

WHEELS AND TIRES

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12 OUTLINE, TROUBLESHOOTING GUIDE

OUTLINE

SPECIFICATIONS

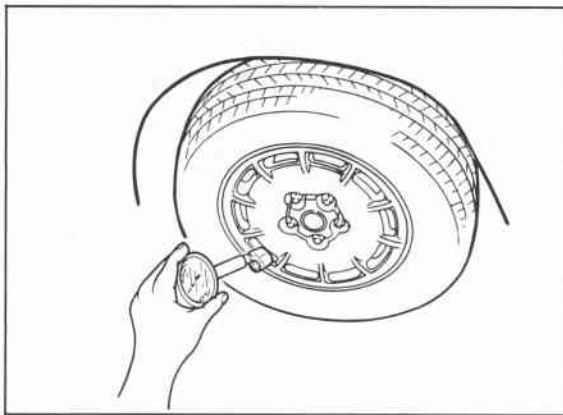
Item			Type	Standard	Temporary spare (if equipped)
Wheel	Size			5-J x 13	4-T x 15
				5 1/2-JJ x 14	
				6-JJ x 15	
	Off set	mm (in)		42 (1.65)	53 (2.09)
	Diameter of pitch circle	mm (in)	114.3 (4.5)		
	Material		Steel or aluminum alloy	Steel	
	Number of fixing nuts	13 inch-wheel	4	4 or 5	
14 inch-wheel		5			
15 inch-wheel					
Tire	Size	13 inch-wheel	6.45—13—6PR 165 SR13 165/80R13 82S 185/70HR13 185/70R13 85H	T125/70D15	
		14 inch-wheel	185/70HR14 185/70R14 87H 185/70R14 88H 185/70VR14		
		15 inch-wheel	195/60R15 86H 195/60VR15		
	Air pressure kPa (kg/cm ² , psi)	Front	216 (2.2, 31) or 196 (2.0, 28) *See tire labels for application	412 (4.2, 60)	
		Rear	177 (1.8, 26)		

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TROUBLESHOOTING GUIDE

Problem	Possible Cause	Remedy	Page
Premature tire wear	Incorrect tire pressure	Adjust	12— 2
Tire squeal	Incorrect tire pressure Tire deterioration	Adjust Replace	12— 2 —
Road noise or body vibration	Insufficient tire pressure Unbalanced wheel(s) Deformed wheel(s) or tire(s) Irregular tire wear	Adjust Adjust Repair or replace Replace	12— 2 12— 5 — —
Steering wheel vibration	Irregular tire wear Right and left tread depths different Deformed or unbalanced wheel(s) Deformed tire(s) Unequal tire pressures Loose lug nuts	Replace Replace Replace or adjust Replace Adjust Tighten	— — 12— 5 — 12— 2 12— 5
Uneven (one-sided) braking	Unequal tire pressures	Adjust	12— 2
Steering wheel doesn't return properly, or pulls to either left or right while vehicle moving on level road surface	Incorrect tire pressure Irregular tire wear (left and right are different) Unequal tire pressures Different types or brands of tires mixed (right/left) Improperly tightened lug nuts	Adjust Replace Adjust Replace Tighten	12— 2 — 12— 2 — 12— 5
General driving instability	Unequal tire pressures Deformed or unbalanced wheel(s) Loose lug nuts	Adjust Replace or adjust Tighten	12— 2 12— 5 12— 5
Excessive steering wheel play	Loose lug nuts	Tighten	12— 5

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WHEELS AND TIRES

INSPECTION AND ADJUSTMENTS

Check the following, and adjust or replace as necessary.

1. Air pressure

Check the air pressure of all tires, including the spare tire, with an air pressure gauge.
(Refer to page 12—2.)

Caution

The air pressure must be measured when the tire is cold.

2. Tire wear

Specifications

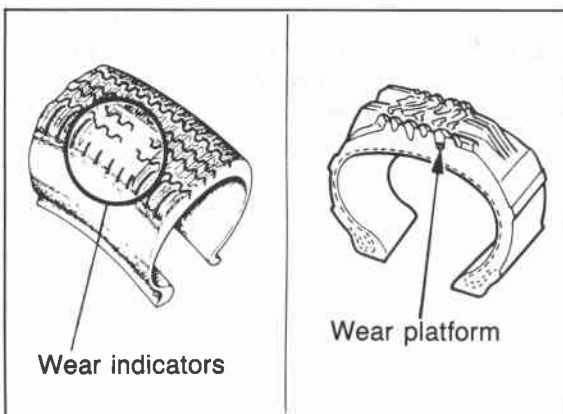
Remaining tread

Ordinary tires: 1.6 mm (0.063 in) min.

(Tire should be replaced if wear indicators are exposed.)

Snow tires: 50% of tread

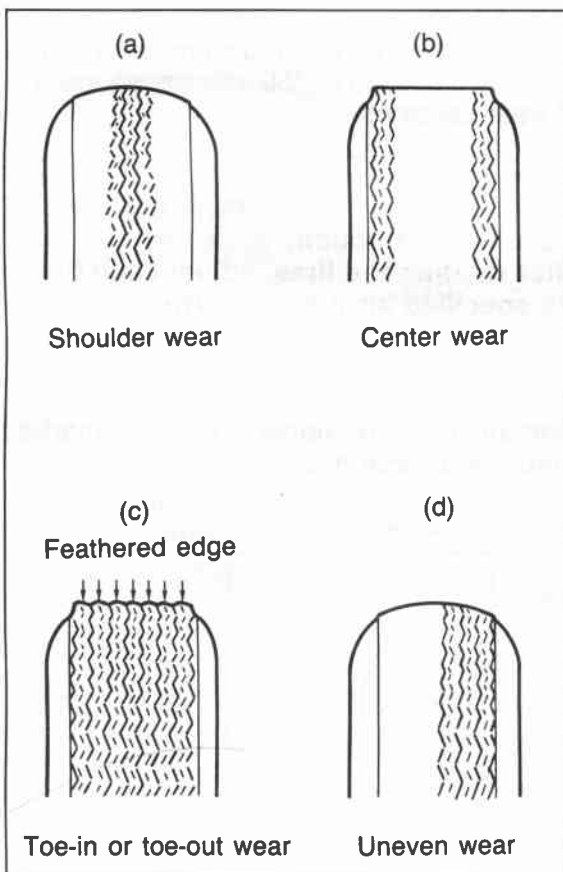
(Tire should be replaced if wear indicators are exposed.)



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Troubleshooting guide

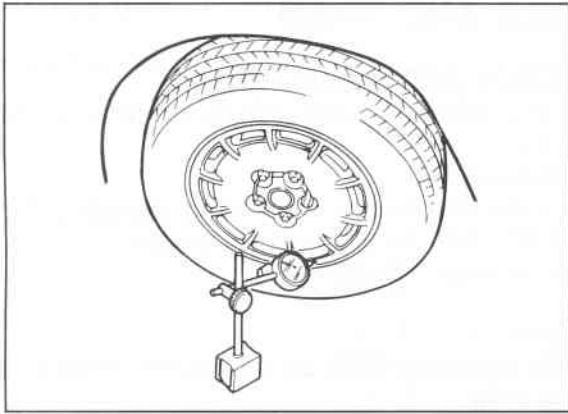
Abnormal tire wear patterns shown in the illustration can occur. Refer to the chart for the probable causes and remedies.



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	Probable cause	Remedy
(a)	<ul style="list-style-type: none"> Underinflation (both sides worn) Incorrect camber (one side worn) Hard cornering Lack of rotation 	<ul style="list-style-type: none"> Measure and adjust pressure Repair or replace axle and suspension parts Reduce speed Rotate tires
(b)	<ul style="list-style-type: none"> Overinflation Lack of rotation 	<ul style="list-style-type: none"> Measure and adjust pressure Rotate tires
(c)	<ul style="list-style-type: none"> Incorrect toe-in 	<ul style="list-style-type: none"> Adjust toe-in
(d)	<ul style="list-style-type: none"> Incorrect camber or caster Malfunctioning suspension Unbalanced wheel Out-of-round brake drum or disc Other mechanical conditions Lack of rotation 	<ul style="list-style-type: none"> Repair or replace axle and suspension parts Repair or replace Balance or replace Correct or replace Correct or replace Rotate tires

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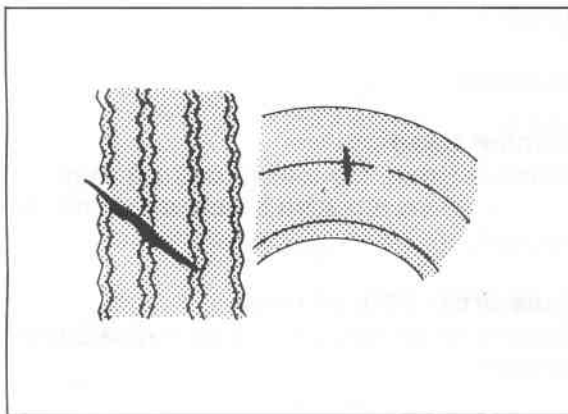
3. Wheel deflection

Set the probe of a dial indicator against the wheel, and turn the wheel one full revolution.

Wheel deflection limit

mm (in)

	Horizontal	Vertical
Steel wheel	2.5 (0.098)	2.0 (0.079)
Aluminum wheel	2.0 (0.079)	

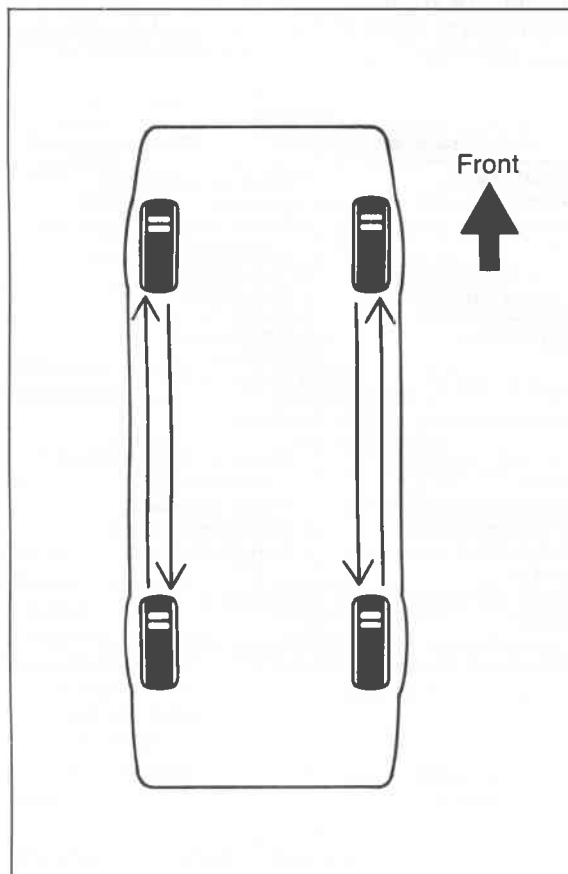


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4. Cracks, damage, or foreign matter (such as metal pieces, nails, and stones) in the tire and cracks, deformation, and damage to the wheel

5. Loose wheel lug nut(s)

6. Air leaking from the valve stem



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TIRE ROTATION

To prolong tire life and assure uniform wear, rotate the tires every 6,000 km (3,750 miles) or sooner if irregular wear develops.

Caution

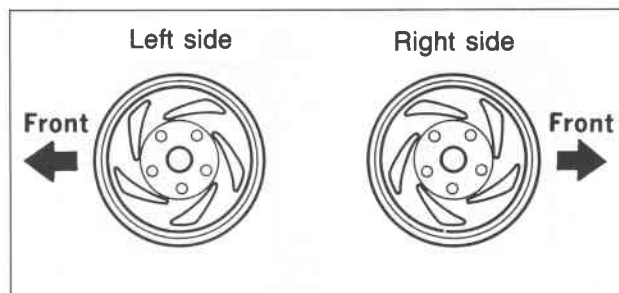
a) Do not include "TEMPORARY USE ONLY" spare tire in rotation.

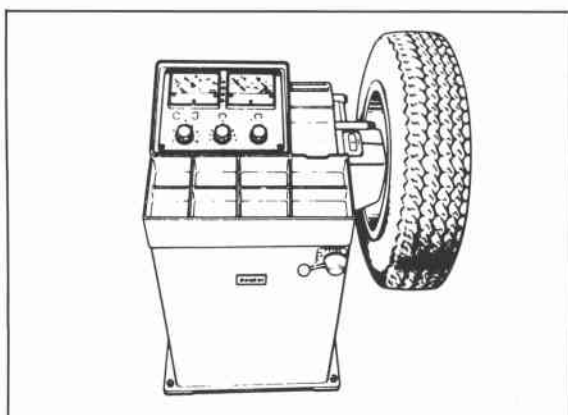
b) After rotating the tires, adjust each tire to the specified air pressure. (Refer to page 12—2.)

Note

The optional unidirectional wheels are marked to indicate direction of travel.

Unidirectional wheel





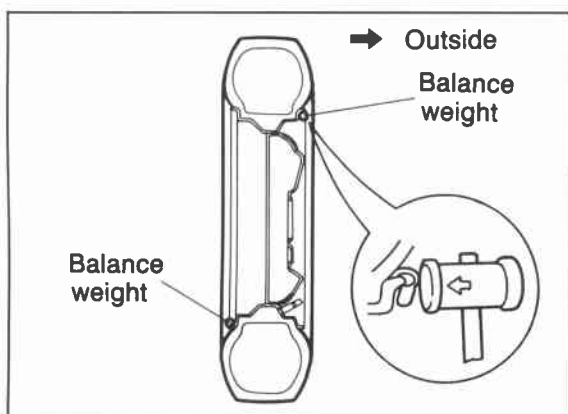
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WHEEL BALANCE

If a wheel becomes unbalanced or if a tire is replaced or repaired, the wheel must once again be balanced to within specification.

Maximum unbalance (at rim edge): g (oz)

13 inch-wheel	11 (0.39)
14 inch-wheel	10 (0.35)
15 inch-wheel	9 (0.32)



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Caution

- Do not use more than two balance weights on the inner or outer side of the wheel. If the total weight exceeds 100 g (3.5 oz), re-balance after moving the tire around on the rim.
- Attach the balance weights tightly so that they do not protrude more than 3 mm (0.12 in) beyond the wheel edge.
- Select suitable balance weights for steel or aluminum alloy wheels.
- Do not use an on-car balancer on ATX models. Use of this type of balancer may cause clutch damage.

WHEEL MOUNTING

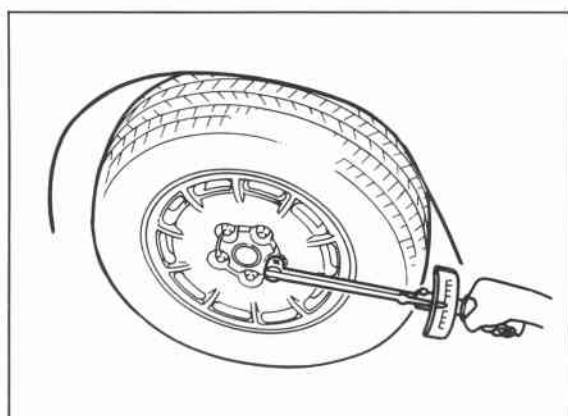
Tighten the lug nuts to the specified torque in a criss-cross fashion.

Tightening torque:

88—118 N·m (9—12 m·kg, 65—87 ft·lb)

Caution

- The wheel-to-hub contact surfaces must be clean.
- Never apply oil to the nuts, bolts, or wheels; doing so might cause looseness or seizure of the lug nuts.



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SPECIAL NOTE

Regarding wheels and tires:

- Do not use wheels or tires other than the specified types.
- Aluminum wheels are easily scratched. When washing them, use a soft cloth, never a wire brush. If the vehicle is steam cleaned, do not allow boiling water to contact the wheels.
- If alkaline compounds (such as salt water or road salts), get on aluminum wheels, wash them as soon as possible to prevent damage. Use only a neutral detergent.

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Regarding tire replacement:

Note the following points when tires are to be removed from or mounted onto the wheels.

1. Be careful not to scratch the tire bead, the rim bead, or the edge of the rim.
2. Apply a soapy solution to the tire bead and the edge of the rim.
3. Use a wire brush, sandpaper, or cloth to clean and remove all rust, dirt, etc., from the rim edge and the rim bead. For aluminum wheels, use only a cloth for this purpose; never use a wire brush or sandpaper.
4. Remove any pebbles, glass, nails, etc., embedded in the tire tread.
5. Be sure the air valve is installed correctly.
6. After mounting a tire onto a wheel, inflate the tire to 250—300 kPa (2.55—3.06 kg/cm², 35.55—42.66 psi). Check to be sure that the bead is seated correctly onto the rim and that there are no air leaks. Then reduce the pressure to the specified level.
7. If a tire iron is used to change a tire on an aluminum wheel, be sure to use a piece of rubber between the iron lever and the wheel in order to avoid damage to the wheel. Work should be done on a rubber mat, not on a hard or rough surface.

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