



System Description

Supply and Installation of Bus Engine Bay Fire Suppression Systems

Contract Number T100188-09/10

Supplement no 1 – Tests and approvals

The system is built according to The Swedish Insurance Companies regulations, SBF 128. Dafo is as the first company in Sweden certified by the insurance companies.

The system is fully designed according to SBF 128 due to battery backup. Full scale tests has been performed under supervision from the insurance companies.

Supplement no 2 – System description

Description of hazardous area

Protected objects: engine incl. turbo and exhaust system, transmission near engine, hydraulic pumps and fuel operated heaters. The protection of the heater is not stipulated in the regulations but normally protected if placed in/near the engine compartment.

Ventilation: Operating fan

Shut-down functions: Fan, fuel and engine could after agreement upon be shut-down at activation of the system depending on how the system is designed.

System description

Comprises a fire extinguisher, piping with nozzles and a fire alarm with heat sensitive cable. The fire suppression system discharges automatically at the fire. A manual release can be made from a firing button on the display unit in the cab or from a manual release device

Agent. Forrex AB -30 °C

Agent quantity: 15 litres, quantity according to SBF 128, 3 litres/m³ protected volume.

Activation:	The fire suppression system discharges automatically at fire. 30 sec delay is programmed
Shut-downs:	Engine, fuel lines and electric master switch can be turned off upon agreement. 30 sec delay is programmed.
Nozzles:	16 nozzles with function and coverage to admit a rapid knock down also when the engine is running.
Detection:	7 metres of a heat sensitive cable. The line detector has an operating temperature of approx. 180°C.
Fire alarm	The system uses as standard an alarm horn and an alarm panel or use the vehicles own alarm system.

Supplement no 3 – Material description

Agent

Forrex AB –30°C is a liquid agent which efficiently knocks down the fire. Fully tested and certified down to -30°C. The agent is not corrosive.

Agent tank

The agent tank is made of a rigid aluminum profile. The patented construction admits a flexible and space saving installation.

Release mechanism

The release mechanism is operated with squib and a nitrogen cartridge. The release mechanism is mounted in a rigid steel bracket. Mechanical release mechanism is included

Distribution system

Between the agent tank and the distribution system is a steel braided rubber hose used, SAE 100 R2. For the distribution system is stainless steel pipe, DIN 2333, is used.

Nozzles

The nozzles are designed for vehicle installations as follows: Optimized performance to get a optimal spray pattern and extinguishing function during different weather and ventilation conditions. Designed with protective cap and internal filter to avoid debris in the nozzles and the distribution system.

Line detector

A heat sensitive cable, Line detector, is used as detection system. The detector is developed for use in mining machines and has a very good resistance to the environment. The detector is also very easy to install.

Cables

All cables are designed and produced according to a marine naval specification with modifications for vehicle environment. The isolation material is very resistive against hydraulic oil, battery acid and other liquids that could occur in an engine environment. It also has a very good resistance against mechanical damage and is flexible even in low temperatures.

Signs and labels

The labels is produced in the language English.