

MVRD
NON-ROAD DIESEL
ENGINE EMISSION
REGULATION BYLAW
CONSOLIDATED

THIS IS A CONSOLIDATION, FOR REFERENCE PURPOSES, OF:

- “Metro Vancouver Regional District Non-Road Diesel Engine Emission Regulation Bylaw No. 1329, 2021 (Repealed Bylaw No. 1161, 2012) (*Adopted October 29, 2021*).
- “Metro Vancouver Regional District Non-Road Diesel Engine Emission Regulation Amending Bylaw No. 1337, 2021 (*Adopted January 28, 2022*).

As of January 29, 2022

COPIES OF THE ORIGINAL BYLAWS MAY BE INSPECTED AT
BOARD AND INFORMATION SERVICES, METRO VANCOUVER

**METRO VANCOUVER REGIONAL DISTRICT
NON-ROAD DIESEL ENGINE EMISSION REGULATION
BYLAW NO. 1329, 2021**

A Bylaw to Regulate the Discharge of Air Contaminants from Non-Road Diesel Engines

WHEREAS:

1. The *Environmental Management Act* authorizes the Metro Vancouver Regional District to provide the service of air pollution control and air quality management and, for that purpose, the Board of the Metro Vancouver Regional District may, by bylaw, prohibit, regulate and otherwise control and prevent the discharge of air contaminants;
2. The *Environmental Management Act* authorizes the Metro Vancouver Regional District to, by bylaw, establish different prohibitions, regulations, rates or levels of fees, conditions, requirements and exemptions for different persons, operations, activities, industries, trades, businesses, air contaminants or works, to establish different classes of persons, operations, activities, industries, trades, businesses, air contaminants and works, and to require the keeping of records and the provision of information respecting air contaminants and their discharge; and
3. It is deemed desirable to regulate the discharge of diesel particulate matter and nitrogen oxides from non-road diesel engines.

NOW THEREFORE the Board of the Metro Vancouver Regional District enacts as follows:

Citation

1. The official citation of this bylaw is “Metro Vancouver Regional District Non-Road Diesel Engine Emission Regulation Bylaw No. 1329, 2021” (“this bylaw”).

Repeal of Bylaws

2. “Metro Vancouver Regional District Non-Road Diesel Engine Emission Regulation Bylaw No. 1161, 2012” as amended, is hereby repealed.

Schedule(s)

3. The following Schedules are attached to and form part of this Bylaw:
Schedule “1” Engine Tier Classification; and
Schedule “2” Registration Fees.

Definitions

4. In this bylaw:

“**annual**” means a consecutive 365-day period;

“**approved**” means an approval given by the district director;

“community care facility” has the same meaning as in the *Community Care and Assisted Living Act*;

“diesel particulate matter” means the particles emitted into the environment from the exhaust of a non-road diesel engine;

“diesel particulate matter emission rate” means the rate of diesel particulate matter emitted from a non-road diesel engine, expressed in grams per brake-horsepower hour;

“emergency” means a present or imminent event or circumstance that:

- (a) is caused by accident, fire, explosion, technical failure, labour strike or the forces of nature; and
- (b) requires prompt coordination of action or special regulation of persons or property to protect the health, safety or welfare of a person or to limit damage to property or the environment;

“emergency engine” means an engine, including emergency generators and other stationary engines, intended for use only in an emergency;

“emission reduction measure” means an approved retrofit, remanufacture, or similar device, alteration, technological, or operational change made to a non-road diesel engine that reduces the diesel particulate matter emission rate;

“emission standard” means the diesel particulate matter emission rate stipulated for a non-road diesel engine, corresponding to both the engine’s year of manufacture and its horsepower group, all as set out in Table 2 of Schedule 1;

“engine tier classification” means the classification of a non-road diesel engine as determined in accordance with Schedule 1;

“farm business” has the same meaning as defined in the *Farm Practices Protection (Right to Farm) Act*;

“farm operation” has the same meaning as defined in the *Farm Practices Protection (Right to Farm) Act*;

“g/bhp-hr” means grams per brake-horsepower hour;

“government body” includes a federal, provincial, and local government body, including an agency or ministry of the Crown in right of Canada or British Columbia, and any other body or entity prescribed by the district director;

“hour meter” means a functioning non-resettable meter that measures and displays the number of hours that an engine has operated, with a minimum display capability of 9,999 hours, or as approved by the district director;

“hp” means the maximum horsepower of a non-road diesel engine;

“kW” means the maximum power of a non-road diesel engine expressed in kilowatts;

“label” means a label, decal or other approved mark;

“land owner” means a person who is in possession, has the right to control, or occupies or controls the use of land on which a non-road diesel engine is or will be operated;

“low-use” means no more than 200 hours of operation within a low-use engine operating period;

“low-use engine” means a non-road diesel engine registered for a low-use engine operating period;

“low-use engine operating period” means an operating period of 365 consecutive days authorizing low-use of a non-road diesel engine in accordance with the requirements of Part 3 and Part 5 of this bylaw;

“machine” includes a stationary or mobile vehicle, equipment, device, appliance or implement that is powered by a non-road diesel engine;

“moderate use” means more than 200 hours of operations but no more than 500 hours of operation within a moderate-use engine operating period;

“moderate-use engine” means a non-road diesel engine registered for a moderate-use engine operating period;

“moderate-use engine operating period” means an operating period of 365 consecutive days authorizing moderate-use of a non-road diesel engine in accordance with the requirements of Part 3 and Part 6 of this bylaw;

“monthly” means a consecutive 30-day period;

“nitrogen oxides emission rate” means the rate of nitrogen oxides emitted from a non-road diesel engine, expressed in grams per brake-horsepower hour;

“non-road diesel engine” means a diesel-fueled or alternative diesel-fueled compression ignition engine in a machine that is not primarily used or intended to be used for transportation on a public street, road or highway;

“online registration system” means the Metro Vancouver Non-Road Diesel Online Registration website that enables the registration of non-road diesel engines;

“opacity” means the degree to which the discharge of an air contaminant reduces the passage of light or obscures the view of a background object expressed numerically from 0 per cent (transparent) to 100 per cent (opaque), as determined by:

- (a) the SAE J1677 Snap-Acceleration Smoke test procedure;
- (b) by a certified observer using EPA Method 9; or
- (c) a method approved by the district director;

“operating period” means an operating period described in Schedule 2, which when purchased for an engine authorizes the engine’s operation for the time period stipulated and in accordance with this bylaw;

“operator” means a person who is in control of or responsible for the operation of a non-road diesel engine;

“original air emission control system” means a system or device installed, attached or incorporated into a non-road diesel engine by the manufacturer of the engine to prevent or lessen the discharge of any air contaminants.

“original registration date” means the date when an engine was first registered for 90 days without cancellation for a non-road diesel engine for which all registration information required under Part 3 and if applicable Part 5 or Part 6 has been submitted to the district director;

“owner” means a person who is in possession of, has the right to control, or occupies or controls the operation of a non-road diesel engine;

“person” includes a land owner, an owner, an operator and a government body and any director, officer, employee or agent of a person or government body;

“registrant” means a person who has completed a registration;

“registration” means the submission to Metro Vancouver Regional District of all registration information required under Part 3 and if applicable Part 5 or Part 6 for a non-road diesel engine, and when payment is received for an operating period for that engine;

“registration fee” means the fee prescribed in Schedule 2 for the operating period stipulated in the registration;

“registration number” means the unique identification number issued by Metro Vancouver Regional District for a non-road diesel engine pursuant to this bylaw;

“registration number label” means a label that, unless otherwise approved by the district director, is:

- (a) painted on or otherwise permanently affixed to opposite sides of the exterior housing of a machine;
- (b) in black characters at least 10 cm (4 in.) tall and 6 cm (2.5 in.) wide on a yellow or white background; and
- (c) clearly visible and legible at all times during operation of the non-road diesel engine;

“remanufacture” means to rebuild an engine;

“retire” means to voluntarily and permanently withdraw from operation pursuant to Part 8 of this bylaw a non-road diesel engine, and upon such retirement, the engine can no longer be operated or registered to operate within the Metro Vancouver Regional District;

“retrofit” means a device installed on a non-road diesel engine that reduces diesel particulate matter emissions;

“sensitive receptor” means a hospital, an elementary school, a day care facility or a community care facility;

“surcharge” means a fee prescribed in Part 9 that is additional to the registration fee;

“tier label” means a label that, unless otherwise approved by the district director, is:

- (a) painted on or otherwise permanently affixed to opposite sides of the exterior housing of a machine;
- (b) in black characters at least 10 cm (4 in.) tall and 6 cm (2.5 in.) wide on a yellow or white background; and
- (c) clearly visible and legible at all times during operation of the non-road diesel engine;

“Tier 0” means the engine tier classification described in Schedule 1;

“Tier 1” means the engine tier classification described in Schedule 1;

“**Tier 2**” means the engine tier classification described in Schedule 1;

“**Tier 3**” means the engine tier classification described in Schedule 1;

“**Tier 4**” means the engine tier classification described in Schedule 1;

“**written anti-idling procedure**” means a written policy or procedure established for the operation of an engine.

5. Terms defined in the *Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008* or incorporated by reference into that bylaw have the same meaning in this bylaw.
6. References in this bylaw to an enactment include the enactment as it may be amended or replaced from time to time.

Part 1 – Application and Scope of this Bylaw

7. No person may discharge, or cause, permit, or allow the discharge of any air contaminant into the environment from a non-road diesel engine operating within the Metro Vancouver Regional District except in accordance with this bylaw.
8. This bylaw applies to all non-road diesel engines having a maximum power of 25 hp or greater (19 kW or greater).
9. This bylaw does not apply to non-road diesel engines that power:
 - (a) machines used in farm operations conducted as part of a farm business if each of the requirements in subsection 2(2) of the *Farm Practices Protection (Right to Farm) Act* is fulfilled in relation to that farm operation;
 - (b) personal recreational machines, including personal snow mobiles and all-terrain vehicles.
10. A person who is in compliance with the *Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008* and this bylaw is exempt from the application of section 5 of the *Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008* and from subsections 6(2) and 6(3) of the *Environmental Management Act* in relation to the discharge of air contaminants from a non-road diesel engine operating within the Metro Vancouver Regional District, if the person is also in compliance with all other applicable provisions of the *Environmental Management Act*.

Part 2 – Emergency Engines

Replaced by Bylaw 1337, 2021

11. Emergency engines are exempt from Parts 3, 4, 5, 6, 9 and 11.
12. An emergency engine must be:
 - (a) operated in accordance with the manufacturer's operating procedures; and
 - (b) inspected and maintained in accordance with the manufacturer's recommendations.
13. The discharge of air contaminants from an emergency engine must not result in:
 - (a) The recirculation of its stack exhaust into the building; or
 - (b) The entrainment of its stack exhaust into surrounding building openings or air ventilation intakes.
14. An operator of an emergency engine must keep maintenance records and other records stipulated by the district director and, within 72 hours of a request by the district director or an officer, submit records as required.

Part 3 – Registration Requirements

15. Every person who causes, permits or allows the operation of a Tier 0 or Tier 1 non-road diesel engine must, prior to operation of the non-road diesel engine, register by:
 - (1) providing the following registration information to the district director using the online registration system:
 - (a) the maximum power and year of manufacture of the non-road diesel engine;
 - (b) the engine serial number;
 - (c) the engine tier classification as determined in accordance with Schedule 1; and
 - (d) any additional registration information required under Parts 5, 6, 7 or 8, if applicable; and
 - (2) paying the registration fee for the applicable operating period, as prescribed in Schedule 2.

16. Effective January 1, 2023 every person who causes, permits or allows the operation of a Tier 2 non-road diesel engine must, prior to operation of the non-road diesel engine, register by:
 - (1) providing the following registration information to the district director using the online registration system:
 - (a) the maximum power and year of manufacture of the non-road diesel engine;
 - (b) the engine serial number;
 - (c) the engine tier classification as determined in accordance with Schedule 1; and
 - (d) any additional registration information required under Parts 5, 6, 7 or 8, if applicable; and
 - (2) paying the registration fee for the applicable operating period, as prescribed in Schedule 2.
17. Effective January 1, 2024 every person who causes, permits or allows the operation of a Tier 3 non-road diesel engine must, prior to operation of the non-road diesel engine, register by:
 - (1) providing the following registration information to the district director using the online registration system:
 - (a) the maximum power and year of manufacture of the non-road diesel engine;
 - (b) the engine serial number;
 - (c) the engine tier classification as determined in accordance with Schedule 1; and
 - (d) any additional registration information required under Parts 5, 6, 7 or 8, if applicable; and
 - (2) paying the registration fee for the applicable operating period, as prescribed in Schedule 2.
18. Effective January 1, 2029 every person who causes, permits or allows the operation of a Tier 4 non-road diesel engine must, prior to operation of the non-road diesel engine, register by:
 - (1) providing the following registration information to the district director using the online registration system:
 - (a) the maximum power and year of manufacture of the non-road diesel engine;
 - (b) the engine serial number;

- (c) the engine tier classification as determined in accordance with Schedule 1; and
 - (d) any additional registration information required under Parts 5, 6, 7 or 8, if applicable; and
- (2) paying the registration fee for the applicable operating period, as prescribed in Schedule 2.
19. Every person must, immediately upon the request of the district director or officer, provide proof of identity and any other information the district director or officer deems necessary to ensure compliance with this bylaw.
20. An operating period is valid when payment is received and expires on:
- (a) the last day of the operating period; or
 - (b) the date on which an instalment payment amount, as determined in accordance with Schedule 2, is due and not paid.
21. If, prior to expiry of an annual, monthly or daily operating period:
- (a) a registrant cancels a registration for an operating period, then a refund will be issued to the registrant for the remaining portion of the registration fee or surcharge paid in respect of the number of full days in the operating period that remain unexpired on the date of cancellation, less the \$15 administration fee; or
 - (b) a registrant amends the registration information in accordance with Part 7, then a refund will be issued to the registrant for the remaining portion of the registration fee or surcharge paid that exceeds the amount of the registration fee or surcharge that would be payable for the remainder of the operating period following the emission reduction measure under Part 7.
22. A refund will not be issued in respect of a registration fee or a surcharge paid for a low-use or a moderate-use engine operating period.

Part 4 – Labelling Requirements

23. Every person who causes, permits or allows the operation of a non-road diesel engine must, prior to operation of the non-road diesel engine, and at all times during the engine's operation, if Part 3 requires the engine to be registered, label and visibly display on the machine a registration number label, and:
- (a) a "T0" tier label if it is a Tier 0 non-road diesel engine;
 - (b) a "T1" tier label if it is a Tier 1 non-road diesel engine;
 - (c) effective January 1, 2023 a "T2" tier label if it is a Tier 2 non-road diesel engine;

- (d) effective January 1, 2024 a “T3” tier label if it is a Tier 3 non-road diesel engine;
- (e) effective January 1, 2029 a “T4” tier label if it is a Tier 4 non-road diesel engine.

Part 5 – Low-Use Engine Registration Requirements

24. A person may register a low-use engine for a low-use engine operating period by:
- (a) providing all registration information required under Part 3;
 - (b) providing the low-use engine’s hour meter reading at the time of registration; and
 - (c) paying the registration fee for a low-use engine operating period, as prescribed in Schedule 2.
25. No person may cause, permit or allow the operation of a low-use engine unless the person ensures that the low-use engine or machine has installed, mounted or built into it a functioning, non-resettable hour meter. If a low-use engine’s hour meter is replaced, the owner must, within 10 calendar days of the hour meter replacement and using the online registration system, notify the district director of the replacement. The notice must include the following information:
- (a) the old hour meter reading;
 - (b) the current reading of the replacement hour meter;
 - (c) a copy of the receipt for the new hour meter; and
 - (d) a declaration, in prescribed form, verifying the installation of the replacement hour meter.
26. Every person with a valid low-use engine operating period must:
- (a) keep records of the date, hour meter reading and civic address of operation of the low-use engine during the operating period and maintain those records;
 - (b) ensure at the time of making the record that the record includes the name of the person who is able to verify the information contained in the record;
 - (c) keep each record for at least three years after the year in which the record was first made; and
 - (d) upon the request of the district director or an officer, produce for inspection, or deliver copies of, any records or supporting documentation to the requesting party, within 48 hours of such request.

27. Every person with a valid low-use engine operating period must:
- (a) using the online registration system, on or before each of April 15, July 15, October 15 and January 15 of each year, report the low-use engine's hour meter reading from the last day of the previous calendar quarter; or
 - (b) using the online registration system, immediately report the low-use engine's hour meter reading when the engine has been used for a cumulative total of 200 hours; and
 - (c) upon the request of the district director or an officer, provide the hour meter manufacturer name, model and serial number to the requesting party within 48 hours of such request.
28. The registration of a low-use engine under this Part is immediately invalidated if:
- (a) that low-use engine is used for more than a cumulative total of 200 hours in the operating period; or
 - (b) the hour meter on that low-use engine has been tampered with, is not present, is not functioning correctly or at all, or if the display is not readable.

Part 6 – Moderate-Use Engine Registration Requirements

29. Effective Jan 1, 2024, a person may register a moderate-use engine for a moderate-use engine operating period by:
- (a) providing all registration information required under Part 3;
 - (b) providing the moderate-use engine's hour meter reading at the time of registration; and
 - (c) paying the registration fee for a moderate-use engine operating period, as prescribed in Schedule 2.
30. No person may cause, permit or allow the operation of a moderate-use engine unless the person ensures that the moderate-use engine or machine has installed, mounted or built into it a functioning, non-resettable hour meter. If a moderate-use engine's hour meter is replaced, the owner must, within 10 calendar days of the hour meter replacement and using the online registration system, notify the district director of the replacement. The notice must include the following information:
- (a) the old hour meter reading;
 - (b) the current reading of the replacement hour meter;
 - (c) a copy of the receipt for the new hour meter; and

(d) a declaration, in prescribed form, verifying the installation of the replacement hour meter.

31. Every person with a valid moderate-use engine operating period must:

- (a) keep records of the date, hour meter reading and civic address of operation of the moderate-use engine during the operating period and maintain those records;
- (b) ensure at the time of making the record that the record includes the name of the person who is able to verify the information contained in the record;
- (c) keep each record for at least three years after the year in which the record was first made; and
- (d) upon the request of the district director or an officer, produce for inspection, or deliver copies of, any records or supporting documentation to the requesting party within 48 hours of such request.

32. Every person with a valid moderate-use engine operating period must:

- (a) using the online registration system, on or before each of April 15, July 15, October 15 and January 15 of each year, report the moderate-use engine's hour meter reading from the last day of the previous calendar quarter; or
- (b) using the online registration system, immediately report the moderate-use engine's hour meter reading when the engine has been used for a cumulative total of 500 hours; and
- (c) upon the request of the district director or an officer, provide the hour meter manufacturer name, model and serial number to the requesting party within 48 hours.

33. The registration of a moderate-use engine under this Part is immediately invalidated if:

- (a) that moderate-use engine is used for more than a cumulative total of 500 hours in the operating period; or
- (b) the hour meter on that moderate-use engine has been tampered with, is not present, is not functioning correctly or at all, or if the display is not readable.

Part 7 – Engine with Emission Reduction Measure

34. Subject to section 35, a person who causes, permits or allows the operation of a non-road diesel engine with an emission reduction measure is eligible for a reduction in the registration fee, to be calculated as prescribed in Schedule 2.
35. To be eligible for the reduction in the registration fee under section 34, a person must, prior to the operation of the non-road diesel engine, provide to the district director:
 - (a) an accurate and detailed description of the proposed emission reduction measure made to that non- road diesel engine; and
 - (b) upon request, any other information that the district director or an officer deems necessary to evaluate the proposed emission reduction measure or the application of this Part.
36. The registration of a non-road diesel engine with an emission reduction measure under this Part is immediately invalidated if the emission reduction measure is modified, tampered with, removed or otherwise does not operate to reduce the diesel particulate matter emission rate in the manner for which the district director gave approval.
37. If an emission reduction measure is modified, tampered with, removed, or otherwise changed, a person who causes, permits or allows the operation of that non-road diesel engine must, prior to operation:
 - (a) amend the registration information; and
 - (b) pay the registration fee for the engine tier classification with which the non-road diesel engine conforms.
38. A person who causes, permits or allows the operation of a registered Tier 0, Tier 1, Tier 2 or Tier 3 non-road diesel engine with an emission reduction measure must:
 - (a) keep records including, maintenance records, alternative fuel receipts (if applicable), meter logged hours of operation or other records stipulated by the district director as required with use of an emission reduction measure; and
 - (b) within 72 hours of a request by the district director or an officer, submit records as required.
39. A vendor or provider of a proposed emission reduction technology may apply to the district director for assessment and approval of the emission reduction technology, upon payment to Metro Vancouver Regional District of a fee of \$2000 for each proposed emission reduction technology.

Part 8 – Registration Fee Rebate for Retirement

40. A registrant who before January 1, 2026 retires a non-road diesel engine from operation within the Metro Vancouver Regional District, and notifies the district director within 365 days of such retirement is eligible for a partial rebate equal to 80% of the registration fees paid in the 1095 days immediately prior to the retirement.
41. A registrant who after December 31, 2025 retires a non-road diesel engine from operation within the Metro Vancouver Regional District, and notifies the district director within 365 days of such retirement is eligible for a partial rebate equal to 80% of the registration fees paid in the 1825 days immediately prior to the retirement.
42. A registrant who is eligible for a partial rebate under this Part must submit any and all information that the district director or officer deems necessary to evaluate the application of this Part, before the partial rebate may be given.
43. A surcharge paid pursuant to Part 9 does not qualify for a Part 8 rebate for retirement.

Part 9 – Operating Prohibitions and Surcharges

44. For the purposes of this Part and the operation of a non-road diesel engine pursuant to section 46(b), section 48(b), section 50(b) or section 52(b), the surcharge payable is prescribed as follows:

surcharge = [*(\$value of registration fee for the applicable operating period)* - \$15] x 3.
45. If a Tier 0 non-road diesel engine was not registered for at least 90 days prior to January 1, 2015 or has been retired, then that non-road diesel engine must not be operated.

Replaced by Bylaw 1337, 2021

46. Notwithstanding section 45, a Tier 0 engine is not prohibited from operating:
 - (a) if the engine has an emission reduction measure to reduce the diesel particulate matter emission rate to meet the emission standard of a Tier 2 non-road diesel engine or better;
 - (a.1) if the engine has an emission reduction measure to reduce the diesel particulate matter emission rate to meet the emission standard of a Tier 1 non-road diesel engine or better and the engine was registered for at least 90 days prior to February 1, 2020; or
 - (b) on or after January 1, 2023, if the registrant pays the registration fee for the applicable operating period plus the surcharge prescribed in section 44.

Replaced by Bylaw 1337, 2021

47. If a Tier 1 non-road diesel engine was not registered for at least 90 days prior to February 1, 2020 or has been retired, then that non-road diesel engine must not be operated.

48. Notwithstanding section 47, a Tier 1 engine is not prohibited from operating:
 - (a) If the engine has an emission reduction measure to reduce the diesel particulate matter emission rate to meet the emission standard of a Tier 2 non-road diesel engine or better; or
 - (b) On or after January 1, 2023, if the registrant pays the registration fee for the applicable operating period plus the surcharge prescribed in section 44.
49. If a Tier 2 non-road diesel engine has not been registered for at least 90 days prior to January 31, 2026 or has been retired, then effective February 1, 2026 that non-road diesel engine must not be operated.
50. Notwithstanding Section 49, a Tier 2 engine is not prohibited from operating after January 31, 2026 if:
 - (a) the engine has an emission reduction measure to reduce the diesel particulate matter emission rate to meet the emission standard of a Tier 4 non-road diesel engine or better; or
 - (b) the registrant pays the registration fee for the applicable operating period plus the surcharge prescribed in section 44.
51. If a Tier 3 non-road diesel engine has not been registered for at least 90 days prior to January 31, 2027, or has been retired, then effective February 1, 2027 that non-road diesel engine must not be operated.
52. Notwithstanding Section 51, a Tier 3 engine is not prohibited from operating after January 31, 2027 if:
 - (a) the engine has an emission reduction measure to reduce the diesel particulate matter emission rate to meet the emission standard of a Tier 4 non-road diesel engine or better; or
 - (b) the registrant pays the registration fee for the applicable operating period plus the surcharge prescribed in section 44.

Part 10 – Opacity and Idling Restrictions

53. No person may cause, permit or allow the operation of a non-road diesel engine if the discharge of air contaminants from that non-road diesel engine exceeds 20% opacity.
54. Subject to section 55, no person may idle a non-road diesel engine for more than five consecutive minutes.
55. A person may idle a non-road diesel engine for more than five consecutive minutes if idling is:

- (a) for testing, servicing, repairing, or diagnostic purposes, including regeneration of a diesel particulate filter;
 - (b) necessary to serve the purposes of the operation of the machine;
 - (c) in the performance of emergency work or for public safety purposes; or
 - (d) in accordance with an approved written anti-idling procedure.
56. A person who causes, permits or allows idling of a non-road diesel engine in accordance with a written anti-idling procedure under subsection 55(d) must submit the written anti-idling procedure to the district director or officer within 24 hours of being requested to do so by the district director or officer.

Part 11 – Prohibited Operation Near Sensitive Receptor

57. No person may operate a Tier 0 or Tier 1 engine within 100 metres of a sensitive receptor.

Part 12 – Prohibited Operation of Engine with Tampered Air Emission Control System

58. No person may operate a non-road diesel engine with an original air emission control system that has been tampered with in such a manner that the system is rendered inoperable or the system's efficiency at controlling the discharge of air contaminants is lessened.

Part 13 – Offences

59. A person who provides false information in a registration application, a report or other submission of information, or to an officer or the district director in response to a request to produce records or other information, commits an offence and is liable on conviction to a fine not exceeding \$200,000.
60. A person who contravenes any provision of this bylaw commits an offence and is liable on conviction to a fine not exceeding \$200,000.
61. Nothing in this bylaw limits the district director or the Metro Vancouver Regional District from utilizing any other remedy that would otherwise be available at law.

Part 14 – Severability

62. If any portion of this bylaw is held to be *ultra vires*, illegal, invalid, or unenforceable in any way, in whole or in part, by a court or tribunal of competent jurisdiction, such decision shall not invalidate or void the remainder of the bylaw, and the portion so held to be *ultra vires*, illegal, invalid, or unenforceable shall be deemed to be reduced in scope so as to be valid and enforceable, or in the alternative to have been stricken therefrom with the same force and effect as if such parts had never been included in this bylaw.

Read a first, second and third time this _____ day of _____, 2021.

Passed and finally adopted this _____ day of _____, 2021.

Sav Dhaliwal, Chair

Chris Plagnol, Corporate Officer

Schedule 1 – Engine Tier Classifications

1. “Tier 0” means a non-road diesel engine that has an engine power as specified in Column 1 of Table 1 and:
 - (a) was manufactured for sale in Canada, the United States, or the European Union during the period specified in Column 2 of Table 1; or
 - (b) was not manufactured for sale in Canada, the United States or the European Union and it cannot be demonstrated, to the satisfaction of the district director, that the manufactured engine emission standard meets a Tier 1 or better emission standard for the applicable engine power in Table 2.

2. “Tier 1” means a non-road diesel engine that has an engine power as specified in Column 1 of Table 1 and:
 - (a) was manufactured for sale in Canada, the United States or the European Union during the period specified in Column 3 of Table 1; or
 - (b) was not manufactured for sale in Canada, the United States or the European Union but it can be demonstrated, to the satisfaction of the district director, that the manufactured engine emission standard meets the Tier 1 emission standard for the applicable engine power in Table 2.

3. “Tier 2” means a non-road diesel engine that has an engine power as specified in Column 1 of Table 1 and:
 - (a) was manufactured for sale in Canada, the United States or the European Union during the period specified in Column 4 of Table 1; or
 - (b) was not manufactured for sale in Canada, the United States or the European Union but it can be demonstrated, to the satisfaction of the district director, that the manufactured engine emission standard meets the Tier 2 emission standard for the applicable engine power in Table 2.

4. “Tier 3” means a non-road diesel engine that has an engine power as specified in Column 1 of Table 1 and:
 - (a) was manufactured for sale in Canada, the United States or the European Union during the period specified in Column 5 of Table 1; or
 - (b) was not manufactured for sale in Canada, the United States or the European Union but it can be demonstrated, to the satisfaction of the district director, that the manufactured engine emission standard meets the Tier 3 emission standard for the applicable engine power in Table

2.

5. “Tier 4” means a non-road diesel engine that has an engine power as specified in column 1 of Table 1 and:

- (a) was manufactured for sale in Canada, the United States or the European Union during the period specified in Column 6 of Table 1; or
- (b) was not manufactured for sale in Canada, the United States or the European Union but it can be demonstrated, to the satisfaction of the district director, that the manufactured engine emission standard meets the Interim Tier 4 emission standard for the applicable engine power in Table 2.

Table 1 – Engine Tier Classifications

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Engine Power	Tier 0	Tier 1	Tier 2	Tier 3	Interim Tier 4 or Tier 4
19 ≤ kW < 37 (25 ≤ hp < 50)	1998 and prior years	1999 to 2003 inclusive	2004 to 2007 inclusive	N/A	2008 and later years
37 ≤ kW < 56 (50 ≤ hp < 75)	1997 and prior years	1998 to 2003 inclusive	2004 to 2007 inclusive	N/A	2008 and later years
56 ≤ kW < 75 (75 ≤ hp < 100)	1997 and prior years	1998 to 2003 inclusive	2004 to 2007 inclusive	2008 to 2011 inclusive	2012 and later years
75 ≤ kW < 130 (100 ≤ hp < 175)	1996 and prior years	1997 to 2002 inclusive	2003 to 2006 inclusive	2007 to 2011 inclusive	2012 and later years
130 ≤ kW < 225 (175 ≤ hp < 300)	1995 and prior years	1996 to 2002 inclusive	2003 to 2005 inclusive	2006 to 2010 inclusive	2011 and later years
225 ≤ kW < 450 (300 ≤ hp < 600)	1995 and prior years	1996 to 2000 inclusive	2001 to 2005 inclusive	2006 to 2010 inclusive	2011 and later years
450 ≤ kW < 560 (600 ≤ hp < 750)	1995 and prior years	1996 to 2001 inclusive	2002 to 2005 inclusive	2006 to 2010 inclusive	2011 and later years
560 ≤ kW < 900 (750 ≤ hp < 1,200)	1999 and prior years	2000 to 2005 inclusive	2006 to 2010 inclusive	N/A	2011 and later years
kW ≥ 900 (hp ≥ 1,200)	1972 and prior years	1973 to 2001 inclusive	2002 to 2004 inclusive	2005 to 2010 inclusive	2011 and later years

Table 2 – Metro Vancouver Diesel Particulate Matter (DPM) Emission Standards (g/bhp-hr)

Engine Year	DPM STANDARDS - ENGINE HORSEPOWER GROUPS g/HP-hr								
	25≤49	50≤74	75≤99	100≤174	175≤299	300≤599	600≤749	750≤1199	1200+
pre-1969	0.95	1.2	1.2	1.1	1.1	0.95	0.95	0.95	0.84
1969	0.95	1.2	1.2	1.1	1.1	0.95	0.95	0.95	0.84
1970	0.95	1.2	1.2	0.94	0.94	0.81	0.81	0.81	0.84
1972	0.95	1.2	1.2	0.78	0.78	0.68	0.68	0.68	0.84
1973 - 1987	0.95	1.2	1.2	0.78	0.78	0.68	0.68	0.68	0.72
1988	0.95	1.2	1.2	0.78	0.54	0.49	0.49	0.5	0.72
1989 - 1995	0.95	1.2	1.2	0.78	0.54	0.49	0.49	0.5	0.72
1996	0.95	1.2	1.2	0.78	0.4	0.4	0.4	0.5	0.72
1997	0.95	1.2	1.2	0.6	0.4	0.4	0.4	0.5	0.72
1998	0.95	1.09	1.09	0.6	0.4	0.4	0.4	0.5	0.72
1999	0.6	1.09	1.09	0.6	0.4	0.4	0.4	0.5	0.72
2000	0.6	1.09	1.09	0.6	0.4	0.4	0.4	0.4	0.72
2001	0.6	1.09	1.09	0.6	0.4	0.15	0.4	0.4	0.72
2002	0.6	1.09	1.09	0.6	0.4	0.15	0.15	0.4	0.54
2003	0.6	1.09	1.09	0.22	0.15	0.15	0.15	0.4	0.54
2004	0.45	0.30	0.30	0.22	0.15	0.15	0.15	0.4	0.54
2005	0.45	0.30	0.30	0.22	0.15	0.15	0.15	0.4	0.15
2006	0.45	0.30	0.30	0.22	0.15	0.15	0.15	0.15	0.15
2007	0.45	0.30	0.30	0.22	0.15	0.15	0.15	0.15	0.15
2008	0.22	0.22	0.3	0.22	0.15	0.15	0.15	0.15	0.15
2009	0.22	0.22	0.3	0.22	0.15	0.15	0.15	0.15	0.15
2010	0.22	0.22	0.3	0.22	0.15	0.15	0.15	0.15	0.15
2011	0.22	0.22	0.3	0.22	0.015	0.015	0.015	0.07	0.07
2012	0.22	0.22	0.015	0.015	0.015	0.015	0.015	0.07	0.07
2013	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.07	0.07
2014	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.07	0.07
2015	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.03	0.03
2016	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.03	0.03
2017	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.03	0.03
2018	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.03	0.03
2019	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.03	0.03
2020 and later	0.02	0.02	0.015	0.015	0.015	0.015	0.015	0.03	0.03

Tier 0 Engine		Tier 1 Engine		Tier 2 Engine		Tier 3 Engine		Interim Tier 4		Tier 4 Engine	
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Schedule 2 – Registration Fees

Replaced by Bylaw 1337, 2021

1. Subject to sections 11 and 12 of this Schedule 2, the registration fee payable for an operating period (annual, monthly, daily, low-use or moderate-use, as applicable) is prescribed in this Schedule 2 in accordance with the calculations respectively set out below for each type of operating period.

Annual Operating Period

2. The registration fee for an annual operating period is calculated as follows:

$$\text{registration fee} = \text{hp} \times \text{prorated annual fee rate} + \$15$$

Where:

hp is engine horsepower;

prorated annual fee rate is
$$\frac{[\text{current year fee rate} \times D] + [\text{next year fee rate} \times (365 - D)]}{365 \text{ days}}$$

D is the number of days calculated from the date of registration to December 31;

current year fee rate is the registration fee rate specified in Column 5 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) of the engine's registration; and

next year fee rate is the registration fee rate specified in Column 5 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) that is the calendar year after the calendar year of the engine's registration.

3. An annual operating period registration fee may be paid:

(a) in full, in which case the operating period is for a consecutive 365-day period; or

(b) in four instalments, in which case the operating period is limited to the quarterly period of three months for which the instalment fee has been paid.

4. If the annual operating period registration fee is paid in instalments under subsection 3(b) of this Schedule, the amount of an instalment payment:

(a) which is due must be paid prior to the date of commencement of the instalment period in which the non-road diesel engine will be operated; and

(b) includes interest at 5% *per annum*.

Table 3 - Registration Fee Rates (\$ per horsepower)

Column 1	Column 2	Column 3	Column 4	Column 5 (Column 3 + Column 4)
Tier	Year	Diesel Particulate Matter Fee Rate (\$/HP)	Nitrogen Oxides Fee Rate (\$/HP)	Registration Fee Rate (\$/HP)
Tier 0	2021	20.00	0.00	20.00
	2022	20.00	0.00	20.00
	2023	20.00	0.00	20.00
	2024	31.61	2.18	33.79
	2025	36.87	2.55	39.42
	2026	42.14	2.91	45.05
	2027	47.41	3.28	50.69
	2028	52.68	3.64	56.32
	2029 and later	53.73	3.71	57.44
Tier 1	2021	10.00	0.00	10.00
	2022	10.00	0.00	10.00
	2023	10.00	0.00	10.00
	2024	11.29	1.27	12.56
	2025	13.17	1.48	14.65
	2026	15.05	1.69	16.74
	2027	16.93	1.90	18.83
	2028	18.81	2.11	20.92
	2029 and later	19.19	2.16	21.35
Tier 2	2023	0.88	0.67	1.55
	2024	1.59	0.86	2.45
	2025	3.71	1.00	4.71
	2026	4.24	1.14	5.38
	2027	7.16	1.28	8.44
	2028	7.95	1.43	9.38
	2029 and later	8.11	1.46	9.57
Tier 3	2024	1.11	0.54	1.65
	2025	2.59	0.63	3.22
	2026	2.96	0.72	3.68
	2027	4.99	0.81	5.80
	2028	5.54	0.90	6.44
	2029 and later	5.65	0.92	6.57
Tier 4	2029 and later	0.40	0.54	0.94

Monthly Operating Period

5. The registration fee for a monthly operating period is calculated as follows:

$$\text{registration fee} = \text{hp} \times \text{number of months} \times \text{prorated monthly fee rate} + \$15$$

Where:

hp is engine horsepower;

number of months is the number of monthly operating periods;

prorated monthly fee rate is
$$\frac{[\text{current year fee rate} \times N] + [\text{next year fee rate} \times (T-N)]}{T \times 8}$$

N is the number of days registered in the current calendar year of registration;

T is the total number of days in the operating period;

current year fee rate is the registration fee rate specified in Column 5 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) of the engine's registration; and

next year fee rate is the registration fee rate specified in Column 5 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) that is the calendar year after the calendar year of the engine's registration.

Daily Operating Period

6. The registration fee for a daily operating period is calculated as follows:

$$\text{registration fee} = (\text{hp} \times \text{daily registration fee multiplier} \times \text{current year fee rate}) + \$15$$

Where:

hp engine horsepower

daily registration fee multiplier is the multiplier specified in Column 2 of Table 4 for the number of days specified in Column 1 of Table 4; and

current year fee rate is the registration fee rate specified in Column 4 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) of the engine's registration.

Table 4 – Daily registration fee multiplier

Column 1	Column 2
Number of Days	Multiplier
1	0.0323
2	0.0456
3	0.0559
4	0.0645
5	0.0722
6	0.0791
7	0.0854
8	0.0913
9	0.0968
10	0.1021
11	0.1070
12	0.1118
13	0.1164
14	0.1208
15	0.1250

Low-Use Engine Operating Period

7. Eligibility for a low-use engine operating period is subject to compliance with Part 5 – Low-Use Engine Registration Requirements.

8. The registration fee for a low-use engine operating period is calculated as follows:

$$\text{registration fee} = \frac{\text{hp} \times \text{prorated annual fee rate}}{4} + \$15$$

Where:

hp engine horsepower

prorated annual fee rate is $\frac{[\text{current year fee rate} \times D] + [\text{next year fee rate} \times (365-D)]}{365 \text{ days}}$

D is the number of days calculated from the date of registration to December 31;

current year fee rate is the registration fee rate specified in Column 5 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) of the engine’s registration; and

next year fee rate is the registration fee rate specified in Column 5 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) that is the calendar year after the calendar year of the engine’s registration.

Moderate-Use Engine Operating Period

- 9. Eligibility for a moderate-use engine operating period is subject to compliance with Part 6 – Moderate-Use Engine Registration Requirements.
- 10. The registration fee for a moderate-use engine operating period is calculated as follows:

$$\text{registration fee} = \text{hp} \times \text{prorated annual fee rate} \times 0.6 + \$15$$

Where:

hp is engine horsepower

prorated annual fee rate is $\frac{[\text{current year fee rate} \times D] + [\text{next year fee rate} \times (365-D)]}{365 \text{ days}}$

D is the number of days calculated from the date of registration to December 31;

current year fee rate is the registration fee rate specified in Column 5 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) of the engine’s registration; and

next year fee rate is the registration fee rate specified in Column 5 of Table 3 that appears opposite the engine tier classification (Column 1) of the non-road diesel engine and the calendar year (Column 2) that is the calendar year after the calendar year of the engine’s registration.

Reduction in Registration Fee for Engine with Emission Reduction Measure

Replaced by Bylaw 1337, 2021

- 11. Until and including December 31, 2022, where a non-road diesel engine with an emission reduction measure qualifies for a reduction in the registration fee pursuant to sections 34 and 35 of the bylaw, the registration fee payable for a non-road diesel engine with an emission reduction measure is calculated as follows:

$$\text{registration fee} = \text{reduced fee rate} \times \text{hp} + \$15$$

Where:

reduced fee rate is the fee rate calculated in accordance with sections 11(a) or 11(b) of this Schedule 2, as appropriate

hp is engine horsepower

- (a) The reduced fee rate for a Tier 0 non-road diesel engine with an emission reduction measure that does not meet the emission standard of a Tier 1 non-road diesel engine is calculated as follows:

$$\text{reduced fee rate} = \text{T1 rate} + \frac{\left[\frac{(100 - Y)}{100} \times \text{T0 standard} \right] - \text{T1 standard}}{\text{T0 standard} - \text{T1 standard}} \times (\text{T0 rate} - \text{T1 rate})$$

Where:

Y is the percentage of reduction in the diesel particulate matter emission rate as a result of the emission reduction measure

T0 rate is the fee rate for a Tier 0 non-road diesel engine without an emission reduction measure, for the operating period;

T1 rate is the fee rate for a Tier 1 non-road diesel engine without an emission reduction measure, for the operating period;

T0 standard is the emission standard of a Tier 0 non-road diesel engine; and

T1 standard is the emission standard of a Tier 1 non-road diesel engine.

- (b) The reduced fee rate for a Tier 0 or Tier 1 non-road diesel engine with an emission reduction measure that meets the emission standard of a Tier 1 non-road diesel engine but does not meet the emission standard of a Tier 2 non-road diesel engine is calculated as follows:

$$\text{reduced fee rate} = \frac{\left[\frac{(100 - Y)}{100} \times R \right] - \text{T2 standard}}{\text{T1 standard} - \text{T2 standard}} \times \text{T1 rate}$$

Where:

R is the emission standard for the engine tier classification applicable to the non-road diesel engine without the emission reduction measure;

- Y is the percentage of reduction in the diesel particulate matter emission rate as a result of the emission reduction measure;
- T1 rate is the fee rate for a Tier 1 non-road diesel engine without an emission reduction measure, for the operating period;
- T1 standard is the emission standard of a Tier 1 non-road diesel engine; and
- T2 standard is the emission standard of a Tier 2 non-road diesel engine.

Added by Bylaw 1337, 2021

12. Effective January 1, 2023, where a non-road diesel engine with an emission reduction measure qualifies for a reduction in the registration fee pursuant to sections 34 and 35 of the bylaw, the registration fee payable is as set out under section 1 of this Schedule 2 except that the registration fee for the applicable operating period may be reduced by a dollar value of reduction that is calculated as follows:

$$\text{reduction} = Y_{\text{DPM}} \times [(\$ \text{value of registration fee for the applicable operating period}) - \$15]$$

Where:

- YDPM is the percentage of reduction in the diesel particulate emission rate as a result of an emission reduction measure, all as approved by the district director.