



Fire extinguishing system for vehicles and working machines

Safety Regulation, valid as of 1 April 2020

1 Purpose

This safety regulation presents the requirements for the fire extinguishing equipment used for vehicles and working machines. It contains a general description on the need and operation of an automatic fire extinguishing system and provides information about companies selling fire extinguishing systems approved by Pohjola Insurance.

If a vehicle or working machine is used in a particularly fire-hazardous environment or it is used for handling fire-hazardous material, it must be equipped with a fixed and automatic fire extinguishing system as described herein. The fire extinguishing system requirement is also mentioned in the product description and policy document.

2 Obligation to comply with safety regulations

These safety regulations are part of the insurance contract. Both the policyholder and the insured must comply with the safety regulations and its provisions. If the safety regulations are not complied with, the compensation may be reduced or completely denied in accordance with the Insurance Contracts Act. The policyholder must ensure that those responsible for work performance are familiar with the contents of these safety regulations.

3 When must an automatic fire extinguishing system be installed?

Installing an automatic fire extinguishing system may be the requirement for being granted insurance if the vehicle is used in an environment carrying a high fire risk or if the vehicle or working machine is used for an activity that carries a high fire risk or in underground operations (indoors).

Examples of environments with a high fire risk include forests, sawmills, timber storage, waste-to-energy plants, peat processing areas, joinery workshops, grain, animal feed and chemical plants, and paper industry plants.

Examples of materials posing a fire hazard include wood chips, sawdust, peat, timber, waste used to create energy, paper, cereal, animal feed and oil products. A typical example of a vehicle with a higher fire risk is a wood grinder fitted on a chassis or towed in a trailer; a farm tractor used to extract peat; or a soil tilling machine used on a peat bog.

Certain types of vehicle must always have an automatic fire extinguishing system, and this is also indicated in the policy document. With certain vehicle types, if the vehicle is used in an environment that has a higher fire risk, the requirement for an automatic fire extinguishing system is determined on a case-by-case basis.

4 Approved fire extinguishing system

Automatic fire extinguishing systems approved by Pohjola Insurance are currently sold and installed by the following retailers. These fire extinguishing systems fulfil, in terms of technical implementation, quality and functions, the requirements set by Pohjola Insurance and certain Nordic standards. Additionally, the operation of the fire extinguishing systems has been tested in an accredited test laboratory.

Fire extinguishing systems approved by Pohjola Insurance:

- Dafo Oy (Dafo Forrex)
- YTM-Industrial (YTM-FireStop)
- Mikro-Pulssi Oy (Forest)
- OEM Finland Oy (Fogmaker)
- Teknosafe Oy (Rotarex)

Certificate of installation of the fire extinguishing system

The customer receives a certificate of installation, and compliance to requirements is certified with a test report that is given to the owner and keeper.

The vehicle keeper must also have a maintenance plan and log for the fire extinguishing system. The person in charge of the fire extinguishing system must enter any testing and maintenance into the log.

Operation of the fire extinguishing system in practice

The purpose of the fire extinguishing system is, if fire breaks out, to warn the environment and to put out the fire in the premises provided with fire protection in which the vehicle or working machine operates.

A fire extinguishing system approved by Pohjola Insurance will sound an alarm when it detects a fire and release the extinguishing agent. The system may also be activated manually from the driver's seat or from outside the machine with an external activation device.

Protection level

Protection must include all the items below that include a fire risk, except if they have been built in a way that the risk of fire or the fire spreading have been considered unlikely.

- engine compartment and particle filter of an internal-combustion engine
- the parts of a covered chassis that contain electrical wires and compressed-air pipes
- compartments around the front and rear axle's differential gear brake, and any brakes permanently fitted into the chassis
- any items not visible and below protective sheets where flammable material may accumulate, items in which large amounts of oil enter through valves, and similar items.

Maintenance and checking of proper operation

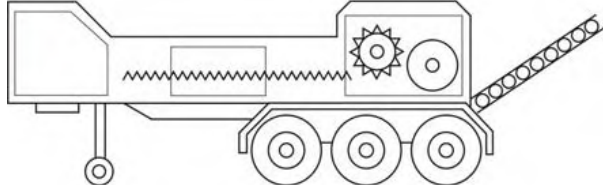

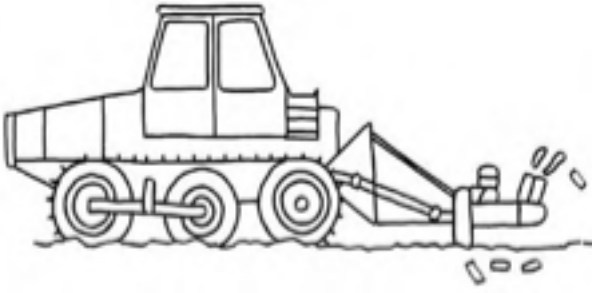
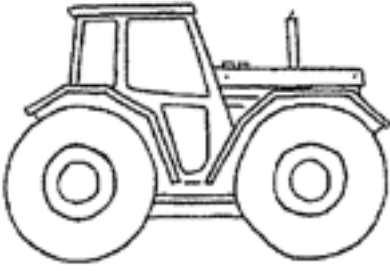
The fire extinguishing system must be kept in operating condition and in a way that ensures that it corresponds to the purpose of use of the protected object throughout its service life. Any detected faults and defects must be fixed without delay. Any permanent or temporary measures that may risk the performance of the fire extinguishing system are prohibited.

Service and maintenance instructions supplied by manufacturers/installation firms must be followed and also kept in the same place as the vehicle's operating instructions. Daily, weekly and periodic inspections must be performed according to these instructions. The vehicle's operator and serviceman must learn how to use the fire extinguishing system properly.

The fire extinguishing system must be inspected at least once a year in accordance with the instructions supplied by the manufacturer and installation firm. Only the manufacturer/supplier or a person it has approved may perform such inspection. A detailed report on each inspection must be drawn up, which must be presented on request. Hand-held fire extinguishers must also be maintained at least once a year.

5 Fire extinguishing system requirements

The following explains how the installation of an automatic fire extinguishing system may be considered a requirement to be granted insurance, based on the vehicle type or what kind of environment the vehicle is used. The requirement for a fixed automatic fire extinguishing system is always entered on the policy document.

<p>Choppers, crushers</p> <p>A chopper is a working machine that crushes or tears up timber products or other waste used to create energy.</p> <p>The regulations apply both to units that have their own drive engine and those that require external transportation.</p> <p>Once it detects a fire, the fire extinguishing system sounds an alarm and at the same time shuts off the engine and the electric and fuel system, and releases the extinguishing agent.</p> <p>The amount of extinguishing agent must be at least 6 litres per cubic metre to be protected.</p> <p>The machine must also be equipped with four 34A233B hand-held fire extinguishers which must be reachable from ground level.</p>	
<p>Waste processing machines</p> <p>Machines/vehicles primarily used for compressing waste.</p> <p>The fire extinguishing system will sound an alarm when it detects a fire and release the extinguishing agent.</p> <p>The amount of extinguishing agent must be at least 3 litres per cubic metre to be protected. The machine must be equipped with two 34A233B hand-held fire extinguishers which must be reachable from ground level.</p>	
<p>Peat extraction machine</p> <p>A peat extraction machine is a machine or vehicle that extracts or processes peat.</p> <p>The fire extinguishing system will sound an alarm when it detects a fire and release the extinguishing agent.</p> <p>The amount of extinguishing agent must be at least 3 litres per cubic metre to be protected. The machine must be equipped with two 34A233B hand-held fire extinguishers which must be reachable from ground level.</p>	
<p>Peat tractor</p> <p>A tractor that processes peat.</p> <p>The fire extinguishing system will sound an alarm when it detects a fire and release the extinguishing agent.</p> <p>The amount of extinguishing agent must be at least 3 litres per cubic metre to be protected. The machine must be equipped with two 34A233B hand-held fire extinguishers which must be reachable from ground level.</p>	

Also other types of working machines that are used for working on a peat extraction site must be equipped with a fixed automatic fire extinguishing system.

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Automatic fire extinguishing system prerequisite for insurance, upon discretion

If a vehicle or working machine is used indoors, in shafts or underground, we use our discretion, case by case, to decide whether we require that the vehicle or working machine must be equipped with an automatic fire extinguishing system in order to be granted insurance. A mining site is an example of such an environment.

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