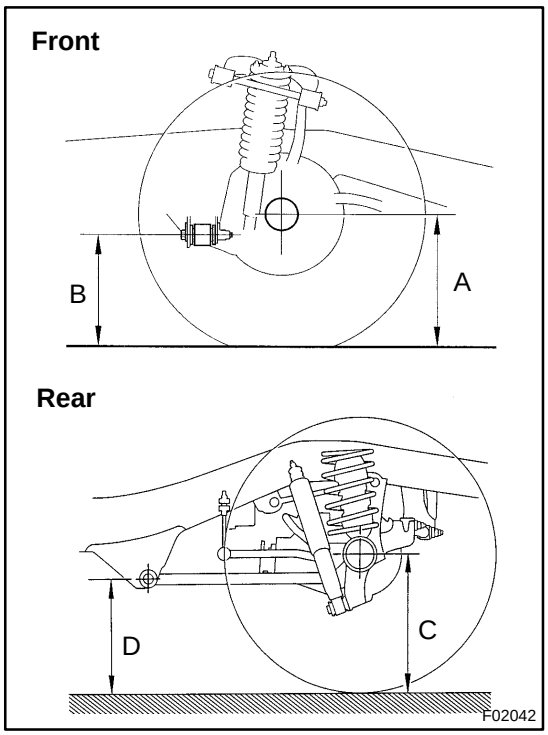


FRONT WHEEL ALIGNMENT

SA04U-03

INSPECTION

1. MEASURE VEHICLE HEIGHT

Vehicle height:

2WD:

Front	A - B: 72.2 mm (2.843 in.)
Rear	C - D: 52.0 mm (2.047 in.)

4WD:

Front	A - B: 69.9 mm (2.752 in.)
Rear	C - D: 50.7 mm (1.996 in.)

Measuring points:

A: Ground clearance of spindle center

B: Ground clearance of front adjusting cam bolt center

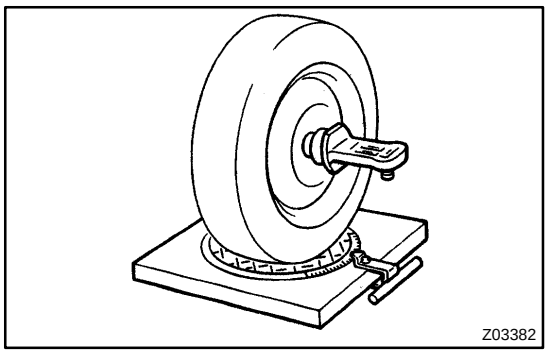
C: Ground clearance of rear axle shaft center

D: Ground clearance of lower control arm front bushing center

NOTICE:

Before inspecting the wheel alignment, adjust the vehicle height to the specification.

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



2. INSTALL CAMBER-CASTER-KINGPIN GAUGE OR ONTO WHEEL ALIGNMENT TESTER

Follow the specific instructions of the equipment manufacturer.

3. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION

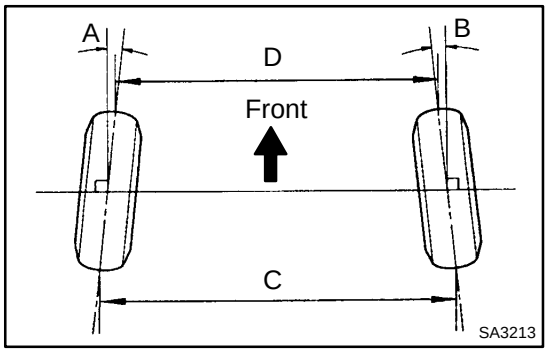
2WD:

Camber Left-right error	-0 °15' ± 45' (-0.25° ± 0.75°) 30' (0.5°) or less
Caster Left-right error	3°15' ± 45' (3.25° ± 0.75°) 30' (0.5°) or less
Steering axis inclination Left-right error	11°00' ± 45' (11° ± 0.75°) 30' (0.5°) or less

4WD:

Camber Left-right error	-0 °15' ± 45' (-0.25° ± 0.75°) 30' (0.5°) or less
Caster Left-right error	3°05' ± 45' (3.06° ± 0.75°) 30' (0.5°) or less
Steering axis inclination Left-right error	11°00' ± 45' (11.00° ± 0.75°) 30' (0.5°) or less

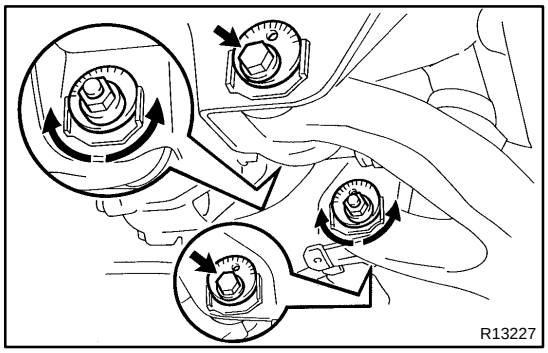
If the steering axis inclination is not within the specification, after the camber and caster have correctly adjusted, recheck the steering knuckle front wheel for bearing or looseness.



4. INSPECT TOE-IN

Toe-in (total)	A + B: 0°12' ± 12' (0.2° ± 0.2°) C - D: 2 ± 2 mm (0.08 ± 0.08 in.)

If the toe-in is not within the specification, adjust the rack ends.



5. ADJUST CAMBER AND CASTER

NOTICE:

After the camber has been adjusted, inspect the toe-in.

(a) Loosen the front and/or rear adjusting cam nuts.

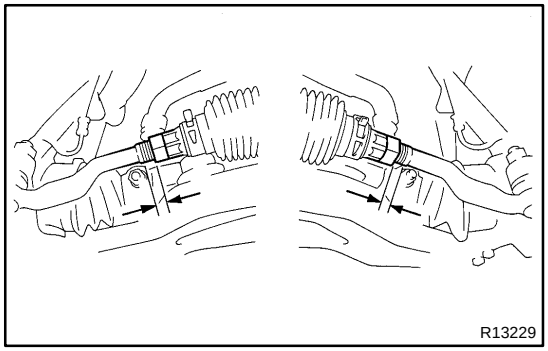
(b) Adjust the camber and caster by front and/or rear adjusting cams (See adjustment chart).

HINT:

Try to adjust the camber and caster to the center value.

(c) Torque the front and/or rear adjusting cam nuts.

Torque: 130 N·m (1,325 kgf·cm, 96 ft·lbf)



6. ADJUST TOE-IN AND WHEEL ANGLE

HINT:

First, check or adjust the lengths of the tie rod ends, then adjust the toe-in.

Tie rod end length left-right error:
1.5 mm (0.059 in.) or less

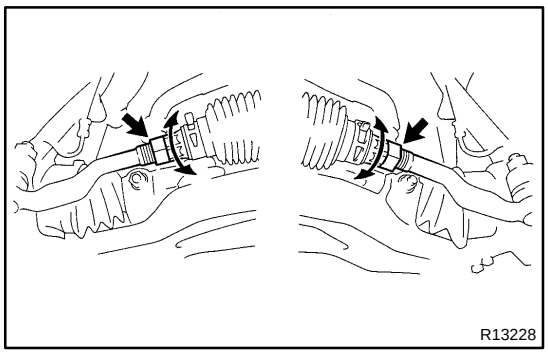
(a) Remove the boot clamps.

(b) Loosen the rack end lock nuts.

(c) Turn the left and right rack ends an equal amount to adjust the toe-in.

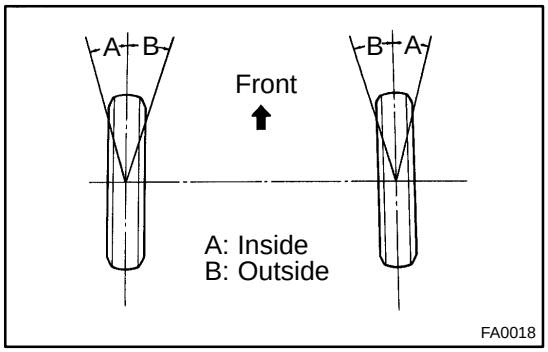
HINT:

Try to adjust the toe-in the center value.



(d) Tighten the rack end lock nuts.
Torque: 55 N·m (560 kgf·cm, 41 ft·lbf)
(e) Place the boot on the seat and clip it.

HINT:
Make sure that the boots are not twisted.

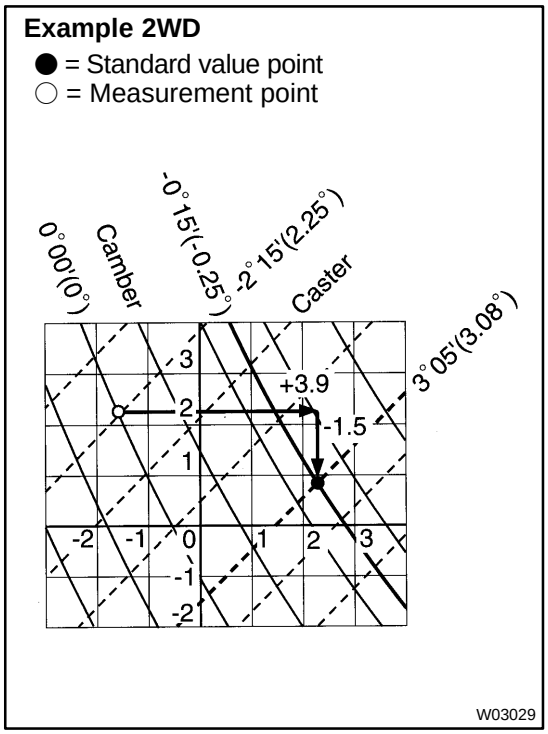


7. INSPECT WHEEL ANGLE

Turn the steering wheel fully, and measure the turning angle.

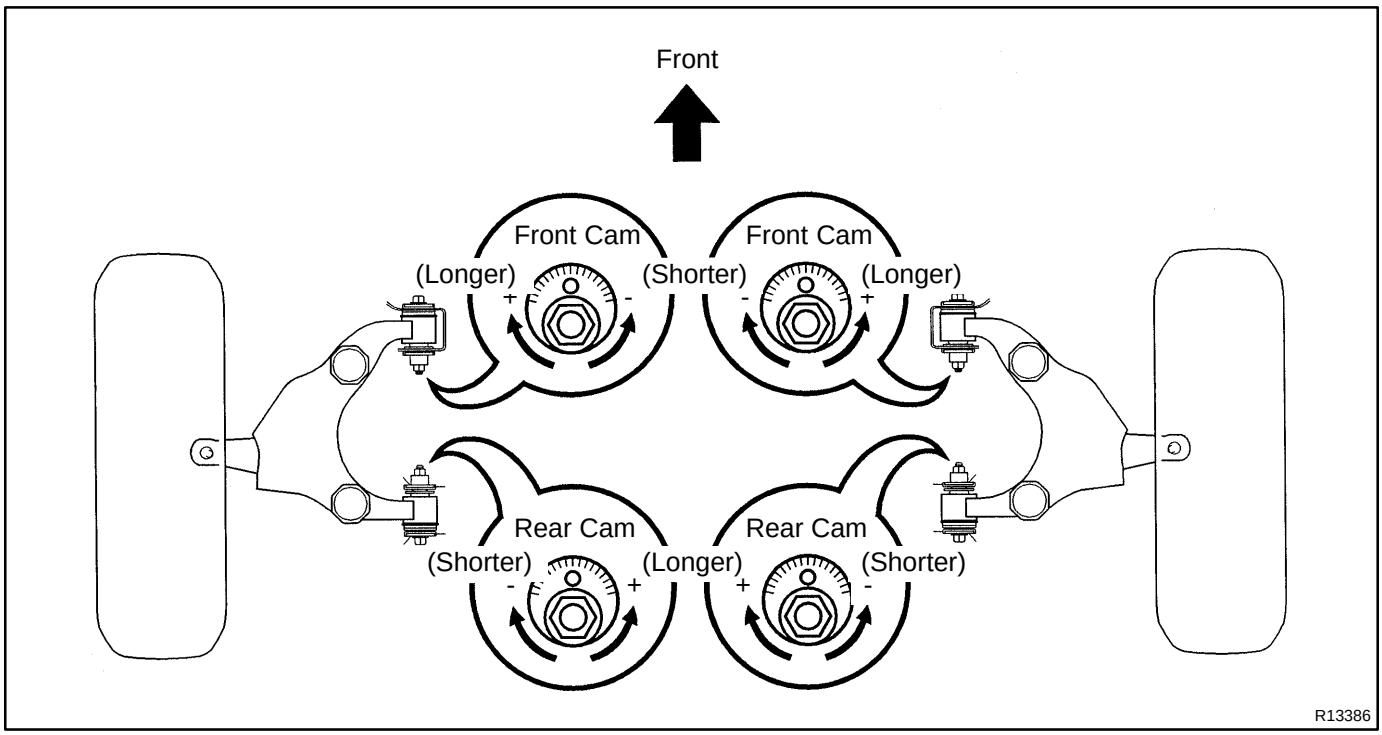
Inside wheel	Outside wheel (Reference)
35° (33° - 36°)	31°

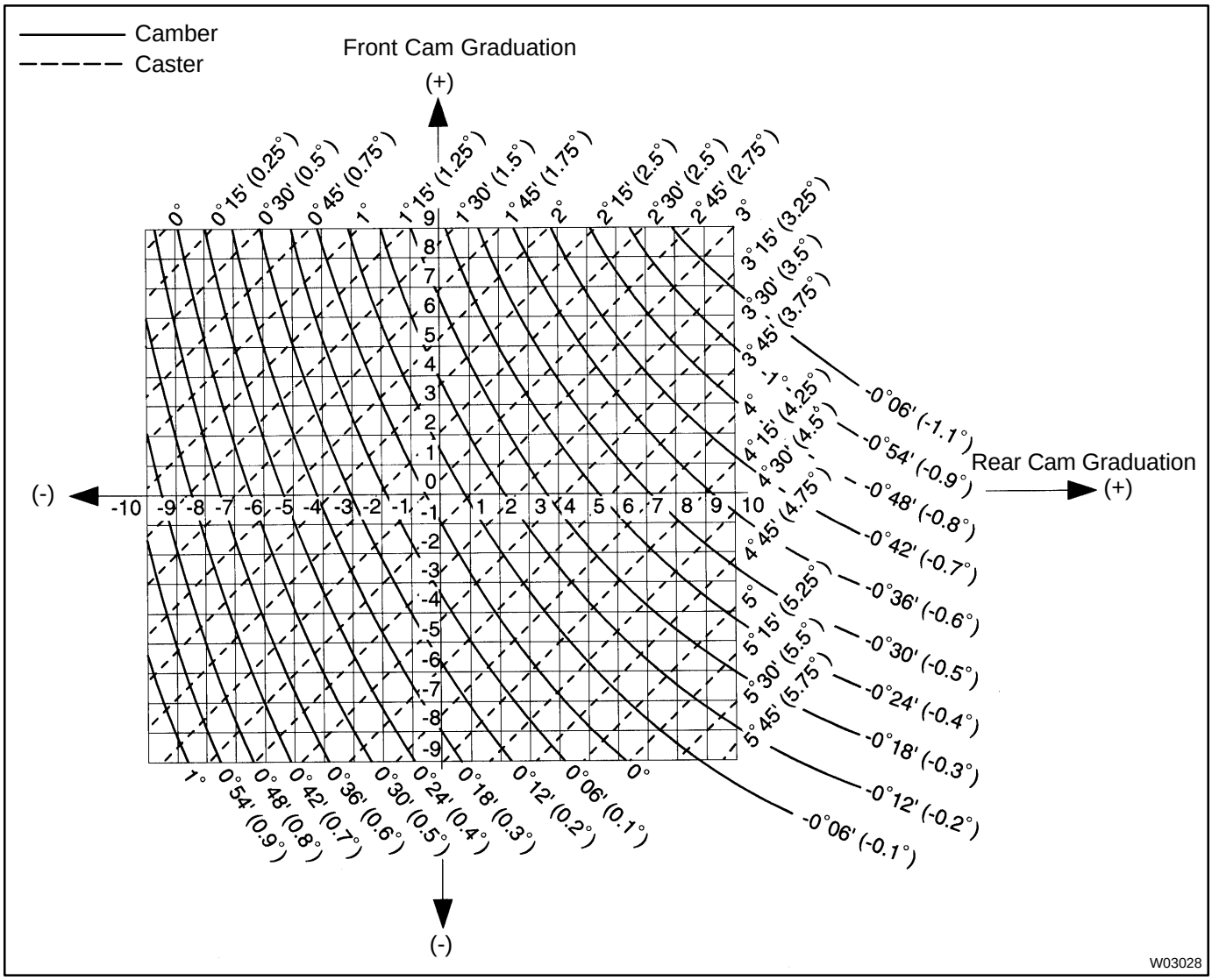
If wheel angle deviates from the specifications, readjust the toe-in and wheel angle within the specifications. At this time, the lengths of the tie rod end may be within less than 1.5 mm (0.059 in.).



8. HOW TO READ ADJUSTMENT CHART

(a) Find the wheel alignment standard value applicable for the tire size.
(b) Mark the selected standard value on the adjustment chart.
Example 2WD:
Camber -0°15' (-0.25°)
Caster 3°05' (3.08°)
(c) Mark on the adjustment chart the alignment values measured at the vehicle height.
Example:
Camber 0°00' (0°)
Caster 2°15' (2.25°)
(d) As shown in the illustration, read the distance from the standard value to the measured value, and adjust the front and/or rear adjusting cams accordingly.
Example:
Front cam -(shorter) 1.5
Rear cam +(Longer) 3.9


Front
Front Cam
(Longer)
(Shorter)
Front Cam
(Shorter)
(Longer)
Rear Cam
(Shorter)
(Longer)
Rear Cam
(Longer)
(Shorter)
R13386


Camber
Caster
Front Cam Graduation
(+)
(-)
Rear Cam Graduation
(+)
(-)
0°
0°15' (0.25°)
0°30' (0.5°)
0°45' (0.75°)
1°
1°15' (1.25°)
1°30' (1.5°)
1°45' (1.75°)
2°
2°15' (2.5°)
2°30' (2.5°)
2°45' (2.75°)
3°
3°15' (3.25°)
3°30' (3.5°)
3°45' (3.75°)
4°
4°15' (4.25°)
4°30' (4.5°)
4°45' (4.75°)
5°
5°15' (5.25°)
5°30' (5.5°)
5°45' (5.75°)
-0°06' (-1.1°)
-0°54' (-0.9°)
-0°48' (-0.8°)
-0°42' (-0.7°)
-0°36' (-0.6°)
-0°30' (-0.5°)
-0°24' (-0.4°)
-0°18' (-0.3°)
-0°12' (-0.2°)
-0°06' (-0.1°)
1° 0°54' (0.9°)
0°48' (0.8°)
0°42' (0.7°)
0°36' (0.6°)
0°30' (0.5°)
0°24' (0.4°)
0°18' (0.3°)
0°12' (0.2°)
0°06' (0.1°)
0°
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