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IMPORTANT WARRANTY INFORMATION

REF **16-036**

Effective 11/21/2016

Release 11/21/2016

SUBJECT Detroit One Box After Treatment Device Failure Modes

❖ ATD Resource

This letter supersedes IWI letter 15-049R; content in blue indicates changes/additions.

❖ Required Claim Information

For claims regarding a failure mode and/or cause described in the table on pages 2-3, please provide the following supporting information in the claim narrative:

- Power Service Literature (PSL) diagnostics for the active fault codes
 - Include results/readings/values of each troubleshooting step
 - Whether diagnostics led the tech to perform the ATD Checklist
 - Include results/readings/values of each troubleshooting step
 - Data from the DDEC Report
 - See the table on pages 2-3 for data requirements
- Note: [Attach the DDEC Report file \(.xtr file format\).](#)

❖ DDEC Report Checklist

Technicians should use the DDEC Report Checklist to record the data required for the claim narrative. [Attach the DDEC Report Checklist to the claim](#); record checklist values in the claim narrative. The DDEC Report Checklist is available via:

- [DDCSN > Literature > PSL > DD Heavy Duty > EPA07/10/GHG14 DDEC VI/10 Electronics and Troubleshooting Manual > Symptom Diagnosis - ATD Checklist > DDEC Report Checklist](#)
- [DTNACONnect > My Applications > PSL > DD Heavy Duty > EPA07/10/GHG14 DDEC VI/10 Electronics and Troubleshooting Manual > Symptom Diagnosis - ATD Checklist > DDEC Report Checklist](#)

A sample DDEC Report Checklist is available on page 4 of this letter.

IMPORTANT WARRANTY INFORMATION LETTER

Verify latest version online: [Warranty Operation Letters](#) are available at DDCSN.com > [Literature](#) > [Service Letters/Bulletins](#) > [Warranty Operations](#)

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❖ Failure Modes/ Possible Causes

Common One Box ATD Complaint/Symptom	Cause of Failure	Data Required for Claims
Noisy One Box ATD	Internal failure <u>Primary Failed Part (PFP):</u> DOC/ SCR Module (One Box)	- Provide PSL, Symptom Diagnostics results: Noisy One Box ATD - Diagnostics indicate internal structural damage
	Plugged One Box ATD <u>PFP:</u> Upstream failure; if no upstream failure is found and there is a duty cycle concern, use ATSREPROGRAM as the PFP	- Provide PSL Symptom Diagnostics results: Noisy One Box ATD - Diagnostics indicate either DPFs or DOCs were plugged - Provide the PSL ATD Checklist - Checks for upstream failures - From the DDEC report - Trip distance/trip duration - Idle percentage - Percentage of operation between 0-9 mph (Vehicle Speed Histogram) - Percentage of operation between 0-19% load (Engine Load Histogram) - Percentage of operation between 0-999 rpms - Percentage of operation over 1,800 rpms (Engine Speed Histogram)
Failed SCR of the One Box, Low NOX Conversion Codes Applicable Fault Codes: - EPA10/GHG14: 4364/1, 4364/18 - GHG17: 4364/17 - Can also be combined with 3364/2, 3246/0, 3246/15, 3250/0, 3250/15, 4363/0	Internal failure, PSL diagnostic per code <u>PFP:</u> DOC/ SCR Module (One Box)	- Provide fault codes - Provide the PSL diagnostic results - Diagnostics indicate internal structural damage
	Upstream failure over-tempered the One Box ATD <u>PFP:</u> Upstream failure <u>or</u> for DD15AT/DD16 only, REPROGRAM ACM for outdated software <u>*Corrected:</u> - DD15AT: 12/2/13 with ACM 3.1.3.0 with fuel map ZGS001 - DD16: 4/30/14 with ACM 3.1.3.0 with fuel map ZGS003 – failure indicated by 5443 & 4363/0 codes can be found in log file history or VT	- Provide fault codes - Provide the PSL diagnostic results - Diagnostics indicate the SCR module failed, complete the ATD checklist to identify cause of failure - Provide the ATD Checklist - From the DDEC report - Trip distance/trip duration - Idle percentage - Percentage of operation between 0-9 mph (Vehicle Speed Histogram) - Percentage of operation between 0-19% load (Engine Load Histogram) - Percentage of operation between 0-999 rpms - Percentage of operation over 1,800 rpms (Engine Speed Histogram) - Search <u>engine and vehicle claim history and Virtual Technician (VT)</u> for previous upstream failure causing the over-temp (e.g., over-fueling injector claim/internal EGR cooler failure, etc.)

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Common One Box ATD Complaint/Symptom	Cause of Failure	Data Required for Claims
Plugged ATD per Malfunction Indicator Lamp (MIL), Fault Codes, and De-rate. • Applicable Fault Codes: ○ EPA10: 3251/2, 3556/18 ○ GHG14: 102/18, 3251/0, 3556/18 ○ GHG17: 3251/0	Internal plugging of the One Box ATD, values greater than: • EPA10: 10KPa (1.45 psi) • GHG14: 6KPa (.89 psi) • GHG14 DD15AT only: 7 KPa (1.01 psi) • GHG17: 6KPa (.89 psi) • GHG17 DD15 AT only: 7KPa (1.01 psi) <u>PFP</u>: Upstream failure; if no upstream failure is found and there is a duty cycle concern, use ATSREPROGRAM as the PFP	• Provide fault codes • Provide the PSL diagnostic results • Provide the ATD Checklist • From the DDEC report ○ Trip distance/trip duration ○ Idle percentage ○ Percentage of operation between 0-9 mph (Vehicle Speed Histogram) ○ Percentage of operation between 0-19% load (Engine Load Histogram) ○ Percentage of operation between 0-999 rpms ○ Percentage of operation over 1,800 rpms (Engine Speed Histogram)
DEF Buildup in the One Box, GHG14 Low NOX Conversion Codes • Applicable Fault Codes: 4364/1, 4364/18	Internal DEF buildup in the One Box, requires installation of the DEF awning (part number: A0004921911) <u>PFP</u>: REPROGRAM ACM	• Provide fault codes • Provide the PSL diagnostic results ○ Diagnostics indicate DEF buildup in the One Box (DEF awning installation)

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14.3 DDEC Report Checklist

1. ☐ Trip distance/Trip duration _____.
2. ☐ Idle percentage _____.
3. ☐ The percentage of operation between 0-9 mph (Vehicle Speed Histogram) _____.
4. ☐ The percentage of operation between 0-19% load (Engine Load Histogram) _____.
5. ☐ The percentage of operation between 0-999 rpms _____.
6. ☐ The percentage of operation over 1,800 rpms (Engine Speed Histogram) _____.

Screen print examples of DDEC report histograms attached below:

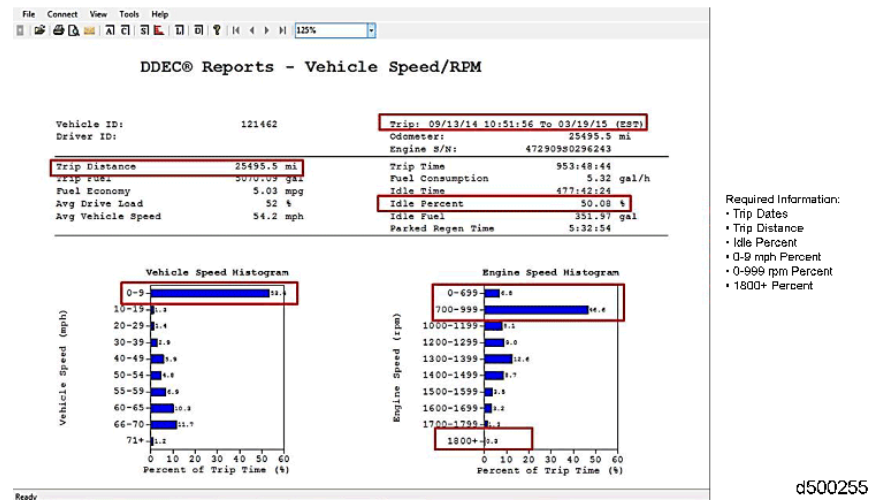


Figure 1. From DDEC report: Select "View", then "Speed/RPM"

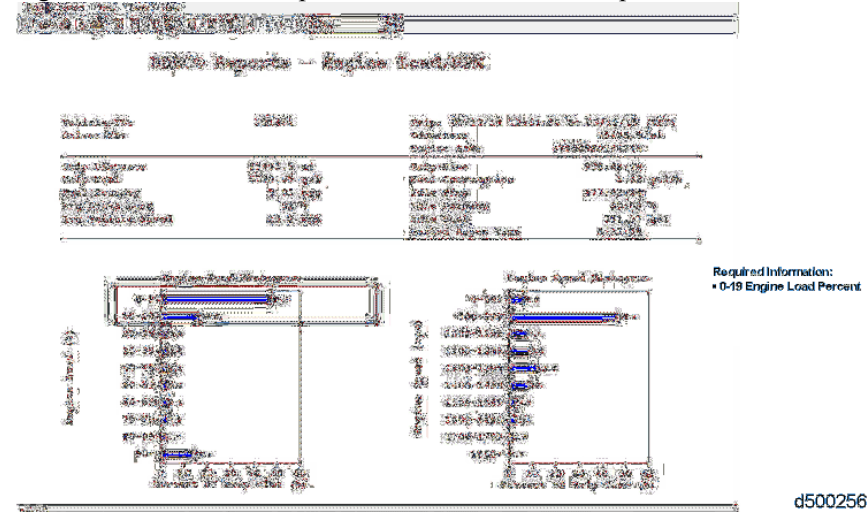


Figure 2. From DDEC report: Select "View", then "Engine Load/RPM"

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