MINISTRY OF
CONSTRUCTION AND TRANSPORT

TRANSPORTATION SAFETY BUREAU

FINAL REPORT (EXTRACTION)

2022-1151-5
(HU-10320)

Railway Accident / Level Crossing Accident
Aszód - Galgamácsa, 14th October 2022

Translation

This document is the translation of Points 1, 5 and 6 of Hungarian version of the Final Report. Although efforts have been made to translate the mentioned parts of the Final Report as accurately as possible, discrepancies may occur. In this case, the Hungarian Final Report is the authentic, official version.

Basic principles of the safety investigation

The purpose of the safety investigation fulfilled by Transportation Safety Bureau (TSB) as National Investigation Body of Hungary is to reveal the causes and circumstances of serious railway accidents, railway accidents and railway incidents and propose recommendations in order to prevent similar incidents. The safety investigation is not intended to examine and determine fault, blame or liability in any form.

The findings of the safety investigation are based on an assessment of the evidence available and obtained by TSB in the course of the investigation, taking into account the principles of a fair and impartial procedure. In the Final Report, the persons involved in the occurrence shall be referred to by the positions and duties they had at the time of the occurrence.

The Final Report shall not have binding force and no appeal proceedings may be initiated against it.

This safety investigation has been carried out by TSB pursuant to relevant provisions of

- Act CLXXXIV of 2005 on the safety investigation of aviation, railway and marine accidents and incidents;
- Commission Implementing Regulation (EU) 2020/572 of 24 April 2020 on the reporting structure to be followed for railway accident and incident investigation reports;
- in the absence of other related regulation of the Act CLXXXIV of 2005, the TSB conducts the investigation in accordance with Act CL of 2016 on General Public Administration Procedures.

Act CLXXXIV of 2005 is to serve compliance with Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety.

The competence of the TSB is based on Government Regulation № 230/2016. (VII.29.) on the assignment of a transportation safety body and on the dissolution of Transportation Safety Bureau with legal succession.

The safety investigation is independent of other investigations, administrative infringement or criminal proceedings, as well as proceedings initiated by employers in connection with the accident or incident.

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1. SUMMARY

On 14 October 2022, at 9:03 am, the passenger train № 35517 travelling from Balassagyarmat to Aszód collided with a tractor-trailer combination consisting of a tractor unit and a semi-trailer carrying cattle manure in the unsecured crossing on Section 57 between Galgamácsa and Aszód stations. The collision caused the motor train set to derail with two axles and then back onto the track with one axle.

The investigation attributed the cause of the incident to a human factor related to the person driving the road vehicle, but it was found that

- the track maintenance service was unable to fully ensure that the reduced visibility triangles were kept clear (although the one involved in the occurrence was adequate);
- in the case of a collision between a series 117 (ex. Bzmot) railway vehicle and a road vehicle, there is a high risk of derailment;
- the possibility to escape from the railway vehicle is limited.

The TSB does not issue a safety recommendation in relation to this incident, but the IC draws attention to a previous recommendation issued in relation to a similar occurrence involving emergency exits.

5. CONCLUSIONS

5.1 Summary

5.1.1 Direct causes

Acts, mistakes, events or conditions or a combination thereof the elimination or avoiding of which could probably have prevented the accident or incident:

a) the driver drove onto the railway line without stopping, not scanning for the approaching train beforehand.

5.1.2 Indirect causes

Acts, mistakes, events or conditions which influenced the occurrence by increasing its probability, accelerating the effects or the severity of the consequences, but the elimination of which would not have prevented the occurrence:

a) the series 0117 motor train set is a vehicle liable to derailment in the event of a collision with a road vehicle.

5.1.3 Systemic factors

Causal or contributing factors of organisational, management, social or regulatory nature which are likely to have an effect on similar or related occurrences, particularly including regulatory framework conditions, the design and use of the safety management systems, the skills of the personnel, the procedures and maintenance: the IC makes no such findings.

5.2 Actions taken

Following the occurrence, the railway network operator cleared the crossing's sight triangles.

5.3 Additional notes

Factors that are not related to the occurrence of the accident but are risk factors:

a) in the inspection book of the road crossing, the sight triangles were not documented according to the actual situation;
b) the reduced visibility triangle in the road crossing was not provided in the directions not relevant to the occurrence and the speed limit set after the occurrence did not correspond to the actual visibility conditions;
c) due to limited staff at the chief track master's area, the performing of maintenance tasks other than troubleshooting is limited;
d) a component of the door opener is inherently unsafe, but a different, even less safe, component was installed in the vehicle during actual repairs.

5.4 Proven procedures, good practices

No factors to reduce the consequences of the occurrence and avoid a more serious outcome have been identified by the IC.

5.5 Lessons learnt

Compliant and safety-conscious driving style of road users plays an important role in avoiding such accidents. However, even if this accident is not related to this, it is necessary for the railway infrastructure manager to give road drivers the opportunity to apply the caution expected of them by keeping sight triangles clear and/or by introducing appropriate speed limits.

6. SAFETY RECOMMENDATION

Such occurrences can be avoided by following the rules and by paying due attention and care by the staff, and the IC therefore does not consider it justified to issue a safety recommendation.

However, based on the findings relating to the emergency door openers, the IC confirms the Safety Recommendation № BA2022-0381-5-03 (relating to emergency exits) issued on 4 October 2022.