

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

Early Credit FAQs

Q – What are early credits? How can they be earned? Why would a fleet want to obtain early credits?

A – Credits can be earned when a fleet takes certain actions prior to their initial compliance dates. Early credits can be earned in three ways: repowering vehicles with cleaner engines; retiring older vehicles; and retrofitting an engine with ARB-Verified Diesel Emission Control Strategy (VDECS). By taking early actions and earning early credits, a fleet can reduce or spread out the regulation's compliance cost in the first few years. Credits can be applied and used later when the regulation takes effect in order to postpone some or all of the actions required for that year.

Q – How can you earn early credit from repowering your vehicles?

A – Replacing an old engine with a higher Tier engine greatly reduces the PM and nitrogen oxide (NOx) emissions. Early credits can be earned by upgrading to a newer Tier 1, 2, or 3 Engine before March 1, 2009. The different Tier classifications can be found at: http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road_Diesel_Std.xls. On or after March 1, 2009, a repower must be to a Tier 2 or higher level to count towards compliance with the regulation.

Consider, for example, a large fleet with a total of 5,001 horsepower (hp) that repowers a scraper with a Tier 0 engine, with a 400 horsepower (hp) Tier 1 engine in 2008. Such a fleet will get closer to meeting its fleet average target for NOx and can bank 400 hp in carryover turnover credit. Then, on March 1, 2010, if the fleet does not meet the 2010 fleet average target for NOx, instead of meeting the Best Available Control Technology (BACT) requirements to turn over 8 percent of 5,001 hp, i.e., 400 hp, the fleet may simply use its banked 400 hp in credit and postpone any required turnover to the following year.

Q – How can you earn early credit from retiring your vehicles?

A – It is normal during the course of business for fleets to retire old vehicles and upgrade to new ones (i.e., turnover). The regulation only grants early credit for turnover that clearly exceeds normal expected turnover. Early

credit is only granted to fleets that retire Tier 0 vehicles at an average rate greater than 8 percent of their hp per year during the period from March 1, 2006 to March 1, 2009. Thus, a fleet can only accumulate early credit for turnover exceeding 24 percent of its hp during that three-year period.

Consider, for example, a large fleet with a total of 10,001 hp that retires half its hp, 5,000 hp, between March 1, 2006 and March 1, 2009. Such a fleet can bank 2,600 hp (5,000 hp minus 24 percent of its hp, i.e., 2,400 hp) in carryover turnover credit. Then, on March 1, 2010, if the fleet with its remaining 5,001 hp does not meet the 2010 fleet average target for NOx, it may choose not to meet the BACT requirements by turning over 8 percent of 5,001 hp (i.e., 400 hp). Instead, the fleet may simply use 400 hp of its banked credit and postpone any required turnover to the following year. The fleet could take the same approach every year with the remaining carryover turnover credit and thereby avoid any required turnover until March 1, 2016.

Year	2010	2011	2012	2013	2014	2015	2016
Required	400	400	400	400	400	400	400
Remaining Credit	2200	1800	1400	1000	600	200	0*

* Requires an additional 200 HP of emission reductions from a repower, retrofit, or retirement assuming that there are no further purchases of equipment.

Q – How can you earn early credit from retrofitting your vehicle with a diesel particulate filter (PM VDECS)?

A – When a highest level VDECS is installed on an engine before January 1, 2010¹, that fleet will get double credit, meaning that the fleet will receive carryover retrofit credit equal to double the horsepower of the engine on which the highest level VDECS is installed. At this time for most engines affected by the regulation, the highest level VDECS are diesel particulate filters (DPFs). A list of VDECS may be found at: <http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm>. A partial list of diesel-emission retrofit device suppliers and installers is available at: <http://www.arb.ca.gov/msprog/publicfleets/retrofitdistributorslist.pdf>.

Beginning in 2010 for large fleets, 2013 for medium fleets, and 2015 for small fleets, the regulation requires fleets to meet diesel particulate matter (PM) fleet averages, or apply the highest level VDECS to 20 percent of their hp per year. Consider, for example, a large fleet with total horsepower of 10,000 hp that applies highest level VDECS to 1,000 hp of its engines before January 1, 2010. Such a fleet can bank 2,000 hp

¹ The regulation originally included a deadline of March 1, 2009 for double retrofit credit but the Board approved an extension of this deadline by 10 months until January 1, 2010.

While this document is intended to assist fleets with their compliance efforts, it is the sole responsibility of fleets to ensure compliance with the In-Use Off-Road Diesel Vehicle Regulation.

(1,000 hp times 2) in carryover retrofit credit. Then, on March 1, 2010, if the fleet does not meet the 2010 fleet average target for PM, it may choose not to meet the BACT requirements to retrofit 20 percent of 10,000 hp (i.e., 2,000 hp). Instead, the fleet may use its 2,000 hp of banked carryover retrofit credit and postpone any required retrofitting to the following year.

Q – How can you earn early credit from retrofitting your vehicle with a NOx VDECS?

A – If a fleet installs a VDECS that has been verified as achieving NOx reductions before March 1, 2009, it receives carryover turnover credit equal to the Verified Percent NOx Reduction divided by 60 percent multiplied by the hp on which the VDECS is installed. For example, if a fleet installed the Extengine diesel oxidation catalyst and selective catalytic reduction system, which is verified to achieve 80 percent in NOx reductions, on a 200 hp engine, it would receive 267 hp in carryover turnover credit (i.e., $(80/60) \times 200 = 267$).

Q – How do I use early credit?

A – Fleets can use carryover turnover credit to postpone being required to install highest level VDECS, repower, or retire vehicles.

Q – What recordkeeping do I need to do to claim my early credits?

A – In order to claim credit, fleets must record the vehicle type, manufacturer, model, model year, and vehicle serial number as well as the engine manufacturer, engine model, engine family, engine serial number, engine model year, and maximum power for the affected vehicle. The fleet must also keep records of:

- Retrofitting – for each vehicle within the fleet that was retrofit with the highest level VDECS available at the time of retrofit prior to January 1, 2010, the date of the retrofit, and whether the Carl Moyer Incentive Program funding was used;
- Repowering – for each vehicle within the fleet that was repowered with a Tier 1 or newer engine prior to March 1, 2009, the date of repower;
- Retiring – engine and vehicle information as described above, for each and every vehicle within the fleet between March 1, 2006 and March 1, 2009, as well as the date of any purchase and/or retirement between those dates.

Q – What if I order a VDECS early but its installation is delayed until after March 1, 2009?

- A – If a VDECS is ordered early, but its installation is delayed until after January 1, 2010, as long as the order is placed before *September 1, 2009*, the fleet will still earn double credit. This double credit is allowed because the fleet took the initiative to install the VDECS early and the delay is beyond the fleet's control. In order to document when the order was placed, the fleet should retain proof of the VDECS order date in its records.