Service Bulletin

Mazda North American Operations
Irvine, CA 92618-2922

Subject:	Bulletin No: 01-007/01R
MIL OR LOW FUEL LIGHT MAY ILLUMINATE, INACCURATE/ERRATIC OPERATION OF FUEL GAUGE	Last Issued: 8/30/2002

APPLICABLE MODEL(S)/VINS

All 1997 - 2002 Millenia

Revision Note: 2002 Millenia has been added to the applicable models.

DESCRIPTION

MIL illumination occurs with DTC P1455 stored in memory. Also, the vehicle's low fuel light may illuminate prematurely and not allow more than 8 to 12 gallons of fuel to be pumped back into the tank during refueling. This along with erratic fuel gauge readings, or showing only 1/2 full after filling fuel tank. A modified fuel gauge sender unit and fuel tank are now available to resolve these concerns.

Customers having this concern should have their vehicle repaired using the following procedure.

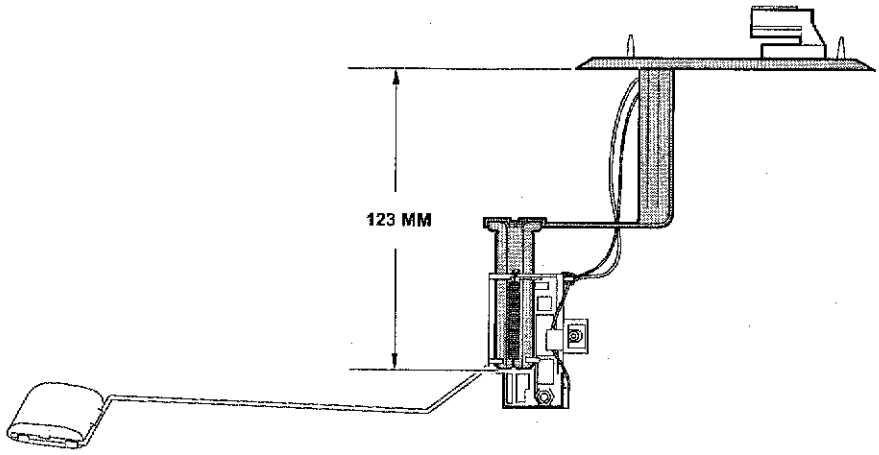
REPAIR PROCEDURE

1. Verify customer concern.
2. Install NGS tester and retrieve DTCs. Record Freeze Frame Data only for DTC P1455.
3. Remove rear seat bottom according to Workshop Manual section 09-13 REAR SEAT REMOVAL/INSTALLATION.
4. Remove center cover plate.
5. Remove No. 2 fuel gauge sender unit. See Workshop Manual section 01-14 FUEL SYSTEM.

   CAUTION:

   Be sure to partially drain the fuel tank if the fuel tank is FULL or near FULL. Otherwise, fuel will leak out when removing fuel gauge sender unit. Fuel and fuel vapors are extremely flammable and can easily ignite.
6. Measure distance between bottom edge of fuel gauge sender unit bracket and bottom mounting surface of mounting plate as shown in the following illustration.

FUEL GAUGE SENDING UNIT



- If measurement is 123mm (plus or minus 1mm) bracket is not bent. For further diagnosis refer to Service Bulletins 09-003/00R and/or F(01)-016/98.
- If measurement is 112 to 121mm, replace fuel gauge sender unit with modified part. DO NOT replace fuel tank. Proceed to STEP 8.
- If measurement is less than 112mm, reinstall fuel gauge sender unit back into fuel tank and proceed to STEP 7.

7. Check evaporative system for excessive vacuum using the following procedure:
   A. Warm-up engine to normal operating temperature.
   B. Using NGS Tester, monitor PIDs for RPM, PRGV & FTPV.
   C. With vehicle in PARK, rev fully warm engine and hold at 2800RPM for 3-4 minutes.

Condition	FTP (in.hg.)	FTPV
Normal (after 3-4 minutes at 2800 RPM)	0 to -.2	2.5 to 2.2V
CDCV hose removed from canister (canister/hose open to atmosphere)	0	2.5V
Defective system (has restriction)	-.6 or greater in vacuum	1.6V or lower in voltage

- If vacuum readings DO indicate a restriction is present, check the following areas. Refer to the Workshop Manual section 01-16A (KL) or 01-16B (KJ).
  - Fuel tank rollover valves, vent hose between rollover valves and pressure control valve (if equipped),

and the pressure control valve itself.

- Hose between pressure valve (if equipped) and charcoal canister, and charcoal canister itself.
- Hose between charcoal canister and CDCV solenoid valve, and CDCV solenoid valve itself.
- Hose between CDCV solenoid valve and air filter, and CDCV air filter itself.
- Hose between CDCV air filter and 2-way check valve, and 2-way check valve itself.
- Hose between 2-way check valve and pipe, or hose to atmosphere (if equipped).

Repair or replace any parts found causing a restriction. Then replace fuel tank using modified part number and replace fuel gauge sender unit using new original part number. See PART(S) INFORMATION. Install new original fuel gauge sending unit into modified fuel tank.

NOTE: Be sure to install only the combination of new original fuel gauge sending unit with modified fuel tank, otherwise, incorrect fuel readings will result.

- If vacuum readings DO NOT indicate a restriction, install a new fuel gauge sending unit using new original part number into a modified fuel tank using modified part number. See PART(S) INFORMATION.

NOTE: Be sure to install only the combination of new original fuel gauge sending unit with modified fuel tank, otherwise, incorrect fuel readings will occur.

8. Clear any DTCs if present and perform drive mode 4 according to 2000 Workshop Manual section 01-02B.
9. Verify repair.

PART(S) INFORMATION

Part Number	Description	Qty.	Notes
T0Y1-60-960	Fuel Gauge Sender Unit (modified)	1	1997-2000
T0Y0-60-960	Fuel Gauge Sender Unit (modified)	1	2001
T001-60-960B	Fuel Gauge Sender Unit (original)	1	1997-2000
T060-60-960	Fuel Gauge Sender Unit (original)	1	2001
TB94-42-110C	Fuel Tank (modified)	1	1997-1998 (w/o On-Board Vapor Recovery)
TC40-42-110B	Fuel Tank (modified)	1	1998-2001 (with On-Board Vapor Recovery)

WARRANTY INFORMATION

Warranty Type	A
Symptom Code	6X

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Damage Code	9B
Part Number Main Cause	SEE PART(S) INFORMATION
Quantity	1
Operation Number / Labor Hours	XX272XR1 0.3 gauge unit R&R XX272XR2 1.6 fuel tank R&R XX272XR3 0.5 (max.) evaporative system diagnosis XX272XR4 0.5 (max.) drive cycle