FSB 237-018, OBD2013 Conical Injector Kits

(May 2013)

In the event that a single injector failure or an engine stumble under load is experienced on an OBD2013 MP8 engine with a vehicle build date before May 5, 2013 (engine serial number clean point 1027921), all six injectors are required to be replaced. New injector kits are available (part number 85137080) to upgrade to the new NCV coated injectors. Kit contains six injectors, six injector sleeves, six O-rings, six hold down bolts and graphite paste to address these failures as necessary. Along with the installation of the injector kit the engine control module (ECM) programming is required and fuel tank ventilation filter kit needs to be installed.

Note: For the current procedure for replacing conical injectors and stainless steel sleeves, see service bulletin 237-60, Unit injector and Sleeve, Replacement (Conical). Failure to follow the procedure exactly can result in denial of warranty.

Overview

1 Verify injectors have not already been updated to the latest part number (22027808). If injectors have been updated, this bulletin does not apply. Follow normal repair procedures.

2 Refer to service bulletin 237-60 for injector and sleeve replacement.

Note: When replacing injectors, the ECM must be programmed with the new injector trim codes. The code is printed on top of the injector electrical connector. The programming is performed using Premium Tech Tool (PTT) and is necessary to ensure that engine timing and emission levels are correct. **Do not enter the new trim codes until after ECM programming is complete.**

3 If the vehicle is not equipped with fuel tank filter vents, use procedure in Field Service Bulletin FSB 234-014 to install fuel tank ventilation filter.

Required Parts

Injector Kit — part number 85137080

Ventilation Filter Kit — part number 85136403 for on-highway applications, part number 21882780 for off-road applications

Note: For on-highway applications, one ventilation filter kit is required for each fuel tank.

Required Tools

Premium Tech Tool version 2.01.51 or higher

Diagnostic Connector 88890304

Communication Interface 88890300 with firmware 1.12.0.2 or higher

ECM Programming 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.

Note: Information is subject to change without notice.
Illustrations are used for reference only and may differ slightly from the actual engine version. However, key components addressed in this information are represented as accurately as possible.

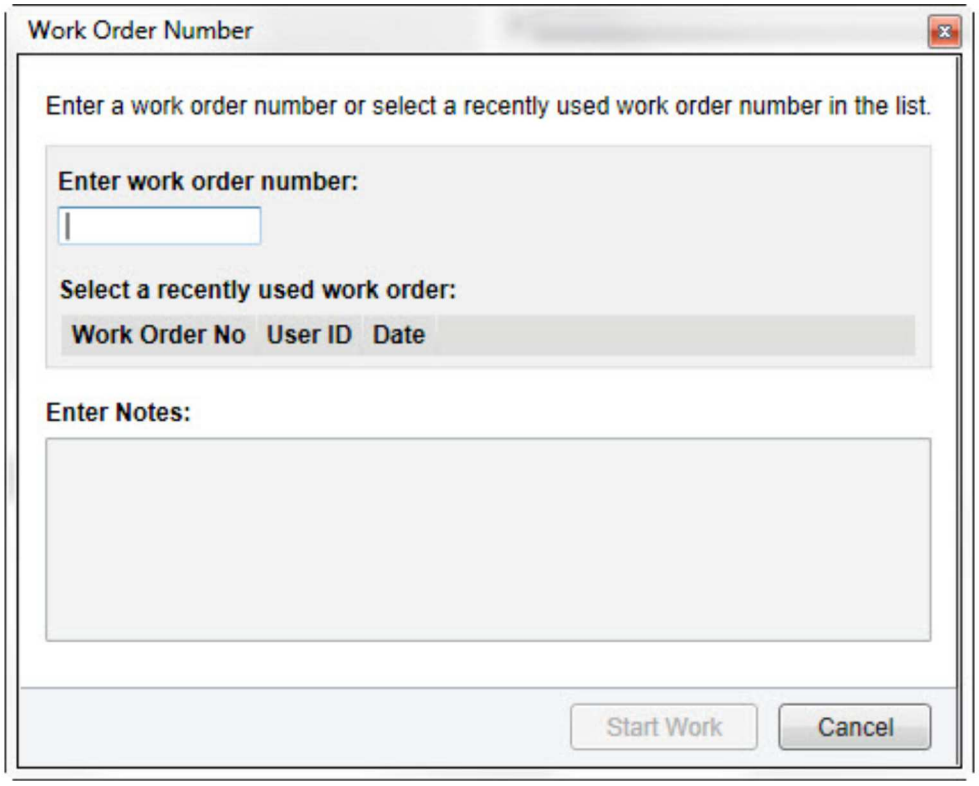
You must read and understand the precautions and guidelines in Service Information, Function Group 20, "General Safety Practices, Engine" before performing this procedure. If you are not properly trained and certified in this procedure, ask your supervisor for training before you perform it.

1 Connect 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 (do not use intermediate storage).

2 Turn the ignition switch “ON”.

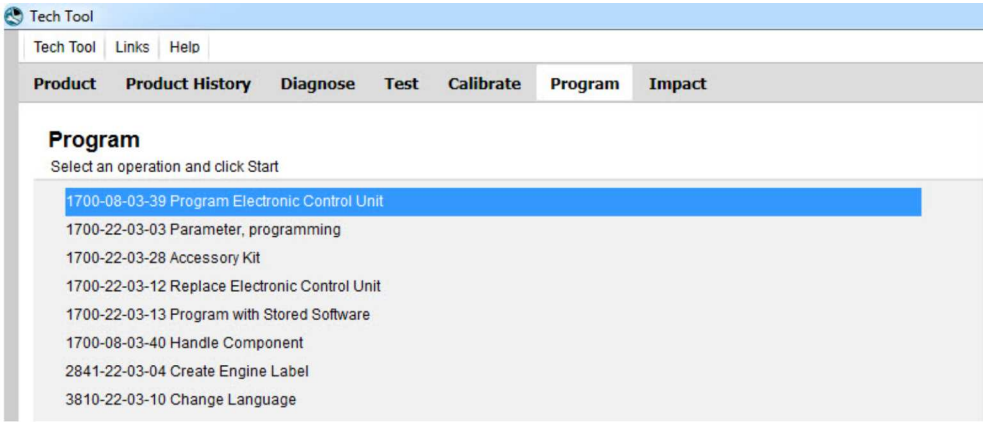
3 Log in to PTT and Identify Vehicle.

4 Once the vehicle has been identified, enter the work order number information, then click Start Work.



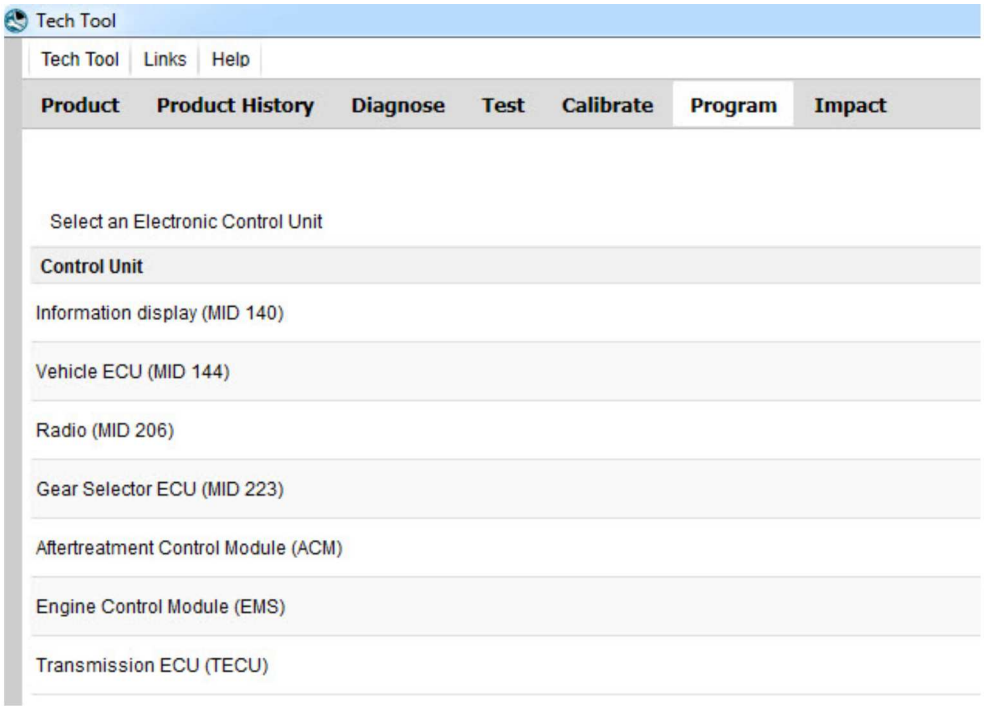
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5 From the Main Menu select Program and **then** Program Electronic Control Unit 1700-08-03-39. Then click Start.



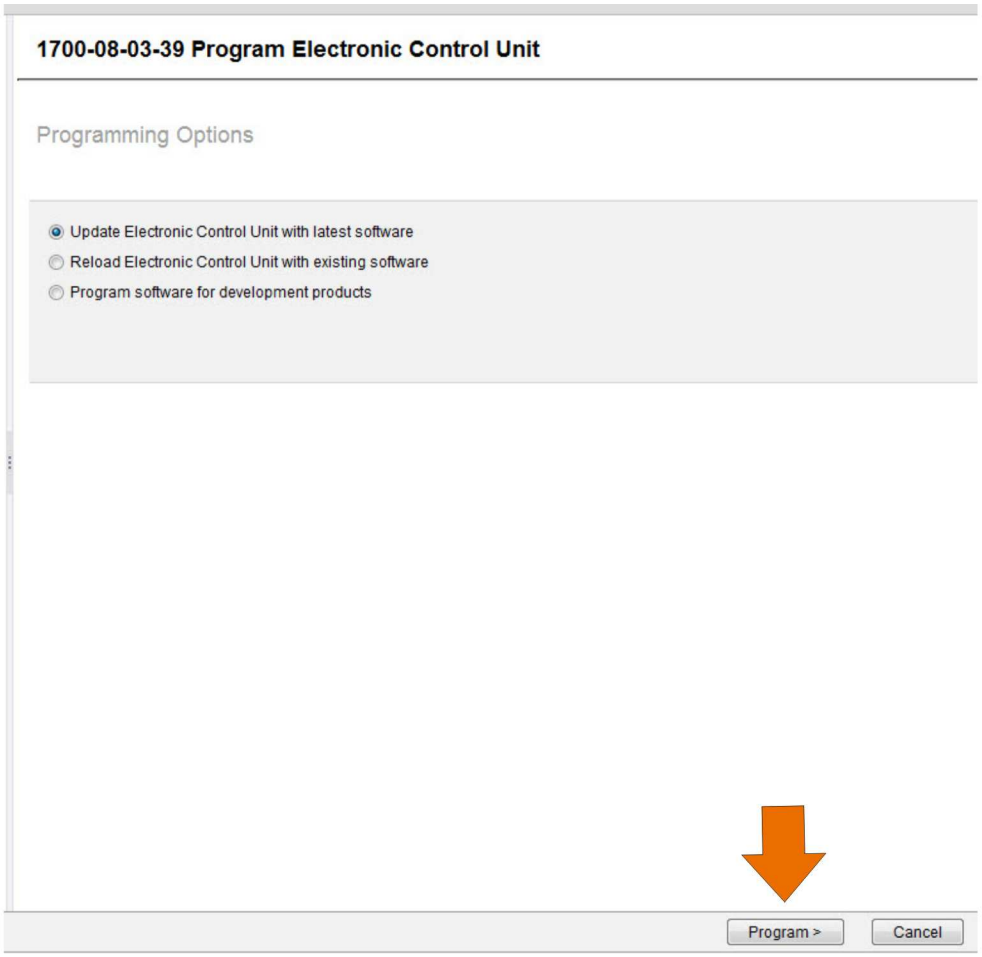
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6 Select Engine Control Module from the list.



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7 Select Update Electronic Control Unit with latest software, then click Program.



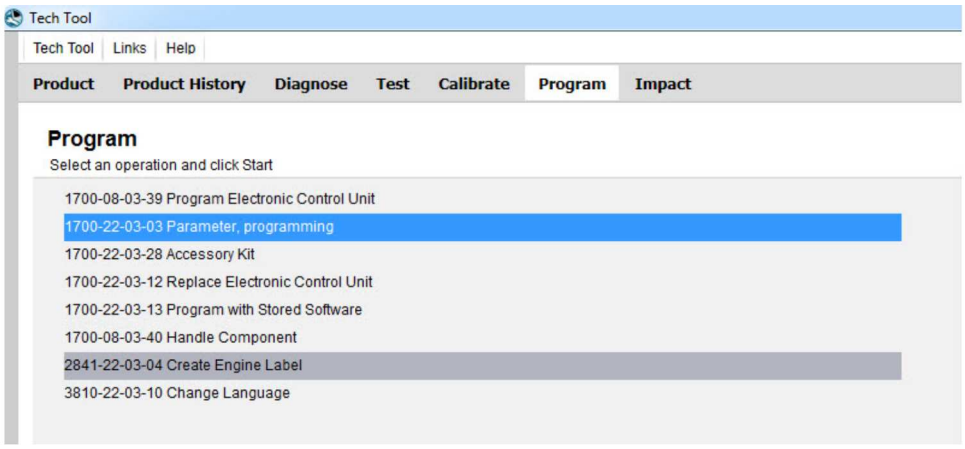
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8 Certain conditions must be met to continue with programming: Battery voltage above 10V, Parking brake applied, and Ignition key in ON position with Engine not running. When all conditions are met, click Continue to proceed with programming.



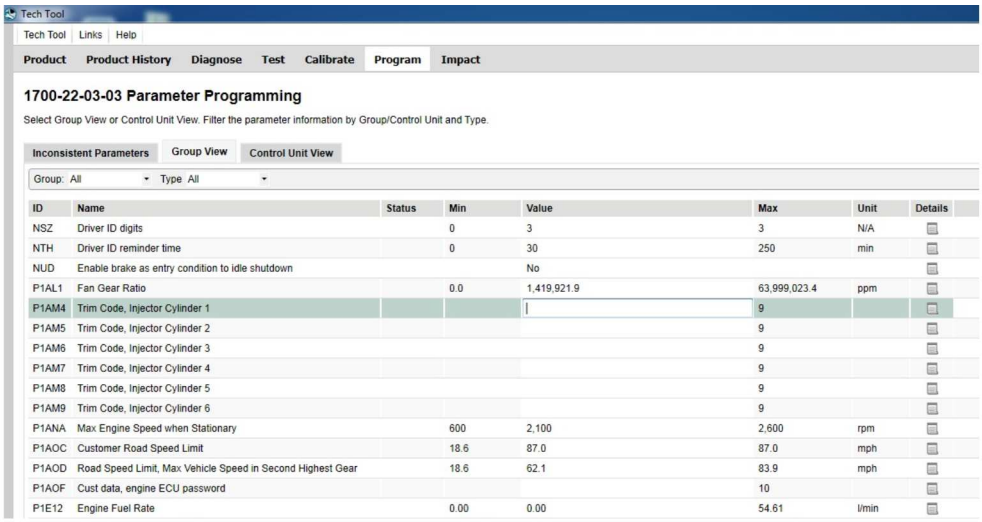
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9 Once Engine Control Module programming is complete, select 1700-22-03-03 Parameter, programming and click Start.



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10 Open Group View tab and scroll down to ID P1AM4, Trim Code, Injector Cylinder 1 and enter the injector trim code into the Value field. Repeat for all six injectors and click Continue.



ID	Name	Status	Min	Value	Max	Unit	Details
NSZ	Driver ID digits		0	3	3	N/A	
NTH	Driver ID reminder time		0	30	250	min	
NUD	Enable brake as entry condition to idle shutdown			No			
P1AL1	Fan Gear Ratio		0.0	1,419,921.9	63,999,023.4	ppm	
P1AM4	Trim Code, Injector Cylinder 1				9		
P1AM5	Trim Code, Injector Cylinder 2				9		
P1AM6	Trim Code, Injector Cylinder 3				9		
P1AM7	Trim Code, Injector Cylinder 4				9		
P1AM8	Trim Code, Injector Cylinder 5				9		
P1AM9	Trim Code, Injector Cylinder 6				9		
P1ANA	Max Engine Speed when Stationary		600	2,100	2,600	rpm	
P1AOC	Customer Road Speed Limit		18.6	87.0	87.0	mph	
P1AOD	Road Speed Limit, Max Vehicle Speed in Second Highest Gear		18.6	62.1	83.9	mph	
P1AOF	Cust data, engine ECU password				10		
P1E12	Engine Fuel Rate		0.00	0.00	54.61	l/min	

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11 When programming is complete, click Exit to return to Main Menu, clear any diagnostic trouble codes (DTC) and Finish Work.

Reimbursement

This repair may be eligible for reimbursement if a product failure was experienced within time and mileage limits of the applicable Warranty coverage. Reimbursement is obtained via the normal claim handling process.