

Wheel Alignment

SAAB

ADJUSTMENT

TIRE INFLATION (COLD)

Before attempting to check or adjust wheel alignment, make sure tires are properly inflated. Refer to manufacturer's specifications given in owner's manual.

CASTER

To adjust caster, add or remove shims under upper control arm bushing brackets. Changing shims from front to rear bracket increases caster angle. Moving shims from rear to front decreases caster angle.

NOTE — Same shim thicknesses removed from front must be placed under rear and vice versa. Change in caster also affects camber.

CAMBER

To adjust camber, add or remove shims under upper control arm bushing brackets. Increasing shims under both brackets reduces camber angle and removing shims under both increases camber.

NOTE — Always add or remove same thickness of shims at front and rear or caster angle will be affected.

TOE-IN

With wheels in straight-ahead position, loosen steering link (tie rod) lock nut and turn adjustable sleeve until correct toe-in is obtained. Tighten lock nuts and recheck toe-in.

NOTE — After adjustment of toe-in, measurement "A" (Fig. 1) of tie rod must not exceed 1.0" (25 mm) or 1.02" (26 mm) for power steering models. For tie rods opposite each other, the difference between measurements "A" must not exceed .08" (2 mm).

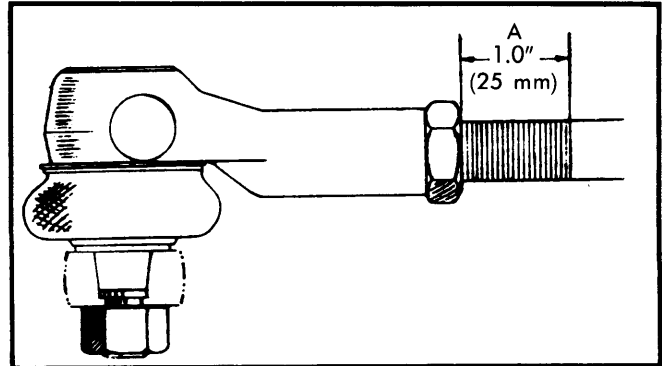


Fig. 1 View Showing Tie Rod Length Measurement

SUBARU

ADJUSTMENT

TIRE INFLATION (COLD)

Before attempting to check or adjust wheel alignment, make sure tires are properly inflated. Refer to manufacturer's specifications given in owner's manual.

RIDING HEIGHT

Front (All Models) — Place vehicle on level surface. Measure distance between ground and front end of transverse link attaching bolt. Adjust clearance by turning nuts (at same time) on strut until specified height is obtained. See *Riding Height Specifications table*.

Rear (4-WD) — Place vehicle on level surface. Measure the distance between ground and center of outer end face of torsion bar on BRAT and between ground and lowest point of crossmember pipe on all others. Adjust clearance by turning adjusting bolt clockwise to increase riding height and counter-clockwise to decrease height. See *Riding Height Specifications chart*.

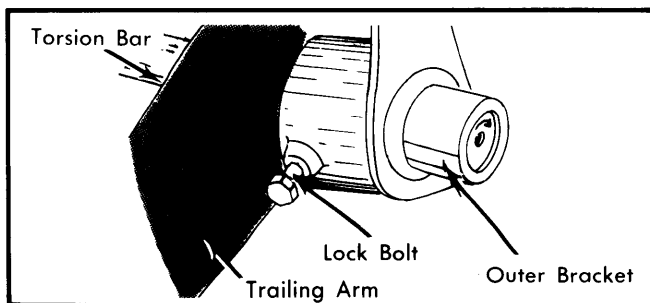


Fig. 1 Installed View of Torsion Bar Outer End Attachment

NOTE — Adjusting bolt is accessible through service hole located in vehicle floor.

Rear (2-WD) — 1) Riding height is adjusted by changing the angle between trailing arm center line and markings on outer bracket. See Fig. 1. The trailing arm and outer bracket have full serrations around the torsion bar mounting hole, while torsion bar has 1 missing serration, thus allowing torsion bar to be inserted at any angle.

2) To increase riding height, turn outer end and inner end of torsion bar in direction opposite to cast-in arrow on outer end of bar. Height changes .20" (5 mm) with each shift in serration.

3) Initially set vehicle rear riding height by inserting torsion bar with its missing serrations aligned with markings on outer bracket surface and trailing arm inner surface. This should equal the approximate riding height. See *Riding Height Specifications chart*.

4) Measure riding height from center of trailing arm bushing to ground and determine numbers of teeth to be shifted on inner and/or outer serrations.

NOTE — Vehicle must be in unloaded condition.

5) At top of shock absorber, remove bolt attaching shock to body. Raise rear of vehicle and remove wheel. Remove lock bolt of outer bushing. Remove 3 bolts connecting outer and inner arms with brake drum supported by a jack to prevent brake hose damage.

6) Place alignment mark on outer bushing, crossmember and torsion bar for reassembly reference. Measure vertical distance between end of outer arm and vehicle body. Pull out outer arm and torsion bar until inner serration is completely disengaged.

SUBARU (Cont.)

Riding Height Specifications

Application	Front In. (mm)	Rear In. (mm)
1600 & 1800 (2-WD) Station Wagon	9.65-10.63 (245-270)	11.02-11.81 (280-300)
All Others	9.45-10.43 (240-265)	10.24-11.02 (260-280)
1600 & 1800 (4-WD) Hatchback	10.43-11.42 (265-290)	12.60-13.39 (320-340)
Station Wagon	10.63-11.61 (270-295)	13.19-13.98 (335-355)
BRAT	9.84-10.83 (250-275)	13.58-14.37 (345-365)

7) Rotate torsion bar and outer arm to shift matching of inner serration by appropriate pitches and engage inner serration with crossmember. Pull outer arm from torsion bar and rotate outer arm in opposite direction to shift matching of outer serration by appropriate pitches.

NOTE — DO NOT disengage inner serration of torsion bar from crossmember.

8) Install outer arm to torsion bar and crossmember, then measure vertical distance between end of outer arm and vehicle body. Change in this distance shows half of change in riding height clearance caused by adjustment.

9) Install 3 bolts connecting outer and inner arms. Repeat adjustment procedure on opposite wheel. Install wheels and lower vehicle. Install shock absorbers and outer bushing lock bolt. Check rear riding height adjustment. If correct, tighten lock bolt on outer bushing. If incorrect, repeat adjustment on each wheel.

CASTER

Caster angle is not adjustable. If angle is not to specifications, inspect suspension for wear or damage and repair or replace components as necessary.

CAMBER

Camber angle is not adjustable. If angle is not to specifications, inspect suspension for wear or damage. Repair or replace components as necessary.

TOE-IN

If toe-in is not within specifications, loosen both left and right tie rod lock nuts. Turn both tie rods an equal amount until specified toe-in is obtained.

TOYOTA

ADJUSTMENT

TIRE INFLATION (COLD)

Before attempting to check or adjust wheel alignment, make sure tires are properly inflated. Refer to manufacturer's specifications given in owner's manual.

CAMBER & CASTER

NOTE — Caster and camber adjustments should always be made in one operation.

Pickup (2-WD) — If camber or caster angles are not within specifications, adjust by adding or removing shims between upper control arm shaft and front suspension crossmember. To increase camber, remove shims from upper control arm shaft bolts in equal amounts. To decrease camber, add shims to upper control arm shaft bolts in equal amounts. To increase caster, add shims to rear side of upper control arm shaft bolt or remove shims from front side. To decrease caster, remove shims from rear side of upper control arm shaft bolt or add shims to front side.

Land Cruiser & Pickup (4-WD) — Camber and caster are not adjustable. If not within specifications, inspect and repair or replace front suspension components as necessary.

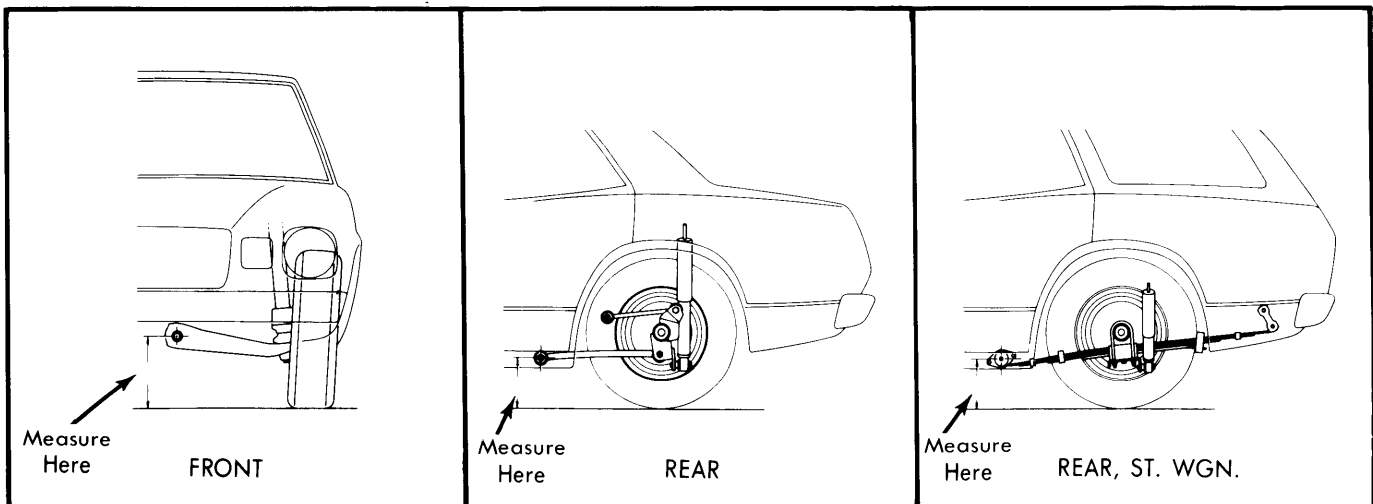


Fig. 1 Riding Height Measurement Points for All Models — Except Pickup & Land Cruiser