

## FRONT WHEEL ALIGNMENT

id021100800200

### Front wheel alignment (Unloaded)\*<sup>1</sup> [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

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* <sup>2</sup> (Reference value) [Tolerance $\pm 1^\circ$ ]		6°19'	6°21'	6°24'	6°27'	6°29'
Camber angle* <sup>2</sup> (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'

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

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

### Front wheel alignment (Unloaded)\*<sup>1</sup> [SKYACTIV-D 2.2]

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* <sup>2</sup> (Reference value) [Tolerance $\pm 1^\circ$ ]		6°15'	6°17'	6°20'	6°23'	6°25'
Camber angle* <sup>2</sup> (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'

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

\*<sup>2</sup> : 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

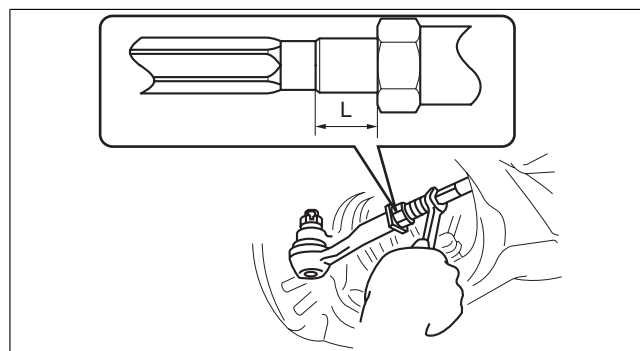
10.1—23.1 mm {0.4—0.9 in}

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.



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7. Adjust the toe-in after adjusting the steering angle.

#### **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. 4 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.