



NUMBER: 18-014-10

GROUP: Vehicle Performance

DATE: April 28, 2010

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THE wiTECH DIAGNOSTIC APPLICATION IS THE PREFERRED METHOD FOR FLASHING ECUs. HELP USING THE wiTECH DIAGNOSTIC APPLICATION FOR FLASHING AN ECU IS AVAILABLE BY SELECTING “HELP” THEN “HELP CONTENTS” AT THE TOP OF THE wiTECH DIAGNOSTIC APPLICATION WINDOW.

THE wiTECH SOFTWARE LEVEL MUST BE AT RELEASE 10.03 OR HIGHER TO PERFORM THIS PROCEDURE.

StarMOBILE DESKTOP CLIEEN MAY ALSO BE USED TO PERFORM THIS PROCEDURE.

SUBJECT:

Flash: Engine Runs Rough At Low RPM or MIL Illumination For MDS Reactivation and Misfire DTC's

OVERVIEW:

This bulletin involves selectively erasing and reprogramming the Powertrain Control Module (PCM) and Transmission Control Module (TCM) with new software. The flash is a combination flash that will update both controllers.

NOTE: If vehicle does not exhibit any unusual noise or is not running rough then the vehicle only needs the PCM update. Very few vehicles will need more than the PCM update.

MODELS:

2009	(LE)	300C/300C Touring (International Markets)
2009	(LX)	300/300 C/Charger
2009	(LC)	Challenger

NOTE: This bulletin applies to all vehicles equipped with a 5.7L engine (Sales code EZD or EZH).

SYMPTOM/CONDITION:

The Customer may experience a MIL illumination for the following:

- a. P0301 - Cylinder 1 Misfire
- b. P0304 - Cylinder 4 Misfire

- c. P0306 - Cylinder 6 Misfire
- d. P0307 - Cylinder 7 Misfire
- e. P1411 - Cylinder 1 Reactivation Control Performance
- f. P1414 - Cylinder 4 Reactivation Control Performance
- g. P1416 - Cylinder 6 Reactivation Control Performance
- h. P1417 - Cylinder 7 Reactivation Control Performance

The customer may also notice that the engine runs rough at low RPM's because the engine is running in 4 cylinder mode. If the engine runs rough the MIL should be illuminated for the cylinder reactivation control performance and the corresponding cylinder misfire DTC. It is possible to have more than one cylinder experience this condition. If the engine runs rough and the DTC's are set, it will be necessary to inspect the push rod, rocker shaft and lifters for that cylinder(s).

NOTE: If the Cylinder Reactivation Control Performance and Misfire DTC's are not stored as a pair per cylinder, then it will be necessary to follow the appropriate Diagnostic Procedures available in TechCONNECT to repair the cause of the single trouble code. The PCM should still be Flashed with the updated software.

Flashing the PCM will provide improved MDS operation and avoid the MIL conditions and push rod, rocker shaft and lifter issues. This change prevents the engine from switching into MDS mode when the engine RPM is above 3000 rpm.

DIAGNOSIS:

Using a Scan Tool (wiTECH™) with the appropriate Diagnostic Procedures available in TechCONNECT, verify all engine and transmission systems are functioning as designed. If DTC's are present other than the ones listed above record them on the repair order and repair as necessary before proceeding further with this bulletin.

If the above condition is present, perform the Repair Procedure.

PARTS REQUIRED:

Qty.	Part No.	Description
1	04275086AB	Label, Authorized Modification

REPAIR PROCEDURE:

1. Start Engine and listen for and unusual noise coming from the cylinders or if the engine is running rough.

NOTE: It may be necessary to compare this vehicle with a stock vehicle to help make the next decision.

NOTE: If vehicle does not exhibit any unusual noise or is not running rough then the vehicle only needs the PCM flash update. Very few vehicles will need more than the PCM flash update.

2. Is the engine making any unusual noise coming from the cylinders or is the engine is running rough?
 - a. Yes >>> proceed to [Step #3](#)

- b. No >>> proceed to [Step #26](#)
- 3. Turn engine off and leave key in the “run position”.
- 4. Connect the wiTECH™ to the vehicle.
- 5. Read DTC's and record all DTC's that are active or stored. This will be used later in this repair procedure.

NOTE: If the engine is running rough the DTC's will be active or stored as a pair per cylinder. If they are not active or stored as a pair then it will be necessary to follow the appropriate Diagnostic Procedures available in TechCONNECT to repair the cause of the single code. The PCM should still be Flash with the updated software.

- 6. Are DTC's P0306 and P1416 active or stored?
 - a. Yes >>> proceed to [Step #10](#)
 - b. No >>> proceed to [Step #7](#)
- 7. Are DTC's P0304 and P1414 active or stored?
 - a. Yes >>> proceed to [Step #10](#)
 - b. No >>> proceed to [Step #8](#)
- 8. Are DTC's P0301 and P1411 active or stored?
 - a. Yes >>> proceed to [Step #18](#)
 - b. No >>> proceed to [Step #9](#)
- 9. Are DTC's P0307 and P1417 active or stored?
 - a. Yes >>> proceed to [Step #18](#)
 - b. No >>> proceed to [Step #26](#)
- 10. Following the Procedures available in TechCONNECT remove the right valve cover.
- 11. Inspect the right rocker shaft for damage or nic's in the shaft.
- 12. Is the right rocker shaft damage?
 - a. Yes >>> replace right rocker shaft following the Procedures available in TechCONNECT and proceed to [Step #13](#)
 - b. No >>> proceed to [Step #13](#)
- 13. Remove the push rods for cylinders 4 and 6.
- 14. Inspect push rods to ensure they are **not** bent or have nic's.

NOTE: Care must be taken when the push rods are aligned. Following the Procedures available in TechCONNECT.

- 15. Are push rods damaged?
 - a. Yes >>> replace damaged push rod and proceed to [Step #16](#).
 - b. No >> proceed to [Step #16](#)
- 16. Following the Procedures available in TechCONNECT gain access to and inspect the lifter for cylinders 4 and 6. Look to see if the lifter head is bent or the lifter is stuck in the down position.
- 17. Is lifter damaged?
 - a. Yes >>> Replace lifter, following the Procedures available in TechCONNECT and proceed to [Step #8](#)
 - b. No >>> proceed to [Step #8](#)
- 18. Following the Procedures available in TechCONNECT remove the left valve cover.
- 19. Inspect the left rocker shaft for damage or nic's in the shaft.
- 20. Is the left rocker shaft damage?
 - a. Yes >>> replace left rocker shaft following the Procedures available in TechCONNECT and proceed to [Step #21](#)
 - b. No >>> proceed to [Step #21](#)
- 21. Remove the push rods for cylinders 1 and 7.

22. Inspect push rods to ensure they are **not** bent or have nic's.

NOTE: Care must be taken when the push rods are aligned. Following the Procedures available in TechCONNECT.

23. Are push rods damaged?

- a. Yes >>> replace damaged push rod and proceed to [Step #24](#)
- b. No >>> proceed to [Step #24](#)

24. Following the Procedures available in TechCONNECT gain access to and inspect the lifter for cylinders 1 and 7. Look to see if the lifter head is bent or the lifter is stuck in the down position.

25. Is lifter damaged?

- a. Yes >>> Replace lifter, following the Procedures available in TechCONNECT and proceed to [Step #26](#)
- b. No >>> proceed to [Step #26](#)

NOTE: The flash update is a combination flash that will update both the PCM and TCM controllers.

NOTE: If this flash process is interrupted/aborted, the flash should be restarted.

26. Reprogram the PCM with the latest software. Follow the detailed service procedures available in DealerCONNECT/TechCONNECT, Refer To Group 8 - Electrical > Electronic Control Modules - Service Information > Module - Powertrain Control > Standard Procedures > PCM/ECM Programming - Gas. **After PCM reprogramming, the following must be performed:**

- a. Clear any DTC's that may have been set in other modules due to reprogramming. The wiTECH application will automatically present all DTCs after the flash and allow the tech to clear them.

27. Type the necessary information on the "Authorized Modification Label" and attach it near the VECI label.

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Amount
09-80-01-98	Rockers, Right Inspect (B)	1.2 Hrs.
09-80-01-99	Rockers, Left Inspect (B)	1.1 Hrs.
09-75-01-94	Push Rods, Right Inspect (B)	1.4 Hrs.
09-75-01-95	Push Rods, Left Inspect (B)	1.4 Hrs.
09-85-01-96	Lifter, Right Inspect (B)	3.5 Hrs.
09-85-01-95	Lifter, Left Inspect (B)	3.2 Hrs.
09-80-01-94	Rocker Shaft, Right Intake Inspect and Replace	1.2 Hrs.
09-80-01-96	Rocker Shaft, Right Exhaust Inspect and Replace	1.2 Hrs.
09-80-01-95	Rocker Shaft, Left Intake Inspect and Replace	1.1 Hrs.
09-80-01-97	Rocker Shaft, Left Exhaust Inspect and Replace	1.1 Hrs.
09-75-01-90	Push Rods, Inspect and Replace Cylinders 1 (Intake and exhaust)	1.4 Hrs.
09-75-01-91	Push Rods, Inspect and Replace Cylinders 7 (Intake and exhaust)	1.4 Hrs.
09-75-01-92	Push Rods, Inspect and Replace Cylinders 4 (Intake and exhaust)	1.4 Hrs.
09-75-01-93	Push Rods, Inspect and Replace Cylinders 6 (Intake and exhaust)	1.4 Hrs.
09-85-01-92	Lifter, Right Inspect and Replace (Cylinders 6 and 8)	3.2 Hrs.
09-85-01-94	Lifter, Right Inspect and Replace (Cylinders 4 and 2)	3.2 Hrs.
09-85-01-91	Lifter, Left Inspect and Replace (Cylinders 1 and 3)	3.5 Hrs.
09-85-01-93	Lifter, Left Inspect and Replace (Cylinders 7 and 5)	3.5 Hrs.
18-19-06-xx	Module, Powertrain Control (PCM/TCM) - Reprogram (C)	0.2 Hrs.
International Related Operation		
18-00-00-WT	StarMOBILE (International) (C)	0.2 Hrs.

FAILURE CODE:

ZZ	Service Action
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