

FORD TECHNICAL SERVICE BULLETIN 03-16-1

Engine Controls/Fuel System - MIL ON/DTC's P0171/P0174

**Article No.
03-16-1**

Issued: 08/18/03

DRIVEABILITY - DIAGNOSTIC TROUBLE CODES(DTCS) P0171/P0174 STORED IN MEMORY - VEHICLES EQUIPPED WITH 3.8L ENGINE

MALFUNCTION INDICATOR LAMP (MIL) - ILLUMINATED WITH DIAGNOSTIC TROUBLE CODES (DTCS) P0171/P0174 STORED IN MEMORY - VEHICLES EQUIPPED WITH 3.8L ENGINE

**FORD:
1999-2003 WINDSTAR**

This TSB supersedes articles 03-4-7 and 00-21-8.

ISSUE

Some vehicles may exhibit a check engine light on and lean Diagnostic Trouble Codes (DTC's) P0171/P0174 (system too lean bank 1 or 2) stored in memory.

ACTION

Do not replace PCM (Powertrain Control Module), MAF (Mass Air Flow), or HEGO's (Heated Oxygen Sensors), as these parts are not the root cause of the lean codes conditions described. Refer to following Service Procedure for details.

SERVICE PROCEDURE

These conditions may be caused by a loose fitting on the fuel pressure regulator vacuum line on the intake manifold end and/or leaking isolator bolts/port gaskets in the lower to upper intake manifold mounting area. This condition is sometimes intermittent and may not be apparent on a warmed-up engine.

If the vacuum line from the intake manifold to the fuel pressure regulator is loose at the manifold (due to oil contamination), replace the vacuum line (9E498) and install a new design LH service valve cover (6582). Another vacuum leak source is the gasket (9H486) between the upper and lower intake manifold assemblies caused by a loss of tension at the isolator bolt assemblies (9S479) due to contamination of the rubber grommets from excessive oil pullover.

1. Perform self test, if codes P0171, P0174 are the only codes stored in the PCM then continue with this article. For any other codes, follow the normal diagnostic procedures found in the PC/ED Manual.

PCM CALIBRATION INFORMATION							
Application	Old Part Number (-12A650-)	Old Tear Tag	New Part Number (-12A650-)	New Tear Tag	Old Calibration	New Calibration	NGS/WDS Qualifier
1999-2000 49S LEV	XF2F-ME	ZHT2	YU7Z-EC	N/A	9LMA-BEE	9LMA-BEE	WDS B26.2 Release or Later
1999-2000 Calif.	XF2F-HE	NQE2	YU7Z-FC	N/A	9LMA-BDE	9LMA-BDE	WDS B26.2 Release or Later
1999-2000 Calif. ULEV CAT.RED	YF2F-AB	FGJ1	YU7Z-GC	N/A	0A31AS0B05	0A31AS0B05	WDS B26.2 Release or Later
2001 50S ULEV	1F2F-BD	UET3	1U7Z-DBB	NYD1	1A31AS0507	1A31AS0512	WDS B26.2 Release or Later
2001 50S ULEV (CAT)	1F2A-AD	TVM3	1U7Z-DTA	TGA0	1A31NC507	1A31NC0510	WDS B26.2 Release or Later
2002 50S ULEV	2F2A-AC	YUX2	2U7Z-AJA	JPR0	2A31CA0506	2A31CA0506	WDS B26.2 Release or Later
2002 ULEV (CAT)	2F2A-DB	OOZ1	2F2Z-DC	OOZ2	2A31ZC0505	2A31ZC0510	WDS B26.2 Release or Later
2003 50S ULEV	3F2A-CB	DLQ1	3F2Z-CB	DLQ1	3A31BA0505	3A31BA0505	WDS B26.2 Release or Later

2. (ALL 1999-2003). Reprogram the PCM (Powertrain Control Module) with the latest calibration, WDS B26.2 release or later. Do not replace the PCM. Reset the keep alive memory.
3. (1999-2001 ONLY). Inspect the vacuum line from the intake manifold to the fuel pressure regulator for looseness, leaks and/or oil contamination and replace Vacuum Line (XF2Z-9E498-DD) if required.
4. (1999-2000 ONLY). Inspect the LH Valve Cover, it should be a (3F2Z-6582-BA) Install a new LH Valve Cover if required, refer to Workshop Manual Section 303-01 Valve Cover-LH. (Refer to the following NOTE for description of the old style valve cover).

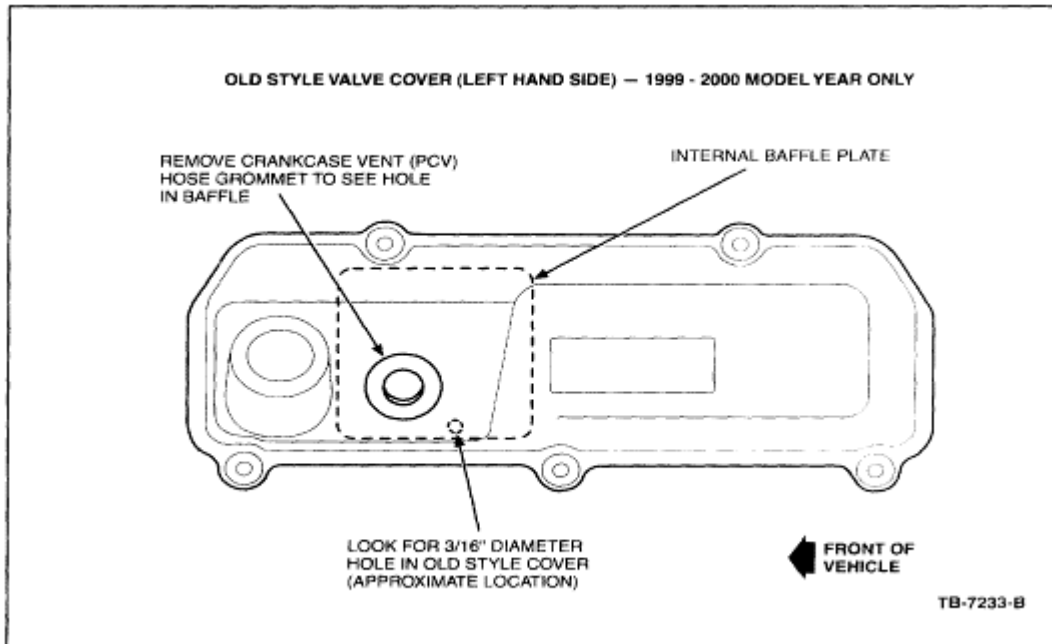


Figure 1

NOTE USING A SHOP LIGHT OR FLASHLIGHT, CHECK THE LH VALVE COVER TO SEE IF IT HAS ALREADY BEEN UPDATED TO THE LATEST LEVEL. REMOVE THE PCV VALVE AND RUBBER GROMMET FROM THE VALVE COVER AND LOOK THROUGH THE HOLE AT THE INTERNAL SHEET METAL BAFFLE. THE OLD STYLE VALVE COVER BAFFLE HAS A 3/16" DIAMETER HOLE IN THE 5:00 O'CLOCK POSITION AS YOU LOOK THROUGH THE PCV HOLE (FIGURE 1). VALVE COVERS FITTING THIS DESCRIPTION MUST BE REPLACED.

5. (ALL 1999-2003). Remove the upper intake and replace only port gaskets (9H486) and isolator bolt assemblies (9S479). The new isolator bolt assemblies use a rubber material that is green in color, do not use the old isolator bolt assemblies with the black rubber material (XF2Z-AA). Do not replace any other intake parts (black plastic or aluminum) or the lower intake gaskets, (9439 and 9A424/425) or the upper intake clamshell gasket (9461). Refer to Workshop Manual Section 303-01, Intake Manifold-Upper.

6. (ALL 1999-2003). While the upper intake manifold is removed, check the Exhaust Gas Recirculation (EGR) orifices that are pressed into each primary port of the lower intake manifold. If any of the orifices are plugged with soot, clean and unplug them with a pick and solvent.

CAUTION DO NOT USE SMOKE DETECTION, PROPANE GAS, OR CARB CLEANER TO TEST FOR VACUUM LEAKS. (CARB OR BRAKE CLEANER MAY CAUSE INTAKE MANIFOLD RUNNER CONTROL (IMRC) BEARING FAILURE). SOME LEAKAGE FROM THE IDLE AIR CONTROL (IAC) OR EGR VALVE AND IMRC SEALS IS NORMAL. DO NOT REPLACE THESE PARTS, ESPECIALLY THE LOWER ALUMINUM INTAKE MANIFOLD.

NOTE THIS CONDITION COULD ALSO BE DUE TO WARM AMBIENT TEMPERATURES AND THE USE OF WINTER GRADE FUELS WHICH HAVE VERY HIGH VOLATILITY AND MAY BOIL IN THE FUEL LINES (VAPOR LOCK) DURING A SHORT HOT SOAK. OXYGENATED FUELS WILL AGGRAVATE THIS CONDITION. IF NON-OXYGENATED FUEL IS NOT AVAILABLE, USE MID/HIGH OCTANE FUELS WHICH HAVE LOWER VOLATILITY AND MAY HELP ALLEVIATE THE CONDITION.

Obtain an Authorized Modifications Decal (FPS 8262 - obtainable through DOES II, 25/pkg) and list the date, dealer number, and summary of modifications performed. Select a prominent place adjacent to the Vehicle Emission Control Information Decal suitable for installing the Authorized Modifications Decal. Clean the area, install the decal, and cover it with a clear plastic decal shield.

SUPERSEDES: 00-21-8, 03-4-7

WARRANTY STATUS:

Eligible Under The Provisions Of Bumper To Bumper Warranty Coverage And Emissions
Warranty Coverage