
Rear axle	Dimension X
Lower edge of spring seat to shoulder of damper-valve foot	74 mm / 2.91 in

1.10.3 Install rear spring strut. ⇒*Workshop Manual '427119 Removing and installing spring strut, rear'*
Do not complete the vehicle interior.

1.11 Install front-axle deactivation set. **Proceed right-hand drive in a mirror-inverted manner.**

Use a suitable pin removal tool to replace the electric wiring harness.

1 – Front axle resistors
2 – Adhesive pads
3 – Plug
4 – Rear axle resistors
5 – Adhesive pads
6 – Cable tie



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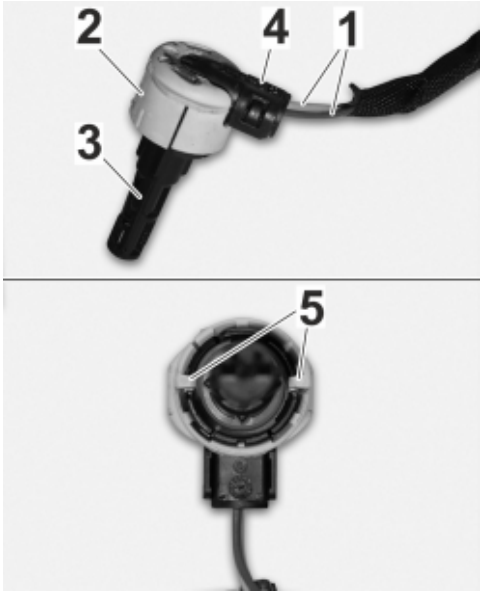
1.11.1 Replacing both original wiring harness connectors:
Release safety cap ⇒*10* -**2**- on locking lugs ⇒*10* -**5**-.
Release connector ⇒*10* -**4**- lock ⇒*10* -**3**-.

1 – Electric lines
2 – Locking cap
3 – Plug
4 – Fuse
5 – Locking lugs



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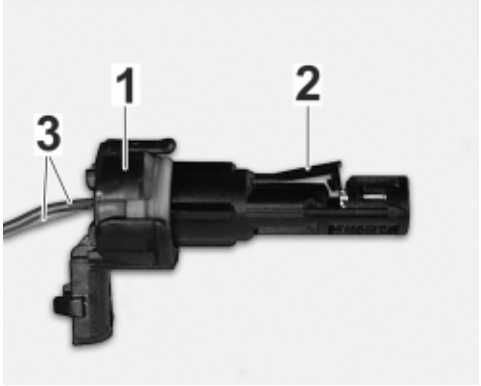
1.11.2 Release connector ⇒ *11* **-2-** lock ⇒ *11* **-1-** and unpin electric lines ⇒ *11* **-3-**.

1 – Plug
2 – Fuse
3 – Electric lines



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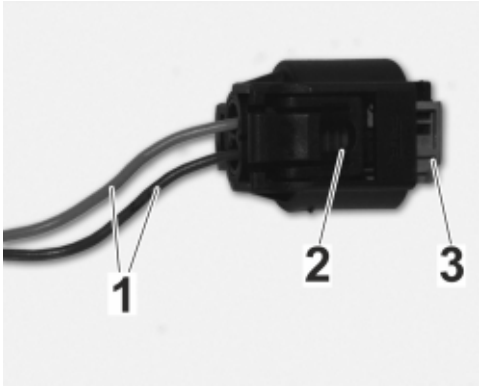
1.11.3 Remove safety cap ⇒ *10* **-2-** (no longer required).

1.11.4 Plug electric lines ⇒ *12* **-1-** into new connector ⇒ *12* **-2-** and lock fuse ⇒ *12* **-3-**.

1 – Electric lines
2 – Plug
3 – Fuse



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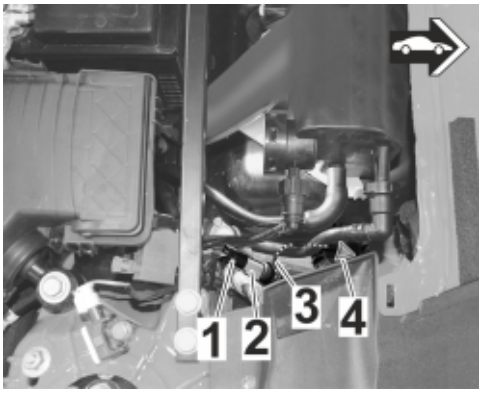
1.11.5 Installing front-axle deactivation set on the **right vehicle side**:
Bring new connector ⇒ *13* **-1-** into contact with vehicle connector ⇒ *13* **-2-**.
Affix resistor ⇒ *13* **-4-** on a level surface using the supplied adhesive pads.
Route the electric wire harness ⇒ *13* **-3-** without tension and secure with a cable tie.

1 – New connector
2 – Vehicle connector
3 – Electric wiring harness
4 – Resistance



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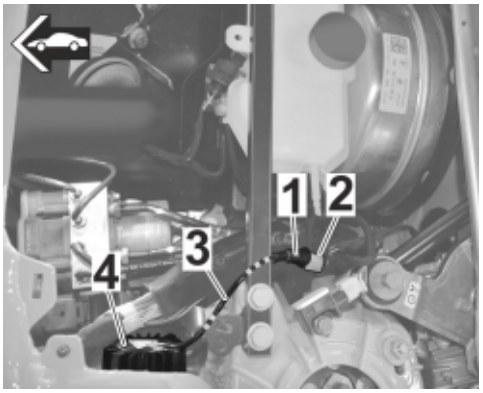
1.11.6 Installing front-axle deactivation set on the **left vehicle side**:
Connect new plug connection ⇒ *14* **-1-** with vehicle plug connection ⇒ *14* **-2-**.
Affix resistor ⇒ *14* **-4-** on a level surface using the supplied adhesive pads.
Route the electric wire harness ⇒ *14* **-3-** without tension and secure with a cable tie.



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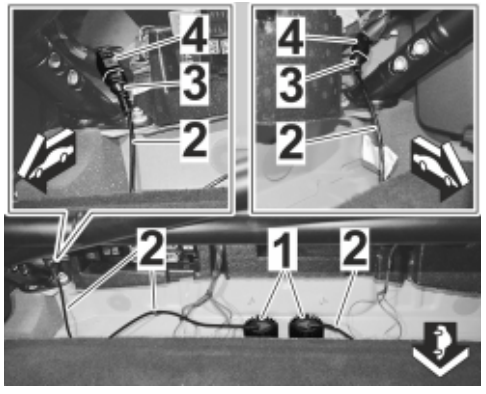
1 – New connector
2 – Vehicle connector
3 – Electric wiring harness
4 – Resistance

1.12 Install rear-axle deactivation set. **Proceed right-hand drive in a mirror-inverted manner.**

1.12.1 Bring new connectors ⇒ *15* **-3-** into contact with vehicle connectors ⇒ *15* **-4-**.
Isolate wiring harness ⇒ *15* **-2-** from power supply and secure with cable tie.
Affix resistors ⇒ *15* **-1-** on a level surface in the middle of the vehicle using the supplied adhesive pads.

1.13 Complete the vehicle interior. ⇒ *Workshop Manual '427119 Removing and installing rear spring strut - "Subsequent work" section'*



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WARNING

Danger of injury and damage from brake fluid

- **Poisonous if swallowed**
- **Irritation and damage to skin**
- **Avoid contact with paint surfaces**

⇒ **Only store brake fluid in suitable, labelled containers**

⇒ **Wear protective gloves and goggles**

⇒ **In the event of contact (eyes or skin), wash immediately with water**

⇒ **In the event of contact with paint surfaces, wash off immediately with water - do not wipe off**

NOTICE

Vehicle and driver weight

- **Before starting the alignment, please ensure the following conditions are met:**

⇒ **Fuel tank is completely full**

⇒ **Driver's weight (incl. helmet and racing suit) has been determined or requested and is placed on the driver's seat with an equivalent weight**

14 Perform suspension alignment.

14.1 Measure vehicle with standard values (as-delivered state). To do this, see the repair instructions ⇒*Workshop Manual '427119 Adjustment values for suspension alignment'*.

14.2 Measure vehicle with the performance setup recommended by Manthey (race circuit driving). Adjustment via the Manthey measuring wheel system in Conversion Instructions for ⇒*Installation and Conversion Instructions '440000 measuring wheel system'*

14.3 Measuring criteria:

- Tank capacity: **Full**
- Driver ballast: **Driver weight**

Damper clicking Performance	Front axle	Rear axle
Rebound stage (R) LowSpeed (Black)	7	7
Rebound stage (R) HighSpeed (gold)	7	7
Pressure stage (C) LowSpeed (Black)	7	7
Pressure level (C) HighSpeed (Gold)	7	7
Steel anti-roll bar	Center position = medium	Center position = medium
Ride height on tires	101.0 mm / 3.98 in	249.0 mm / 9.80 in
Driving height on measuring wheel system	87 mm / 3.43 in (offset: -14 mm / -0.55 in)	242 mm 9.53 in (offset: -7 mm / -0.28 in)

Damper clicking Comfort	Front axle	Rear axle
Rebound stage (R) LowSpeed (Black)	10	10
Rebound stage (R) HighSpeed (gold)	9	11
Pressure stage (C) LowSpeed (Black)	10	9
Pressure level (C) HighSpeed (Gold)	9	10
Steel anti-roll bar	Center position = medium	Center position = medium

Ride height on tires	101.0 mm / 3.98 in	249.0 mm / 9.80 in
Driving height on measuring wheel system	87 mm / 3.43 in (offset: -14 mm / -0.55 in)	242 mm / 9.53 in (offset: -7 mm / -0.28 in)

14.4 Measurement log:

Measurement log (executing PORSCHE center)			
Wheel alignment values (worldwide)	**Initial readings**	**Setpoint values**	**Final measurement**
Front axle			
Toe unpressed (total)		- 0°20'/- 3 mm / - 0.16 in	
Camber with wheels in straight-ahead position		- 2° 36'/- 2.6°	
Rear axle			
Toe per wheel		+ 0°17'/+ 2.5 mm / + 0.098	
Camber		-2° 45'/-2.75°	
Installed on:	Mechanic:	Acceptance:	Stamp:
(Date)	(First Name)	(Name of Foreman)	(Porsche Center)

4090: Conversion of Manthey threaded suspension — Labor time: **560 TU**

Includes: Remove and install all four wheels, remove and install front spring struts, disassemble and assemble front spring struts, remove and install rear spring struts, disassemble and assemble rear spring struts, measure vehicle in full.