

**NUMBER:** 18-011-13  
**GROUP:** Vehicle Performance  
**DATE:** March 06, 2013

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**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 13.03 OR HIGHER TO PERFORM THIS PROCEDURE.**

**SUBJECT:**

Flash: MIL Illumination P050B and/or Rattle/Clatter Sound on Cold Start-up

**OVERVIEW:**

This bulletin involves installing revised heater hoses, routing the purge solenoid wire harness, and installing revised Powertrain Control Module (PCM) software.

**MODELS:**

2011 - 2013      MK                              Compass/Patriot

**NOTE: This bulletin applies to vehicles equipped with the 2.4L engine (Sales Code ED3) and either the Continuously Variable Transaxle (Sales Code DAV) or the Continuously Variable Transaxle with Off-Road Crawl Ratio (Sales Code DAW).**

**SYMPTOM/CONDITION:**

Customers may indicate that they hear a clatter or rattle noise coming from the engine on initial start up after a long cold soak. A small number of customers may also experience a Malfunction Indicator Lamp (MIL) illumination. Upon further investigation the technician may find that the following Diagnostic Trouble Code (DTC) has been set.

- P050B - Cold Start Ignition Timing Performance

**DIAGNOSIS:**

If the customer describes the symptom/condition or if the technician finds the listed DTC, perform the repair procedure.

**PARTS REQUIRED:**

Qty.	Part No.	Description
1	05058822AB	Hose, Heater Core Supply
1	05058823AB	Hose, Heater Core Return

Qty.	Part No.	Description
1	04275086AD	Label, Authorized Modification
AR (1)	68048953AB	Coolant, Engine
1	68024433AC	Cable, Shifter

**REPAIR PROCEDURE:**

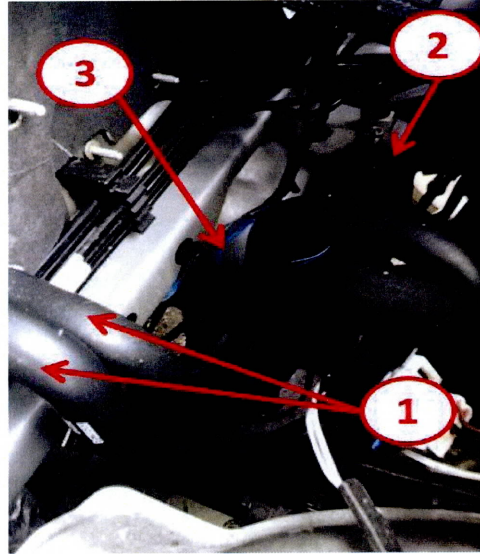
1. Was the vehicle built on or before March 1, 2012 (MDH 0301XX)?
  - a. Yes>>> Proceed to Step 2.
  - b. No>>> Proceed to Step 16.
2. Replace the transmission shifter cable. Refer to DealerCONNECT>Service>TechCONNECT>21 - Transmission and Transfer Case>Automatic - CVT>CABLE, Gearshift Control>Removal/Installation for additional information.

**WARNING:Do not open the radiator draincock with the system hot and under pressure. Serious burns from coolant can occur.**

3. Remove the right wheel inner splash shield.
4. Position a clean collecting container under draincock location.

**NOTE: Drain pan should be free from any contamination. The engine coolant will be reused.**

5. Without removing the pressure cap and with system not under pressure, turn draincock counterclockwise to open.
6. The coolant reserve bottle should empty first, then remove the pressure cap.
7. Allow cooling system to drain completely.
8. Remove both supply and return heater core hoses.
9. Install new heater core supply hose (p/n 05058822AB) and heater core return hose (p/n 05058823AB).
10. Install the right wheel inner splash shield.
11. Remove the engine cover.
12. To ensure that the purge solenoid wiring harness ([Fig. 1](#)) does not come in contact with the heater hoses, the wire harness will require a slight modification.

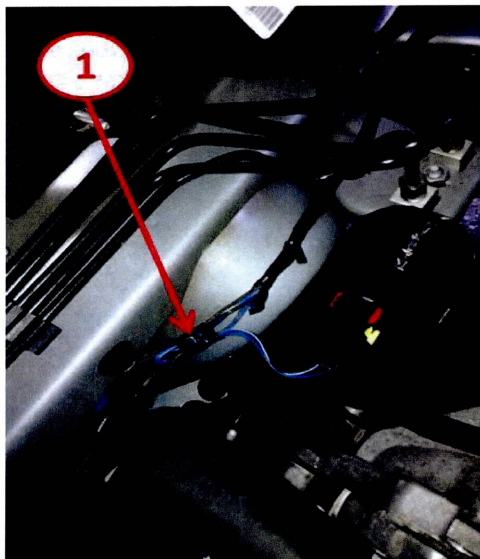


**Fig. 1 Purge Solenoid Wire Harness**

- 1 - Heater Core Supply and Return Hoses
- 2 - Purge Solenoid
- 3 - Purge solenoid Wire Harness

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13. Loosely pull the purge solenoid wire harness straight and create a bend in the harness approximately 10mm (0.40 in. or 3/8 - 7/16 in.) away from the harness retaining clip edge. This bend will also create a natural bend after the current spot tape on the harness. Then, apply 3 - 4 wraps of electrical tape securing the bend to the harness as shown in (Fig. 2).



**Fig. 2** *urge Solenoid Wire Harness Routing*

1 - Secured Purge Wire Harness

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14. Install the engine cover.
15. Fill engine coolant system making sure that no air is trapped in the engine. Refer to DealerCONNECT>Service>TechCONNECT>Service Info>07 - Cooling>Standard Procedure>STANDARD PROCEDURE - COOLANT AIR EVACUATION for additional information.

**NOTE: Install a battery charger to ensure battery voltage does not drop below 13.2 volts. Do not allow the charging voltage to climb above 13.5 volts during the flash process.**

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

16. 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.
17. **After PCM reprogramming, the following must be performed:** 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.
18. 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:**

<b>Labor Operation No:</b>	<b>Description</b>	<b>Amount</b>
18-19-06-S3	Module, Powertrain Engine Controller - Reprogram (1 - Semi-Skilled)	0.2 Hrs
<b>Related Operation No:</b>		
24-46-10-92	Hose, Heater Core and Cable, Transaxle Gearshift - Replace (1 - Semi-Skilled)	1.5 Hrs

**FAILURE CODE:**

ZZ	Service Action
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