

## 2008 Mazda CX-9 Grand Touring

2008 SUSPENSION Technical Data (Suspension) - Mazda CX-9

### 2008 SUSPENSION

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## SUSPENSION TECHNICAL DATA

### Front wheel alignment [2WD] (Unloaded)\*<sup>1</sup>

#### FRONT WHEEL ALIGNMENT SPECIFICATION - (2WD) (UNLOADED)

Item		Fuel gauge indication				
		Empty	1/4	1/2	3/4	Full
Maximum steering angle [Tolerance $\pm 3^\circ$ ]	Inner	38°				
	Outer	32°				
Total toe-in	[Tolerance $\pm 4 \{ \pm 0.16 \}$ ]	2 {0.08}				
	(mm {in}) (degree)	$0^\circ 18' \pm 0^\circ 32'$				
Caster angle <sup>(1)</sup> [Tolerance $\pm 1^\circ$ ]		3°01'	3°02'	3°03'	3°04'	
Camber angle <sup>(1)</sup> [Tolerance $\pm 1^\circ$ ]		-0°19'		-0°20'		-0°21'
Steering axis inclination (Reference value)		11°31'	11°32'	11°33'	11°34'	11°35'
<p>*<sup>1</sup> : Engine coolant and engine oil are at specified level. Jack and tools are in designated position.                      (1) Difference between left and right must not exceed 1°30'.</p>						

### Front wheel alignment [AWD] (Unloaded)\*<sup>1</sup>

#### FRONT WHEEL ALIGNMENT SPECIFICATION - (AWD) (UNLOADED)

Item		Fuel gauge indication				
		Empty	1/4	1/2	3/4	Full
Maximum steering angle [Tolerance $\pm 3^\circ$ ]	Inner	38°				
	Outer	32°				
Total toe-in	[Tolerance $\pm 4 \{ \pm 0.16 \}$ ]	2 {0.08}				
	(mm {in}) (degree)	$0^\circ 18' \pm 0^\circ 32'$				
Caster angle <sup>(1)</sup> [Tolerance $\pm 1^\circ$ ]		3°02'	3°03'		3°04'	3°05'
Camber angle <sup>(1)</sup> [Tolerance $\pm 1^\circ$ ]		-0°19'		-0°20'		-0°21'
Steering axis inclination (Reference value)		11°31'	11°32'	11°33'	11°34'	11°35'
<p>*<sup>1</sup> : Engine coolant and engine oil are at specified level. Jack and tools are in designated position.                      (1) Difference between left and right must not exceed 1°30'.</p>						

### Rear wheel alignment [2WD] (Unloaded)\*<sup>1</sup>

#### REAR WHEEL ALIGNMENT SPECIFICATION - (2WD) (UNLOADED)

		Fuel gauge indication				
		Empty	1/4	1/2	3/4	Full

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Item		Empty	1/4	1/2	3/4	Full
Total toe-in	[Tolerance ± 4 {±0.16}] (mm {in})	2 {0.08}				
	(degree)	0°09' ± 0°18'				
Camber angle <sup>(1)</sup> (Reference value) [Tolerance ± 1°]		-0°26'	-0°27'	-0°29'	-0°30'	-0°32'
Thrust angle (Reference value) [Tolerance ± 0°48']		0°				

\*1 : Engine coolant and engine oil are at specified level. Jack and tools are in designated position.

(1) Difference between left and right must not exceed 1°30'.

### Rear wheel alignment [AWD] (Unloaded) \*1

#### REAR WHEEL ALIGNMENT SPECIFICATION - (AWD) (UNLOADED)

Item		Fuel gauge indication				
		Empty	1/4	1/2	3/4	Full
Total toe-in	[Tolerance ± 4 {±0.16}] (mm {in})	2 {0.08}				
	(degree)	0°09' ± 0°18'				
Camber angle <sup>(1)</sup> (Reference value) [Tolerance ± 1°]		-0°27'	-0°28'	-0°30'	-0°31'	-0°33'
Thrust angle (Reference value) [Tolerance ± 0°48']		0°				

\*1 : Engine coolant and engine oil are at specified level. Jack and tools are in designated position.

(1) Difference between left and right must not exceed 1°30'.

### Suspension

#### SUSPENSION SPECIFICATION

Item	Specification
Front lower arm rotational torque	2.62 N.m {26.7 kgf.cm, 23.1 in.lbf} max.
Front stabilizer control link ball joint starting torque	0.2-2.0 N.m {3-20 kgf.cm, 2-17 in.lbf}
Rear stabilizer control link ball joint starting torque	0.2-2.0 N.m {3-20 kgf.cm, 2-17 in.lbf}

### Standard tire

#### TIRE SPECIFICATION

Item		Specification	
Tire	Size	P245/60R18 104H	P245/50R20 102V
	Air pressure (kPa {psi})	Front	230 {34}
		Rear	
	Remaining tread (mm {in})	1.6 {0.07}	
Wheel	Size	18x7 1/2J	20x7 1/2J
	Material	Aluminum alloy	
	Wheel offset (mm {in})	45 {1.8}	

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Standard tire	Wheel pitch circle diameter	(mm {in})	114.3 {4.5}		
	Wheel and tire runout	Lateral direction	2.0 {0.08}		
		Radial direction	1.5 {0.06}		
	Wheel and tire imbalance	(g {oz})	Adhesive-type <sup>*1</sup> : 10 {0.35} max.	Adhesive-type <sup>*1</sup> : 6 {0.21} max.	
			Knock-type <sup>*2</sup> : 6 {0.21} max.	Knock-type <sup>*2</sup> : 4 {0.14} max.	
		<sup>*1</sup> : Total weight exceeds <b>160 g {5.65 oz}</b> . <sup>*2</sup> : One balance weight: <b>60 g {2.12 oz} max</b> . If the total weight exceeds <b>100 g {3.53 oz}</b> on one side, rebalance after moving the tire around on the rim. Do not use three or more balance weights.			
Wheel nut tightening torque	(N.m {kgf.m, ft.lf})	107.8-147.0 {11.0-14.9, 79.6-108.4}			

### Temporary spare tire

#### TIRE SPECIFICATION

		Item	Specification		
Temporary spare tire	Tire	Size	T155/90D 18	195/80R17 99M	
		Air pressure (kPa {psi})	420 {60}	250 {36}	
		Remaining tread (mm {in})	1.6 {0.07}		
	Wheel	Size	18x4T	17x5 1/2J	
		Material	Steel		
		Wheel offset (mm {in})	40 {1.57}	45 {1.8}	
		Wheel pitch circle diameter (mm {in})	114.3 {4.5}		
	Wheel and tire runout (mm {in})	Lateral direction	2.0 {0.08}		
		Radial direction	1.5 {0.06}		
	Wheel nut tightening torque	(N.m {kgf.m, ft.lf})	107.8-147.0 {11.0-14.9, 79.6-108.4}		