



Safety recommendation no. 174

Date of the publication	06.12.2022
Number of the final report	2022060202
Safety deficit	<p>On 2 June 2022 at 11.36 am, in Zollikofen station, a locomotive train collided with the rear of a freight train comprising special vehicles for track construction work. This freight train was about to depart. The front locomotive of the locomotive train came to a stop on the low-floor wagon located at the rear of the freight train. The driver of the locomotive train sustained minor injuries.</p> <p>The locomotive train collided with a stationary freight train about to depart Zollikofen station on 2 June 2022 because the locomotive train had passed a stop signal. The driver expected the next signal to be the exit stop signal. He did not notice the signal layout between the entry and exit signals.</p> <p>Factors contributing to the accident:</p> <ul style="list-style-type: none">• The incorrect configuration of the ZUB 262ct by the maintenance team during maintenance work was not detected. This led to a failure of the train control system on the lead locomotive of the locomotive train.• The focus was on continuing the train's journey, not on the repairs conducted by the maintenance services – for which reason the train control system had been deactivated.• The journey was made without a second driver. <p>According to SBBI's rough estimates, the train control system does not function correctly on an average of three trains a day. If a train runs with a non-functioning train control system, a serious accident may result. Depending on how they are interpreted, existing regulations on how to act in the event of a train control system failure also permit journeys other than those whose purpose is to take the vehicle to a repair point as quickly and simply as possible. As a rule, the specifications are interpreted in such a way that the measures can be implemented individually or may be combined. Specifications tend to be selected and combined to achieve trouble-free operation with the least possible effort. This results in vehicles still running at a maximum of 80 km/h for 12 hours after the train control system has failed, without the additional safety of being accompanied by a second driver. Because these 12 hours are interpreted as applying to driving time only, defective vehicles may be in use for several days. As with the incident in Aarau on 29 November 2017, in the incident in Zollikofen a locomotive train was running unnecessarily and with reduced safety from a maintenance location as a result of a train control system failure. Moreover, in both of these incidents, the engine ran from a locomotive crew location without an additional driver, contrary to the regulation.</p>
Safety recommendation	The Federal Office of Transport (FOT) should examine to what extent the specifications can be adapted so that priority is given to

preventing a ride being driven without a functional train control system. If journeys are nonetheless still necessary in such a situation, then measures to effectively reduce the resulting increased risk must be in place.

Addressees	Bundesamt für Verkehr
Stage of the implementation	Implemented: The Federal Office of Transport (FOT) responds as follows: The 2024 Rail Service Regulations (RSR 2024), R.300.9, sections 10.3 and 10.4 have been amended and the regulations tightened.
Investigation report concerning the safety recommendation	<u>Vorbericht</u> <u>Schlussbericht</u>