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Major System: ENGINES **Created:** 1/8/2015
Current Language: English **Last Modified:** 5/15/2015
Other Languages: NONE **Author:** Caleb Iverson
Viewed: 1026

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Coding Information

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Title: Fault Code 629-12 for Big Bore Engines**Applies To:** 2010 MaxxForce 11 and 13, 2013 N13 engines

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

05/15/2015 - Author updated for feedback purposes
01/08/2015 - Initial Article Release
04/21/2015 - Added SRTs. Cleaned-up formatting
05/15/2015 - Removed N13. The manual has been updated. Updated graphics.

DESCRIPTION

This document is intended to provided updated diagnostics for fault code 629-12 in 2010 forward MaxxForce 11/13 engines.

SYMPTOM(s)

Not Applicable.

Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):

DTC/Light	Description
629-12	ECM Internal Chip Error

Customer Observations or Concerns:

Malfunction Indicator Lamp (MIL) and active fault 629-12.

SPECIAL TOOL(s) / SOFTWARE

Not Applicable

Tool Description	Tool Number	Comments	Instructions

SERVICE PARTS INFORMATION

Not Applicable

Kit Description	Part Number	Quantity Required	Notes

DIAGNOSTIC STEP(s)

Fault Overview

Fault Code sets when Engine Control Module (ECM) detects an internal error within ECM.

Lamp Reaction

Malfunction Indicator Lamp (MIL) will illuminate when this fault is detected during two consecutive drive cycles.

Associated Faults

SPN 94 FMI 0, 3, and 4 (FDP); SPN 157 FMI 0, 3, 4, 14, 20, and 21 (FRP); SPN 633 FMI 3, 4, and 5 (FPCV), SPN 651 - 656 FMI 3, 4, and 5 (INJ); SPN 651 - 656 FMI 13, 16, and 18 (Cyl Bal); SPN 2797 FMI 11 (INJ); SPN 2798 FMI 11 (INJ); SPN 3055 FMI 0, 1, 15, and 17 (FRP).

Fault Facts

External ECM functions which may cause this error to set are faults with accelerator pedal position (APP) and fuel system. If pedal or fuel system related faults are detected along with internal ECM fault SPN 629 FMI 12, pedal and fuel system faults need to be corrected before ECM is changed due to SPN 629 FMI 12 fault.

Drive Cycle to Determine Fault Status

Continuous

Possible Causes

- Fuel System Faults
- APP Faults
- Failed ECM

Step	Check for associated fault codes.	Decision
1	Using Electronic Service Tool (EST) with ServiceMaxx™ software, check Diagnostic Trouble Code (DTC) list for Associated Faults(). Is EST DTC list free of Associated Faults?	Yes: Go to Step 2.
		No: Repair Associated Faults. After repairs are complete, retest for SPN 629 FMI 12.

Step	Check for active or pending fault codes.	Decision
2	Using EST with ServiceMaxx™ software. Key ON, check DTC list for SPN 629 FMI 12. A. Key ON, clear codes. B. Key OFF, wait for EST screens to clear. C. Key ON, check Diagnostic Trouble Codes (DTC) list for SPN 629 FMI 12. Is EST DTC list SPN 629 FMI 12 active or pending?	Yes: Replace Engine Control Module (ECM) and perform Crankshaft Position Sensor Relearn Procedure. After repairs are complete, retest for SPN 629 FMI 12.

No: Release vehicle to customer.

REPAIR STEP(s)

Crankshaft Position Sensor Relearn Procedure

Overview

After diagnosing and repairing Crankshaft Position (CKP) sensor, Camshaft Position (CMP) sensor, and base engine concerns, CKP position parameter has to be reprogrammed.

Tools Required

- Electronic Service Tool with ServiceMaxx™ software
- Interface cable (RP1210B-compliant supporting J1939 and J1708)

Procedure

1. Key-On Engine-Off (KOEO)
2. Connect Electronic Service Tool to vehicle Diagnostic Connector.
3. Log in to ServiceMaxx™
4. Clear Diagnostic Trouble Codes if any are displayed
5. Select Sessions > Programming

ID	Name	Value	Units	Undo
95202	Aftertreatment Reset Request	Not Available		
95092	Change Oil Lamp Activation Time	461.49	s	
95081	Change Oil Lamp Always On	Yes		
95232	Crankshaft Position Learning Reset Request	Yes		
66082	DOC Serial Number			
66072	DPF Cleaning and Installation Date	No		
66062	DPF Serial Number	Yes		
95022	Engine Hour Service Interval	815.13	hr	
95052	Engine Hour Starting Value	706,871.10	hr	
95222	FRP relief valve counter	59,201		
95212	FRP relief valve timer	4,754	min	
95012	Fuel Used Service Interval		gal	
95042	Fuel Used Starting Value	52,768,553.9	gal	
95252	Learned Injector Values	S17400B0E1B935B3DD998F24...		
95242	Reset Learned Injector Values	*** WRITE ONLY ***		
95101	Service Interval Reset Request	No		
95072	Service Soon Percent		%	
41160	Trip Engine Coolant Level Low Time	943022:45:40	hh:mm:ss	
95032	Vehicle Distance Service Interval		miles	
95062	Vehicle Distance Starting Value	147,344.25	miles	

6. Select Service Interval Tab
7. Change Parameter Value 95232 CKP Crankshaft Position Learning Reset Request to Yes
8. Click Program Engine Button
9. When Engine Parameters Programmed Successfully pop up box appears, turn Key Off for a minimum of 15 seconds.



10. Turn Key On
11. Clear any Diagnostic Trouble Codes

REMOVAL PROCEDURE:

Not Applicable

INSTALLATION PROCEDURE:

Not Applicable

WARRANTY INFORMATION

Per warranty policy letter WPL13-009G all claims after 10/14/2013 are required to have an associated health report from before the repair was started. This report must show the active faults codes that led to the diagnosis and repair. Also, if faults log during the course of the repair, after the initial health report, a second health report is required showing the faults.

Warranty Claim Coding:

Group:	12000 - Engines
Noun:	801 - Control Module Engine (ECM)

Standard Repair Time(s):

Step	Description	Chassis	Engine	SRT	Hours
2	ELECTRONIC CONTROL MODULE (ECM OR ECM/IDM) I-6 ENGINES, REPLACE	ProStar	MAXXFORCE 11/13	R12-8801U	0.6
2	ELECTRONIC CONTROL MODULE (ECM OR ECM/IDM) I-6 ENGINES, REPLACE	TranStar	MAXXFORCE 11/13	Q12-8801U	0.6
2	ELECTRONIC CONTROL MODULE (ECM OR ECM/IDM) I-6 ENGINES, REPLACE	WorkStar	MAXXFORCE 11/13	N12-8801U	0.6
2	ELECTRONIC CONTROL MODULE (ECM OR ECM/IDM) I-6 ENGINES, REPLACE	PayStar	MAXXFORCE 11/13	T12-8801U	0.6

- Link to the Standard Repair Time Manual: [Click Here](#)

Claim SRT Example:**Claim Comment Suggestion:****Special Requirement(s):****OTHER RESOURCES**

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