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Title: CPA BEAM RCT+, CCP and BBT tips (used with new CPA PressurePlus tool)

Applies To: MaxxForce 7, DT, 9, 10, 13, N9, N10, N13

CHANGE LOG

01/13/2017- Added additional info for "Crankcase Leak Detected" message

RCT+ is Relative Compression Test PLUS crankcase pressure analysis

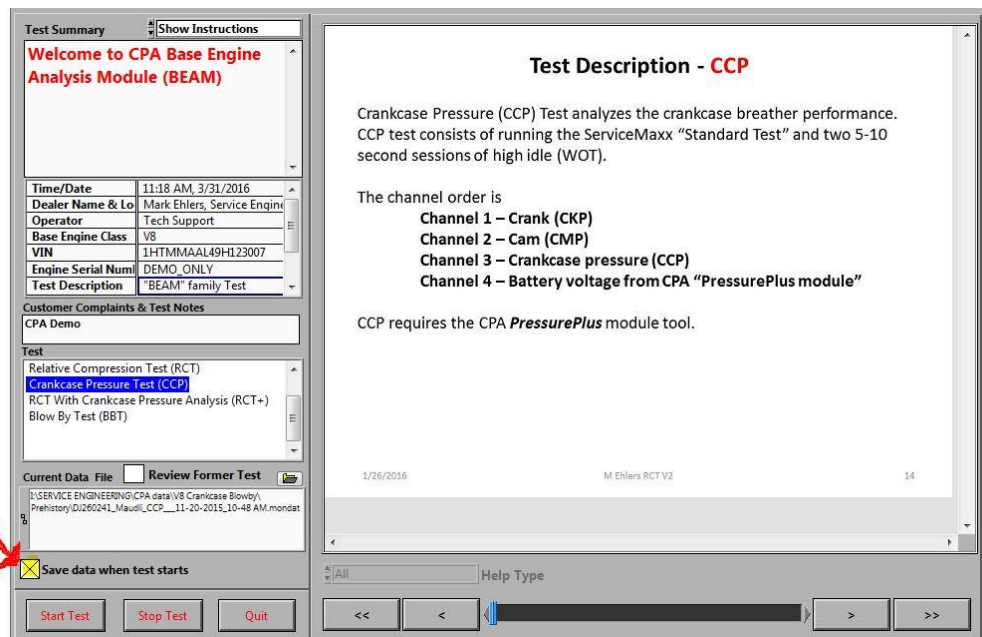
- Faster than manual compression test & more accurate than Servicemaxx RCT
- It measures approximate blow-by of each cylinder while cranking the engine
- If RCT+ can be performed then there is no need to perform RCT
- RCT+ involves three 10-15 second episodes of engine cranking (batteries must be fully charged but charger cannot be connect to the vehicle)
- The CPA software and the diagnostic manuals includes test instruction and how to interpret the RCT+ results.

Updates

- The WAC for medium duty I6 Power Cylinders launched the 1st week of November 2016. A Case File is only needed if CPA instructs you to open one (no WAC given).

TIPS

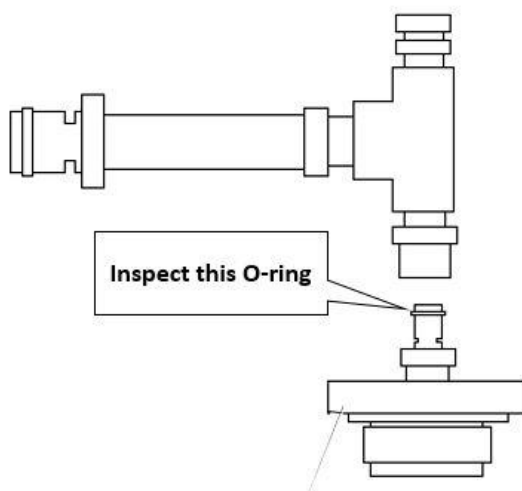
- If the batteries are not in good health on the vehicle that you are performing RCT+ on then press "Stop Test" when the CPA prompts you to start cranking for the 3rd time. The CPA will process the test and issue a conclusion
- If the engine is runnable, warm the engine before performing RCT+ (this improves the accuracy of RCT+). Even if you can only run the engine for a few seconds do this before RCT+
- BBT (blow-by test) uses the PressurePlus module and the CPA box to measure blow-by instead of a water manometer or magnahelic gauge. The orifice tool that has always been used to measure blow-by is still needed. The fan must be OFF in order to achieve accurate results.
- CCP (Crankcase Pressure test- MaxxForce 7 ONLY) uses the PressurePlus module and the CPA box to measure crankcase pressure instead of a water manometer or magnahelic gauge. The crankcase breather is functioning normally for this test.
- If the engine cannot run the ServiceMaxx Standard test (as requested in BBT and CCP test) then do the following:
 - Check this box



- When CPA requests the ServiceMaxx test, hold the throttle wide open (WOT) for 5 seconds (fan OFF)
 - Idle for 4 seconds
 - WOT for 5 seconds (fan OFF)
 - Press "Stop Test"
 - CPA will process the test and create the Results Graph
- Crankcase Leak Detected Message
 - This message can be caused by several factors. Click [HERE](#) for more explanations.
 - If after performing RCT+ the "Crankcase Leak Detected" message appears the "Test Data" screen may look like the screen below

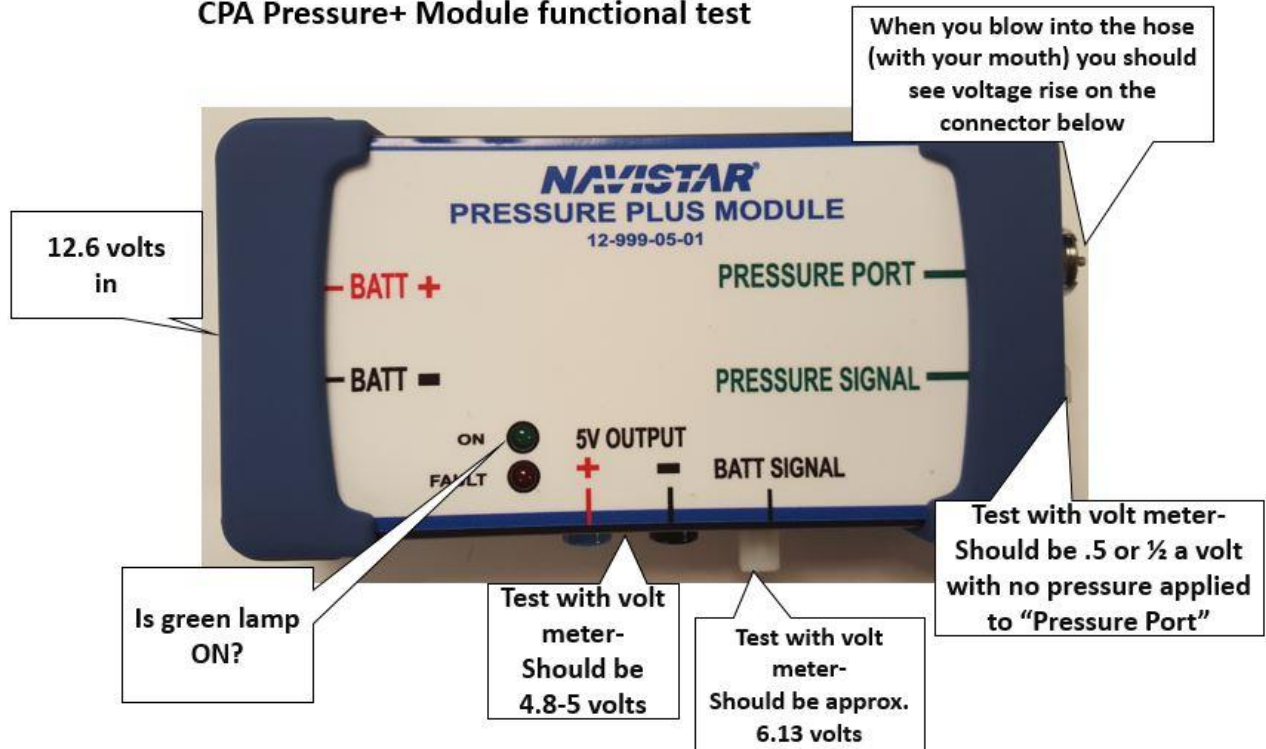


- Confirm that the crankcase breather outlet is properly plugged
- Confirm that the oil dipstick is seated and sealing (MF7 and 13L only)
- Confirm that the O-ring on the RCT+ oil fill cap adapter is not damaged (see image below)
- Verify all connections are correct
- Retest

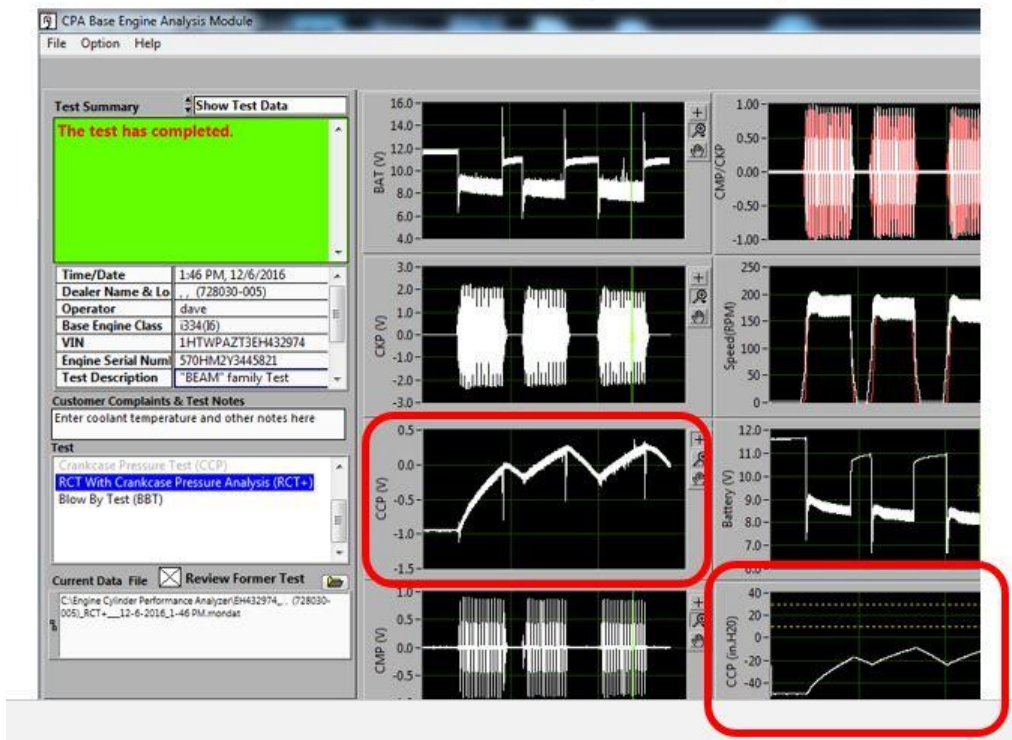


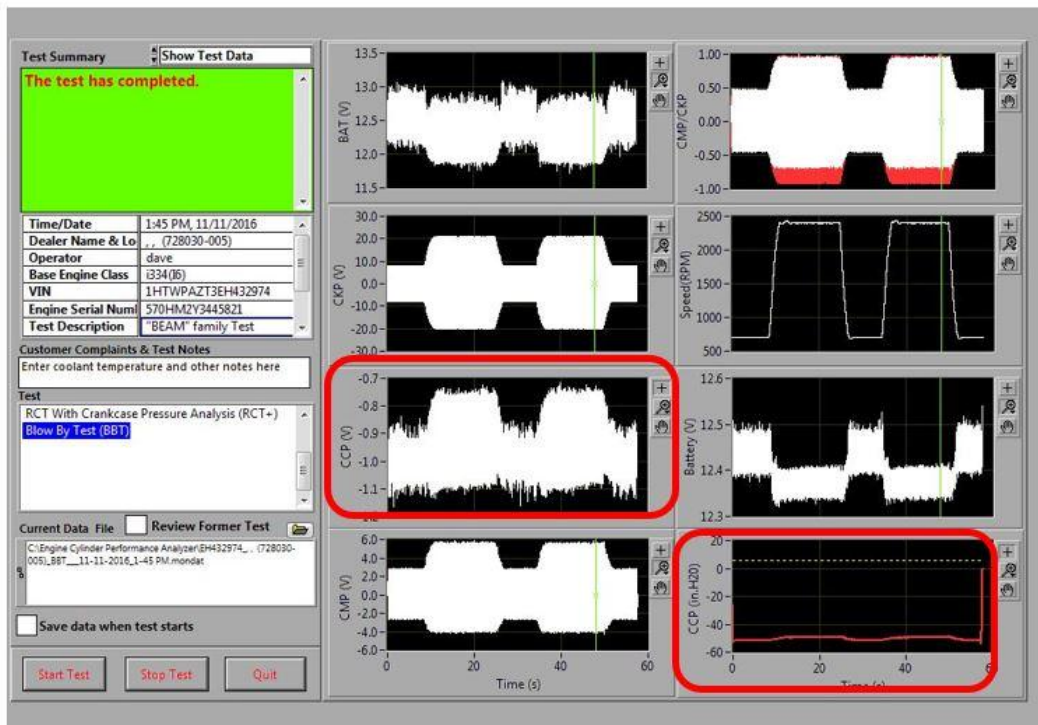
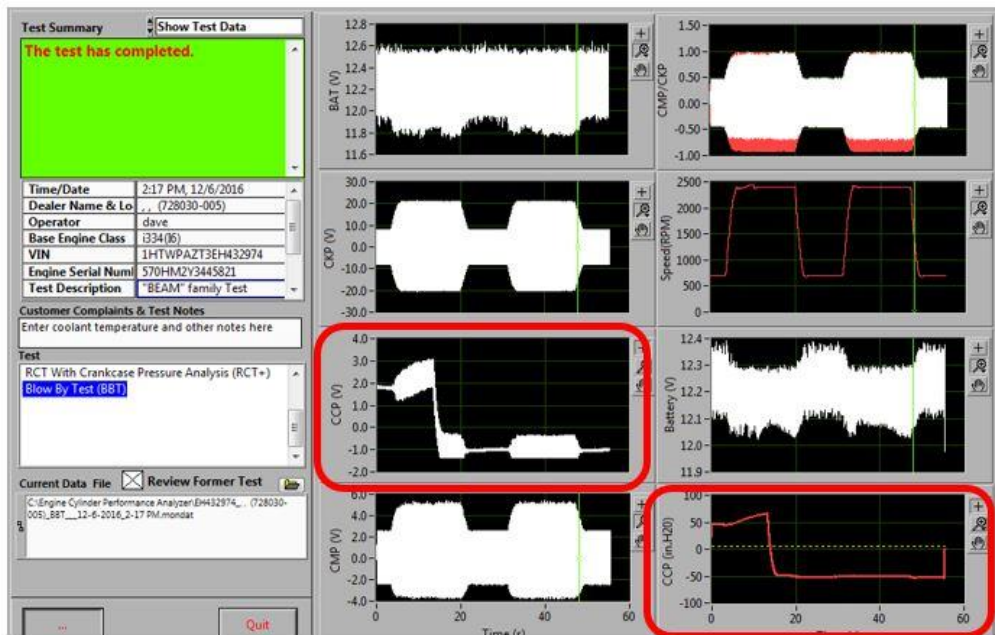
- CPA Pressure+ Module failures are rare but have occurred. Use the info below to see if the Pressure+ Module has a problem.

CPA Pressure+ Module functional test



Screenshots of pressure signals with a FAILED Pressure+ Module (in red boxes)





RESOURCES

- [RCT+ instructions for 13L \(MF13 and N13\)](#)
- [RCT+ instructions for MaxxForce 7](#)
- [RCT+ instructions for MaxxForce DT, 9, 10, N9, N10](#)
- [BBT instructions for MaxxForce 7](#)
- [BBT instructions for MaxxForce DT, 9, 10, N9, N10](#)
 - Fan must be OFF in order to achieve accurate results
- [CCP instructions for MaxxForce 7](#)

- **RCT and Idle test**

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Download the beta version of CPA here (when requested by Tech Services):

version 8.2.3.0:

DropBox: https://www.dropbox.com/s/xt5shu4tfgvx642/CPA_v8230_UPG_Tool.exe?dl=1

Teamsites: http://teamsites.navistar.com/sites/EZ-TechDownloadCenter/EZTech%20Updates/CPA_v8230_UPG_Tool.zip

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