

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER DE-06-002

Pursuant to the authority vested in the Air Resources Board (ARB) by Health and Safety Code, Division 26, Part 5, Chapter 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Section 39515 and 39616 and Executive Order G-02-003;

Relating to Exemptions under Section 27156 of the Vehicle Code, and Verification under Sections 2700 through 2710 of Title 13 of the California Code of Regulations

Clean Air Power, Incorporated
Catalytic Particulate Filter (CPF)

ARB has reviewed Clean Air Power, Inc.'s request for verification of CPF. Based on an evaluation of the data provided, and pursuant to the terms and conditions specified below, the Executive Officer of ARB hereby finds that the CPF reduces emissions of diesel particulate matter (PM) consistent with a Level 3 device (greater than or equal to 85 percent reductions) (Title 13 California Code of Regulations (CCR) Sections 2702 (f) and (g) and Section 2708). Accordingly, the Executive Officer determines that the system merits verification and, subject to the terms and conditions specified below, classifies the CPF as a Level 3 system.

The aforementioned verification is subject to the following terms and conditions:

- The CPF must be identical to the Engelhard DPX, and may use either the MEX or NEX catalyst formulation.
- The engines are originally manufactured from model year 1994 through 2002 having the engine family names listed in Attachment 1.
- The average engine exhaust temperature must be at least 225 degrees Celsius.
- The engine must be both certified in California for on-road applications and used in on-road applications.
- The engine must be predominantly fueled by natural gas as intended. The supplemental diesel fuel used must have a sulfur content of no more than 15 parts per million (ppm) by weight.
- The engine must not employ exhaust gas recirculation.
- The engine must not have a pre-existing diesel particulate filter.
- The engine must be four-stroke.
- The engine can be turbocharged or naturally aspirated.
- The engine can be mechanically or electronically injected.
- The system must be installed with a backpressure monitor and indicator light on all vehicles retrofitted with the CPF.
- The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.

- Lube oil, or other oil, should not be mixed with the fuel.
- The product must not be operated with fuel additives, as defined in Section 2701 of Title 13, of the CCR, unless explicitly verified for use with the fuel additive(s).
- The product must not be used with any other systems or engine modifications without ARB and manufacturer approval.
- The other terms and conditions specified below.

IT IS ALSO ORDERED AND RESOLVED: That installation of the CPF, manufactured by Clean Air Power, Inc. of 5131 Santa Fe Street, San Diego, California 92109 has been found not to reduce the effectiveness of the applicable vehicle pollution control system, and therefore, the CPF is exempt from the prohibitions in Section 27156 of the Vehicle Code for installation on heavy-duty on-road vehicles listed in Attachment 1.

This exemption is only valid provided the engines meet the aforementioned conditions.

The CPF consists of a catalyst-coated, cellular ceramic monolith particulate filter and a backpressure monitoring system. The major components of the CPF are identified in Attachment 2.

This Executive Order is valid provided that installation instructions for CPF do not recommend tuning the vehicle to specifications different from those of the vehicle manufacturer.

Changes made to the design or operating conditions of the CPF, as exempted by ARB, which adversely affect the performance of the vehicle's pollution control system, shall invalidate this Executive Order.

No changes are permitted to the device. The ARB must be notified in writing of any changes to any part of the CPF. Any changes to the device must be evaluated and approved by ARB. Failure to do so shall invalidate this Executive Order.

As of January 1, 2007, systems that increase emissions of nitrogen dioxide (NO₂) by more than 30 percent of the baseline oxides of nitrogen (NO_x) emissions will no longer be candidates for verification.

As of January 1, 2009, systems that increase emissions of NO₂ by more than 20 percent of the baseline NO_x emissions will no longer be candidates for verification.

Marketing of the CPF using identification other than that shown in this Executive Order or for an application other than that listed in this Executive Order shall be prohibited unless prior approval is obtained from ARB.

This Executive Order shall not apply to any CPF advertised, offered for sale, sold with, or installed on a motor vehicle prior to or concurrent with transfer to an ultimate purchaser.

As specified in the Diesel Emission Control Strategy Verification Procedure (Title 13 CCR Section 2706 (g)), the ARB assigns each Diesel Emission Control Strategy a family name. The designated family name for the verification as outlined above is: **CA/CAP/2002/PM3/N00/ON/DPF01**.

Additionally, as stated in the Diesel Emission Control Strategy Verification Procedure, Clean Air Power, Inc. is responsible for honoring the required warranty (Section 2707) and conducting in-use compliance testing (Section 2709).

In addition to the foregoing, ARB reserves the right in the future to review this Executive Order and the exemption and verification provided herein to assure that the exempted and verified add-on or modified part continues to meet the standards and procedures of CCR, Title 13, Section 2222, et seq and CCR, Title 13, Sections 2700 through 2710.

Systems verified under this Executive Order shall conform to all applicable California emissions regulations.

This Executive Order does not release Clean Air Power, Inc. from complying with all other applicable regulations.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order.

Executed at El Monte, California, this 31st day of July 2006.

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Robert H. Cross, Chief
Mobile Source Control Division

Attachment 1: ARB Approved Engine Families for the CPF
Attachment 2: Part Numbers and Model Numbers of the CPF