



6th April 2022

Passenger safety on open passenger-carrying vehicles used on passenger carrying miniature railways: safety advice

TARGET AUDIENCE:

This safety advice is aimed at designers, manufacturers, and operators of passenger-carrying miniature railways using sit astride passenger carrying vehicles on both raised and ground level tracks where failure to provide suitable protective measures could result in passengers accessing entrapment points between the carriage and the track and/or between the passenger carrying vehicles.

Persons responsible for the maintenance and inspection of these devices should also read this safety advice.

INTRODUCTION:

The advice follows HSE investigation into an incident in 2021 where a member of the public had their leg trapped between the carriage they were travelling on and the raised track.

HSE has identified that there were no suitable guards installed at the front and rear of the passenger carriage, to prevent a passengers limb from extending into the dangerous entrapment point created by the track and the moving carriage.



Fig 1

In addition, HSE identified a possible entrapment risk between the two passenger carrying vehicles (Fig 2), where it is possible for members of the public to place limbs, and for the space to reduce sufficiently to create an entrapment trapping point as the train rounds a bend in the track.



Fig 2

ACTIONS REQUIRED: Manufacturers/Designers of passenger-carrying miniature railways

Manufacturers and designers of passenger-carrying miniature railways should ensure that the design of all passenger carrying vehicles, is such that dangerous entrapment points are not created between the track and carriage or between passenger carrying vehicles.

Clear unambiguous instruction should also be provided, incorporating detailed instruction on the use of the equipment, including acceptable combinations of passenger carrying vehicles/engines etc.

In addition, there should be instruction on the necessary inspection and maintenance regime for safety critical elements.

ACTIONS REQUIRED: Operators of passenger-carrying miniature railways

The operators of all passenger-carrying miniature railways should use a competent person to undertake an assessment of their rolling stock (in all combinations) giving due consideration to the operating environment

The assessment should identify any deficiencies in the design, which would allow passengers limbs to enter a dangerous entrapment point between the passenger carrying vehicle and the track and/or between the passenger carrying vehicle during transit.

If the assessment identifies any such deficiencies, remedial action should be taken immediately, and the rolling stock taken out of service until such a time that the necessary work has been satisfactorily completed.

HSE understand that there will be a significant number of variations in the design and dimensions of the rolling stock, and it is important that a suitable assessment is undertaken for each piece of equipment used at your site, in all used combinations, giving due consideration to the operating environment.

Ongoing maintenance and annual inspection

In addition, the operators of all passenger-carrying miniature railways should ensure that before running the train each day, physical checks are carried out to ensure that guards and other protective measures remain in place, are free from damage and remain effective.

These physical checks should be effectively integrated into the operational procedures for the passenger-carrying miniature railway, with effective training, information, instruction and supervision to ensure that they are completed at the start of each day or more frequently if required.