



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

MAY 5 2009

OFFICE OF
AIR AND RADIATION

Mr. Terry Sears
General Manager
Caterpillar Emissions Solutions
Caterpillar, Inc.
Bldg AC 6146, PO Box 610
Route 29 & Rensch Road
Mossville, IL 61552-0610

Dear Mr. Sears:

The U.S. Environmental Protection Agency (EPA) has reviewed your request for the extension of the Marine Emissions Upgrade Group (EUG) on the National Clean Diesel Campaign's Emerging Technologies List. The extension includes additional configurations for the current EUG. Based on our evaluation of the application and the test plan, EPA has determined this extension of the EUG meets the requirements of the Diesel Emission Reduction Program Provisions under the Energy Policy Act of 2005 to qualify as an emerging technology.

This extension of the EUG will remain under the same time frame as the original EUG determination. The placement of the original EUG emerging technology expires July 10, 2009. Caterpillar may request that the Marine EUG emerging technology remain on the Emerging Technology List for an additional year.

Based on EPA's review of the information and data provided, your technology is approved for extension in Emerging Technology applications on the following categories of engines and/or vehicles provided all of the required operating criteria are met as described below:

All Caterpillar 3500 mechanic unit injector (MUI) and electronic unit injector (EUI) marine engines with rated power greater than 750 horsepower originally manufactured between 1984 and 2008 model years, not certified to EPA or California Air Resources Board (CARB) emission standards. The EUG kits include components for Tier 1 and 2 configurations of the turbocharger, fuel pump/governor, nozzles, cylinder packs, jacket water aftercooler, and installation parts.

The following projected emission reduction levels for this technology, based on the information and data provided by the manufacturer are included in the updated table below. The assigned emission levels may be adjusted based on the results of verification testing.

Technology	Particulate Matter (PM) %	Carbon Monoxide (CO) %	Hydrocarbons (HC)%	Oxide of Nitrogen (NOx) %
3500 Marine EUG - Kit 1	25	N/A	N/A	N/A
3500 Marine EUG - Kit 2	25	N/A	N/A	21- 29
3500 Marine EUG - Kit 3	25	N/A	N/A	41 - 48

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

1. The servicing dealer must follow specific installation instructions approved by Caterpillar and validate that the upgraded engine has the necessary components installed and has been tested to ensure the proper fuel delivery, power, torque and speed. The dealer must submit a validation form to Caterpillar in order to receive a label for the upgraded engine.
2. The engine must be operated with fuel that contains no more than 500 ppm sulfur.

The primary goal of the Emerging Technology program is to support early deployment of new technologies that will reduce diesel emissions from the existing fleet. This program provides an opportunity for manufacturers to obtain feedback from fleet partners on their technology while it is in-use. In addition, manufacturers are expected to pursue full EPA verification during the time frame their technology is on the Emerging Technology List.

Thank you for participating in EPA's National Clean Diesel Campaign. If you have any questions or comments, please contact Kuang Wei, of my staff, at (202) 343-9329.

Sincerely,



Jim Blubaugh, Manager
 Innovative Strategies Group
 Office of Transportation and Air Quality