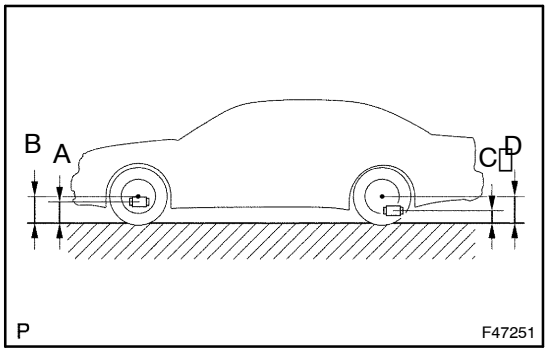
FRONT WHEEL ALIGNMENT

260HS–01

ADJUSTMENT

1. INSPECT TIRE (SEE PAGE 28–1)



2. MEASURE VEHICLE HEIGHT

Vehicle height:

Except air suspension:

Tire Size	Front B–A	Rear D–C
P225/55R17	105 mm (4.13 in.)	91 mm (3.58 in.)
245/45R18	104 mm (4.09 in.)	89 mm (3.50 in.)
Australia, Middle East, General	107 mm (4.21 in.)	89 mm (3.50 in.)

Air suspension:

Front B–A	Rear D–C
115 mm (4.53 in.)	109 mm (4.29 in.)

Measuring points:

A: Ground clearance of lower suspension arm No.1 bushing set bolt center

B: Ground clearance of front wheel center

C: Ground clearance of rear suspension arm No.2 set bolt center

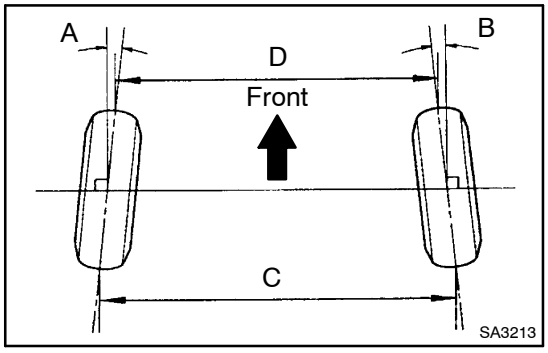
D: Ground clearance of rear wheel center

NOTICE:

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

HINT:

Bounce the vehicle up and down to stabilize the suspension and inspect the vehicle height.



3. INSPECT TOE–IN

Toe–in:

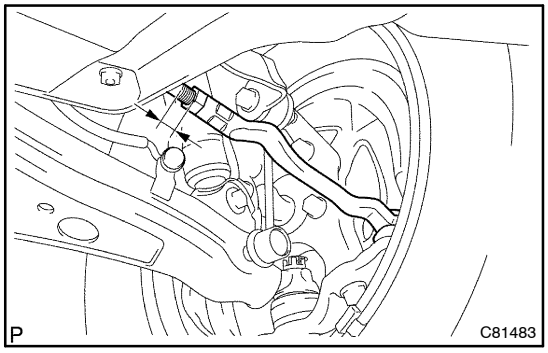
Toe–in (total)	A + B: 0°06' ± 12' (0.1° ± 0.2°) C – D: 1 ± 2 mm (0.04 ± 0.08 in.)

If the toe–in is not within the specified range, adjust it at the rack ends.

4. ADJUST TOE–IN

(a) Remove the rack boot set clips.

(b) Loosen the tie rod end lock nuts.



(c) Turn the right and left rack ends by equal amounts 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.

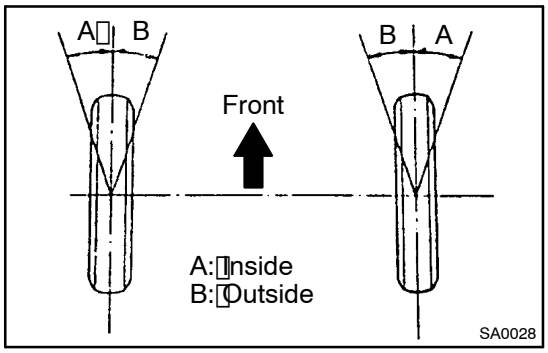
Torque: 56 N·m (570 kgf·cm, 41 ft·lbf)

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

HINT:

Make sure that the boots are not twisted.

(g) Perform the zero point calibration of yaw rate and deceleration sensor (see page 05–387).



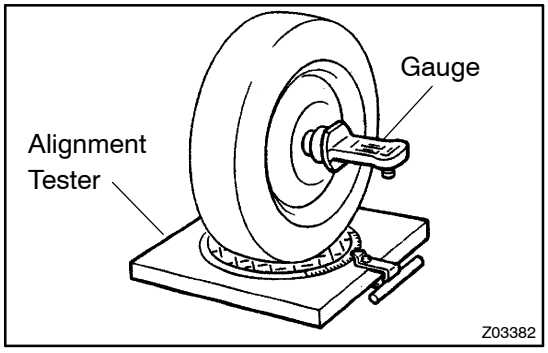
5. INSPECT WHEEL ANGLE

(a) Turn the steering wheel fully left and right to measure the turning angle.

Wheel turning angle:

Inside wheel	42°10’ (42.2°)
Outside wheel: Reference	36°15’ (36.3°)

If the right and left inside wheel angles differ from the specified value, check and adjust the right and left rack end lengths.



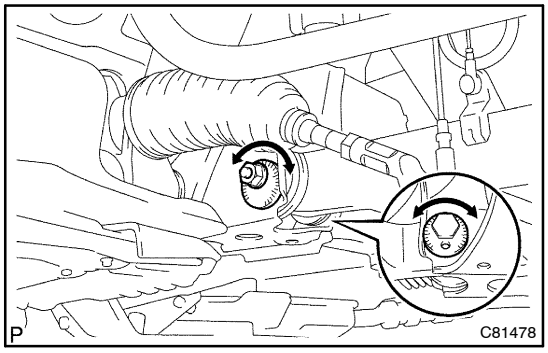
6. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION

(a) Put the front wheel on the center of the alignment tester.

(b) Set the camber–caster–kingpin gauge at the center of the axle hub.

Camber, caster and steering axis inclination:

	w/o Electronic modulated air suspension	w/ Electronic modulated air suspension
Camber	–0°05’ ± 45’ (–0.08° ± 0.75°)	–0°15’ ± 45’ (–0.25° ± 0.75°)
Left–right error	30’ (0.5°) or less	30’ (0.5°) or less
Caster	6°45’ ± 45’ (6.75° ± 0.75°)	7°15’ ± 45’ (7.25° ± 0.75°)
Left–right error	30’ (0.5°) or less	30’ (0.5°) or less
Steering axis inclination	9°00’ ± 45’ (9° ± 0.75°)	9°15’ ± 45’ (9.25° ± 0.75°)
Left–right error	30’ (0.5°) or less	30’ (0.5°) or less



7. ADJUST CAMBER

HINT:

- After adjusting the camber, inspect the caster and toe–in.
- Try to adjust the camber to the center value.

(a) Loosen the camber adjusting cam nut.

(b) Turn the camber adjusting cam and adjust the camber.

HINT:

Camber changes about 6'18" (0.11°) with each graduation of the cam.

(c) Torque the camber adjusting cam.

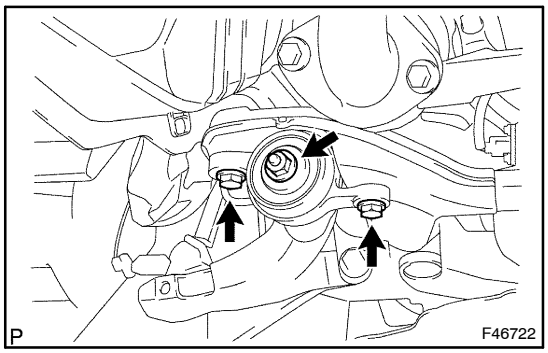
Torque: 172 N·m (1,755 kgf·cm, 127 ft·lbf)

8. ADJUST CASTER

HINT:

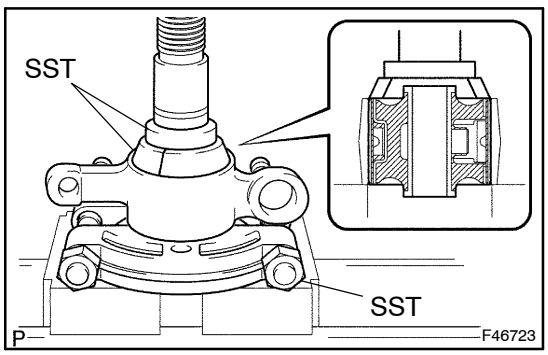
The caster can be adjusted by replacing the No. 2 bushing bracket.

(a) Jack up the vehicle and make the wheels in full rebound condition.



(b) Remove the nut and washer from the rear of the lower No. 2 bushing.

(c) Remove the bolts from the right and left sides of the lower No. 2 bushing bracket and take out the bracket from the lower arm.



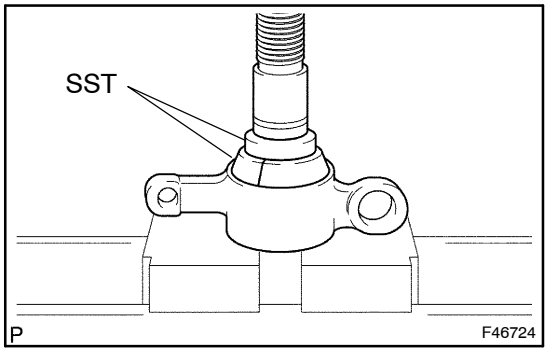
(d) Using SST and a press, remove the lower No. 2 bushing from the bracket. According to the table below, replace the bracket and press–fit the removed bushing.

SST 09613–26010, 09950–00020, 09950–60010 (09951–00650)

Part No.	Adjustment Amount
48652–50040	+30'
48652–50050	–30'

HINT:

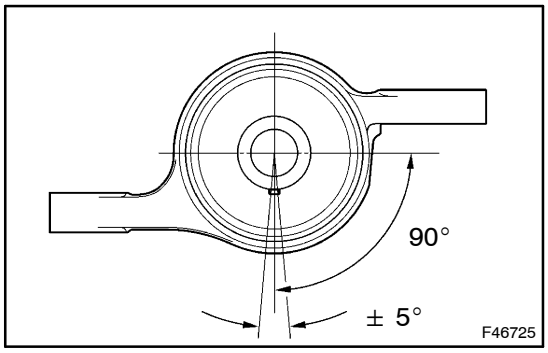
- Push the part shown in the illustration to remove.
- For SST 09613–26010, use 2 thicker half–rings as a pair.



(e) Using SST and a press, reinstall a bushing as shown in the illustration.
SST 09613–26010, 09950–60010 (09951–00650)

HINT:

- For SST 09613–26010, use 2 thicker half–rings as a pair.



- Set the protrusion of the bushing to the position shown in the illustration.

(f) Install the lower bracket into the lower arm shaft. Temporarily install the washer and nut removed in (b) until it goes by hand.

NOTICE:

Do not install them completely in this stage.

(g) install the 2 bolts that removed in (c).
Torque:
Vehicle inside: 60 N·m (612 kgf·cm, 44 ft·lbf)
Vehicle outside: 137 N·m (1,395 kgf·cm, 101 ft·lbf)

(h) Put down the vehicle and, with its wheels completely grounded, tighten the nut that is temporarily installed in (e).
Torque: 137 N·m (1,395 kgf·cm, 101 ft·lbf)