
Can I put a spare diesel particulate filter in my vehicle and clean the dirty filter at a separate time?

Yes, if the spare DPF has the same part number as the one you're removing. If you don't replace the filter with the same filter part number, the replacement may not fit, may affect the engine performance; or adversely affect the emissions system.

Do I need to keep a written service record?

Yes, service records are important for proper maintenance and in the event of a warranty claim. Some regulatory agencies (i.e., CARB) require filter service and cleaning records; for example, date of installation, vehicle mileage at the time of installation, part number, serial number, date of filter cleaning and mileage at each filter cleaning.

Are there any special requirements for disposing of the ash residue remaining after the cleaning cycle?

There are no uniform regulations regarding ash. Disposal should be in accordance with all local laws and regulations.

Are there any special handling requirements when servicing the filter?

The filter is rather heavy and care must be taken during the service to avoid damage or dropping. Chipped or cracked filters lose their efficiency and should be replaced.

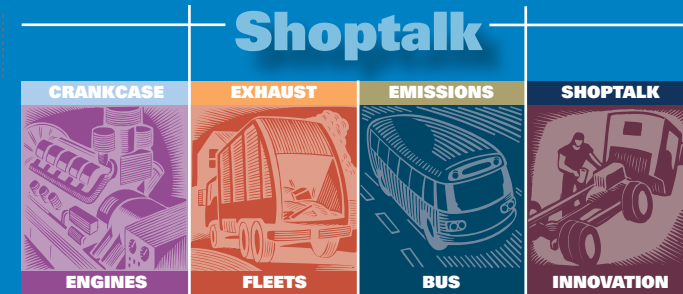
Does the person cleaning the filter need additional safety protection?

A dust mask, gloves and safety glasses should be worn while performing the cleaning process.

Are their fuel-type limitations when using a DPF Muffler?

DPF mufflers require the use of Ultra-Low Sulfur Diesel (ULSD) fuel (<15ppm sulfur). A DPF Muffler can withstand short durations of low sulfur diesel fuel without harm, but extended exposure will damage the catalyst coating.

Engine oil must not be blended with the engine's fuel since the oil may damage the filter, cause higher backpressure, plug the filter, reduce engine performance and void the warranty.



Shoptalk

Maintenance tips, cost reduction ideas and product features and benefits from the filtration and emissions experts – simple facts every diesel engine owner can use!

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Diesel Particulate Filter
Emissions Retrofit

Maintenance Impact to a Fleet

A diesel particulate filter (DPF) muffler will require new maintenance procedures for your fleet.

This document has been prepared to help you adequately prepare for the new maintenance practices required for efficient operation of your DPF Muffler.



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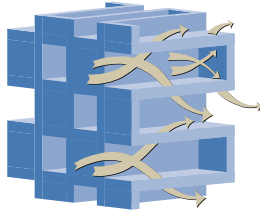
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What is the purpose of a DPF Muffler?

A DPF muffler replaces your existing muffler and is designed to reduce tailpipe emissions from a diesel engine. A DPF muffler is very efficient, removing over 85% of particulate matter and hydrocarbons.

A diesel particulate filter has thousands of small channels that capture particulate emissions. A catalytic reaction regenerates the filter, eliminating the captured particulate. The rate of regeneration is dependant on exhaust temperature and emission rate. Insufficient regeneration may require filter cleaning.



The filter loads up with ash generated from the combustion of engine oil additives. On a periodic basis, the ash accumulation must be removed from the filter.

DPF Muffler Maintenance Questions & Answers?

What new steps do you need to include in our routine maintenance?

At normal scheduled maintenance intervals, Donaldson recommends inspection of the DPF Muffler, exhaust piping and mounting brackets. Look for leaks, structural failures (cracks) and loose or missing fasteners. Any defective parts should be repaired or replaced.

On a routine basis or when the filter monitor indicates, you will also need to remove the filter centerbody from the DPF Muffler for cleaning.

How do you clean a diesel particulate filter?

Routine cleaning involves removing the ash and unburned hydrocarbons that collect in the filter. Donaldson offers a DPF filter cleaning system (two separate units) that does both.

Ash can be removed by forcing air through the filter. The Donaldson pulse cleaner unit forces a large volume of air to quickly and efficiently clean the filter. This cleaning stage takes less than 15 minutes.

If the filter becomes overloaded or contaminated with hydrocarbons (including diesel fuel or lube oil) the filter must be baked in a specially-designed high-temperature cleaning unit (i.e., DPF Thermal Regenerator). This process takes up to seven hours to regenerate or clean the filter. Donaldson recommends a final air pulse cleaning prior to re-installation.

How do you know when its time to clean the filter?

Filter cleaning must be completed every 12 months or every 60,000 miles (100,000 km), whichever comes first.

Filter cleaning may also be required if the filter cannot regenerate. Donaldson supplies a filter service monitor that will visually alert the operator when cleaning is required, based on exhaust backpressure.

Never use a hammer to loosen a filter from the inlet and outlet sections.

Avoid hammering on the mounting surfaces during removal. Hammering will cause physical damage to the filter and cause malfunction.

How does the filter service monitor work?

There are four exhaust backpressure conditions that activate the monitor.

Check Exhaust - Continuous Yellow
Service your emissions filter the next opportunity for truck service.

Check Exhaust - Flashing Yellow
Indicates problem within the wiring and connections; such as a short in the wire, bad sensor, etc. To troubleshoot, a technician will need to connect the system to a PC via cable link and access the Donaldson service tool software, item X007999.

Stop Engine - Flashing Red
During normal operation, when the vehicle exceeds the maximum backpressure limits the red lights will flash and stop when backpressure goes back down to normal limits.

Stop Engine - Continuous Red
Immediately stop engine and service the filter immediately. To turn off the red light, a technician will have to connect the system to a PC via a cable link to reset the monitor. Instructions will be included with the Donaldson PC computer application, item X007999. To avoid resetting the monitor, please service while Flashing Red light is on.



How do you know if the filter service monitor is working properly?

When the ignition is turned on, the monitor initiates a self-test. During the self-test the yellow and red lights flash for a period of three seconds. After the self-test the monitor will display the filter condition.

How do you reset the filter service monitor?

You only need to reset the monitor if you wait for the steady red light.

Will cleaning intervals be different for vehicles with newer engines?

Older engines generate more emissions and may require more frequent filter cleaning. Engines with lower exhaust temperature profiles may also require more frequent cleaning.

What else would adversely affect filter cleaning interval?

Oil consumption exceeding the original engine manufacturer's specifications will increase the required cleaning frequency.

What situations can plug a DPF Muffler?

Operating your engine at low load or idling for extended periods of time or improper engine maintenance may plug or overload the filter.

Failed injectors or turbo-chargers may wet and plug the filter. In these situations, a thermal regeneration (baking) cycle is required to regeneration the filter.

Does it matter how I re-install the filter after cleaning?

The filter can be re-installed in either direction. We recommend the filter be installed *in the reverse direction* from which it was removed.

Examples of Donaldson DPF Mufflers

