

**State of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER DE-04-008

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

Lubrizol Corporation PuriNOx™ (also known as Proformix™)

The ARB has reviewed Lubrizol's request for verification of the PuriNOx™ emulsified diesel fuel. Based on an evaluation of the data provided, and pursuant to the terms and conditions specified below, the Executive Officer of the ARB hereby finds that PuriNOx™ reduces emissions of diesel particulate matter (PM) consistent with a Level 2 device (greater than or equal to 50 percent reductions) and oxides of nitrogen (NOx) by 15 percent (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 PuriNOx™ as a Level 2 system, for on-road applications.

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

- The on-road heavy-duty engines are originally manufactured from model year 1988 to 2003 (including EGR) with engine families listed in Attachment 1.
- The engine must be certified in California for on-road applications.
- The application must be able to tolerate a reduced peak engine power of 20 percent.
- The engine must not use optical or conductive fuel sensors, nor water absorbing fuel filters.
- The vendor must ensure that customers are fully aware of the attached application, storage and usage requirements.
- The customer must meet the application storage and usage requirements.

The engine must be four-stroke.

- The engine can be turbocharged or naturally aspirated.
- The engine can be mechanically or electronically controlled.
- The engine may include exhaust gas recirculation system.
- The engine may or may not have a pre-existing original equipment manufacturer oxidation catalyst.
- 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 other terms and conditions specified below.

IT IS ALSO ORDERED AND RESOLVED: That usage of PuriNOx™, manufactured by Lubrizol Corporation, 29400 Lakeland Boulevard, Wickliffe, Ohio 44092-2298, has been found not to reduce the effectiveness of the applicable vehicle pollution control system, and therefore, PuriNOx™ is exempt from the prohibitions in section 27156 of the Vehicle Code for on-road engines listed in Attachment 1.

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

PuriNOx™ is an emulsified diesel fuel, a blend of regular diesel fuel with water and fuel additives. End-users are required to follow the guidelines on operation and storage as listed in the owner's manual. In particular, there are strict requirements to ensure that PuriNOx™ does not remain static or left standing beyond a certain amount of time.

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

No changes are permitted to the PuriNOx™'s formulation or operating conditions. The ARB must be notified in writing of any changes, which must be evaluated and approved by the ARB. Failure to obtain ARB approval shall invalidate this Executive Order.

Marketing of PuriNOx™ 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 the ARB.

The ARB estimates that use of PuriNOx™ might incur a fuel economy penalty between ten to fifteen percent depending on the engine and application.

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/LUB/2004/PM2/N15/ON/FUEL01.

Additionally, as stated in the Diesel Emission Control Strategy Verification Procedure, Lubrizol is responsible for honoring their warranty (section 2707) and conducting in-use compliance testing (section 2709).

In addition to the foregoing, the 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.

Furthermore, Lubrizol must fulfill the conditions stated in the Resolution from the California Environmental Policy Council on April 30, 2004 (see Attachment 2). Lubrizol must provide cumulative national sales information and report to ARB on the status of the other conditions contained in the Resolution every six months.

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

Strategies verified under this Executive Order shall conform to all applicable California emission regulations.

Executed at El Monte, California, this 5th day of August, 2004

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Robert H. Cross, Chief
Mobile Source Control Division