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WM, 4495TW Adjustment values for suspension alignment

Tools

Tool denomination	Type	Tool number	Image
PIWIS Tester 3	Special tool	9900	

Vehicle height

Vehicle height with steel springs

Information

- The following values relate to the curb weight, i.e. full fuel tank, vehicle with tyre repair kit (or spare wheel, collapsible wheel) and tools, but without occupants and without luggage.
- Tyre pressure in accordance with specifications.
- On vehicles with air suspension, the vehicle must be adjusted to normal level using the Porsche System Tester. Only align and adjust the vehicle in this position.
- If the control unit or one of the level sensors was replaced, calibration must be carried out using the Porsche System Tester.

Vehicle height	Steel springs
Front-axle height	
with 19, 20, 21 inch wheels [mm]	414 ±10
From outer wheel centre to bottom edge of wing	
Rear-axle height	
with 19/20,21-inch wheels [mm]	419 ±10
From outer wheel centre to bottom edge of wing	
Max. difference in height between left and right: 10 mm	

Vehicle height, air springs

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From outer wheel centre to bottom edge of wing	
Rear-axle height	
with 19/20,21-inch wheels [mm]	419 ±10
From outer wheel centre to bottom edge of wing	
Max. difference in height between left and right: 10 mm	

Wheel alignment values

Wheel alignment values, steel springs

Information

Adjusting the front axle

The front axle can be adjusted as follows:

- **Toe:** Adjustment using the tie rod
- **Camber:** Adjustment by moving the front-axle carrier (necessary if max. difference from left to right is exceeded)
- **Caster:** Cannot be adjusted!

For a detailed description, see

> **449503** Performing front + rear suspension alignment

WARNING

Steering-angle sensor not calibrated or calibrated incorrectly

- **Unexpected vehicle handling**
- **Steering-angle sensor does not function**
- **Malfunction in steering-angle sensor**

- After working on wheel suspension parts, when replacing the steering-angle sensor, and after changing the wheel alignment values, calibrate the steering-angle sensor using > **PIWIS Tester 3**.
- Keep the front wheels in straight-ahead position on the measuring platform during calibration.
- For vehicles with electromechanical steering, also re-teach the electric steering lock settings.

Information

- The following values relate to the empty weight, i.e. full fuel tank, vehicle with spare wheel (collapsible wheel) and tools, but without driver and without additional weights.
- Tyre pressure in accordance with specifications.
- The toe-difference angle value is also influenced by the vehicle height. For this reason the measured result must be evaluated accordingly. No action is necessary in the case of small deviations from the toe-difference angle's required value as long as the value to the right and left is almost the same.

Wheel alignment values

	Steel springs
Front axle	
Toe unpressed (per wheel) < 1,000 km (620 mls)	
Adjustment value	+ 0°07.5' ±2.5'
Control value	+ 0°07.5' +5/-2.5'
Toe unpressed (per wheel) > 1,000 km (620 mls)	
Adjustment value	+ 0°05' ±2.5'
Control value	+ 0°05' +5/-2.5'
max. difference, left to right	0°05'
Camber (vehicle with suspension compressed 10 mm)	- 0°55.5' ±20'
Camber (vehicle with suspension compressed 05 mm)	- 0°50.1' ±20'
Camber (vehicle with suspension compressed 00 mm)	- 0°45.0' ±20'
Camber (vehicle with suspension relieved -05 mm)	- 0°40.0' ±20'
Camber (vehicle with suspension relieved -10 mm)	- 0°35.3' ±20'
max. difference, left to right	0°20'
Toe difference angle at 20° steering angle	1°05' ±30'
Caster	+ 7°30' ±30'
max. difference, left to right	0°15'
Kingpin inclination	11°37.5'
Rear axle	
Toe unpressed (per wheel)	
Adjustment value	+ 0°05' ±5'
max. difference, left to right	0°05'
Camber	- 1°10' ±15'
max. difference, left to right	0°20'

Wheel alignment values, air springs

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- After working on wheel suspension parts, when replacing the steering-angle sensor, and after changing the wheel alignment values, calibrate the steering-angle sensor using > [PWIS Tester 3](#).
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- Tyre pressure in accordance with specifications.
- The toe-difference angle value is also influenced by the vehicle height. For this reason the measured result must be evaluated accordingly. No action is necessary in the case of small deviations from the toe-difference angle's required value as long as the value to the right and left is almost the same.

i Information

Adjusting the front axle

The front axle can be adjusted as follows:

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- **Caster:** Cannot be adjusted!

For a detailed description, see

- > [449503 Performing front + rear suspension alignment](#)

Wheel alignment values	Air springs
Front axle	
Toe unpressed (per wheel) < 1,000 km (620 mls)	
Adjustment value	+ 0°07.5' ±2.5'
Control value	+ 0°07.5' +5/-2.5'
Toe unpressed (per wheel) > 1,000 km (620 mls)	
Adjustment value	+ 0°05' ±2.5'
Control value	+ 0°05' +5/-2.5'
max. difference, left to right	0°05'
Camber (vehicle with suspension compressed 10 mm)	- 0°55.5' ±20'
Camber (vehicle with suspension compressed 05 mm)	- 0°50.1' ±20'
Camber (vehicle with suspension compressed 00 mm)	- 0°45.0' ±20'
Camber (vehicle with suspension relieved -05 mm)	- 0°40.0' ±20'
Camber (vehicle with suspension relieved -10 mm)	- 0°35.3' ±20'
max. difference, left to right	0°20'
Toe difference angle at 20° steering angle	1°05' ±30'
Caster	+ 7°30' ±30'
max. difference, left to right	0°15'
Kingpin inclination	11°37.5'
Rear axle	
Toe unpressed (per wheel)	
Adjustment value	+ 0°05' ±5'
max. difference, left to right	0°05'
Camber	- 1°30' ±15'
Camber (applies only for China Turbo S PHEV)	- 1°18' ±15'
max. difference, left to right	0°20'

97AAA1, 97ABA1, 97ABE1, 97ADB1, 97ADD1, 97ADG1, 97AFF1, 97AFH1, 97BAA1, 97BBA1, 97BBE1, 97BDB1, 97BFF1, 97BFH1, 97CBA1, 97CBE1, 97CDB1, 97CDD1, 97CDG1, 97CFF1, 97CFH1

From 2017

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