



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

AUG 31 2011

OFFICE OF  
AIR AND RADIATION

Mr. Julian A. Imes  
Donaldson Company, Inc.  
140 West 94<sup>th</sup> Street  
Minneapolis, MN 55431-2370

Dear Mr. Imes:

The U.S. Environmental Protection Agency (EPA) previously verified Donaldson Company Inc.'s (Donaldson's) Series 6000 Diesel Oxidation Catalyst (DOC) in combination with the Donaldson Spiracle<sup>TM</sup> Closed Crankcase Filtration System (Spiracle). This technology combination was verified on May 8, 2003 and subsequently amended on August 14, 2003 and April 1, 2011. Donaldson has requested to have the Series 6400 DOC approved as equivalent (or alternative) to the Series 6000 DOC for Donaldson's current verification.

Based on our evaluation of your in-use test data, original verification test data, and additional information provided, EPA hereby grants the extension to Donaldson's existing verification to include the 6400 DOC and Spiracle<sup>TM</sup> with the following criteria and percent reductions:

Technology	Engine Model/Application	Fuel, Max Sulfur (ppm)	Reductions (%)			
			PM	NO <sub>x</sub>	HC	CO
Series 6400 DOC & Spiracle (Closed Crankcase Filtration System)	Highway, heavy-heavy and medium-heavy duty, 4 cycle, non-EGR, model year 1991 - 2003, turbocharged or naturally aspirated	15	28	N/A	50	23

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. The engine exhaust temperature must achieve at least 150 °C during its duty cycle.
3. The engine must be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.
4. The vehicle may not be equipped with an oil burning system and lube oil or other oils may not be mixed with the fuel.

5. The engine must not have been originally certified or equipped with a DOC or diesel particulate filter.
6. Spiracle™ must be installed and maintained as described in the April 1, 2011 EPA approval (copy enclosed).

EPA estimates that this device will incur no discernable fuel economy penalty when used in a compatible application.

Information on Donaldson's Series 6400 Series Diesel Oxidation Catalyst in combination with the Donaldson Spiracle™ Closed Crankcase Filtration 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>.

Thank you for participating in EPA's National Clean Diesel Campaign. If you have any questions or comments, please contact Britney McCoy, of my staff, at (202) 343-9218.

Sincerely,



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

Enclosure