

## **Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation**

### **Removal or Failure of Verified Diesel Emission Control Strategies (VDECS) FAQ January 2013**

**Q - I installed a VDECS to comply with the Off-Road regulation. What happens if I remove the VDECS?**

A - The consequences of removing a VDECS (that has been installed on a vehicle subject to the Off-Road regulation) will depend on both why and when the VDECS was removed. In some cases, a fleet may be required to remove the VDECS from its fleet average calculations, and/or forfeit the Best Available Control Technology (BACT) credit earned for the VDECS installation; however, this will not always be the case. Please see the questions and answers below that address certain situations in which a VDECS will be allowed to be removed, and how compliance credits may be affected.

**Q - What happens if I remove a VDECS because of safety or visibility concerns?**

A - If a fleet removes a functioning VDECS that has not failed or been damaged for safety or visibility reasons, the fleet may keep the BACT credit earned from the installation of the VDECS but must remove the VDECS from its fleet average calculations. If the fleet cannot meet its fleet average target for the most recent compliance date without including the removed VDECS, the fleet owner must bring the fleet back into compliance through some other means within 90 days of the removal of the VDECS.

**Q - What if I want to remove a VDECS for reasons other than safety or visibility concerns?**

A - If a fleet removes a functioning VDECS that has not failed or been damaged for reasons other than safety or visibility, the fleet will forfeit any BACT credit earned from the installation of the VDECS and must remove the VDECS from its fleet average calculations. If the fleet cannot meet the compliance requirements for the most recent compliance date without including the removed VDECS and forfeited BACT credit, the fleet must bring the fleet back into compliance through some other means within 90 days of the removal of the VDECS.

**Q - What if I want to remove a VDECS for reasons other than safety or visibility concerns, and replace it with another VDECS?**

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A - If a fleet wants to remove a VDECS and replace it with another VDECS, no BACT credit will be forfeited as long as the replacement VDECS is 1) the highest level VDECS currently available, and 2) is installed within 90 days of the original VDECS removal. If the replacement VDECS does not meet both of the criteria above, the BACT credit earned from the original VDECS installation will be forfeited.

**Q - What happens if a VDECS fails or is damaged within its warranty period?**

A - If a VDECS fails or is damaged within its warranty period and cannot be repaired, the fleet must replace it with the same level or higher VDECS within 90 days of the failure. If after 90 days the failed/damaged VDECS is not replaced, the fleet must forfeit the BACT credit earned from the installation of the failed/damaged VDECS, and must remove the VDECS from its fleet average calculations.

**Q - What happens if a VDECS fails or is damaged outside of its warranty period?**

A - Before the fleet's final target date: If a VDECS fails or is damaged outside of its warranty period before January 1, 2023, for large and medium fleets, or before January 1, 2028, for small fleets, and cannot be repaired, and if the fleet cannot meet its fleet average target for the most recent compliance date without the failed VDECS, the fleet owner must replace the failed or damaged VDECS within 90 days of its failure, with the highest level VDECS available for the engine at time of failure. If after 90 days the failed/damaged VDECS is not replaced, the fleet may still retain the BACT credit earned from the installation of the failed/damaged VDECS, but must remove the VDECS from its fleet average calculations.

After the fleet's final target date: If a VDECS fails or is damaged outside of its warranty period on or after January 1, 2023 for large and medium fleets, or on or after January 1, 2028 for small fleets, and cannot be repaired, the fleet owner must replace the failed or damaged VDECS within 90 days of its failure with the highest level VDECS available for the engine at time of failure, regardless of whether the fleet met the applicable fleet average requirement for the most recent compliance date. If after 90 days the failed/damaged VDECS is not replaced, the VDECS must be removed from its fleet average calculations.

**Q - If I remove a VDECS and replace it with a new VDECS, will my vehicle be exempt from the BACT requirements for another six years?**

A - Yes. Section 2449.1(b)(2)(C) states that if medium or large fleet installs a highest level VDECS on a vehicle, that vehicle is exempt from the BACT

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requirements for six years from the VDECS installation date. This exemption applies to any VDECS installation, even if a VDECS was previously installed on a vehicle. Therefore, if a VDECS is removed and then is replaced with another VDECS, the fleet will receive a six year BACT exemption from the date of the replacement VDECS installation.

**Q - What happens if I remove a VDECS because I am replacing the engine in my vehicle?**

A - The consequences of removing a VDECS due to engine replacement will depend on whether or not a VDECS is installed on the replacement engine and – if so – when.

VDECS Replaced within 90 days of original VDECS removal: If a VDECS (new or original/used <sup>1</sup>) is installed on the replacement engine within 90 days of removing the original VDECS for the purposes of replacing the engine, the fleet may retain the BACT credit earned from installation of the original VDECS and will be awarded new credit (double credit if installed, or a new VDECS is purchased, before January 1, 2013 for a large fleet, January 1, 2016 for a medium fleet, and January 1, 2018 for a small fleet). The VDECS will remain in the fleet average calculations, and the vehicle will receive a six year BACT exemption from the date of the VDECS installation on the replacement engine.

VDECS not replaced within 90 days of original VDECS removal: If a VDECS is not installed within 90 days of removing the original VDECS for the purposes of replacing the engine, consequences will depend on whether or not the original VDECS is eligible to be reused:

a. If old VDECS could have been reused on the replacement engine: If all the following conditions are true, then the fleet will forfeit any BACT credit earned from the installation of the VDECS on the previous engine and must remove the VDECS from the fleet average calculations:

- The removed VDECS meets re-designation and verification requirements per Title 13, California Code of Regulations, Section 2706 (Verification Procedure, Warranty and In-Use Compliance

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<sup>1</sup> Before installing a previously used VDECS on a different engine or different vehicle (known as re-designation), the VDECS must meet all re-designation and verification requirements per Title 13, California Code of Regulations, Section 2706 (Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines), must be less than 10 years old, and the re-designation must be approved by the VDECS manufacturer. Additional information is available online at <http://www.arb.ca.gov/enf/advs/advs420.pdf> and <http://www.arb.ca.gov/diesel/verdev/swap/swap.htm>.

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Requirements for In-Use Strategies to Control Emissions from Diesel Engines), including being verified for the new engine,

- The removed VDECS is less than 10 years old,
- The VDECS manufacturer agrees to the re-use, and
- The VDECS is still within its warranty period.

If the VDECS meets the conditions above except that it is outside of its warranty period, the fleet may retain the BACT credit earned from the installation of the VDECS on the previous engine, but must remove the VDECS from the fleet average calculations.

- b. Old VDECS could not have been reused on the replacement engine: If the removed VDECS does not meet re-designation and verification requirements per the Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (for example, because it is not verified for the new engine), the removed VDECS is more than 10 years old, and/or the VDECS manufacturer does not agree to its re-use, the fleet may retain the BACT credit earned from the installation of the VDECS on the previous engine, but must remove the VDECS from the fleet average calculations.

Example 1: VDECS replaced within 90 days of original VDECS removal:

A large fleet (> 5,000 total maximum horsepower (hp)) installed a highest level particulate matter (PM) VDECS on a 300 hp engine in 2010, which earned them 600 hp in BACT credit (double credit for early VDECS installation) and reduced their fleet average due to the VDECS factor of 0.7 that was included in their fleet average calculation. In order to replace the engine after it had reached the end of its useful life, the fleet removed the VDECS in February 2013, and then installed the VDECS on a new 300 hp engine for the same vehicle within 90 days of removal from the old engine (the VDECS met all requirements for re-designation and verification for the replacement engine). The fleet would retain their original 600 hp in BACT credit and earn an additional 300 hp in BACT credit for the new VDECS installation, giving them a total of 900 hp in BACT credit. Additionally, the fleet average continues to benefit from the VDECS factor that was included in their fleet average calculations, and the vehicle remains exempt from BACT requirements.

Example 2: VDECS not replaced within 90 days of original VDECS removal (old VDECS could have been reused on the replacement engine)

A large fleet installed a highest level PM VDECS on a 200 hp engine in 2011, which earned them 400 hp in BACT credit (double credit for early VDECS

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installation) and reduced their fleet average due to the VDECS factor of 0.7 that was included in their fleet average calculation. On January 1, 2014, the fleet used all 400 hp of their credits to meet their BACT requirement for that year. The fleet's BACT requirement on January 1, 2015 is set at 500 hp. The fleet subsequently replaced the retrofitted engine with a like engine, and removed the VDECS. The VDECS met all re-designation and verification requirements for the replacement engine and was within its warranty period, but the fleet chose not to install the VDECS on the replacement engine within 90 days of removing it from the original engine. The fleet would then forfeit the 400 hp in BACT credit they had earned and used, which increases their BACT requirement for January 1, 2015 from 500 hp to 900 hp (since the 400 hp in early VDECS BACT credit was added to their existing 500 hp requirement). Additionally, the fleet average would no longer benefit from the VDECS factor in their fleet average calculation, and the vehicle is no longer exempt from BACT requirements.

Example 3: VDECS not replaced within 90 days of original VDECS removal (old VDECS could not have been reused on the replacement engine):

A large fleet installed a highest level PM VDECS on a 400 hp Tier 1 engine in 2013, which earned them 400 hp in BACT credit and reduced their fleet average due to the VDECS factor of 0.7 that was included in their fleet average calculation. The fleet used their 400 hp in BACT credit to meet their BACT requirement on January 1, 2015. In 2016, the fleet subsequently chose to repower the vehicle with a Tier 3 engine, so they removed the VDECS from the original Tier 1 engine. The VDECS was not verified for use with the new engine, so the fleet was not able to reuse it. The fleet would retain their original 400 hp in BACT credit that they used in 2015 and would earn an additional 400 hp in BACT credit for the engine repower to a higher tier. The fleet would no longer be allowed to use the VDECS factor in their fleet average calculations since no VDECS is installed, but the fleet average would benefit from the lower emission standard of the cleaner Tier 3 engine.

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