



Ski Lift Operations Emergency Engine Permitting and Use

What is an Emergency Engine?

An emergency engine is a stationary internal combustion engine, which operates as a mechanical or electrical power source during unforeseeable emergency conditions that are beyond the control of the owner.

What is an Emergency?

The following are emergency conditions under which an emergency engine can operate:

- a) When the primary power source for a facility is not available such as during a power outage and passengers must be safely unloaded.
- b) When the electric ski lift motor malfunctions and passengers must be safely unloaded.
- c) When an interruption of electrical power from the electricity supplier is required to repair damage from fire, flood, or any other catastrophic event, natural or man-made.
- d) When operation of the engine is required to minimize damage from fire, flood, or any other catastrophic event, natural or man-made.

Can I Perform Readiness Testing?

Yes. Given that these engines run infrequently, they must be properly maintained to ensure they will operate during an emergency. Therefore, emergency engines can be run for maintenance checks and readiness testing, as recommended by federal, state, or local government, the manufacture, or other safety and insurance requirements.

What are the Limitations on the Hours of Operation of an Emergency Engine?

Each emergency engine can operate as follows:

- Up to 500 hours during any consecutive 12-month period. This is the combined emergency use, and maintenance and readiness testing.
- The maintenance and readiness testing included in the 500 hours is limited to 100 hours per calendar year.

Is a Permit Required for an Emergency Engine?

Yes. You must obtain a **General State Permit** to operate an emergency engine prior to its installation if it meets the permitting thresholds shown in the table below. Permitting examples follow.

Fuel Type	Threshold Design Heat Input Ratings
Liquid fuel oil (#2 fuel oil, diesel fuel oil, ultra-low sulfur diesel, etc.)	An single engine rated at ≥ 1.5 MMBtu/hr, or a combination of engines each with a rating of ≥ 0.15 MMBtu/hr that meet or exceed a total rating of 1.5 MMBtu/hr.
Gaseous or liquefied propane	An engine rated at ≥ 10.0 MMBtu/hr, or a combination of engines each with a rating of ≥ 1.5 MMBtu/hr that meet or exceed a total rating of 10.0 MMBtu/hr.

Permitting Examples:

- A) Your facility has one permitted engine rated at 1.5 MMBtu/hr that burns #2 fuel. A permit is required since this engine meets the single engine design rating. You want to install a second engine with a design rating of 0.15 MMBtu/hr. The new engine must be included in the permit since the facility’s existing engine meets the design rating of 1.5 MMBtu/hr and the new engine meets the individual rating of 0.15 MMBtu/hr.

- B) Your facility has one engine rated at 1.0 MMBtu/hr that burns natural gas. This engine does not require a permit since it is below the single engine design rating of 10.0 MMBtu/hr. You want to install eight more engines burning natural gas each rated at 1.0 MMBtu/hr. A permit is still not required since the combined design rating of all engines is only 9.0 MMBtu/hr.

- C) Your facility has one permitted engine rated at 1.5 MMBtu/hr that burns low sulfur diesel. A permit is required since this engine meets the single engine design rating. You want to install a second engine burning natural gas with a design rating of 1.5 MMBtu/hr. This new engine is not required to be included in the permit since it is below the design ratings for the fuel type.

Does the General State Permit Allow use of an Emergency Engine for any Non-Emergency Use?

No. Under the **General State Permit**, you cannot operate an emergency engine for non-emergency purposes.

What if I Want to Operate My Engines for Non-Emergency use or as Prime Power?

You will need to obtain a **State Permit to Operate**. The **State Permit to Operate** provides you options for non-emergency and prime power use of the engine. The **State Permit to Operate** will be designed based on your specific needs.

To discuss in more detail your needs and applicable permitting, please contact the NHDES Air Resources Division’s Permitting Program at (603) 271-1370 or airpermitting@des.nh.gov.