

Wheel Alignment

1962-72 VOLKSWAGEN SPECIFICATIONS & ADJUSTMENTS

TIRE INFLATION (COLD)

Before attempting to check or adjust wheel alignment, ensure that tires are properly inflated.

Tire Pressure Specifications (psi)

Model Application	Front	Rear
Type 1 (Exc. Super Beetle)...	16	24
Super Beetle.....	16	27
Type 2.....	28	32
Type 3.....	17	26
Type 411.....	20	26
Radial Tires		
Type 1.....	18	27
Type 3.....	18	28
Type 411.....	20	26

CASTER

All Models – The caster angle is part of the front axle design and is non-adjustable. If not within specifications, check for worn or damaged parts, replace as necessary.

CAMBER

Type 1 (1962-65) & Type 2 (1962-68) – Camber is non-adjustable. If alignment is not within specifications, check for damaged or worn parts and replace as necessary.

Type 1 Exc. Super Beetle (1966-72), Type 3 (All) & Type 2 (1969-72) – Loosen hexagon nut on upper ball joint and turn eccentric bush with suitable tool (VW 179) until camber within specifications. Tighten hexagon nut.

Sedan 113 Super Beetle (1971-72) – Adjust camber by loosening nut (max. 1 turn) on control arm bolt and turn bolt to set camber angle to specifications. Tighten nut.

Model 411 (1971-72) – To adjust, raise vehicle just off floor on hoist and loosen front carrier mounting bolts. Move carrier sideways until camber angle is within specifications on both sides. *NOTE* – Vehicle must be level laterally on lift. If not, lateral angle must be accounted for. Tighten front axle carrier bolts and lower vehicle.

All Models Rear (Exc. 411) – Camber angle is dependent upon torsion bar and spring plate setting. If camber not within specifications, See *Torsion Bar Adjustment*.

Model 411 Rear (1971-72) – Loosen wishbone brackets and turn on longitudinal axis. If outer bracket is lowered and inner bracket raised, camber angle will increase. If moved in opposite directions, camber will decrease. Adjust camber to specifications and tighten wishbone brackets.

TOE-IN

Type 1 Exc. Super Beetle (1962-72) – Position front wheels to center position and loosen hexagon nuts and clamp (if present) on tie rods. Turn both tie rods in the same direction by equal amounts to adjust toe-in to specifications. Tilt both tie rods in the same direction to align tie rods. Tighten hexagon nuts and clamps.

Sedan 113 Super Beetle (1971-72) – Using suitable tool (113 415 375), align steering to center position. Loosen clamp nut and lock nut on tie rods. Turn tie rods until each wheel is set to 1/2 the total toe angle. Align tie rods by tilting ends as far as they will go and tighten lock nut and clamp nut. Remove centering tool.

Type 2 (1962-72) & Type 3 (1965-72) – Position front wheels to center position and loosen lock nuts at both ends of the adjustable tie rod. Turn tie rod to adjust toe-in to correct specifications. Tighten lock nuts.

Model 411 (1971-72) – Use suitable tool (VW 279a) to align steering to center position. Loosen clamping bolts and nuts on both tie rods. Adjust toe-in to specifications by turning both tie rods (equal amounts) in same direction. Align tie rods with each other by tilting the tie rod. Tighten clamps and nuts.

Type 1 Rear (1962-68) & Type 3 Rear (1965-68) – To adjust, loosen the bolts in axle tube flanges, hook in suitable tool (VW 147) and set toe to specifications. *NOTE* – On Type 1 vehicles with equalizer spring, the guides for the push rods must be removed when checking the toe. Release tension on tool before taking reading. Tighten bolts in axle tube flanges.

Type 1 Rear (All 1969-72) & Type 3 Rear (1969-72) – Loosen spring plate bolts. Using suitable tools (VW160 & VW179) set toe angle on both sides to specifications. Tighten spring plate bolts.

Type 2 Rear (1962-68) – Toe angle is dependent upon torsion bar and spring plate setting. If toe angle not within specifications, See *Torsion Bar Adjustment*.

Type 2 Rear (1969-72) – To adjust toe angle, loosen bolts in the axle tube flange. Using suitable tool (VW 160) set toe to correct specifications. Relieve tension on tool before taking reading. Tighten bolts.

Model 411 Rear (1971-72) – Using suitable aligning tool (VW 361/1) adjust toe angle to specifications. Turn the eccentric bolts in the brackets for the inner arms of the wishbone to change toe angle.

TORSION BAR ADJUSTMENT

All Models Rear Exc. Model 411 & Type 2 (1962-68) – Using suitable protractor (VW 261) find deviation of vehicle from the horizontal and note reading to be taken into account in setting spring plate angle. Install spring plate on torsion bar and measure position using protractor (VW 261). If not within torsion bar specifications adjust by moving torsion bar one spline forward and spring plate back on spline or torsion bar back one spline and spring plate forward one spline until readings are within specifications.

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Type 2 Rear (1962-68) — Using suitable protractor (VW 245a) check horizontal position of vehicle on one of frame side members. Reading to be taken into account in setting spring plate angle. Insert inner end of torsion bar in center anchor and press spring plate on outer end of torsion bar. Adjust protractor (VW 245a) on the unloaded spring plate until bubble is in the center position. Adjust to specifications by moving torsion bar one spline forward and spring plate back on spline or torsion bar back one spline and spring plate forward one spline until readings are within specifications.

Torsion Bar Specifications

Model Application	Setting
Type 1 All Models.....	20°30' + 50'
Type 2 (1962-68).....	20° ± 30'
Station Wagon (1969-72).....	23° + 50'
Kombi & Van (1969-72).....	21°10' + 50'
Type 3 Fastback.....	23° + 50'
Type 3 Squareback.....	21°30' + 50'

WHEEL ALIGNMENT SPECIFICATIONS						
R — Right F — Front Rr — Rear L — Left Man — Manual Steering Pwr — Power Steering	Steering Axis Incln.	Caster (Degrees)	Camber (Degrees)	Toe-In	Toe-Out On Turns	
					Inner	Outer
TYPE 1 FRONT 1962-65 1966-72 Up To 115 979 202 ① From 116 000 001 ①	2° ± 35'	1° + 20' - 40'	30' ± 15'	....	....
	3° 20' ± 1°	40' ± 30'	30' ± 15'	....	....
	3° 20' ± 1°	30' ± 20'	30' ± 15'	....	....
TYPE 1 REAR 1962-68 All Models Up To 116 1021 298 ① All Models Up To 2 528 668 ① Sedan From 117 000 001 ① Karmann Ghia From 147 000 003 ① Convertible Up To 157 000 002 ① 1969-72 All Models	2° 30' ± 1°	-5' ± 10'	....	....
	3° ± 30'	-5' ± 10'	....	....
	1° ± 1°	-5' ± 10'	....	....
	15' ± 1°	-5' ± 10'	....	....
	15' ± 1°	-5' ± 10'	....	....
	-1° 20' ± 40'	0° ± 15'	....	....
TYPE 2 FRONT 1962-72 All Models Up To 217 148 459 ① All Models From 218 000 001 ①	max. 1°	40' ± 30'	5' ± 10'	....	....
	3° ± 40'	40' ± 20'	15' ± 15'	....	....
TYPE 2 REAR 1962-68 Van Station Wagon Kombi 1969-72 All Models	4° ± 30'	-25' ± 25'	....	....
	3° ± 30'	-25' ± 25'	....	....
	3° 30' ± 30'	-25' ± 25'	....	....
	-50' ± 30'	10' ± 20'	....	....
TYPE 3 FRONT 1965-72 All Models	4° ± 40'	1° 20' ± 20'	40' ± 15'	....	....
TYPE 3 REAR 1965-68 Up To 316 316 238 ① From 317 000 001 ① 1969-72 Fastback Squareback	2° 30' ± 1°	-5' ± 10'
	1° 45' ± 1°	-5' ± 10'
	-1° 20' ± 40'	5' ± 15'
	-1° 20' ± 40'	0° ± 15'

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					Inner	Outer
TYPE 4 FRONT						
1971-72						
Wagon From						
460 2 030 186 ①	1°10'±30'	1°45'±35'	0°±15'
Sedan From						
410 2 032 317 ①	1°10'±30'	1°45'±35'	0°±15'
Wagon Up To						
460 2 030 185 ①	1°10'±30'	1°10'±35'	0°±15'
Sedan Up To						
410 2 032 316 ①	1°10'±30'	1°10'±35'	0°±15'
TYPE 4 REAR						
1971-72						
All Models	-1°±30'	10'±15'

① — Chassis No.