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This file was not scanned to deprive Mazda of any money - it was scanned due to the rareness of the original manuals and the overwhelming need of the RX-7 owner to have this information so that they can accurately troubleshoot problems. Perhaps if Mazda's dealerships could support the Rotary Engine it wouldn't be so necessary for the owners to do so.

Many thanks to Lenny Terris for scanning this.

WHEELS AND TIRES

OUTLINE

SPECIFICATIONS

Item \ Type			Standard	Temporary spare
wheel	Size		16 × 8JJ	16 × 4T
	Offset	mm {in}	50 {1.97}	40 {1.57}
	Pitch circle diameter	mm {in}	114.3 (4.50)	
	Material		Aluminum alloy	
Tire	Size		P225/50R16 91V P225/50 ZR 16	T135/70D16
	Air pressure	kPa {kgf/cm^2, psi}	220 {2.2, 32}	415 {4.2, 60}

TROUBLESHOOTING GUIDE

Problem	Possible cause	Action	Page
Excessive or irregular tire wear	Refer to page Q–4 for details.		
Premature tire wear	Incorrect tire pressure	Adjust	Q–3
Tire squeal	Incorrect tire pressure Tire deterioration	Adjust Replace	Q–3 —
Road noise or body vibration	Insufficient tire pressure Unbalanced wheel Deformed wheel or tire Irregular tire wear	Adjust Adjust Repair or replace Replace	Q–3 Q–5 — —
Shake (steering wheel vibrates up/down)	Excessive tire or wheel runout Loose lug nuts Unbalanced wheel Cracked or worn engine mount rubber Cracked or worn transmission mount rubber	Replace Tighten Adjust or replace Replace Replace	— Q–4 Q–5 Section C Section J, K
Shimmy (steering wheel vibrates left/right)	Cracked or worn steering gear mount rubber Loose steering gear mounting bolts Stuck or damaged steering ball joint Excessive tire or wheel runout Loose lug nuts Unbalanced wheel Insufficient tire pressure Unevenly worn tires Malfunction of shock absorber Loose shock absorber mounting bolts Stuck or damaged lower arm ball joint Cracked or worn suspension bushings Damaged or worn front wheel bearing Improperly adjusted front wheel alignment	Replace Tighten Replace Replace Tighten Adjust or replace Adjust Replace Replace Tighten Replace Replace Replace Adjust	Section N Section N Section N — Q–4 Q–5 Q–3 — Section R Section R Section R Section R Section M Section R
Uneven (onesided) braking	Unequal tire pressures	Adjust	Q–3
Steering wheel doesn't return properly or pulls left or right	Incorrect tire pressure Irregular tire wear (left/right) Unequal tire pressures Different types or brands of tires mixed (left/right) Loose lug nuts	Adjust Replace Adjust Replace Tighten	Q–3 — Q–3 — Q–4
General driving instability	Unequal tire pressures Damaged or unbalanced wheel Loose lug nuts	Adjust Replace or adjust Tighten	Q–3 Q–5 Q–4
Excessive steering wheel play	Loose lug nuts	Tighten	Q–4

WHEELS AND TIRES

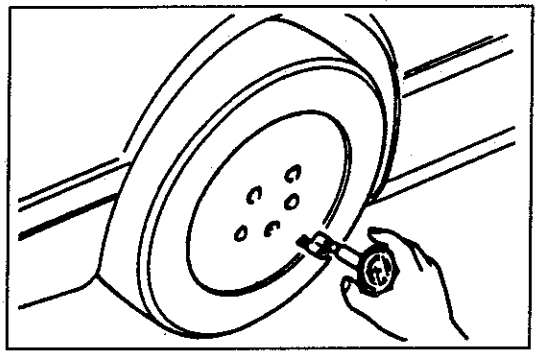
SPECIAL NOTES ABOUT WHEELS AND TIRES

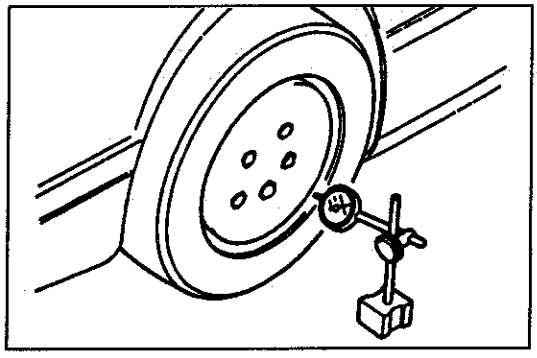
1. Do not use wheels or tires other than the specified types.
2. Aluminum wheels are easily scratched. When washing them, use a soft cloth, never a wire brush. If the vehicle is steam cleaned, do not allow boiling water to contact the wheels.
3. If alkaline compounds (such as salt-water or road salts)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

NOTES REGARDING TIRE REPLACEMENT

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

1. Be careful not to damage 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 and dirt 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 pebbles, glass, nails, and other foreign items embedded in the tire tread.
5. Be sure the air valve is installed correctly.
6. After mounting a tire onto a wheel, inflate it to 250–300 kPa {2.5–3.0 kgf/cm^2, 36–42 psi}. Verify 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 to avoid damage to the wheel. Work should be done on a rubber mat, not on a hard or rough surface.





INSPECTION/ADJUSTMENT

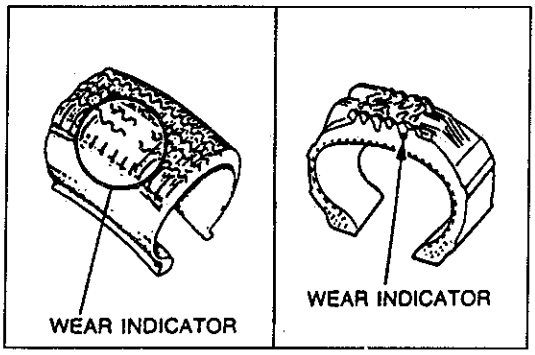
Perform the following inspections and adjust or replace as necessary.

1. Check the air pressure of all tires when they are cold, including the spare tire.

Air pressure
Standard tire: 220 kPa {2.2 kgf/cm^2, 32 psi}
Temporary spare tire: 415 kPa {4.2 kgf/cm^2, 60 psi}

2. Turn the wheel one full revolution and check the wheel runout.

Wheel runout
Horizontal: 2.0 mm {0.079 in} max.
Vertical: 1.5 mm {0.059 in} max.

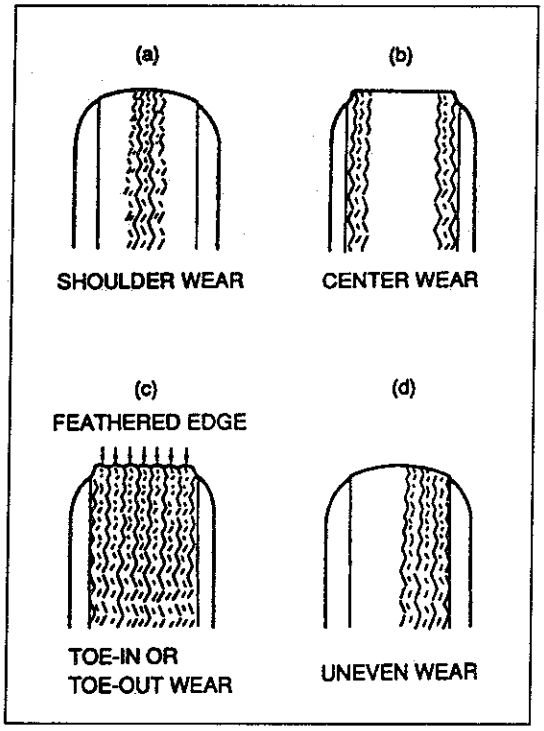


3. Inspect for tire wear.

Specifications

Remaining tread
Ordinary tires: 1.6 mm {0.063 in} min.
(Tire should be replaced if wear indicators are exposed.)

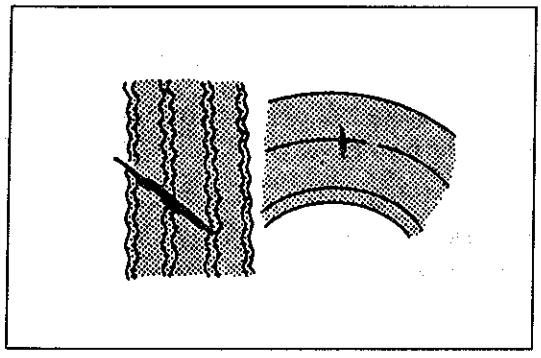
Snow tires: 50% of tread
(Tire should be replaced if wear indicators are exposed.)



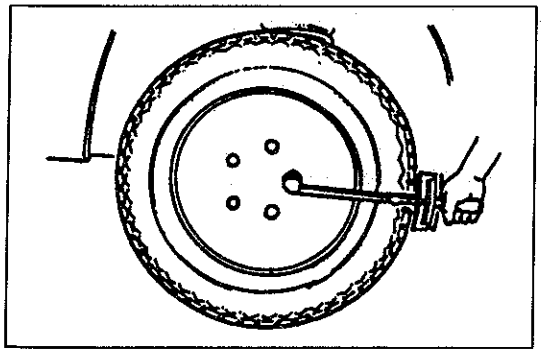
Troubleshooting guide

Abnormal tire wear patterns as shown in the illustration can occur. Refer to the chart for the possible causes and actions.

	Possible cause	Action
(a)	• Underinflation (both sides worn) • Incorrect camber (one side worn) • Hard cornering • Lack of rotation	• Measure and adjust pressure • Repair or replace suspension parts • Reduce speed • Rotate tires
(b)	• Overinflation • Lack of rotation	• Measure and adjust Pressure • Rotate tires
(c)	• Incorrect toe-in	• Adjust toe-in
(d)	• Incorrect camber or caster • Malfunctioning suspension • Unbalanced wheel • Out-of-round brake drum or disc • Other mechanical conditions • Lack of rotation	• Repair or replace suspension parts • Repair or replace • Balance or replace • Correct or replace • Correct or replace • Rotate tires



4. Cracks, damage, and 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 valve stem.

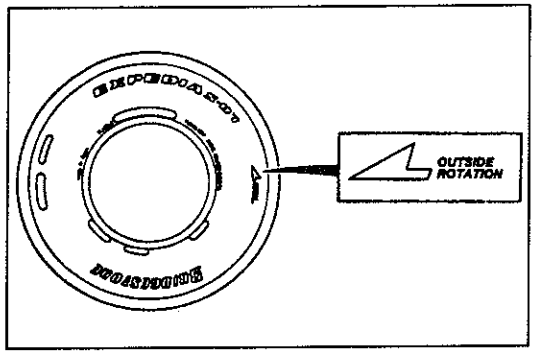


REMOVAL/INSTALLATION

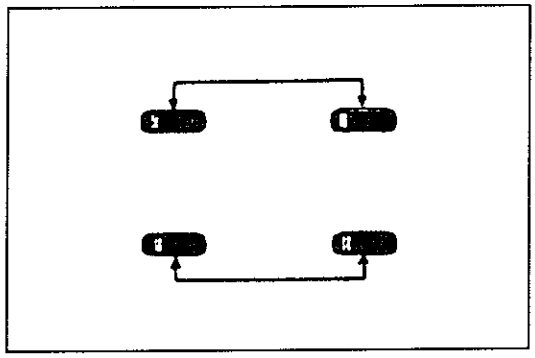
After making sure that the wheel-to-hub contact surfaces are clean, tighten the lug nuts to the specified torque in a crisscross pattern.

Tightening torque:
89–117 N·m{9.0–12.0 kgf·m,66–86 ft·lbf}

Caution
- **Applying oil to the lug nuts, studs, or wheels will cause the lug nuts to loosen.**



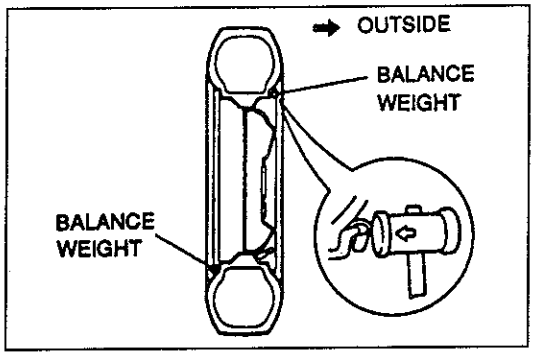
Mount the tires so that OUTSIDE marks face out, and rotation marks match the tire's rotation.



TIRE ROTATION

To prolong tire life and assure uniform tire wear, rotate all tires as specified below except the "TEMPORARY USE ONLY" spare tire.

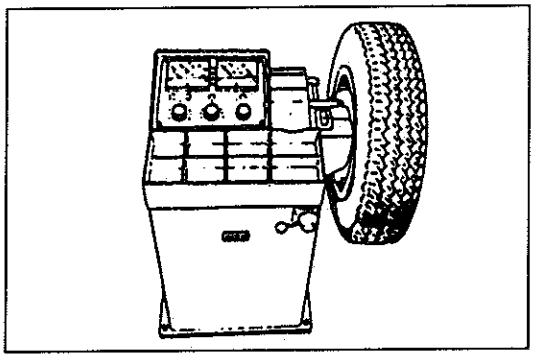
USA : Every 6000km {3750miles}
Canada : Every 24000km {15000miles} or 15monthes (whichever comes first)



WHEEL BALANCE ADJUSTMENT

If a wheel has becomes unbalanced or if a tire has been repaired or repaired, rebalance the wheel.

Maximum unbalance (at rim edge): 8g {0.28 oz}



When balancing a wheel:

(1) Use no more than two balance weights on the inner or outer side of the wheel.
(2) One balance weight should weigh no more than 60 g {2.1 oz}. If the total weight of all the balance weights on one side exceeds 100 g {3.53 oz}, then rebalance after repositioning the tire on the rim.
(3) Select suitable balance weights for steel or aluminum alloy wheels.

Caution

- **Using an on-vehicle balancer may cause damage to the transmission. Always use an off-vehicle balancer whenever balancing a wheel.**