

5 SAFETY RECOMMENDATIONS

5.1 Side collision protection for rolling stock

The regulations do not take the protection of rolling stock equipment against side collisions into account. The lack of protection increases the risk of fire in diesel trains in particular. Diesel trains typically operate on track sections with a lot of passive level crossings. This means that there is a risk of side collisions.

The Safety Investigation Authority recommends that:

The European Union Agency for Railways add requirements on protection against side collisions to regulations on diesel trains. [2021-S1]

Ready-made modules are used in building trains, which is cost-effective. Usability factors are the primary consideration in the placement of modules, while safety remains secondary. Railway operators are to investigate the possibilities of improving the protection against side collisions of the stock that is already in use.

5.2 Evacuation training for engine drivers

The engine driver plays a crucial role in the evacuation of regional trains since the driver is the only crew member on board. A risk assessment was conducted when train crews were cut from rail bus traffic. The risk assessment did not pay sufficient attention to evacuations or identify the need for additional engine driver training. The basic or supplementary training provided to engine drivers by VR does not include evacuation training or drills.

The Safety Investigation Authority recommends that the Finnish Transport and Communications Agency (Traficom) ensures that:

VR Group includes evacuation training in its engine driver training program. [2021-S2]

5.3 Passenger safety on Dm12 rolling stock

If the train driver is incapacitated or the train has more than one car, passengers must be able to exit the train quickly on their own initiative in the event of a fire or other accident. The rail bus's safety lights do not function if the batteries are damaged, and the instructions for opening the doors are difficult to understand.

The Safety Investigation Authority recommends that the Finnish Transport and Communications Agency (Traficom) ensures that:

VR Group replaces the emergency opening instruction decals and ensure the functioning of safety lights on rail buses. [2021-S3]

5.4 Use of location signs in the emergency call

A study commissioned by the Finnish Transport Infrastructure Agency on the use of location signs included a risk assessment of their impact on other parties. The impact on the ability of Emergency Response Centres to locate the scenes of accidents was not assessed.

The Safety Investigation Authority recommends that the Finnish Transport and Communications Agency (Traficom) ensures that:

The Finnish Transport Infrastructure Agency agrees with the Emergency Response Centre Administration on the use of location signs in railway emergency calls. [2021-S4]

5.5 Measures taken

The Finnish Transport Infrastructure Agency has discussed the geographical data needed in rescue operations involving the railways with the Emergency Response Centre Administration. Talks are ongoing to ensure that the Emergency Response Centre Administration will update its data directly through the Finnish Transport Infrastructure Agency's open API in the future.

The safety training provided to engine drivers by **VR Group's** train traffic unit in 2020 included a review of the evacuation process and discussed the evacuation of trains in the event of an emergency or malfunction. The instruction was purely theoretical and did not include any practical training.