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State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-535-5

Relating to Exemptions under
Section 27156 of the Vehicle Code

Cleaire Advanced Emission Controls
Longview System

Pursuant to the authority vested in the Air Resources Board (ARB) by Section 27156 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-02-003;

IT IS ORDERED AND RESOLVED: That installation of the Longview System, manufactured by Cleaire Advanced Emission Controls of 14775 Wicks Boulevard, San Leandro, California 94577, has been found not to reduce the effectiveness of the applicable vehicle pollution control system, and therefore, the Longview System is exempt from the prohibitions in Section 27156 of the Vehicle Code for installation on heavy-duty on-road vehicles equipped with the following 4-stroke, turbocharged, electronic fuel injection diesel engines:

<u>Model-Year</u>	<u>Make</u>	<u>Displacement</u>
1994-2002	Cummins	5.9 to 15.0 L
1994-2003	International (formerly Navistar)	5.9 to 15.0 L

This Executive Order applies only to engines originally certified to oxides of nitrogen emission standards of 4.0 or 5.0 g/bhp-hr and not otherwise equipped with an aftertreatment emission control system such as a catalytic converter or a diesel particulate filter.

This Executive Order is only valid provided the engines meet the following operating conditions: (1) the engine exhaust temperature is greater than 260 degrees Celsius for at least 25 percent of the typical duty cycle and (2) the engine is operated using either standard California diesel with a maximum sulfur content of 500 parts per million by weight (ppmw) or ultra low sulfur diesel with a maximum sulfur content of 15 ppmw.

The Longview System consists of a lean NOx catalyst, secondary fuel injection system, electronic controller, control sensors, and a catalyzed passive diesel particulate filter. The fuel injection system includes a fuel pump, injector, injector block, static mixer, and a pressure regulator. The sensors include a manifold absolute pressure sensor, engine speed sensor, two exhaust temperature sensors, and an engine backpressure sensor. The fuel injection control algorithms for both standard California diesel and ultra low sulfur diesel are identical. The major components of the Longview System are identified in Attachment A.

This Executive Order is based on emission test data and supporting information submitted by Cleaire Advanced Emission Controls. Based on the submission, it was determined that the Longview System would not have any adverse impact on exhaust emissions.

This Executive Order is valid provided that installation instructions for the Longview System 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 Longview System, as exempt by the ARB, which adversely affect the performance of the vehicle's pollution control system, shall invalidate this Executive Order.

Marketing of the Longview 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 Longview System advertised, offered for sale, sold with, or installed on a motor vehicle 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 Longview System may have on any warranty either expressed or implied by the vehicle 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 2222, 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 CLEAIRE ADVANCED EMISSION CONTROLS' LONGVIEW 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 9TH day of July 2003.



Allen Lyons, Chief
Mobile Source Operations Division

Attachment A

Cleaire Advanced Emission Controls – Longview System P/N 8011		
Cleaire PN	QTY	Description
MK-502, MK-503, MK-504, or MK-505	1	Controller and Sensor Kit
7004A, 7004B, MK-3.1, MK-3.1A, MK-4.1, MK-4.1A, or MK-4.1B	1	Monitor Logger Controller
P604-9491 or 4088588	1	Pressure Transducer
194-6724	1	MAP Sensor
2T-125K316-R-6-TIS-30- CF11	2	Thermocouple – braided sheath, solid wire
71255-00	1	Magnetic Pickup (tachometer)
FK-501 or FK-502	1	Fuel System Kit
RAC58500-10	1	Diesel Fuel Pump/Filter
FP-1	1	Injector Assembly (inj., adp., o-ring)
B4CPA2-50	1	4mnpt x 4mnpt Check Valve (pressure regulator)
U4M-S or U5M-S	1	Static Mixer Assembly (4" or 5" exhaust pipe)
JC-02 or KC-02	2	NOx Reduction Catalyst (10.5" x 6") NOx Reduction Catalyst (11.25" x 6")
JF-10 or JF-12 or KF-10 or KF-12	1	Diesel Particulate Filter (10.5" x 12") Diesel Particulate Filter (11.25" x 12")