

**DRIVEABILITY—INTERMITTENT ENGINE QUIT OR
IDLE DIP—NO DIAGNOSTIC TROUBLE CODES
(DTCs) PRESENT—VEHICLES EQUIPPED WITH 3.0L
DURATEC ENGINE ONLY**

**Article No.
02-23-1**

FORD: 2001-2003 ESCAPE

Article 02-11-6 is being republished in its entirety to update the Model Year and Calibration information.

ISSUE

Some vehicles equipped with the 3.0L Duratec engine may exhibit an intermittent engine quit and restart condition. This is usually a one-time event during closed throttle deceleration with no Diagnostic Trouble Codes (DTCs) and no Malfunction Indicator Lamp (MIL). Due to the intermittent nature of the condition and the multiple potential causes of the condition, the complete bulletin checklist and all appropriate part replacements should be performed regardless of whether the condition can be duplicated by the technician. Otherwise, customers may experience the intermittent condition and be forced to return to the dealership. If the vehicle is no longer eligible for warranty coverage, discuss this service with the customer before performing.

ACTION

In addition to normal diagnostics, perform ALL of the following Driveability Checklist. Although the condition may not be possible to duplicate, it is recommended to perform this bulletin checklist in its entirety to resolve the condition.

SERVICE PROCEDURE

NOTE

THIS CONDITION MAY HAVE SEVERAL CAUSES, AND IT IS VERY IMPORTANT TO THOROUGHLY AND COMPLETELY PERFORM EACH STEP. IF EACH STEP IS NOT PERFORMED COMPLETELY, THE RESULT COULD BE AN INCOMPLETE OR REPEAT REPAIR.

NOTE

DUE TO THE INTERMITTENT NATURE OF THE CONDITION AND THE MULTIPLE POTENTIAL CAUSES OF THE CONDITION, THE COMPLETE

BULLETIN CHECKLIST AND ALL APPROPRIATE PART REPLACEMENTS SHOULD BE PERFORMED REGARDLESS OF WHETHER THE CONDITION CAN BE DUPLICATED BY THE TECHNICIAN.

Please use the following conditions for all tests described below unless stated otherwise:

- Transmission in Park
 - Engine at idle at approximately 750 RPM
 - Engine temperature should be at least 190° F (88° C)
 - All accessories and the engine cooling fan should be off
1. Determine if the Evaporative Vapor Management (EVAPVM) duty cycle is operating properly. If EVAPVM is functioning correctly, the duty cycle should increase to 84-100% with the FTP decreasing to approximately 2.2 volts and then reset back to 0% duty cycle while FTP holds at approximately 2.6 volts. If the duty cycle does not increase within 5 minutes, turn on the headlights and the AC with the blower on high. The duty cycle should start increasing within 5-10 minutes. Do not replace the EVAPVM valve if the duty cycle functions correctly. If the duty cycle stops increasing and remains at 95-100% while FTP holds at approximately 2.6 volts, replace the EVAPVM valve with part number YL8Z-9C915-AA. Verify corrective action then proceed to Step 2.

NOTE

2003 VEHICLES BUILT IN LATE 2002 CALENDAR YEAR OR AFTER WILL HAVE A REVISED EVAPORATIVE EMISSIONS SYSTEM THAT REMOVES THE CHECK VALVE. IF THE VEHICLE IS NOT EQUIPPED WITH A CHECK VALVE, IT IS NOT NECESSARY TO PERFORM STEP 2 OF THIS PROCEDURE.

Article No. 02-23-1 Cont'd.

2. Disconnect the vent line in the evaporative emissions system from the check valve side (for reference check valve part # is YL8U-9C915-AB). This connection is located just forward of the evaporative emissions canister assembly, underneath the vehicle in the area of the driver side rear seat. Using shop air, blow the vent line from the check valve side forward (towards the brake booster). In the past, spiders have been known to construct webs in vent lines so handle with caution. Possible obstructions in the vent line can prevent the evaporative emissions system from purging properly, and in some cases, can cause the condition to occur. Verify corrective action then proceed to Step 3.
3. Inspect the Idle Air Control (IAC) Valve. If the valve is not part number 1L8E-9F715-AA, replace with part number 1L8Z-9F715-AA which will also require latest calibration level given in Step 4 or 5.

NOTE

ENGINE RPM WILL SLOWLY RAMP UP. IT IS EXTREMELY IMPORTANT TO CHECK THE IAC DUTY CYCLE WHEN THE RPM IS AT 750 RPM. EVEN 800 RPM IS TOO HIGH FOR CHECKING IAC DUTY CYCLE UNDER THESE CONDITIONS. IF RPM IS OVER 750 RPM, MOMENTARILY OPENING AND CLOSING THE THROTTLE WILL LOWER THE RPM.

Verify that IAC duty cycle is between 32-40% with no purge flow (EVAPVM duty cycle is 0%) and fuel trims (SHRTFT1, SHRTFT2, LONGFT1, LONGFT2) are less than 15%. If IAC duty cycle is within specification proceed to Step 4 now. If IAC duty cycle is out of specification, replace the throttle body with part number 2L8Z-8E828-AB. If the fuel trims are above 15%, disconnect the Mass Air Flow Sensor (MAF) and recheck the fuel trims. If the fuel trims drop to below 15%, replace the MAF sensor with part number 1L2Z-12B579-BARM. If fuel trims stay above 15%, check for vacuum leaks and check the fuel system. Verify corrective action then proceed to Step 4.

4. For vehicles sold in the U.S. and Canada perform the following: Reprogram PCM with WDS. Some 2001 model year PCMs cannot be reprogrammed and must be replaced. This is determined by the MPC # located in upper left corner of the barcode on the PCM. If the PCM is an MPC 160, then replace with part 1U7Z-12A650-AXD. If the PCM is MPC 161, then just reprogram with WDS. Verify latest calibration was successfully reprogrammed. WDS should show latest calibration level as 1U7A-12A650-AXD for 2001, 2U7A-12A650-CZB for 2002 or 3L8A-12A650-BC for 2003. Note that some early 2002 vehicles may have the 2001 calibration. Proceed to Step 5.
5. For vehicles sold in Mexico perform the following: Reprogram PCM with WDS. Some 2001 model year PCMs cannot be reprogrammed and must be replaced. This is determined by the MPC # located in upper left corner of the barcode on the PCM. If the PCM is an MPC 160, then replace with part 1U7Z-12A650-AZD. If the PCM is MPC 161, then just reprogram with WDS. Verify latest calibration was successfully reprogrammed. WDS should show latest calibration level as WDS should show latest calibration level as 1U7A-12A650-AZD for 2001MY, 2U7A-12A650-CPB for 2002MY or 3L8A-12A650-CC for 2003. Note that some early 2002 vehicles may have the 2001 calibration. Proceed to Step 6.
6. If the Electronic Engine Control (EEC) relay has stamped lettering, proceed to Step 7 now. If the EEC relay has white lettering printed on the top surface, replace with a new Hella service relay that is all black and has stamped lettering on the top surface. Both the new Hella service relay and the old relay have the same part number (FOAZ-14N089-A). Make sure the relay you are installing has stamped lettering. For location, use 2001 Wiring Diagram sections 303-078-00-1 Connector C1016, 700-06-00-37 Battery Junction Box. Proceed to Step 7.

7. For 2001 and 2002 vehicles, inspect the DPFE sensor part number. If DPFE sensor is part number 2F1E-9J460-AA, proceed to Step 8 now. If the DPFE sensor is part number YF1E-9J460-AD, check for a white dot on the sensor housing (Note: White dot can be anywhere on housing). If there is a white dot, proceed to Step 8 now. If there is not a white dot, replace the DPFE with part 2F1Z-9J460-AA. Proceed to Step 8.
8. Ensure the Mass Air Flow (MAF) sensor gasket is properly installed and not blocking the air stream by disconnecting the airbox and looking inside the airbox towards the MAF sensor. If gasket is damaged, replace with part YL8Z-9E937-CA. Proceed to Step 9.
9. Verify the PCM harness integrity by removing the module from the COWL and moving the PCM harness around while the engine is running. If any abnormalities are observed, repair/replace the harness. Proceed to Step 10.
10. Inform the customer that significant weight (approximately 9 oz. or more) hanging from the key ring while the keys are in the ignition may move the ignition cylinder out of the Run position and stop the engine. When this occurs, all gauges immediately shut off (fuel reads "E", tachometer goes to zero, speedometer goes to zero immediately). It is recommended that the customer attach fewer keys to the key ring that retains the vehicle ignition key.

PCM CALIBRATION INFORMATION						
Application	Old Part Number (-12A858-)	Tear Tag	New Part Number (-12A858-)	Old Calibration	New Calibration	NGS/WDS Qualifier
2001 3.0L - Escape	1U7A-AXB	ATF3	1U7Z-AXD	0M11A30512	0M11A30512	WDS B21.3 Release or Later
2001 3.0L - Escape	1U7A-AZB	ESG3	1U7Z-AZD	0M11B30512	0M11B30512	WDS B21.3 Release or Later
2002 3.0L - Escape	2U7A-CZA	NSF1	2U7Z-CZB	2M11A30510	2M11A30510	WDS B21.3 Release or Later
2002 3.0L - Escape	2U7A-CPA	PVN1	2U7Z-CPB	2M11B30510	2M11B30510	WDS B21.3 Release or Later
2003 3.0L - Escape	3L8A-BA	BAR2	3L8Z-BC	3M11A30510	3M11A30511	WDS B21.3 Release or Later
2003 3.0L - Escape	3L8A-CA	CAS2	3L8Z-CC	3M11B30510	3M11B30511	WDS B21.3 Release or Later

Obtain an Authorized Modifications Decal (FPS 8282 - 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.

AUTHORIZED MODIFICATIONS	
THE FOLLOWING MODIFICATIONS HAVE BEEN MADE:	
Reprogrammed Powertrain Control Module (PCM) Per TSB 02-23-1	
THESE MODIFICATIONS HAVE BEEN APPROVED, AS APPROPRIATE, BY EPA AND CARB.	
DEALER NUMBER:	DATE:
CHANGE AUTHORITY:	
FPS 8282 3/78 FORD MOTOR COMPANY PRINTED IN U.S.A.	

Article No. 02-23-1 Cont'd.

PART NUMBER	PART NAME
1L8Z-9F715-AA	IAC - Idle Air Control Valve
2L8Z-9E828-AB	Throttle Body
1L2Z-12B579-BARM	MAF - Mass Air Flow Sensor
YL8Z-9E831-CA	Gasket - Mass Air Flow Sensor
FOAZ-14N89-A	EEC Relay
2F1Z-9J480-AA	DPFE Sensor
YL8Z-9C816-AA	EVAPVM Valve

OTHER APPLICABLE ARTICLES: NONE**SUPERSEDES: 02-11-8****WARRANTY STATUS: INFORMATION ONLY****OASIS CODES: 607000, 607400, 607500, 607600,
607700, 611000, 611500, 614000,
614500, 614800**

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, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle.

Service Bulletin

Mazda North American Operations
Irvine, CA 92614-3022



Subject: INTERMITTENT ENGINE QUIT OR IDLE DIP	Bulletin No: 01-014/02R
	Last issued: 12/16/2002

NOTE

- This bulletin supersedes Last issued: 10/01/2002.

APPLICABLE MODEL(S)/VINS

2001-2003 Tributes with 3.0L Duratec engine only built prior to 9/16/02.

DESCRIPTION

Some vehicles equipped with a 3.0L Duratec engine may exhibit an intermittent engine quit condition. This is usually a one time event during closed throttle deceleration with no Diagnostic Trouble Codes (DTCs) and no Malfunction Indicator Lamp (MIL). The engine will restart immediately. Because of an intermittent nature, the condition may not be possible to duplicate.

When normal diagnostics cannot pinpoint the root cause, refer to the following Drivability Checklist for details.

REPAIR PROCEDURE

NOTE: This concern may have several causes so it is important to thoroughly complete each step.

NOTE: Make sure the vehicle is in the following conditions when performing all tests described below:

- Transmission in Park
- Engine at idle at approximately 760 RPM
- Engine temperature should be at least 88°C (190°F)
- All accessories and the engine cooling fan should be off

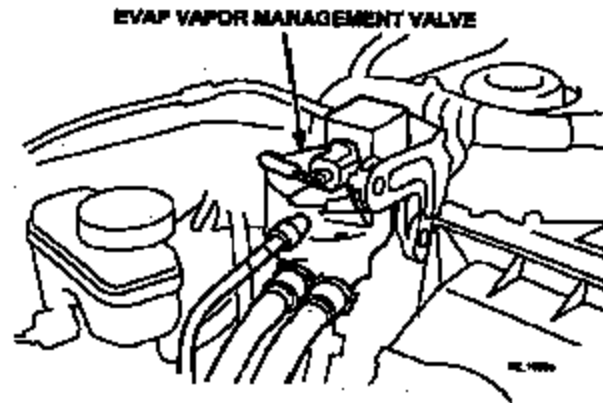
NOTE: Parts will be collected for warranty inspection and any unnecessary replacements will be debited.

1. Inspection of Evaporative (EVAP) Vapor Management Valve

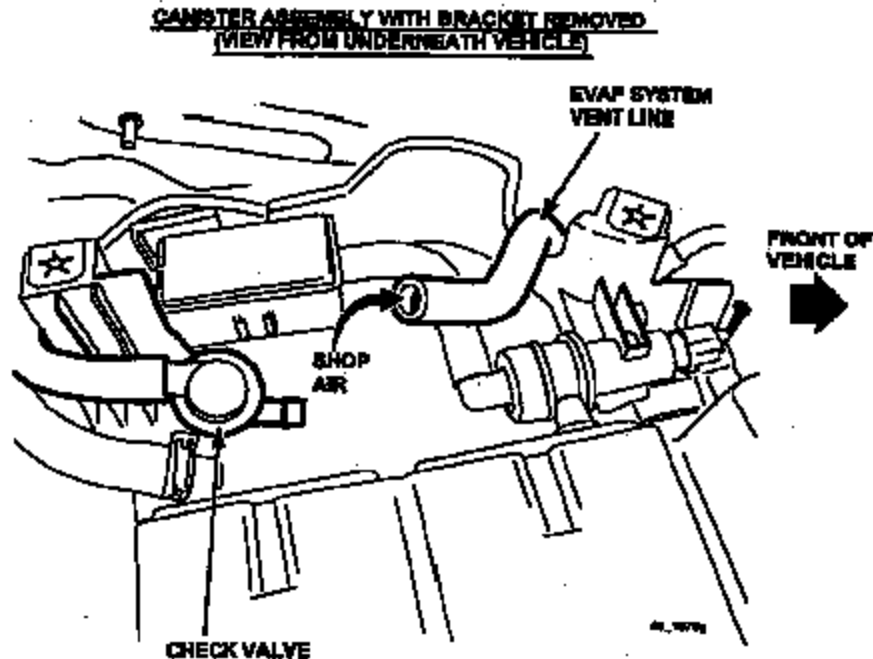
- Determine if the Evaporative Vapor Management (EVAPVM) duty cycle is operating properly.** Monitor these parameters using PIDs - EVAPVM # (in percent) and FTP (in volts).
 - If EVAPVM is functioning correctly, the duty cycle should increase to 84-100% with the FTP decreasing to approximately 2.2 volts and then reset back to 0% duty cycle while FTP hold at approximately 2.8 volts. If the duty cycle does not increase within 5 minutes, turn on the headlights and the AC with the blower on high. The duty cycle should start increasing within 5-10 minutes. Do not replace the EVAPVM valve if the duty cycle functions correctly.
 - If the duty cycle stops increasing and remains at 95-100% while Fuel Tank Pressure (FTP) holds at

CONSUMER NOTICE: The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership.

approximately 2.6 volts, replace the EVAPVM valve with part number AJ03-1B-741A.



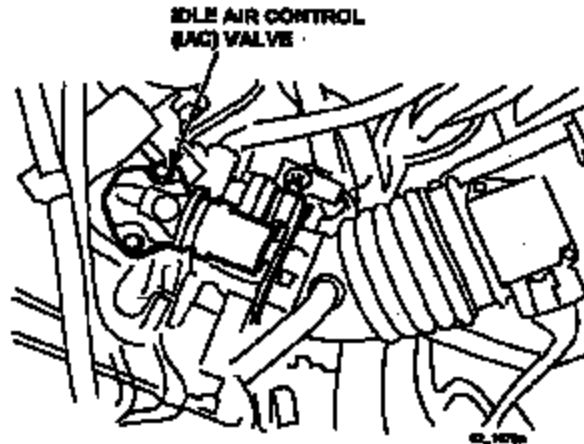
- b. Verify corrective action, then proceed to Step 2.
2. **Inspection of EVAP System Vent Line**
 - a. Disconnect the vent line in the evaporative emissions system from the check valve side. This connection is located just forward of the evaporative emissions canister assembly, underneath the vehicle in the area of the driver side rear seat.



- b. Using shop air, blow the vent line from the check valve side forward (towards the brake booster). In the past, spiders have been known to construct webs in vent lines, so handle with caution. Possible obstructions in the vent line can prevent the evaporative emissions system from purging properly, and in some cases, can cause the condition to occur.
- c. Verify corrective action, then proceed to Step 3.

3. Inspection of Idle Air Control (IAC) Valve**a. Inspect the Idle Air Control (IAC) valve.**

- If the valve is not stamped with part number 1L8E-9F715-AA, replace with AJ71-20-850.

**b. Verify that IAC duty cycle is between 32-40% with no purge flow (EVAPVM duty cycle is 0%) and fuel trims (SHRTFT1, SHRTFT2, LONGFT1, LONGFT2) are less than 15%.**

- If IAC duty cycle is out of specification, replace the throttle body with part number AJ03-13-640B.
- If IAC duty cycle is within specification proceed to Step 3c now.

c. If the fuel trims are above 15%, disconnect the Mass Air Flow Sensor (MAF) and recheck the fuel trims.

- If the fuel trims drop to below 15%, replace the MAF sensor with part number 1F22-13-210A.
- If fuel trims stay above 15%, check for vacuum leaks and check the fuel system (Refer to Workshop Manual section 01-01 and 01-14 Troubleshooting and Fuel System).

d. Verify corrective action, then proceed to Step 4.**4. PCM Reflashing****a. Reprogram PCM with WDS version 21.5 or later. Only use WDS version 21.5 or later during this reprogramming.****b. Some 2001 model year PCMs cannot be reprogrammed and must be replaced. This is determined by the MPC # located in the upper left corner of the barcode on the PCM.**

- If the PCM is an MPC 160, then replace with part AJY8-18-881D.
- If the PCM is an MPC 161, then just reprogram with WDS version 21.5 or later.

c. Verify the latest calibration was successfully reprogrammed.

- WDS should show latest calibration level as 1U7A-12A650-AYD if PCM tear tag is # SJC0, SJC1, or SJC2.
- For PCM tear tag # HQP1, HQP2, HQP3, or RKG0, the latest calibration level is 2U7A-12A650-CRB.
- For tear tag # BAR0 or BAR1, the latest calibration level is 3L8A-12A650-BC.

NOTE: For additional details on PCM reflashing, refer to the attached PCM REFLASH PROCEDURE SUPPLEMENT. Then proceed to Step 5.

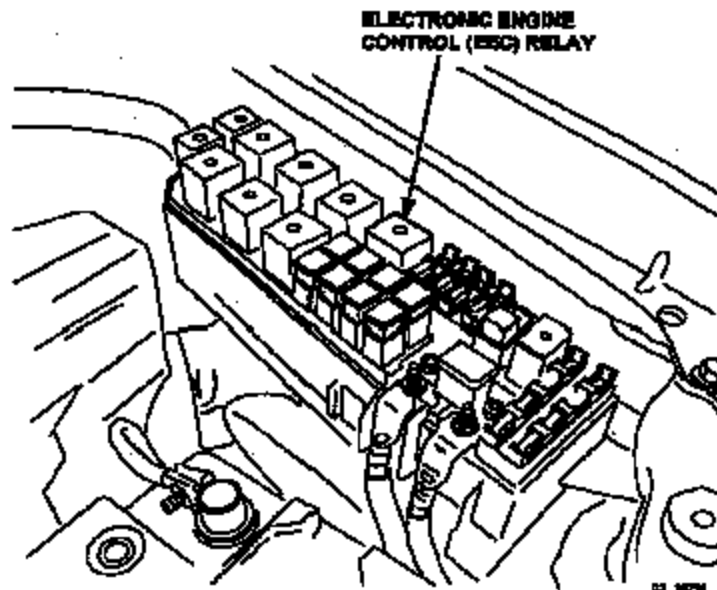
5. Inspection of Electronic Engine Control (EEC) Relay**a. Inspection of Electronic Engine Control (EEC) Relay.**

- If the Electronic Engine Control (EEC) relay has black stamped lettering, proceed to Step 6 now.
- If the EEC relay has white lettering printed on the top surface, replace with a new Hella service relay, BTDA-67-740, that is all black and has stamped lettering on the top surface.

NOTE: Both the new Hella service relay and the old relay have the same part number (BTDA-67-740). Make sure the relay you are installing has stamped lettering.

b. Confirm EEC relay female terminal tightness on the Battery Junction Box side using tester part number 49-L088-OA2-020 from the Mazda terminal repair kit.

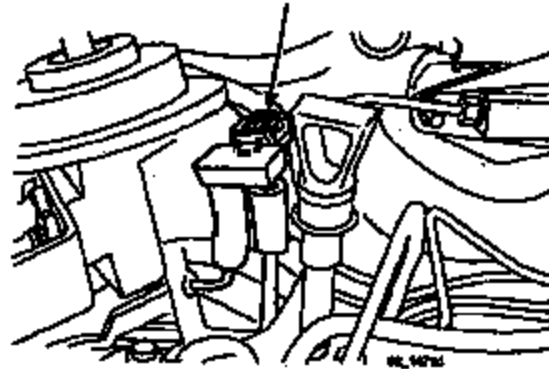
- If loose, adjust terminals as needed.
- If okay, proceed to Step 6.



6. Inspection of Differential Pressure Feedback EGR (DPFE) Sensor Part Number

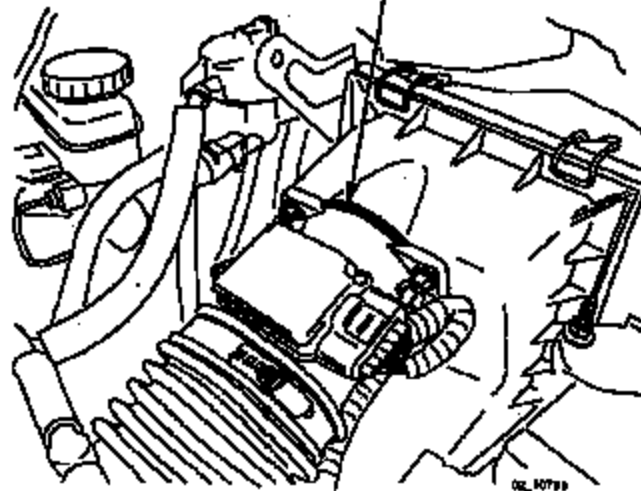
- If DPFE sensor is stamped with part number 2F1E-9J460-AA or AB, proceed to Step 7 now.
- If the DPFE sensor is stamped with part number YF1E-9J460-AD, check for a white dot on the sensor housing (note: white dot can be anywhere on housing). If there is a white dot, proceed to Step 7 now. If there is not a white dot, replace the DPFE with part 1F22-20-302A. Proceed to Step 7.

DIFFERENTIAL PRESSURE
FEEDBACK, EXHAUST GAS
RECIRCULATION (DPFEGR)
SENSOR

**7. Inspection of Mass Air Flow (MAF) Sensor Gasket**

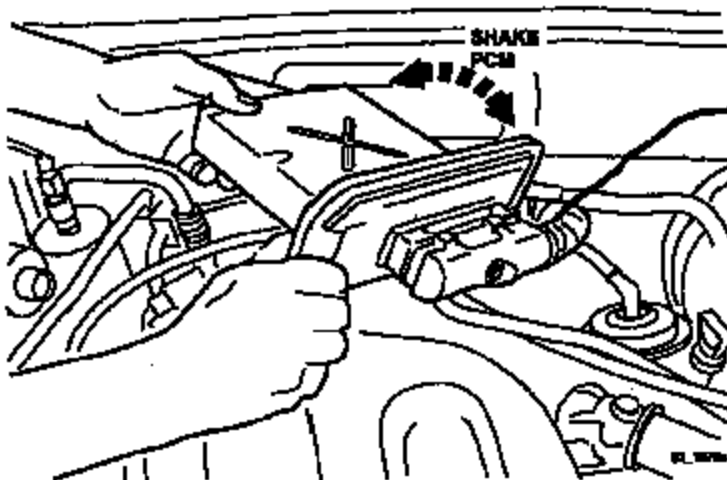
- a. Ensure the Mass Air Flow (MAF) sensor gasket is properly installed and not blocking the air stream by disconnecting the airbox and looking inside the airbox towards the MAF sensor. If gasket is damaged, replace with part AJ03-13-211. Proceed to Step 8.

MASS AIR FLOW
(MAF) SENSOR
GASKET



8. Verify PCM Harness Integrity

- a. Verify the PCM harness integrity by removing the module from the COWL and moving the PCM harness around while the engine is running. If any abnormalities are observed, repair/replace the harness. Proceed to Step 9.

**9. Inspection of Key Ring Weight**

- a. Inform the customer that significant weight (approximately 8 oz or more) hanging from the key ring while the keys are in the ignition may move the ignition cylinder out of the Run position and stop the engine. When this occurs, all gauges immediately shut off (fuel reads "E", tachometer goes to zero, speedometer goes to zero immediately).
- b. It is recommended that the customer attaches fewer keys to the key ring that retains the vehicle ignition key.
- c. Proceed to Step 10.

10. Road Test

- a. Road test the vehicle long enough to experience 3 closed throttle decelerations from approximately 40 mph down to 10 mph. Use scan tool to examine engine RPM during test.
- b. Ensure that there are no engine RPM dips below 680 RPM. Then proceed to Step 11.

11. Obtain an Authorized Modification PCM Label through MStore (part number 9999-95-AMDC-07) 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 Label. Clean the area, install the decal, and cover it with a clear plastic decal shield.

Bulletin No: 01-014/02R	Last issued: 12/16/2002
-------------------------	-------------------------

PART(S) INFORMATION

Part Number	Description	Qty.	Notes
AJ71-20-860	Bypass Valve	1	
AJ03-13-840B	Throttle Body	1	
AJ03-18-741A	Valve, solenoid	1	
BTDA-67-740	Relay, coolant fan	1	Electronic Engine Control (EEC) Relay
AJY8-18-881D	Control unit, EGI	1	Powertrain Control Module (PCM) Replaces JYB2, JYB3 tear tag PCMs
1F22-13-210A	Manifold Sensor Air Flow	1	
1F22-20-302A	Sensor, ENG	1	
AJ03-13-211	Gasket	1	

WARRANTY INFORMATION


NOTE: This information applies to verified customer complaints on vehicles covered under normal warranty. Refer to the SRT microfiche for warranty term information.

NOTE: Parts will be collected for warranty inspection and any unnecessary replacements will be debited.

Warranty Type	A
Symptom Code	D5
Damage Code	9W
Part Number Main Cause	AJY8-18-881D
Quantity	0 or 1
Operation Number / Labor Hours	YY280XRX / 1.2 (includes reflashing of the PCM and vehicle repair) YY290XRX / 1.5 (includes replacement and reflashing of the PCM and vehicle repair)

6. Screen appears to fill out R.O. information and mileage. Fill out information and then press tick. Or skip this by pressing tick.
7. With screen showing "Vehicle Specification", press "Tool Box".
8. Another menu appears. Select "Module programming" then press tick. "Please Wait" appears.
9. Then another menu appears. Select "Programmable module installation" then select "PCM" then press Tick.
10. Screen shows "Set ignition switch to OFF (position 0)". Do this and press tick.
11. Screen shows "Install a new module in vehicle". Replace the PCM with the new unit, then press tick.
12. Screen shows "Remove the fuses for fuel pump and additional fans as this may cause interference and battery drain during the programming process". Do this and press tick.

Note: There are two 50 amp fuses (on 3.0L) labeled "Main Fan" and "Add Fan". Remove only the 50 Amp fuses to deactivate the fans. Fuel pump is a mini fuse 20 amp (position 6) at front end of fuse box.
13. Screen shows "Set ignition switch to the ON position". Do this and press tick
14. Screen shows "Downloading data" box with "progress bar". Please wait 2-3 minutes.
15. Screen now shows "Set ignition switch to the OFF position". Do this and press tick.
16. Screen now shows "Set ignition switch to the ON position". Do this and press tick.
17. Screen shows "Set the ignition switch to OFF (position 0)". Do this and press tick.
18. Screen shows "Calibration has been loaded and checked". Press tick.
19. Screen shows "Re-install fuses for fuel pump and additional fans". Do this, then press tick.
20. Screen shows "Obtain a PCM label and fill in the PCM data shown with the data on the WDS screen. Install in the appropriate position. (New label should be in the new PCM part box) **DO NOT FILL OUT PCM LABEL AT THIS TIME!** Press tick.
21. Screen shows "start engine. Do not depress throttle". **THIS IS INCORRECT!!!!** You must follow the below procedure to start the vehicle:
 - Turn ignition OFF. Turn KEY ON (Count 3 secs. security light is ON solid) Turn key OFF, remove key.
 - Insert 2nd key, turn key ON, (security light stays ON for 3 secs. goes out) then start engine. Turn OFF engine, remove key.
 - both keys programmed.
22. Now with Key OFF, press "Select Systems Options" or "Menu" ICON (at the upper right hand side of screen). Press "EXIT" and push the green tick. This will return you to the "Vehicle Specifications" screen.
23. Now press the "Close session" ICON (lower left hand side of screen, 3rd ICON) and press "delete (deletes session)". Press tick.
24. Now, Press "16 PIN", "All except those below", and then tick.
25. Screen shows cable hookup. Turn ignition switch to ON. Press tick.
26. Screen shows WDS communicating with PCM "progress bar" and "Operation in progress".
27. Wait until WDS finishes collection of PCM information (hard drive light quits flashing). Then the "Vehicle Specification" screen appears with VIN # information. It asks you "Is this correct?" Press NO.
28. Then the "Vehicle Specification" screen appears again and asks: "Is this correct?" Press NO again.

29. Screen shows "Incorrect Calibration Programmed." Press tick.
30. Screen shows "To enable WDS to identify PCM, please enter one of the following information:
 - PCM part number or
 - Calibration number (7, 10, or 15 digits) or
 - Tear tag numberPress tick.
31. Press the light blue box area next to "tear tag" and enter "SJC0, SJC1, SJC2, or SJA3" (whatever the tear tag number of the new PCM is) and press tick.
32. Vehicle specification screen appears asking "Is this correct?" Now press YES.
33. Screen shows "Turn ignition switch OFF". Do this and press tick.
34. Screen shows "Remove the fuses for fuel pump and additional fans as this may cause interference and battery drain during the programming process". Do this and press tick.
35. Screen shows "Turn ignition switch ON". Do this.
36. Screen shows "Downloading Data" box with progress bar. It takes approx. 2-3 minutes.
37. Screen shows "Turn ignition switch OFF". Do this. Press tick.
38. Screen shows "Turn ignition switch ON". Do this. Press tick.
39. Screen changes to "progress bar" and then changes to "Vehicle Specifications" with VIN # and asks "Is this correct?" Press Yes.
40. Screen to  out R.O. Information appears. Press tick.
41. "Vehicle Specifications" screen appears. Now Re-install fan and fuel pump fuses.
42. Now select "Tool Box", then "Module Programming", then press tick. "Please wait" appears.
43. Now select "Module Reprogramming" and "PCM". Then press tick.
44. Screen should say "No later calibration is available on the system for this PCM. The latest level for this vehicle: 1U7A-12A850-AYD. Obtain a PCM label and fill in the PCM data shown with the data on the WDS screen. Install it next to the vehicle emissions label on the hood.
45. Now press tick.
46. Now turn Key OFF, press "Select Systems Options" or "Menu" ICON (at the upper right hand side of screen). Press "EXIT" and push the green tick. This will return you to the vehicle specifications screen.
47. Now press the "Close session" ICON (lower left hand side of screen, 3rd ICON) and press "delete (deletes session)". Press tick.
48. Disconnect WDS cable. PCM is now programmed with the latest calibration. Roadtest vehicle to relearn Keep Alive Memory (KAM).
49. Go back to REPAIR PROCEDURE Step 5.

Procedure 2

(For 3.0L vehicles with PCMs that have tear tag numbers of SJC0, SJC1, SJC2, HQP1, HQP2, HQP3, RKG0, BAR0, or BAR1)

Note: When performing this procedure, if the WDS PTU is not docked and connected to 115V-120V, we recommend that a battery charger be installed on the vehicle battery and turned ON to a maximum charge of no more than 20 AMPS to keep the vehicle battery up to capacity. If you exceed 20 AMPS it will damage the WDS PTU.

1. Connect WDS DLC cable to vehicle's DLC connector (lower portion of dash in front of driver).
2. Press "16 PIN", "All except those below", and then press tick.
3. Screen shows cable hookup. Turn ignition switch to ON. Press Tick.
4. Screen shows WDS communicating with PCM "progress bar" and "Operation in progress".
5. Wait until WDS finishes collection of PCM information. (hard drive light quits flashing). Then the "Vehicle Specification" screen appears with VIN # information. It asks you "Is this correct? Yes or No?" Press "Yes" if information is correct.
6. Screen appears to fill out R.O. information and mileage. Fill out information and then press tick. Or skip this by pressing tick.
7. On certain tear tag PCM's ONLY, screen will appear showing the "Standard Equipment Module". Press "Exit", then tick.
8. For all other PCM tear tag numbers, screen now return to the "Vehicle Specification".
9. Now press the "tools" tab on the top, then "Module Programming". Then press tick.
10. Screen will show "Please Wait." then another menu appears:
 - Programmable Module Installation
 - Module Reprogramming
 - Programmable Parameters
11. Press "Module Reprogramming" then PCM, then press tick.
12. Screen shows "A later calibration is available, P/N 1U7A-12A850-AYD filename: DOAR63W OR it will show 2U7A-12A850-CRE filename: DOAR63Y OR it will show 3L8A-12A850-BC filename: DOAV535. Do you want to program the PCM with it. Press YES.
13. Screen will say to ensure battery is good to run test. Then press Tick.
14. Screen will now say that KOEO test will be run before reprogramming to check for hard faults. Press tick.
15. Screen now shows self test preparation screen. Insure that all parameters are met then press tick.
16. Screen now shows "Performing test-Please Wait"
17. Screen will now show if any codes are stored.

NOTE: If any codes are stored they need to be addressed before recalibration. If no codes are stored proceed to next line.
18. If No Codes are stored press "EXIT". Then the tick mark.
19. Screen now shows "Set ignition switch to the OFF position". Do this and press tick.

20. Screen shows "Remove the fuses for fuel pump and cooling fans as this may cause interference and battery drain during the programming process". Do this and press Tick.
Note: There are two 50 amp fuses (on 3.0L) labeled "Main Fan" and "Add Fan". Remove only the 50 Amp fuses to deactivate the fans. Fuel pump is a mini fuse 20 amp (position #6) at front end of fuse box.
21. Screen shows "Set Ignition switch to the ON position". Do this.
22. Screen shows "Downloading data" box with "progress bar". Please wait 2-3 minutes.
23. Screen now shows "Set Ignition switch to the OFF position". Do this and press tick.
24. Screen now shows "Set Ignition switch to the ON position". Do this and press tick.
25. Screen now shows "Set Ignition switch to the OFF position". Do this and press tick.
26. Screen shows "Calibration has been loaded and checked". Press tick.
27. Screen shows "Re-install fuses for fuel pump and cooling fans". Do this, then press tick.
28. Screen shows "Obtain a PCM label and fill in the PCM data shown with the date on the WDS screen. Calibration P/N is: 1U7A-12A650-AYD, 2U7A-12A650-CRB, or 3L8A-12A650-BC. Install PCM label next to the vehicle emission label on the hood.
29. Screen shows "Start engine. Do not depress throttle". Do this and press tick.
30. Screen shows "operation successful- procedure complete". Press Tick.
31. Screen now shows "Turn key off" - Do this then press tick.
32. Vehicle PCM calibration is now updated.
33. Disconnect WDS cable. Roadtest vehicle to relearn Keep Alive Memory (KAM).
34. Go back to REPAIR PROCEDURE Step 5.