

## FRONT WHEEL ALIGNMENT INSPECTION

SA171-01

### 1. MEASURE VEHICLE HEIGHT

#### Vehicle height

Front	A - B: 82.7 mm (3.256 in.)
Rear	C - D: 71.2 mm (2.803 in.)

Measuring points:

A: Ground clearance of spindle center

B: Ground clearance of lower suspension arm front bolt center

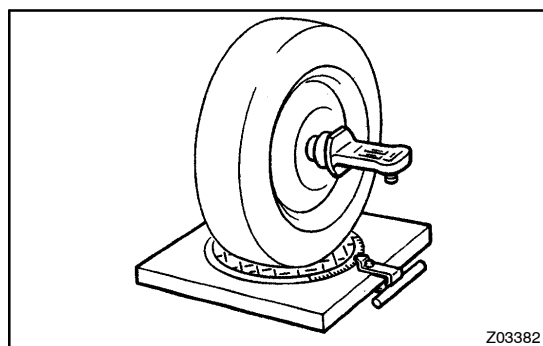
C: Ground clearance of rear axle shaft center

D: Ground clearance of lower control arm front bolt 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.



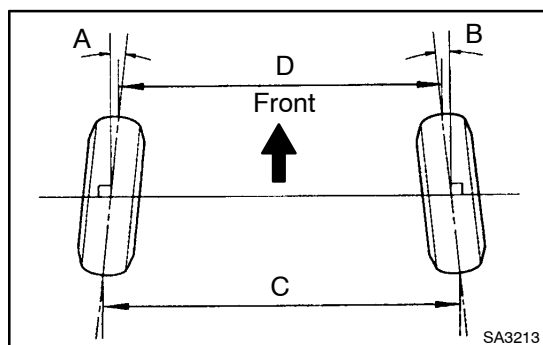
### 2. INSTALL CAMBER-CASTER-KINGPIN GAUGE OR POSITION VEHICLE ON WHEEL ALIGNMENT TESTER

Follow the specific instructions of the equipment manufacturer.

### 3. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION

Camber	0°00' ± 45' (0° ± 0.75°)
Left-right error	30' (0.5°) or less
Caster	3°05' ± 45' (3.08° ± 0.75°)
Left-right error	30' (0.5°) or less
Steering axis inclination	12°15' ± 45' (12.25° ± 0.75°)
Left-right error	30' (0.5°) or less

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



### 4. INSPECT TOE-IN

Toe-in (total)	A + B: 0°00' ± 12' (0° ± 0.2°)
	C - D: 0 ± 2 mm (0 ± 0.08 in.)

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

### 5. ADJUST CAMBER AND CASTER

#### NOTICE:

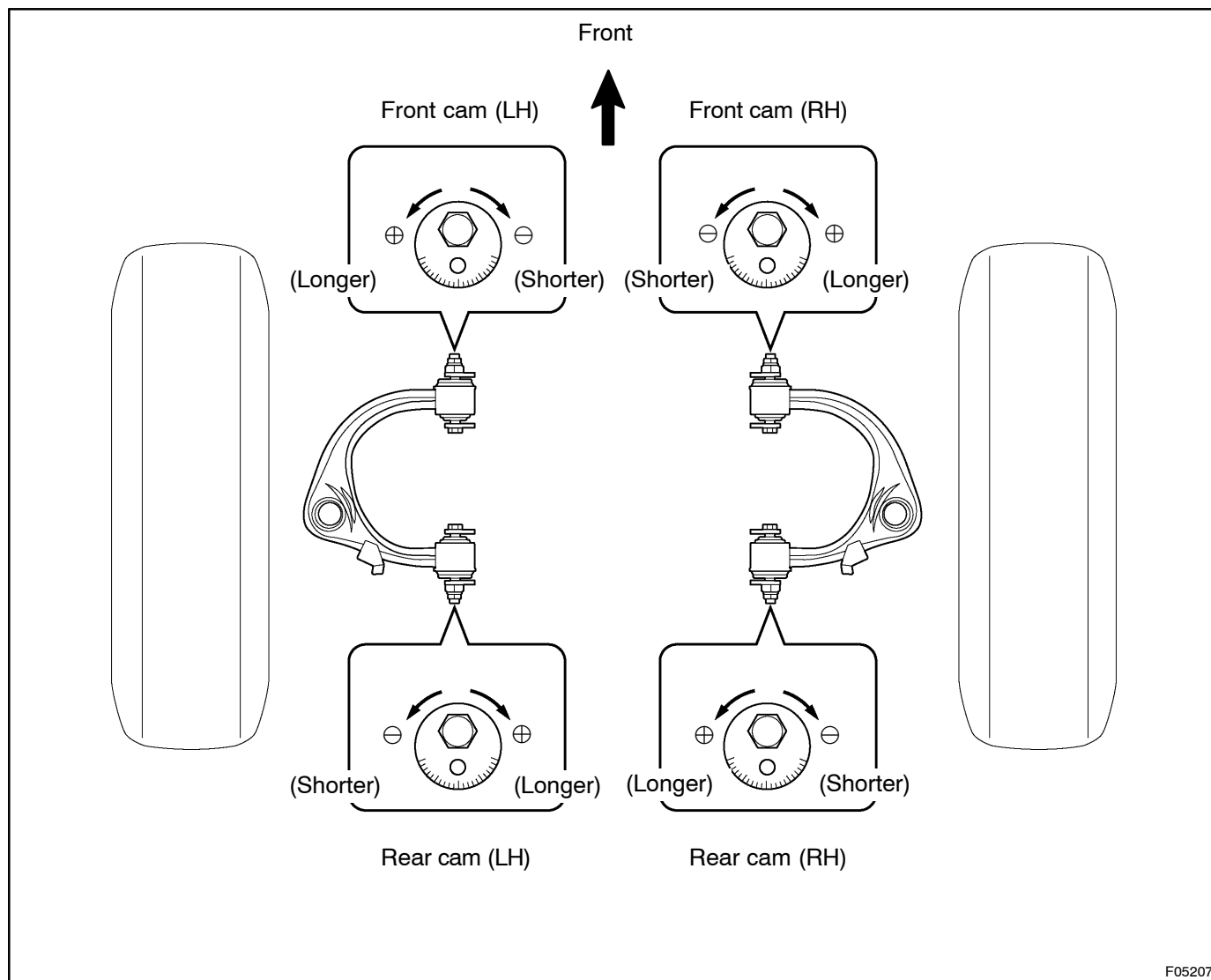
**After the camber has been adjusted, inspect the toe-in.**

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

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

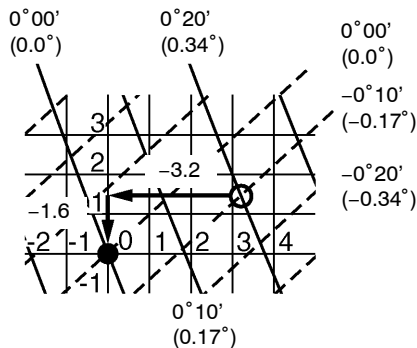
HINT:

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



**(Example)**

——— Camber  
 - - - - - Caster  
 ○ = Calculated value  
 ● = 0 point



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(c) How to read adjustment chart (using examples).

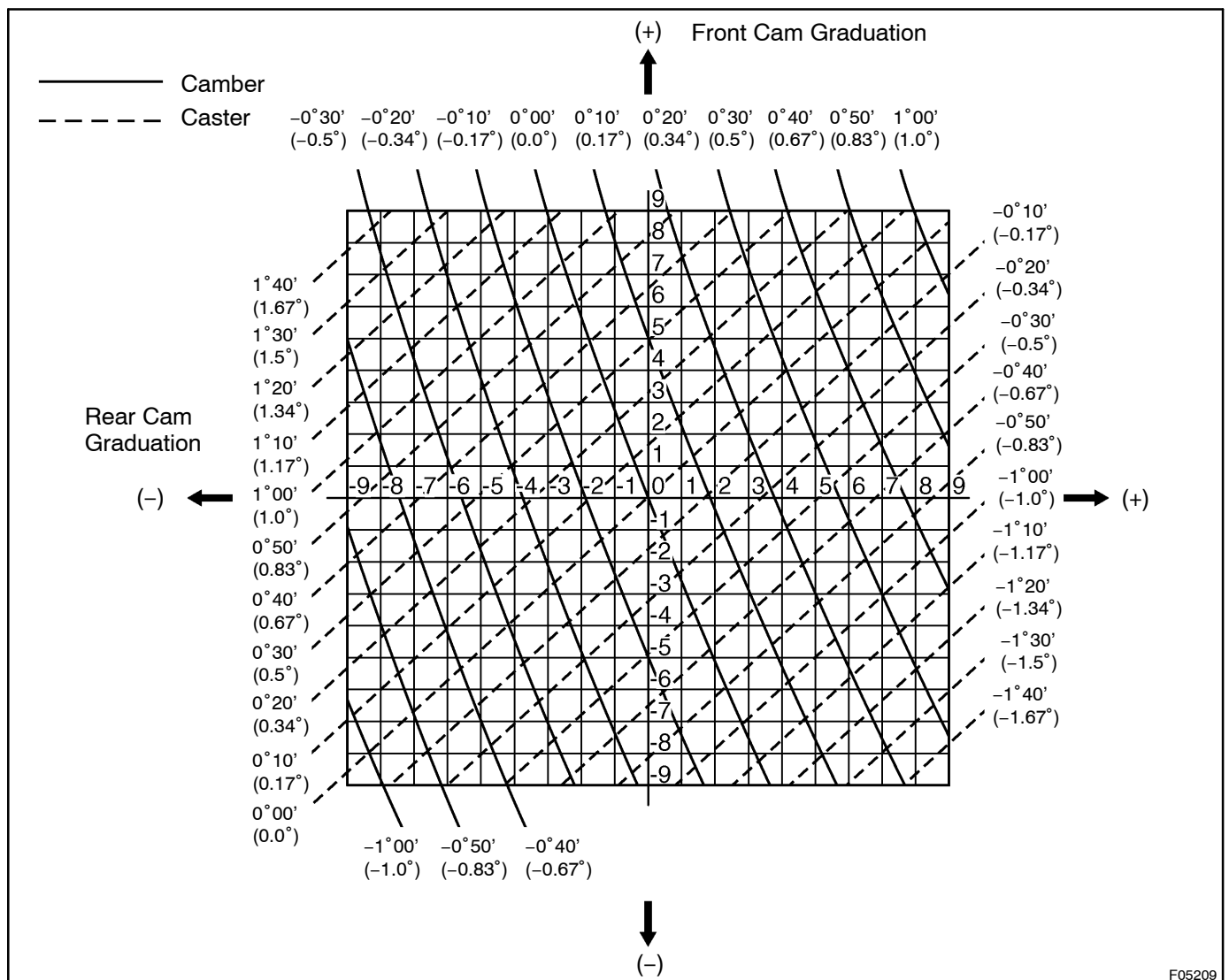
(1) Measure the present alignment.

**Camber:  $-0^{\circ}20'$  ( $-0.33^{\circ}$ )****Caster:  $3^{\circ}15'$  ( $3.25^{\circ}$ )**

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

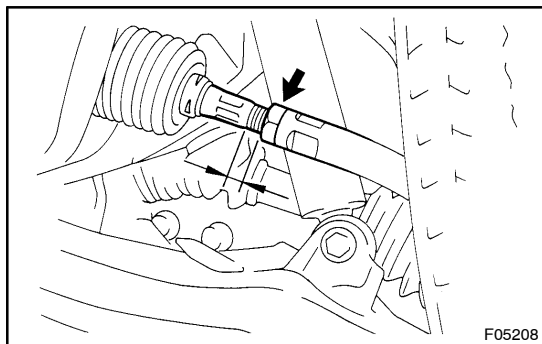
**Standard value:****Camber:  $0^{\circ}00'$  ( $0^{\circ}$ )****Caster:  $3^{\circ}05'$  ( $3.08^{\circ}$ )****Formula:  $A - B = C$** **Camber:  $0^{\circ}00' - (-0^{\circ}20') = 0^{\circ}20'$** **Caster:  $3^{\circ}05' - 3^{\circ}15' = -0^{\circ}10'$** 

(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.

**Front cam: - (Shorter) 1.6****Rear cam: - (Shorter) 3.2**

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- (d) Torque the front and/or rear adjusting cam nuts.  
**Torque: 98 N·m (1,000 kgf·cm, 72 ft·lbf)**



## 6. ADJUST TOE-IN

- (a) Check or adjust the lengths of the rack ends, then adjust the toe-in.  
**Rack end length difference: 3.0 mm (0.118 in.) or less**
- (b) Remove the boot clamps.  
 (c) Loosen the tie rod lock nuts.  
 (d) Turn the left and right rack ends an equal amount to adjust the toe-in.

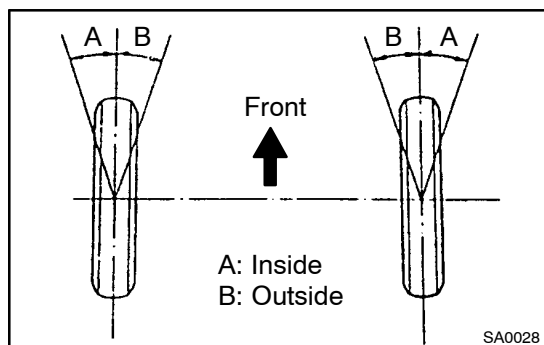
### HINT:

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

- (e) Tighten the tie rod lock nuts.  
 (f) Place the boot on the seat and clamp it.

### HINT:

Make sure that the boots are not twisted.

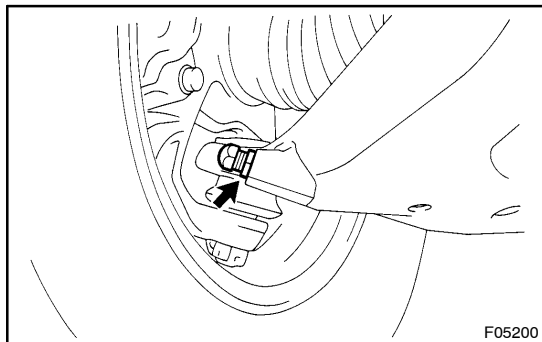


## 7. INSPECT AND ADJUST WHEEL ANGLE

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

Inside wheel	36° 42' (33° 42' – 36° 42') 36.7° (33.7° – 36.7°)
Outside wheel (Reference)	32° 36' 32.6°

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



- (b) When toe-in is normal after inspection, adjust wheel angle with the knuckle stopper bolt of the lower suspension arm.

**Torque: 44 N·m (450 kgf·cm, 32 ft·lbf)**