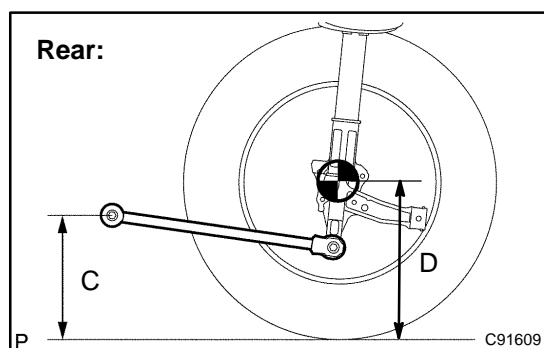
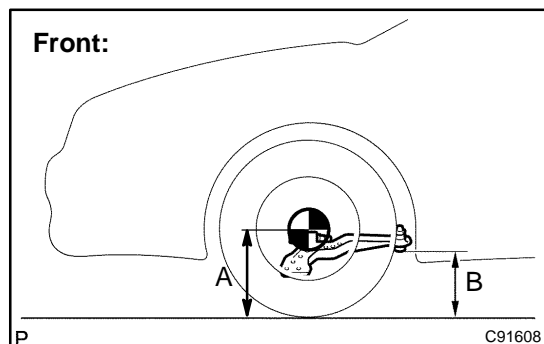


FRONT WHEEL ALIGNMENT

ADJUSTMENT

260L7-01

1. INSPECT TIRE (See page 28-1)



2. MEASURE VEHICLE HEIGHT

Vehicle height:

2AZ-FE COMFORT:

	USA, Canada	Mexico
Front (A – B)	119 mm (4.69 in.)	106 mm (4.17 in.)
Rear (D – C)	45 mm (1.77 in.)	33 mm (1.30 in.)

2AZ-FE PREMIUM:

Front (A – B)	120 mm (4.72 in.)
Rear (D – C)	45 mm (1.77 in.)

2AZ-FE SPORT:

Front (A – B)	120 mm (4.72 in.)
Rear (D – C)	48 mm (1.89 in.)

1MZ-FE COMFORT:

Front (A – B)	120 mm (4.72 in.)
Rear (D – C)	46 mm (1.81 in.)

1MZ-FE PREMIUM:

	USA, Canada	Mexico
Front (A – B)	119 mm (4.69 in.)	106 mm (4.17 in.)
Rear (D – C)	47 mm (1.85 in.)	33 mm (1.30 in.)

3MZ-FE SPORT:

Front (A – B)	121 mm (4.76 in.)
Rear (D – C)	48 mm (1.89 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 strut rod set bolt center

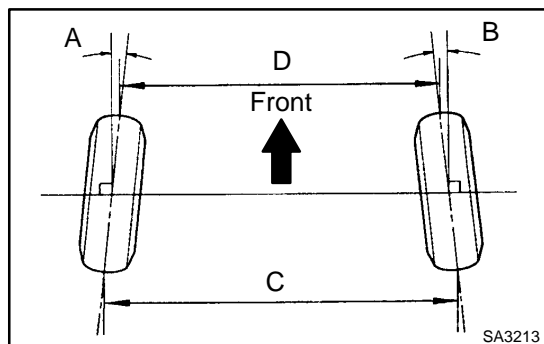
D: Ground clearance of rear wheel center

NOTICE:

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

HINT:

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



3. INSPECT TOE-IN

Toe-in:

Toe-in (total)	A + B: $0^\circ \pm 12'$ ($0^\circ \pm 0.2^\circ$) C - D: 0 ± 2 mm (0 ± 0.08 in.)
-------------------	---

HINT:

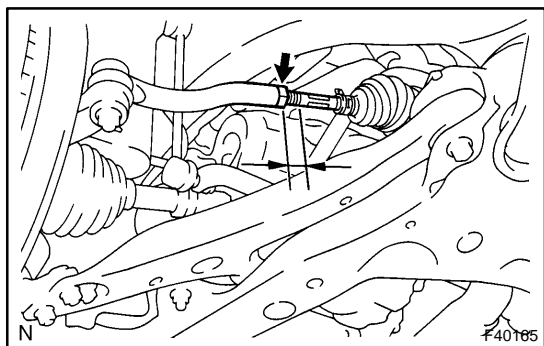
- Measure "A + B" when "C - D" can not be measured.
- If toe-in is not within the specified range, adjust it at the rack ends.

4. ADJUST TOE-IN

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



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

- Torque the tie rod end lock nuts.

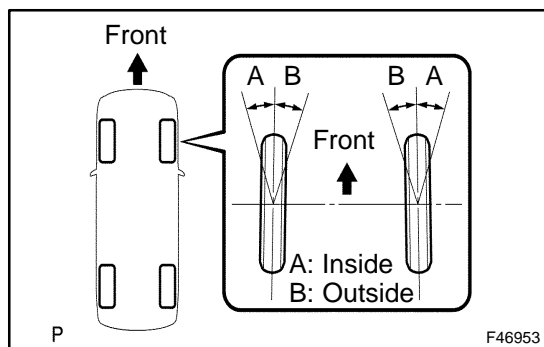
Torque: 74 N·m (755 kgf-cm, 55 ft-lbf)

- Place the boots on the seats and install the clips.

HINT:

Make sure that the boots are not twisted.

- Perform VSC system calibration. (See page 05-1002)



5. INSPECT WHEEL ANGLE

- Turn the steering wheel fully left and right, and measure the turning angle.

Wheel turning angle:

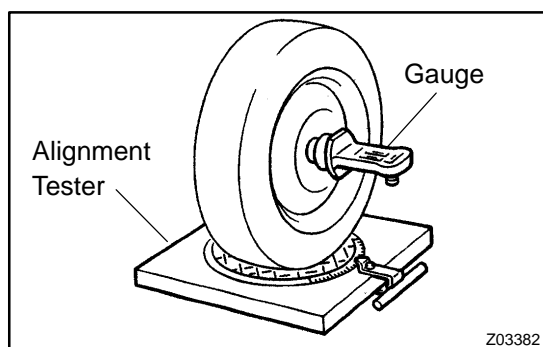
USA, Canada:

	15 inch	16 inch
Inside wheel	$39^\circ 04' \pm 2^\circ$ ($39.07^\circ \pm 2^\circ$)	$36^\circ 39' \pm 2^\circ$ ($36.65^\circ \pm 2^\circ$)
Outside wheel: Reference	$33^\circ 44'$ (33.73°)	$32^\circ 11'$ (32.18°)

Mexico:

	15 inch	16 inch
Inside wheel	$39^\circ 30' \pm 2^\circ$ ($39.50^\circ \pm 2^\circ$)	$37^\circ 00' \pm 2^\circ$ ($37.00^\circ \pm 2^\circ$)
Outside wheel: Reference	$34^\circ 02'$ (34.03°)	$32^\circ 28'$ (32.47°)

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



6. INSPECT CAMBER, CASTER AND STEERING AXIS INCLINATION

- Put the front wheel on the center of the alignment tester.
- Set the camber-caster-kingpin gauge at the center of the axle hub or drive shaft.

Camber and steering axis inclination:

	USA, Canada	Mexico
Camber	$-0^{\circ}43' \pm 45'$ ($-0.72^{\circ} \pm 0.75^{\circ}$)	$-0^{\circ}33' \pm 45'$ ($-0.55^{\circ} \pm 0.75^{\circ}$)
Right-left error	45' (0.75°) or less	45' (0.75°) or less
Steering axis inclination	$11^{\circ}27' \pm 45'$ ($11.45^{\circ} \pm 0.75^{\circ}$)	$11^{\circ}05' \pm 45'$ ($11.08^{\circ} \pm 0.75^{\circ}$)
Right-left error	45' (0.75°) or less	45' (0.75°) or less

Caster

3MZ-FE:

Caster	$2^{\circ}40' \pm 45'$ ($2.67^{\circ} \pm 0.75^{\circ}$)
Right-left error	45' (0.75°) or less

1MZ-FE:

	USA, Canada	Mexico
Caster	$2^{\circ}37' \pm 45'$ ($2.62^{\circ} \pm 0.75^{\circ}$)	$2^{\circ}33' \pm 45'$ ($2.55^{\circ} \pm 0.75^{\circ}$)
Right-left error	45' (0.75°) or less	45' (0.75°) or less

2AZ-FE SPORT:

Caster	$2^{\circ}43' \pm 45'$ ($2.72^{\circ} \pm 0.75^{\circ}$)
Right-left error	45' (0.75°) or less

2AZ-FE Except SPORT:

	USA, Canada	Mexico
Caster	$2^{\circ}39' \pm 45'$ ($2.65^{\circ} \pm 0.75^{\circ}$)	$2^{\circ}36' \pm 45'$ ($2.60^{\circ} \pm 0.75^{\circ}$)
Right-left error	45' (0.75°) or less	45' (0.75°) or less

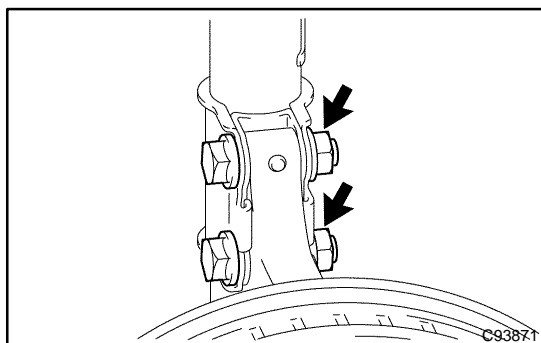
If the caster and steering axis inclination are not within the specified ranges, after the camber has been correctly adjusted, re-check the suspension parts for damaged and/or worn out parts.

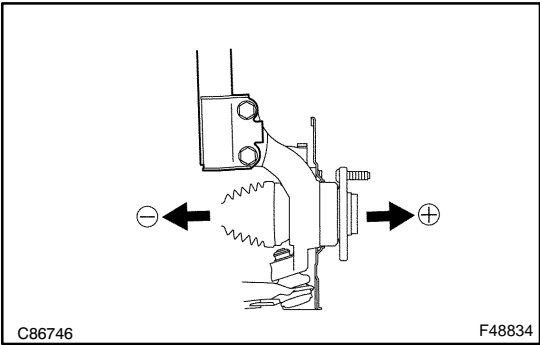
7. ADJUST CAMBER

NOTICE:

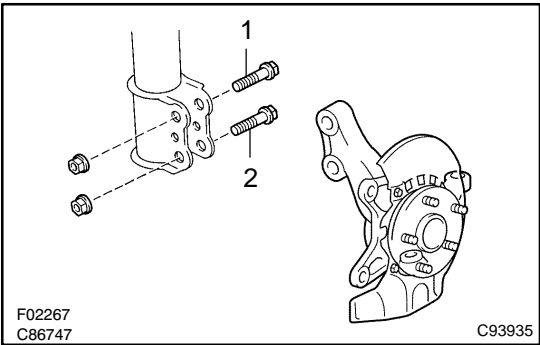
After the camber has been adjusted, inspect the toe-in.

- Remove the front wheel.
- Remove the 2 nuts on the lower side of the shock absorber assy front LH.
- Clean the installation surfaces of the shock absorber assy front LH and the steering knuckle.
- Temporarily install the 2 nuts.



















- (e) Fully push or pull the front axle hub in the direction of the required adjustment.
- (f) Tighten the nuts.
Torque: 210 N·m (2,141 kgf·cm, 155 ft·lbf)
- (g) Install the front wheel.
Torque: 103 N·m (1,050 kgf·cm, 76 ft·lbf)

















- (h) Check the camber.
If the measured value is not within the specified range, calculate the required adjustment amount using the formula below.
(Camber adjustment amount) = Center of the specified range – Measured value
- (i) Check installed bolts combination. Select appropriate bolts from the table below to adjust the camber within the specified range.

Move the axle toward (+) in step (e)	Refer to table (1) (Move the axle toward positive side)
Move the axle toward (-) in step (e)	Refer to table (2) (Move the axle toward negative side)

Table (1) (Move the axle toward positive side)

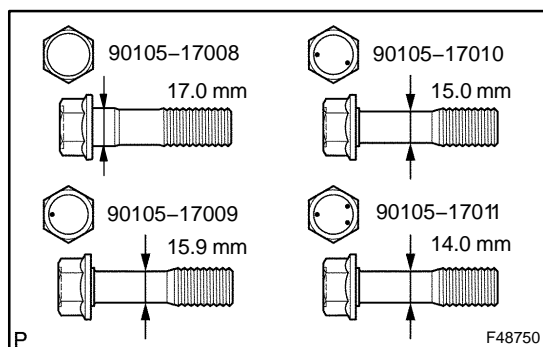
Installed Bolt Adjusting Value	1							
	2							
-1°30' to -1°15'								G
-1°15' to -1°00'							G	A
-1°00' to -0°45'						G	A	B
-0°45' to -0°30'					G	A	B	C
-0°30' to -0°15'				G	A	B	C	D
-0°15' to 0°		G	A	B	C	D	E	
0° to 0°15'	A	B	C	D	E	F		
0°15' to 0°30'	B	C	D	E	F			
0°30' to 0°45'	C	D	E	F				
0°45' to 1°00'	D	E	F					
1°00' to 1°15'	E	F						
1°15' to 1°30'	F							

Selected Bolt Combination

	A	B	C	D	E	F	G
1	 90105-17008	 90105-17008	 90105-17008	 90105-17009	 90105-17010	 90105-17011	 90105-17008
2	 90105-17009	 90105-17010	 90105-17011	 90105-17011	 90105-17011	 90105-17011	 90105-17008

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The body and suspension may be damaged if the camber is not correctly adjusted according to the above table.

NOTICE:















Replace the nut with a new one when replacing the bolt.

(j) Repeat the steps mentioned above. At step (b), replace 1 or 2 selected bolts.















HINT:

Replace one bolt at a time when replacing 2 bolts.

Table (2) (Move the axle toward negative side)

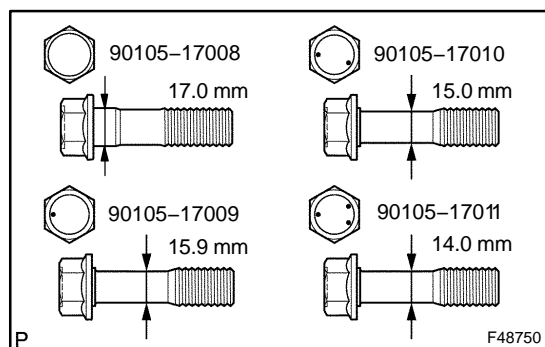
Installed Bolt Adjusting Value	1							
	2							
-1°30' to -1°15'	F							
-1°15' to -1°00'	E	F						
-1°00' to -0°45'	D	E	F					
-0°45' to -0°30'	C	D	E	F				
-0°30' to -0°15'	B	C	D	E	F			
-0°15' to 0°	A	B	C	D	E	F		
0° to 0°15'		G	A	B	C	D	E	
0°15' to 0°30'			G	A	B	C	D	
0°30' to 0°45'				G	A	B	C	
0°45' to 1°00'					G	A	B	
1°00' to 1°15'						G	A	
1°15' to 1°30'							G	

Selected Bolt Combination

	A	B	C	D	E	F	G
1	 90105-17008	 90105-17008	 90105-17008	 90105-17009	 90105-17010	 90105-17011	 90105-17008
2	 90105-17009	 90105-17010	 90105-17011	 90105-17011	 90105-17011	 90105-17011	 90105-17008

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The body and suspension may be damaged if the camber is not correctly adjusted according to the above table.

NOTICE:

Replace the nut with a new one when replacing the bolt.

(k) Repeat the steps mentioned above. At step (b), replace 1 or 2 selected bolts.

HINT:

Replace one bolt at a time when replacing 2 bolts.

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