

WHEEL ALIGNMENT (4WD)

1. MAKE FOLLOWING CHECKS AND CORRECT ANY PROBLEMS

- (a) Check the tires for wear and proper inflation pressure.

Cold tire inflation pressure:

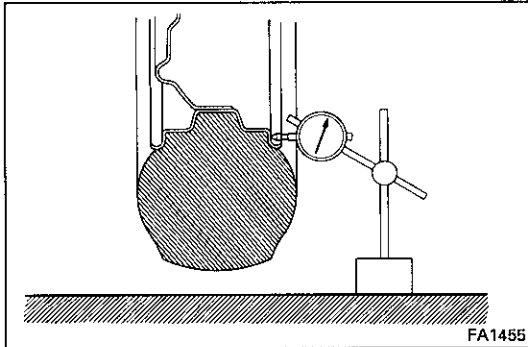
kg/cm² (psi, kPa)

Tire size	Front	Rear
195 / 75 R 16C	3.0 (44, 300)	3.75 (54, 375)

- (b) Check the wheel runout.

Wheel runout: 1.2 mm (0.047 in.) or less

- (c) Check the front wheel bearings for looseness.
 (d) Check the front suspension for looseness.
 (e) Check the steering linkage for looseness.
 (f) Check the ball joint for excessive looseness.
 (g) Check that the shock absorbers work properly by using the standard bounce test.



2. MEASURE VEHICLE HEIGHT

Vehicle height: See page A-19

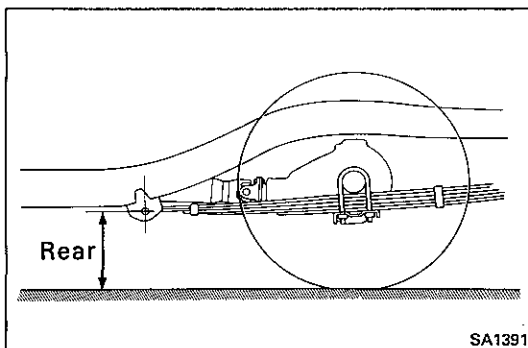
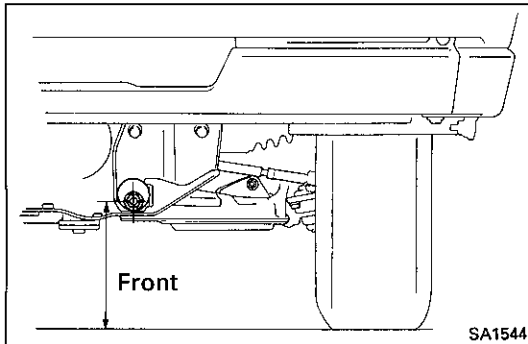
Measuring point:

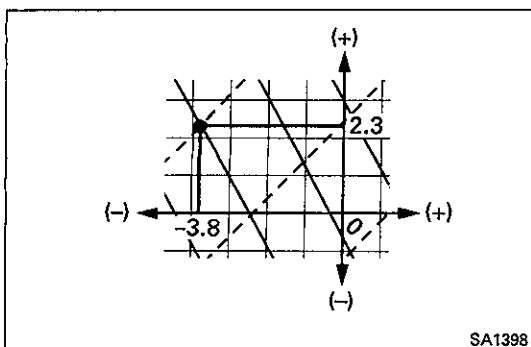
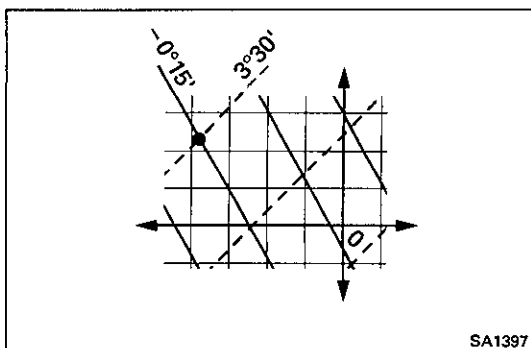
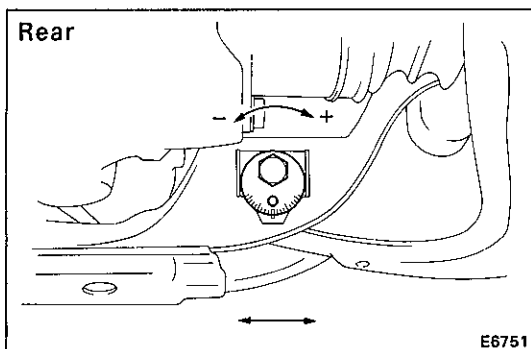
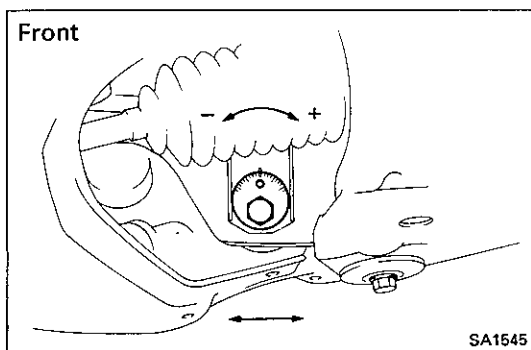
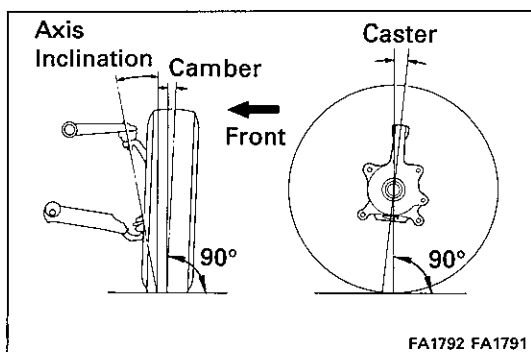
Front	Height at center of tip of front adjusting cam bolt
Rear	Height of center of rear leaf spring front bush

If the vehicle height is not standard, try to adjust it by pushing down on or lifting the body.

If it still not correct, check for bad springs or suspension parts.

HINT: Before inspecting wheel alignment, adjust vehicle height to specification.





FRONT WHEEL ALIGNMENT

1. INSTALL WHEEL ALIGNMENT EQUIPMENT

Follow the specific instructions of the equipment manufacturer.

2. CHECK CAMBER, CASTER AND STEERING AXIS INCLINATION

Inspection standard:

Wheel base	Camber	Caster	Steering axis inclination
Standard	0°05' ± 45' (0.08° ± 0.75°)	2°40' ± 45' (2.67° ± 0.75°)	12°35' ± 45' (12.58° ± 0.75°)
Long	0°05' ± 45' (0.08° ± 0.75°)	2°45' ± 45' (2.75° ± 0.75°)	12°35' ± 45' (12.58° ± 0.75°)

3. ADJUST CAMBER, CASTER AND STEERING AXIS INCLINATION

If camber and/or caster are not within specification, using adjustment chart, adjust by front and/or rear adjusting cams.

Adjustment standard:

Wheel base	Camber	Caster	Steering axis inclination
Standard	0°05' ± 30' (0.08° ± 0.5°)	2°40' ± 30' (2.67° ± 0.5°)	12°35' ± 30' (12.58° ± 0.5°)
Long	0°05' ± 30' (0.08° ± 0.5°)	2°45' ± 30' (2.75° ± 0.5°)	12°35' ± 30' (12.58° ± 0.5°)

If the steering axis inclination is not within the specification after camber and caster have been correctly adjusted, recheck the steering knuckle and front wheel for bending or looseness.

How to Read the Chart

(a) Mark the measured alignment values on the adjustment chart.

Example: Camber - 0°15' (-0.25°)

Example: Caster 3°30' (3.5°)

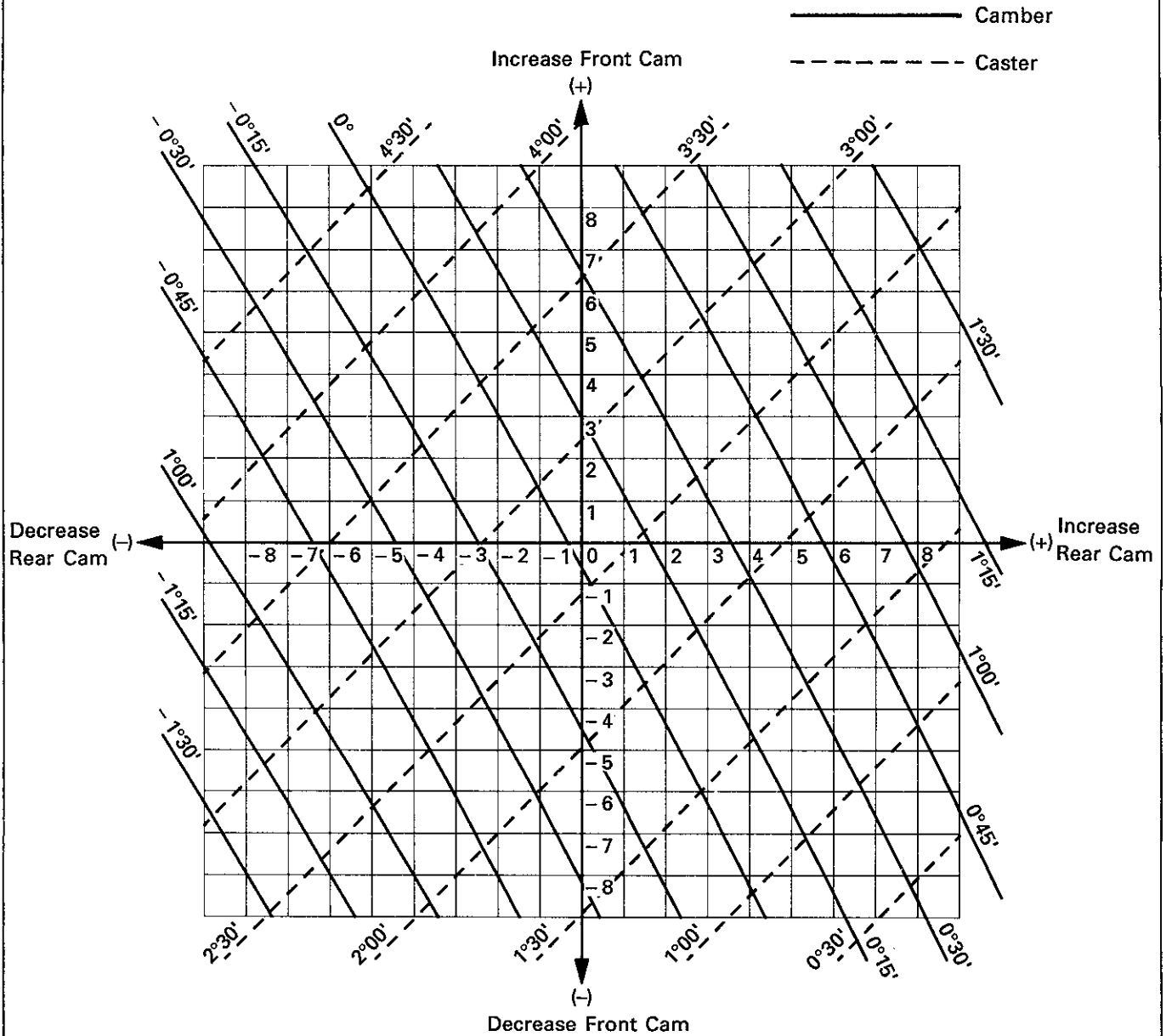
(b) To calculate the amounts by which the front and/or rear cams are to be adjusted, read from the adjustment chart the distance from the center of the chart to the mark you have made, as shown in the illustration.

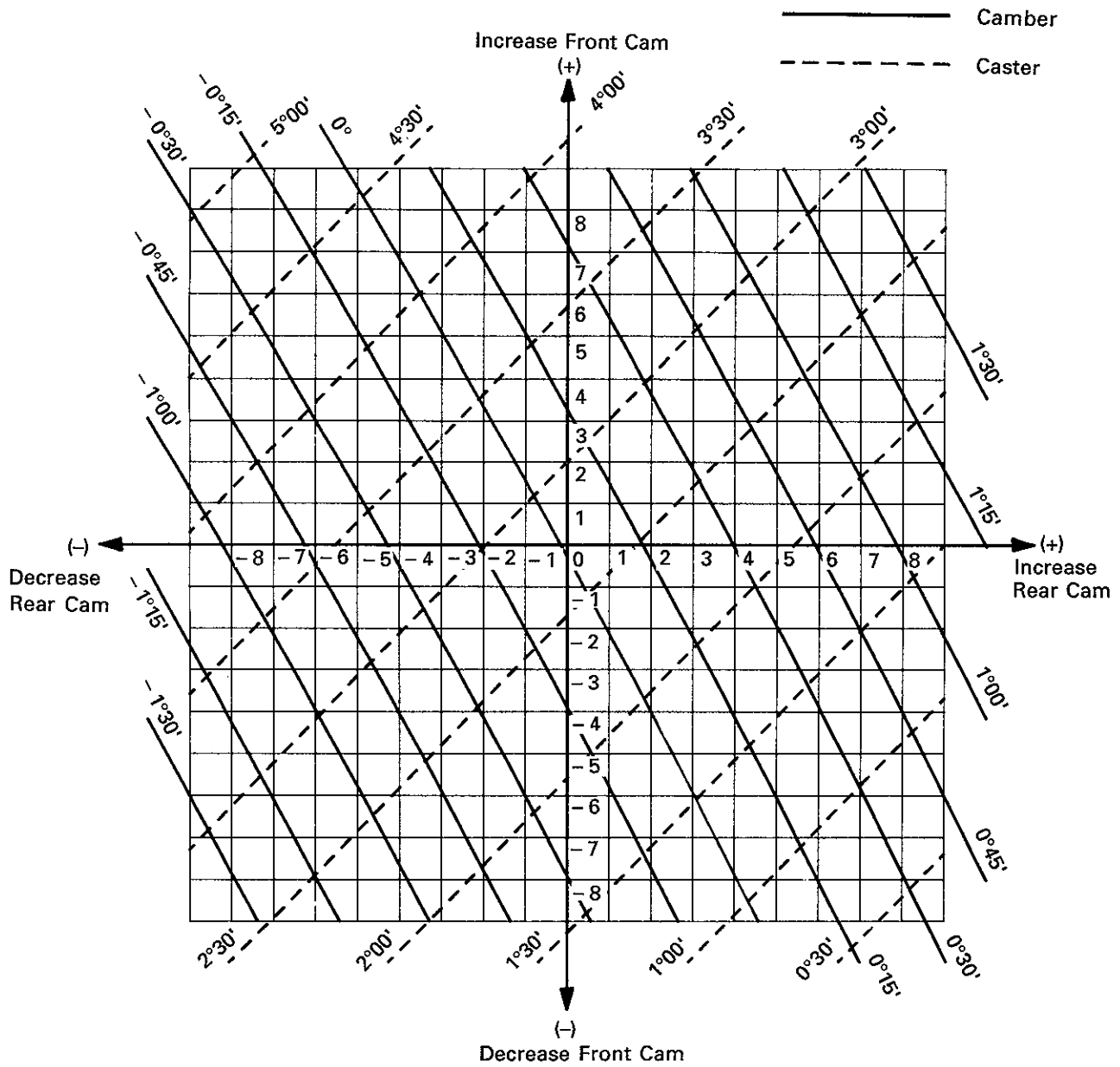
Example: Front cam + 2.3

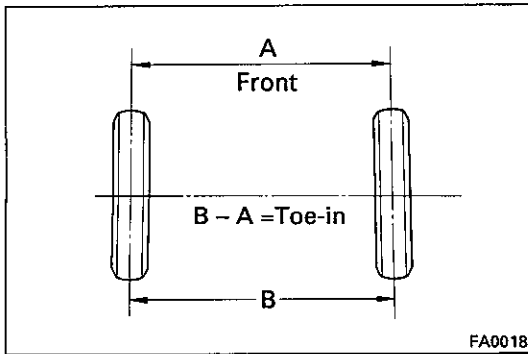
Rear cam - 3.8

ADJUSTMENT CHART

[Standard Wheel Base]



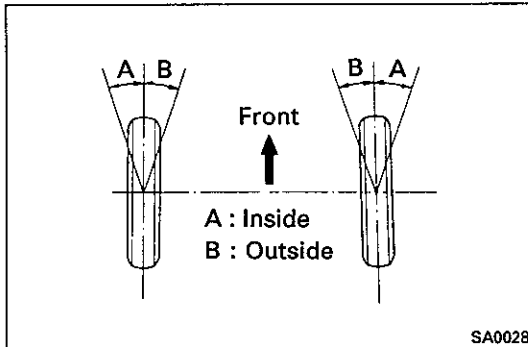
ADJUSTMENT CHART
[Long Wheel Base]

**4. INSPECT TOE-IN**

(See page SA-4)

Inspection standard: $0 \pm 2 \text{ mm}$ ($0 \pm 0.08 \text{ in.}$)**5. ADJUST TOE-IN**

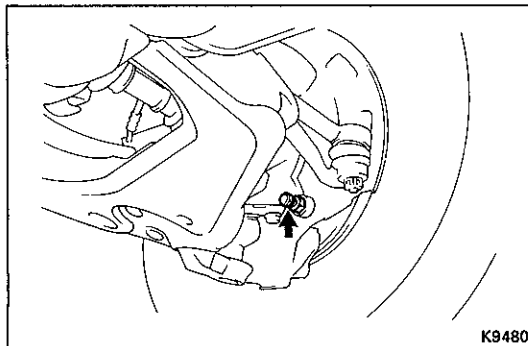
(See page SA-5)

Adjustment standard: $0 \pm 1 \text{ mm}$ ($0 \pm 0.04 \text{ in.}$)**6. INSPECT WHEEL ANGLE**

Remove the caps of the knuckle stopper bolts and check the wheel angles.

Wheel angle:**Inside wheel** $32^\circ 20' \begin{smallmatrix} +0^\circ \\ -3^\circ \end{smallmatrix}$ ($32.33^\circ \begin{smallmatrix} +0^\circ \\ -3^\circ \end{smallmatrix}$)**Outside wheel** $30^\circ 10' \begin{smallmatrix} +0^\circ \\ -3^\circ \end{smallmatrix}$ ($30.17^\circ \begin{smallmatrix} +0^\circ \\ -3^\circ \end{smallmatrix}$)

If maximum steering angles differ from standard value, adjust the wheel angle.

**7. ADJUST WHEEL ANGLE**

- Remove the caps of the knuckle stopper bolt.
- Loosen the lock nuts.
- Fully screw in the knuckle stopper bolts.
- If the wheel angle is different on the left and right wheels, adjust the tie rod length to remove the difference in wheel angle.
- Fully turn the steering wheel and loosen the knuckle stopper bolt until it touches the lower arm.
- Torque the lock nut.

Torque: 450 kg-cm (33 ft-lb, 44 N-m)

- Install the caps of the knuckle stopper bolt.
- Inspect toe-in.

If the wheel angle still cannot be adjusted within limits, inspect and replace damaged or worn steering parts.

8. CHECK SIDE SLIP (REFERENCE ONLY)**Side slip:** 3.0 mm/m (0.118 in./3.3 ft) or less