



Date	Group	No.	Release	Page
10.2013	284	042	01	1(13)

SB-10054123-3937

ECM and ACM Software Updates
OBD2013, MP7, MP8, MP10
CHU, CXU, GU, LEU, MRU, TD

PI0826, ECM and ACM Software Updates

(October 2013)

Information

Software updates with enhancements are available for the engine control module (ECM) and aftertreatment control module (ACM) **for vehicles built from the start of OBD2013 production to May 29, 2013.**

Note: For vehicles built from May 30, 2013 to October 4, 2013, refer to PI0831.

Software updates are to resolve the following diagnostic trouble codes (DTC).

- DTC P1086, Oil Level Moderately Low, low oil level light coming on during start up
- DTC P0420, NOx Catalyst: Missing SCR, catalyst system efficiency below threshold
- DTC P205B, Aftertreatment Diesel Exhaust Fluid (DEF) Tank Temperature Sensor: Rationality Low
- DTC P2002, PM Filter Efficiency Monitor, aftertreatment diesel particulate filter (DPF) efficiency fault
- MP7 engine stumble with low coolant temperature and light load

Note: A DPF Service Regeneration and Crystal Sublimation are required when programming is complete.

Tools

Premium Tech Tool version 2.02.55 or higher

Diagnostic Connector 88890304

Communication Interface 88890300 with firmware 1.12.0.2 or higher

Check Premium Tech Tool version by clicking on Help tab and then click on "About Tech Tool".



W2085456

Procedure



DANGER

Do not attempt to repair or service this vehicle without having sufficient training, the correct service literature and the proper tools. Failure to follow this could make the vehicle unsafe and lead to serious personal injury or death.

- 1 Verify service program eligibility by checking service program status in eWarranty.
- 2 Secure the vehicle for service by parking it on a flat level surface, applying the parking brake, chocking the rear wheels, and placing the transmission in neutral.
- 3 Connect Premium Tech Tool (PTT) to the vehicle diagnostics connector using the 16 pin OBD cable 88890304 and Communication Interface 88890300. Connect the PC to a functional LAN or modem connection and a 120 Volt AC source.
- 4 Turn the ignition switch "ON".
- 5 Log in to PTT and Identify Vehicle is displayed.

- 6 Once the vehicle has been identified, enter the Work Order Number information, then click Start Work.

Work Order Number

Enter a work order number or select a recently used work order number in the list.

Enter work order number:

Select a recently used work order:

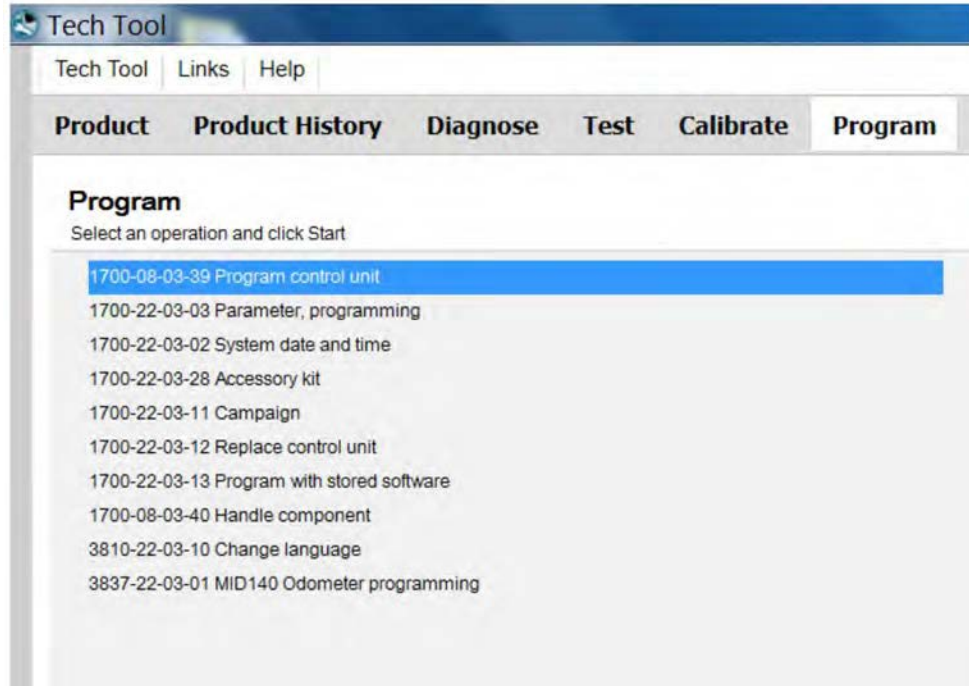
Work Order No	User ID	Date
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Enter Notes:

Start Work **Cancel**

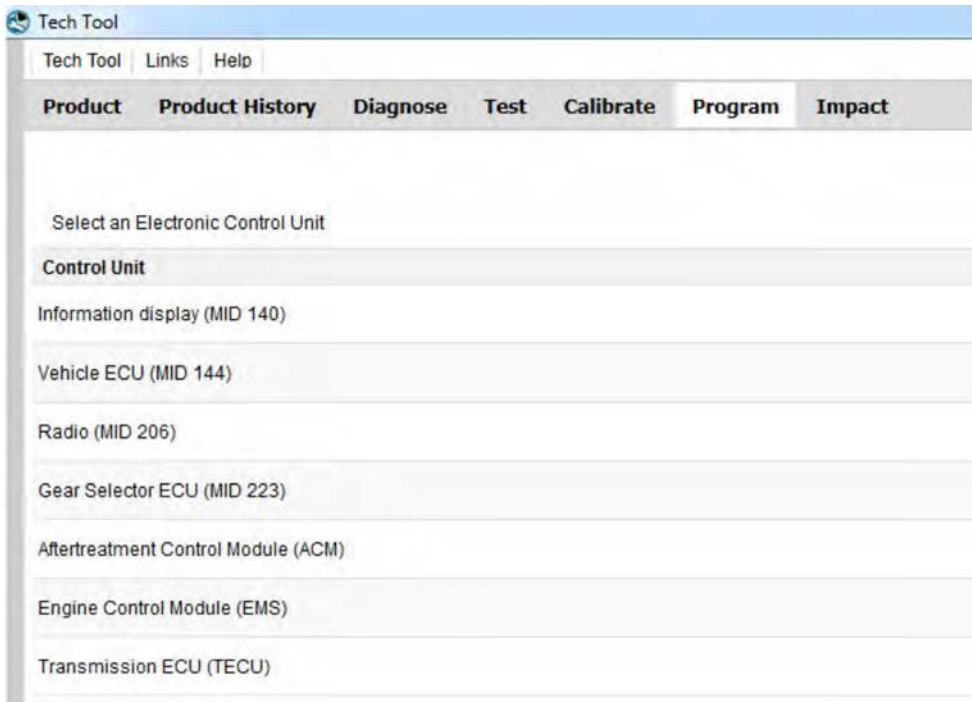
W2079940

- 7 From the Main Menu select Program and **then** Program Control Unit 1700-08-03-39. Then click Start.



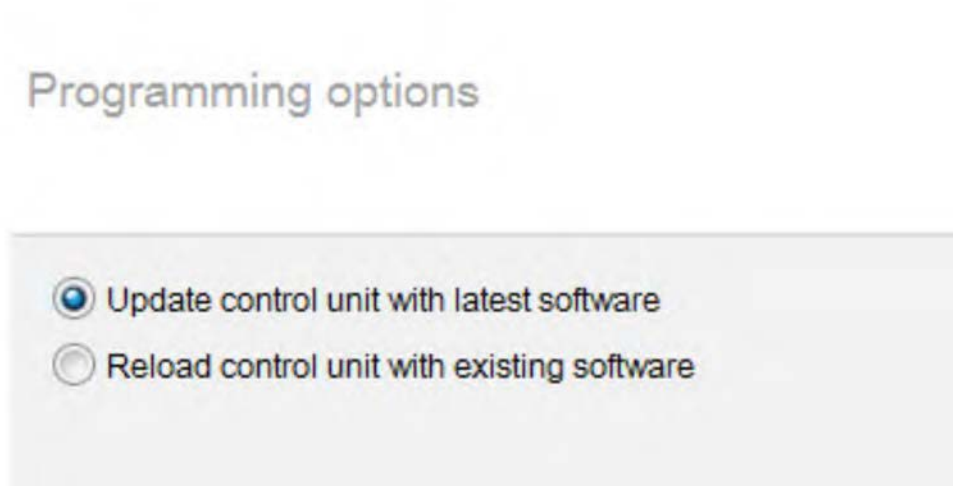
W2085457

- 8 Select a control unit from the list. For this campaign, update the engine control module (EMS) and aftertreatment control module (ACM).



W2079943

- 9 Select Program to update the control unit with the latest software.



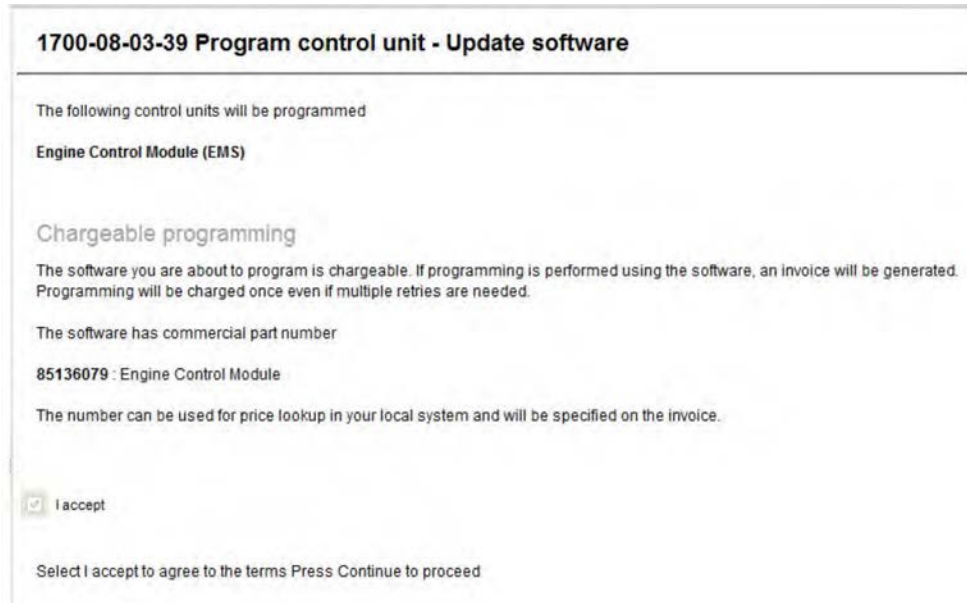
W2085461

10 Certain conditions must be met to continue with programming: battery voltage above 10v, parking brake applied, and ignition key in ON position with engine not running. When all conditions have been met, click Continue to proceed with programming.



W2080113

11 Select "I accept" to agree to the terms and press Continue to proceed.

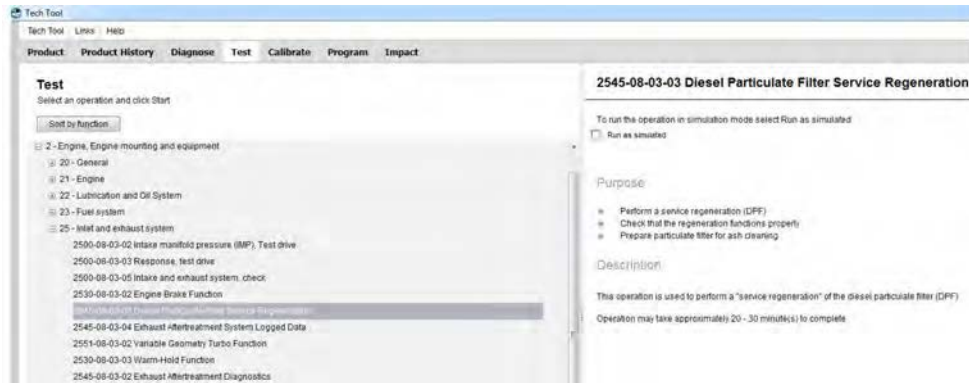


W2085462

12 When EMS programming is complete, click Exit to return to Main Menu to program the ACM.

Note: Engine hours will be lost once modules have been programmed.

13 When programming is complete, select Test from the Main Menu. Select 2545-08-03-03 Diesel Particulate Filter Service Regeneration and click on Start.



W2080634

14 Review the advisories, check the box and click on Continue.

2545-08-03-03 Diesel Particulate Filter Service Regeneration

Information >> Conditions >> Execution >> Result

! WARNING

Ensure that the vehicle is in a suitable place outdoors. The exhaust outlet must not be directed towards anything that could be damaged by high temperature. If the exhaust is directed towards the ground it is recommended to soak the ground below with water to prevent damage to the surface, or if possible position the vehicle on gravel surface. Ensure that the exhaust is not near flammable material.

A fire-extinguisher should be accessible in case of fire.

! CAUTION

Vehicles equipped with an exhaust aftertreatment system generate high exhaust gas temperatures during regeneration of the diesel particulate filter. If regeneration might occur while working with the vehicle, ensure that the exhaust outlet is not directed toward anything that could be damaged by high gas temperatures. Also, do not connect an exhaust vent hose to the vehicle since most exhaust vent hoses are not designed to handle high temperatures. Failure to follow this warning may result in high temperature exhaust gases overheating nearby structures or components resulting in a fire.

I have read and understand the above advisory

Continue > Cancel

W2080637

15 When all conditions are met, check the box and click on Continue.

2545-08-03-03 Diesel Particulate Filter Service Regeneration

Information >> Conditions >> Execution

Automatically checked conditions:

- 1 Parking brake spotted
- 2 Ignition key in ON position, Engine running
- 3 Engine Coolant Temperature (ECT) above 122 °F
- 4 Accelerator pedal position below 5 %

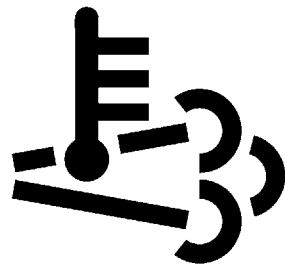
Manual conditions:

- 5 Gear selector in neutral position
- 6 Vehicle outdoors in a suitable area

Continue

W2085464

16 When regeneration is complete, allow engine to idle until high exhaust system temperature (HEST) light goes off.

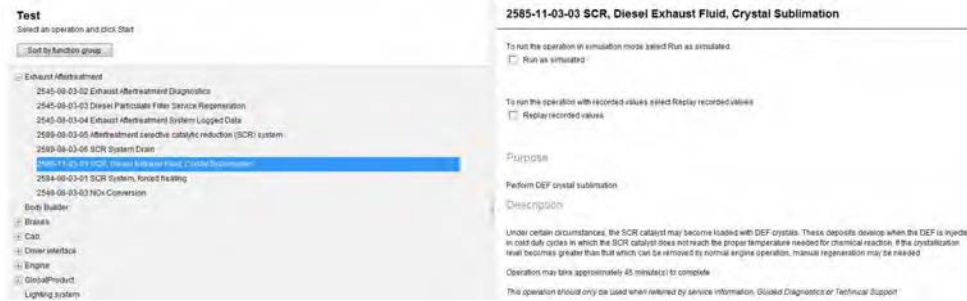


W3007444

High Exhaust System Temperature (HEST)

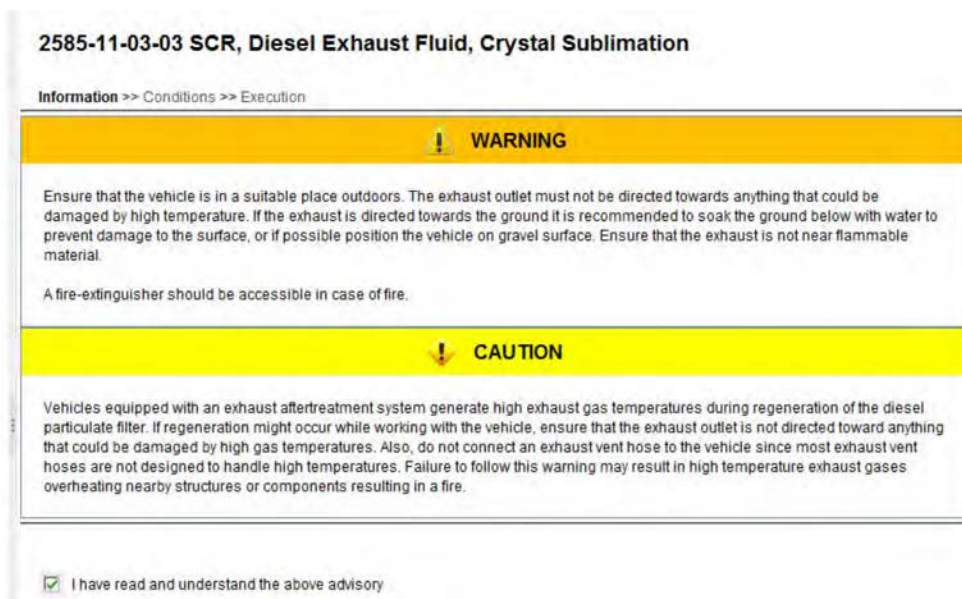
17 When the HEST light goes off, select Test from the Main Menu. Select 2585-11-03-03 SCR, Diesel Exhaust Fluid, Crystal Sublimation and click on Start.

Note: Start the Crystal Sublimation process within 2 minutes of engine coming back to idle.



W2083561

18 Review the advisories, check the box and click on Continue.



W2083562

19 When all conditions are met, check the confirmed box and click on Continue.

The screenshot shows a diagnostic software interface for a Diesel Exhaust Fluid (DEF) sublimation procedure. The interface is divided into two main sections: a checklist on the left and a detailed condition list on the right.

Checklist (Left):

- 1. Three parking brake icons (P) with green checkmarks.
- 2. Two RPM conditions: "> 400 rpm" and "602 rpm", both with green checkmarks.
- 3. Two temperature conditions: "> 122 °F" and "134.6 °F", both with green checkmarks.
- 4. Two percentage conditions: "< 0 %" and "0 %", both with green checkmarks.
- 5. A gear selector icon showing "4H = N" with a green checkmark.
- 6. An icon of a laptop and a tablet with a green checkmark.
- 7. An icon of a truck and a building with a green checkmark.

Condition List (Right):

2585-11-03-03 SCR, Diesel Exhaust Fluid, Crystal Sublimation

Information: Conditions: [X] Disabled

Automatically enabled conditions:

- 1. Parking brake applied
- 2. Ignition key in ON position, Engine running
- 3. Engine Coolant Temperature (ECT) above 122 °F
- 4. Accelerator pedal position below 0 %

Manual conditions:

- 5. Gear selector in neutral position
- 6. Release from diagnostic mode (refer to Technical support)
- 7. Vehicle submersed in a sulfate bath

Confirmed

W2085463

20 When sublimation is complete, allow engine to idle until HEST light goes off.

21 Clear any diagnostic trouble codes (DTC) and Finish Work.

Reimbursement

This repair is covered by an authorized Service Program. Reimbursement is obtained via the normal claim handling process.	
Claim Type (used only when uploading from the Dealer Bus. Sys.)	41
Recall Status	
Vehicle inspected, repair not required	1- Inspected OK
Vehicle repaired per instruction	2- Modified per instruction
Labor Code	
Primary Labor Code	2351V-01-96 — 2.3 hrs
Time to take charge and determine campaign status	101AA-0A-00 — 0.3 hrs
Causal Part	3092091
Authorization Number	PI0826
Expiration Date	31-OCT-2014

Note: Take Charge Time is not included in the Labor Code for this operation. Take charge may be eligible but can only be used once per repair visit. If vehicle is having other warranty repairs performed, take charge should be charged to the warranty repair, otherwise take charge can be charged to this service program.