



Do you **import** or **manufacture** off-road diesel engines or machines?

If YES, legal requirements may apply to you.

The Off-Road Compression-Ignition Engine Emission Regulations contribute to improved air quality. Standards for these engines were first introduced in 2006, as part of the Government of Canada's actions to improve air quality in order to protect the environment and the health of Canadians. The implementation of these regulations has contributed to reductions in emissions of smog-forming pollutants, such as nitrous oxides and particulate matter, which have negative environmental and health effects. Stricter standards, called **Tier 4**, came into force on **January 16, 2012**, leading to further reductions in emissions from this sector. The emission standards and the testing procedures are aligned with those of the United States Environmental Protection Agency (U.S. EPA).

To whom and to what types of engines do the Regulations apply?

The Regulations apply to all persons **importing or manufacturing** off-road compression-ignition engines, also referred to as off-road diesel engines, whether these are on their own or already installed in machines.

Off-road diesel engines are typically found in **construction, forestry and agricultural** machines, which may include tractors, bulldozers, heavy haulers and portable generator sets.

Will all engines and machines entering Canada after January 16, 2012, need to immediately meet the new Tier 4 standards?

No. The gradual implementation of the standards based on engine power, as well as the transition engine provisions, will permit the continued import of engines meeting previous standards for a period of time. Specifically, starting at the end of 2014, engines in some power categories will be required to meet the stricter Tier 4 standards. By the end of 2018, all engines will be required to meet the new Tier 4 standards. There is no limit on the number of transition engines that can be imported during the phase-in period and/or prior to the coming into effect of Tier 4 requirements for a given engine category.



What are the main requirements of the Regulations?

The Regulations set requirements for importers and manufacturers of off-road diesel engines. The requirements include:

- meeting the prescribed engine emission standards (which depend on model year) and demonstrating compliance with the standards;
- labelling of engines;
- reporting; and
- keeping records.

Failure to comply with these obligations can result in fines of up to \$1,000,000 and/or up to three (3) years of imprisonment.



What are transition engines?

A transition engine is an engine that is installed in, or on, a machine that meets a previous emission standard. The transition engine provisions allow for the import and manufacture of these engines for set time periods (see tables 1 and 2). Transition engine standards and time frames are based on the U.S. EPA Flex engine program.

The quantity of these transition engines will not be limited, but will be monitored through annual reporting. Environment Canada will be assessing the proportion of transition engines imported or manufactured into Canada in comparison to the proportion in the United States. If the use of the transition engine provisions, in comparison to their use in the United States, becomes excessive, Environment Canada will consider modifying the provisions in future.

What are the Tier 4 coming into force dates and transition engine time frames?

Table 1 shows the gradual coming into force of the final Tier 4 standards per engine power category. Table 2 shows the general availability transition engine time frames per power category. To illustrate, using an example of an engine rated at 225 kW, the final Tier 4 standards would begin to apply starting with the 2014 model year. However, the transition engine provisions would allow the import or manufacture of 225 kW engines meeting Tier 3 standards up until December 31, 2017. It is in 2018 that all 225 kW engines imported into or manufactured in Canada will need to meet the Tier 4 standards.

Table 1: Gradual Coming Into Force of the Final Tier 4 Standards

Power (kW)	Coming into force of the Final Tier 4 standards (model year)
kW < 19	2012
19 ≤ kW < 56 ¹	2013
56 ≤ kW < 130 ²	2014
130 ≤ kW ≤ 560 ²	2014
kW > 560	2015

¹ For this power category, Interim Tier 4 and Final Tier 4 standards are identical for the 2013 and 2014 model years.

² For these power categories, Interim Tier 4 and Final Tier 4 standards are identical for the 2014 model year.

Table 2: General Availability Transition Engine Time Frames

Power (kW)	Emission standard	End of general availability provisions ¹
kW < 19	Tier 2	December 31, 2014
19 ≤ kW < 37	Tier 2	December 31, 2014
37 ≤ kW < 56	Tier 2	December 31, 2014
56 ≤ kW < 75	Tier 3	December 31, 2018
75 ≤ kW < 130	Tier 3	December 31, 2018
130 ≤ kW ≤ 560	Tier 3	December 31, 2017
kW > 560 ²	Tier 2	December 31, 2017

¹ There are also “delayed” availability provisions where engines may meet Interim Tier 4 standards (see **Further information** below).

² For this power category, engines may continue to meet Tier 1 emission standards until December 31, 2012.

How is compliance with the Regulations demonstrated?

Generally, compliance with the Regulations may be demonstrated in one of two ways: if the engine has been certified by the U.S. EPA, compliance may be demonstrated by providing proof of the EPA certification; in the event that the engine is not EPA-certified, compliance must be demonstrated by providing proof that the engine meets the applicable standards, which will usually involve the importer or engine manufacturer performing emissions testing of the engine.

Further information

For more detailed information, please consult the Regulations and the related guidance documents on the CEPA registry website, at www.ec.gc.ca/lcpe-cepa/eng/regulations/detailReg.cfm?intReg=88.

Further information can also be obtained by contacting Environment Canada at 819-997-2800 / 1-800-668-6767 (in Canada only) or VehicleandEngineInfo@ec.gc.ca.

Disclaimer

This document is for information purposes only and does not in any way supersede or modify the *Off-Road Compression-Ignition Engine Emission Regulations* and any amendments, or offer any legal interpretation of those Regulations.

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