

# WHEEL ALIGNMENT

## 02-11 WHEEL ALIGNMENT

### WHEEL ALIGNMENT

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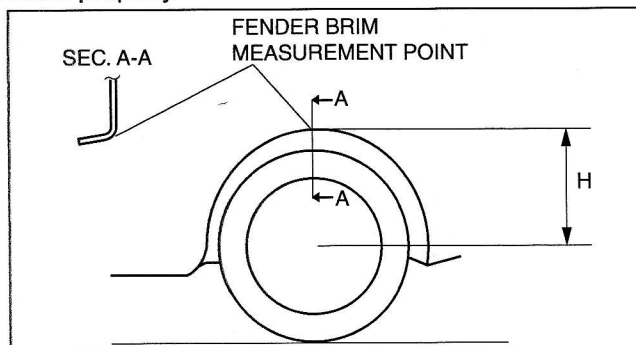
### WHEEL ALIGNMENT PRE-INSPECTION

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1. Park the vehicle on level ground, in an unloaded condition\*, with the wheels straight forward.  
\*: Unloaded condition.....Fuel tank is full. Engine coolant and engine oil are at specified level. Spare tire, jack and tools are in designated position.
2. Inspect the tire pressure.
  - Adjust to the recommended pressure if necessary. (See 02-50-1 SUSPENSION TECHNICAL DATA.)
3. Inspect the wheel bearing play.
  - Correct if necessary. (See 03-11-2 WHEEL HUB, STEERING KNUCKLE INSPECTION.)
4. Inspect the wheel runout.
  - Correct if necessary. (See 02-50-1 SUSPENSION TECHNICAL DATA.)
5. Rock the vehicle, and verify that there is no looseness in the steering wheel joint and suspension ball joint.
6. Rock the vehicle, and verify that the shock absorber operates properly.
7. Measure height H from the center of the wheel to the fender brim.
8. Verify that the difference between the left and right dimension H is within the specification.
  - If it exceeds the specification, repeat the Step 2—7.

**Standard specification**  
**10 mm {0.39 in} or less**



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# WHEEL ALIGNMENT

## FRONT WHEEL ALIGNMENT

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### Front wheel alignment (Unloaded)\*1

Item		Fuel gauge indication				
		Empty	1/4	1/2	3/4	Full
Maximum steering angle [Tolerance $\pm 3^\circ$ ]	Inner	37°48'				
	Outer	30°54'				
Total toe-in	Tire [Tolerance $\pm 4$ {0.2}]	2 {0.08}				
	Rim inner [Tolerance $\pm 3$ {0.1}]	1.0 {0.04}				
	(degree)	0°10'±0°20'				
Caster angle *2 (Reference value) [Tolerance $\pm 1^\circ$ ]		6°19'	6°21'	6°24'	6°27'	6°29'
Camber angle *2 (Reference value) [Tolerance $\pm 1^\circ$ ]		-0°20'	-0°21'	-0°21'	-0°21'	-0°22'
Steering axis inclination (Reference value)		11°57'	11°58'	11°59'	11°59'	12°00'

\*1 : Engine coolant and engine oil are at specified level. Spare tire, jack and tools are in designated position.

\*2 : Difference between left and right must not exceed 1°30'.

### Steering Angle Adjustment

1. Loosen the tie-rod end locknuts.
2. Remove the steering gear boot clamp.
3. Turn the tie rods.

#### Standard length L

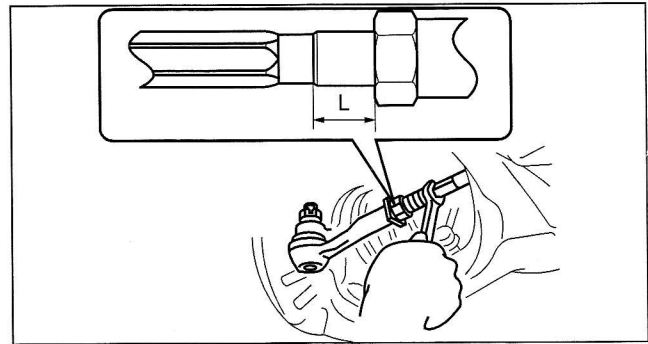
10.1—23.1 mm {0.398—0.909 in}

4. Turn the tie rods equally to provide the correct maximum steering angle.
5. Tighten the tie-rod end locknuts.

#### Tightening torque

69—98 N·m {7.1—9.9 kgf·m, 51—72 ft·lbf}

6. Verify that the boot is not twisted, and install the boot clamp.
7. Adjust the toe-in after adjusting the steering angle.



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### Total Toe-in Adjustment

1. Loosen the locknut of the tie-rod end.
2. Remove the rack boot clamp.
3. Adjust the total toe-in by rotating each tie rod (left and right) in the opposite directions by the same amount respectively.

#### Note

- Toe angle changes by **approx. 6 mm {0.2 in}** per one rotation of the tie rod for one wheel.
- Each tie rod has a right-hand thread. When increasing the toe-in angle, rotate the right tie rod toward the front of the vehicle and rotate the left tie rod toward the rear of the vehicle by the same amount.

4. Tighten the locknut of the tie-rod end.

#### Tightening torque

69—98 N·m {7.1—9.9 kgf·m, 51—72 ft·lbf}

5. Verify that the rack boot does not have any twisting and install the rack boot clamp.

# WHEEL ALIGNMENT

## REAR WHEEL ALIGNMENT

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### Rear wheel alignment (Unloaded)\*1

Item			Fuel gauge indication				
			Empty	1/4	1/2	3/4	Full
Total toe-in	Tire [Tolerance $\pm 4$ {0.2}]	(mm {in})	2 {0.08}				
	Rim inner [Tolerance $\pm 3$ {0.1}]		1.0 {0.04}				
	(degree)		$0^{\circ}10' \pm 0^{\circ}20'$				
Camber angle*2 (Reference value) [Tolerance $\pm 1^{\circ}$ ]			$-0^{\circ}51'$	$-0^{\circ}54'$	$-0^{\circ}56'$	$-0^{\circ}58'$	$-1^{\circ}01'$
Thrust angle (Reference value) [Tolerance $\pm 0^{\circ}48'$ ]			$0^{\circ}00'$				

\*1 : Engine coolant and engine oil are at specified level. Spare tire, jack and tools are in designated position.

\*2 : Difference between left and right must not exceed  $1^{\circ}30'$ .

### Total Toe-in Adjustment

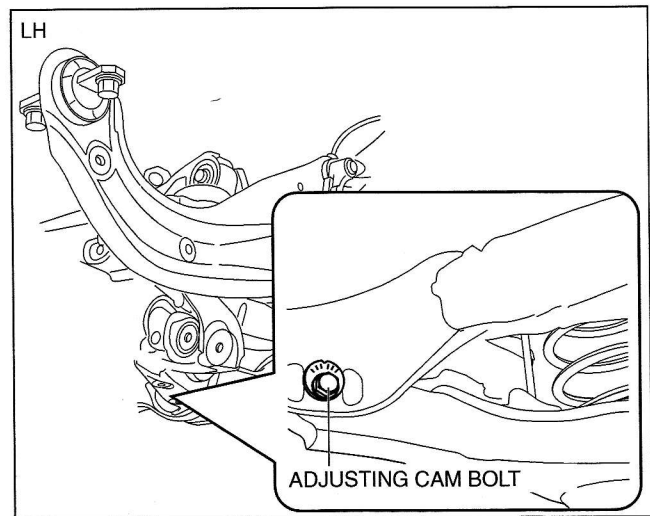
- Loosen the installation nut of the adjusting cam bolt.
- Rotate the adjusting cam bolt in either direction to adjust the toe-in.

	Left wheel	Right wheel
Toe-out direction	Clockwise	Counterclockwise
Toe-in direction	Counterclockwise	Clockwise

- Tighten the nut.

### Tightening torque

84—101 N·m {8.6—10 kgf·m, 62—74 ft·lbf}



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