



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

Mr. W.C. Passie
Caterpillar, Inc.
100 NE Adams Street
Peoria, IL 61629-7150

FEB 20 2004

OFFICE OF
AIR AND RADIATION

Dear Mr. Passie:

The U.S. Environmental Protection Agency (EPA) has reviewed your request for verification of Caterpillar's Catalyzed Converter/Muffler (CCM). Based on our evaluation of your verification application, test data and additional information provided, EPA hereby verifies that this technology reduces emissions of certain criteria pollutants by the percentages described in the table below.

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

All highway, heavy-heavy and medium-heavy duty, 4-cycle, non-EGR diesel engines (not including urban bus engines), including turbo-charged or naturally aspirated and mechanically or electronically injected, originally manufactured from 1998 through 2003 model years.

Technology	Fuel (sulfur content)	Particulate Matter (PM) %	Carbon Monoxide (CO) %	Hydrocarbons (HC) %	Oxides of Nitrogen (NOx) %
Caterpillar CCM ¹	≤ 500 ppm	20	20	40	0

¹ The CCM is a diesel oxidation catalyst within a muffler assembly. This verification is for Caterpillar's CCM substrate numbers 228-1628 and 228-1629 for medium heavy-duty diesel engines and for substrate numbers 222-7786 and 222-8117 for heavy heavy-duty diesel engines, and further described by specific assembly part numbers in Caterpillar's verification application.

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

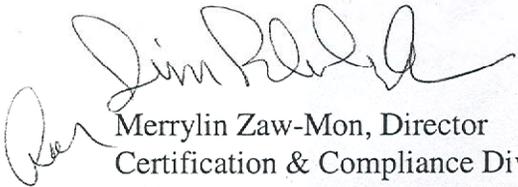
1. The engine must be operated with a fuel that contains a sulfur content of no more than 500 ppm.
2. The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.

Caterpillar indicates there is no discernible fuel economy penalty with the use of this technology.

Information on Caterpillar's Catalyzed Converter/Muffler, percent reduction, applicable engines, and in-use testing program will be posted on the EPA Voluntary Diesel Retrofit Program website (www.epa.gov/otaq/retrofit). As you know, Caterpillar will be responsible for completing the required in-use testing program and for submitting all in-use testing data to EPA.

Thank you for participating in EPA's Voluntary Diesel Retrofit Program. If you have any questions or comments, please contact Dennis Johnson, of my staff, at 202-343-9278.

Sincerely,

A handwritten signature in black ink, appearing to read "Merrylin Zaw-Mon". The signature is fluid and cursive, with a large initial "M" and "Z".

Merrylin Zaw-Mon, Director
Certification & Compliance Division
Office of Transportation and Air Quality

cc: Joel Martin, Caterpillar