



Countries: CANADA, TAIWAN, UNITED STATES, MEXICO, GUAM, KOREA, SOUTH KOREA
Availability: ISIS, Bus ISIS, FleetISIS, Body Builder
Major System: ENGINES
Current Language: English
Other Languages: NONE
Viewed: 7290

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Coding Information

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Title: Interpreting AMS Snapshot

Applies To: 2010 + MaxxForce DT, 9, 10, N9 & N10 (ESN 3,300,000 and later) operating below 4,000' altitude

CHANGE LOG

12/4/2015 - Updated specification in step 6.
 10/29/2015 - Added Change Log, and updated broken link.

DESCRIPTION

This article describes how to read and interpret the AMS (Air Management System) Test on 2010 and newer I-6 Engines.

Note: this article does not apply to units being operated at 4,000' or greater altitude.

Note: Units operating at an altitude greater than 4,000' may fail this test with a normally operating system.

SYMPTOM(s)

Diagnostic Trouble Code(s):

SPN	FMI	Description
27	0	EGRP fault: over temperature
27	3	EGRP signal Out of Range HIGH
27	4	EGRP signal Out of Range LOW
27	7	EGRP does not agree with commanded position
27	14	EGR System flow rate error during Air Management Test
2659	10	EGR Slow Response Fault
2659	14	KOER AMT – EGR test failure
2659	20	EGR High Flow Rate detected
2659	21	EGR Low Flow Rate detected
2791	2	EGR valve communication fault
2791	3	EGRP signal Out of Range HIGH
2791	4	EGR voltage to LOW
2791	7	EGR valve unable to achieve commanded position
2791	8	EGR valve not receiving ECM PWM signal

2791	14	EGR valve Initialization Fault
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Customer Complaint(s):

Check engine light (related to one of the DTCs listed above)

SPECIAL TOOL(s) or SOFTWARE

Service Maxx

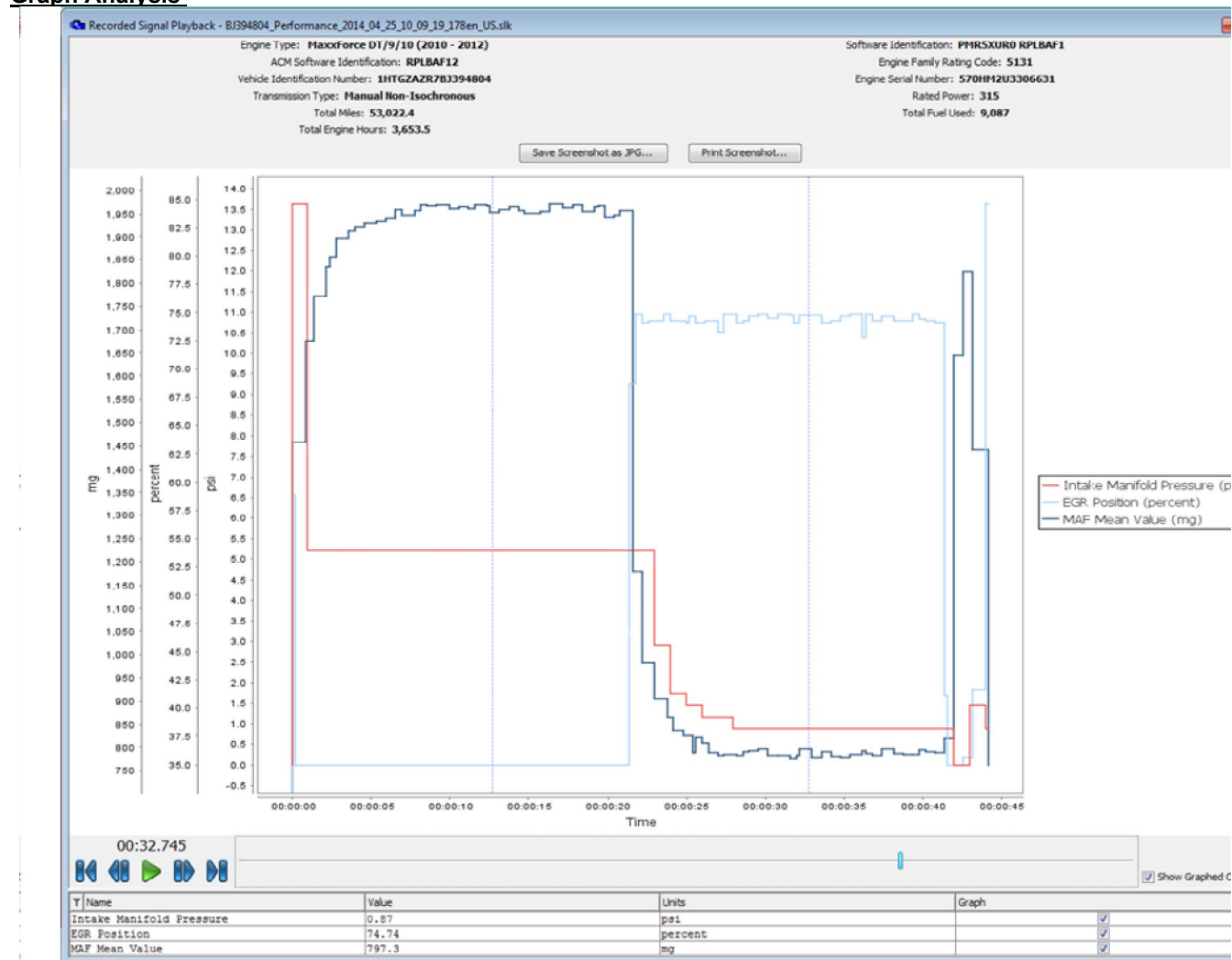
Testing Steps

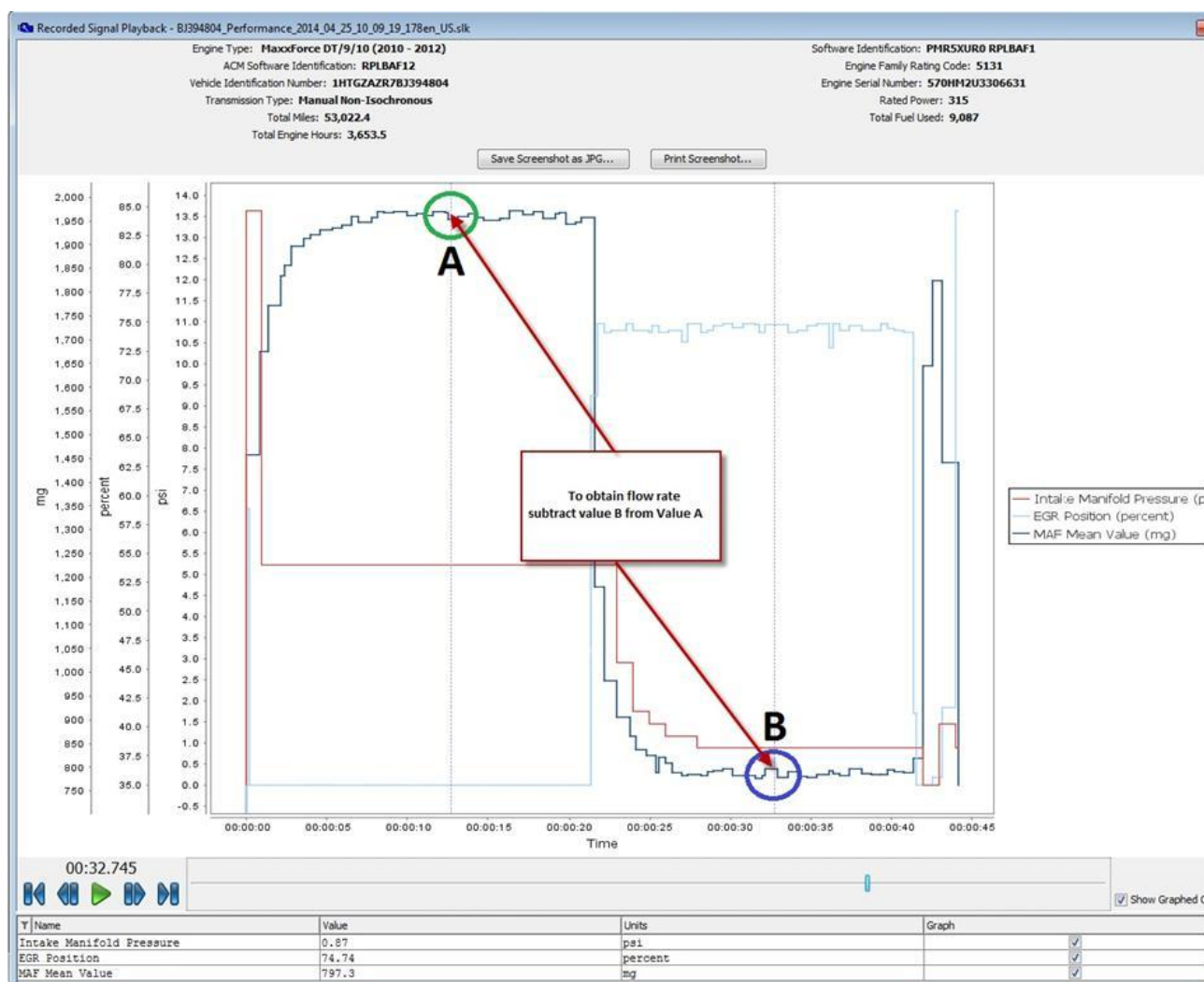
1. Run Standard Test.
2. Run MAF Calibration Procedure.
3. Run and record the AMS test.

(Note: If any faults are active the EGR valve will not open during the AMS test causing the data to be unusable)

(Note: MAF Mean Value must be at least 1,100 mg during the first half of the test for the data to be usable, if below inspect for intake restriction do not proceed until corrected)

4. Graph MAF Mean Value mg, IMP & EGR Position using Service Maxx.

Graph Analysis



5. Calculate the EGR flow in mg by subtracting reading B from reading A then compare to specs:

Specs

- A. 466 ST $\geq$ 690 mg
- B. 466 HT $\geq$ 740 mg
- C. 570 $\geq$ 850 mg

If the calculated EGR Flow Rate does not meet spec proceed with the following

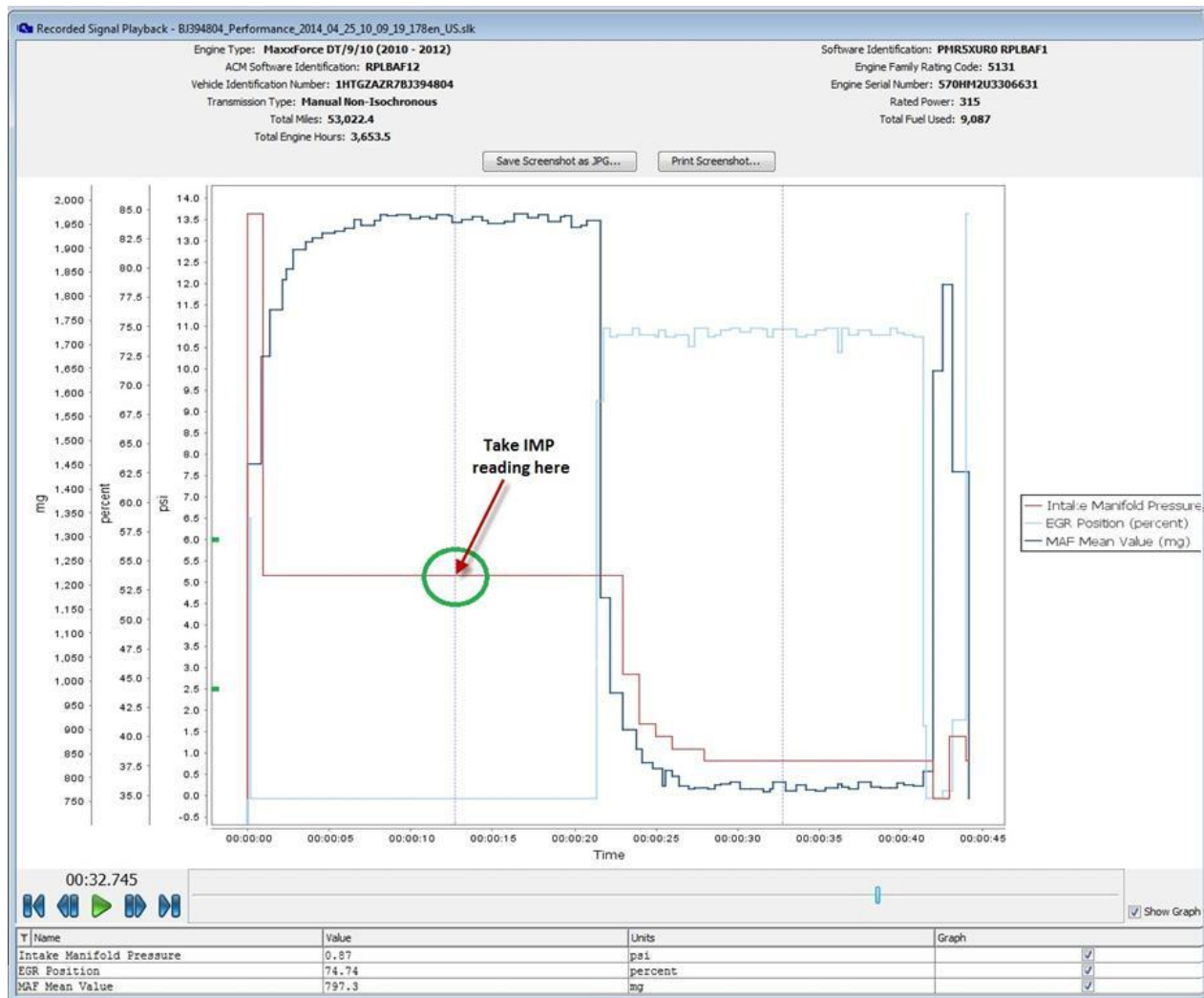
A. Remove the ETV (Engine Throttle Valve) from the EGR mixer housing, using a flashlight and mirror inspect the inlet air heater for severe plugging.

(80% or more plugging is required to cause an EGR flow issue)

B. If severe plugging is not present in the EGR mixer housing, cycle EGR valve 5 times with the output state test low / high and watch plunger operation using a mirror and flashlight.

(Do not remove the EGR valve unless a SPN 27 and or SPN 2791 fault is set or valve fails to move)

C. If the EGR valve actuation does not log any DTCs, and unit still logs SPN 2659 FMI 14 remove rear EGR crossover pipe and inspect for plugging (Replace if plugged and retest).



6. Verify IMP meets spec during the first half of the test:

A. Spec is 2 PSI or greater

If IMP does not meet spec proceed with the following:

A. Below range: Follow [IK1200648 Low Power Complaint due to Low Boost or ETV Boot Tear](#)

B. Above range: [Check turbocharger wastegate adjustment per IK1201103](#)

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