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Coding Information

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Title: CPA N13 Full-Load Blow-by Test (FL-BBT) tips

Applies To: N13 engines with documented high oil consumption or frequent regens (Synthetic 5000-SYN718-3 or 5000-SYN745-1). Does NOT apply to MF13

CHANGE LOG

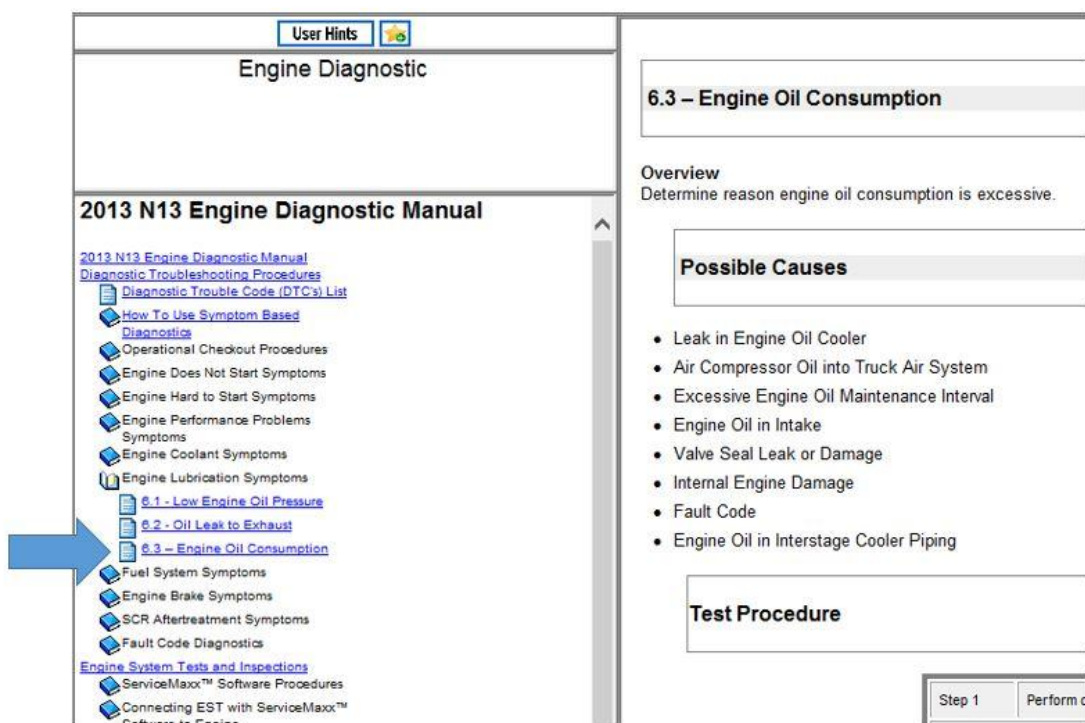
Please refer to the change log text box below for recent changes to this article:

- 04/25/2017- Updated diagnostic software to Navistar Engine Diagnostics™.
- 01/04/2017- Added link to CPA Pressure+ Module diagnostics
- 11/03/2016- Added image of Pre-road test signal check (For CPA version 8 and higher)
- 09/13/2016- Added tip for checking all signals before entering roadway
- 08/18/2016- Added tips for FL-BBT
- 08/10/2016- Updates CPA download link and made changes since APR are now on iApprove and test procedure is in the diag. manual
- 08/01/2016- Revise title and added new CPA download links and instructions
- 07/18/2016- Updates CPA test instructions and software
- 07/05/2016- Added CPA 13L Full Load Blow-by Test
- 06/28/2016- Added CPA based testing
- 05/05/2016- Added emphasis for need for Navistar Engine Diagnostics™ snapshot
- 03/30/2016 - Initial Article Release

DESCRIPTION

A new CPA test has been developed for the N13 engine (does NOT apply to MF13). This test is to be used when an engine has documented high oil consumption or has synthetic fault codes 5000-SYN718-3 or 5000-SYN745-1 indicating frequent regens (due to the amount of ash entering the aftertreatment). Follow the appropriate section of the N13 Engine diagnostic manual

Engine Diagnostic Manual has the Test Instructions (example below)

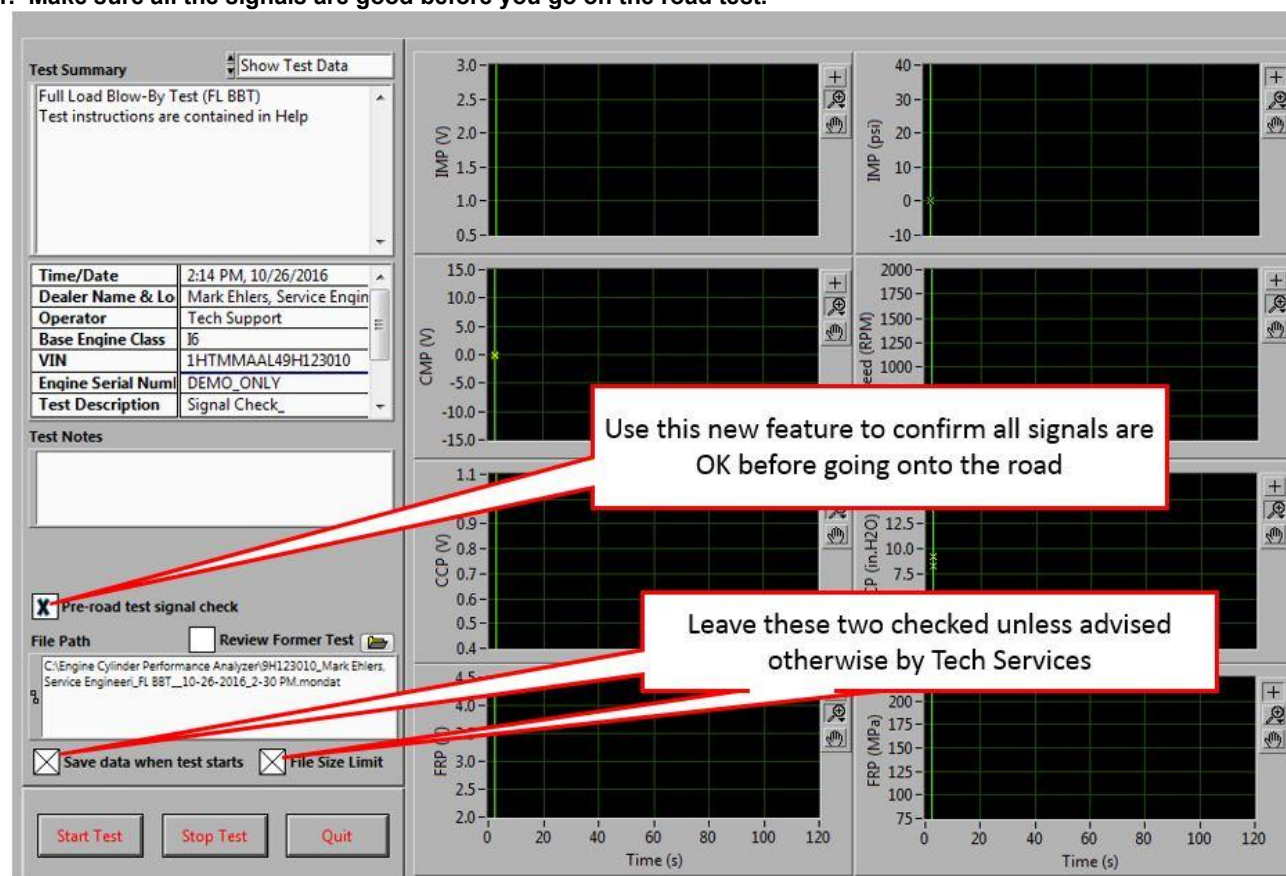


Steps

1. Update EZ-Tech CPA software to this new version.
 - a. [Here](#)
2. Test the engine under full load using the new "13L Full Load Blow-by" test.
 - a. If you cannot use the 12-801-04 13L CPA E1 ECM breakout harness then perform the CPA FL-BBT using the method- [Here](#)

Tips

1. Make sure all the signals are good before you go on the road test.

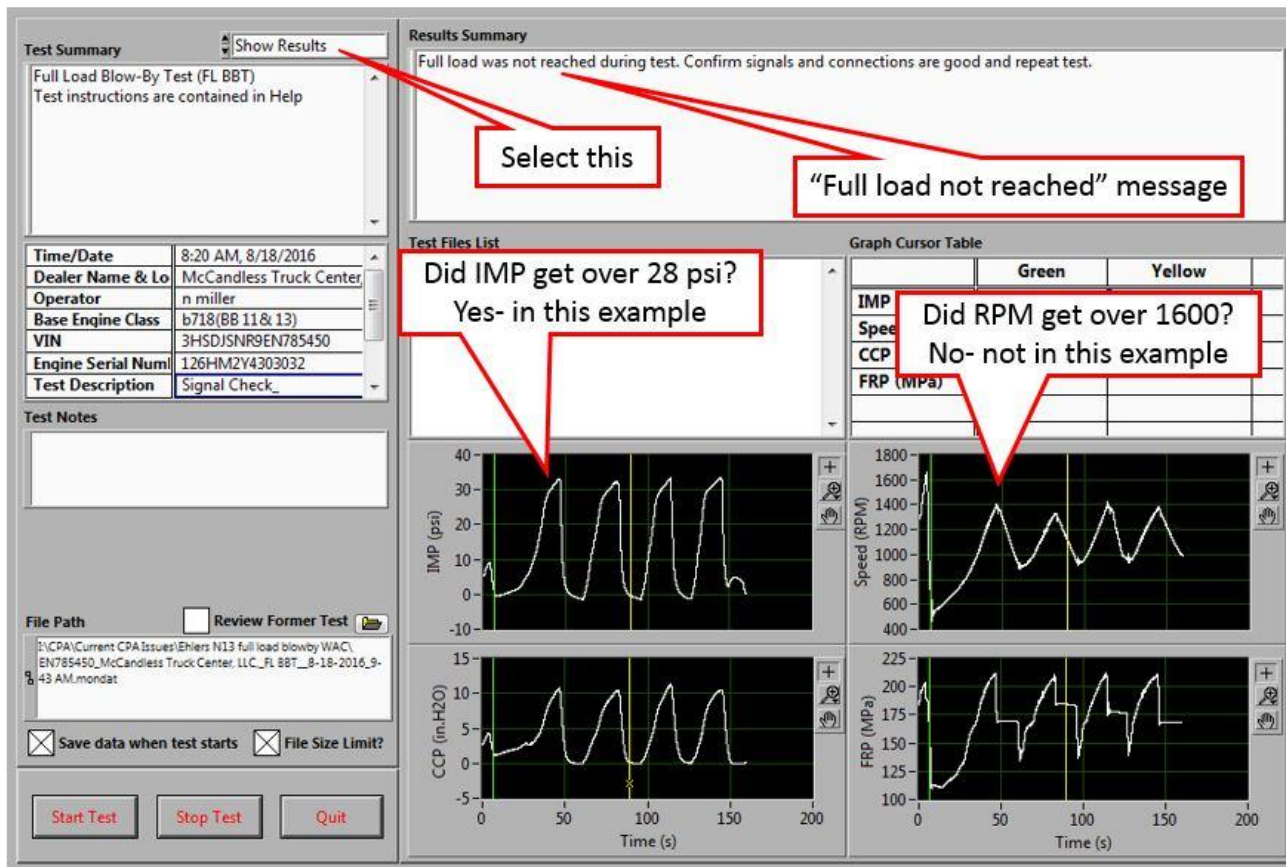


2. Part of your recording should be with the engine at idle (just a few seconds)

3. Auto-shift transmissions need to be shifted manually to achieve full load. They will upshift prematurely if left in auto. 9th or 10th gear is generally used with either transmission type

4. The full-load must occur at 1600 RPM or higher to be valid.

5. This CPA test requires the IMP/boost pressure to reach at least 28 psi. If the engine cannot achieve this the Test Result will be "Full load was not achieved during this test". Low boost is often caused by a plugged DPF (in cases of high oil consumption). Check the Navistar Engine Diagnostics™ snapshot to see if the DPF is restricted.



6. CPA Pressure+ Module failures are rare but the end of [IK1201325](#) has the method to test the module.

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