NZ Safety Alert

MinEx
Health and Safety in NZ extractives

Let's work together to keep ourselves and our workers safe

September 2019

Fire risk on excavator

A hired CAT 345D Excavator operating on a quarry stockpile caught fire in the engine compartment. The speed of the fire and smoke meant that the operator had to turn off the excavator and jump clear. No injuries were sustained however the excavator received fire damage, which was confined to the engine compartment.

The main wiring loom and main power cable to the starter motor of the excavator are secured by a "P" clamp where they pass through the main cross member of the chassis.

The rubber insulation on the "P" clamp had failed and fallen out due to contamination from oil and heat over the lifespan of the excavator.

This has allowed the wiring loom and power cable to vibrate in the "P" clamp and cause wear on the insulation of the wiring loom.

The wear on the insulation and wiring loom has caused a wire in the loom to short, overheat and set fire to the insulation. The fire has then spread through the engine bay of the excavator.

You need to ensure that:

1. Regular inspections are conducted on mobile equipment of wiring looms. Checks should look for any chaffing/rubbing of wires and faulty securing clamps, especially "P" clamps.
2. Immediately replace any worn insulation or "P" clamps.
3. This alert, and others, are shared with all workers, particularly mobile equipment operators, mechanics and contractors.
4. Speed is reduced to match the conditions, particularly when travelling loaded, down steep slopes.
5. Procedures are clear on action to be taken by mobile plant operators when they experience an engine fire on mobile plant.

MinEx data on incidents with the potential to cause harm over the 24 months to June 2019 shows 59 incidents of fire. An identical incident occurred recently where a similar P-clip failure caused a fire in a truck engine.

Know of an incident or near miss? Please share the learnings with us.