



Guide 1.12 Machine Fires

Machine and vehicle fires are infrequent but high hazard events, for people, the immediate area, the worksite as a whole and the environment.



Starter motor, alternators, air conditioning units and the associated wiring, - rank high in the initial cause of machine fires.

[Think about how often you check and service these areas.](#) Uncontrolled **Hot Works** (metal cutting and welding) are also a common initial cause. [Ensure you identify and control the associated risks, consider the use of a Hot Works 'permit to work' system.](#)

Forestry machines run at high temperatures and carry highly flammable liquids - oils and hydraulic fluids operating at pressure.

Diesel and Hydraulic Oil have low 'fire points' (the temperature they must be at before they will burn) in their normal liquid states, (diesel is more than 40°C, hydraulic oil much higher at 200°C).

However, both, when they are released under pressure, (through a small hole or tear in a hose or pipe), can produce a fine 'mist' which is highly flammable, it can be explosive or act like a flame jet when it comes into contact with a spark or hot metal.

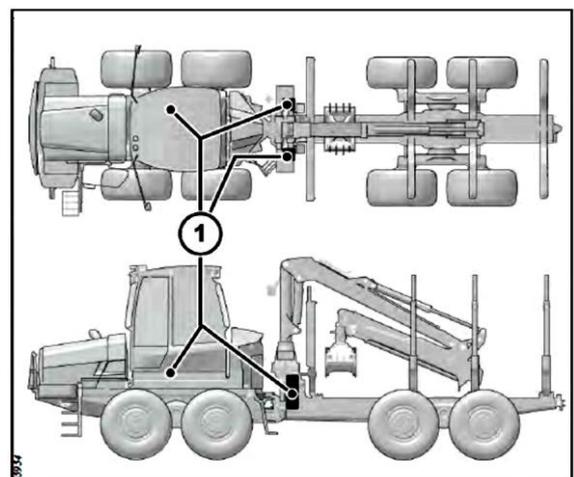
[Think about the location of your fuel and hydraulic oil lines and how often you check them, especially at the joints and connections.](#)

Some harvesting machines are susceptible to the build-up of forestry debris, such as needles and wood dust in the engine belly, especially when working in thinning's or felling Larch in the autumn or Lodgepole pine when it is losing needles with Dothistroma. The fire potential of these materials can increase as they dry out inside the machine, are heated up and become impregnated with oil and grease. [Think about the crop you are working in and how often you clean out this debris from the engine compartment, the belly pan and the differential plates.](#)

If your machine is fitted with an automatic or semi-automatic fire suppressent system, [make sure it is annually checked and serviced by a competent person.](#)



Where the manufacturer has supplied and fitted hand held fire extinguishers, [these must be maintained in place.](#)





Know what type of extinguishers you have and what type of fires they are best suited to control.

They are colour coded. If they are fitted with a gauge (AFFF Foam), make sure it is sitting in



the green, if not,



have it repressurised or replace it. If it is a powder extinguisher, regularly turn it 'up and down' a few times to avoid the powder settling. Ensure they are serviced annually by a competent person. Always ensure these checks are recorded on the extinguisher label.

WATER	POWDER	AFFF FOAM	CARBON DIOXIDE (CO ₂)
USE Paper, wood, textiles & solid materials fires	Liquid, electrical wood, paper & textile fires	Liquid, paper, wood & textile fires	Liquid & Electrical fires
DON'T USE Liquid, electrical or metal fires	Metal fires	Electrical or metal fires	Metal fires

DO NOT HOLD HORN WHEN OPERATING

Ensure you know where all the additional manual fire extinguisher insertion ports are (if fitted) on your machine and know how long it will take you to reach them with your extinguisher.



Never leave your machine or vehicle running unattended. When shutting down and leaving your machine, ensure you engage and remove the 'battery isolator' switch. Think about where you park up your machine, particularly to the proximity of fuel bowsers, other machines, services (overhead powerlines) or buildings.



Fire suppression systems and hand-held fire extinguisher's primary role is to delay the onset of a fire to enable the operator to escape. They will extinguish a small fire if caught at the ignition point, but they will very quickly become ineffective as the fire takes hold. If your machine catches fire beyond your fire suppression system's or your ability to quickly contain it, (if you are able to - turn off the engine), retreat to a safe distance, ensure nobody else enters the danger area and call the fire brigade.

If you are able to contain and extinguish a machine fire, make sure it is safe before you re-enter the machine. An assessment should be made by a competent person to establish the initial cause of the fire. After repair, a full functional check of the entire machine should take place. All machine fires, irrespective of how small, should be recorded in the vehicle log book.

Inform your Forestry Work Manager of all machine fires.

Machines are insured and can be replaced; however, the insurance will not cover lost production, downtime or lost contracts. To your family and friends, you are irreplaceable.

