

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-542U

Relating to Exemptions under  
Sections 38390 and 38391 of the Vehicle Code

KleenAir Systems, Inc.  
NOxMaster System

Pursuant to the authority vested in the Air Resources Board (ARB) by Part 5, Division 26 of the Health and Safety Code and Sections 38390, 38391 and 38395 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That installation of the NOxMaster System, Model NXM-HD-2-0800, manufactured by KleenAir Systems, Inc. of 1370 South Acacia Avenue, Fullerton, California 92831, has been found not to reduce the effectiveness of the applicable engine pollution control system, and therefore, the NOxMaster System is exempt from the prohibitions in sections 38390 and 38391 of the Vehicle Code for installation on 1996-2001 model-year off-road Cummins, Inc. 5.9 liter diesel engines.

The NOxMaster System consists of a pressurized ammonia storage tank, pressure regulator, metering valve, ammonia diffuser, selective catalytic reduction catalyst, oxidation catalyst, and an electronic controller. The system components exempted under this Executive Order are identified in Attachment A.

This exemption is based on emission tests conducted by KleenAir Systems, Inc. on a 1994 model-year Cummins B5.9 diesel engine with the NOxMaster System. KleenAir Systems, Inc. submitted the following data:

System	8-Mode Emissions (g/kW-hr)				D2 Emissions (g/kW-hr)			
	HC	CO	NOx	PM	HC	CO	NOx	PM
Single Catalyst	0.28	3.27	6.69	0.063	0.04	0.16	2.22	0.050
Dual Catalyst	0.27	3.96	5.76	0.067	0.04	0.18	1.53	0.046
2001 Standards	1.3	11.4	9.2	0.54	1.3	11.4	9.2	0.54

Data show that the engine modified with the NOxMaster System complies with the applicable emission standards under the steady-state 8-mode and D2 constant speed operations. Similar results are expected when the NOxMaster System is installed on any of the off-road engines listed above.

This Executive Order is valid provided that installation instructions for the NOxMaster System do not recommend tuning the engines to specifications different from those of the engine manufacturer.

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

Marketing of the NOxMaster System 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.

This Executive Order shall not apply to any NOxMaster System advertised, offered for sale, sold with, or installed on an off-road engine or equipment prior to or concurrent with transfer to an ultimate purchaser.

This Executive Order does not constitute any opinion as to the effect the use of the NOxMaster System may have on any warranty either expressed or implied by the engine manufacturer.

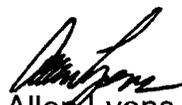
No claim of any kind, such as "Approved by the Air Resources Board," may be made with respect to the action taken herein in any advertising or other oral or written communication.

In addition to the foregoing, the ARB reserves the right in the future to review this Executive Order and the exemption provided herein to assure that the exempted add-on or modified part continues to meet the standards and procedures of California Code of Regulations, Title 13, Section 2474, et seq.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, 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 KLEENAIR SYSTEMS, INC.'S NOXMASTER SYSTEM.

Violation of any of the above conditions shall be grounds for revocation of this Executive Order. The Executive Order may be revoked only after a ten-day written notice of intention to revoke the Executive Order, in which period the holder of the Executive Order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it shall be held within ten days of receipt of the request, and the Executive Order may not be revoked until a determination is made after a hearing that grounds for revocation exist.

Executed at El Monte, California, this 8<sup>TH</sup> day of April 2002.



Allen Lyons, Chief  
New Vehicle/Engine Programs Branch