State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER DE-08-002-03

Pursuant to the authority vested in the California 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;

This action relates to Verification under sections 2700 through 2710 of Title 13 of the California Code of Regulations:

DCL International Inc.
MINE-X SOOTFILTER® Diesel Particulate Filter System

ARB has reviewed the request by DCL International Inc. for verification of the MINE-X SOOTFILTER® diesel particulate filter (DPF) system. 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 the MINE-X SOOTFILTER® DPF system reduces emissions of diesel particulate matter (PM) consistent with a Level 3 device (greater than or equal to 85 percent reductions) (California Code of Regulations (CCR), Title 13, sections 2702 (f) and 2708) and complies with the CARB January 1, 2009, NO_2 limit (CCR, Title 13, section 2702 (f) and section 2706 (a)). Accordingly, the Executive Officer determines that the system merits verification and, subject to the terms and conditions specified below, classifies the MINE-X SOOTFILTER® DPF system as a Level 3 Plus system, for use with stationary prime and emergency standby generators, pumps, and compressors using engine families listed in Attachment 1.

This verification is subject to the following terms and conditions:

- The engine must be used in a stationary application associated with prime or emergency standby generators, pumps, and compressors.
- The engines are model years 1996 or newer having the engine family names listed in Attachment 1.
- The engine must be a certified Tier 1, Tier 2, Tier 3, Tier 4i with a rated horse power between 50 and 75 or over 750, or Tier 4 Alt 20% NOx and PM off-road engine with certified particulate matter (PM) emission levels less than or equal to 0.15 g/bhp-hr (as tested on an appropriate steady-state certification cycle outlined in the ARB off-road regulations – similar to ISO 8178 D2).
- The engine must be in its original certified configuration.
- 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 must be certified in California.
- DCL International Inc. must review actual operating conditions (duty cycle, baseline emissions, exhaust temperature profiles, and engine backpressure)

prior to retrofitting an engine with the MINE-X SOOTFILTER® DPF system to ensure compatibility.

- The engine should be well maintained and not consume lubricating oil at a rate greater than that specified by the engine manufacturer.
- 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 fuel additive(s).
- The other terms and conditions specified below.

Table 1: Conditions for the MINE-X SOOTFILTER® DPF System

Parameter	Value
Application	Stationary Prime and Emergency Standby Power Generation, Pumps, and Compressors
Engine Type	Diesel, with or without turbocharger, without Exhaust-Gas Recirculation (EGR), mechanically or electronically controlled, Tier 1, Tier 2, Tier 3, Tier 4i with a rated horse power between 50 and 75 or over 750, or Tier 4 Alt 20% NOx and PM off-road engines certified to a particulate matter (PM) emission limit of less than or equal to 0.15 g/bhp-hr.
Minimum Exhaust Temperature for Filter Regeneration	The engine must operate at the load level required to achieve 350 degrees Celsius (°C) for a minimum of 30 percent of the engine's operating time. Operation at lower temperatures is allowed, but only for a limited duration.
Maximum Consecutive Minutes Operating Below Passive Regeneration Temperature	240 Minutes
Number of Consecutive Cold Starts and 15 Minute Idle Sessions before Regeneration Required	16
Number of Hours of Operation Before Cleaning of Filter Required	1,000 when using Ultra Low Sulfur Diesel (<15 ppm Sulfur).
Fuel	California diesel fuel with less than or equal to 15 ppm sulfur or a biodiesel blend provided that the biodiesel portion of the blend complies with ASTM International D6751 (15 ppm sulfur), the diesel portion of the blend complies with Title 13 (CCR), sections 2281 and 2282 and the blend contains no more than 20 percent biodiesel by volume.
PM Verification Level	Level 3 Plus Verification: • PM - at least 85% reduction • NO_2 - meets January 2009 limit

The MINE-X SOOTFILTER® DPF system consists of a catalyzed passive diesel particulate filter and a DCL Exhaust Monitor/Logger backpressure monitor. A schematic of the approved label is shown in Attachment 2. Labels attached to the DPF and the engine must be identical.

This Executive Order is valid provided that installation instructions for the MINE-X SOOTFILTER® DPF system do not recommend tuning the engine to specifications different from those of the engine manufacturer.

Prior to sale of a MINE-X SOOTFILTER® DPF, DCL International Inc. must provide each prospective owner/purchaser of the MINE-X SOOTFILTER® DPF with a written estimate of the number of hours of engine operation that will typically elapse before regeneration is required. DCL International Inc. must also provide, in writing, the length of time of a typical regeneration event.

Changes made to the design or operating conditions of the MINE-X SOOTFILTER® DPF system, as exempted by ARB, which adversely affect the performance of the engine's pollution control system, shall invalidate this Executive Order. As such, no changes are permitted to the device.

Changes to the DCL International Inc. MINE-X SOOTFILTER® DPF system are not permitted without ARB approval. The ARB must be notified in writing of any changes to any part of the MINE-X SOOTFILTER® DPF system. Any changes to the device must be evaluated and approved by ARB. Failure to do so shall invalidate this Executive Order.

Marketing of the MINE-X SOOTFILTER® DPF 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 ARB.

As specified in the Diesel Emission Control Strategy Verification Procedure (CCR, Title 13 section 2706 (j) (2)), the ARB assigns each Diesel Emission Control Strategy a family name. The designated family name for the verification as outlined above is:

CA/DCL/2008/PM3+/N00/ST/DPF01

Additionally, as stated in the Diesel Emission Control Strategy Verification Procedure, DCL International Inc. is responsible for recordkeeping requirements (CCR, Title 13, section 2702), honoring the required warranty (section 2707) and conducting in-use compliance testing (section 2709).

This Executive Order is valid provided that the diesel fuel used in conjunction with the device complies with CCR, Title 13, sections 2281 and 2282, and if biodiesel is used, the biodiesel blend shall be 20 percent or less subject to the following conditions:

- The biodiesel portion of the blend complies with the American Society for Testing and Materials International specification D6751 applicable for 15 parts per million sulfur content, and

- The diesel fuel portion of the blend complies with CCR, Title 13, sections 2281 and 2282.

Other alternative diesel fuels such as, but not limited to, ethanol diesel blends and water emulsified diesel fuel are excluded from this Executive Order.

In addition, ARB reserves the right in the future to review this Executive Order and verification provided herein to assure that the 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 DCL International Inc. from complying with all other applicable regulations.

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

Executive Order DE-08-002-02 is hereby superseded and is of no further force and effect.

Executed at Sacramento, California, this 2nd day of May 2011

James N. Goldstene
Executive Officer
by

Richard W. Corey, Chief
Stationary Source Division

Attachment 1: MINE-X SOOTFILTER® Diesel Particulate Filter system Off-Road Certified Engine Family List (≤ 0.15 g/bhp-hr PM)