

Firetrace Vehicle Protection Systems



Simple. Affordable. Reliable.

Protecting Your Assets and Keeping Your People Safe

FIRETRACE SYSTEMS ARE <u>ONLY</u> AVAILABLE FROM FIRETRACE INTERNATIONAL AND ITS AUTHORISED PARTNERS. THE FIRETRACE BRAND NAME IS ONLY APPLICABLE TO GENUINE FIRETRACE SYSTEMS. ACCEPT NO FAKE UNTESTED OR UNAPPROVED COPIES



Protecting Vehicles with Firetrace™ Detection and Extinguishing Systems

Why Protect Vehicles from Fire?

High Cost to Replace Long Time to Replace Loss of Revenue Prevent Damage to nearby infrastructure Prevent Fire Spread **Protect Passengers** Enable Escape Time for Disabled/Elderly/Infirm Protect Goods in Transit.

Which Vehicles are Protected by Firetrace Systems?

Construction / Diggers / Cranes Mining

Agricultural

Buses

Disabled

Children Carriers

Taxis

Freight

Military

Police

Private

Collectors / Vintage

Airport Service Vehicles

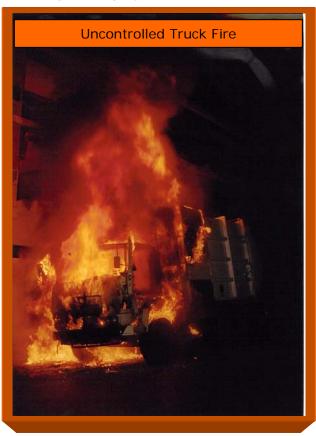
Battery Operated Vehicles

LPG Vehicles

Petrol / Diesel Vehicles

Fork Lift Trucks









Heavy Plant / Construction Vehicles



Optional Battery Operated Sounder located in crew cab alerts driver that a fire has been detected.

anywhere along its length. Detects fire quickly – wherever it starts!



Special Applications - Airports

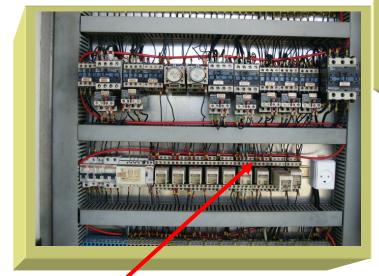
BENAUS

12KG Indirect Powder System Protects main Engine.

Various vehicles can be protected with Firetrace systems. This passenger "bus" at Copenhagen Airport uses a 12KG ILP Powder System on the main engine, a 6KG DLP Powder System on the generator and 2KG DLP Novec System on the Electrical panels.



Multi-Applications on Special Vehicles



On board electrical panels protected with 2KG Firetrace Direct Low Pressure Systems.



A 6KG DLP Powder System is installed to protect the generator from Fire.

Ford Transit Minibus used as Taxi Service for Elderly and Disabled People installed with a Firetrace Protection System.



- MOTABILITY SERVICE -



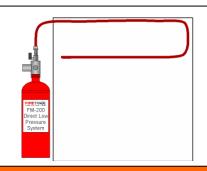


About the unique Firetrace Technology

Firetrace is unique because we use a proprietary tube to detect a fire (Firetrace Detection Tubing). The tube has been tested to the highest standards set down by globally respected test houses such as UL and FM, independently tested and verified by Oxford University, UK. In fact Firetrace is the only company in the world able to supply Firetrace Detection Tubing and to supply a tube that has been extensively tested and approved.

The Fire Detection Tubing acts as a linear heat detector along its length and is set to activate at a temperature of approximately 100°C. Once the Fire Detection Tube (FTD) has detected a fire we can use Firetrace to extinguish fires in two ways. This gives us an amazing capability to handle all kinds of vehicle fire applications. There are two types of Firetrace System.

The Firetrace Direct Low Pressure (DLP) System



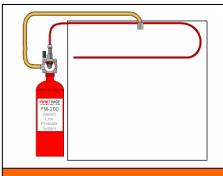
The Firetrace "Direct" System uses the Firetrace Tube to do three things at once.

- 1. Detect a Fire
- 2. Release Extinguishing Agent through the Tube onto the fire.
- 3. Extinguish the Fire.

On contact with Fire or heat at approx 100°C the tube will rupture delivering Extinguishant directly onto the seat of the fire extinguishing it rapidly.



The Firetrace InDirect Low Pressure (ILP) System



The Firetrace "InDirect" System uses the Firetrace Tube to detect a fire and release the extinguishing agent through carefully positioned pipework.

- 1. Detect a Fire
- 2. Release Extinguishing Agent through diffusion pipework or hoses to flood an enclosure.
- 3. Extinguish the Fire.

On contact with Fire or heat at approx 100°C the tube will rupture delivering Extinguishant through diffuser pipes or hoses and nozzles, flooding the enclosure with extinguishing agent and extinguishing the fire rapidly.





Many Types of Fire Extinguishing System in One!

Because Firetrace systems have the unique ability to be configured as either Direct or Indirect Systems it means that we can offer our customers the capability to protect different kinds of Fire Hazards located in and around various types of vehicles. (Engines, Electrical Panels, Control Panels, Wheel Arches) can all be protected with Firetrace systems! This flexibility and adaptability is a unique Firetrace benefit.

Some Additional Benefits

The advantage of using Firetrace Detection Tube rather than other detection devices such as Fusible Link type detection is that the Firetrace Detection Tube acts as a linear detection device along its entire length meaning it can detect a fire anywhere and not just at the location of a fusible link! This could have important benefits on detection and extinguishing time reducing costly damage to the vehicle and maximising the escape opportunity for the driver and any passengers.

Because Firetrace has the Direct System configuration capability we can deliver extinguishing agent – through the detection point – straight onto the source of the fire which means the detection AND extinguishing time is extremely rapid.

Both the Direct and Indirect Firetrace systems are able to use a wide variety of extinguishing agents including Powder, Novec 1230, HFC-227EA, CO2 and Foam meaning that Firetrace can provide a Fire Detection and Extinguishing solution to almost any vehicle Fire Risk.

Actuation

Whilst all Firetrace systems can detect and extinguish fires automatically it is possible to install our optional manual actuator on the driver's dash board to enable the driver to manually actuate the system.





Where are Firetrace Vehicle Protection Systems Installed?

Firetrace systems are installed globally. From the cities of Northern Europe, to the deserts of the Middle East, rain forests of Central and Western Africa and beyond. Firetrace is rugged, robust and able to handle any terrain. Firetrace is fit for purpose in all kinds of environments and locations. Firetrace is robust enough to withstand the harshest of conditions!



The Firetrace Detection Tube (FTD) installed on this London Bus has been installed using the Firetrace Tube Protector to shield the FTD from debris that may inadvertently cause damage. This ensures the FTD is not punctured thus maintaining system reliability over the lifetime of the system.

PARIS DAKAR RALLY



HISTORIC NOTE BACK TO THE 1980's

One of the first ever Firetrace Systems made was installed to protect the engine of a vehicle participating in the Paris Dakar Rally - establishing Firetrace as a reliable, robust and rugged Vehicle Protection System.

See Picture left taken in the early 1980's



Fire Protected Hazard Areas

Firetrace systems are mostly installed to provide protection from fires starting in the Engine bay. Depending on the vehicle type there may be a number of additional fire hazard locations on the vehicle. These can include.

Generators Motors Electrical cabinets Control Boards

Wheel Arches (for disk brake fires please ask to be sent 1mb Movie File by email). And more.....

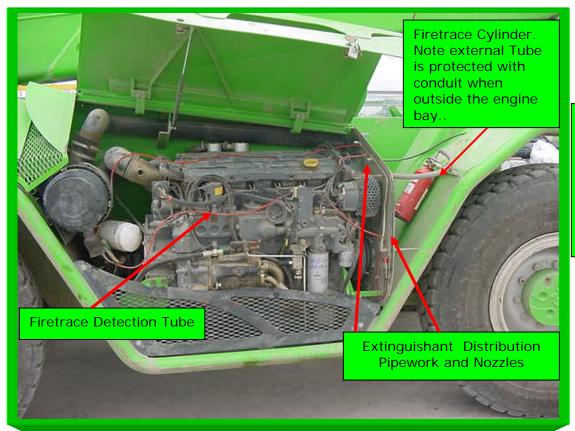
In fact if there's a fire hazard on a vehicle (any vehicle!) Firetrace can protect it!





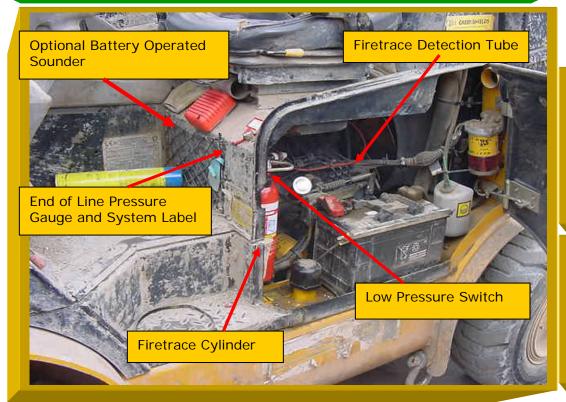
Vehicle Engine Installation Snapshot Overview

Firetrace Systems Installed at the Worlds Busiest International Passenger Airport



Earth Mover Heathrow Terminal 5





Fork Lift Truck
Heathrow
Terminal 5



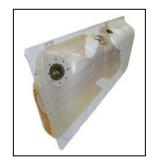


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Fuel Tank Impact / Puncture Explosion Suppression

FIRE Panel™







Please visit our website (address below) for information relating to our seperate business unit product which focuses on providing fuel tank fire suppression solutions. You can see the actual test crash video footage online.

For decades, technology used by the military has enhanced the survivability of military aircraft fuel cells (fuel tanks) during combat. Military aircraft have often encased the fuel cells with layers of fire suppressing agents. Currently, several models of helicopters and some of the most advanced aircraft employ this type of fuel cell protection. The FIRE Panel product, which is patented technology, is the civilian embodiment of the military protection concept.

The premise of this protection is that to reach the fuel cell or tank with some object that would puncture or ignite the fuel, it must first pass through the protective wrap containing fire suppressing agent. The puncturing of this protective wrap releases a cloud of fire suppressing powder, which "inerts" the space around the fuel cell/tank, thereby preventing the ignition of the fuel or quickly suppressing a fire.