

# 1. Brakes

## A: SPECIFICATIONS

### 1. SEDAN

	Engine (cc)	1800				2200
	Driving system	FWD				AWD
		Base	L	Base	L	LX
Front brake	Type	Disc (Floating type, ventilated)				
	Effective disc diameter mm (in)	194 (7.64)	194 (7.64) [210 (8.27)]		210 (8.27)	
	Disc thickness x outer diameter mm (in)	18 x 242 (0.71 x 9.53)	18 x 242 (0.71 x 9.53) [24 x 260 (0.94 x 10.24)]		24 x 260 (0.94 x 10.24)	
	Effective cylinder diameter mm (in)			53.97 (2.1248)		
	Pad dimensions (length x width x thickness) mm (in)			112.4 x 44.3 x 11.0 (4.43 x 1.744 x 0.433)		
	Clearance adjustment	Automatic adjustment				
Rear brake	Type	Drum (Leading-trailing type)	Drum (Leading-trailing type) [Disc (Floating type)]	Drum (Leading-trailing type)	Drum (Leading-trailing type) [Disc (Floating type)]	Disc (Floating type)
	Effective drum or disc diameter mm (in)	228.6 (9)	228.6 (9) [230 (9.06)]	228.6 (9)	228.6 (9) [230 (9.06)]	230 (9.06)
	Disc thickness x outer diameter mm (in)	—	[10 x 266 (0.39 x 10.47)]	—	[10 x 266 (0.39 x 10.47)]	10 x 266 (0.39 x 10.47)
	Effective cylinder diameter mm (in)	17.46 (0.6874)	17.46 (0.6874) [34.93 (1.3752)]	19.05 (0.7500)	19.05 (0.7500) [34.93 (1.3752)]	34.93 (1.3752)
	Lining or pad dimensions (length x width x thickness) mm (in)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)]	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)]	92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)
	Clearance adjustment	Automatic adjustment				
Parking brake	Type	Mechanical on rear brake drums				
	Effective drum diameter mm (in)	228.6 (9)	228.6 (9) [170 (6.69)]	228.6 (9)	228.6 (9) [170 (6.69)]	170 (6.69)
	Lining or pad dimensions (length x width x thickness) mm (in)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)]	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)]	162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)
	Clearance adjustment	Automatic adjustment	Automatic adjustment [Manual adjustment]	Automatic adjustment	Automatic adjustment [Manual adjustment]	Manual adjustment
Master cylinder	Type	Tandem				
	Effective diameter mm (in)	23.81 (0.9374)	23.81 (0.9374) [25.40 (1)]	23.81 (0.9374)	23.81 (0.9374) [25.40 (1)]	25.40 (1)
	Reservoir type	Sealed type				
Brake booster	Brake fluid reservoir capacity cm <sup>3</sup> (cu in)			190 (11.59)		
	Type	Vacuum suspended				
Proportioning valve	Effective diameter mm (in)	230 (9.06)	230 (9.06) [180 + 205 (7.09 + 8.07)]	230 (9.06)	230 (9.06) [180 + 205 (7.09 + 8.07)]	180 + 205 (7.09 + 8.07)
	Split point kPa (kg/cm <sup>2</sup> , psi)	2,942 (30.0, 427)	2,942 (30.0, 427) [1,961 (20.0, 284)]	2,942 (30.0, 427)	2,942 (30.0, 427) [1,961 (20.0, 284)]	1,961 (20.0, 284)
Reducing ratio		0.4				
Brake line	Dual circuit system					
A.B.S.	—	OP	—	OP	STD	

[ ]: A.B.S. equipped vehicle.

## 2. WAGON

	Engine (cc)	1800			2200				
	Driving system	FWD		AWD	AWD				
		Base	L	L	Outback	LX			
Front brake	Type	Disc (Floating type, ventilated)							
	Effective disc diameter mm (in)	194 (7.64)	194 (7.64) [210 (8.27)]		210 (8.27)				
	Disc thickness x outer diameter mm (in)	18 x 242 (0.71 x 9.53)	18 x 242 (0.71 x 9.53) [24 x 260 (0.94 x 10.24)]		24 x 260 (0.94 x 10.24)				
	Effective cylinder diameter mm (in)			53.97 (2.1248)					
	Pad dimensions (length x width x thickness) mm (in)			112.4 x 44.3 x 11.0 (4.43 x 1.744 x 0.433)					
	Clearance adjustment	Automatic adjustment							
Rear brake	Type	Drum (Leading-trailing type)	Drum (Leading-trailing type) [Disc (Floating type)]	Drum (Leading-trailing type) [Disc (Floating type)]	Drum (Leading-trailing type)	Disc (Floating type)			
	Effective drum or disc diameter mm (in)	228.6 (9)	228.6 (9) [230 (9.06)]	228.6 (9) [230 (9.06)]	228.6 (9)	230 (9.06)			
	Disc thickness x outer diameter mm (in)	—	[10 x 266 (0.39 x 10.47)]	[10 x 266 (0.39 x 10.47)]	—	10 x 266 (0.39 x 10.47)			
	Effective cylinder diameter mm (in)	19.05 (0.7500)	19.05 (0.7500) [34.93 (1.3752)]	19.05 (0.7500) [38.1 (1.500)]	19.05 (0.7500)	38.1 (1.500)			
	Lining or pad dimensions (length x width x thickness) mm (in)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)]	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)]	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)			
	Clearance adjustment	Automatic adjustment							
Parking brake	Type	Mechanical on rear brake drums							
	Effective drum diameter mm (in)	228.6 (9)	228.6 (9) [170 (6.69)]	228.6 (9) [170 (6.69)]	228.6 (9)	170 (6.69)			
	Lining or pad dimensions (length x width x thickness) mm (in)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)]	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)]	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)			
	Clearance adjustment	Automatic adjustment	Automatic adjustment [Manual adjustment]	Automatic adjustment [Manual adjustment]	Automatic adjustment	Manual adjustment			
Master cylinder	Type	Tandem							
	Effective diameter mm (in)	23.81 (0.9374)	23.81 (0.9374) [25.40 (1)]	23.81 (0.9374) [25.40 (1)]	23.81 (0.9374)	25.40 (1)			
	Reservoir type	Sealed type							
Brake booster	Brake fluid reservoir capacity cm <sup>3</sup> (cu in)			190 (11.59)					
	Type	Vacuum suspended							
Proportioning valve	Effective diameter mm (in)	230 (9.06)	230 (9.06) [180 + 205 (7.09 + 8.07)]	230 (9.06) [180 + 205 (7.09 + 8.07)]	230 (9.06)	180 + 205 (7.09 + 8.07)			
	Split point kPa (kg/cm <sup>2</sup> , psi)	2,942 (30.0, 427)	2,942 (30.0, 427) [1,961 (20.0, 284)]	2,942 (30.0, 427) [1,961 (20.0, 284)]	2,942 (30.0, 427)	1,961 (20.0, 284)			
Proportioning valve	Reducing ratio	0.4							
Brake line		Dual circuit system							
A.B.S.	—	OP	OP	—	STD				

[ ]: A.B.S. equipped vehicle.

## 3. COUPE

	Engine (cc)	1800				2200				
	Driving system	FWD				AWD				
		Base	L	Base	L	LX				
Front brake	Type	Disc (Floating type, ventilated)								
	Effective disc diameter mm (in)	194 (7.64)	210 (8.27)							
	Disc thickness x outer diameter mm (in)	18 x 242 (0.71 x 9.53)	24 x 260 (0.94 x 10.24)							
	Effective cylinder diameter mm (in)	53.97 (2.1248)								
	Pad dimensions (length x width x thickness) mm (in)	112.4 x 44.3 x 11.0 (4.43 x 1.744 x 0.433)								
	Clearance adjustment	Automatic adjustment								
Rear brake	Type	Drum (Leading-trailing type)	Drum (Leading-trailing type) [Disc (Floating type)]	Drum (Leading-trailing type)	Drum (Leading-trailing type) [Disc (Floating type)]	Disc (Floating type)				
	Effective drum or disc diameter mm (in)	228.6 (9)	228.6 (9) [230 (9.06)]	228.6 (9)	228.6 (9) [230 (9.06)]	230 (9.06)				
	Disc thickness x outer diameter mm (in)	—	[10 x 266 (0.39 x 10.47)]	—	[10 x 266 (0.39 x 10.47)]	10 x 266 (0.39 x 10.47)				
	Effective cylinder diameter mm (in)	17.46 (0.6874)	17.46 (0.6874) [34.93 (1.3752)]	19.05 (0.7500)	19.05 (0.7500) [34.93 (1.3752)]	34.93 (1.3752)				
	Lining or pad dimensions (length x width x thickness) mm (in)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)]	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)]	92.4 x 33.7 x 10.0 (3.638 x 1.327 x 0.394)				
	Clearance adjustment	Automatic adjustment								
Parking brake	Type	Mechanical on rear brake drums								
	Effective drum diameter mm (in)	228.6 (9)	228.6 (9) [170 (6.69)]	228.6 (9)	228.6 (9) [170 (6.69)]	170 (6.69)				
	Lining or pad dimensions (length x width x thickness) mm (in)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)]	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161)	218.8 x 35.0 x 4.1 (8.61 x 1.378 x 0.161) [162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)]	162.6 x 30.0 x 3.2 (6.40 x 1.181 x 0.126)				
	Clearance adjustment	Automatic adjustment	Automatic adjustment [Manual adjustment]	Automatic adjustment	Automatic adjustment [Manual adjustment]	Manual adjustment				
Master cylinder	Type	Tandem								
	Effective diameter mm (in)	23.81 (0.9374)	23.81 (0.9374) [25.40 (1)]	23.81 (0.9374)	23.81 (0.9374) [25.40 (1)]	25.40 (1)				
	Reservoir type	Sealed type								
Brake booster	Brake fluid reservoir capacity cm <sup>3</sup> (cu in)	190 (11.59)								
	Type	Vacuum suspended								
Proportioning valve	Effective diameter mm (in)	230 (9.06)	230 (9.06) [180 + 205 (7.09 + 8.07)]	230 (9.06)	230 (9.06) [180 + 205 (7.09 + 8.07)]	180 + 205 (7.09 + 8.07)				
	Split point kPa(kg/cm <sup>2</sup> , psi)	2,942 (30.0, 427)	2,942 (30.0, 427) [1,961 (20.0, 284)]	2,942 (30.0, 427)	2,942 (30.0, 427) [1,961 (20.0, 284)]	1,961 (20.0, 284)				
Proportioning valve	Reducing ratio	0.4								
Brake line		Dual circuit system								
A.B.S.	—	OP	—	OP	STD					

[ ]: A.B.S. equipped vehicle.

**B: SERVICE DATA**

ITEM		STANDARD	SERVICE LIMIT
Front brake	Pad thickness (including back metal)	17 mm (0.67 in)	7.5 mm (0.295 in)
	Disc thickness	13-inch type: 18 mm (0.71 in) 14-inch type: 24 mm (0.94 in)	13-inch type: 16 mm (0.63 in) 14-inch type: 22 mm (0.87 in)
	Disc run-out	—	0.075 mm (0.0030 in)
Rear brake (Disc type)	Pad thickness (including back metal)	15 mm (0.59 in)	6.5 mm (0.256 in)
	Disc thickness	10 mm (0.39 in)	8.5 mm (0.335 in)
	Disc run-out	—	0.10 mm (0.0039 in)
Rear brake (Drum type)	Inside diameter	228.6 mm (9 in)	230.6 mm (9.079 in)
	Lining thickness	4.1 mm (0.161 in)	1.5 mm (0.059 in)
Rear brake (Disc type Parking)	Inside diameter	170 mm (6.69 in)	171 mm (6.73 in)
	Lining thickness	3.2 mm (0.126 in)	1.5 mm (0.059 in)
Parking brake	Lever stroke	7 to 8 notches/196N (20 kg, 44 lb)	

			Models without A.B.S.	Models with A.B.S.
		Brake pedal force	Fluid pressure	
Brake booster	Brake fluid pressure without engine running	147 N (15 kg, 33 lb)	785 kPa (8 kg/cm <sup>2</sup> , 114 psi)	588 kPa (6 kg/cm <sup>2</sup> , 85 psi)
		294 N (30 kg, 66 lb)	2,158 kPa (22 kg/cm <sup>2</sup> , 313 psi)	1,863 kPa (19 kg/cm <sup>2</sup> , 270 psi)
	Brake fluid pressure with engine running and vacuum at 66.7 kPa (500 mmHg, 19.69 inHg)	147 N (15 kg, 33 lb)	5,492 kPa (56 kg/cm <sup>2</sup> , 796 psi)	5,394 kPa (55 kg/cm <sup>2</sup> , 782 psi)
		294 N (30 kg, 66 lb)	8,434 kPa (86 kg/cm <sup>2</sup> , 1,223 psi)	9,219 kPa (94 kg/cm <sup>2</sup> , 1,337 psi)

**C: RECOMMENDED BRAKE FLUID**

FMVSS No. 116, fresh DOT3 or 4 brake fluid

**CAUTION:**

- Avoid mixing brake fluid of different brands to prevent the fluid performance from degrading.
- When brake fluid is supplemented, be careful not to allow any dust into the reservoir.
- Use fresh DOT3 or 4 brake fluid when replacing or refilling the fluid.

**D: BRAKE FLUID LEVEL INDICATOR***Reserve tank with level indicator:*

*Residual fluid quantity at light ON  
Approx. 80 cm<sup>3</sup> (80cc, 4.88 cu in)*

*Tank capacity  
190 cm<sup>3</sup> (190cc, 11.59 cu in)*