

**ENVIRONMENT CANADA**

**GUIDANCE DOCUMENT**

***OFF-ROAD COMPRESSION-IGNITION  
ENGINE EMISSION REGULATIONS***

**under the  
*Canadian Environmental Protection Act, 1999***

**Disclaimer**

This document provides guidance only. It does not in any way supersede or modify the *Canadian Environmental Protection Act, 1999* or the *Off-Road Compression-Ignition Engine Emission Regulations*. In the event of an inconsistency between this document and the Act and/or the Regulations, the Act and the Regulations prevail.

**Transportation Division  
Environment Canada**

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## 1. INTRODUCTION

This guidance document provides information about the requirements of the *Off-Road Compression-Ignition Engine Emission Regulations* established under the authority of Part 7, Division 5 of the *Canadian Environmental Protection Act, 1999* (CEPA 1999).

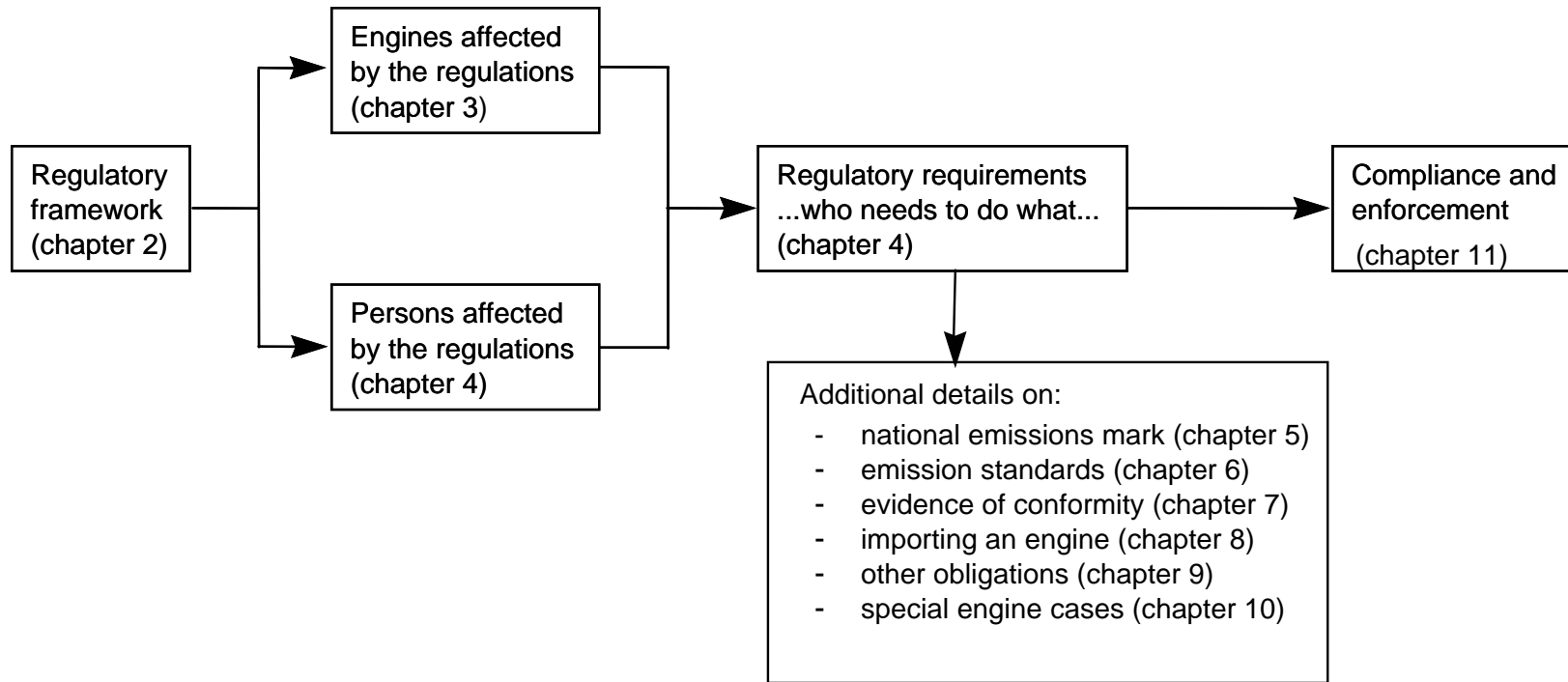
The text of CEPA 1999 is not repeated in the Regulations. This guidance document cites both the Regulations and the Act to aid in understanding the requirements of the Regulations and the Act.

The Regulations are aligned with the corresponding U.S. Environmental Protection Agency (EPA) rules for off-road compression-ignition engines. Engines sold concurrently in Canada and the United States and covered by a valid EPA certificate of conformity can enter Canada with a declaration at the border. For other engines, the evidence of conformity must be obtained and produced in a form and manner that is satisfactory to the Minister.

Figure 1 illustrates how this document is organized. Each chapter includes a short description of a specific aspect of the Regulations followed by additional details, typically in question and answer format.

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**Figure 1: Structure of the Guidance Document**

## 2. REGULATORY FRAMEWORK

The *Off-Road Compression-Ignition Engine Emission Regulations* establish, under the authority of the *Canadian Environmental Protection Act, 1999*, Canadian emission standards aligned with those of the EPA for compression-ignition engines used in off-road applications.

The text of the Regulations can be retrieved from the CEPA Environmental Registry at <http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=88>.

### 2.1 What is the *Canadian Environmental Protection Act, 1999 (CEPA 1999)*?

The *Canadian Environmental Protection Act, 1999 (CEPA 1999)*, “an Act respecting pollution prevention and the protection of the environment and human health in order to contribute to sustainable development”, is Canada’s principal piece of federal environmental protection legislation. Part 7, Division 5, contains the legislative authority for making regulations for the purpose of controlling vehicle, engine and equipment emissions.

The text of CEPA 1999 can be retrieved at <http://laws.justice.gc.ca/en/C-15.31/index.html> or at [http://www.ec.gc.ca/CEPARegistry/the\\_act/](http://www.ec.gc.ca/CEPARegistry/the_act/).

### 2.2 What is the CEPA Environmental Registry?

The CEPA Environmental Registry is a comprehensive source of public information relating to activities under CEPA 1999. In addition to providing up-to-date copies of current CEPA 1999 instruments (e.g., regulations, voluntary agreements), the primary objective of the Registry is to encourage and support public participation in environmental decision-making, by facilitating access to documents arising from the administration of the Act.

The CEPA Environmental Registry is accessible at <http://www.ec.gc.ca/ceparegistry>.

### 2.3 What is the *Code of Federal Regulations*?

The *Code of Federal Regulations* is a codification of the general and permanent rules published by the U.S. Federal Government. In this guidance document, the expression “CFR” always means Title 40, Part 89, *Control of Emissions from New and In-Use Nonroad Compression-Ignition Engines* of the Code of Federal Regulations. The text of the CFR can be retrieved at <http://www.gpoaccess.gov/cfr/index.html>.

The Regulations incorporate portions of the CFR by reference, in order to align the vehicle and engine emission standards of the two countries. Subsection 1(2) of the Regulations states that incorporation by reference to the CFR shall be read as **excluding**

- (1) references to the EPA or its Administrator exercising discretion in any way;
- (2) alternative standards related to the averaging, banking and trading of emission credits, to small volume manufacturers or to financial hardship; and
- (3) standards or evidence of conformity from any other jurisdiction or authority other than the EPA.

#### **2.4 Are the Regulations identical to the EPA rules?**

No. While the overall missions of Environment Canada and EPA are quite similar, the constitutions and laws of Canada and the U.S. differ. There are differences in how environmental protection regulations are developed and enforced in Canada and in the U.S.

The Regulations were developed to align Canadian emission standards with those of the EPA. Ancillary provisions are as similar as possible, considering the different regulatory frameworks in Canada and the U.S.

#### **2.5 Certain provisions of the Regulations state that information can be requested by or sent to the Minister. Who is the Minister?**

The “Minister” is the federal Minister of the Environment. Where the Regulations require information to be submitted to the Minister, unless otherwise directed, it should be sent to:

Director, Transportation Division  
Clean Air Directorate  
Environment Canada  
351 St-Joseph Blvd  
Gatineau, Quebec K1A 0H3  
fax: 819-953-7815  
phone: 819-994-3706

An official of Environment Canada may also make a request for information, under CEPA 1999 or the Regulations, on behalf of the Minister. The request will indicate if the information is to be sent to the Minister or to the official whose name and co-ordinates will appear on the notice.



### 3. ENGINES SUBJECT TO THE REGULATIONS

The Regulations prescribe standards for off-road engines that operate as reciprocating, internal combustion engines, other than those that operate under characteristics significantly similar to the theoretical Otto combustion cycle and that use a spark plug or other sparking device.

The Regulations apply to engines that are typically diesel-fuelled and found in construction, mining, farming and forestry machines, such as tractors, excavators and log skidders.

The Regulations apply to engines manufactured in Canada that are “transported within Canada” (i.e., transported between provinces and territories) and to engines imported into Canada.

These Regulations do not apply to compression-ignition engines that are subject to the *On-Road Vehicle and Engine Emission Regulations*. These Regulations are available at:

<http://www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=65>.

Section 3.4 of this guidance document identifies other categories of compression-ignition engines that are not subject to these Regulations.

#### 3.1 What is an off-road engine?

An off-road engine is defined as an internal combustion engine that is used or designed to be used:

- (1) by itself and that is capable of being carried or moved from one location to another;
- (2) in or on a machine that is designed to be or capable of being carried from one location to another (e.g., a portable generator);
- (3) in or on a machine that is self-propelled;
- (4) in or on a machine that serves a dual purpose by both propelling itself and performing another function (e.g., a tractor); or
- (5) in or on a machine that is intended to be propelled while performing its function (e.g., a transport refrigeration unit).

Under section 149 of CEPA 1999, engines designed to propel an aircraft or rolling stock (e.g., a locomotive) and compression-ignition engines rated at 37 kW and above that are designed to propel a vessel (i.e., a boat, ship or craft designed, used or capable of being used solely or partly for navigation in, on, through or immediately above water) are not within the scope of Part 7, Division 5 of CEPA 1999 and are not subject to the Regulations.

The definition of off-road engine does not include engines designed to be used in stationary applications, such as a fixed generator-set or pump.

### **3.2 What is a machine?**

“Machine” means anything, including a vehicle, device, appliance or implement, that is powered by an engine. A tractor, an excavator, or a portable generator, for example, powered by a compression-ignition engine would be considered a machine for the purpose of these Regulations. In the CFR, the words “nonroad equipment” or “nonroad vehicle” generally have the same meaning as “machine” in the Regulations.

While most provisions of the Regulations apply specifically to engines, machines are also covered if the machine contains an engine covered by these Regulations.

### **3.3 What is the difference between “equipment” and “machine”?**

The word “equipment” is often used in everyday language as a general descriptor for tools or machinery powered by off-road engines, such as in the expression “construction equipment”.

Within the context of CEPA 1999 and its regulations under Part 7, Division 5, the word “equipment” has a specific meaning. Under section 149 of CEPA 1999 the word “equipment” means “any prescribed equipment that is designed for use in or on a vehicle or engine”. This legislative meaning of “equipment” is intended to address engine accessories including but not limited to catalytic converters or fuel systems.

The Regulations use the term “machine” as meaning a vehicle, device, appliance or implement powered by an engine.

### **3.4 Which categories of compression-ignition engines are not subject to the Regulations?**

The compression-ignition engines that are not subject to the Regulations are those that:

- (a) are designed exclusively for competition and with features that are not easily removed and characteristics that render their use other than in competition unsafe, impractical or unlikely;
- (b) are regulated by the *On-Road Vehicle and Engine Emission Regulations*;
- (c) are designed to be used exclusively in underground mines;
- (d) have a per-cylinder displacement of less than 50 cubic centimetres;
- (e) are designed to be used in military machines designed for use in combat or combat support;
- (f) are being exported and that are accompanied by a written statement establishing that they will not be sold or used in Canada; or

(g) are designed to be used in a vessel and for which the fuel, cooling and exhaust systems are integral parts of the vessel. Auxiliary engines used on vessel (e.g., a crane or a portable generator) are, however, subject to the Regulations.

Additional information concerning engines designed to be used exclusively in underground mines is given in Chapter 10 of this guidance document.

### **3.5 Do all compression-ignition engines that are subject to the Regulations have to conform to all provisions of the Regulations?**

No, the following engines must conform only to certain provisions of the Regulations:

- (1) engines that are imported into Canada solely for purposes of exhibition, demonstration, evaluation or testing;
- (2) engines that are being imported exclusively for use by a visitor to Canada or by a person passing through Canada to another country;
- (3) engines that are in transit through Canada, from a place outside Canada to another place outside Canada;
- (4) engines that do not meet the requirements of the Regulations at importation or when leaving a factory but that will meet these requirements before they leave the possession or control of the *company*<sup>1</sup>, such as incomplete engines;
- (5) replacement engines as this term is defined in subsection 12(1) of the Regulations;
- (6) transition engines as this term is defined in subsection 13(1) of the Regulations; and
- (7) engines for which the Governor-in-Council has granted an exemption.

Additional details on special provisions in respect of these engines are given in Chapter 10 and Section 6.6 of this guidance document.

All other engines must conform to all provisions of the Regulations.

### **3.6 When do the Regulations come into force?**

The Regulations came into force on January 1, 2006, except for the sections related to the national emissions mark which came into effect on February 8, 2005. Additional details on the national emissions mark are provided in Chapter 5 of this guidance document.

The emission standards apply to engines of the 2006 and later model years that are manufactured on or after January 1, 2006.

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<sup>1</sup> Chapter 4 of this guidance document provides details on the exact meaning of “company” under CEPA 1999.

### 3.7 What is a model year?

Model year is the year determined by the manufacturer to designate the period of production of a particular model of an engine and is defined in section 4 of the Regulations.

The model year can span a period of up to two calendar years less one day but can include only one January 1. The model year corresponds to the calendar year during which production occurred or the calendar year during which January 1 fell. For example, a line of engines produced between March 1, 2006 and January 31, 2007 would be 2007 model year engines.

## 4. PERSONS AFFECTED BY THE REGULATIONS

The Regulations apply mainly to companies and, in section 149 of CEPA 1999, a *company* is defined as a “person” who

- (a) is engaged in the business of manufacturing vehicles, engines or equipment in Canada;
- (b) is engaged in the business of selling to other persons, for the purpose of resale by those persons, vehicles, engines or equipment obtained directly from a person described in paragraph (a) or the agent of such person; or
- (c) imports any vehicle, engine or equipment into Canada for the purpose of sale.

To highlight that “*company*” under CEPA 1999 means only specific types of commercial entities, the word will be italicized throughout the rest of this guidance document.

Four different types of persons are potentially affected by the Regulations:

- a Canadian engine manufacturer;
- a distributor of Canadian engines or machines containing Canadian engines;
- an importer of engines or machines for the purpose of sale ; and
- a person who is not a *company* importing an engine or machine.

### 4.1 Who is a Canadian engine manufacturer?

A person engaged in the business of manufacturing vehicles, engines or equipment in Canada is a *company* under CEPA 1999.

Under CEPA 1999, “to manufacture” includes any process of assembling or altering any engine before its sale to the first retail purchaser. Therefore a person who modifies an engine before it is sold, for example by adapting a diesel

engine to run on natural gas, would be considered to be a *company* for the purposes of the Regulations.

The Regulations apply to engines manufactured in Canada if they are “transported within Canada” (i.e., transported between provinces or territories). Engines manufactured in Canada that are transported between provinces or territories require a national emissions mark (see Chapter 5).

#### **4.2 Who is a distributor of Canadian engines?**

A person who is engaged in the business of selling to other persons, for the purpose of sale by those persons, engines obtained directly from a Canadian engine manufacturer or its agent is a distributor of Canadian engines and is a *company* under CEPA 1999.

Engines manufactured in Canada that are transported between provinces or territories require a national emissions mark (see Chapter 5). Only one national emissions mark is required per engine.

#### **4.3 When is an importer a *company* under CEPA 1999?**

Under CEPA 1999, a *company* is a person who imports engines or machines powered by these engines for the purposes of sale. Section 3 of CEPA 1999 defines “to sell” as including to offer for sale or lease, have in possession for sale or lease or deliver for sale or lease.

A person importing engines for a purpose other than sale is not a *company* under CEPA 1999. Therefore, an individual or commercial entity importing engines directly for their own use is not considered to be a *company* for the purposes of the Regulations. For example, a construction business directly importing a backhoe to be used by its employees would not be considered a *company*. However, there are regulatory requirements for this category of persons.

#### **4.4 What are the regulatory requirements for each type of “person” affected by the Regulations?**

Table 1 provides a summary of the requirements for the four different categories of persons affected by Regulations. When necessary, more detailed information is provided elsewhere in the guidance document, as indicated in the following table.

**Table 1: Summary of Regulatory Requirements**

	Canadian engine manufacturer	Distributor of Canadian engines	Engine or machine importer		Chapter in the guidance document
			For the purpose of sale	For other purposes	
Company under CEPA 1999?	✓	✓	✓		4
Affix the national emissions mark	✓	✓			5
Supply engines that comply with standards	✓	✓	✓	(1)	6
Provide evidence of conformity	✓	✓	✓(2)	(1)	7
Submit an importation declaration			✓	✓	8
Prescribed label is affixed to an imported engine			✓	✓	8
Provide maintenance instructions	✓	✓	✓(2)		9
Cause notice of defect to be given, if necessary	✓	✓	✓		9

(1) The presence of the prescribed label on the engine is considered to be evidence that the engine conforms to the prescribed emission standards when it is imported by a person for purposes other than sale.

(2) The *company* may arrange with the engine or machine manufacturer that certain required information be provided by the engine or machine manufacturer on behalf of the *company*.

#### 4.5 How are foreign engine manufacturers affected by the Regulations?

Engines produced by foreign manufacturers and imported into Canada must conform to CEPA 1999 and the Regulations.

Importers may require the assistance of a foreign engine manufacturer to demonstrate compliance with the Regulations. In particular, the assistance of foreign engine manufacturers may be required to ensure that engines imported into Canada meet the prescribed standards and to provide evidence of conformity to that effect. These requirements are described in Chapters 6 and 7 of this guidance document.

### 5. NATIONAL EMISSIONS MARK

*Companies* are only required to affix the national emissions mark to prescribed engines that are manufactured in Canada for sale in Canada. Section 152 of CEPA 1999 combined with subsection 5(3) of the Regulations prohibits a *company* from transporting engines manufactured in Canada between provinces or territories unless the engine has a national emissions mark applied to it.

The national emissions mark is the symbol shown in Figure 2. Section 150 of CEPA 1999 specifies that the national emissions mark is a national trademark and establishes limitations on any person's use of the mark (or the use of any other mark in such a manner that it is likely to be mistaken for a national emissions mark). *Companies* must obtain the Minister's authorization to use the national emissions mark.



**Figure 2: The National Emissions Mark**

**5.1 Are there any conditions regarding affixing a national emissions mark to an engine?**

Yes. Section 153 of CEPA 1999 prohibits a *company* from affixing the national emissions mark to any engine unless the stated requirements are met. The emission standards that the engine must meet are prescribed in sections 9 to 13 of the Regulations.

**5.2 When do the provisions regarding the national emissions mark come into effect?**

Sections 6 to 8 of the Regulations, which relate to the national emissions mark, came into effect on February 8, 2005 to allow companies to seek authorization to affix the national emissions mark to engines manufactured before January 1, 2006 that meet applicable 2006 model year standards.

The remaining sections of the Regulations came into effect on January 1, 2006.

**5.3 Who can affix the national emissions mark?**

Under section 151 of CEPA 1999, a *company* must have received an authorization from the Minister to affix the national emissions mark to vehicles, engines or equipment.

**5.4 How does a *company* obtain the Minister's authorization to use the national emissions mark?**

A *company* must submit an application to obtain the Minister's authorization to use the national emissions mark. The information to be included in the application is set out in section 6 of the Regulations. A *company's* application must be signed by a person who is authorized to act on behalf of the *company*.

When the Minister authorizes a *company* to use the national emissions mark, a unique identification number will be assigned to the *company*.

**5.5 What information could satisfy the requirement of paragraph 6(2)(d) of the Regulations to show that the *company* is capable of verifying compliance with the standards?**

Information to show that a *company* is capable of verifying compliance with the regulatory standards may be presented in various forms, including but not limited to the following:

- (1) Recent experience in obtaining EPA emission certification



When applicable, a *company* may provide the following statement:

"The *company* has been issued certificates of conformity by the U.S. EPA within the last five years as evidence of conformity with U.S. regulatory emission standards for engines covered under the *Off-Road Compression-Ignition Engine Emission Regulations*"

## (2) Technical Information

The *company* may provide technical information to show that it is capable of verifying compliance with the standards set out in the Regulations including, but not limited to, information describing the capabilities of the emission test facilities operated by, or on behalf of, the *company* to produce evidence that its engines conform to the standards set out in the Regulations. This may include evidence that the emission test facility used on behalf of the *company* has produced test results used in support of a successful application to the EPA for the issuance of a certificate of conformity.

The Minister will assess the information provided to determine if the *company* meets the requirements for being authorized to affix the national emissions mark on engines.

## **5.6 Do imported engines require the national emissions mark?**

No. Subsection 153(1) of CEPA 1999 directly requires that imported engines conform to the requirements of the Regulations as a condition for their importation into Canada. Accordingly, affixing a national emissions mark to imported engines is not required to demonstrate such conformity. Nonetheless, a *company* that is authorized by the Minister to use the national emissions mark may affix the mark to engines that are manufactured outside Canada, provided they conform to the requirements of the Regulations.

## **5.7 Are there any requirements regarding the size, location and manner of affixing the national emissions mark to an engine?**

Yes. Requirements regarding the size, location and manner of affixing the national emissions mark to machines or engines are addressed in section 7 of the Regulations.

The national emissions mark shall be at least 7 mm in height and 10 mm in width. The identification number assigned by the Minister to the *company* (described in section 5.4 of this document) shall be in figures that are at least 2 mm in height, immediately below or to the right of the national emissions mark.

The national emissions mark shall be located on or immediately next to the EPA engine information label or, if there is no such label, in a visible, readily accessible location.

The national emissions mark shall be on a label that is permanently applied, is resistant to any weather condition, and bears legible and indelible inscriptions.

## **6. EMISSION STANDARDS**

The Regulations prescribe that the engines conform to applicable standards and provisions for:

- a) emission control systems and defeat devices (section 9 of the Regulations);
- b) exhaust emissions (section 10 of the Regulations);
- c) crankcase and smoke emissions (section 10 of the Regulations); and
- d) adjustable parameters (section 11 of the Regulations).

These standards are aligned with EPA rules for off-road compression-ignition engines as published in the CFR. Environment Canada plans to maintain alignment with the U.S. EPA 2008 (Tier 4) rules for off-road compression-ignition engines, through a separate regulatory process.

Under section 14 of the Regulations, an engine covered by a current EPA certificate of conformity and sold concurrently in Canada and the U.S. is deemed to conform to the Canadian emission standards.

### **6.1 What is an emission control system?**

Subsection 1(1) of the Regulations defines an emission control system as “any device, system or element of design that controls or reduces the exhaust emissions from an engine”.

### **6.2 Are there restrictions on an emission control system installed on a prescribed engine?**

Yes. Subsection 9(1) of the Regulations prescribes that an emission control system shall not release a substance that causes air pollution that would not have been released if the system were not installed. In addition, the emission control system shall not make the engine or the machine in which the engine is installed unsafe, or endanger persons or property near the engine or machine.

### **6.3 What is a defeat device?**

A defeat device means any device, system, or element of design which senses operation outside emission certification test conditions and reduces emission control effectiveness. The Regulations incorporate by reference the CFR definition of defeat device.

Under subsection 9(2) of the Regulations, no engine can be equipped with a defeat device.

#### 6.4 What are the exhaust emission standards?

The exhaust emission standards are aligned with those of the EPA and the Regulations incorporate by reference sections 89.112, 89.113 and 89.120 of the CFR.

The exhaust emission standards are divided into nine classes based on engine power. The Regulations establish a maximum level of combined non-methane hydrocarbon and oxides of nitrogen (NMHC + NO<sub>x</sub>), carbon monoxide (CO) and particulate matter (PM) emissions for each engine class. The standards are defined as mass of pollutant per unit of engine work expressed in grams per kilowatt-hours.

Table 2 provides a summary of the exhaust emission standards.

**Table 2: Engine Classes and Exhaust Emission Standards**

Engine power	Tier	Effective Date (Model Year)	NMHC +NO <sub>x</sub> (g/kWh)	CO (g/kWh)	PM (g/kWh)
kW<8	2	2006 and later	7.5	8.0	0.80
8≤kW<19	2	2006 and later	7.5	6.6	0.80
19≤kW<37	2	2006 and later	7.5	5.5	0.60
37≤kW<75	2	2006, 2007	7.5	5.0	0.40
	3	2008 and later	4.7	5.0	0.40
75≤kW<130	2	2006	6.6	5.0	0.30
	3	2007 and later	4.0	5.0	0.30
130≤kW<225	3	2006 and later	4.0	3.5	0.20
225≤kW<450	3	2006 and later	4.0	3.5	0.20
450≤kW≤560	3	2006 and later	4.0	3.5	0.20
kW>560	2	2006 and later	6.4	3.5	0.20

#### 6.5 What are the procedures to measure the exhaust emissions?

The Regulations specify that the test procedures, fuels and calculation methods are those set out in the CFR for those standards.

In general, during an emission certification test, exhaust gases are sampled while the test engine is operated using a specified test cycle on a dynamometer. The exhaust gases are analyzed to determine the concentration

of each pollutant. Emission concentrations are converted to weighted emission rates reported in grams per kilowatt-hour (g/kW-hr).

## **6.6 What is a transition engine and may it be sold in Canada?**

Machines containing transition engines may be sold in Canada, provided the machine installed with the engine conforms to requirements of section 13 of the Regulations.

A transition engine is an engine that is installed in or on a machine that meets the flexibility provisions set out in paragraph 102(d), subpart B - Emission Standards and Certification Provisions, of the CFR. The flexibility provisions in paragraph 102(d) state that:

1. for engines rated under 37 kW, a percentage of new machines in each of the power categories need not meet the Tier 1 or Tier 2 standards, over the seven model years beginning when the Tier 1 standards first apply in the U.S. in the applicable power category.
2. for engines rated at or above 37 kW, a percentage of new machines in each of the power categories may meet the Tier 1 or Tier 2 standards in lieu of the Tier 2 or Tier 3 standards, over the seven model years beginning when the Tier 2 standards first apply in the U.S. in the applicable power category.

The cumulative sum of the annual percentages of machines meeting the above flexibility provisions in each of the power categories may not exceed 80% over the specified seven year period in the U.S.

A machine manufacturer may exceed the 80% cumulative sum provided that in each power category, the manufacturer's total of machines meeting the above flexibility provisions:

1. is less than 100 units multiplied by the number of years in which the flexibility provisions apply, during the period of time that the flexibility provisions apply;
2. is less than 200 units in any model year; and
3. does not include engines from more than one engine family, or from more than one engine manufacturer if the engines do not belong to any engine family.

In Canada, section 13 of the Regulations allows a machine that meets the flexibility provisions under the U.S. Rule (i.e., a transition engine) to be imported into Canada, provided the engine bears the label specified in subsection 13(4).

A *company* may also import a loose engine that will become a transition engine when installed in or on a machine if, in the case of a machine sold in Canada and the U.S.:

- the machine will meet the requirements of subsections 13(1) to 13(4) with the calculations based on U.S. sales only, and

- the *company* submits the declaration referred to in subsection 13(5).

In the case of a machine that is sold only in Canada and that contains a transition engine, please refer to the “Advisory Notice for Transition Engines Installed in Machines Sold Only in Canada under the Off-Road Compression-Ignition Engine Emission Regulations”.<sup>2</sup>

Since the Regulations came into effect on January 1, 2006, the duration of time when transition engines are allowed in Canada is less than in the U.S., however, the final model years in which transition engines are allowed are the same in both countries. The applicable model years are set out in subsections 13 (2) and (3).

For further guidance on evidence of conformity for transition engines, please refer to section 7.4.

### **6.7 For how long must an engine conform to the exhaust emission standards?**

An engine must conform to the exhaust emission standards throughout its “useful life”. The useful life period is incorporated by reference from the CFR. Section 89.104 of the CFR states the specified periods. Table 3 provides a summary of the useful life for the different engine categories.

**Table 3: Useful Life for Engines Categories**

<b>Scenario</b>	<b>Useful Life</b>
All engines rated under 19 kW	3000 hrs or 5 yrs (whichever first occurs)
Constant speed engines rated under 37 kW with rated speeds greater than or equal to 3000 rpm	3000 hrs or 5 yrs (whichever first occurs)
All other engines rated at or above 19 kW and under 37 kW	5000 hrs or 7 yrs (whichever first occurs)
All other engines rated at or above 37 kW	8000 hrs or 10 yrs (whichever first occurs)

### **6.8 What are the requirements for crankcase emissions?**

Crankcase emissions are not permitted from naturally aspirated engines. There are no crankcase emission requirements for turbo-charged engines.

<sup>2</sup> The “Advisory Notice for Transition Engines Installed in Machines Sold Only in Canada under the Off-Road Compression-Ignition Engine Emission Regulations” is available on Environment Canada’s Environmental CEPA Registry at: [www.ec.gc.ca/CEPARRegistry/regulations/detailReg.cfm?intReg=88](http://www.ec.gc.ca/CEPARRegistry/regulations/detailReg.cfm?intReg=88).

## **6.9 What is an adjustable parameter?**

Subsection 11(1) of the Regulations defines an adjustable parameter as “a device, system or element of design that is physically capable of being adjusted to affect emissions or engine performance during emission testing or normal in-use operation, but does not include devices, systems or elements of design that are permanently sealed by the engine manufacturer or that are inaccessible with the use of ordinary tools”.

Engines with adjustable parameters must comply with the applicable standards, regardless of the adjustment of these parameters. For example, if there is an adjustment screw on an engine, this engine must meet the exhaust emission standards regardless of the setting of the screw (i.e., whether it is fully, partially, or not tightened).

## **6.10 Is an engine covered by an EPA certificate of conformity and sold concurrently in Canada and the U.S. required to meet the Canadian emission standards?**

Under subsection 14(2) of the Regulations, an engine covered by an EPA certificate of conformity and sold concurrently in Canada and the U.S. is deemed to conform to the emission standards (i.e., sections 9 to 11 of the Regulations) if this engine meets all requirements set out in the EPA certificate of conformity. All other requirements of the Regulations (such as evidence of conformity, importation documents, notice of defect, etc.) must also be met.

In some cases, it is possible for the EPA to issue a certificate of conformity for an engine with emission levels above the applicable standard. The EPA emission program incorporates an optional averaging, banking and trading program that allows manufacturers to certify engines to a level less stringent than the prescribed standard as long as the increased emissions are offset, on a sales weighted basis, by engines certified better than the standard. Engines certified under the EPA averaging provisions may not exceed a prescribed maximum emission level.

Engines covered by a current EPA certificate of conformity obtained under the U.S. averaging, banking and trading program are recognized as meeting the standards in Canada.

## **6.11 Is it necessary to have exactly the same engine model sold concurrently in Canada and in the U.S.?**

No. Under subsection 14(1) of the Regulations, an engine sold in Canada that has the same features (used by the EPA to classify engines into engine families) as an engine in an engine family covered by an EPA certificate and sold in the U.S. in the same model year may conform to the emission standards referred to in the relevant EPA certificate, instead of standards set out in the

Regulations. The engine sold in Canada must not have any features that could cause it to have a higher level of emissions than the engine family sold in the U.S.

## **7. EVIDENCE OF CONFORMITY**

Sections 16 to 18 of the Regulations identify the records respecting the evidence of conformity that must be provided to the Minister upon request.

For an engine that is covered by an EPA certificate of conformity and that is sold concurrently in Canada and in the U.S., the evidence of conformity is

- (1) a copy of the EPA certificate of conformity;
- (2) a document demonstrating that the engine is sold concurrently in Canada and in the U.S.;
- (3) a copy of the records submitted to the EPA when applying to obtain a certificate of conformity; and
- (4) the U.S. EPA engine information label affixed to the engine.

For an engine that is not covered by an EPA certificate of conformity or that is not sold concurrently in Canada and the U.S., the evidence of conformity shall be obtained and produced in a form and manner that is satisfactory to the Minister. Please refer to section 7.3 of this guidance document.

### **7.1 What records could satisfy the requirement of demonstrating that an engine is sold concurrently in Canada and the U.S.?**

Paragraph 16(b) of the Regulations requires a document demonstrating that an engine covered by an EPA certificate is sold concurrently in Canada and the U.S. Examples of the required evidence include:

- (1) a copy of an invoice for the sale of an engine to a person in the U.S.;
- (2) a copy of an invoice for the sale of a machine containing the engine to a person in the U.S. accompanied by documentation showing that the engine was installed in the machine; or
- (3) other evidence sufficient to demonstrate concurrent sales of engines in the U.S. and Canada.

### **7.2 When must the evidence of conformity be submitted?**

Section 18 of the Regulations requires a *company* to provide evidence of conformity in respect of any engine of the 2006 and later model years that are manufactured on or after January 1, 2006 upon written request by the Minister. This request can apply to engines manufactured in the eight years preceding the request and evidence of conformity must be provided in either official language within 40 days after the request is delivered. If the evidence of conformity must

be translated from a language other than French or English, the *company* has 60 days to provide the evidence.

For an engine that is not covered by a current EPA certificate of conformity or that is not sold concurrently in Canada and the U.S., section 17 of the Regulations requires that the evidence of conformity be “obtained and produced by a *company* in a form and manner that is satisfactory to the Minister”. Evidence of conformity for an engine that is not covered by an EPA certificate or that is not sold concurrently in Canada and the U.S. must be submitted to Environment Canada prior to importation or prior to affixing the national emissions mark in order to determine that the *company* has obtained and produced the evidence of conformity in a form and manner that is satisfactory to the Minister

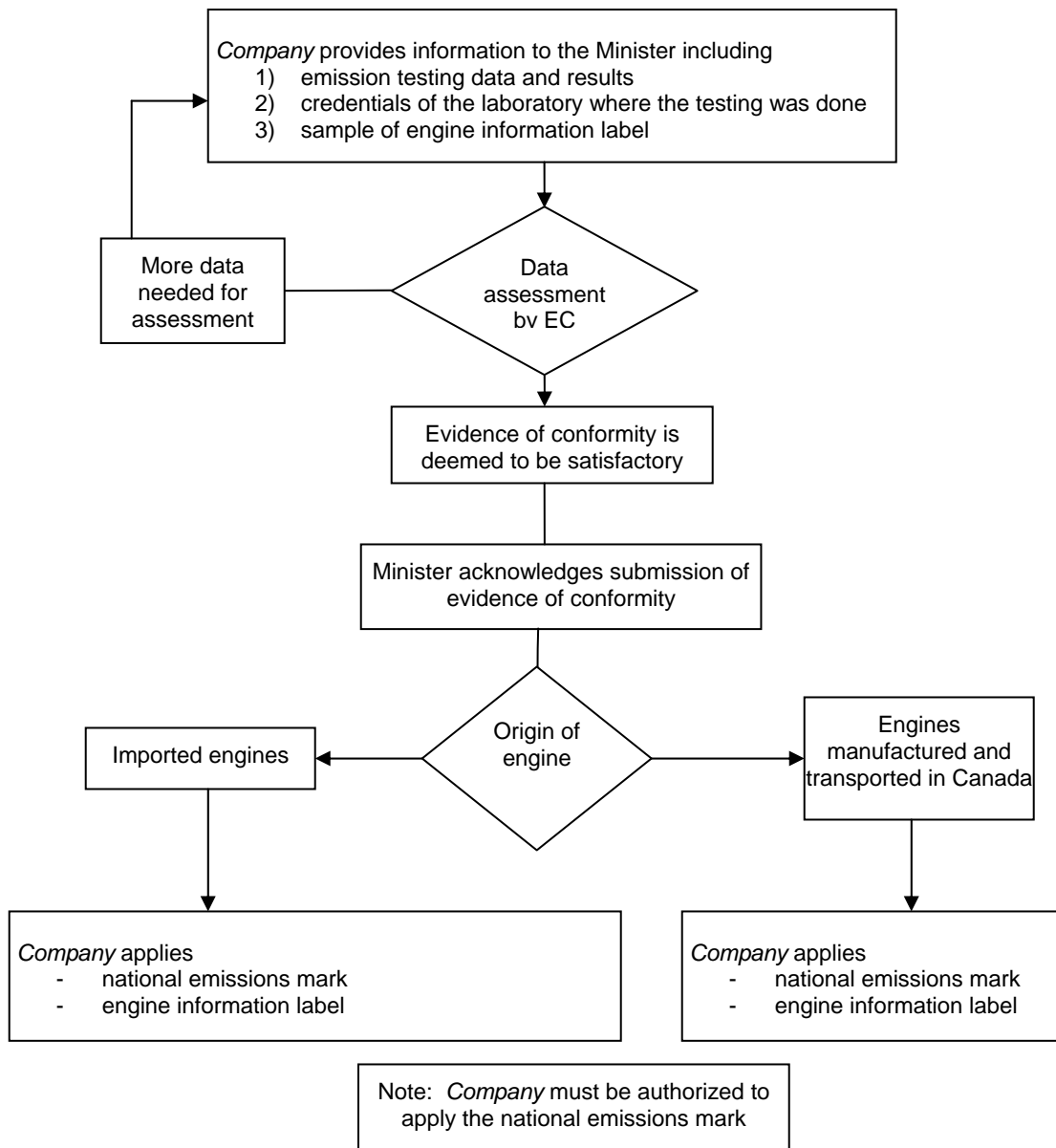
While the Regulations do not oblige a *company* to directly maintain the evidence of conformity, there is an obligation to make it available upon request. Accordingly, *companies* should ensure that the necessary arrangements are in place to fulfill this obligation.

**7.3 What is the procedure to provide evidence of conformity “in a form and manner satisfactory to the Minister” for the engines referred to in section 17 of the Regulations (i.e., not covered by an EPA certificate of conformity or not sold concurrently in Canada and the U.S.)?**

For an engine that is not covered by an EPA certificate of conformity or that is not sold concurrently in Canada and the U.S., section 17 of the Regulations states that evidence of conformity must be obtained and produced in a form and manner satisfactory to the Minister.

Figure 3 illustrates the procedure to provide evidence of conformity “in a form and manner satisfactory to the Minister” for the engines referred to in section 17 of the Regulations.





**Figure 3: Sample Procedure for Engines that are not Covered by a Current EPA Certificate of Conformity or that are not Sold Concurrently in Canada and the U.S.**

The evidence of conformity in this situation must be submitted prior to importation of the subject engine(s) or prior to affixing the national emissions mark to the engine(s). The evidence of conformity submission must contain an original letter signed by an authorized officer of the company that will be importing the subject engines into Canada and contain an unconditional statement of compliance with the *Off-Road Compression-Ignition Engine Emission Regulations*.

*Companies* should obtain and produce evidence of conformity that is comparable to that specified in paragraphs 16(c) and 16(d) for EPA certified engines (i.e., evidence of conformity comparable to information specified in section 89.115 of the CFR). A *company* should therefore obtain and produce the following evidence:

- (1) results of the emissions testing of the Canada-only engine obtained using the applicable procedures set out in the CFR;
- (2) data required to repeat this testing (i.e., information specified in section 89.115 of the CFR);
- (3) credentials of the laboratory where the testing was performed, especially experience in obtaining test results used in support of certification by the EPA;
- (4) sample of an engine information label.

Test results and data required to repeat the testing may be presented in the same format used when applying to the EPA for a certificate of conformity.

Under the Regulations, an engine information label must be affixed in the location specified in paragraph 16(d) of the Regulations. This engine information label shall include:

- (1) a statement of compliance, such as “this engine conforms to all applicable standards under the Canadian Off-Road Compression-Ignition Engine Emission Regulations for [XXXX] model year” or the national emissions mark if the *company* has been authorized to affix it; and
- (2) the name of *company*, the model year, date of manufacture, rated engine power and sufficient information to demonstrate satisfactory evidence of conformity.

On the label, a *company* may use the code system shown in Table 4 instead of providing in full the information listed under item (2). This code is based on the engine family identification developed by the EPA.

**Table 4: Identification Code for Canada-Only Engines**

Number of characters	Columns	Description
2	1-2	A letter code identifying Environment Canada - EC
1	3	Model year identified until 2009 by the last number of the model year, i.e. 5 for model year 2005.
3	4-6	Codes identifying the <i>company</i> . A <i>company</i> may use a) the identification number assigned by the Minister if authorized to affix the national emissions mark; b) the character sequence used by the EPA to identify the <i>company</i> , if applicable; or c) if the <i>company</i> cannot use a) or b), a sequence of three characters subject to approval by Environment Canada.
1	7	A letter code identifying the Regulations V on-road S small spark-ignition R recreational C compression-ignition L large spark-ignition
4	8-11	Engine displacement in liters (e.g. 05.7 where the decimal point counts as a digit and the leading zero is a space) or cubic inches (e.g. 0350, 0097). For large displacement engines, the displacement may be entered as XX.X (e.g. 12.1). Small engines may be entered as a .XXX (e.g., .072, 0.07, 00.7). In all cases the displacement will be read in liters if a decimal point is entered and in cubic inches if there is no decimal point.
3 or more	12-?	Sequence characters. Use any combination of characters to provide a unique identification for the engine model or family.

#### **7.4 How is the evidence of conformity for a transition engine “obtained and produced by a *company* in a form and manner that is satisfactory to the Minister”?**

Section 17 of the Regulations requires that evidence of conformity for any engine that is not covered by an EPA certificate be “obtained and produced by a *company* in a form and manner that is satisfactory to the Minister”. In the case of transition engines<sup>3</sup> installed in machines that are sold concurrently in Canada and the U.S., the following evidence of conformity is deemed to be satisfactory to the Minister:

1. a statement from the *company* that the engine is a transition engine; the engine has been affixed with the label required under subsection 13 (4); and the engine conforms to the *Off-Road Compression-Ignition Engine Emission Regulations*;
2. as required under subsection 13 (4) of the Regulations, the label that is affixed to the engine which states that the engine is a transition engine that conforms to the *Canadian Off-Road Compression-Ignition Engine Emission Regulations* or the EPA non-road compression-ignition emission regulations under the provisions of 40 CFR 89.102;
3. the machine manufacturer’s name, address, and contact person’s name and phone number;
4. a copy of the machine manufacturer’s calculation described in subparagraph 89.102(e)(1) of the CFR that has been submitted to the EPA after the transition period;
5. a copy of the machine manufacturer’s records referred to in subparagraph 89.102(e)(2) of the CFR;
6. the engine manufacturer’s name, address, and contact person’s name and phone number;
7. in the case of an engine rated at or above 37 kW, a copy of the engine manufacturer’s most recent EPA certificate covering the engine and a copy of the engine manufacturer’s records submitted to the U.S. EPA in support of the application for the issuance of the U.S. EPA certificate in respect of the engine; and
8. documentation demonstrating that the model of machine installed with a particular transition engine was sold concurrently in Canada and the U.S.

In the case of transition engines installed in machines that are sold only in Canada, please refer to the “Advisory Notice for Transition Engines Installed in

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<sup>3</sup> Transition engines are not covered by valid U.S. EPA certificates of conformity since transition engines rated below 37 kW are not required to meet emission standards and transition engines rated above 37 kW are required to meet the previous Tier 1 or Tier 2 standards.

Machines Sold Only in Canada under the Off-Road Compression-Ignition Engine Emission Regulations”.<sup>4</sup>

Typically, evidence of conformity for an engine that is not covered by an EPA certificate must be submitted to Environment Canada prior to importation in order to determine that the *company* has obtained and produced the evidence of conformity in a form and manner that is satisfactory to the Minister. In the specific case of a transition engine, however, it is not necessary to submit the evidence of conformity prior to importation given that this guidance specifies the form and manner that is satisfactory to the Minister.

Notwithstanding the above, the *company* is obligated under sections 17 and 18 of the Regulations to provide evidence of conformity upon written request by the Minister. In the case of transition engines, the "*company*" is typically the importer of the engine or machine and the information listed above is usually generated by the engine manufacturer and the machine manufacturer. It is recommended that the Canadian importer of machines or engines ensure that the necessary arrangements are in place to fulfill the obligation that the evidence of conformity is provided upon request. The Canadian importer may arrange that copies of the machine manufacturer's calculation and records and the engine manufacturer's EPA certificate and records be submitted directly by the manufacturers to Environment Canada when requested.

## **8. IMPORTING AN ENGINE**

Only engines that comply with the Regulations are eligible for importation.

Under section 19 of the Regulations, any *company* importing an engine shall submit a declaration at a customs office. This declaration must provide

- (a) the name and address of the importer;
- (b) the business number assigned to the *company*;
- (c) for a loose engine, the name of its manufacturer, its model and model year;
- (d) for a machine, the name of its manufacturer, the make, model and type of the machine;
- (e) the date of importation; and
- (f) a statement that the engine bears the national emissions mark or that the *company* is able to produce the evidence of conformity or complies with the Canadian emission standards.

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<sup>4</sup> The "Advisory Notice for Transition Engines Installed in Machines Sold Only in Canada under the Off-Road Compression-Ignition Engine Emission Regulations" is available on Environment Canada's Environmental CEPA Registry at: [www.ec.gc.ca/CEPARRegistry/regulations/detailReg.cfm?intReg=88](http://www.ec.gc.ca/CEPARRegistry/regulations/detailReg.cfm?intReg=88).

Under section 21 of the Regulations, any engine that is imported by a person who is not a *company* shall be labeled with:

- (a) the national emissions mark;
- (b) the EPA engine information label; or
- (c) a label showing that the engine conformed to the emission standards of the California Air Resources Board (CARB) in effect at the time of its manufacture.

The presence of one of the above identified labels on the engine would indicate that the engine conforms to Canadian emission standards at the time of manufacture.

### **8.1 What is the business number required in subparagraph 19(1)(e)(i) of the Regulations?**

The business number (BN) is assigned by the Canada Revenue Agency to uniquely identify business entities and must be supplied on customs documents. It is part of a numbering system that simplifies and streamlines the way businesses deal with the federal government.

More information on business numbers is available at <http://www.cra-arc.gc.ca/menu-e.html>

### **8.2 Is there a special form for the importation declaration specified in section 19 of the Regulations?**

No. The required declaration can be provided by a *company* in three different ways.

- (1) If the information provided on the commercial invoice required at importation corresponds to the requirements of the Regulations, the *company* may add the statement of conformity required under paragraph 19(1)(e) of the Regulations onto their commercial invoice.
- (2) If eligible, the *company* may provide the bulk declaration referred to in subsection 19(2) of the Regulations.
- (3) The *company* may submit the declaration as a separate document, as long as all information requirements for importation are met.

### **8.3 Is there any suggested wording for the statement under subparagraph 19(1)(e)(ii) of the Regulations?**

Subparagraph 19(1)(e)(ii) of the Regulations requires that a company submit a statement indicating that “the engine bears the national emissions mark, or that the company is either able to produce the evidence of conformity referred to in section 16 or complies with section 17”.

A company may use wording such as “The company is able to the produce evidence of conformity under the Canadian Off-Road Compression-Ignition Engine Emission Regulations” or “All engines in this shipment conform to the Canadian Off-Road Compression-Ignition Engine Emission Regulations”.

In the case where there is a combined shipment (i.e., one that also includes engines conforming to the *Off-Road Small Spark-Ignition Engine Emission Regulations*), a combined statement such as “Every engine in this shipment conforms to either the Canadian *Off-Road Spark-Ignition Engine Emission Regulations* or *Off-Road Compression-Ignition Engine Emission Regulations*, as applicable” is acceptable.

#### **8.4 Who is eligible to sign the import declaration as the “duly authorized representative” of the *company*?**

“Duly authorized representative” means a person with written authority to act on behalf of the *company*. An authorized employee of the *company* or a separate commercial entity under contract with the *company*, such as a customs broker, can sign documents as the duly authorized representative of the *company*.

#### **8.5 What is the procedure to provide bulk declarations of imported engines in a “form and manner satisfactory to the Minister”, as referred to in subsection 19(2)?**

Subsection 19(2) of the Regulations specifies that any *company* that imports 50 or more engines in a calendar year may provide the importation information required under subsection 19(1) "in another form and manner that is satisfactory to the Minister".

Subject to the procedures used by a *company* to meet the Canada Border Services Agency's importation requirements, it may be convenient for a *company* to choose to submit bulk declaration reports to Environment Canada.

A *company* must send a notice to the Director of the Transportation Division (see Section 2.5 of this document) to inform Environment Canada of its intention to use bulk declaration reports.

The notice must contain the following information:

- 1) *company* name;
- 2) business number;
- 3) models of engines or machines containing the engines to be imported into Canada;

- 4) estimated annual quantity of engines or machines containing the engines to be imported into Canada;
- 5) estimated frequency of importations (e.g., 1 shipment/year, 1 shipment/month); and
- 6) desired frequency of bulk declaration reports.

A *company* that has received acknowledgement from Environment Canada indicating that bulk declaration reporting is appropriate, may then submit reports at the frequency stated in the acknowledgement.

There is no specified printed form for the bulk declaration report. Subsection 19(1) of the Regulations specifies the required information. The quantities of each engine and machine model that were imported must also be included.

## **9. OTHER OBLIGATIONS**

### **9.1 Obligation to provide maintenance instructions**

Under section 15 of the Regulations, a *company* shall ensure that written instructions for emission-related maintenance are provided to the first retail purchaser of every engine or machine. The *company* must ensure that those written instructions are consistent with the maintenance instructions set out in the CFR. The instructions must be provided in English, French or both official languages, as requested by the purchaser.

### **9.2 Notice of defect**

On becoming aware of a defect in the design, construction or functioning of the engine that affects or is likely to affect its compliance with a prescribed standard set out in the Regulations, a *company* shall cause notice of defect to be given.

The expression “on becoming aware of a defect” in subsection 157(1) of CEPA 1999 could be, for an engine covered by an EPA certificate, when the *company* is aware that the criteria were met under which it must file a defect information report with the EPA, as described in subsection 89.803(a) of the CFR. “On becoming aware of a defect” could also mean that the *company* has received reports from users of the engine that have led the *company* to conclude that there is a defect in design, construction or functioning, or that, through its own testing, the *company* has found such a defect.

Subsection 25(1) of the Regulations describes the information that must be provided in the notice of defect. The notice must be given to the Minister, to each person who has obtained an engine with the defect from the *company* and to each current owner of an engine with the defect.



Given the nature of the compression-ignition engine and machine market, subsection 157(4) of CEPA 1999 provides flexibility regarding issuing notice to current owners. The Minister may order that the notice be provided by publication in daily newspapers or in an alternative medium or, if the circumstances warrant, order that the current owners need not be notified. The notice of defect provided to the Minister requires a description of the means available to the *company* to contact the current owner of each affected engine.

Within 60 days after a notice of defect has been given, the *company* must submit to the Minister an initial report containing the information described in subsection 25(2) of the Regulations. The *company* must also submit, within 45 days after the end of each quarter, quarterly reports to the Minister containing the information described in subsection 25(3) of the Regulations.

Under subsection 157(3) of CEPA 1999, a *company* is not required to cause notice of defect to be given if a relevant notice has already been given in Canada by another person (e.g., the engine manufacturer) for the same defect. The *company* should obtain a copy of that notice of defect for their records.

### **9.3 Obligation to provide an engine**

Under section 159 of CEPA 1999, upon request from the Minister, a *company* shall make available for testing any engine that was used in tests conducted in order to establish information submitted as evidence of conformity, or make available for testing an equivalent engine. The Minister will defray the transportation cost and pay the rental rate set in section 22 of the Regulations. The annual rental rate is 12% of the manufacturer's suggested retail price of the engine, prorated on a daily basis for each day the engine is made available.

## **10. SPECIAL CASES OF OFF-ROAD COMPRESSION-IGNITION ENGINES**

### **10.1 Engines imported into Canada solely for purposes of exhibition, demonstration, evaluation or testing**

Under paragraph 155(1)(a) of CEPA 1999, an engine imported into Canada solely for purposes of exhibition, demonstration, evaluation or testing does not have to comply with the requirements of the Regulations if a declaration signed by the person importing the engine or their duly authorized representative is submitted to the Minister prior to importation. Section 20 of the Regulations specifies that the declaration must contain:

- (1) the name and street address and, if different, the mailing address of the importer;
- (2) the business number of the importer;

- (3) in respect of an engine that is not installed in or on a machine, the name of the manufacturer and the model and model year of the engine
- (4) in respect of a machine, the name of the manufacturer and the make, model and type of the machine;
- (5) the date on which the engine is imported;
- (6) a statement that the engine will be used in Canada solely for purposes of exhibition, demonstration, evaluation or testing; and
- (7) the date on which the engine will be removed from Canada or destroyed.

## **10.2 Engine in transit through Canada, from a place outside Canada to another place outside Canada**

Under paragraph 155(1)(b) of CEPA 1999, an engine in transit through Canada, from a place outside Canada to another place outside Canada, does not have to comply with the requirements of the Regulations, if it is accompanied by written evidence that the engine will not be sold or used in Canada.

## **10.3 Engine imported exclusively for use by a visitor to Canada**

Under paragraph 155(1)(c) of CEPA 1999, an engine imported exclusively for use by a visitor to Canada or by a person passing through Canada to another country does not have to meet the requirements of the Regulations.

## **10.4 Incomplete engine**

Under section 21 of the Regulations, an incomplete engine can be imported by a *company* when a declaration is submitted at a customs office. The declaration must be signed by a duly authorized representative of the *company* and must contain the following:

- (a) the information described in paragraphs 19(1) (a) to (d) and subparagraph 19(1)(e)(i) of the Regulations;
- (b) a statement from the engine manufacturer that the engine will, when completed in accordance to the instructions provided by the manufacturer, conform to the prescribed standards; and
- (c) a statement from the *company* that the engine will be completed in accordance with the engine manufacturer's instructions.

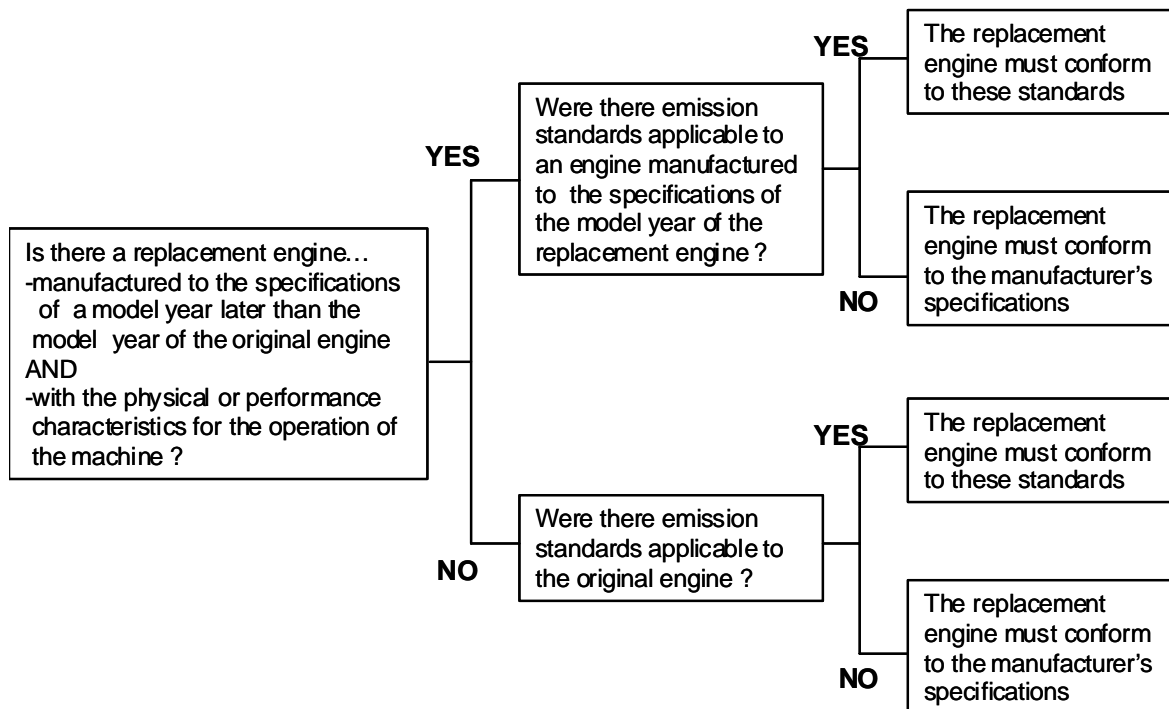
Please refer to Chapter 5 regarding National Emissions Mark

## **10.5 Replacement engine**

Under section 12 of the Regulations, a replacement engine is “an engine manufactured exclusively to replace an engine in a machine for which no current model year engine with the physical or performance characteristics necessary for

the operation of the machine is manufactured by the manufacturer of the original engine”.

A replacement engine may conform to standards that are different from those prescribed in sections 9 to 11 of the Regulations. Figure 4 illustrates the standards and specifications for replacement engines.



**Figure 4: Standards Applicable to a Replacement Engine**

The *company* must affix a label to a replacement engine. Under subsection 12(3) of the Regulations, this label must

- (a) set out in both official languages that the engine is a replacement engine and meet the requirements set out for the national emissions mark under subsections 7(3) and (4); or
- (b) meet the requirements set out in paragraph 89.1003(b)(7) of the CFR.

### 10.6 Engine designed to be used exclusively in underground mines

Off-road compression-ignition engines that are designed to be used exclusively in underground mines are not subject to the Regulations.

Allowable emission limits and exhaust treatment system requirements for diesel engines used in underground mines fall under provincial or territorial

occupational health and safety requirements, except in the case of Crown Corporations and uranium mines, which both fall under federal jurisdiction. The certification for diesel equipment used in mines is provided by CANMET, a research branch of Natural Resources Canada. All CANMET certified engines are required to have an engine label, which includes a permanent Energy, Mines and Resources (EMR) certification mark and the approved certification number. For more information on those requirements, contact CANMET at <http://www.nrcan.gc.ca/mms/canmet-mtb/mmsl-lmsm/mines/air/diesel/diesel-e.htm> or the provincial or territorial authority.

An off-road compression-ignition engine designed to be used exclusively in an underground mine generally has features that make it unsuitable for use above ground. Off-road compression-ignition engines that are designed to be used in both above ground and underground mines are fully subject to the Regulations.

### **10.7 Engine for which the Governor-in-Council has granted an exemption**

A *company* may apply to the Governor in Council to be granted an exemption from any standard prescribed under the Regulations. Under section 156 of CEPA 1999, an exemption from any prescribed standard will be granted only if, in the opinion of the Governor in Council, compliance with that standard would

- (a) create substantial financial hardship for the *company*;
- (b) impede the development of new features for safety, emission monitoring or emission control that are equivalent or superior to those that conform to prescribed standards; or
- (c) impede with the development of new kinds of engines or engine components.

An exemption may not be granted for a model of engine if the exemption would substantially diminish the control of emissions from the engine or if the *company* applying for the exemption has not provided evidence that it has attempted in good faith to bring the model into conformity with all applicable prescribed standards.

Under subsection 156(4) of CEPA 1999, an exemption for financial hardship may not be granted:

- if the annual world production of vehicles or engines manufactured by the *company* or by the manufacturer of the model that is the subject of the application for exemption exceeded 10,000 vehicles or engines;
- or if the annual total number of vehicles or engines manufactured for, or imported into, the Canadian market by the *company* exceeded 1,000 vehicles or engines.

Section 23 of the Regulations describes the information to be provided to the Minister when applying for an exemption and section 24 describes the label to be applied to an engine for which an exemption has been granted.

## **11. COMPLIANCE AND ENFORCEMENT**

Manufacturers and importers are responsible for ensuring that their products comply with the Regulations and are required to submit evidence of conformity upon request.

Environment Canada administers a comprehensive program to verify compliance with federal emission standards. The program includes:

- authorizing and monitoring use of the national emissions mark;
- reviewing evidence of conformity;
- registering notices of defect affecting emission controls;
- inspection of test engines and emission-related components; and
- laboratory emission tests of sample engines that are representative of products offered for sale in Canada.

If Environment Canada determines that an engine does not comply with the Regulations, the manufacturer or importer is subject to the provisions of CEPA 1999. In this situation, the normal course of events is to perform sufficient engineering assessment to determine if a notice of defect should be issued in accordance with section 157 of the Act.

Environment Canada will apply the Compliance and Enforcement Policy for CEPA 1999 to address alleged violations. The policy sets out the range of possible responses to alleged violations: warnings, environmental protection compliance orders, ticketing, ministerial orders, injunctions, prosecution and environmental protection alternative measures (which are an alternative to a court prosecution after the laying of charges for a CEPA 1999 violation). In addition, the policy explains when Environment Canada will resort to civil suits by the Crown for recovery. A copy of this policy is available at [www.ec.gc.ca/CEPARRegistry/policies](http://www.ec.gc.ca/CEPARRegistry/policies).

Alleged violations may be identified by Environment Canada's technical personnel, through information transmitted by the Canada Border Services Agency, through complaints received from the public or through inspections or investigations by CEPA 1999 enforcement officers. Inspections may also include verifications by enforcement officers at Canada's international borders.

When, following an inspection or an investigation, a CEPA enforcement officer discovers an alleged violation, the officer will choose the appropriate enforcement action based on the following criteria:

- Nature of the alleged violation: This includes consideration of the seriousness of the harm or potential harm to the environment, the intent of the alleged violator, whether it is a repeat violation, and whether an attempt has been made to conceal information or otherwise subvert the objectives and requirements of CEPA 1999.
- Effectiveness in achieving the desired result with alleged violator: The desired result is compliance with CEPA 1999 within the shortest possible time and with no further repetition of the violation. Factors to be considered include the violator's history of compliance, willingness to cooperate with enforcement officers, and evidence of corrective actions already taken.
- Consistency in enforcement: Enforcement officers will consider how similar situations have been handled in determining the measures to be taken to enforce CEPA 1999.