

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

1996 Toyota Supra

1995-96 WHEEL ALIGNMENT
Toyota - Specifications & Procedures

Supra

RIDING HEIGHT ADJUSTMENT

Before adjusting alignment, measure riding height. Riding height must be measured with vehicle on level floor and tires properly inflated. Bounce vehicle several times to allow suspension to settle.

Visually inspect vehicle for signs of abnormal height from front to rear or side to side. Check passenger and luggage compartments for extra heavy items, and remove them if present. If riding height is not within specification, inspect and repair or replace suspension components. See RIDING HEIGHT SPECIFICATIONS.

RIDING HEIGHT MEASUREMENT POINTS

Measure front riding height from ground to center of lower suspension arm mounting bolt. Measure rear riding height from ground to center of No. 2 lower suspension arm mounting bolt.

RIDING HEIGHT SPECIFICATIONS

NOTE: See RIDING HEIGHT SPECIFICATIONS table.

RIDING HEIGHT SPECIFICATIONS TABLE

Application (1)	Front		Rear	
	In.	(mm)	In.	(mm)
Non-Turbo	7.28	(185)	9.84	(250)
Turbo	7.36	(187)	9.88	(251)

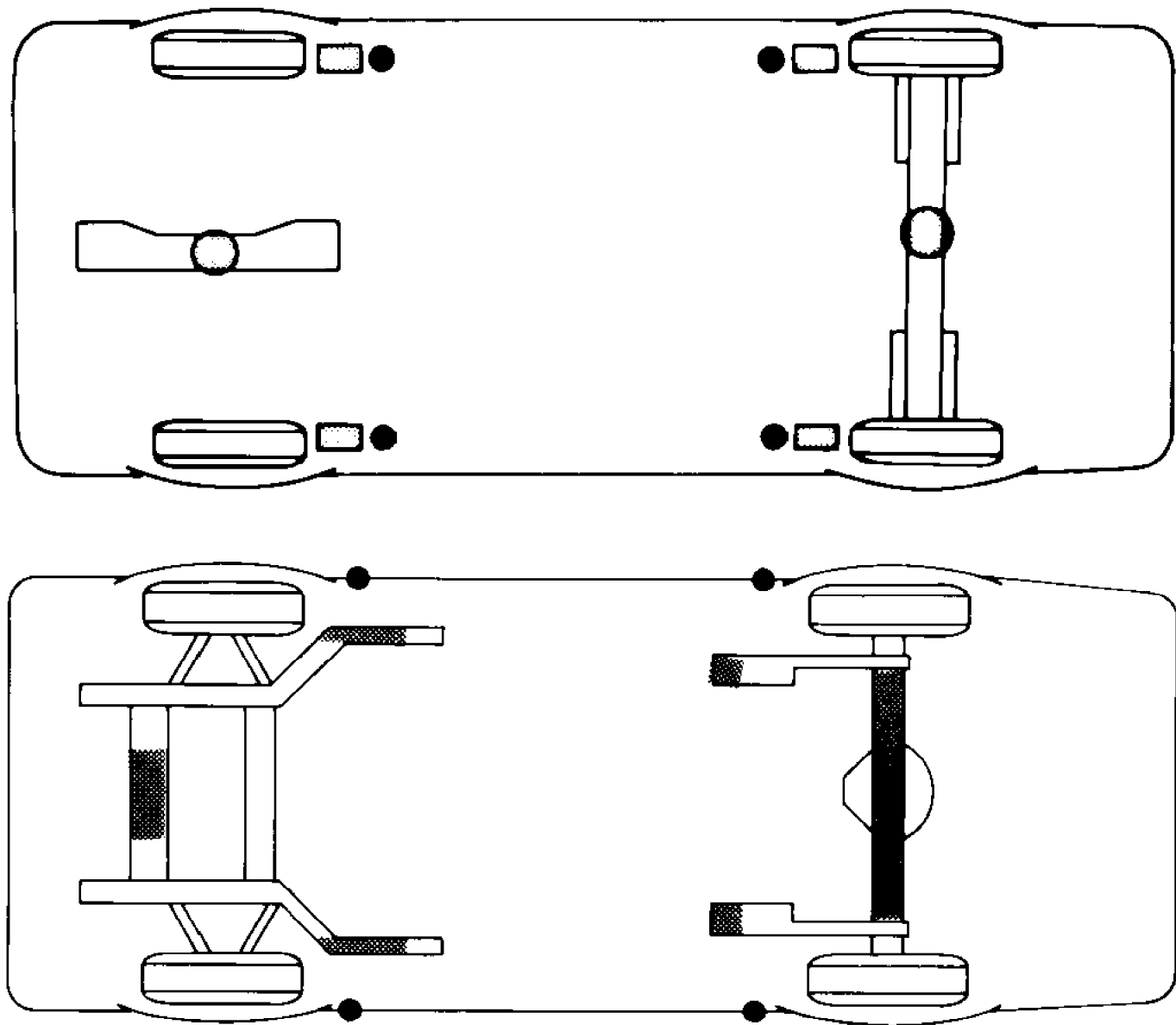
JACKING & HOISTING

FLOOR JACK

To raise vehicle, place floor jack under front suspension crossmember and/or rear differential carrier.

EMERGENCY JACKING

Place emergency jack on reinforced support points of side body panel (between front and rear wheels). Safety stands may also be placed at these points. See Fig. 1.



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Fig. 1: Identifying Jacking & Hoisting Support Points (Typical)
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

LIFTING VEHICLE WITH HOIST

Place lift blocks on reinforced support points of side body panel (between front and rear wheels). Safety stands may also be placed at these points. See Fig. 1.

WHEEL ALIGNMENT PROCEDURES

TURNING ANGLE

Turn steering wheel fully right and then left, and observe turning radius on both wheels. If turning radius is incorrect, inspect and replace any damaged or worn front suspension components. See

WHEEL ALIGNMENT SPECIFICATIONS.

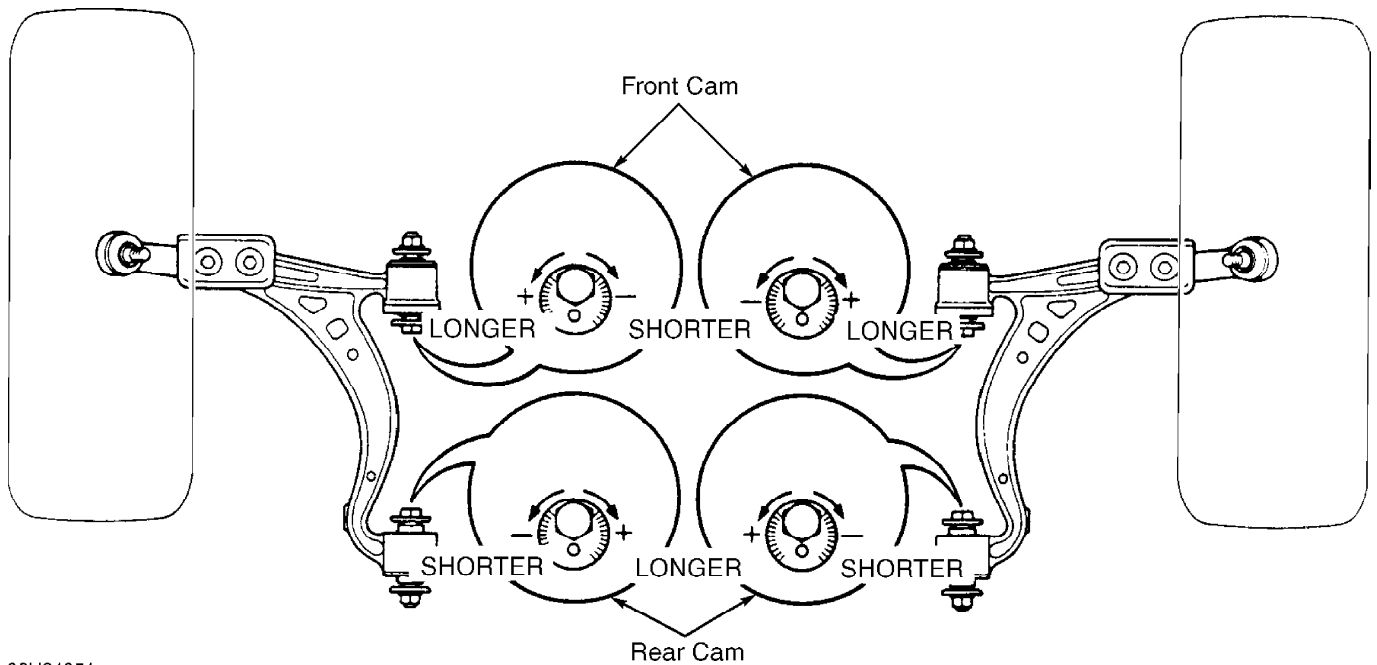
CAMBER ADJUSTMENT

Front Suspension

1) Check tires for wear and improper inflation. Inspect front wheel bearings for looseness. Check wheel runout. Wheel runout should not exceed .055" (1.4 mm).

2) Inspect front suspension components for looseness. Ensure front shock absorbers work properly. Measure vehicle riding height. See RIDING HEIGHT ADJUSTMENT.

3) Measure camber of both front wheels. If camber is not within specification, remove engine undercover. Remove front lower arm bracket strut. Loosen adjuster cam lock nuts. Rotate adjuster cams as necessary. See WHEEL ALIGNMENT SPECIFICATIONS. See Fig. 2. Tighten lock nuts to specification. See TORQUE SPECIFICATIONS.

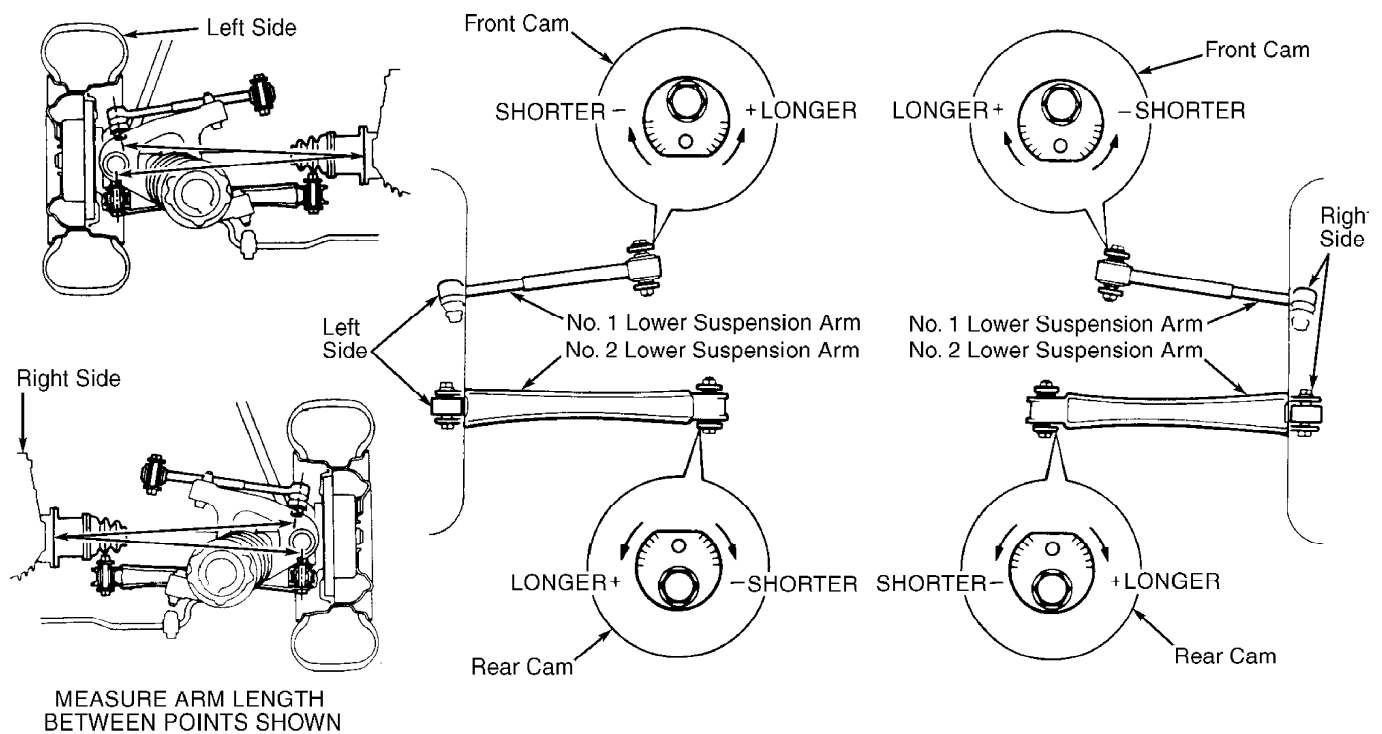


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Fig. 2: Adjusting Front Camber & Caster
Courtesy of Toyota Motor Sales, U.S.A., Inc.

Rear Suspension

Check tires for wear and improper inflation. Ensure lengths of left and right No. 1 and No. 2 lower suspension arms are equal. See Fig. 3. Check camber of both rear wheels. See WHEEL ALIGNMENT SPECIFICATIONS. If camber is not within specification, adjust camber by rotating adjuster cams.



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 Fig. 3: Identifying Rear Camber & Toe Adjuster Cams
 Courtesy of Toyota Motor Sales, U.S.A., Inc.

CASTER ADJUSTMENT

Front Suspension

1) Measure riding height, camber, and steering axis inclination. See WHEEL ALIGNMENT SPECIFICATIONS. If adjustment is necessary, see appropriate adjustment procedure.

2) Measure caster of both front wheels. If caster is not within specification, remove engine undercover. Remove front lower arm bracket strut. Loosen adjuster cam lock nuts. Rotate adjuster cams as necessary. See WHEEL ALIGNMENT SPECIFICATIONS. See Fig. 2. Tighten lock nuts to specification. See TORQUE SPECIFICATIONS.

STEERING AXIS/KING PIN INCLINATION

Measure riding height, camber, and caster. See WHEEL ALIGNMENT SPECIFICATIONS. If adjustment is necessary, see appropriate adjustment procedure. Measure steering axis inclination of both front wheels. If steering axis inclination is not within specification, inspect wheel bearing for looseness, or replace steering knuckle. See WHEEL ALIGNMENT SPECIFICATIONS. Steering axis/king pin inclination is not adjustable.

TOE-IN ADJUSTMENT

Front Suspension

Measure riding height, camber, steering axis inclination, and caster. See WHEEL ALIGNMENT SPECIFICATIONS. If adjustment is necessary, see appropriate adjustment procedure. Set front wheels to straight-ahead position. Bounce both ends of vehicle several times to settle suspension. Measure toe-in. If necessary, adjust toe-in by changing length of tie rods.

Rear Suspension

1) Measure rear camber. See CAMBER ADJUSTMENT under WHEEL ALIGNMENT PROCEDURES. Bounce both ends of vehicle several times to settle suspension.

2) Measure toe-in. If toe-in is not within specification, adjust by rotating adjuster cams. See WHEEL ALIGNMENT SPECIFICATIONS. See Fig. 3.

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS TABLE

Application	Ft. Lbs. (N.m)
Front Adjuster Cam Lock Nuts	167 (226)
Rear Adjuster Cam Lock Nuts	136 (184)
Tie Rod Lock Nuts	41 (56)
Wheel Lug Nuts	76 (103)

WHEEL ALIGNMENT SPECIFICATIONS

WHEEL ALIGNMENT SPECIFICATIONS TABLE

Application	Preferred	Range
Non-Turbo		
Camber (1)		
Front	-0.33	-0.83 To 0.17
Rear	-1.58	-2.08 To -1.08
Caster (1)	3.33	2.83 To 3.83
Steering Axis		
Inclination (1)	9.58
Toe-In (2)		
Front	0 (0) ...	-0.04 To 0.04 (-1 To 1)
Rear	0.12 (3) ...	0.08 To 0.16 (2 To 4)
Toe-In (1)		
Front	0	-0.1 To 0.1
Rear	0.3	0.2 To 0.4
Toe-Out On Turns (1)		
Inner	35
Outer	30.75
Turbo		
Camber (1)		
Front	-0.5	-1 To 0
Rear	-1.5	-2 To -1
Caster (1)	3.5	3 To 4
Steering Axis		
Inclination (1)	9.75
Toe-In (2)		
Front	0 (0) ...	-0.04 To 0.04 (-1 To 1)
Rear	0.12 (3) ...	0.08 To 0.16 (2 To 4)
Toe-In (1)		
Front	0	-0.1 To 0.1
Rear	0.3	0.2 To 0.4
Toe-Out On Turns (1)		
Inner	34.92
Outer	30.58

(1) - Measurement in degrees.
 (2) - Measurement in inches (mm).

