



Safety recommendation no. 186

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Safety deficit	<p>On 9 June 2022 at around 11.20am, the HGem 2/2 locomotive No 2501 had to manoeuvre two loaded ballast wagons parked on track 111 below Les Avants station. The two ballast wagons were then to be shunted back to Les Avants station. Having initially moved out of the station on open line, the train experienced adhesion problems on its return journey.</p> <p>As the train was unable to return to Les Avants station, in order to clear the track for a passenger train bound for Les Avants station the MOB traffic management centre asked the foreman shunter to bring his train down to Chamby station and to cross the passenger train in Sendy-Sollard station. The train travelled down the line and came to a halt in front of the Sendy-Sollard entry signal, which was set at stop. Having received authorisation to enter the station on track 1 with the signal at stop, the train set off again. When braking to come to a halt on track 1, the train was unable to stop. It broke away, hit the downline exit point at Sendy-Sollard station, and ran on open line before coming to a halt some 900 metres further on.</p> <p>The train broke away from track 1 at Sendy-Sollard station and ran for some 900 metres on open line because, when braking in the station, the two axles of the HGem 2/2 No 2501 locomotive jammed, causing the locomotive to lose adhesion. The train slowed down solely thanks to the two loaded Fdk wagons, which had a combined braking ratio (65%) insufficient for the line it was on, thereby reducing the train's braking ratio to below 60%, i.e. too low to be able to stop the train.</p> <p>The following factors contributed to the train breaking away:</p> <ul style="list-style-type: none">• The locomotive brake release was activated by the electronic controls; this inhibited the locomotive's air brake during the final phase of braking and prevented reactivation, resulting in a sudden rise in brake cylinder pressure which made the axles lock up.• The pneumatic anti-skid system is inactive below 5 km/h.• The magnetic brakes did not function. <p>The following may have contributed to the train breaking away: There had been a software modification affecting the automatic compensation of buffer force.</p> <p>The MOB's integrated management system (IMS) contains a procedure on releasing vehicles after maintenance, repair or modification, which describes the various stages of inspection and testing until the vehicle is returned to service. However, it does not specify how essential and non-essential modifications are categorised and by whom, nor who is responsible for taking the necessary steps with the supervisory authority, the FOT.</p>
Safety recommendation	<p>The STSB recommends that the Federal Office of Transport (FOT) ask the MOB to adapt the procedures of its integrated management</p>

system (IMS) so that, when modifications are made to vehicles, it is clear who is responsible for categorising such modifications and ensuring that they are submitted to the FOT for vehicle approval.

Addressees	Bundesamt für Verkehr
Stage of the implementation	Partially implemented: The Federal Office of Transport (FOT) responds as follows: MOB has modified its processes. Implementation will be reviewed as part of the next audit, planned for October 2024.
Investigation report concerning the safety recommendation	<u>Rapport de première information</u> <u>Rapport final</u>