

EMISSION RECALL

Subject: **Emission Recall 08C5**
Sterling 360 ECU Replacement

Defect Involved

Detroit Diesel Corporation (DDC) has determined that certain Sterling 360 engines manufactured between May 30, 2007 and July 31, 2008, will require the engine control unit (ECU) to be replaced with an improved component in order to update the exhaust gas recirculation (EGR) low flow monitor.

The lack of speed/load disable conditions causes the On Board Diagnostic (OBD) monitor to indicate successful completion of the EGR low flow monitoring in areas of engine operation where it does not have adequate sensitivity to detect a malfunction. Therefore, the ECU lacks the ability to detect restrictions in EGR gas flow at engine speeds above an idle

Engines Involved

A list of engines located in your area of responsibility that require this correction is attached.

The table below gives descriptive information to help identify the affected units:

Make	Model Number	Engine Model	Model Year
Sterling 360	FE83D FE83DDZSLSUH FE83DEZSLSUH FE83DGZSLSUH FE83DDZSLSUL FE83DEZSLSUL FE83DGZSLSUL	4M50T	2008 2009

VEHICLES INVOLVED

Certain 2008 through 2009 model year FE83D vehicles produced from May 30, 2007 through July 31, 2008.

A list of vehicles your Dealership has sold that require this Recall can be found on the Dealer's "Open Campaigns" list supplied by MFTA/DTNA via Website. Some individual vehicles described above may not need the Recall. Always check the "VIN Inquiry" tab under "Service" or "Warranty" on Website to verify that the VIN requires this voluntary Recall or Detroit Diesel's Warranty System under Engine Serial Number or Unit History.

Important note: It is a violation of Federal law for a dealer to deliver a new or used motor vehicle covered by this Recall Information Bulletin, under a sale or lease, until the voluntary Recall has been completed.

OWNER NOTIFICATION

Detroit Diesel will notify owners of equipment incorporating engines identified with this Recall. A copy of the owner letter that will be used by Detroit Diesel is enclosed.

Sterling Dealer Recall Responsibility

Authorized Sterling Repair Facilities are to service all engines subject to Recall 08C5. Recall 08C5 is to be performed at no charge to owners on all affected engines under the engine warranty or under the provisions of Recall 08C5.

Please use the appropriate steps, noted below, for indicating that Safety Recall 08C5 has been completed.

Sterling Trucks

- Check the base label (**Form WAR259**) to see if **Safety Recall 08C5** has been completed. The base label is usually located on the passenger-side door about 12 inches (30 cm) below the door latch. If **Safety Recall 08C5** has been completed, no further work is needed.
- If base label is not located on the passenger-side door, please affix label (**Form WAR259**) 12 inches or 30 cm from the door latch.

- Upon completion of **Safety Recall 08C5**, clean a spot on the base label (**Form WAR259**), write the Safety Recall Number (**08C5**) on a blank, red completion sticker (**Form WAR260**), and attach it to the base label.

Corrective Procedure

- Reference the attached **Sterling 360 – FE83D Engine ECU Replacement (Attachment I)**.

Warranty Information

Claim Type:	04
Modification:	08C5
Fault Type:	ZZ
Primary Failed Part:	MBF EX 46 A
Labor:	2.2 hours
Labor Code:	R08C5
Parts Return:	Return to MFTA

Parts Information

All parts that have been removed and replaced **must be returned to MFTA** via UPS Ground using MFTA's Authorized Return Service (ARS). Each **EX46A** parts kit will include an ARS tag to affix to the package prior to shipping. Return the removed ECU to MFTA using normal MFTA Parts Department ARS return procedures.

When ordering the kits reference the **Parts Ordering Procedure** (Attachment II).

MBF EX 46 A Parts Kit Contents		
Item No.	Part Name	Qty.
1	Engine Control Unit	1

1) Remove Panels 23, 21, and
air duct for passenger side footwell.
(See Illustration 1)

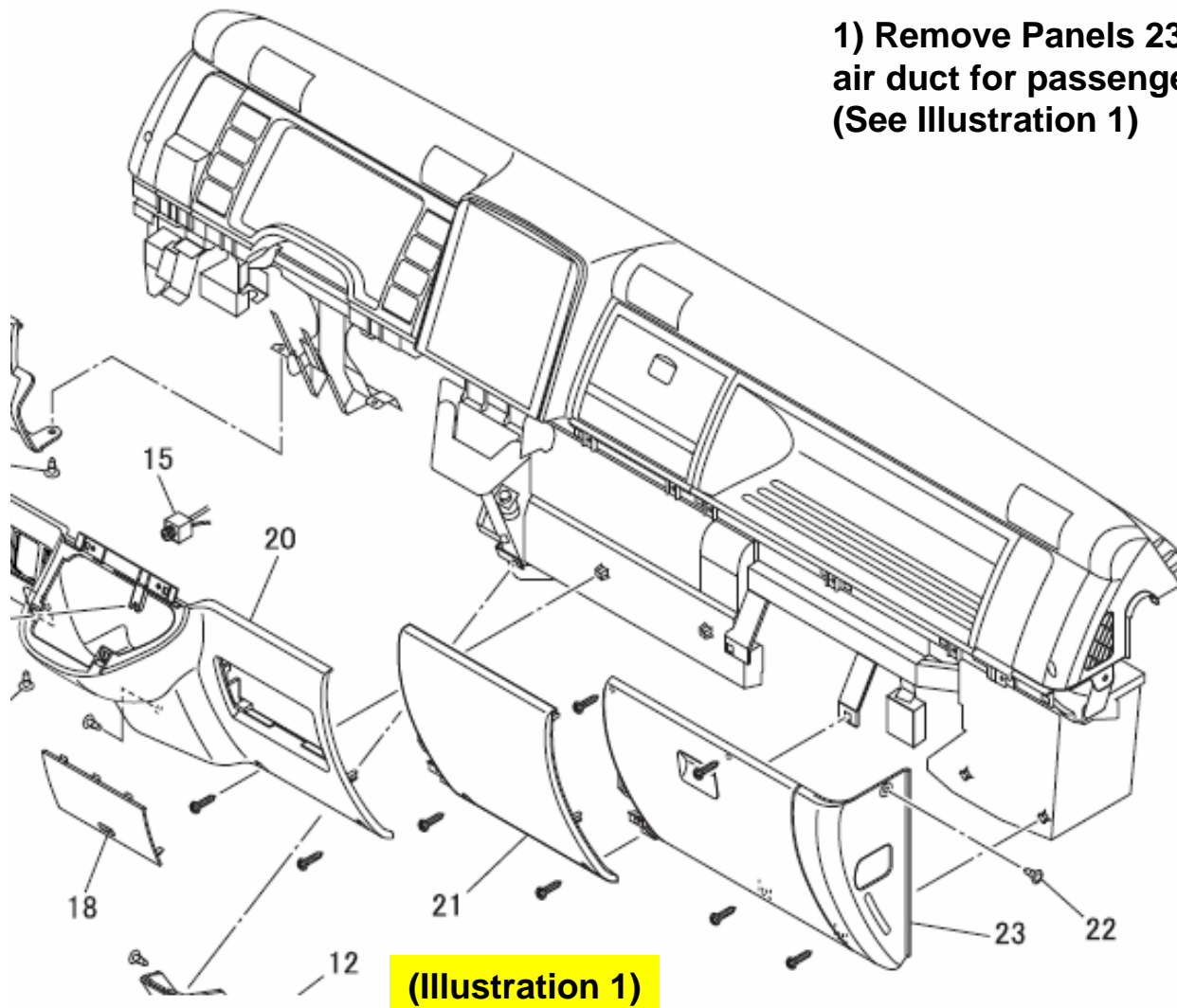
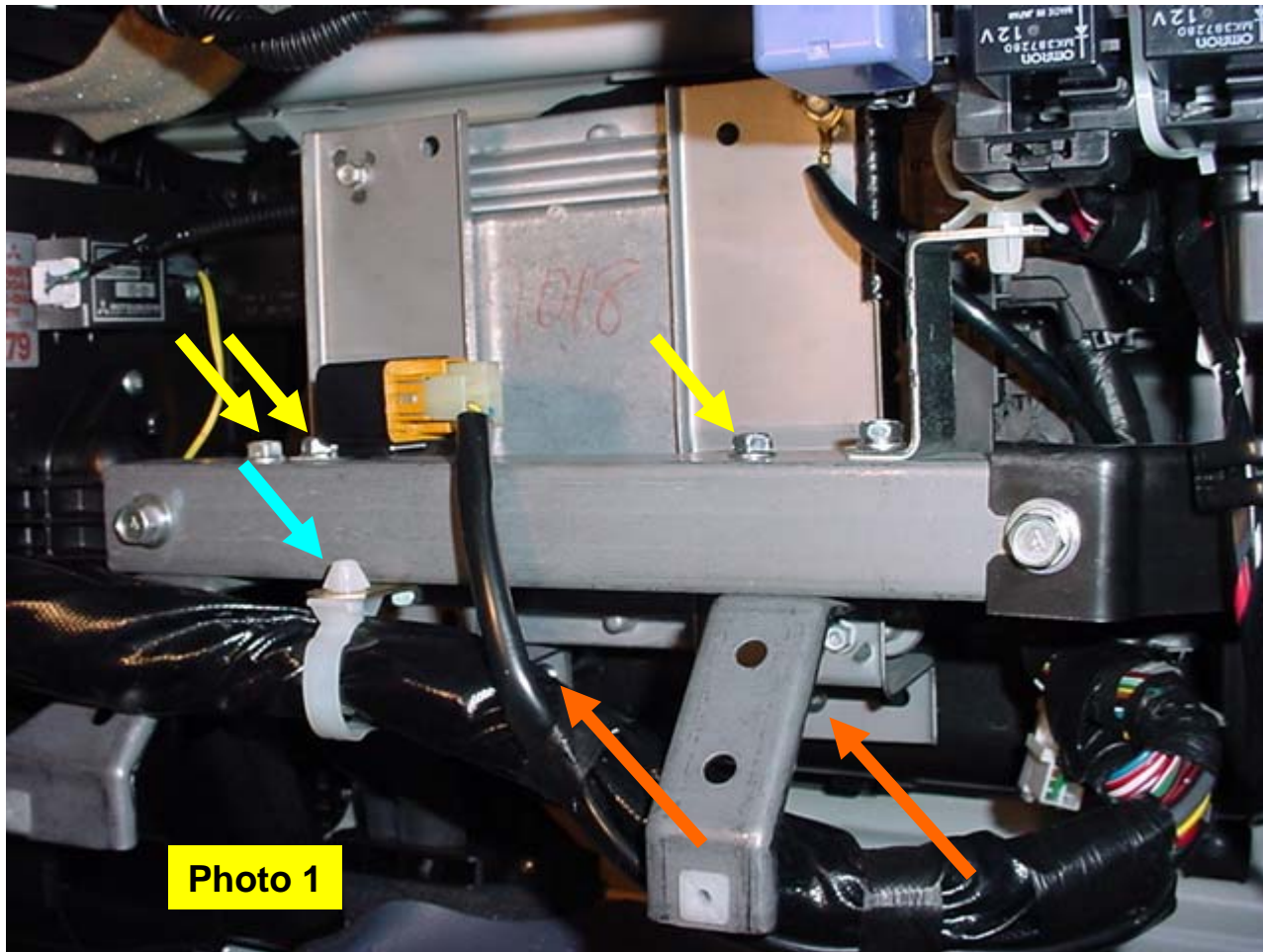


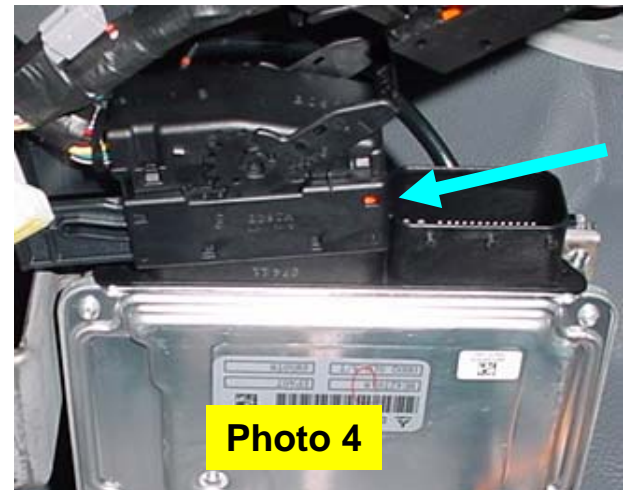
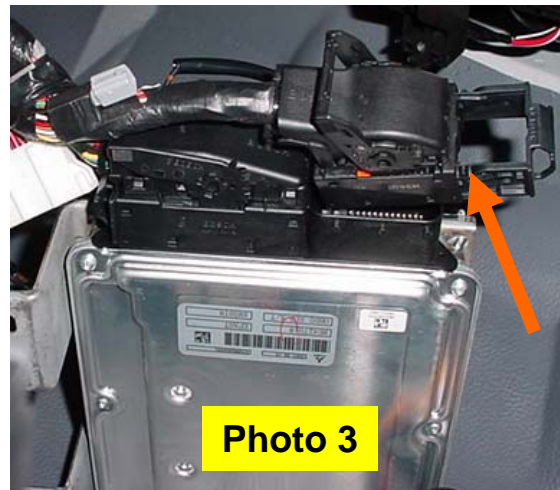
Illustration from Service Manual Pub. No. TWSE0713-51

FE83D Engine ECU Replacement

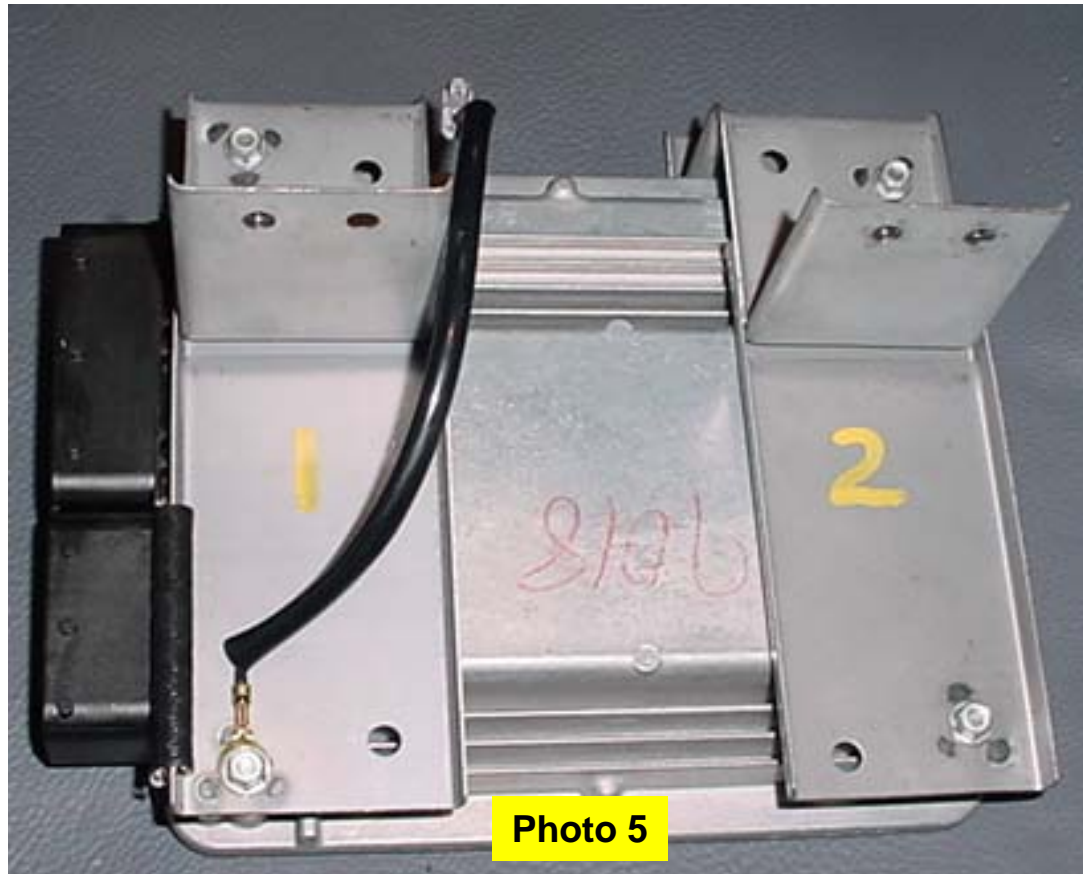


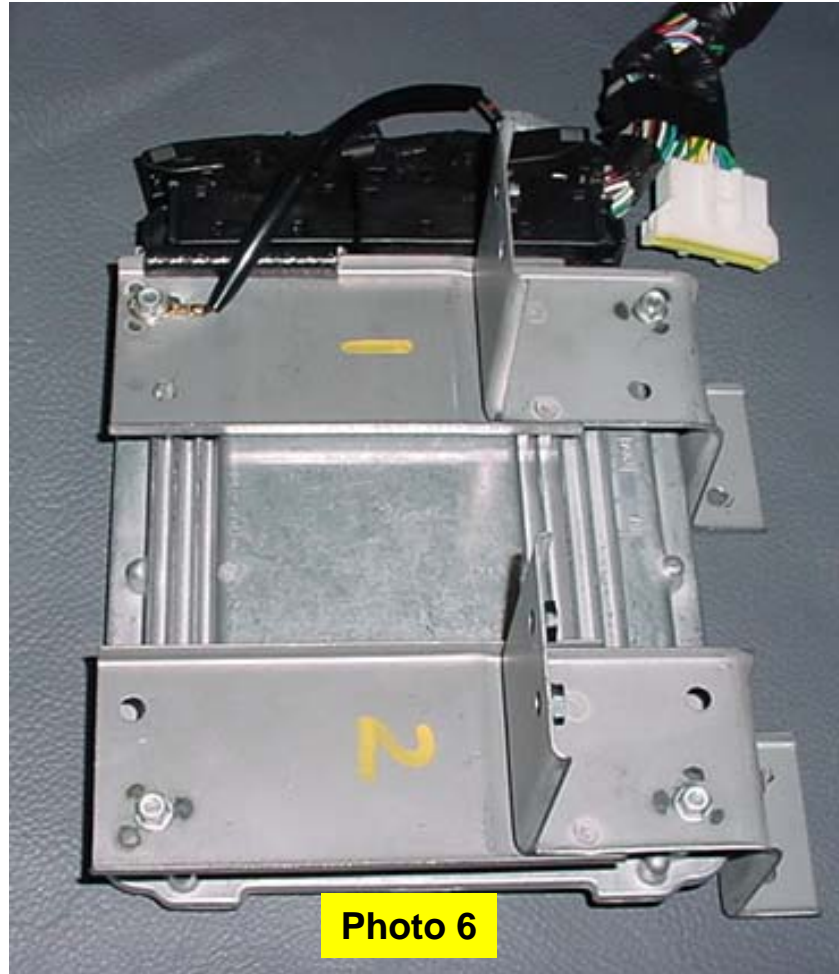
2) Remove the (3)10mm bolts holding the ECU mounting bracket to the dash frame (See Yellow arrows) . Remove the (2) silver Phillips screws holding the ECU bracket to the AC duct. (See Orange arrows) Disconnect the wire harness from the dash frame. (See Light Blue arrow) (Refer to Photo 1)

- 3) Remove the ECU from the dash frame. Disconnect the ground wire. (See Photo 2)
- Disconnect the GE58A pin connector by moving the lever as shown. (See Photo 3)
- Disconnect the GE96A connector by moving the lever as shown. (See Photo 4)



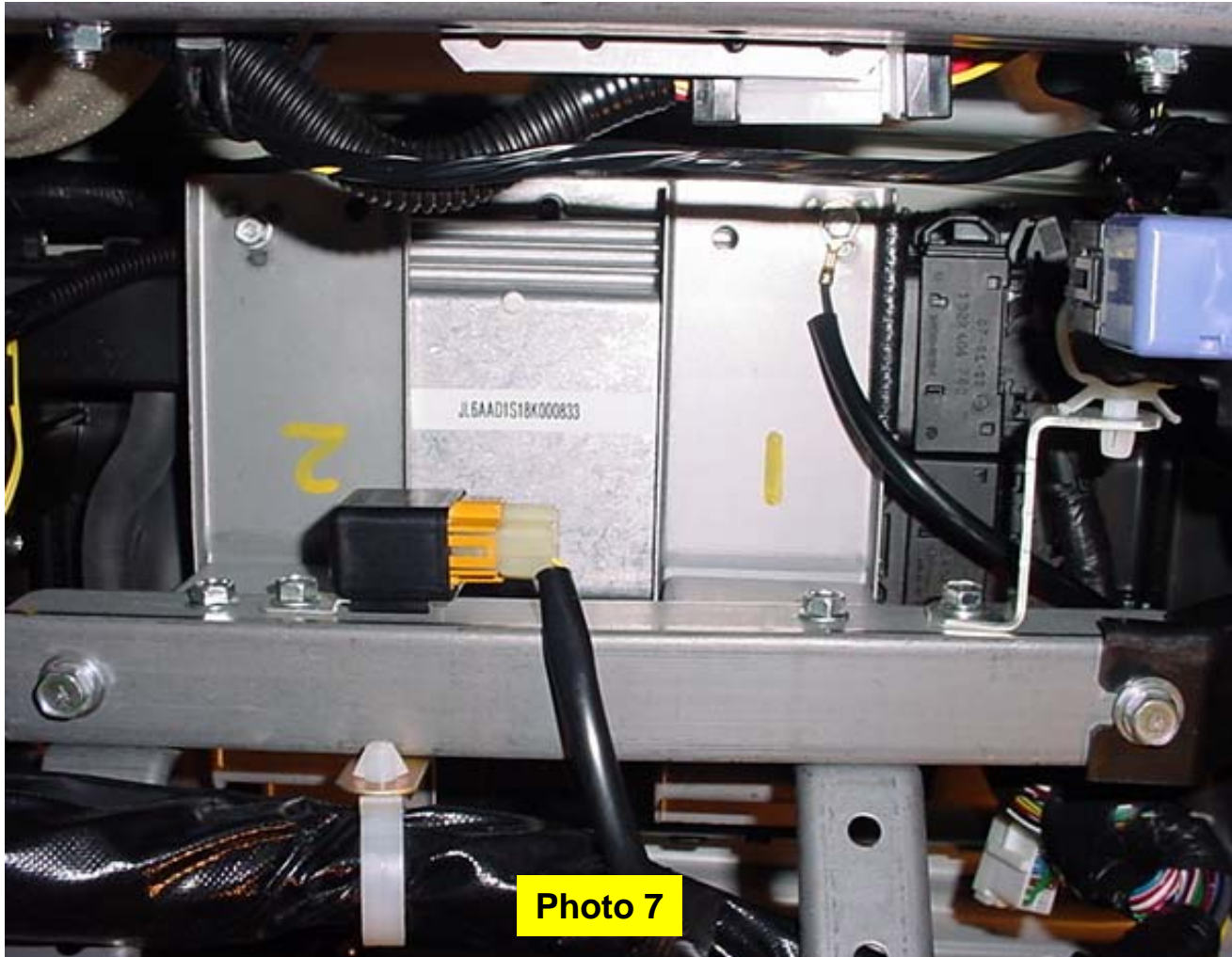
4) Label ECU mounting brackets for installation onto the new ECU. Remove the (4) 10mm bolts holding the brackets to the ECU and the ground wire. (See Photo 5)



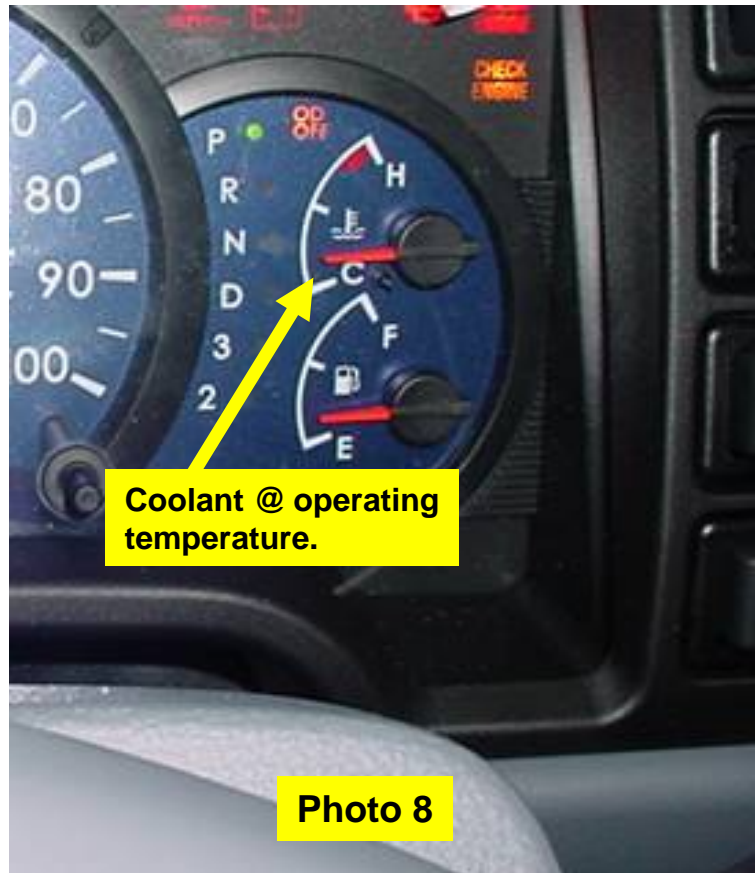


5) Install brackets and the ground wire to the new ECU. Reconnect the GE96A pin connector, the GE58A pin connector, and the ground wire connector to the cab wire harness. (See Photo 6)

6) Mount the new ECU into the truck. (See Photo 7) Reinstall mounting bolts and screws.



- 7) Load the ash data into the new ECU Following the steps in the Appendix.
- 8) Clear all diagnostic trouble codes from the ECU using the MUT-III.
- 9) Move vehicle to the outside of garage. Prepare vehicle for manual DPF regeneration using the MUTT III.



WARNING:

DO NOT PERFORM PARKED REGENERATION IN A POORLY VENTILATED GARAGE OR OTHER ENCLOSED AREA. EXHAUST GASES CONTAIN CARBON MONOXIDE, WHICH IS TOXIC AND VERY DANGEROUS!

CAUTION:

DURING PARKED DPF REGENERATION, ALL SURFACES AND AREAS SURROUNDING THE EXHAUST SYSTEM BECOME EXTREMELY HOT COULD CAUSE SEVERE BURNS. ENSURE THAT NO FLAMMABLE MATERIALS ARE IN CLOSE PROXIMITY, AND THAT NO ONE VENTURES NEAR THE EXHAUST SYSTEM DURING THE REGENERATION PROCESS.

CAUTION:

THE EXHAUST GAS TEMPERATURE DURING REGENERATION CAN REACH TEMPERATURES AS HIGH AS 1200°F. DO NOT ATTACH ANY HOSE OR DEVICE TO THE EXHAUST PIPE TO VENT GASES.

10) Start engine. Allow engine to run until the coolant reaches operating temperature (minimum of 158 degrees F), about 10 minutes. (See Photo 8) Shut off engine.

11) Perform a manual DPF regeneration. Refer to Part IV of the 2008 FE/FG Service Manual, Group 13EA Common Rail System PART II (TWSE0805-13EA), page 13EA-970, No. A5 DPF Regeneration (Manual)

Observe the following guidelines:

- A) Park the vehicle in a well ventilated area free of combustible or flammable materials.**
- B) Fully apply the vehicle's parking brake.**
- C) Place the transmission shift lever to Neutral or Park.**
- D) Warm the engine to operating temperature.**
- E) Turn off the PTO Switch if equipped.**

12) The engine speed will increase to approximately 1500 rpm to start the regeneration. The exhaust brake may also operate during the regeneration process. Parked regeneration should take 10 to 30 minutes after pressing the DPF switch. The regeneration is finished when the engine returns to idle speed and the DPF lamp goes out. Allow engine to run at idle speed for 10 minutes to allow temperatures to stabilize.

13) Shut engine down.

14) Fill out the recall completion sticker (included in the ECU kit) with indelible ink. Clean the driver's side door jamb and affix the label securely. (See Photo 9)



Photo 9



FE83D Engine ECU Replacement

15) Complete check sheet included in kit.

Complete this form after ECU replacement and fax a copy to MFTA Service at (856) 467-4665. Please keep the original copy of this form at the dealership.

C1003810 ECU Campaign Completion Record

Customer:		Date:	
VIN:		Technician:	

Dealer Code	Dealer R/O #	Installed ECU Serial #	Removed ECU Serial #
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1. Confirmation of mileage _____ Miles / Km

	Items	Check(✓)
1)	Check mileage, if accrued mileage is lower than 50 mi (80 km) →go to step 3	
2)	Check mileage, if accrued mileage is more than 50 mi (80 km)→go to step 2	

2. Read ash data

	Items	Record data
1)	Using MUT-III read and record ash accumulation data (should be 6 numbers)	

3. ECU Replacement precautions

	Items	Check(✓)
1)	Ensure grounding wire is properly tightened	
2)	Torque ECU mounting bracket to 3.7-5.2 ft-lb (5-& Nm)	
3)	Insert harness connector and ensure that it is properly locked	

4. ECU Coding (Not required for vehicles with less than 50 miles)

	Items	Check(✓)
1)	Using MUT-III, write ash accumulation data into new ECU	
2)	Delete all codes in engine ECU. Start engine and confirm that there are no warning lamps illuminated.	

5. Manual Regeneration

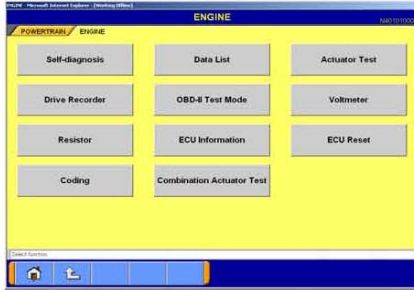
	Items	Check(✓)
1)	Perform manual regeneration using MUT-III	

6. Final check

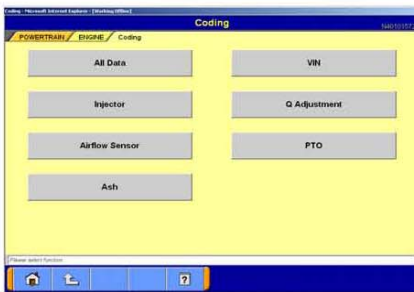
	Items	Check(✓)
1)	Start engine and confirm MIL is not illuminated	
2)	Install Emission Completion Label on left door jamb per instructions	

APPENDIX – Operating Procedures for Writing Coding Data

7-8-6. Writing Ash Data



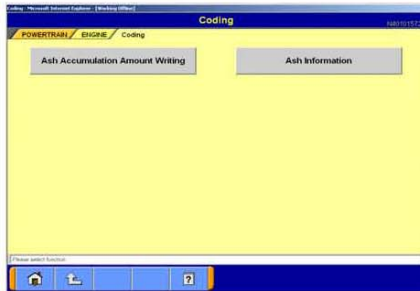
- (1) Select the **Coding** button from the Function selection screen.



- (2) Select the **Ash** button from the Coding menu screen.

Ash Accumulation Amount Writing

---"Ash Data" is written by manual input/automatic input.
→ go to section (4).



- (3) Coding Sub Menu is displayed.

Ash Information

---Model Information written in ECU is displayed..
---Record data onto Campaign Completion Record sheet.

Ash Accumulation Amount Writing

---"Ash Data" is written by manual input/automatic input.
→ go to section (4).



- (4) Input Password.

---Input the password received from step 3 of the repair procedure on page 2 and go to the Inquiry number input screen (5).

---Select the  button.

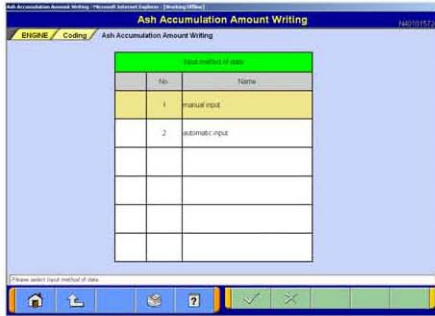


- (5) Input Inquiry Number.

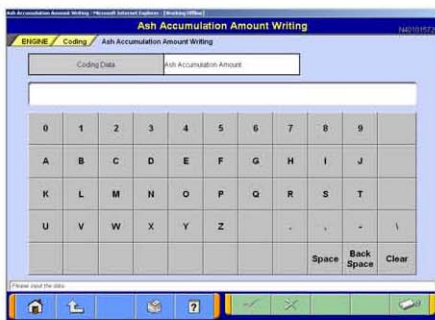
---Input the Inquiry number (8 digits) received from step 3 of the repair procedure on page 2 and go to the data input method selection screen (6).

---Select the  button.

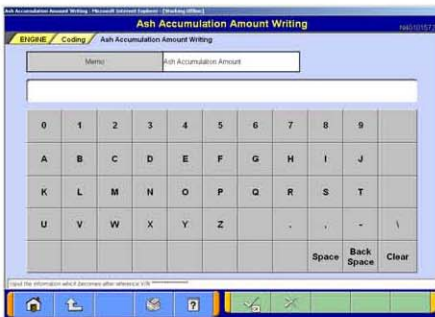
APPENDIX – Operating Procedures for Writing Coding Data



- (6) Selecting the Input Method of Data
 Manual input ---Select this option for this recall.
 → go to section (7).
 Automatic input ---Not applicable to this recall.



- (7) Input Coding Data (Ash Data)
 ---Input Coding data (6 digits, example: 00 02 FE) and
 select the button to go to the Memo input
 screen (8).



- (8) Input Memo: type "Recall" on Memo line.
 ---Select the button to go to the confirmation
 screen for Coding writing screen (9).



- (9) Confirm that the proper Coding writing details are displayed correctly.
 ---Select the button to write data to ECU. A
 confirmation dialogue will be displayed after the
 button is selected. Follow the instructions.
 ---Select the button to cancel if data is incorrect.

Ash Data Entry Complete.