



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, DC 20460

OFFICE OF
AIR AND RADIATION

DEC 16 2013

Mr. Kevin Brown
Clean Diesel Technologies, Inc
83 Commerce Valley Drive East
Thornhill, Ontario
L3T 7V1
Canada

Dear Mr. Brown:

The U.S. Environmental Protection Agency (EPA) has reviewed your request for verification of the Clean Diesel Technologies, Incorporated (CDTi) Purifilter OR Diesel Particulate Filter (DPF) for Non-Road Applications System. Based on our evaluation of the verification application, the test data, and additional information provided, EPA hereby grants verification.

The technology is approved for use on the following engines and/or vehicles provided all of the operating criteria are met as described below:

Technology	Engine Model/Application	Fuel, Max Sulfur (ppm)	Reductions (%)			
			PM	NO _x	HC	CO
CDTi Purifilter OR Diesel Particulate Filter (DPF) for Non-Road Applications System	Nonroad, Tier 1 or Tier 2 or Tier 3 diesel engines certified with a maximum PM level of 0.20 g/bhp-hr with power ratings 100 ≤ Horsepower ≤ 603hp	15	90	N/A	90	85

The following criteria must be met in order for appropriately retrofitted engines to achieve the aforementioned emission reductions:

1. The engine must be operated on ultra-low sulfur diesel fuel (ULSD) of 15 ppm or less.
2. Nonroad engines must have EPA particulate matter (PM) certification levels less than or equal to 0.20 g/bhp-hr (0.27g/kW-hr) and greater than 0.015 g/bhp-hr (0.02g/kW-hr).

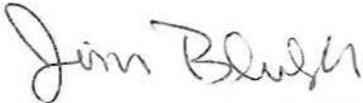
3. The engine's exhaust must produce a NOx/PM ratio of at least 18 or more. CDTi will make an assessment of the suitability of candidate engines, based upon certification emission levels or emission test data.
4. CDTi approved dealer shall perform an engine pre-assessment that assures the engine is at a minimum operating condition to prevent excess soot build up. The dealer will provide the owner with a copy of the pre-assessment.
5. CDTi will install the Emissions Device Monitor with the Purifilter OR System to constantly monitor backpressure and temperature on all vehicles equipped with this DPF that notifies the operator when the backpressure limit is reached.
6. The engine must be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.
7. The vehicle may not be equipped with an oil burning system and lube oil or other oils may not be mixed with the fuel.
8. The engine must not have been originally certified or equipped an original equipment DPF, DOC, or SCR system.
9. All engines with power ratings below 100 hp or above 603 hp or 19L engine displacement are excluded.
10. To ensure engine out opacity levels are comparable to those reported by the original engine manufacturer, written approval must be given to the installer/distributor prior to retrofit for engines with OE reported peak opacity values above 30%.
11. Minimum duty cycle requirements of 10% above 300 C must be met.

CDTi estimates that this device will incur no discernible fuel economy penalty when used in a compatible application. If CDTi's Purifilter OR system is modified from the application description provided to EPA and representative of products tested, you must notify EPA immediately. This verification does not automatically confer to modified devices or devices that are similar to this original verification.

Information on CDTi's Purifilter OR system, percent reduction, and applicable engines will be posted on the EPA's Verified Technology List website at: <http://www.epa.gov/cleandiesel/verification/verif-list.htm>. CDTi will be responsible for completing the required in-use testing program and for submitting all in-use testing data to EPA as outlined in EPAs in-use test methods.

Thank you for participating in EPA's Technology Assessment Center Verification Program. If you have any questions or comments, please contact Anthony Erb, of my staff, at 202-343-9259.

Sincerely,

A handwritten signature in black ink that reads "Jim Blubaugh". The signature is written in a cursive, slightly slanted style.

Jim Blubaugh, Deputy Director
Transportation and Climate Division
Office of Transportation and Air Quality