



BAHAMAS, BOLIVIA, BELIZE, CANADA, CHILE, TAIWAN, COLOMBIA, COSTA RICA, DOMINICAN REPUBLIC, ECUADOR, EL SALVADOR, TRINIDAD AND TOBAGO, UNITED STATES, URUGUAY, VENEZUELA, MEXICO, ARUBA, NICARAGUA, PERU, PUERTO RICO, Curaçao, GUAM, GUATEMALA, GUYANA, HAITI, HONDURAS, JAMAICA, KOREA, SOUTH KOREA, PANAMA
Countries: ISIS, Bus ISIS, FleetISIS, IsSIR
Availability: ISIS, Bus ISIS, FleetISIS, IsSIR
Major System: ENGINES
Current Language: English
Other Languages: [Français](#), [Español](#)
Viewed: 36671
Document ID: IK1200478
Revision: 14
Created: 3/23/2010
Last Modified: 8/13/2019
Author: Allan Hertko

[Less Info](#)

Hide Details

Coding Information

Copy Link 	Copy Relative Link 	Bookmark View My Bookmarks	Add to Favorites 	Print 	Provide Feedback 	Helpful 2752	Not Helpful 1483
----------------------	-------------------------------	--	-----------------------------	------------------	-----------------------------	----------------------------	--------------------------------

Title: On vehicle DOC Cleaning MaxxForce® 7 Engines

Applies To: 2007 - 2009 MaxxForce® 7,

CHANGE LOG

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

08/13/2019- Changed to NED from ServiceMaxx. 08/08/2019- Responded to feedback via email and phone conversations, republished article. 01/24/2019 - Edited article coding 11/13/2018- Responded to feedback via email, republished article. 05/02/2015 - Author updated for feedback purposes	
---	--

DESCRIPTION

A method to clean the DOC on the vehicle with NED in combination with ZTSE 6031 has been developed. A partially plugged DOC may cause excessive **Exhaust Back Pressure** and cause a rise in engine oil level due to fuel dilution.

When the ECM calibration is updated the (parameter 87002) Customer Password (CPW) is restored to Calibration default (0000). You will need to acquire the CPW and program it back in when finished with the update. The only exception to this is if the ECM is updated with NETS and we have the CPW saved in our database, then the CPW will be programmed back into the ECM during a cal update. If this happens, see the note on step 11 of this article.

SYMPTOMS

- Loss of power
- Excessive regens
- Unable to regen
- Rise in oil level
- High exhaust back pressure

POSSIBLE DIAGNOSTIC TROUBLE CODES

DTC	MODULE	DESCRIPTION
2352	ECM	EBP above desired level

SERVICE PROCEDURE



To prevent unexpected movement of the vehicle and possible serious personal injury or death, park the vehicle on a flat, level surface, set the parking brake, turn the engine off and chock the wheels to prevent vehicle from moving in both directions.



To avoid personal injury from the muffler and exhaust system allow the vehicle to cool sufficiently before servicing the muffler and exhaust system. Maintain adequate clearance between all parts of the exhaust system and all hoses, wires and lines for engine cooling, brake system, fuel system, power steering system and electrical system. Ensure that all components near the exhaust system are free of oil or other flammable debris. If the

heat from DOC cleaning accumulates to certain amount near the exhaust system, it may set nearby items on fire and result in property damage, personal injury or death.

1. Remove the three M10 X 50 flange bolts at the rear of the DPF.
2. Insert Restrictor plate torque bolts to 40 lbf-ft. (School Bus and horizontal tailpipe only) **See Photo 1**

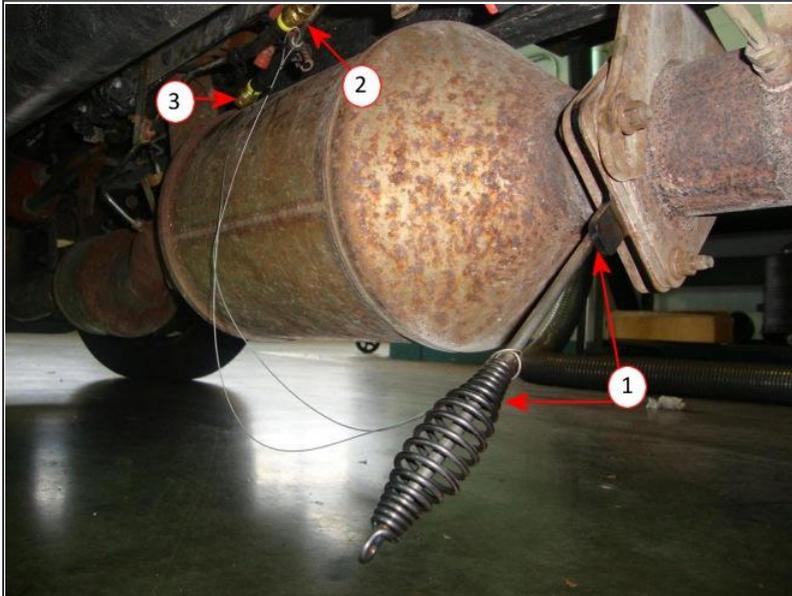


Photo 1 - Restrictor Installed - Horizontal Exhaust

1. Restrictor Tool
2. EGDP Hose Plug
3. EGDP Hose Plug

3. For Vertical Exhaust install Restrictor Cap as shown in **Photo 2** - Tighten clamps bolts to 60 ft. lbs.

CAUTION :

UPDATE! A tool modification kit for ZTSE6031 was shipped to all dealers in May 2011. ZTSE6031 should ONLY be used AFTER this modification has been completed.

Additional information- <https://evaluate.internationaldelivers.com/service/sfnpdf/IT11-126.pdf>
and https://evaluate.internationaldelivers.com/service/sfns/sfn1042_1.xml



Photo 2 - Vertical Exhaust Restrictor- Chain must be taut and securely attached at the bottom

4. Disconnect both the EGDP tubes from the rubber hose at the EGDP Sensor
5. Install the 2 EGDP Plugs and hoses supplied with tool kit. **See Photo 3**



Photo 3 - EGDP Plugs and Hoses Installed on Steel EGDP Tubes
 EGDP Plug
 EGDP Plug
 Original hoses to EGDP Sensor disconnected

6. Move vehicle outside and away from activity.

7. Ensure Parking Brake is set.

8. Open hood

WARNING:

To prevent unexpected movement of the vehicle and possible serious personal injury or death, park the vehicle on a flat, level surface, set the parking brake, turn the engine off and chock the wheels to prevent vehicle from moving in both directions.

WARNING:

Open hood during on-vehicle DOC cleaning. This can greatly reduce the effects of heat on hoses, wiring and other components near the exhaust system. If the heat from DOC cleaning accumulates to certain amount near the exhaust system, it may set nearby items on fire and result in property damage, personal injury or death

9. Connect NED, ignition Key-On identify vehicle.

10. NED menu click on **Procedures**.

11. Scroll down to **KOER Aftertreatment Procedures**, click-on **DOC Cleaning Procedure**.

DOC Cleaning
 This procedure will Clean Plugged DOCs by achieving High Exhaust Temperatures. Once the "target" exhaust temperatures are reached, the test will run for a pre-determined time to clean the DOC. If the temperatures are unable to be reached, the test will timeout.

Temperatures

T Name	Value	Units
Engine Coolant Temperature	-34	F
Engine Oil Temperature	1,375.5	F
Exhaust Gas Temperature 1	30	F
Exhaust Gas Temperature 2	50	F
Exhaust Gas Temperature 3	70	F

Pressures/Inhibitors

T Name	Value	Units
DPF Differential Pressure	452.71	psi
DPF Soot Loading	1,255.7	%
Exhaust Back Pressure	46.33	psi

Diagnostic Trouble Codes

DTC	SPN	FME	Type	Freeze Frame	Message	Module
N/A	111	3	Active	Open	Unknown DTC 111 : 3 (Engine Coolant Level 1 - Voltage above normal, or shorted to high source)	Engine
N/A	222	2	Previously Active	Open	Unknown DTC 222 : 2 (Unknown SPN (222) - Data erratic, intermittent or incorrect)	Engine

12. NED will now the load parameters required to run this procedure, this may take a few moments.

Note: During steps 10-11 of the procedure if the message displayed below appears there is a customer password present in this vehicle.

The DOC Cleaning Procedure is complete: DOC Clean Procedure Unable to Set Parameters

OK

You will need the customer password to move forward. Change the password (parameter 87002) to 0000, run the procedure and then program the customer password back into the engine when the procedure is complete. If the customer password is unavailable please contact tech central.

13. DTC 2352 and 1213 may set ignore these DTC codes.

14. After reading the pre-test information click **"OK"**. See below:

Navistar Engine Diagnostics - DOC Cleaning

File Connection Snapshot Sessions Tests Procedures Tools Help

COM Link - De-Activate

Instructions

DOC Cleaning

This procedure will Clean Plugged DOCs by achieving High Exhaust Temperatures. Once the "target" exhaust temperatures are reached, the test will run for a pre-determined time to clean the DOC. If the temperatures are unable to be reached, the test will timeout.

Temperatures

Pressures Inhibitors

Pre-test Information

CAUTION: High Exhaust Temperature and Pressure are achieved during this procedure.

In order to prevent personal injury or death, when running this procedure ensure:

- the parking brake is set
- the transmission is in neutral or park
- the wheels are blocked.

OK Cancel

T Name	Value	Units
Engine Coolant Temperature	-36	F
Engine Oil Temperature	1,196.7	F
Exhaust Gas Temperature 1	100	F
Exhaust Gas Temperature 2	50	F
Exhaust Gas Temperature 3	30	F

T Name	Value
AESC Remote Accelerator Position	2.4
Engine Speed	0.0

DTC	SPN	FMI	Type	Freeze Frame	Message	Modu
N/A	111	3	Active	Open	Unknown DIC 111 : 3 (Engine Coolant Level 1 - Voltage above normal, or shorted to high source)	Engi
N/A	222	2	Previously Active	Open	Unknown DIC 222 : 2 (Unknown SPN (222) - Data erratic, intermittent or incorrect)	Engi

Build NED.V6.64 Engine Diagnostic Test Status

Clear DTCs Refresh Show All Modules

15. Start engine when prompted.

16. Click **"OK"** after engine is running.

17. The cleaning procedure will now start, engine RPM will increase automatically and will return to idle automatically after the cleaning process has been completed.

Procedure will run approximately 5 minutes after EGT 1 and EGT 2 reach 800 degrees.

NOTE:

Procedure can be aborted at any time by touching any pedal.

18. Allow engine to remain at idle until prompted to turn engine off.

19. Please turn engine off. Press **"OK"** to continue.

20. Leave engine off and click **"OK"**.

21. **"Turn Key On"** but leave engine off when prompted.

22. Click **"OK"**.

23. NED will now Change back the original parameters and clear the codes.

24. NED will automatically save a **Snap Shot** that needs to be attached to the case file.

25. Click **"OK"**.

26. The cleaning procedure has been successfully performed with the **"DOC Cleaned"** prompt.

27. Click **"OK"**.

28. Verify codes have been cleared.

29. NED can now be disconnected hood closed and unit moved back in building.



WARNING:

Exhaust will be very hot and care should be taken to prevent injury during the following steps. Wear Heat protective gloves.

- 30. Remove restrictor plate or cap
- 31. If the restrictor plate was used Inspect the gasket and reuse if possible.
- 32. Reinstall bolts, Torque bolts to 45 lbf-ft.
- 33. Remove EGDP Plug.
- 34. Reconnect EGDP hoses to tubes.

NOTE:

After Running the DOC Cleaning Procedure, fault code 1213 Remote Throttle Signal Out-of Range may become active.

DTC	MODULE	DESCRIPTION
1213	ECM	Remote Throttle Signal Out-of-Range

RESOLUTION

Connect with Service Maxx, set ECM parameter 75001 to 2, In Cab Operation only.

Hide Details
Feedback Information

	Viewed: 36670
	Helpful: 2752
	Not Helpful: 1483

No Feedback Found