

Authorized Installer (Dealer/Distributor) Requirements and Obligations

- 1) The installer of the Nett Technologies diesel emission control strategy must be authorized and trained by the party that holds the verification, i.e., Nett Technologies, for the diesel emission control strategy. The installer is also responsible to train the end user at the time of commissioning. The Owner's manual must be made available to the end user after installation.
- 2) The installer of the Nett Technologies diesel emission control strategy must comply with the pre-installation assessment requirements in 13 CCR § 2706(t).

In general, the authorized installer (i.e., the party conducting the pre-installation compatibility assessment) must ensure that a candidate engine being considered for retrofit is compatible with the verified diesel emission control strategy by ensuring that each candidate engine meets all the terms and conditions of the **Executive Order** prior to installation. To determine the suitability, a smoke opacity limit, oil consumption limits, fuel inspection requirements, visual inspections, exhaust gas temperature requirement (see below) and other assessment criteria must be used to determine that the candidate engine is appropriate for use with the diesel emission control strategy and that the candidate engine is in a proper state of maintenance and operating within the engine manufacturers specifications. The party performing the installation/commissioning of the diesel emission control strategy must maintain a record of all documentation used to make the determination that the candidate engine was appropriate for use with the diesel emission control strategy (i.e., the pre-installation compatibility assessment and commissioning reports). These documents must be submitted to Nett Technologies and the end user. In addition, the installer must keep track of all future assessments and installations for future reporting purposes.

Exhaust gas temperature requirement (as per ARB MSC 11-11 Mail-Out)

If the Executive Order for a Diesel Emission Control Strategy (DECS) specifies exhaust gas temperature requirements, then the following pre-installation compatibility assessment requirements must be completed prior to installation:

The exhaust gas temperatures must be measured and recorded from each candidate engine to determine if it meets the exhaust temperature requirements. As an alternative, representative sampling can be conducted for a group of engines that are similar. However, data from engines outside the group cannot be used to support retrofit of engines within the group. Representative sampling can occur under the following conditions:

- a) The DECS is verified for only reducing diesel particulate matter (PM).
- b) At least five representative engines or 10 percent of each group of similar engines, whichever is larger, must be data logged. All engines in a group comprised of 5 or fewer engines must be data logged. Specific conditions that determine which engines belong in a group follows and are defined in Section 2706(t)(1)(B) of the Procedure.
- c) In cases where representative sampling is selected, the party conducting the pre-installation compatibility assessment is still responsible for ensuring that all installations comply with the terms and conditions of the EO and any other requirements specified by DECS manufacturer for that particular DECS.

Data Logging Procedures

Data must be logged according to the following procedures:

- The measured and recorded data must be representative of the actual duty cycle and operation of the candidate engine as best it can be anticipated at the time.
- The exhaust gas temperature must be measured at a point in the exhaust gas system that is within six inches of the proposed location of the inlet of the DECS.
- The data must be measured and recorded for a period long enough to determine the candidate engine's duty cycle but not less than 24 hours of representative, actual engine run time.
 - The data logging strategy must include a means to determine when the engine is actually running. This may include use of a data logging system that starts and stops automatically when the engine starts and stops, or a means to identify and remove data that correspond to the engine being off such as by simultaneously logging data from an engine revolutions per minute sensor or applying a temperature threshold that corresponds to a temperature just below the idle temperature of the engine.

- The automatic exclusion of data logged during engine shutdown does not have to be integrated in the data logging system but before the data is assessed to determine compatibility, the data logged during engine shutdown must be excluded.
- At least 5 representative engines or 10 percent of each group of similar engines, whichever is larger, must be data logged. All engines in a group of 5 or fewer must be data-logged. Data from engines outside the group cannot be used to support retrofit of engines within the group. A group of engines is similar if:
 - All engines belong to the same common ownership fleet.
 - All engines have the same make and model.
 - All engines are certified to the same PM emissions standard.
 - The maximum power ratings of all engines fall within a range of 100 horsepower (e.g. all engines rated between 250 and 350 hp).
 - None of the engines have exhaust gas recirculation, or all of the engines have external exhaust gas recirculation, or all of the engines have internal exhaust gas recirculation.
 - All engines are installed in similar vehicles or equipment that perform a like function and have similar duty cycles.
 - The installer must keep a record of the data for the duration of the warranty period of the DECS and make the data available to the DECS manufacturer and ARB upon request. The specific information that must be kept is specified in Section 2706(t)(3) of the Procedure.
 - Data logging completed prior to February 17, 2011 may be used provided it complies with the requirements of the DECS manufacturer.

Data Logging System Requirements

The exhaust temperatures must be measured and recorded using a stand-alone data logging system that is independent of the DECS that meets the following requirements:

- The recording accuracy must be within four degrees Celsius. The temperature sensor must have a range sufficient to accommodate the highest exhaust gas temperature measured plus 10 percent without exceeding the sensor's full scale rating while ensuring that 90 percent of the measured data are within 10 to 90 percent of the sensor's full scale rating.
 - The memory of the data logging system must be of sufficient size that data are not overwritten prior to retrieval.
 - All data must be recorded at a frequency of at least once every 5 seconds (0.2 Hertz).
 - The data logging system must record the time and date for each data point.
 - Data logging performed prior to February 17, 2011 must comply with the requirements of the DECS manufacturer.
- 3) All installations must strictly adhere to the requirements of the party that holds the verification for the diesel emissions control strategy, i.e., Nett Technologies, and must not relocate the original equipment manufacturers exhaust system:
- Over any occupied space (e.g., driver or passenger compartments); or
 - That would result in any noncompliance with any applicable safety standards; or
 - Any other location deemed unacceptable by Nett Technologies.

See your Owner's Manual for more information.

- 4) Any party that installs a diesel emission control strategy must offer a warranty pursuant to section 13 CCR § 2707(a)(2):

"The installer must furnish the owner with a copy of the following statement:

YOUR WARRANTY RIGHTS AND OBLIGATIONS

(Installer's name) must warrant that the installation of a diesel emission control system is free from defects in workmanship or materials which cause the diesel emission control system to fail to conform to the emission control performance level it was verified to, or to the requirements in the California Code of Regulations, Title 13, Sections 2700 to 2706. The warranty period and the extent of the warranty coverage provided by **(Installer's name)** must be the same as the warranty provided by Nett Technologies, and the same exclusions must apply.

OWNER'S WARRANTY RESPONSIBILITY

As the vehicle, engine, or equipment owner, you are responsible for presenting your vehicle, engine, or equipment, and diesel emission control system to (**Installer's name**) as soon as a problem with the installation is detected.

If you have questions regarding your warranty rights and responsibilities, you should contact Nett Technologies Inc. at 1-800-361-6388 or the California Air Resources Board at 9528 Telstar Avenue, El Monte, California 91731, or (800) 363-7664, or electronic mail: helpline@arb.ca.gov."

- 5) With respect to system labeling, the installer must ensure that the label is visible after installation. In the event that the original strategy label is damaged, destroyed, or missing, Nett Technologies shall issue an ARB approved replacement. The end user must notify Nett Technologies in the event of a damaged, destroyed, or missing original strategy label.
- 6) Proper engine maintenance is critical for the proper functioning of your diesel emission control strategy. Failure to document proper engine maintenance by the installer and end user, including oil consumption records, may be grounds for denial of a warranty claim for a failed component of a diesel emission control strategy. In addition, proper maintenance is critical for the diesel emission control strategy to function as intended. Failure to document proper diesel emission control strategy maintenance, including cleaning and/or ash removal of the system, replacement of consumables, and replacement of broken/failed parts, may be grounds for denial of a warranty claim for a failed component of a diesel emission control strategy. See your Owner's Manual for more information.
- 7) As an authorized installer, you are required to track all Warranty Claims. In addition, you must report annually by March 1st to Nett Technologies and CARB an Installation Warranty Report outlining all the installations of emission control technologies for the previous year, and any installation warranty claims for the previous year. See CARB memo ECAR-14-02 "Annual Reporting Format for Installers and Manufacturers of Diesel Emission Control Strategies".

NOTE: This is a list of key requirements and obligations. For a full list of obligations, please see 13 CCR § 2700-2711. Consequences may arise if the installer does not comply with these regulations and has not gone through the certified training. In the case of failure, if the end user pursues a warranty claim, CARB will issue a Violation Notice and the party involved could be subject to fines and/or other penalties.

Pre-installation Compatibility Assessment Criteria

Please go through and fill out the following check list and sign the form. If any of the shaded boxes have been checked, the engine/vehicle fails the pre-assessment and should not be retrofit without further consultation with Nett Technologies.

Pre-installation check list for Authorized Installer

Engine Characteristics and Maintenance History	Yes	No
Do the candidate engine characteristics meet all terms and conditions of the Executive Order letter (model year, engine family, engine configuration, etc.) for the retrofit device being considered?		
Does the candidate engine meet the exhaust gas temperature requirements for successful operation of the diesel emission control strategy?		
Does the diesel fuel used comply with terms and conditions of retrofit device Executive Order letter (sulfur level, biodiesel specification, fuel additives)?		
Does the engine oil consumption rate exceed the limit given by the manufacturer?		
Is there a history of turbocharger replacements? More than two in past 3 years?		
Is there a history of fuel injector replacements? More than two in past 3 years?		
Is there a history of cylinder valve replacements? More than once in past 3 years?		
Visual Inspection	Yes	No
Are there any visual integrity problems in the exhaust system (exhaust leaks – manifold to tailpipe)?		
Are there any audible combustion problems?		
Is the intake air filter in good condition?		
Are there any indications of air intake system leaks (visible signs of leaks at seal connectors, visible cracks in the charge air cooler, audible turbo spooling problems, high tailpipe opacity)?		
Are there any visible signs of engine oil or diesel fuel present in exhaust system?		
Are there any visible signs of leaks from the turbocharger seals?		
Are there any visible signs of excessive crankcase vent tube emissions or dripping oil at the vent tube?		
Has the fuel pump and governor setting been tampered with?		
Does the Engine Control Module show any active error codes?		
Is there available space for the retrofit?		
Is the smoke level within the specification of the engine Tier level?		

Authorized Installer Signature: _____ Date: _____