

REDUCED HEATER DUCT DISCHARGE TEMPERATURE AT IDLE IN COLD AMBIENT TEMPERATURES BELOW -9 DEGREES CELSIUS (15 FAHRENHEIT)

TSB 12-4-2

FORD:
2009-2012 Flex

LINCOLN:
2010-2012 MKT

The article supersedes TSB **10-25-10** to update the vehicle model years and Service Procedure.

ISSUE

Some 2009-2012 Ford Flex and 2010-2012 Lincoln MKT vehicles may exhibit a concern of reduced heater duct discharge temperature in ambient temperatures below -9 Degrees C (15 Degrees F) when the engine speed is reduced to idle.

ACTION

Follow the Service Procedure steps to correct the condition.

SERVICE PROCEDURE

1. Check vehicle build date. Is the vehicle build date on or before 12/20/2010?
 - a. Yes - Reprogram the PCM to the latest calibration using IDS release 70.03 and higher. This new calibration is not included in the VCM 2010.11 DVD. Calibration files may also be obtained at www.motorcraft.com. Proceed to Step 2.
 - b. No - Proceed to Step 2.
2. Inspect check valve location in vent hose. On 3.5L GTDI engine, vent hose runs from upper radiator hose to degas bottle. On 3.5L/3.7L TiVCT engine, vent hose runs from thermostat housing to degas bottle. Squeeze hose with fingers to verify location.
 - a. 3.5L/3.7L TiVCT engine (Figures 1-2):



Figure 1 - Article 12-4-2

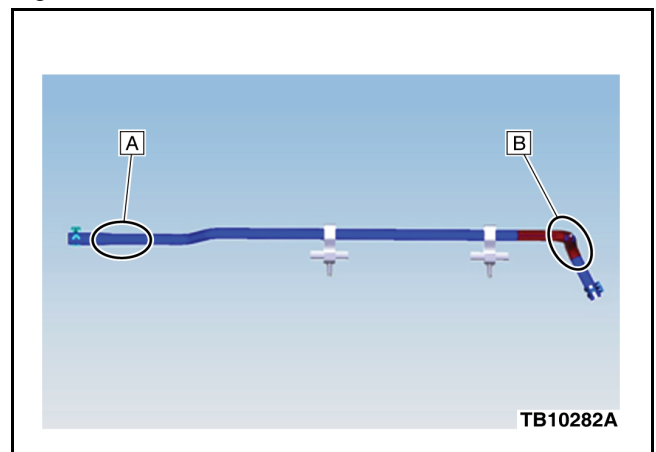


Figure 2 - Article 12-4-2

- (1) If the valve is in location A - The check valve is in the wrong location. Proceed to Step 3.
 - (2) If the valve is in location B - The check valve is in the correct location. Proceed to Step 4.
- b. 3.5L GTDI engine (Figures 3-4):

NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford or Lincoln dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.

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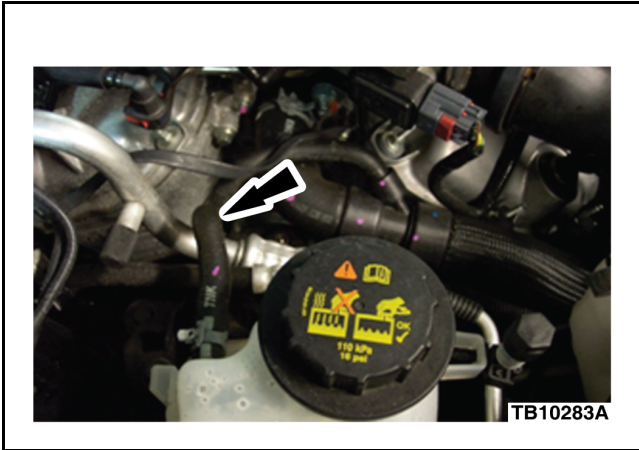


Figure 3 - Article 12-4-2

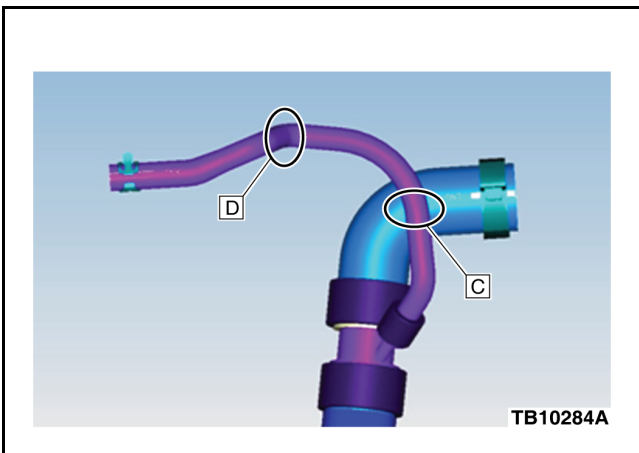


Figure 4 - Article 12-4-2

- (1) If the valve is in location C - The check valve is in the wrong location. Proceed to Step 3.
- (2) If the valve is in location D - The check valve is in the correct location. Proceed to Step 4.

3. Replace vent hose and proceed to Step 4.
4. Idle engine at shop ambient temperature of 15 °C (59 °F) or higher with the hood closed until cooling fan turns on.

NOTE

FAILURE TO ENSURE THERMOSTAT IS FULLY OPEN MAY RESULT IN A REPEAT REPAIR.

5. Set the front climate temperature control to 32 °C (90 °F) and turn off the auxiliary climate control.
6. Set the mode to panel/vent and A/C switched off. Recirculation mode must be shut off.
7. Set the blower to highest speed and open all panel vents.

8. The left center vent discharge air temperature should be a minimum of 58 °C (136 °F) at 16 °C (61 °F) ambient. Does vehicle meet minimum discharge air temperature criteria?

- a. Yes - Normal vehicle characteristic.
- b. No - Possible trapped air. Go to Step 10.

NOTE

VACUUM TOOL SHOULD ONLY BE USED ON EMPTY COOLING SYSTEM. FAILURE TO PERFORM BLEED PROCEDURE AFTER VACUUM TOOL USAGE MAY RESULT IN REPEAT REPAIR. WSM INSTRUCTIONS MUST BE FOLLOWED EXACTLY TO PREVENT REPEAT REPAIR.

CAUTION

ALWAYS ALLOW THE ENGINE TO COOL BEFORE OPENING THE COOLING SYSTEM. DO NOT UNSCREW THE COOLANT PRESSURE RELIEF CAP WHEN THE ENGINE IS OPERATING OR THE COOLING SYSTEM IS HOT. THE COOLING SYSTEM IS UNDER PRESSURE; STEAM AND HOT LIQUID CAN COME OUT FORCEFULLY WHEN THE CAP IS LOOSENED SLIGHTLY.

9. Fill the degas bottle to 25 mm (1") above the cold fill line.
10. Install the degas bottle cap until at least one (1) audible click is heard.
11. Turn the climate control system off.
12. Start the engine and increase the engine speed to 3,500 RPM and hold for 30 seconds.
13. Turn the engine off and wait for one (1) minute to purge any large air pockets from the cooling system.
14. Check the engine coolant level in the degas bottle and if necessary fill to 25 mm (1") above the top of the cold fill line on the degas bottle if the engine is warm or to the top of the cold fill line if the engine is cold.
15. Install the degas bottle cap until at least one (1) audible click is heard.
16. Start the engine and let it idle until the engine reaches normal operating temperature and the thermostat is fully open. A fully open thermostat is verified by the cooling system fan cycling on at least once.
17. Increase the engine speed to 3,500 RPM and hold for 30 seconds.

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18. Allow the engine to idle for 30 seconds.
19. Turn the engine off for one (1) minute.
20. Repeat Steps 17-19 a total of 15 times to remove any remaining air trapped in the system.
21. Check the engine coolant level in the degas bottle and if necessary fill to 25 mm (1") above the top of the cold fill line on the degas bottle if the engine is warm or to the top of the cold fill line if the engine is cold.
22. Install the degas bottle cap until at least one (1) audible click is heard.
23. Repeat Steps 4-8.
24. Does vehicle meet minimum discharge air temperature criteria?
 - a. Yes - Normal vehicle characteristics.
 - b. No - Perform normal diagnostics. Refer to WSM, Section 412-00.

Please advise the customer that this vehicle is equipped with an adaptive transmission shift strategy which allows the vehicle's computer to learn the transmission's unique parameters and improve shift quality. When the adaptive strategy is reset, the computer will begin a re-learning process. This re-learning process may result in firmer than normal upshifts and downshifts for several days.

| PART NUMBER | PART NAME |
|-------------|-------------------|
| 8G1Z-8063-A | Vent Hose - TiVCT |
| AA5Z-8260-A | Vent Hose - GTDI |

WARRANTY STATUS: Eligible Under Provisions Of New Vehicle Limited Warranty Coverage
 Warranty/ESP coverage limits/policies/prior approvals are not altered by a TSB.
 Warranty/ESP coverage limits are determined by the identified causal part and verified using the OASIS part coverage tool.

| OPERATION | DESCRIPTION | TIME |
|-----------|---|----------|
| 120402A | 2009-2012 Flex, 2010-2012 MKT: Inspect Vent Hose, Verify Discharge Temperature (Do Not Use With Any Other Labor Operations) | 0.2 Hr. |
| 120402B | 2009-2012 Flex, 2010-2012 MKT: Reprogram The PCM, Inspect Vent Hose, Verify Discharge Temperature (Do Not Use With Any Other Labor Operations) | 0.4 Hr. |
| 120402C | 2009-2012 Flex, 2010-2012 MKT: Inspect Vent Hose, Verify Discharge Temperature, Perform Bleed Procedure (Do Not Use With Any Other Labor Operations) | 1.0 Hr. |
| 120402D | 2009-2012 Flex, 2010-2012 MKT: Reprogram PCM, Inspect Vent Hose, Verify Discharge Temperature, Perform Bleed Procedure (Do Not Use With Any Other Labor Operations) | 1.2 Hrs. |
| 120402E | 2009-2012 Flex, 2010-2012 MKT: Inspect And Replace Vent hose, Verify Discharge Temperature, Perform Bleed Procedure (Do Not Use With Any Other Labor Operations) | 1.6 Hrs. |
| 120402F | 2009-2012 Flex, 2010-2012 MKT: Reprogram The PCM, Inspect And Replace Vent hose, Verify Discharge Temperature, Perform Bleed Procedure (Do Not Use With Any Other Labor Operations) | 1.8 Hrs |

DEALER CODING

BASIC PART NO.
 RECAL

CONDITION
 CODE
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