

**State Of California
AIR RESOURCES BOARD**

EXECUTIVE ORDER DE-19-001-01

Pursuant to the authority vested in the California Air Resources Board (CARB) 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-14-012;

Relating to Exemptions under section 38391 of the Vehicle Code and Verification under sections 2700 through 2711 of title 13 of the California Code of Regulations (13 CCR),

**New World Engineering, LLC
EADPF**

CARB has reviewed the New World Engineering (NWE) request for verification of the EADPF (electrically assisted diesel particulate filter). Based on an evaluation of the data provided, and pursuant to the terms and conditions specified below, the Executive Officer of CARB hereby finds that the NWE EADPF reduces emissions of diesel particulate matter (PM) consistent with a Level 3 Plus diesel emissions control strategy (DECS) (greater than or equal to 85 percent reduction of and compliant with the 2009 nitrogen dioxide emissions limit) (13 CCR, sections 2702 (f) and 2708). Accordingly, the Executive Officer determines that the system merits verification and, subject to the terms and conditions specified below, classifies the NWE EADPF as a Level 3 Plus DECS. The engines for which the NWE EADPF is verified, the verified parts list, the system and engine labels, swapping and re-designation information, engine family list, and other product information can be found here: http://www.arb.ca.gov/diesel/verdev/companies/nwe/nwe_eadpf.htm

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

- The NWE EADPF shall only be installed on Thermo King TK370, TK376, TK 374, and TK380 engine models used in the MD200, MD300, TS300, TS500, RDIISR, TS600, T600, T800, T1000, T1000 Spectrum, T580, T680, T880, T1080, and T1080 Spectrum and the Carrier C T3-44TV and C T3-69TV engine models used in the Supra 622, 644, 650, 722, 744, 750, 822, 850, 922, 944, 950, 950MT TRU sets.
- The engine must be certified in California for off-road applications.
- 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 oxidation catalyst.
- The engine must not have a pre-existing diesel particulate filter (DPF).
- The engine must not have a pre-existing turbocharger.

- The engine must have a four-stroke combustion cycle.
- The engine must be naturally aspirated.
- The engine must be well maintained and not consume lubricating oil at a rate greater than one quart per 50 hours of engine operation.
- The engine must be operated on fuel that has a sulfur content of no more than 15 parts per million by weight.
- Lube oil, or other oil, must not be mixed with the fuel.
- The system must not be operated with fuel additives, as defined in section 2701 of Title 13, of the CCR, unless explicitly verified for use with the fuel additive(s).
- The product must not be used with any other systems or engine modifications without CARB and manufacturer written approval.
- NWE or their authorized installer must review actual operating conditions and perform engine checks to determine the engine is in good mechanical working order prior to retrofitting an engine with a NWE EADPF to ensure compatibility.
- The DECS must be installed with a backpressure monitor to notify the operator when backpressure limit is reached.
- Swapping of the DPF module within a common ownership fleet is allowed under NWE's practices for swapping DPF modules, in accordance with 13 CCR section 2706(i).
- Re-designating an entire NWE EADPF to another TRU within a common ownership fleet is allowed and CARB has approved NWE's practices for re-designating the EADPF, in accordance with 13 CCR section 2706(i).
- And, the other terms and conditions specified below.

The NWE EADPF consists of a wall-flow diesel particulate filter, diesel oxidation catalyst, electronic heating element, and control system. The NWE EADPF also includes a backpressure monitoring and warning system.

The NWE EADPF may be installed on both "new" and "in-use" TRU engines.

NWE must provide all authorized installers with "Quote Form and Preinstallation Checklist" that must be used to determine the compatibility of the NWE EADPF with the candidate engine pursuant to 13 CCR section 2706(t).

Proper engine maintenance is critical to the proper functioning of the DECS. The owner of the equipment on which the DECS is installed is strongly advised to adhere to the engine maintenance schedules in the NWE EADPF owner's manual. Additionally, the owner is advised that: failure to maintain the engine so that emissions control systems are in operating condition may be grounds for citation and penalty; and failure to document engine maintenance, including keeping records of oil consumption, may be grounds for denial of a warranty claim.

Use of system parts or replacement parts not authorized by NWE may be grounds for denial of a warranty claim.

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

- The biodiesel portion of the blend complies with the American Society for Testing and Materials (ASTM) specification D6751 applicable for 15 ppm sulfur content.
- The diesel fuel portion of the blend complies with 13 CCR, sections 2281 and 2282.
- The use of biodiesel applies to devices verified to reduce only diesel particulate matter.

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

This verification is valid provided that installation instructions for the NWE EADPF do not recommend tuning the equipment to specifications different from those of the engine manufacturer.

IT IS ALSO ORDERED AND RESOLVED: That installation of the NWE EADPF has been found not to reduce the effectiveness of the applicable engine pollution control system, and therefore, the NWE EADPF is exempt from the prohibitions in section 38391 of the Vehicle code for installation on the TRU engines listed in the Engine Family List at: http://www.arb.ca.gov/diesel/verdev/companies/nwe/nwe_eadpf.htm. This exemption is only valid provided the engine meets the aforementioned conditions. Changes made to the design or operating conditions of the NWE EADPF, as exempted by CARB, which adversely affect the performance of the engine's pollution control system, shall invalidate this verification.

No changes are permitted to the NWE EADPF. CARB must be notified in writing of any changes to parts of the NWE EADPF. Any changes to the system, components, applicable engine models, or software must be evaluated and approved in writing by CARB. Failure to do so shall invalidate this verification.

No person shall alter, physically disable, disconnect, bypass, or tamper with an installed CARB verified diesel emission control strategy, as outlined in Title 13 CCR section 2711(e). Should CARB become aware that a design feature of a verified device is altered, physically disabled, disconnected, bypassed, or tampered on multiple units by independent persons, NWE will be responsible to propose a design modification and recall plan to the Executive Officer to minimize existing and potential for future tampering of the verified device.

Marketing of the NWE EADPF using identification other than that shown in this verification or for an application or operating conditions other than that listed in this verification shall be prohibited unless prior approval is obtained from CARB.

As specified in 13 CCR, section 2706 (j) of the *Verification Procedure, Warranty and In-Use Compliance Requirements for In-use Strategies to Control Emissions from Diesel Engines* (Verification Procedure), CARB assigns each DECS a family name. The designated family name for the verification as outlined above is:

CA/NWE/2019/PM3+/N00/TR/DPF01

Additionally, as stated in the Verification Procedure, NWE is responsible for recordkeeping requirements (13 CCR section 2702), honoring the required warranty (13 CCR section 2707), and complying with the system labeling requirements in accordance with section 2706 (j).

Identification must include both device and engine labels consistent with the requirements of 13 CCR section 2706 and California verification labels of this Executive Order. Changes of modifications to the label or label placement are prohibited without prior written approval from CARB.

In addition, NWE must conduct in-use compliance testing (section 2709), which involves the following: in-use compliance field testing after 100 units have been sold or leased in California and in-use compliance emissions testing after 300 units have been sold or leased in California (section 2709 (a)). Both the in-use compliance field and emissions testing proposals have to be submitted within 90 days after selling or leasing in California the 100th unit and 300th unit, respectively (section 2709 (d)). The in-use compliance field and emission testing reports must be submitted no later than 18 months after selling or leasing the 100th and 300th units in the California market, respectively, as outlined in section 2709 (k).

CARB reserves the right in the future to review this verification and the conditions provided herein to assure that the verified add on or modified part continues to meet the standards and procedures of 13 CCR, sections 2222, et seq and 13 CCR sections 2700 through 2711.

The terms and conditions of this verification must be satisfied regardless of where the system is sold in order for the DECS to be considered verified.

Systems verified under this verification shall conform to all applicable California emissions regulations. This verification does not release NWE from complying with all other applicable regulations.

Systems sold as verified, or which carry a CARB-approved label, must satisfy all the terms and conditions of this Executive Order.

Violation of any of the above conditions shall be grounds for revocation of the verification.

Executive Order DE-19-001 is hereby superseded and is of no further force and effect.

Executed at Sacramento, California this 14 day of July, 2020.

A handwritten signature in black ink, appearing to read "Heather Arias", written over a horizontal line.

Heather Arias, Chief
Transportation and Toxics Division

Attachment: NWE EADPF Engine Family List

Attachment: NWE EADPF Parts List