

## 1963-72 PORSCHE SPECIFICATIONS & ADJUSTMENTS

### TIRE INFLATION (COLD)

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

#### Tire Pressure Specifications (psi)

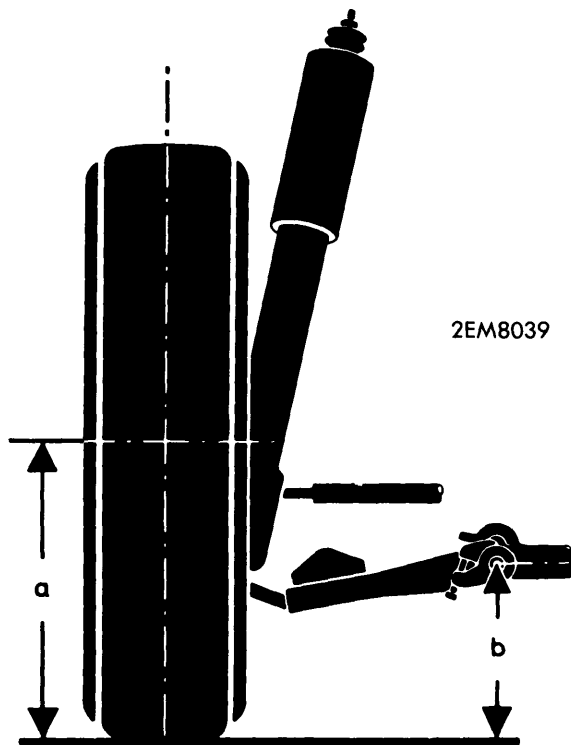
Model Application	Front	Rear
356B/C.....	20.....	24.....
911 & 912.....	26.....	29.....
914 Exc. 914/6.....	23.....	26.....
914/6.....	26.....	28.....

### RIDING HEIGHT

**NOTE** — Riding height should be set with a full tank of gas and spare tire in proper position.

**All Models (Exc. 356B/C & 911E) Front** — Check or adjust riding height with vehicle on level ground. Mark center of front wheel hub cap. Bounce vehicle several times to settle front suspension. Measure dimension "a" as shown in illustration. When riding height is properly set, dimension "b" is 4.25" (911 & 912) or 3.54" (914) less than dimension "a"  $\pm .2$ ". To adjust riding height, if not properly set, loosen or tighten adjusting screw on torsion bar until correct dimension is obtained. Bounce vehicle several times and recheck. Difference between right hand and left hand measurement may not be more than .2".

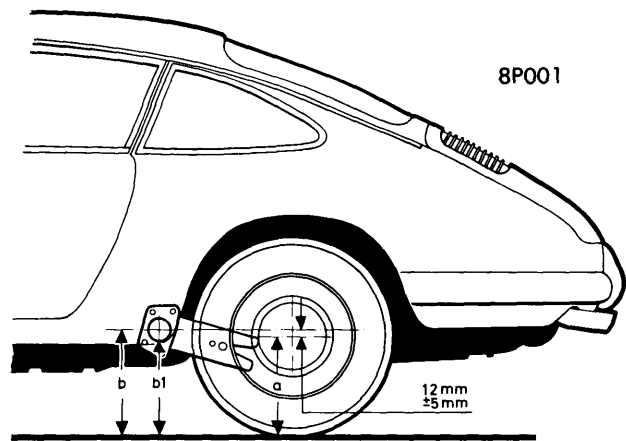
**911E (1969-72)** — These models equipped with self-leveling hydropneumatic suspension system. Spring struts must be brought to correct height before proceeding with wheel alignment checks. Insert the measuring pins of suitable tool (P 1036) through the hollow of sub frame until they make contact with the left and right wishbones. Attach the measuring pins with a small amount of grease. Lift car at the front center with a car jack until dimension "b", shown in illustration, is 4.252". Carry



FRONT RIDING HEIGHT DIMENSIONS

out normal wheel alignment procedures. **NOTE** — If hydraulic car jack is used, make sure that the jack does not sink while checking alignment.

**911 & 912 Rear (1965-72)** — Check rear axle height with vehicle on level ground. Bounce vehicle several times to set suspension at proper attitude. Mark center of rear wheel and measure dimension "a" as shown in illustration. To calculate "b1", add .472 in. to dimension "a" less radius of the bushing cover on torsion bar. Measure "b1". Calculated value should not differ from actual measurement by more than .197 in. The height difference between left and right side should not be more than .315 in. If values are not within limits, check height adjustment of front suspension and rear torsion bar adjustment. Correct if necessary.



REAR AXLE RIDING HEIGHT DIMENSIONS

### CASTER

**All Models Exc. 356B/C** — Remove sealing compound on pressure plates and supporting bearings. Mark position of single hole and double hole pressure plates. Loosen pressure plate bolts. Shift supporting bearing with shock absorber strut in vehicle lengthwise direction until caster is within specifications. **NOTE** — Any shifting of shock absorber strut in crosswise direction will change the camber adjustment. Tighten pressure plate bolts.

**356B/C** — If caster not within specifications check torsion bar angle and correct if necessary. See *Torsion Bar Installation in SUSPENSION* Section. If caster still not within specifications with torsion bar adjustment correct, remove and check suspension arms and the stub axles separately.

### CAMBER

**All Models Front Exc. 356B/C** — To adjust camber, refer to Caster adjustment procedure and note the following. Shift supporting bearing with shock absorber strut in vehicle crosswise direction to adjust camber to specifications. Tighten pressure plate bolts and reseal supporting bearings and pressure plates with a permanent elastic sealing compound.

**356B/C Front** — If camber not within specifications check torsion bar angle and correct if necessary. See *Torsion Bar Installation in SUSPENSION* Section. If camber still not within specifications with torsion bar adjustment correct, check suspension arm offset, suspension arm and stub axles. Replace as necessary.

# Wheel Alignment

## 1963-72 PORSCHE SPECIFICATIONS & ADJUSTMENTS (Cont.)

**911 & 912 Rear (1965-72)** — Mandatory prerequisite for obtaining permissible camber values at rear wheels is proper adjustment of torsion bars. See *Torsion Bar Adjustment*. Loosen retaining bolt nuts and eccentric bolt nuts at the rear axle flange. Turn camber eccentric so camber angle within specifications. Tighten retaining bolt nuts and eccentric bolt nuts.

**914 Rear (1970-72)** — Mark position of rear axle control arm on base plate and remove center bolt. Loosen remaining bolts only slightly. Change shims between control arm bearing and body to change camber angle. A 1 mm shim results in approx. 10' change of camber. With camber to correct specifications tighten bolts. Install center bolt and tighten.

**356B/C Rear (1963-65)** — The camber adjustment depends on the setting of the radius arms. If camber not within specifications, See *Torsion Bar Adjustments*.

### TOE-IN

**All Models Front Exc. 356B/C** — Turn steering wheel to center position (wheels straight ahead). Adjust left hand and right hand tie rods to bring each wheel to a 20' toe-in. Wheels should be pressed with a preload of 33 lbs. **NOTE** — *Coat the threaded part of the tie rod with an anti-corrosion compound upon completion of front axle adjusting.*

**356B/C Front** — Turn steering wheel to center position (wheels straight ahead). Adjust short tie rod so left wheel shows +10' toe-in (pressed). Adjust long tie rod so right wheel shows +10' toe-in (pressed).

**911 & 912 Rear (1965-72)** — Loosen retaining bolt nuts and eccentric bolt nuts at the rear axle flange. Turn toe eccentric so that specifications are within limits. If in cases requiring extreme adjustment the camber eccentric is in the extreme left or right of the oblong cavity in the radius arm then the camber eccentric should be turned around by 180° to preclude possible binding. **NOTE** — *The camber eccentric must always point down at the time of installation to preclude binding when toe-in adjustments are made.* Tighten retaining bolt nuts and eccentric bolt nuts. Recheck rear wheel camber and toe.

**914 Rear (1970-72)** — Slightly loosen control arm bearing bolts and push control arm outside (back or forth) as required. Move until specifications are within limits. Tighten bolts.

**356B/C Rear (1963-65)** — Loosen bolts on bearing flange of axle tube and stop screw. Move axle tube until specifications are within limits. Tighten stop screw and screws on bearing flange.

### TORSION BAR ADJUSTMENT

**911 & 912 Rear (1965-72)** — Place torsion bar into transverse tube with inner end splines first. Slip radius arm onto outer end splines of torsion bar. Place suitable tool (VW 261) onto the lower edge of door cavity in body and adjust clinometer so bubble in glass tube is in center. Check adjustment of free hanging radius arm using suitable tool (VW 261). If not within specifications adjust by turning torsion bar and radius arm in opposite directions to change angle. Adjustments of both radius arms must be the same if camber specifications are to be within limits.

**356B/C Rear (1963-65)** — Using suitable tool (VW 245a) check horizontal position of vehicle on floor tunnel and note reading to be taken into account in setting radius arm. Install torsion bar so that splines engage socket in frame. Install radius arm on outer end of torsion bar. Place suitable tool (VW 245a) on unloaded radius arm. Adjust pendulum on tool so that level is horizontal. If actual angle of radius arm is not within specifications, adjust by moving torsion bar and radius arm in opposite directions to change angle. The adjustment of both radius arms should be identical. When adjusting one side, always check other side. Correct if necessary.

### Torsion Bar Specifications

Model Application	Setting
911 & 911S Coupe & Targa (1965-67) .....	36°
911 All Models (1968) .....	39°
911 All Models (1969-72) .....	36°30'-37°
912 Coupe & Targa (1965-67) .....	33°
912 All Models (1968) .....	36°
912 All Models (1969-72) .....	33°30'-34°
356B/C W/O Compensating Spring	
Coupe & Cabriolet/Hardtop .....	16°30'
Roadster .....	14°30'
356B/C W/Compensating Spring	
Coupe & Cabriolet/Hardtop .....	15°30'
Roadster .....	13°30'

### WHEEL ALIGNMENT SPECIFICATIONS

R — Right Rr — Rear Man — Manual Steering Pwr — Power Steering	F — Front L — Left	Steering Axis Inclin.	Caster (Degrees)	Camber (Degrees)	Toe-In	Toe-Out On Turns	
						Inner	Outer
911 & 912 All Models Front (1965-69) (1970-72) Rear (1965-67) (1968-72)		.....	6°45'±45'①	0°±20'②	+40'③	.....	.....
		.....	6°5'±15'	0°±20'②	+40'③	.....	.....
		.....	.....	-55'-1°35'②	0°±10'④	.....	.....
		.....	.....	-30'-1°10'②	0°±10'④	.....	.....
914 All Models Front (1970-72) Rear (1970-72)		.....	6°±30'	0°±20'②	+20'±10'④	.....	.....
		.....	.....	-30'±20'	0°+15'④	.....	.....
356B/C All Models Front (1963-65) Rear (1963-65)		.....	5°±30'③	0°40'±30'③	5'-25'④	.....	.....
		.....	.....	+45'±35'③	0°±10'	.....	.....

① — Max. deviation left to right 30'.

② — Max. deviation left to right 20'.

③ — Total both wheels.

④ — Per wheel.

⑤ — Values should be equal for both wheels.