

Informal document GRSG-123-14
(123rd GRSG, 28 March–1 April 2022)
Agenda item 2(a))

Experiences and results of bus crash investigation - Stockholm

Klaratunneln 2019-03-10

- M3 class 1 collided with a height restriction portal
- Year 2018, articulated, CNG propulsion system
- A gas-cylinder was penetrated and pushed down through the roof and filled the passenger compartment with gas
- The gas-cylinder then flew away and hit a house facade 13 m up
- The vehicle caught fire, ignition source unclear

Investigations of increased safety of gas buses

Basis for the investigations:

- Knowledge
- Safety culture
- Infrastructure
- Service and maintenance
- Construction and materials

Measures - implemented

Knowledge

- Driver education
- Rescue services

Safety culture

- Public transport operators

Infrastructure

- Regulations concerning constructions at roads

Measures - under consideration

Infrastructure

- Geofencing

Service and maintenance

- Facilitation of retrofitting of systems and functions on vehicles in service

Construction and materials

- Vehicle height information for driver
- Driver support systems
- Measure for penetration of passenger compartment
- Protective structures for energy storage systems

Construction and materials

- Vehicle Height Information – improvement or ineffective?
- Support system – warning or active?
- Passenger compartment integrity – room for improvement?
- Protective structures or breakaway features?

Questions and comments

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