

SB-10057197-4209



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Coding Information

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Title: SPN 3055 FMI 0 FRP Exceeded Maximum Troubleshooting

Applies To: EPA 2010 MaxxForce 11 / 13/ 15 and N13 Engines

CHANGE LOG

11/10/14 Added SRT for CPA data collection and reformatted SRT table. Updated suffix on 13L pump kit part number.
 10/15/14 Added step to collect CPA data. Removed diagnostics for FPCV.
 6/1/14 Adding the 15L MaxxForce information.
 5/21/14 Improved diagnostics for FPCV step 4.
 4/20/14 Added step for fuel pressure RN.

DESCRIPTION

This document contains the steps to be taken to diagnose and correct a SPN 3055 FMI 0 Fuel Rail Pressure Exceeded Maximum. The fault code sets when signal from the Fuel Rail Pressure (FRP) sensor indicates FRP exceeds 34,000 psi (235,000 kPa). The MIL will illuminate when this fault is detected during two consecutive drive cycles.

Condition / Description	Setting Criteria	Enable Conditions / Values	Time Required
Fuel Rail Pressure (FRP) above maximum pressure.	FRP greater than 34,000 psi (235,000 kpa)	Key ON Closed loop fuel rail pressure control	0.25 seconds

SYMPTOMS

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
SPN 3055 FMI 0	FRP Above Maximum

Possible Causes

- Restricted high-pressure pump fuel return line
- Fuel Pressure Control Valve (FPCV) circuit fault
- Fuel Pressure Control Valve (FPCV) faulty (not likely)

SPECIAL TOOLS

Tool Description	Tool Number	Comments	Instructions
Fuel Priming Tool	12-922-01		

Clean Fuel Source Tool	15-637-01	Only if necessary	
Compucheck Fitting	ZTSE4526	For fuel restriction or fuel return pressure test, if necessary	
Fuel Pressure Gauge	ZTSE4681	For fuel return pressure test, if necessary	
Fuel Line Coupler	ZTSE4906		
EZ-Tech with CPA software version 5.0.0.1 or higher			
CPA Tool	OE-11178 or 12-999-01-01 (with blue rubber sides)	Tool Letter TL2900079	4328032R2
CPA Extension Harness	0000062361	4 required	
CPA banana jack breakout	12-999-01-06	4 required	

[Tools Resource Center](#)

SERVICE PARTS INFORMATION

Kit Description	Part Number	Quantity Required	Notes
Hose assy, Fuel Drain (return Line HPFP to tank)	3005913C1	1	If required, Fuel Return Pressure test Step 3
High pressure fuel pump Kit 11L/13L/N13	3007641C94	1	If required after CPA Tool Test, Step 4
High pressure fuel pump Kit 15L	3014489C91	1	If required after CPA Tool Test, Step 4

DIAGNOSTIC STEPS

Step	Action	Decision
1	<p>Check fuel level. Read fuel level using the vehicle instrument panel gauge and perform a visual inspection of fluid level in the fuel tank.</p> <p>Is the fuel level sufficient and the tank is not leaking?</p>	Yes. Go to Step 2.
		No. Add fuel or repair leaks, and prime engine. Go to Step 2.

Step	Action	Decision
2	<p>Using Electronic Service Tool (EST) with ServiceMaxx™ software, check Diagnostic Trouble Code (DTC) list for SPN 157 FMI 3, 4, 20, and 21 (FRP); SPN 94 FMI 0 (FDP); and SPN 633 FMI 3, 4, and 5 (FPCV).</p>	Yes. Go to Step 3.
		No. Repair other codes, first. See health report

	<p>Is the EST DTC list free of SPN 157 FMI 3, 4, 20, and 21; SPN 94 FMI 0; and SPN 633 FMI 3, 4, and 5?</p>	<p>or Service Action Repair Plan site for links to diagnostics. Recheck for 3055-0. If present, go to Step 3.</p>
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Step	Action	Decision
3	<p>Check for restricted fuel return line. Perform HP Pump Fuel Return Pressure Test.</p> <p>Is pressure < 13 psi?</p>	<p>Yes. Go to step 4.</p>
		<p>No. Repair restriction in fuel return line between high-pressure fuel pump and fuel tank. Recheck for codes.</p>

Step	Action	Decision
4	<p>Using ServiceMaxx and the Cylinder Performance Analyzer (CPA) Tool</p> <p>Activate the CPA recorder (link to instructions Activate CPA Recorder)</p> <p>Record data with CPA Tool (link to instructions CPA Tool & Test Instructions)</p> <p>Open a Tech Services case file,</p> <ul style="list-style-type: none"> - Attach CPA zip file - Attach ServiceMaxx snapshot of High pressure fuel pump test - List the tests and corresponding results of any other diagnostic tests already performed - Submit the case referencing "Request CPA data review per IK1201061 3055/0" <p>Does the high pressure pump need to be replaced?</p>	<p>Yes. Replace the High Pressure Fuel Pump. Make sure to use fuel priming tool (12-922-01). Repair complete.</p>
		<p>No. Proceed with repair recommended by Tech Services.</p>

NOTE: After performing all diagnostic steps, if SPN 3055 FMI 0 remains, verify each step was completed correctly and the proper decision was made. Notify supervisor for further action.

WARRANTY INFORMATION

Claim Requirements/Approvals:

There are no special requirements for this repair.

Warranty Claim Coding:

Group:	12000 - Engine
Noun:	454 - High Pressure Fuel Pump

Note: If 15L times are not available, use 13L standard repair times for the 15L as T-times.

Hrs	Code	Model	Engine	Description
0.5	A12-2158U	All	MAXXFORCE 11/13 2010 EPA	Cylinder Performance Analyzer Tool Diagnostics HP Fuel Pump
0.5	A12-2158US	All	N13	Cylinder Performance Analyzer Tool Diagnostics HP Fuel Pump
0.3	R12-2174U	ProStar	MAXXFORCE 11/13 2010 EPA	Electronic Engine Performance, Diagnose Step 4 EST Connection and Data Recording
3.0	R12-7454U-20	"	"	High Pressure Fuel Pump & Drive Gear, Replace, if required
0.3	R12-2192U	"	"	HP Pump Fuel Return Pressure Test, if required
0.3	T12-2063U	PayStar	MAXXFORCE 11/13 2010 EPA	Electronic Engine Performance, Diagnose Step 4 EST Connection and Data Recording
3.0	T12-7454U-20	"	"	High Pressure Fuel Pump & Drive Gear, Replace, if required
0.3	T12-2081U	"	"	HP Pump Fuel Return Pressure Test, if required
3.0	S12-7454U-20	LoneStar	MAXXFORCE 11/13 2010 EPA	High Pressure Fuel Pump & Drive Gear, Replace, if required
0.3	S12-2030U	"	"	HP Pump Fuel Return Pressure Test, if required
0.3	Q12-2174U	TranStar	MAXXFORCE 11/13 2010 EPA	Electronic Engine Performance, Diagnose Step 4 EST Connection and Data Recording
3.0	Q12-7454U-20	"	"	High Pressure Fuel Pump & Drive Gear, Replace, if required
0.3	Q12-2192U	"	"	HP Pump Fuel Return Pressure Test, if required
0.3	N12-2174U	WorkStar	MAXXFORCE 11/13 2010 EPA	Electronic Engine Performance, Diagnose Step 4 EST Connection and Data Recording
3.0	N12-7454U-20	"	"	High Pressure Fuel Pump & Drive Gear, Replace, if required
0.3	N12-2192U	"	"	HP Pump Fuel Return Pressure Test, if required
0.3	R12-2174US	ProStar	N13	Electronic Engine Performance, Diagnose Step 5 EST Data List
3.0	R12-7454US	"	"	High Pressure Fuel Pump & Drive Gear, Replace, if required
0.3	R12-2192US	"	"	HP Pump Fuel Return Pressure Test, if required
0.3	T12-2174US	PayStar	N13	Electronic Engine Performance, Diagnose Step 5 EST Data List
0.3	T12-2192US	"	"	HP Pump Fuel Return Pressure Test, if required
0.3	Q12-2174US	TranStar	N13	Electronic Engine Performance, Diagnose Step 5 EST Data List
3.0	Q12-7454US	"	"	

				High Pressure Fuel Pump & Drive Gear, Replace, if required
0.3	Q12-2192US	"	"	HP Pump Fuel Return Pressure Test, if required
0.3	N12-2174US	WorkStar	N13	Electronic Engine Performance, Diagnose Step 5 EST Data List
3.0	N12-7454US	"	"	High Pressure Fuel Pump & Drive Gear, Replace, if required
0.3	N12-2192US	"	"	HP Pump Fuel Return Pressure Test, if required

[SRT Manual](#)

OTHER RESOURCES

[Master Service Information Site](#)

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Staff ID	Client ID	Comments	Created Date
	U022880	You received the following feedback From: u022880 - Kendall Prohett Email Address: kendall.prohett@navistar.com Job Classification: Dealer: Field Personnel Feedback: CPA software version 5.0.0.1 is not released yet. If it has been, no information has been sent to Ez-Tech support.	11/19/2014 10:57:44 AM

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