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**Other Languages:** NONE

**Author:** Marcelo Sahagun

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Coding Information

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**Title:** Procedure for Recording 0-60 MPH & Lug Down Test

**Applies To:** All Navistar Vehicles

### CHANGE LOG

**NOTE: DO NOT delete this Change Log. If this iKnow Article is being revised, please type in the text box below what has changed in the article. The change log is meant for Dealers to be able to see what has updated/changed in the article.**

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

4/17/2017 - Updated diagnostic software to Navistar Engine Diagnostics™.  
 9/30/2015 - Added a note to step 4 in the lug down test procedure.  
 8/21/2014 - Initial Article Release

### DESCRIPTION

This article details how to record and view a performance session snapshot using Navistar Engine Diagnostics™.

#### **Customer Complaint(s):**

- Low power
- Surge
- Stumble on acceleration
- Slow to accelerate
- Misfire

#### **SPECIAL TOOL(s) or SOFTWARE**

- Navistar Engine Diagnostics™.

#### **I-6 & V-8 TESTING STEP(s)**

**Warning:** To prevent personal injury or death, do not exceed local speed limit laws or drive too fast for conditions when performing 0 to 60 MPH Test.

**NOTE:** Intake Manifold Pressure (IMP) can vary based on ECM calibration and engine load.

1. Using the EST, go to Sessions > Performance. .



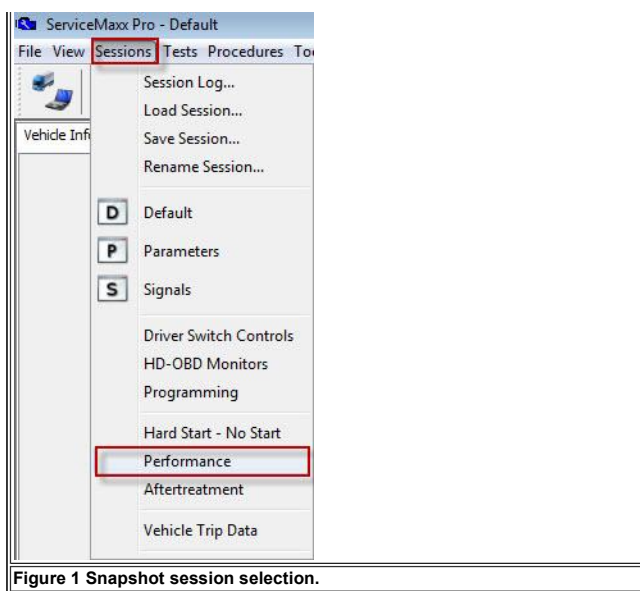


Figure 1 Snapshot session selection.

2. Find an open stretch of road, where the minimum speed limit is 50 MPH or higher.
3. Pull over to the side of the road.
4. When driving conditions are safe and vehicle has reached normal operating temperature, select the record snapshot icon from the toolbar.



Figure 2 Record snapshot icon.

5. Press the accelerator pedal fully to the floor, and accelerate from 0 MPH to max allowed highway speed.
6. After the 0 to 60 MPH test is complete, pull over to the side of the road stop the recording and save the snapshot.



Figure 2 Record snapshot icon.

7. Review the graphed information and compare to appropriate troubleshooting manual before submitting to tech services.

### **BIG BORE TESTING STEP(s)**

**Warning:** To prevent personal injury or death, do not exceed local speed limit laws or drive too fast for conditions when performing 0 to 60 MPH Test.

**NOTE:** Intake Manifold Pressure (IMP) can vary based on ECM calibration and engine load.

1. Using the EST, go to Sessions > Performance.



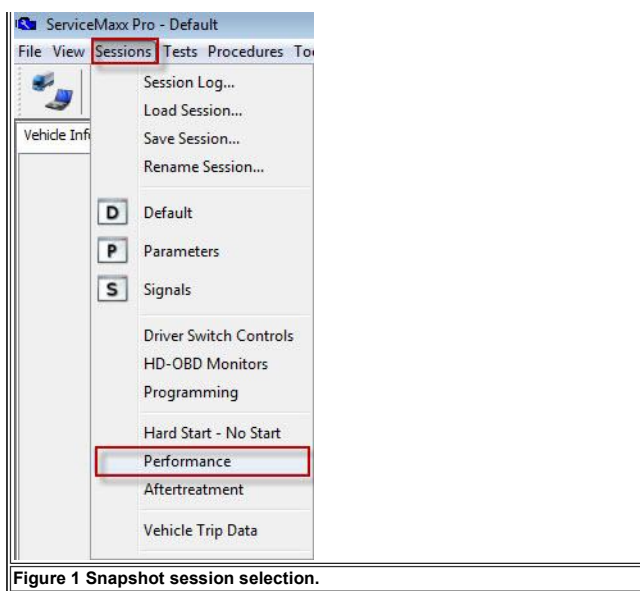


Figure 1 Snapshot session selection.

- Find an open stretch of road in order to perform the Lug Down Test
- When driving conditions are safe and vehicle has reached normal operating temperature, select the record snapshot icon from the toolbar.

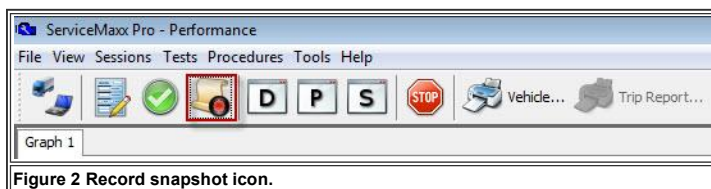


Figure 2 Record snapshot icon.

- Select a suitable high range gear (Example: In a 10 speed gearbox, select the 8th speed. In a 13 speed, select the 9th speed).

NOTE: Using too low of a gear will cause the engine to hit redline before it's had enough time to build boost, so a higher gear should be used if this happens. This explains why boost does not meet spec in a lower gear but does meet spec in a higher gear. If boost meets spec in any gear then it's good.

- Allow engine speed to drop to 1000 RPM.
- Press the accelerator pedal fully to the floor, and accelerate to rated engine speed.
- After the Lug Down test is complete, pull over to the side of the road stop the recording and save the snapshot.

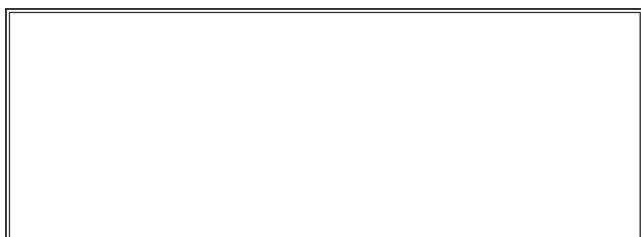


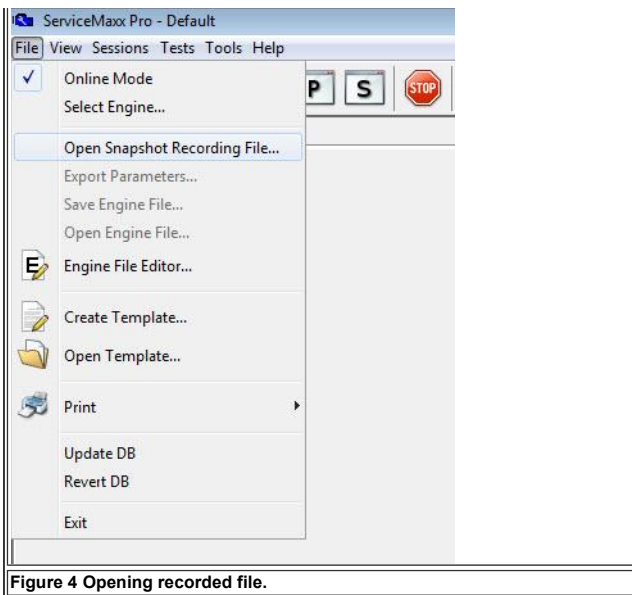
Figure 3 Stop recording icon.

- Review the graphed information and compare to appropriate troubleshooting manual before submitting to tech services.

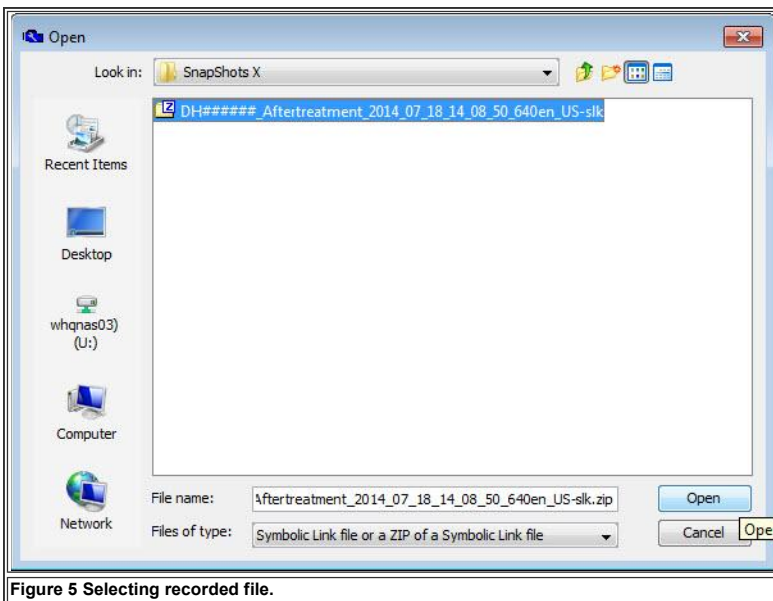
### **REVIEWING SNAPSHOT(s)**

- Open Navistar Engine Diagnostics™.
- Open the recording by selecting File > Open Snapshot Recording File....

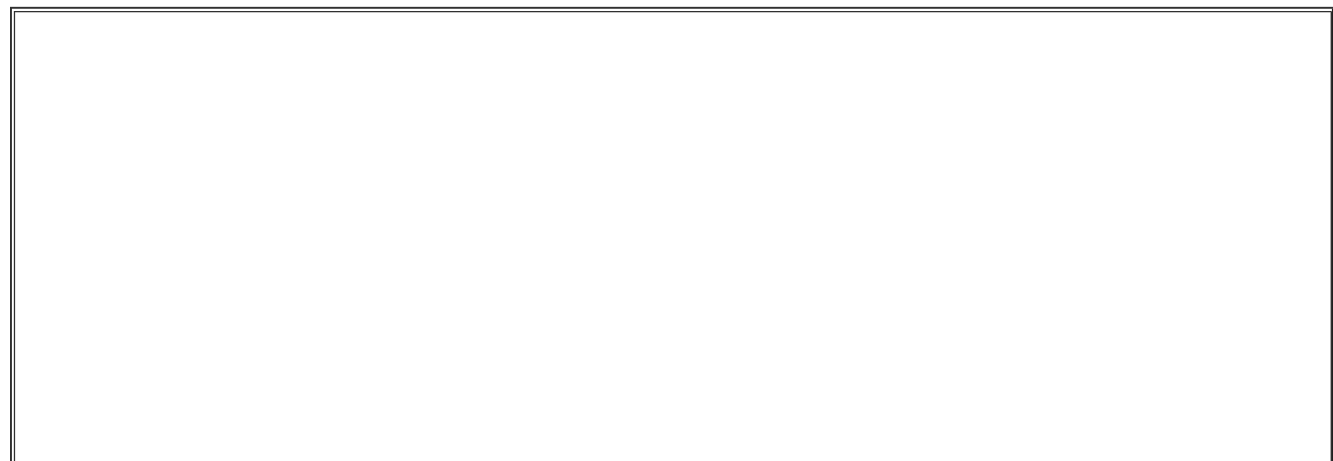


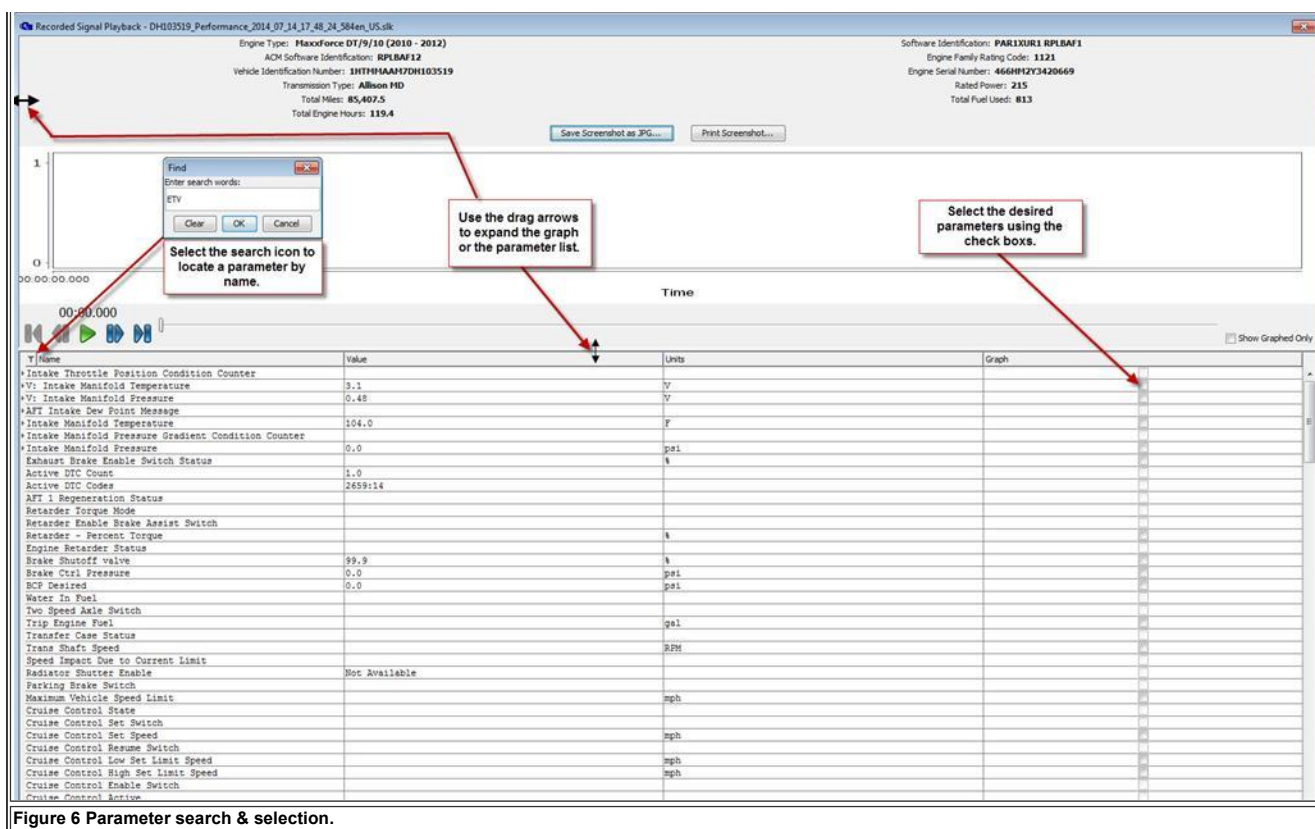


3. Select the desired recording and select Open.

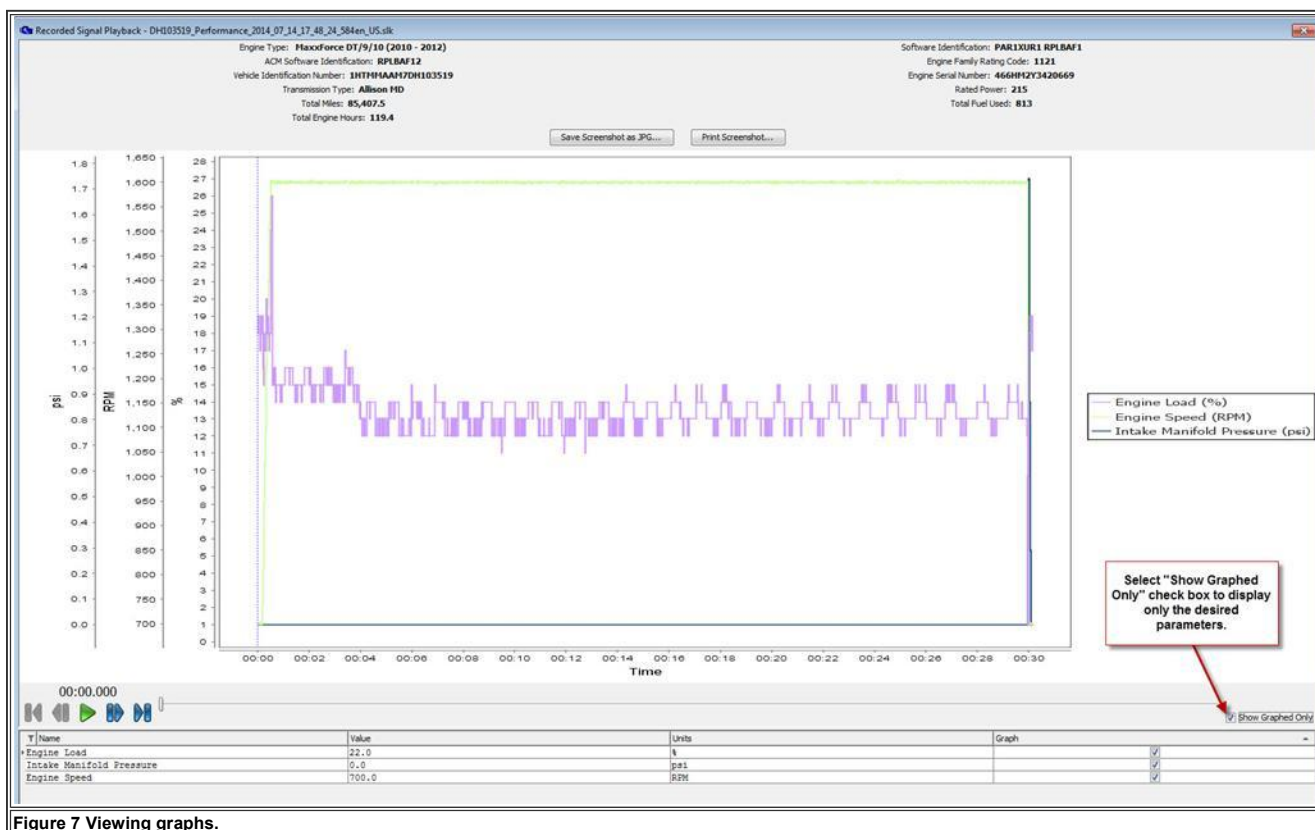


4. Select the desired parameters to view, these can be searched for by name.



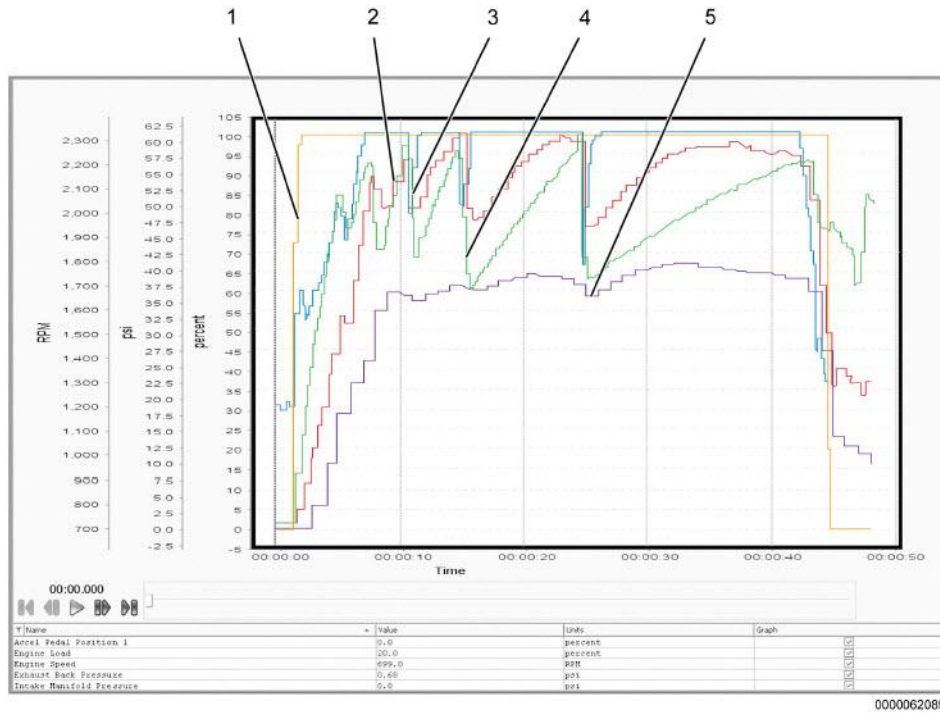


5. Once the desired parameters are highlighted select the "Show Graphed Only" check box then drag the graph down to expand.

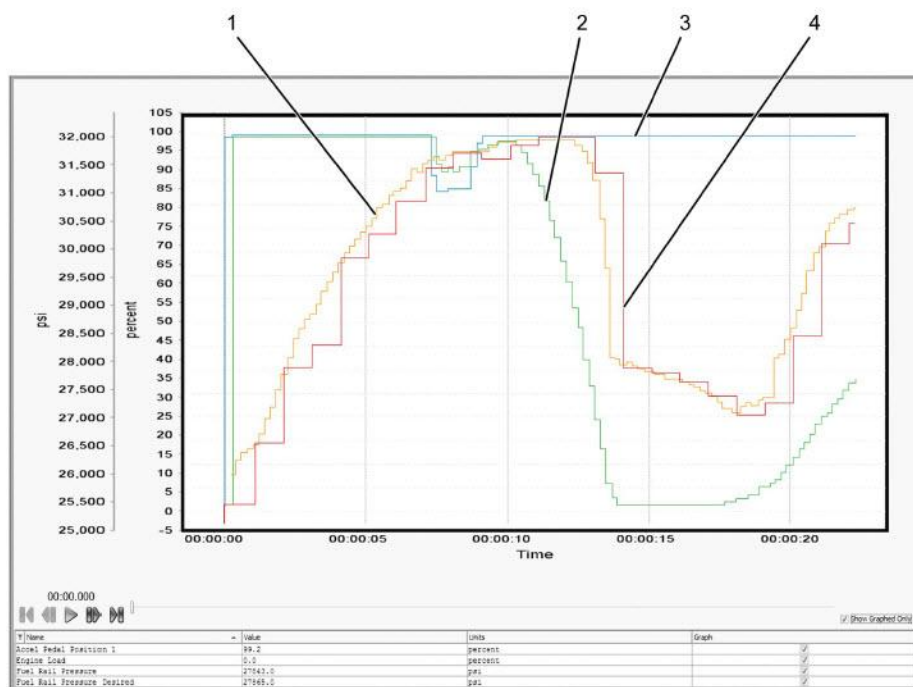


6. Review the graphed information and compare to appropriate troubleshooting manual before submitting to tech services (Note if data is missing, erratic or blank retake before submitting).

#### GRAPHED 0-60:



- |   |  |
|---|--|
| 1. Accelerator Pedal Position 1 (APP1) (percent) [Orange] | 3. Engine load (percent) [Blue]                  |
| 2. Exhaust Back Pressure (EBP) (psi) [Red]                | 4. Engine speed (rpm) [Green]                    |
|   | 5. Intake Manifold Pressure (IMP) (psi) [Purple] |

**GRAPHED LUG DOWN TEST:**

1. Fuel Rail Pressure Desired (FRPD) (psi) [Orange]
2. Engine load (percent) [Green]
3. Accelerator Pedal Position 1 (APP1) (percent) [Blue]

4. Fuel Rail Pressure (FRP) (psi) [Red]

**WARRANTY INFORMATION****Standard Repair Time(s):**

Description	SRT Link	Model
ROAD TEST AND SNAPSHOT, PERFORM	<a href="#">A12-2052A</a>	Models, ALL
STATIONARY SNAPSHOT, PERFORM	<a href="#">A12-2159A</a>	Models, ALL

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