

4

Protecting Your Mazda

Most people like to save money. With an automobile, that can be done in several ways from its first day of operation. Probably tops on the list of cost-efficiency is using the right kind of fuel and using that fuel conservatively.

Section 4 explains how to do this. Further, it discusses proper loading and how to respond to unusual driving conditions. It also illustrates where important vehicle information labels may be found.

Fuel Requirements	4- 2
Emission Control System	4- 3
Engine Exhaust	4- 4
Before Driving	4- 6
Break-In Period	4- 6
Money-Saving Suggestions	4- 7
Special Driving Conditions	4- 8
Vehicle Information Labels	4-12

Protecting Your Mazda

Fuel Requirements

Vehicles with catalytic converters must use **ONLY UNLEADED FUEL**, which will reduce exhaust emissions and keep spark plug fouling to a minimum.

Your Mazda will perform best with regular unleaded fuel having an octane rating (antiknock index) of at least 87 [(R+M)/2 method].

Fuel with a lower rating could cause the emission control system to lose effectiveness. It could also cause engine knocking and serious engine damage.

U.S. federal law requires that octane ratings be posted on gasoline station pumps.

CAUTION

NEVER USE LEADED FUEL.

It is harmful to the catalytic converter. The lead will accumulate on the oxygen sensor and the catalyst inside the converter.

This will result in a malfunction of the emission control system, causing poor performance.

Gasoline blended with oxygenates such as alcohol or ether compounds are generally referred to as oxygenated fuels. The common gasoline blend that can be used with your vehicle is ethanol blended at no more than 10%.

Gasoline containing alcohol, such as ethanol or methanol, may be marketed under the name "Gasohol".

CAUTION

Your vehicle can only use oxygenated fuels containing no more than 10% ethanol by volume. Damage to your vehicle may occur when ethanol exceeds this recommendation, or if the gasoline contains any methanol.

Stop using gasohol of any kind if your vehicle engine is performing poorly.

Emission Control System

CAUTION

Never add fuel system additives. Never add cleaning agents other than those specified by Mazda. Other cleaning agents and additives may damage the system. Consult an Authorized Mazda Dealer.

Vehicle damage and drivability problems resulting from the use of the following may not be covered by the manufacturer's warranty.

- 1) Gasohol containing more than 10% ethanol
- 2) Gasoline or gasohol containing methanol
- 3) Leaded fuel or leaded gasohol

Your vehicle is equipped with an emission control system (the catalytic converter is part of this system) that enables your vehicle to comply with U.S. exhaust emissions requirements.

Under U.S. federal law, any modification to the original-equipment emission control system before the first sale and registration of a vehicle is subject to penalties. In some states, such modification made on a used vehicle is also subject to penalties.

WARNING

Parking Over Things That Burn:
Parking over or near anything inflammable, such as dry grass, is dangerous. Even with the engine turned off, the exhaust system could ignite it because the exhaust system gets very hot during normal use. A resulting fire could cause serious injury or death. Never park over or near anything inflammable.

⚠ CAUTION

Ignoring the following precautions could cause lead to accumulate on the catalyst inside the converter or cause the converter to get very hot. Either condition will damage the converter and cause poor performance.

- USE ONLY UNLEADED FUEL.
- Don't drive your Mazda with any sign of engine malfunction.
- Don't coast with the ignition switch turned off.
- Don't descend steep grades in gear with the ignition switch turned off.
- Don't operate the engine at high idle for more than 5 minutes.

(Continued)

- Don't tamper with the emission control system. All inspections and adjustments must be made by a qualified technician.
- Don't try to push-start or pull-start your vehicle.

**Engine Exhaust
(Carbon Monoxide)**

⚠ WARNING

Carbon Monoxide:

Engine exhaust is dangerous. This gas contains carbon monoxide (CO), which is colorless, odorless, and poisonous. When inhaled, it can cause loss of consciousness and death. If you smell exhaust gas inside your vehicle, keep all windows fully open and contact an Authorized Mazda Dealer immediately.

⚠ WARNING

Exhaust Gas in Enclosed Area:
Running the engine inside an enclosed area, such as a garage, is dangerous. Exhaust gas, which contains poisonous carbon monoxide, could easily enter the cabin. Loss of consciousness or even death could occur. Don't run the engine when inside an enclosed area.

⚠ WARNING

Idling with the Windows Closed:
Exhaust gas is dangerous. When your vehicle is stopped with the windows closed and the engine running for a long time in an open area, exhaust gas, which contains poisonous carbon monoxide, could enter the cabin. Loss of consciousness or even death could occur. Open the windows or adjust the heating or cooling system to draw fresh air.

⚠ WARNING

Snow Blocking the Exhaust Gas:
Running the engine when a vehicle is stopped in deep snow is dangerous. The exhaust pipe could be blocked by the snow, allowing exhaust gas to enter the cabin. Because exhaust gas contains poisonous carbon monoxide, anyone in the cabin could be injured or killed. Clear the snow from underneath and around your vehicle before starting the engine.

Protecting Your Mazda

Before Driving

■ Before Getting In

- Be sure the windows, outside mirror(s), and outside lights are clean.
- Inspect inflation pressures and condition of tires.
- Look under the vehicle for any sign of a leak.
- If you plan to back up, make sure nothing will be in your way.

NOTE

Engine oil, engine coolant, brake/clutch fluid, washer fluid, and other fluid levels should be inspected daily, weekly, or at refueling, depending on the fluid. See Maintenance, Section 8.

■ After Getting In

- Are all doors closed and locked?
- Are the inside and outside mirrors adjusted?
- Is everyone's seat belt fastened?
- Do all the lights work?
- Check all gauges.
- Check all warning lights when the ignition switch is turned to the ON(II) position.
- Release the parking brake and make sure the brake warning light goes off.

Always be thoroughly familiar with your Mazda.

Break-In Period

No special break-in is necessary, but a few precautions in the first 600 miles (1,000 km) may add to the performance, economy, and life of your Mazda.

- Don't race the engine.
- Don't maintain one constant speed for long periods.
- Avoid unnecessary hard stops.
- Avoid full-throttle starts.

Money-Saving Suggestions

How you operate your Mazda determines how far it will travel on a tank of fuel. Use these suggestions to help save money on fuel and repairs.

- Avoid long warm-ups. Once the engine runs smoothly, begin driving.
- Avoid fast starts.
- Keep the engine tuned. Follow the maintenance schedule (page 8-3) and have an Authorized Mazda Dealer perform inspections and servicing.
- Slow down on rough roads.
- Keep the tires properly inflated.
- Don't carry unnecessary weight.
- Don't rest your foot on the brake pedal while driving.
- Keep the wheels in correct alignment.
- Keep windows closed at high speeds.
- Slow down when driving in crosswinds and headwinds.

WARNING

Coasting:

Turning off the engine to coast down a hill can be dangerous. This causes the loss of power steering and power brake control. Any loss of steering or braking control could cause an accident. Never turn off the engine and coast down a hill.

Special Driving Conditions

■ Hazardous Driving

When driving on ice or in water, snow, mud, sand, or similar hazard:

- Be cautious and allow extra distance for braking.
- Avoid sudden braking and quick steering.
- Brake with the pedal by using a light up-down motion. Don't hold the pedal down constantly.
- If you get stuck, shift to 1 or 2 and accelerate slowly. Don't spin the rear wheels.
- For more traction in starting, use sand, rock salt, chains, carpeting, or other nonslip material under the rear wheels.

WARNING

***Downshifting on Slippery Surfaces:**
Downshifting into first gear with a manual transmission or into low with an automatic transmission while driving on slippery surfaces could be dangerous. The sudden change in tire speed could cause the tires to skid. This could lead to loss of vehicle control and an accident. If it is necessary to downshift on slippery surfaces, be very careful.*

■ Rocking the Vehicle

If you must rock the vehicle to free it from snow, sand, or mud, depress the accelerator slightly and...

(Automatic transmission)

Slowly move the shift lever back and forth from D to R.

(Manual transmission)

Slowly move the shift lever back and forth from 1 to R.

⚠ WARNING

Spinning the Wheels:

When the vehicle is stuck, spinning the wheels at high speed could be dangerous. The spinning tire could overheat and explode. This could cause serious injuries. Don't spin the wheels at more than 35 mph (56 km/h), and don't allow anyone to stand behind a wheel when pushing the vehicle.

⚠ CAUTION

Too much rocking may cause engine overheating, transmission failure, and tire damage.

■ **Winter Driving**

- Carry emergency gear, including tire chains, window scraper, flares, a small shovel, jumper cables, and a small bag of sand or salt.
- Have the proper ratio of antifreeze in the radiator (page 8-16).
- Inspect the battery and its cables. Cold reduces battery capacity.
- Use only cold-weather engine oil (page 8-12).
- Inspect the ignition system for damage and loose connections.
- Use washer fluid made with antifreeze—but don't use engine coolant antifreeze for washer fluid (page 8-24).
- Don't use the parking brake if it might freeze. Instead, shift to P with an automatic transmission and to 1 or R with a manual. Block the rear wheels.

▼ **Snow tires**

Use snow tires on all four wheels.

Don't go faster than 75 mph (120 km/h). Inflate snow tires 28 kPa (0.3 kgf/cm², 4 psi) more than recommended on the tire pressure label (driver's door), but never more than the maximum cold-tire pressure shown on the tires.

⚠ WARNING

Mixing Tire Types:

Using tires different in size or type is dangerous. Your vehicle's handling could be greatly affected and result in an accident. Use only the same size and type tires (snow, radial, or non-radial) on all four wheels.

NOTE

Check local regulations before using studded tires.

▼ **Tire chains**

Check local regulations before using tire chains.

Install the chains on the rear tires.
Don't use chains on the front tires.
Use only SAE Class "S" chains, and make sure they fit.

To install the chains:

1. Secure the chains on the rear tires as tightly as possible. Always follow the chain manufacturer's instructions.
2. Retighten the chains after driving 1/4-1/2 mile (1/2-1 km).

 **CAUTION**

- Chains may scratch or chip aluminum wheels. Install tire chains on steel wheels only.
- Chains may affect handling.
- Don't go faster than 30 mph (50 km/h) or the chain manufacturer's recommended limit, whichever is lower.
- Drive carefully and avoid bumps, holes, and sharp turns.
- Avoid locked-wheel braking.
- Don't use chains on the temporary tire; it may result in damage to the vehicle and to the tire.
- Don't use chains on roads that are free of snow or ice. The tires and chains could be damaged.

■ Driving in Flooded Areas

⚠ CAUTION

Make sure water does not enter the vehicle interior or the engine area. The vehicle interior could become wet or the engine could be damaged.

⚠ WARNING

Driving with Wet Brakes:
Driving with wet brakes is dangerous. Increased stopping distance or the vehicle pulling to one side when braking could result in a serious accident. Light braking will indicate whether the brakes have been affected. Dry the brakes by driving very slowly and applying the brakes lightly until brake performance returns to normal.

■ Trailer Towing

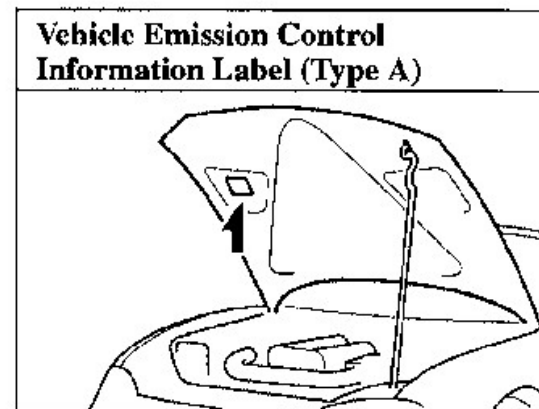
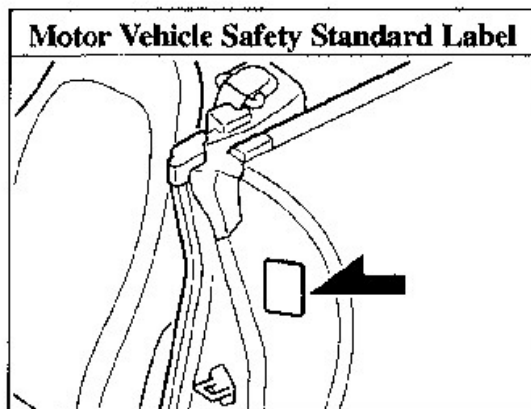
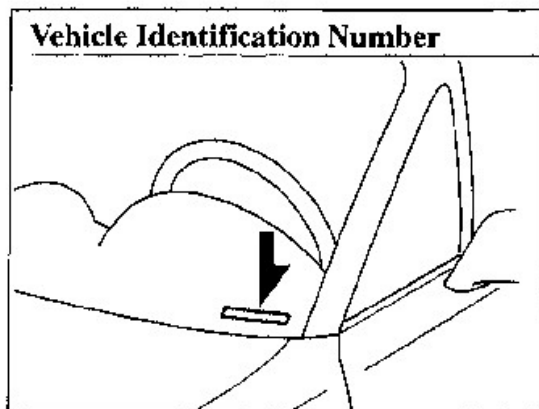
Never tow a trailer with your Mazda.

■ Overloading

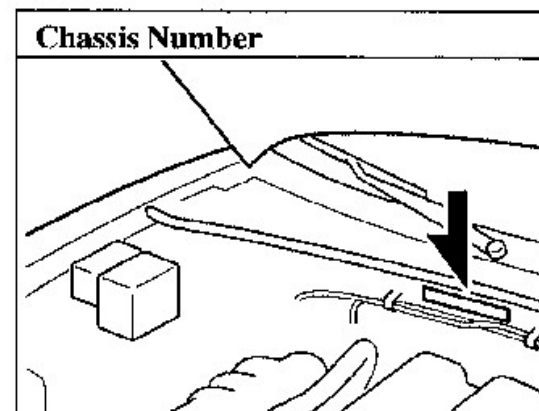
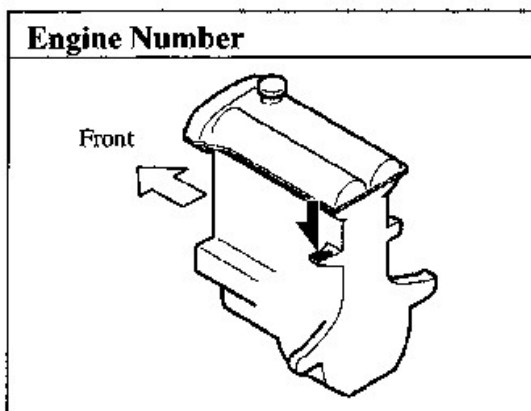
⚠ WARNING

Vehicle Load Weight:
The gross axle weight rating (GAWR) and the gross vehicle weight rating (GVWR) of your vehicle are on the Motor Vehicle Safety Standard Label on the driver's door frame. Exceeding these ratings can cause an accident or vehicle damage. You can estimate the weight of your load by weighing the items (or people) before putting them in the vehicle. Be careful not to overload your vehicle.

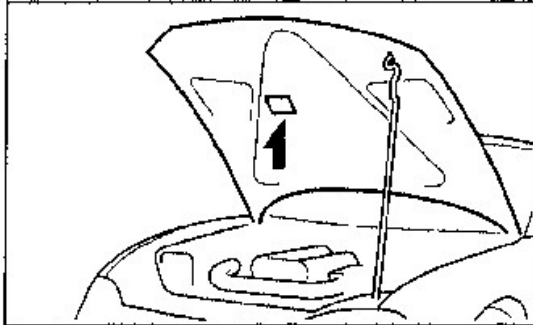
Vehicle Information Labels



The vehicle identification number legally identifies your vehicle. It's on a plate attached to the left top side of the dashboard. This plate can easily be seen through the windshield.



**Vehicle Emission Control
Information Label (Type B)**



Tire Pressure Label

