



Technical Service Bulletin

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Aftertreatment Diesel Particulate Filter (DPF) Maintenance	

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Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

Contents

Product Affected

- B4.5 CM2350 B146C
- B6.7 CM2350 B121B
- B6.7 CM2350 B136C
- B6.7 CM2450 B155B
- ISB6.7 CM2250
- ISB6.7 CM2350 B101
- ISC8.3 and ISL9 CM2250
- ISL9 CM2350 L101
- ISX12 CM2350 X102
- ISX12/ISX11.9 CM2250
- ISX15 CM2250
- ISX15 CM2350 X101
- L9 CM2350 L116B
- L9 CM2350 L120C
- L9 CM2350 L123B
- L9 CM2350 L133C
- L9 CM2450 L126B
- QSB6.7 CM2250
- QSG12/X12 CM2350 G110
- QSL9 CM2250
- QSL9 CM2350 L118
- QSX11.9 CM2250 ECF
- QSX15 CM2250 ECF

- QSX15 CM2250 ECF
- QSX15 CM2350 X105
- QSX15 CM2350 X106
- X12 CM2350 X119B
- X12 CM2450 X137B
- X15 CM2350 X114B
- X15 CM2350 X116B
- X15 CM2450 X124B
- X15 CM2450 X134B

Issue

This TSB explains options available for customers to maintain their aftertreatment diesel particulate filter (DPF). This communication focuses specifically on ash cleaning since ash cleaning is typically associated with the required maintenance of DPFs.

There are many factors that determine how ash accumulates in an aftertreatment DPF, such as duty cycle and engine health. How ash accumulates in an aftertreatment DPF influences the effectiveness of the different types of ash cleaning processes.

Customer Communication

Chemical and Heavy Metal Waste Disposal

⚠ WARNING ⚠

The material captured in a partial flow diesel particulate filter and/or a diesel particulate filter may contain elevated concentrations of metals. Primarily zinc, molybdenum, and possibly polynuclear aromatic hydrocarbons, that may be regulated. These materials must be characterized, handled, and disposed of according to applicable local regulations. In addition, due to the presence of the above-listed chemicals and other potentially toxic components such as oxides of calcium, zinc, phosphorous, silicon, sulfur, and iron, exhaust filter maintenance must be completed only by appropriately trained personnel.

Air-only Cleaning

Air-only cleaning uses compressed air to remove excess ash from the aftertreatment DPF. This process pushes air in reverse of the exhaust flow to remove the excess ash and soot from the aftertreatment DPF. The entire process typically takes about 45 minutes.

Air-only cleaning can remove ash that is loosely packed in and **not** bonded to the aftertreatment DPF. Air-only cleaning is typically a lower cost aftertreatment DPF maintenance cleaning process, but it is less capable of removing densely packed ash or ash that is bonded to the aftertreatment DPF.

Liquid Cleaning (most effective)

Liquid cleaning uses some type of liquid, such as water or chemicals, to help remove the bond between the ash and the aftertreatment DPF substrate. This is a longer cleaning process that can take up to several hours. There are different types of liquid that aftertreatment DPF cleaning suppliers can use.

- As opposed to air-only, liquid cleaning is more effective to loosen ash; however, ash can create a strong bond with the aftertreatment DPF substrate. In this case, water-only, or water combined with air, is not sufficient to clean all types of ash that can accumulate in the aftertreatment DPF. Some readily available suppliers in the market that provide air + water cleaning are:
 - Clean Diesel Specialist (CDS)
 - Emission and Cooling Solutions (ECS) through its DPF RENU program and process
 - Ceramex North America, which works primarily with dealers and fleets
- Liquids with certain organic **chemicals** are even more effective at breaking the bonds ash develops with the aftertreatment DPF substrate. When combined with air, it can effectively remove most ash that accumulates in aftertreatment DPFs. Some readily available suppliers in the market that provide this type of service are:
 - Emission and Cooling Solutions (ECS) with its DPF RENU program and process.
 - **Note** : Chemicals are **not** used on every cleaning. If sintered ash is found during the liquid RENU process, ECS will consult with the customer on whether to proceed with chemical cleaning.
 - FSX Inc. offers filter cleaning services to OEMs at its centralized location in Granite Falls, Washington.
 - **Note** : FSX Inc. **only** offers filter cleaning services on a smaller scale to regional customers (primarily serving the Washington/Oregon region).

Each customer needs to evaluate the best option to maintain its aftertreatment DPFs and which cleaning process supports its business needs. Exhaust filter maintenance **must** be completed **only** by appropriately trained personnel.

Aftertreatment DPF Maintenance and Warranty Guidelines

- Maintaining Cummins Inc. product is the customers responsibility.
- If 5383 is the only aftertreatment DPF-related fault code present, the customer can choose where to have the aftertreatment DPF cleaned. If there's a fault code other than 5383 related to an aftertreatment DPF for an out of warranty repair event, the customer should go to a Cummins® authorized service provider for diagnostics and repairs to identify the root cause of the issue.
- If the aftertreatment DPF is within a Cummins Inc. warranty coverage (base, extended, emissions, new or ReCon Parts) period, and any aftertreatment DPF related fault codes are present, the customer **must** go to a Cummins® authorized service provider for diagnostics and repairs to identify the root cause of the issue. The authorized service provider will file the warranty claim to Cummins Inc. if the root cause of malfunction is warrantable.

Document History

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