**Document title** Check toe-out angle

**Document number** ar4020p0325cw

AR40.20-P-0325CW Check toe-out angle 05.04.2017

# Model 166, 172, 204, 207, 212, 218, 292

# **Modification notes**

12.12.2012	Spurdifferenzwinkel bei 20° Einschlag des kurveninneren Rades	BE40.20-P-1001-08N
02.11.2015	Toe-out angle with inner wheel steered through 20°	BE40.20-P-1001-08P

<u> </u>	Check		
1	Check toe at front axle and adjust if necessary	Model 166, 292	AR40.20-P-0200GQ
		Model 172, 207, 212, 218	AR40.20-P-0200EW
		Model 204	AR40.20-P-0200CW
2	Check toe-out angle	i The steering geometry is checked by measuring the toe-out angle. This is the difference in the steer angle between the outside wheel and the inside wheel when the inside wheel is steered through 20°. If substantial deviations are found, the cause may be one of the following, assuming that the camber and caster settings are correct: Track not adjusted with rack-and-pinion steering in straightahead position, resulting in unequal tie rod lengths; steering knuckle or tie rod bent. On vehicles involved in an accident: Excessive deviations in the front end (longitudinal frame member, frame crossmember, wheel well and firewall, or on front axle carrier) which have a negative effect on the adjustment range for camber and caster can result in greater differences in the toe-out on turns between left and right.	

Model 212.0 (except 212.002/025/056/067/072/074/075/076/077/08/0 90/091/092/093/094/097) with code 485 (DIRECT CONTROL suspension) Model 212.0 (except 212.002/025/056/067/072/074/075/076/077/08/0 90/091/092/093/094/097) with code 489 (AIRMATIC) Model 212.0 (except 212.002/025/056/067/072/074/075/076/077/08/0 90/091/092/093/094/097) with code 677 (AGILITY CONTROL suspension) Model 212.0 (except 212.002/025/056/072/074/075/076/077/092) with code 482 (Off-road comfort suspension) Model 212.002 with code 482 (Off-road comfort suspension) except code P25 (BlueEFFICIENCY Edition) Model 212.002 with code 485 (DIRECT CONTROL suspension) except code P25 (BlueEFFICIENCY Edition) Model 212.002 with code 489 (AIRMATIC) except code P25 (BlueEFFICIENCY Edition) Model 212.002 with code 677 (AGILITY CONTROL suspension) except code P25 (BlueEFFICIENCY Edition) Model 212.002 with code P25 (BlueEFFICIENCY Edition) Model 212.025/056/072 with code 482 (Off-road comfort suspension) except code Z04 (Light armoring) Model 212.025/056/072 with code 485 (DIRECT CONTROL suspension) except code Z04 (Light armoring) Model 212.025/056/072 with code 489 (AIRMATIC) except code Z04 (Light armoring) Model 212.025/056/072 with code 677 (AGILITY CONTROL suspension) except code Z04 (Light armoring) Model 212.025/056/072 with code Z04 (Light armoring) Model 212.067/08/090/091/093/094/097/267/28/291/29 3/294/297 with code 489 (AIRMATIC) Model 212.067/08/090/091/093/094/097 with code 485 (DIRECT CONTROL suspension) Model 212.067/08/090/091/093/094/097 with code 677 (AGILITY CONTROL suspension) Model 212.074/077/274/277 as of 12/1/11, 212.075/275 Model 212.074/077/274/277 up to 11/30/11 Model 212.076/092/276/292 Model 212.1 with code 482 (Off-road comfort suspension) Model 212.1 with code 485 (DIRECT CONTROL suspension) Model 212.2 (except 212.267/274/275/276/277/28/291/292/293/294/2 with code 482 (Off-road comfort suspension) Model 212.2 (except 212.267/274/275/276/277/28/291/292/293/294/2 with code 485 (DIRECT CONTROL suspension) Model 212.2 (except 212.267/274/275/276/277/28/291/292/293/294/2 with code 489 (AIRMATIC) Model 212.2 (except 212.267/274/275/276/277/28/291/292/293/294/2 with code 677 (AGILITY CONTROL suspension) Model 212.267/28/291/293/294/297 with code 485 (DIRECT CONTROL suspension) Model 212.267/28/291/293/294/297 with code 677 (AGILITY CONTROL suspension)Toe-out angle with inner wheel steered through 20°

Model 204.0 (except 204.077), 204.2 (except 204.277) with code 482 (Off-road comfort suspension) as of model refinement Model 204.0 (except 204.077), 204.2 (except 204.277) with code 482 (Off-road comfort suspension) up to model refinement, with cross strut old Model 204.0 (except 204.077), 204.2 (except 204.277) with code 482 (Off-road comfort suspension) up to model refinement, with cross strut new version Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 483 (ADVANCED AGILITY package) as of model refinement Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 483 (ADVANCED AGILITY package) up to model refinement, with cross strut old Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 483 (ADVANCED AGILITY package) up to model refinement, with cross strut new version Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 485 (Comfort suspension) as of model refinement Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 485 (Comfort suspension) up to model refinement, with cross strut old version Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 485 (Comfort suspension) up to model refinement, with cross strut new version Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 486 (Sports suspension) as of model refinement Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 486 (Sports suspension) up to model refinement, with cross strut old version Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 486 (Sports suspension) up to model refinement, with cross strut new version Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 677 (AGILITY CONTROL suspension) as of model refinement Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 677 (AGILITY CONTROL suspension) up to model refinement, with cross strut old version Model 204.0 (except 204.077/08/09), 204.2 (except 204.277/28/29) with code 677 (AGILITY CONTROL suspension) up to model refinement, with cross strut new version Model 204.077/277 as of model refinement Model 204.077/277 up to model refinement Model 204.08/09/28/29/38 with code 486 (Sports suspension) Model 204.08/09/28/29/38 with code 677 (AGILITY CONTROL suspension) Model 204.3 (except 204.377/38) with code 483 (ADVANCED AGILITY package) except code P84 (Sports model) Model 204.3 (except 204.377/38) with code 486 (Sports suspension) except code P84 (Sports model) Model 204.3 (except 204.377/38) with code 677 (AGILITY CONTROL suspension) Model 204.377 except code P98 (Black Series) Model 204.377 with code 224 (Rear individual seat design)

Model 172Toe-out angle with inner wheel steered through 20°	*BE40.20-P-1001-08P
steered through 20°	*BE40.20-P-1001-08N
Model 292	
with code 489 (AIRMATIC)Toe-out angle with inner wheel steered through 20°	

Number	Designation		package, with cross strut (old version),	Model 204.0/2 up to model refinement package, with cross strut (new version), with code 482
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	۷°	-1° 42' (±30')	-1° 42' (±30')

# Check values for toe-out angle

Number	Designation		package, with cross strut (old version), with code 483/486,	model refinement
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	ے م	-1° 42' (±30')	-1° 42' (±30')

## Check values for toe-out angle

Number	Designation		package, with cross strut (old version), with code 485/677,	model refinement
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	ے°	-1° 42' (±30')	-1° 42' (±30')

## Check values for toe-out angle

Number	Designation		model refinement	Model 204.0/2 as of model refinement package, with code 483/486, except 4MATIC
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	۷°	-1° 42' (±30')	-1° 42' (±30')

## Check values for toe-out angle

Number	Designation		model refinement package, with code
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20° $\measuredangle$ °	-1° 42' (±30')	-1° 42' (±30')

Number	Designation		code 483/486, except	Model 204.3 with code 677, except 4MATIC
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	۸°	-1° 42' (±30')	-1° 42' (±30')

Number	Designation			Model 204.0/2/3 with 4MATIC, with code 486
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	Δ°	−1° 30' (±30')	-1° 42' (±30')

### Check values for toe-out angle

Number	Designation		,	Model 204.9 with code 485, except code 460/494/830
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	∡°	−1° 42' (±30')	-1° 37' (±30')

#### Check values for toe-out angle

Number	Designation			Model 204.9 with code 482
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	Δ°	-1° 30' (±30')	-1° 30' (±30')

### Check values for toe-out angle

Number	Designation			Model 204.9 with code 460/494/830
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	∡° ¯	-1° 37' (±30')	-1° 30' (±30')

## Check values for toe-out angle

Number	Designation	Model 204.0/2 AMG up to model refinement package	Model 204.0/2 AMG as of model refinement package, model 204.3 AMG except codeP98
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°  \( \( \alpha^{\circ} \)	-1° 30' (±30')	-1° 18' (±30')

## Check values for toe-out angle

Number	Designation		Model 204.3 AMG with code P98 except code 224	Model 204.3 AMG with code P98+code 224
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20°	ے°	-1° 18' (±30')	-1° 18' (±30')

## Check values for toe-out angle

Number	Designation	Model 207	218 with AMG
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20° $\angle$	-1° 42' (±30')	-2° 0' (±30')

## Check values for toe-out angle

Number	Designation	218 except AMG
BE40.20-P-1001-08K	Toe-out angle with inner wheel steered through 20° $\measuredangle^{\circ}$	-1° 54' (±30')

Number	Designation		•	Model 166.0 with code 489, model 166.8
BE40.20-P-1001-08N	Toe-out angle with inner wheel steered through 20°	ے خ	-1° 30' (±30')	-1° 54' (±30')

Number	Designation			Model 166.0 with code Z04/Z05
BE40.20-P-1001-08N	Toe-out angle with inner wheel steered through 20°	Δ°	-1° 36' (±30')	-1° 54' (±30')

## Check values for toe-out angle

Number	Designation		Model 166 AMG	Model 292 except code 489
BE40.20-P-1001-08N	Toe-out angle with inner wheel steered through 20°	Δ°	-1° 54' (±30')	-1° 46' (±30')

### Check values for toe-out angle

Number	Designation	Model 292 with code 489	Model 292 AMG
BE40.20-P-1001-08N	Toe-out angle with inner wheel steered through 20° $\angle$	-1° 54' (±30')	-1° 54' (±30')

### Test and adjustment values for toe-out angle

Number	Designation		up to model year	Model 172.403/447/448/457 up to model year 2015 with code 483/486
BE40.20-P-1001-08P	Toe-out angle with inner wheel steered through 20°	∡°	-1° 52' (±30')	-1° 53' (±30')

## Test and adjustment values for toe-out angle

Number	Designation		2016 except code	as of model year 2016 with code 483/486, model 172.404/431/434/438
BE40.20-P-1001-08P	Toe-out angle with inner wheel steered through 20°	<b>∡</b> °	-1° 52' (±30')	-1° 53' (±30')

# Test and adjustment values for toe-out angle

Number	Designation		Model 172.466 AMG	Model 172.475 AMG
BE40.20-P-1001-08P	Toe-out angle with inner wheel steered through 20°	, o -	-1° 21' (±30')	-1° 42' (±30')

## Check values for toe-out angle

Number	Designation		Model 212.0 with code 485, except 4MATIC	Model 212.0 with code 485, with 4MATIC
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	∡°	-1° 54' (±30')	-1° 54' (±30')

Number	Designation		Model 212.0 with code 486/677, except 4MATIC	Model 212.0 with code 486/677, with 4MATIC
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	∡°	-1° 54' (±30')	-1° 54' (±30')

Number	Designation		Model 212.002 with code P25	Model 212.0/2 with code 482
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	ے°	-1° 54' (±30')	-1° 54' (±30')

Number	Designation			Model 212.0/2 with code 489, with 4MATIC
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	∡°	-1° 54' (±30')	-1° 54' (±30')

# Check values for toe-out angle

Number	Designation		Model 212.1 with code 482	Model 212.1 with code 485
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	۷°	-1° 48' (±30')	-1° 48' (±30')

### Check values for toe-out angle

Number	Designation		Model 212.2 with code 485, except 4MATIC	Model 212.2 with code 485, with 4MATIC
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	ے°	-1° 48' (±30')	-1° 54' (±30')

## Check values for toe-out angle

Number			Model 212.2 with code 486/677, except	Model 212.2 with code 486/677, with
			4MATIC	4MATIC
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	۷°	-1° 54' (±30')	-1° 54' (±30')

# Check values for toe-out angle

Number	Designation		MODEL 212.025/056/072 with	Model 212 AMG up
			CODEZ04	4MATIC
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	۲°	-1° 54' (±30')	-1° 38' (±30')

Number	Designation		Model 212 AMG as of 12.2011, except 4MATIC	Model 212 AMG with 4MATIC
BE40.20-P-1001-08S	Toe-out angle with inner wheel steered through 20°	ے°	-1° 38' (±30')	-1° 39' (±30')