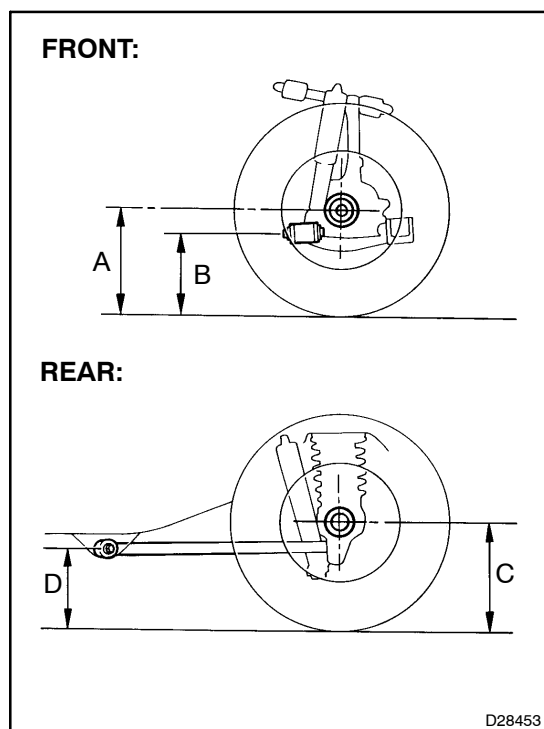


FRONT WHEEL ALIGNMENT ADJUSTMENT

2609J-07

1. INSPECT TIRE (See page 28-1)



2. MEASURE VEHICLE HEIGHT

Vehicle height:

2WD Except air suspension:

	Front A – B	Rear C – D
UZN210L-GKAGKA	113.6 mm (4.47 in.)	71.7 mm (2.82 in.)
UZN210L-GKAZKA	113.5 mm (4.47 in.)	72.3 mm (2.85 in.)
GRN210L-GKAGKA	110.5 mm (4.35 in.)	70.9 mm (2.79 in.)
GRN210L-GKAZKA	110.4 mm (4.35 in.)	71.3 mm (2.81 in.)

2WD Air suspension:

	Front A – B	Rear C – D
UZN210L-GKAZKA	112.7 mm (4.44 in.)	81.4 mm (3.20 in.)

4WD Except air suspension:

	Front A – B	Rear C – D
UZN215L-GKAGKA	99.9 mm (3.93 in.)	71.6 mm (2.82 in.)
UZN215L-GKAZKA	99.8 mm (3.93 in.)	72.1 mm (2.84 in.)
GRN215L-GKAGKA	99.8 mm (3.93 in.)	71.3 mm (2.81 in.)
GRN215L-GKAZKA	99.8 mm (3.93 in.)	71.9 mm (2.83 in.)

4WD Air suspension:

	Front A – B	Rear C – D
UZN215L-GKAZKA	99.2 mm (3.91 in.)	78.9 mm (3.11 in.)

Measuring points:

A: Ground clearance of front wheel center

B: Ground clearance of lower suspension arm No.2 set bolt center

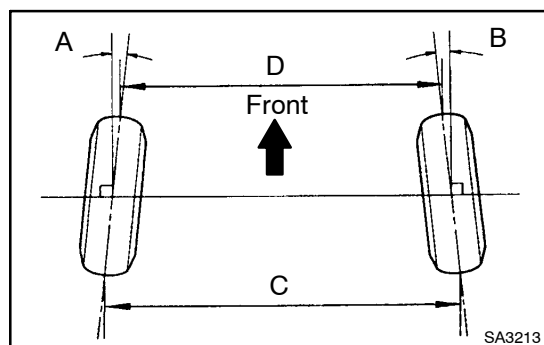
C: Ground clearance of rear wheel center

D: Ground clearance of strut rod set bolt center

NOTICE:

Before inspecting the wheel alignment, adjust the vehicle height to the specified value.

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



3. INSPECT TOE-IN

Toe-in:

Toe-in (total)	A + B: $0^{\circ}05' \pm 0^{\circ}10'$ ($0.08^{\circ} \pm 0.16^{\circ}$) C – D: 1 ± 2 mm (0.04 ± 0.08 in.)
----------------	--

If the toe-in is not within the specified value, adjust it at the rack ends.

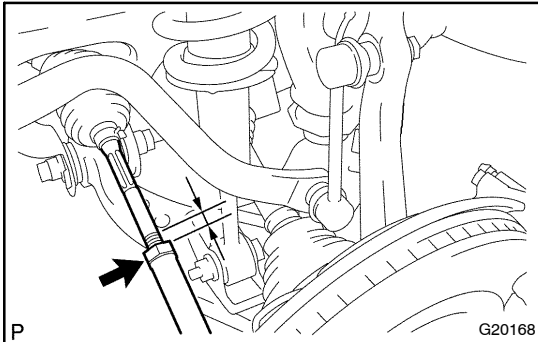
4. ADJUST TOE-IN

- Remove the rack boot set clips.
- Loosen the tie rod end lock nuts.

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

HINT:

Try to adjust the toe-in to the center of the specified value.



- (d) Make sure that the lengths of the right and left rack ends are the same.

- (e) Torque the tie rod end lock nuts.

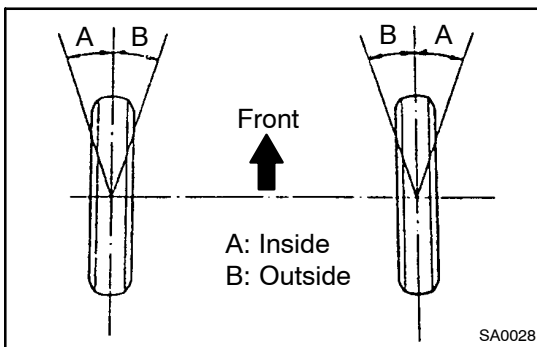
Torque: 88 N·m (897 kgf·cm, 65 ft·lbf)

- (f) Place the boots on the seats and install the clips.

HINT:

Make sure that the boots are not twisted.

- (g) Perform VSC system calibration



5. INSPECT WHEEL ANGLE

- (a) Turn the steering wheel fully, and measure the turning angle.

Wheel angle:

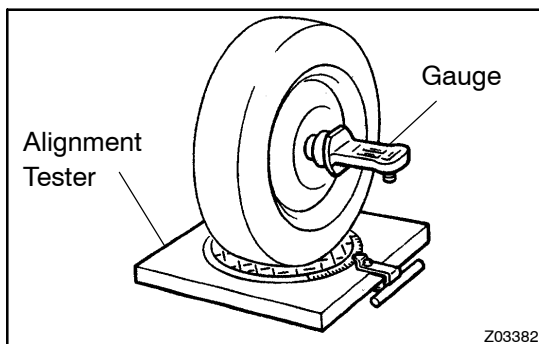
2WD

Inside wheel	37°00' (35°00' – 38°00') 37.00° (35.00° – 38.00°)
Outside wheel (Reference)	32°30' 32.50°

4WD:

Inside wheel	36°40' (34°40' – 37°40') 36.67° (34.67° – 37.67°)
Outside wheel (Reference)	32°53' 32.88°

If the wheel angles differ from the standard of the specification, inspect the toe-in.



6. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION

- (a) Install the camber-caster-kingpin gauge or position vehicle on wheel alignment tester.
- (b) Inspect the camber, the caster and the steering axis inclination.

Camber, caster and steering axis inclination:

2WD Except air suspension:

Camber	Right-left error	-0°28' ± 45' (-0.47° ± 0.75°) 45' (0.75°) or less
Caster	Right-left error	3°23' ± 45' (3.38° ± 0.75°) 45' (0.75°) or less
Steering axis inclination	Right-left error	12°58' ± 45' (12.97° ± 0.75°) 45' (0.75°) or less

2WD Air suspension:

Camber	Right-left error	$-0^{\circ}30' \pm 45'$ ($-0.50^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less
Caster	Right-left error	$3^{\circ}33' \pm 45'$ ($3.55^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less
Steering axis inclination	Right-left error	$13^{\circ}00' \pm 45'$ ($13.00^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less

4WD Except air suspension:

Camber	Right-left error	$-0^{\circ}09' \pm 45'$ ($-0.15^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less
Caster	Right-left error	$3^{\circ}13' \pm 45'$ ($3.22^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less
Steering axis inclination	Right-left error	$12^{\circ}39' \pm 45'$ ($12.65^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less

4WD Air suspension:

Camber	Right-left error	$-0^{\circ}10' \pm 45'$ ($-0.17^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less
Caster	Right-left error	$3^{\circ}22' \pm 45'$ ($3.37^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less
Steering axis inclination	Right-left error	$12^{\circ}40' \pm 45'$ ($12.67^{\circ} \pm 0.75^{\circ}$) 45' (0.75°) or less

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

7. ADJUST CAMBER AND CASTER

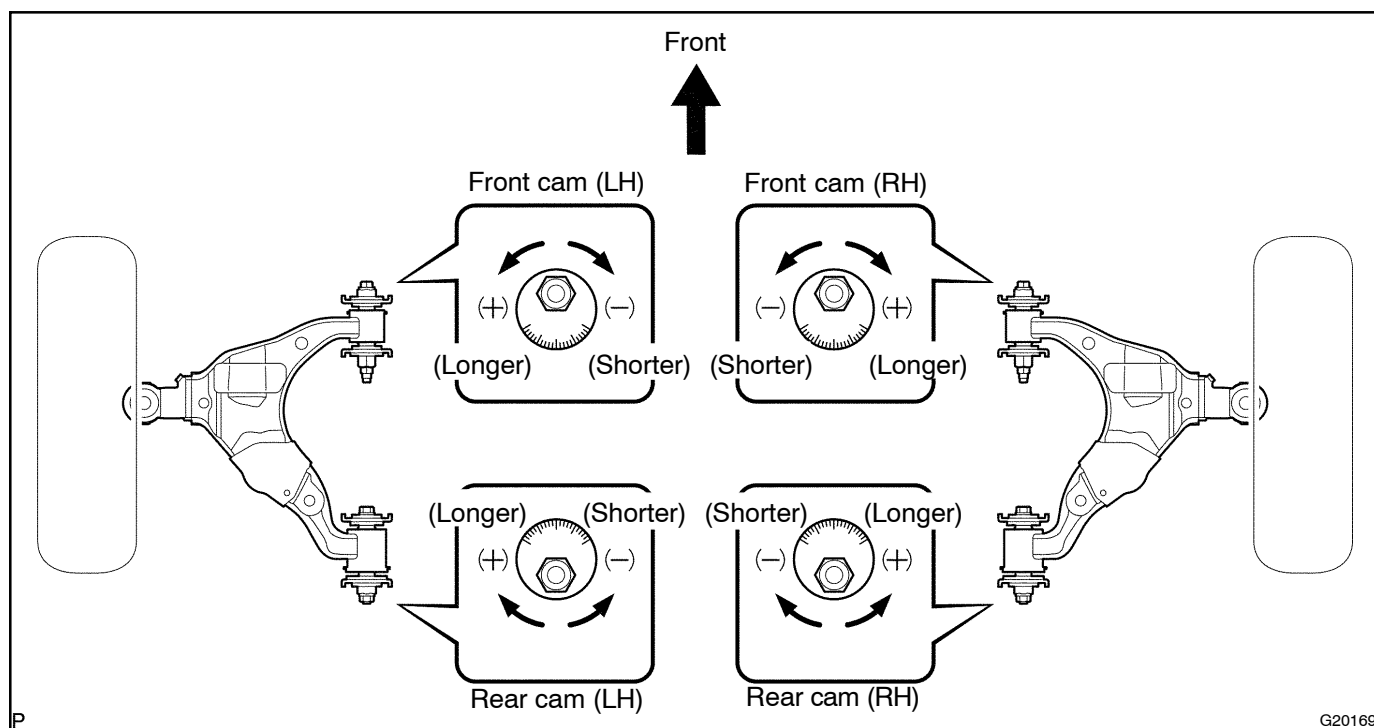
NOTICE:

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

- Loosen the nut and bolt.
- Turn the camber adjust cam No.2 and toe adjust plate No.2 in the circumference direction, and adjust the camber and the caster.

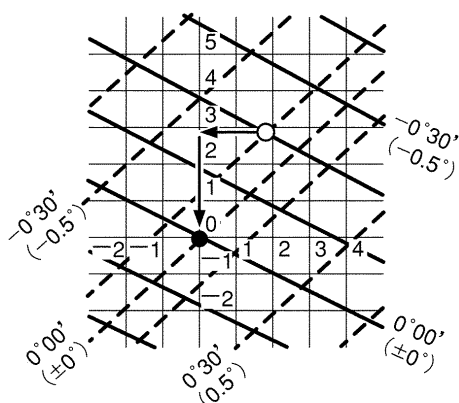
HINT:

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



(Example)

- Caster
- Camber
- = Calculated value
- = 0 point



- How to read adjustment chart (using examples).

(1) Measure the present alignment.

Camber: 0°15' (0.25°)

Caster: 2°45' (2.75°)

- (2) Make the difference between the standard value (A) and the measured value (B) on the adjustment chart.

Standard value:

Camber: 0°35' (0.58°)

Caster: 2°55' (2.92°)

Formula: B - A = C

Camber: 0°15' - (0°35') = - 0°20'

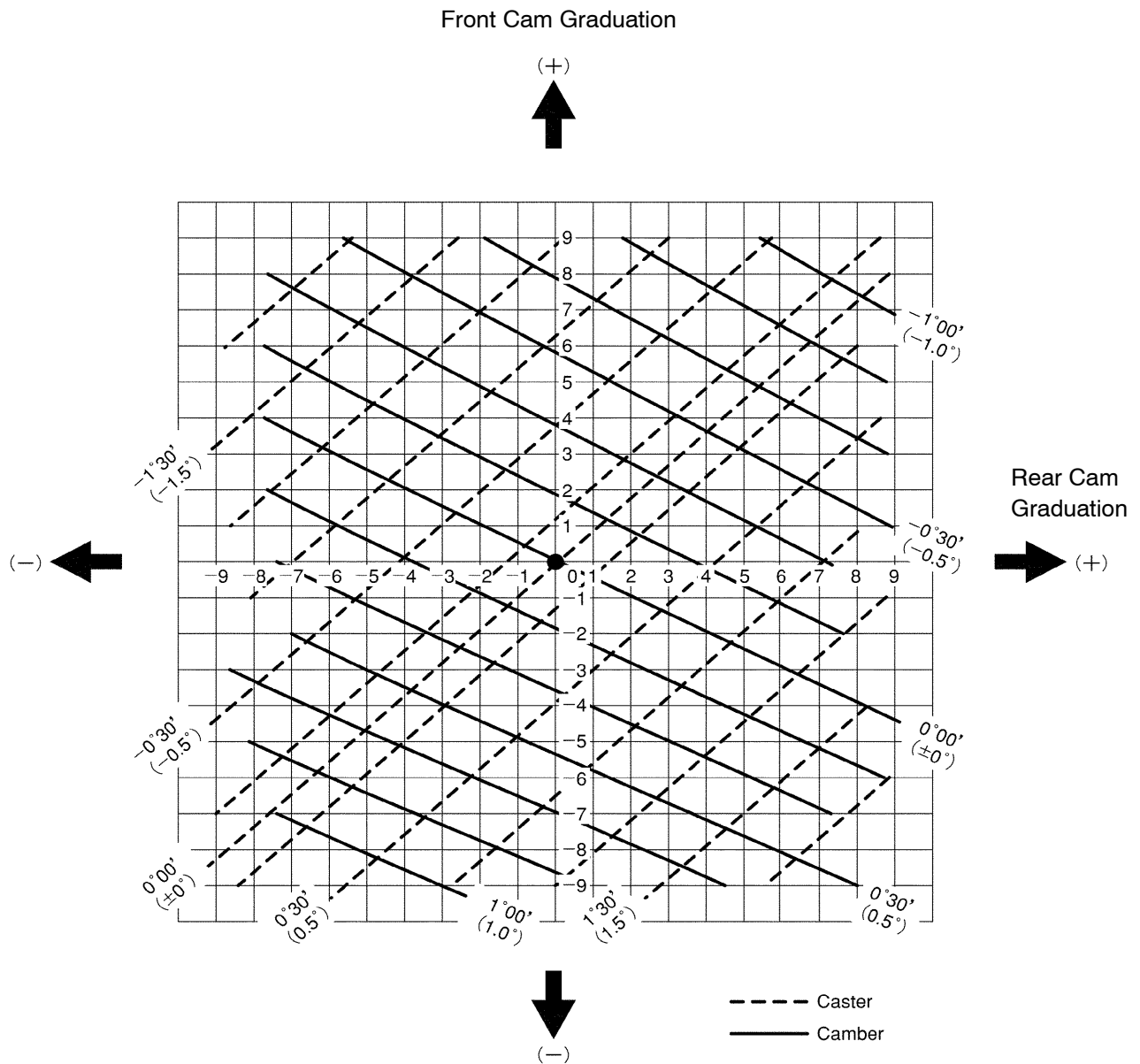
Caster: 2°45' - (2°55') = - 0°10'

- (3) As shown in the chart, read the distance from the marked point to 0 point, and adjust the front and/or rear adjusting cams accordingly.

Toe adjust cam: - (Shorter) 2.8

Camber adjust cam: - (Shorter) 1.8

P G20414



G20415