

Service Bulletin

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Category F	Applicable Model/s All Models	Subject DRIVEABILITY CONCERNS RELATED TO FUEL VOLATILITY	Bulletin No. 013/96 Issued 05/24/96 Revised
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APPLICABLE MODELS

All Models

DESCRIPTION

Some driveability concerns are related to fuel volatility. This bulletin briefly describes some of the symptoms and causes.

SYMPTOM

1. Unleaded gasoline with volatility too high for ambient temperatures may cause the following concerns during warmed-up driving and hot restarts:

- No Start
- Rough Idle
- Surging
- Vapor Lock

NOTE: These symptoms are most typical during spring and summer months when winter gasoline may still be available.

2. Unleaded gasoline with volatility too low for ambient temperatures may cause the following concerns:

- Long Crank Time
- Rough Idle
- Hesitation
- Poor Throttle Response
- Induction Backfire
- Stalls
- Similar symptoms caused by lean operation during initial cold starts and drive-away.

NOTE: Gasoline's volatility is higher (vaporizes easily) in the winter and lower in the summer.

REPAIR PROCEDURE

1. Verify the concern.
2. Perform the diagnostics in section F of the workshop manual.

NOTE: Often, no trouble codes are found if the concern(s) are caused by gasoline.

3. If the concern(s) is still present, the fuel volatility may be the cause. Refer to the appropriate condition on page 2 for diagnostic information.

CONSUMER NOTICE: The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools / equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership.

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WARM ENGINE - WARM / HOT AMBIENT TEMPERATURES

- Recommend that the customer try to identify a source of fresh, good quality gasoline. A station which receives frequent shipments of fuel will likely be a source of fresh, good quality gasoline.
- Using such gasoline may be more appropriate for these ambient temperatures.

COLD ENGINE - COLD AMBIENT TEMPERATURES

- Advise customer's using a higher than recommended octane to switch to the recommendations in the owner's manual.
 - Do not advise using a higher octane than recommended for that engine. Premium octane grade unleaded gasoline does not provide better fuel economy or performance than regular octane grade gasoline. **Only** advise using a higher octane grade gasoline to avoid potentially damaging "spark knock" or "ping." Recommend this octane only after diagnostic procedures are ineffective.
 - Advise customers using the recommended octane grade unleaded gasoline to try another brand.
 - If customers are using a gasoline containing an oxygenate, advise them to try another brand of oxygenated gasoline. If possible, advise customers in this category to try a gasoline which is not oxygenated.
- NOTE:** The oxygenate type should be posted on the pumps.

GENERAL INFORMATION

- No fuel additives will resolve this concern(s).
- Always use a gasoline with a "In-tank System Deposit Control" detergent that helps maintain proper operation of fuel injectors and keeps valves clean.
- This information may be used on any model year vehicles exhibiting these concerns.