

SB-10052660-9761

Countries: CANADA, UNITED STATES
Document ID: IK1200632
Availability: ISIS, Bus ISIS, FleetISIS
Revision: 4
Major System: ENGINES
Created: 8/1/2011
Current Language: English
Last Modified: 7/19/2013
Other Languages: [Français](#), [Español](#),
Author: Ralli Katsikas
Viewed: 5546

[Less Info](#)

Hide Details

Coding Information

Copy Link	Copy Relative Link	Bookmark	Add to Favorites	Print	Provide Feedback	Helpful	Not Helpful
		 View My Bookmarks				 760	 751

Title: EGR Valve OutputTest and Inspection**Applies To: 2010 Maxxforce DT, 9, and 10****DESCRIPTION**

This article describes how to visually inspect and evaluate 2010 emissions I6 engine EGR valve operation. This article assumes EGR electric circuit is ok; it does not include electrical malfunction tests. For electrical malfunction related codes and diagnostics please refer to latest version of EGES 455 available on ISIS.

SYMPTOMS

- Frequent regeneration
- Rough idle
- MAP sensor soot restriction
- EBP sensor soot restriction
- EGDP sensor and/or hoses and/or pipes soot restriction
- IAH soot restriction
- Hard Start

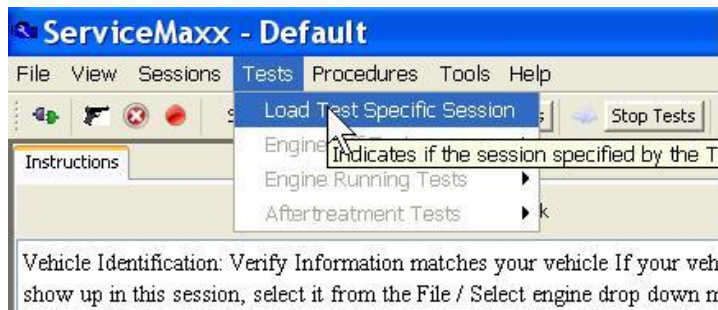
POSSIBLE DIAGNOSTIC TROUBLE CODES

DTC	SPN	FMI	MODULE	DESCRIPTION
-	27	7	ECM	Sticking or failed EGR valve
	2659	all	ECM	Engine Exhaust Gas Recirculation (EGR) Mass Flow Rate

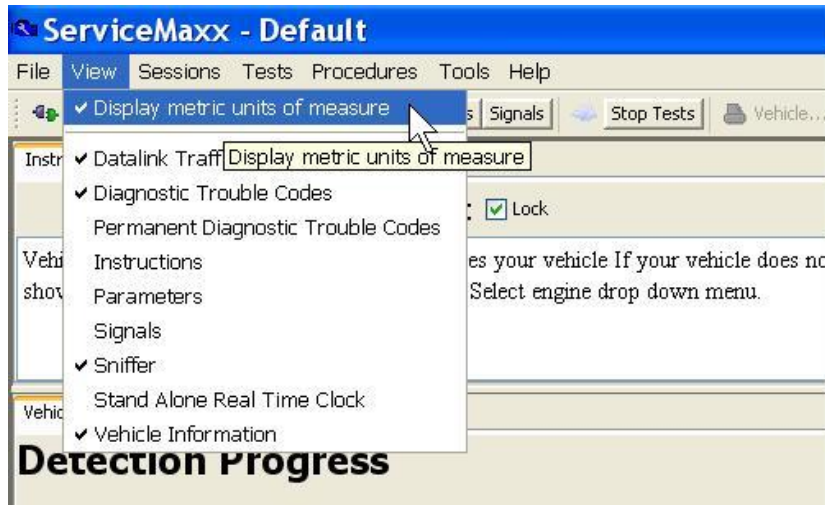
SNAPSHOTS

Case files for this issue require a KOER Air Management test performed. When sending Air Management Snapshots to Technical Services follow these directions:

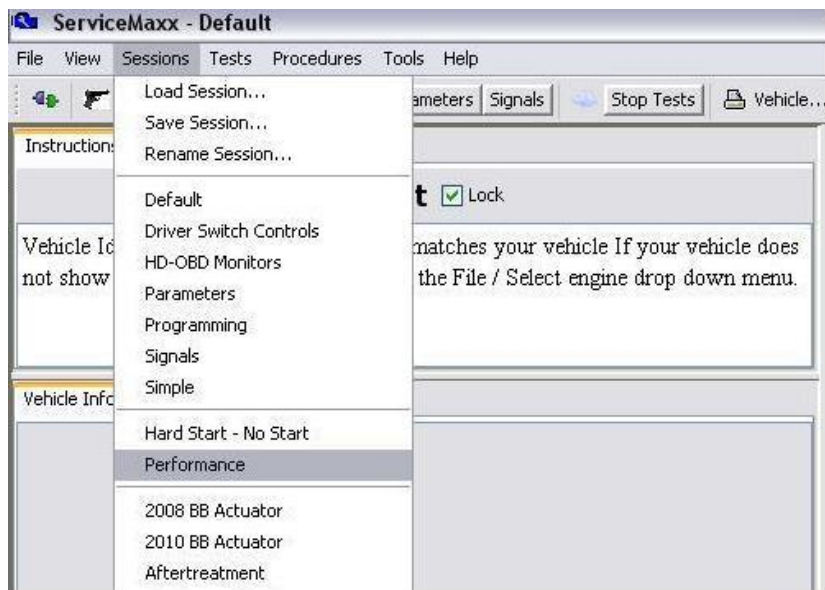
1. Open ServiceMaxx.
2. Warm up engine to n.o.t.
3. Run the standard test.
4. Go to 'Tests' tab and uncheck 'Load Test Specific Session'.



- Go to 'View' and check 'Display Metric Units of measure'.



- Start a performance session.



- Record an air management test with the performance session.
- Attach recording to case file.

OPERATIONAL TEST

- NOTE:**
- The EGR valve does not seal perfectly: When closed, light will shine through; this is normal.
 - EGR Output Test High **WILL NOT** run with active DTC's present. Diagnose and clear all DTC's before

continuing.

To check EGR valve:

1. Remove EGR valve.
 - a. Use Essential Tool - ZTSE4941 - EGR Puller to remove the valve.
 - i. A soapy water solution may be used as a lubricant.
 - b. Clear all active codes!
 - c. Inspect valve: with plug disconnected and at rest the valve must be closed.
 - d. Inspect O-rings for knicks, cuts, flat spots, burn spots.
2. Connect electric plug.
3. Use ServiceMaxx to Run Output Test High:
 - a. Maintain battery voltage with trickle charger.
 - b. Run test up to 5 times to confirm results are consistent.
 - c. Observe valve movement from closed to open and back to closed.
 - i. Look for valve to open fully.
 - ii. Look for valve to contact seats when closed.
 - iii. Output Test High EGR Ctrl percent will range from 80-90%.
 - iv. Output Test High EGR Ctrl percent will display 35% when *active codes* exist—see 3b above,

clear codes!

NOTE: It is OK for light to shine through when valve is closed; DO NOT replace valve.

RESOLUTION

NOTE: DO NOT replace EGR Valve or ECM if EGR Ctrl stays at 35% during Output Test High.

1. Replace valve if:
 - a. Valve does not contact seats with plug disconnected.
 - b. Valve sticks, moves slow, or otherwise does not complete the open/close movement during actuation.
 - c. Valve is stuck open
2. Re-orings and re-install valve if:
 - a. Valve opens and closes fully with output test high.
 - b. No other physical damage to the valve is apparent.

NOTE: Use a soapy water solution as a lubricant while reinstalling.

Hide Details
Feedback Information

Viewed: 5545

Helpful: 760

Not Helpful: 751

Staff ID	Client ID	Comments	Created Date
	DYYKXN8	You received the following feedback From: dyykxn8 - Keith Newton Email Address: keith.newton@clarkstruckcenter.com Job Classification: SE008, Service Technician Dealer: CLARK'S TRUCK CENTER Feedback: The fact that the EGR position and EGR ctrl will remain at 35% with an active code should be more prominently indicated or This information should be send out in a dedicated letter. IK1200894 states if the OBFCT does not meet temperature specs to perform an AMT. When I did it failed the EGR portion ...likely due to the active soot load code. Been chasing a non existant EGR code for a while....	7/19/2013 11:53:43 AM