

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-710

Relating to Exemptions under
Section 27156 of the Vehicle Code

ESW CleanTech, Inc.
LongMile-CMM Diesel Oxidation Catalyst

Pursuant to the authority vested in the Air Resources Board 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 LongMile-CMM diesel oxidation catalyst, manufactured by ESW CleanTech, Inc. of 6755 Mira Mesa Boulevard, Suite 123-122, San Diego, California 92121, has been found not to reduce the effectiveness of the applicable engine emission control system, and therefore, the LongMile-CMM diesel oxidation catalyst is exempt from the prohibitions in Section 27156 of the Vehicle Code for installation on on-road heavy-duty vehicles equipped with 1994 through 2006 model-year diesel engines with displacements up to 12 liters and horsepower ratings from 100 to 400. This Executive Order excludes all engines originally equipped with an aftertreatment emission control system such as a catalytic converter or a diesel particulate filter.

The LongMile-CMM diesel oxidation catalyst consists of a diesel oxidation catalyst, muffler, pressure sensor, temperature sensors, and an electronic controller. Major components of the LongMile-CMM diesel oxidation catalyst are identified in Attachment A.

This Executive Order is only valid provided the engines meet the following operating conditions: (1) the engine exhaust temperature is above 260 degrees Celsius for at least 30 percent of the typical duty cycle and (2) the engine is operated using ultra low sulfur diesel with a maximum sulfur content of 15 parts per million by weight or biodiesel blends containing no more than 20 percent biodiesel by volume.

This Executive Order is based on emission testing originally conducted by Cleaire Advanced Emission Controls with the LongMile-CMM diesel oxidation catalyst. The test data and the LongMile-CMM diesel oxidation catalyst have been transferred to ESW CleanTech, Inc. as part of a purchase agreement.

This Executive Order is valid provided that installation instructions for the LongMile-CMM diesel oxidation catalyst 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 LongMile-CMM diesel oxidation catalyst, as exempted by the Air Resources Board, which adversely affect the

performance of the engine's pollution control system, shall invalidate this Executive Order.

Marketing of the LongMile-CMM diesel oxidation catalyst 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 Air Resources Board.

This Executive Order shall not apply to any LongMile-CMM diesel oxidation catalyst advertised, offered for sale, sold with, or installed on a motor vehicle or an engine 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 LongMile-CMM diesel oxidation catalyst 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 Air Resources Board 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 ESW CLEANTECH, INC.'S LONGMILE-CMM DIESEL OXIDATION CATALYST.

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 13TH day of May 2013.


FOR Erik White, Chief
Mobile Source Operations Division

Attachment A

| LongMile-CMM Diesel Oxidation Catalyst | | | |
|--|------------------------------------|-----|--|
| | Part | Qty | Part Number |
| 1 | Cleaire Muffler Module (CMM) | 1 | CMM-3__ |
| 2 | Diesel Oxidation Catalyst (DOC) | 1 | CJD-20-10, CJD-27-10, CJDA-20-10, or CJDA-27-10 |
| 3 | MLC (Monitor Logger Controller) | 1 | CMKC-5.0_ or CMKC-6.0_ |
| 4 | Pressure Transducer | 1 | CUE-45 |
| 5 | Thermocouple | 2 | CMA-4 |

EVALUATION SUMMARY

Manufacturer Name: ESW CleanTech, Inc.

Name of Device: LongMile-CMM diesel oxidation catalyst

Background:

ESW CleanTech, Inc. (ESW) of 6755 Mira Mesa Blvd., Suite 123-122, San Diego, California 92121 has requested transfer of ESW CleanTech, Inc.' (Cleaire) exemption Executive Order D-535-19 to ESW. The request reflects the purchase of Cleaire and its California Vehicle Code section 27156 tampering exemption Executive Order by ESW. The transfer will allow ESW to continue to install Cleaire products as previously exempted. No changes will be made to the device or its installation as originally approved under D-535-19.

Recommendation:

Grant exemption to ESW as requested and issue Executive Order D-710. This exemption is not valid for any engines originally equipped with an aftertreatment emission control system such as a catalytic converter or a diesel particulate filter. Furthermore, the exemption is only valid provided the engines meet the following operating conditions: (1) the engine exhaust temperature is above 260 degrees Celsius for at least 30 percent of the typical duty cycle and (2) the engine is operated using ultra low sulfur diesel with a maximum sulfur content of 15 parts per million by weight or biodiesel blends containing no more than 20 percent biodiesel by volume. Major components of the LongMile-CMM diesel oxidation catalyst are identified in Attachment A.

Device Description:

The LongMile-CMM diesel oxidation catalyst (DOC) combines an oxidation catalyst with a muffler. The catalyst reduces diesel particulate matter, carbon monoxide, and hydrocarbon emissions. This application includes Umicore metallic DOC DC-600. The catalysts included in the exemption are CJD-20-10, CJDA-20-10 (both 10.5 D x 4 L and 5.7 liters), CJD-27-10, and CJDA-27-10 (both 7.5 D x 5 L and 3.6 liters). The LongMile-CMM DOC is installed with exhaust pressure and temperature sensors and an electronic controller. Backpressure measurements are used to alert the operator of restrictions in the system. The passive catalyst does not require any cleaning. The LongMile-CMM DOC will be used as a temporary fix and will replace the verified/exempted LongMile systems with metallic filters already in use. The muffler module will be installed in place of the metallic filter.

Discussion/Basis for the Recommendation:

The LongMile-CMM DOC was previously manufactured by Cleaire and exempted under D-535-19. With the purchase of Cleaire by ESW, ESW will now manufacture and install the LongMile-CMM DOC as originally exempted under D-535-19.

