



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

DEC 15 2011

OFFICE OF
AIR AND RADIATION

Mr. Brian J. Hockridge
Caterpillar, Inc.
P.O. Box 600
MOS17
Mossville, Illinois 61552-0600

Dear Mr. Hockridge:

The U.S. Environmental Protection Agency (EPA) has reviewed your request for extending the Caterpillar Inc. 3306 Emissions Upgrade Group (EUG) verification currently including model years from 1988 to 1995. This extension is to include additional model years from 1970 to 1987 of unregulated 3306 engines with certain engine arrangements and machine models capable of utilizing an emissions upgrade kit. The installation of the Emissions Upgrade Group will be performed in conjunction with the engine rebuild or overhaul in order to achieve the benefits of the upgrade. Based on our evaluation of Caterpillar's request and supporting documents, EPA hereby verifies the 3306 EUG to include model years from 1970 to 1995. This verification supersedes the prior verification dated January 18, 2008.

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

Select unregulated Caterpillar model 3306 diesel engines from model years 1970 to 1995 with mechanical direct fuel injection for nonroad applications with certain engine arrangements and machine models listed in the Attachment A.

Technology	Fuel (sulfur content)	Particulate Matter (PM) %	Carbon Monoxide (CO) %	Hydro- carbons (HC) %	Oxides of Nitrogen (NO _x) %
Caterpillar Emissions Upgrade Group	500 ppm	22	13	71	37

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

1. The Caterpillar Emissions Upgrade Group includes the components necessary to upgrade Caterpillar model 3306 diesel engines with certain machine models and engine arrangements to achieve US EPA Nonroad Tier 1 emissions levels. The primary components are the turbocharger, fuel pump/governor, fuel injection nozzles, and pistons/rings/liners.
2. Prior to installation, the Caterpillar dealer must determine eligibility of the 3306 EUG by confirming the engine serial number with the engine arrangement and machine model.
3. The servicing dealer must follow specific installation instructions approved by Caterpillar and validate that the upgraded engine has the necessary Tier 1 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 to receive a label for the upgraded engine.
4. Caterpillar will confirm the engine upgrade with the validation form submitted by the dealer and issue an engine label which must be installed by the dealer.
5. For replacement engine upgrades, Caterpillar must comply with the provisions in accordance with 40 CFR 1068.240 for replacement engines.

Information on the 3306 Emissions Upgrade Group, percent reductions, applicable engines, and in-use testing program will be posted on the EPA's National Clean Diesel Campaign/Diesel Retrofit Verification website (<http://www.epa.gov/cleandiesel/verification/verif-list.htm>). 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. The in-use upgraded engines must comply with all US EPA Nonroad Tier 1 emissions standards.

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

Attachment A

Machine Model	Engine Arrangement
D6H	4P-2973 7C-0501 6I-2097 6I-2096 6I-2095 6I-2094 1W-2630 4P-2971
12G	2W-0819 2W-4483
14G	7W-4102 7W-4104 7N-1542 7N-1211
140G	2W-0820 2W-4487
140G-VHP	7W-1766
966 (D, E, F & F II)	6I-2965 6N-3055 7E-0082 9Y-1719

627B - T	1W-1344
627B - S	1W-1342
627E (T&S)	1W-3210 1W-3225 7W-8549
637D - S	1W-1346
637E - S	1W-3231
D7H - DITA	6I-2098 6I-2100
D7H - DIT	7C-2032 7C-1959 6I-2099

D7G	1W-0543
D6D	7N-1398 7N-1399 1N-3061
D7H	7N-2740 4W-8491 7C-9084
ADT	2W-1557 7C-7046 9Y-8274
D25C/D, D30C/D, D35C, D300B, D350C/D	9Y-8274 7C-7046 2W-1557
814B - 815B - 816B	9Y-4951 6N-5908
330	9Y-4134 9Y-4133

CH 65	7W-4152
CH65B	4P-4976
CH 65C	4P-9295 6I-4087
973	7N-5106 5C-9442
970F (VHP)	6I-2027 106-5531
350L	4P-2701
615C (T)	9Y-2640 4P-4730 7N-1141