

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER B-59U-1

Relating to Conversion of Off-Road Engines to Alternative Fuels

Caterpillar Inc.

Pursuant to the authority vested in the Air Resources Board by Section 43013 and Section 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Section 39515 and Section 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the Dynamic Gas Blending Kit bi-fuel natural gas-diesel retrofit system, manufactured by Caterpillar Inc. (Caterpillar) of 100 NE Adams St., Peoria, Illinois 61629, is certified as described below for the following off-road compression-ignition engines and applications:

Fuel Type: Natural gas/diesel or diesel only

Engine: 2006 through 2013 model year Caterpillar 3512C

Displacement: 58.6 liters

Horsepower: 2250, 2500

Emission standards: Tier 2

Application: Generator

Test cycle: C1 8-mode steady-state

Major Retrofit System Components:

Gaseous Fuel Actuator	Speed Sensors
Gaseous Fuel Pressure Regulator	Detonation Sensors
Shutoff Valve	Engine Wiring Harness
Gaseous Fuel Heater	Generator Wiring Harness
Diesel Oxidation Catalyst	Water Lines
Engine Electronic Control	Fuel Lines
Integrated Sensor Module	Air Lines
Temperature Sensors	Control Panel Upgrades
Exhaust Temperature Sensors	Camshaft Covers
Pressure Sensors	

This certification is only valid for converting the following category Caterpillar 3512C engines:

Engine Arrangement Number	Serial Number Prefix
262-6045	R1A
283-1145	
283-9470	
329-3355	R1S
336-2026	
250-7620	R2A
283-1146	
283-9472	

The following are certification emission values of a 2011 model-year Caterpillar 3512C engine (equipped with the Dynamic Gas Blending Kit) and the applicable new engine emission standards:

<u>C1 8-Mode Steady-State Test</u>	<u>NMHC</u>	<u>NOx</u>	<u>NMHC+NOx</u>	<u>CO</u>	<u>PM</u>
Tier 2 standard (g/kW-hr)	N/A	N/A	6.4	3.5	0.20
Diesel	0.02	5.72	5.74	0.04	0.15
Natural Gas/Diesel	0.70	5.26	5.97	0.14	0.15

All emission control systems and the manufacturer's tune-up label shall be retained. The engine shall be adjusted to Caterpillar's tune-up specifications. The production retrofit systems shall be in all material respect the same as those for which certification is granted.

BE IT FURTHER RESOLVED: That Caterpillar shall provide a supplemental emission control information label, which shall be affixed in a permanent manner located adjacent to the original Emission Control Information Label, and shall comply with the labeling requirements described in Sections I.E. of the "California Certification and Installation Procedures for Systems Designed to Convert Off-Road Vehicles, Engines, and Equipment to Use Alternative Fuels," adopted October 1, 1999 (Procedures).

BE IT FURTHER RESOLVED: That Caterpillar shall maintain a record of the converted engine and/or equipment identification numbers as required under Section I.G. of the Procedures.

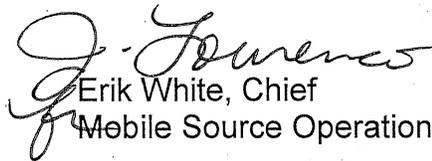
BE IT FURTHER RESOLVED: That Caterpillar has submitted and the Executive Officer hereby approves the materials required to demonstrate certification compliance with the warranty requirements under Section X. of the Procedures.

This Executive Order shall not apply to any natural gas-diesel bi-fuel conversion system advertised, offered for sale, sold with, or installed on an engine prior to or concurrent with transfer to an ultimate purchaser.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE AN ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF CATERPILLAR'S DYNAMIC GAS BLENDING KIT BI-FUEL NATURAL GAS-DIESEL RETROFIT SYSTEM.

The retrofit system certified under this Executive Order must conform to all applicable California emission regulations. Certification of the retrofit system shall not be construed as a certification to sell, offer for sale, or advertise any component of the retrofit system as an individually certified part.

Executed at El Monte, California this 26th day of August 2013.


Erik White, Chief
Mobile Source Operations Division