# Thermal Covers

## We've got you covered

At Mammoth Zero Harm is at the core of what we do every day. Our Thermal Insulation Covers will mitigate the risk of potential injury and fires associated with high temperatures of equipment and power systems.

Designed to incorporate durability, thermal performance and a custom fit, our thermal insulation covers have a protective barrier to minimise fire risk as a result of oil, fuel or hydraulic oil egressions.

We offer a range of Thermal Insulation Covers to meet your specific safety requirements by insulating engine parts, exhaust piping and components, and industrial process piping and machinery.

**Quality assured**

**Customised solutions to suit any machine**

**Easy install and maintenance**

**Made from non-toxic materials**

### Thermal Cover Features

- OEM build and kit packages
- Multiple specifications to suit any environment, application and budget
- Easy installation and maintenance
- Maintains integrity due to quality materials and manufacturing process
- Identification plates for easy installation and cover re-ordering

### Thermal Cover Benefits

- Mitigate the risk of high potential incidents
- Oil, fuel, grease and moisture resistant
- Reduces touch temperatures to meet your specific safety requirements
- Reduces thermal stress
- Innovative engineering that reduces the ingress of fluids
- Cost-effective solution for fire protection

**Why use Mammoth?**

Mammoth is a world-leading equipment and power system solution provider. We offer a broad range of innovative bespoke and universal solutions to the mining, transport, rail, industrial, agriculture and marine industries globally.

Our success is based on delivering innovative integrated solutions, our ability to build strong relationships, and most importantly, strengthen our customers' businesses.

# Thermal Covers - *Case Studies*

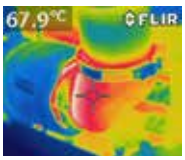
## Case Study 1: CATERPILLAR 18M3

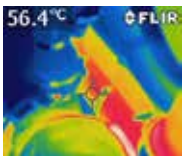
**Overview**
CAT 18M3 series grader fitted with CAT C13 ACERT engine @ 227kW rated power.

Untreated exhaust manifold, turbo, turbo exhaust to muffler group.

Engine surface temperate data @ rated operating temperature.

Operating temperatures > 600°C.




| Engine Component | OEM CATERPILLAR C13 ACERT Untreated (Rated operating temperature) | CATERPILLAR C13 ACERT Mammoth Treated (Rated operating temperature) | Temperature Reduction |
|---|---|---|---|
| **Exhaust Manifold** | 612 °C | 102 °C | –510 °C |
| **Turbo Snail** | 649 °C | 95 °C | –554 °C |
| **Muffler Inlet** | 492 °C | 92 °C | –400 °C |

**Summary:**
By replacing the untreated exhaust manifold, turbo and exhaust-to-muffler assembly with Mammoth's custom-manufactured Pyrogard lagging and integrated dual-skinned exhaust outlet, the CAT 18M3 achieved a reduction in surface temperatures of up to 554 °C. This upgrade significantly reduces fire risk, improves operator safety, and enhances equipment longevity.

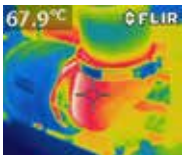
## Case Study 2: CATERPILLAR 18M3

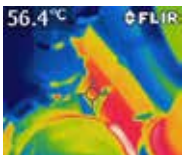
**Overview**
CAT 18M3 series grader fitted with CAT C13 ACERT engine @ 227kW rated power.

Untreated exhaust manifold, turbo, turbo exhaust to muffler group.

Engine surface temperate data @ rated operating temperature.

Operating temperatures > 600°C.

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