BRITISH COLUMBIA
Ministry of Transportation and Infrastructure

Commercial Vehicle Safety & Enforcement Branch

Bulletin # 03 - 15
November 01, 2015

Vehicle Inspections & Standards

INFORMATION BULLETIN

Re: Fire Risk from Operation of Diesel Particulate Filter (DPF) Emission Control Device

Background

Two recent events involving DPF components and vehicle fires have been investigated by WorkSafe BC (Appendix A – WorkSafe Bulletin). Evidence from these events suggests that vehicle components or equipment, particularly hydraulic lines, may have been installed in close proximity to the DPF.

During the soot- burning process (regeneration), temperatures near the DPF can reach 607°C (1125°F). These temperatures are normal and necessary for proper DPF operation. Vehicle components installed in proximity to the DPF may not be intended to withstand this intense heat. Component failure, especially where oils, lubricants or flammable products are present, may result in fire or exceptionally hazardous conditions.

Application

When inspecting a motor vehicle equipped with a DPF, inspectors must ensure that:

- Hoses, wires, and other equipment or components located near DPF systems are in good condition and are not showing any signs of heat damage;
- Heat sensitive equipment or components located near DPF system are protected from heat exposure by either distance or heat shielding; and
- The area around the DPF system and all hydraulic components is free of debris.

Should you have any further questions or concerns, please contact Geoff Ford, Program Advisor, at (250) 953 4039.

Regards,

B. Kangas

Brian Kangas, Manager,
Vehicle Inspections & Standards Program
Commercial Vehicle Safety & Enforcement Branch

Appendix A

WorkSafe Bulletin – WS 2015-14

Diesel particulate filters and heavy duty-trucks – reducing the risk of fire

A hydraulic hose was located near a garbage trucks diesel particulate filter (DPF). Those failed and sprayed hydraulic fluid. Heat from the DPF ignited the hydraulic spray, burning a worker, the truck, and the site of a nearby building.

On a heavy-duty truck, hydraulic lines may be located near the DPF. The intense heat generated by the DPF can damage improperly shielded lines and caused them to rupture and sprayed hydraulic fluid. The heat from the DPF can then ignite the spring hydraulic fluid and put operators and other people nearby at risk of injury from fire.

How diesel particulate filter systems work

DPF systems are used on many large, diesel powered trucks to reduce the amount of fine particulates (six) released in the exhaust. A DPF traps the second a filter. The DPF system then exposes us at high temperatures to break it down into a less harmful ash.

How a fire hazard can develop

During this soot-burning process, known as regeneration, temperatures near the DPF to reach about 607°C (1125°F). Equipment located near the DPF can be exposed to this high heat. If not properly shielded, the equipment they fail. If a hydraulic line fails, hydraulic fluid me sprayed out and ignite, resulting in a fire.

Examples of vehicles with hydraulic machinery include garbage, recycling, and delivery trucks, as well as trucks with deck cranes and other equipment. This machinery may be installed or retrofitted on large diesel chassis. In some cases, the machineries hydraulic components are placed close to the DPF system and they may not have property shielding.

What employers and drivers can do to reduce the risk

When inspecting large diesel trucks with DPF systems, ensure the following:

- Hoses, wires, and other equipment located near the DPF system are in good condition and are not showing signs of heat damage;
- Equipment located near DPF systems is protected from heat exposure by either distance or proper shielding;
- The area around the DPF system and all hydraulic components free of debris.