



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

MAY 21 2004

OFFICE OF
AIR AND RADIATION

Mr. Marty Lassen
Commercial Development and
Marketing Manager
Johnson Matthey
380 Lapp Road
Malvern, PA 19355

Dear Mr. Lassen:

The U.S. Environmental Protection Agency (EPA) has reviewed your request for verification of Johnson Matthey's Catalyzed Continuously Regenerating Technology (CCRT) particulate filter. 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, medium-heavy and light-heavy duty, urban bus, 4-cycle, non-EGR diesel engines, including turbo-charged or naturally aspirated and mechanically or electronically injected, originally manufactured from 1994 through 2003 model years.

Technology	Fuel (sulfur content)	Particulate Matter (PM) %	Carbon Monoxide (CO) %	Hydrocarbons (HC) %	Oxides of Nitrogen (NOx) %
Catalyzed Continuously Regenerating Technology (CCRT) Particulate Filter	≤ 30 ppm	60	60	60	0

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 30 ppm.

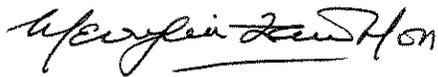
2. The engine exhaust temperature must be at least 210 degrees C for approximately 40 percent of the duty cycle. As there may be significant variations from application to application, Johnson Matthey will review actual vehicle operating conditions and perform temperature data logging prior to retrofitting a vehicle with the CCRT filter system to ensure compatibility.
3. The engine's exhaust must produce a NOx/PM ratio of at least 8, with an optimum approaching 20. Johnson Matthey will make an assessment of the suitability of candidate engines, based upon the applicable emission standards or emission test data.
4. The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.
5. Johnson Matthey must install a back pressure monitor and high pressure indicator light on all vehicles equipped with the CCRT.

Johnson Matthey has indicated there is a negligible (approximately 1 percent) fuel economy penalty with the use of this technology.

Information on Johnson Matthey's CCRT particulate filter, 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, Johnson Matthey 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,



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