

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

Off-Road Engine Tier Lifetime November 2014

Q – Can I still add a Tier 0 or Tier 1 engine to my fleet?

A – As of January 1, 2014, a vehicle with a Tier 0 engine may not be added to any fleet, and large and medium fleets may no longer add a vehicle with a Tier 1 engine to their fleets. Small fleets may add Tier 1 engine vehicles to their fleet through 12/31/2015. However, adding older, higher-emission Tier 1 engines to a fleet can create a burden on a small fleet’s ability to meet the fleet average target rate in the future.

The restrictions for adding older vehicles to a fleet are further explained and illustrated below.

Adding Vehicle Requirements by Fleet Size and Calendar Year (Minimum Engine Tier Allowed to be Added to a Fleet)

Fleet Size	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Medium/Large	T2				T3					
Small	T1		T2						T3	

Ban on adding Tier 0s – Beginning January 1, 2014, a fleet may not add a vehicle with a Tier 0 engine.

Ban on adding Tier 1s – Beginning January 1, 2014, for large and medium fleets, and January 1, 2016, for small fleets, a fleet may not add any vehicle with a Tier 1 engine. The engine tier of any vehicle added to a fleet must be Tier 2 or higher.

Ban on adding Tier 2s – Beginning January 1, 2018, for large and medium fleets, and January 1, 2023, for small fleets, a fleet may not add a vehicle with a Tier 2 engine. The engine Tier of any vehicle added to a fleet must be Tier 3 or higher.

Q – How long is a Tier 0 or Tier 1 engine vehicle able to stay in my fleet before it is phased out or needs to be upgraded?

A – Fleets may continue to have Tier 0 and Tier 1 vehicles until turnover of the vehicle(s) is needed to meet fleet average or Best Available Control Technology

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(BACT) requirements. If a fleet is electing to comply by meeting the fleet average requirements, there is no order in which vehicles must be turned over (e.g., a Tier 2 vehicle can be turned over before a Tier 0 vehicle). If the fleet is electing to comply by meeting the BACT requirements, the fleet must turn over its Tier 0 and Tier 1 vehicles, except those in vehicles that qualify for an exemption from the BACT requirements, before BACT credit can be earned for turning over vehicles with Tier 2 and higher engines. In that case, the fleet can choose which Tier 0 and Tier 1 vehicles will comply first.

Example: Fleet L is a large fleet with 8,000 total max horsepower (hp), consisting of a mix of Tier 0, Tier 1, and Tier 2 vehicles. The fleet meets the fleet average requirement for the 2014 compliance date, but because the fleet does not yet meet the fleet average requirement for the following year, the fleet has a BACT requirement of 640 hp (8% of its total max hp) for the January 1, 2015 compliance date. The fleet has decided to replace with newer vehicles to meet their BACT requirement. The fleet must choose to turn over a minimum of 640 hp of their Tier 0 and/or Tier 1 vehicles to meet their BACT requirement.

Q – How long will my Tier 2 engine be exempt from BACT requirements?

A – All vehicles with a Tier 2 engine are exempt from BACT requirements through January 1, 2015 (i.e., the first turnover of or VDECS installations on Tier 2 or higher engines would be required between January 1, 2015 and December 31, 2015), provided that all Tier 0 and Tier 1 vehicles in the owner's fleet that do not qualify for an exemption under section 2449.1(b)(2) have been turned over. However, this only affects large fleets since medium and small fleets do not have emission performance requirements until January 1, 2017 and January 1, 2019, respectively. Additionally, a vehicle is exempt from BACT requirements if the vehicle is less than 10 years old from the date of manufacture. While most vehicles with Tier 2 engines were manufactured between 2001 and 2007, those over 750 hp may have been manufactured as late as 2010, which could make them exempt through 2020.

A small fleet with less than 500 total horsepower¹ may be able to keep Tier 2 engines in their fleet indefinitely. The fleet may choose to meet an optional compliance schedule, which would allow the fleet to comply by phasing out all of their Tier 0 and Tier 1 vehicles, and replacing them with Tier 2 or greater vehicles, as specified in section 2449(e), and shown below.

¹ To qualify for the optional compliance schedule, the fleet must be less than 500 total horsepower, including vehicles that would otherwise be exempt from the fleet size determination, such as those designated as low-use, 51%-99% agricultural use, dedicated snow-removal, awaiting sale, or used exclusively for emergency operations.

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Optional Compliance Schedule for Fleets with 500 HP or Less

Compliance Date: January 1 of Year	Percent of Fleet (by horsepower) Which Must Have a Tier 2 or Higher Engine
2019	25
2022	50
2026	75
2029	100

Q – I'm in the market for a new off-road vehicle; can I buy one with a Tier 3 engine, or does it have to be Tier 4?

A – Vehicle owners can purchase and add Tier 3 engine vehicles to their fleet at any time. However, since a Tier 4 engine has significantly lower oxides of nitrogen (NOx) emissions than a Tier 3 engine, it will have a more positive effect on the fleet's average emissions, which would make meeting the final fleet average target easier.

Q – If I purchase a Tier 3 engine now, how long will the Off-Road Regulation allow my fleet to keep it?

A – A fleet owner can have a Tier 3 engine in their fleet until turnover is needed to meet fleet average or BACT requirements, which will vary depending on the fleet's vehicle make-up. The final fleet average targets are equivalent to approximately an interim Tier 4 engine standard. This means it is possible for a fleet to be able to meet the final fleet average target with a mix of Tier 4 and Tier 3 vehicles.

Q – If I buy a Tier 4 engine now, will I have to replace it in the future?

A – No; the Off-Road Regulation exempts Tier 4 interim and Tier 4 final engines from BACT requirements.

Q – If most of my fleet is Tier 4, can I also keep some older engines in my fleet?

A – Yes; some older engines may be in each fleet as long as the fleet keeps their fleet average index equal to or less than their fleet average target, uses credit to meet the BACT requirements, or if the engines are exempt. For example, small fleets may install VDECS on older engines to comply with BACT, making the vehicles exempt from BACT for as long as the VDECS are installed, regardless of the Tier level of the engine. Additionally, vehicles with older engines that are operated less than 200 hours each year may stay in the fleet as low-use vehicles, since vehicles designated as year-by-year or permanent low-use are not required to meet emission performance standards.

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Q – Will all of my vehicles have to eventually be Tier 4?

A – Not necessarily; as stated above, the final fleet average targets are equivalent to approximately an interim Tier 4 engine standard. This means that it may be possible for a fleet to be able to meet the final target with a mix of Tier 4 and Tier 3 vehicles, or even older vehicles if designated as low-use or otherwise exempt from BACT requirements.

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