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Major System: FUEL SYSTEMS

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Other Languages: NONE

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Coding Information

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Title: 2010 MaxxForce 11L/13L and N13 SPN-157 FMI-0 FRP relief valve opening fault

Applies To: EPA 2010 MaxxForce 11L/13L and N13 Engines

CHANGE LOG:

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

4/26/2017 - Updated step 2 diagnostics based on feedback from field.
 4/12/2017 - Updated diagnostic software to Navistar Engine Diagnostics™.
 8/15/2014 - Initial Article Release

DESCRIPTION:

This article addresses the service procedure for diagnosing the FRP relief valve opening fault (SPN 157 FMI 0) on EPA 2010 MaxxForce® 11 and 13 liter and N13 engines.

SYMPTOM(s)

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

Engine Warning Lamp (EWL) on in dash and code 157 0 active that cannot be cleared using Navistar Engine Diagnostics™.

DTC/Light	Description
SPN 157 FMI 0	FRP relief valve opening fault

Customer Observations:

- Low Power
- Check Engine Light

SPECIAL TOOL(s) or SOFTWARE:

Tool Description	Tool Number	Comments
Electronic Service Tool (EST) with Navistar Engine Diagnostics™ software		
J1939 and J1708 RP1210B Compliant Device		
	00-00956-08	

180 Pin Breakout Box		
3-Banana Plug Harness	ZTSE4498	
500 Ohm Resistor Harness	ZTSE4497	
Big Bore Terminal Test Probe Kit	ZTSE4899	
Breakout Harness for FRP	ZTSE4829	
Digital Multimeter (DMM)	n/a	

SERVICE PART(s) INFORMATION:

- Verify you confirm there is available stock in the PDC by referencing the Parts Catalog– [Click Here](#)
If the required parts are not available, please contact the Service Parts Group.

Kit Description	Part Number	Quantity Required	Ordering Instructions
FITTING FUEL OUTLET*90 DEG VOS	3559213C2	1	Order from Navistar
FITTING FUEL OUTLET*STRAIGHT V	3559214C2	1	Order from Navistar
FUEL W/S	FS19915		
FUEL LINE MF13	62123075206		

Overview:



GOVERNMENT REGULATION: Engine fluids (oil, fuel, and coolant) may be a hazard to human health and the environment. Handle all fluids and other contaminated materials (e.g., filters rags) in accordance with applicable regulations. Recycle or dispose of engine fluids, filters, and other contaminated materials according to applicable regulations.



WARNING:

To prevent personal injury or death, make sure the engine has cooled before removing components.

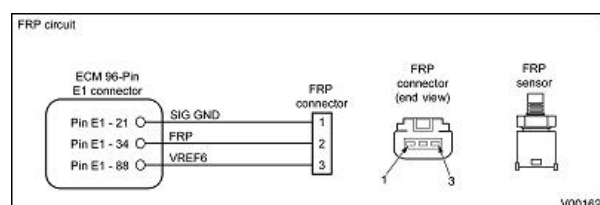


WARNING:

To prevent personal injury or death, do not let engine fluids stay on your skin. Clean skin and nails using hand cleaner and wash with soap and water. Wash or discard clothing and rags contaminated with engine fluids.

SERVICE PROCEDURE:

SPN FMI Condition	Possible Causes
157 0 FRP relief valve opening fault	ECM calibration out of date
	Fuel return line kinked
	Battery ground stud / loose LPCAC



FRP Sensor Circuit Diagram

Step	Action	Decision
1	Verify ECM Calibration Check vehicle calibration scorecard using Service Portal.	Yes: Go to step 2.
	Is the ECM calibration up to date?	No: Update calibration and recheck for Fault Codes.

Step	Action	Decision
2	Inspect fuel lines.	Yes: Replace fuel line and connector(s).
	Are fuel lines kinked?	No: Go to step 3

Step	Action	Decision
3	Inspect LPCAC ground stud.	Yes: Tighten
	Is the ground stud loose?	No: Go to step 5.

Step	Action	Decision
5	Inspect wiring harness. Are wires chaffed? Is fuel vent line clogged? Are fuel lines reversed?	Yes: Replace wiring harness.
		No: Go to step

Step	Action	Decision
7	Clear all faults with EST. Release the vehicle to the customer	

WARRANTY INFORMATION:

Warranty Claim Coding:

Group:	08550
Noun:	401 Clean Power Cable (Battery to Cab)

Group:	15050
Noun:	352 Fuel System Hose/Pipe

Group:	08846
Noun:	909 Harness, Cab Wires, Conn's & Terminals

Standard Repair Time(s):

[SRT Manual](#)

OTHER RESOURCES

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[2010 MaxxForce 11/13 Resource Center \(IK1200548\)](#)

[2010 MaxxForce 11/13 Diagnostic Manual](#)

[2010 MaxxForce 11/13 Service Manual](#)

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Feedback Information

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