DB ermewa GATX Rail Cargo Group Member of ÖBB SBB CFF FFS Cargo VTG

Bundesministerium für Digitales und Verkehr

DAC4EU

DAC Train in Switzerland Operational Tests

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Operational Tests

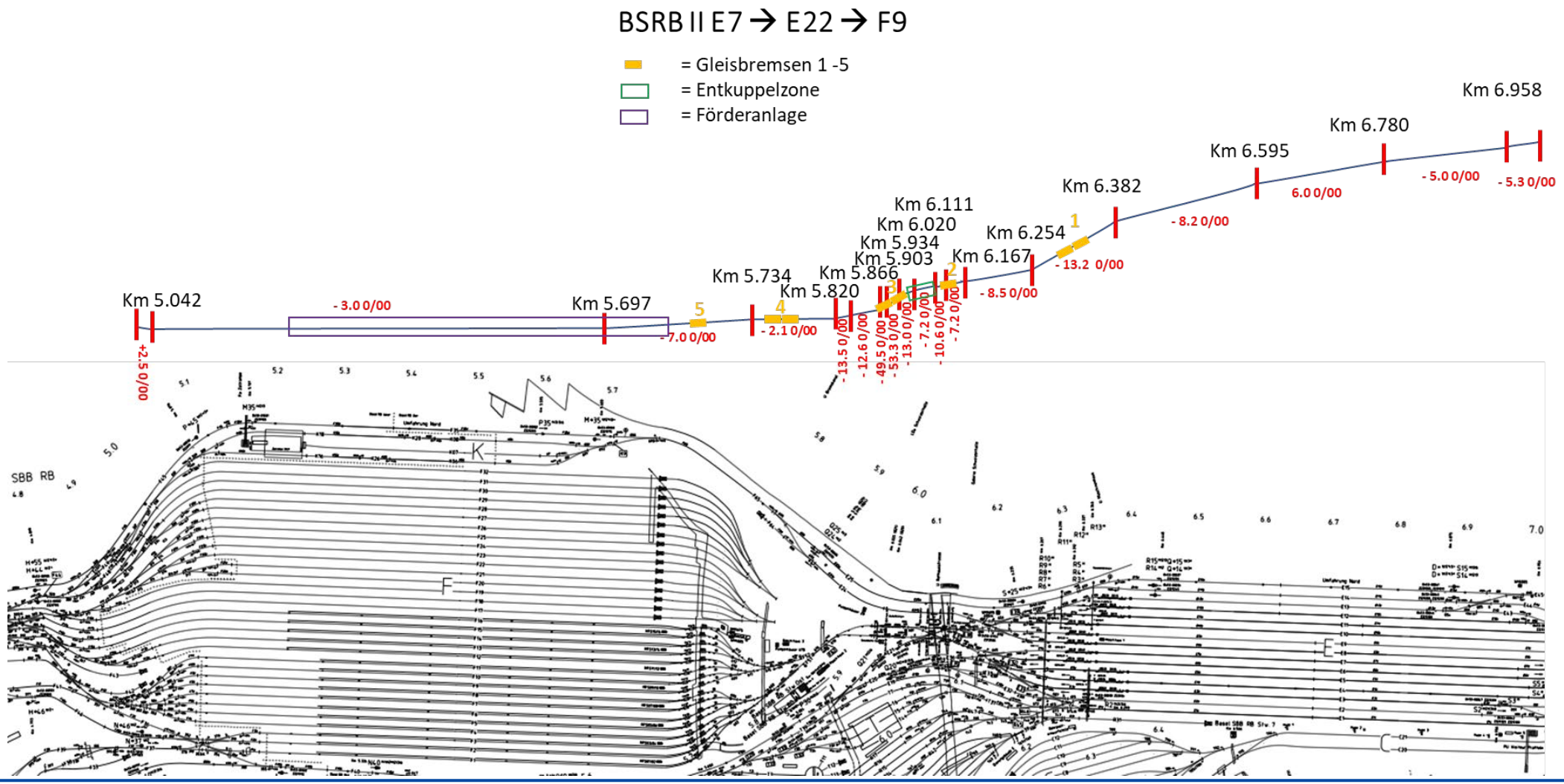
Accomplished Tests

Date	What	Where	Accomplished Tests
10.03.2022	Takeover of demonstrator Train / transfer ride	• Basel RB • Basel RB – Arth-Goldau	none
11.03.2022	Train Run	• Arth-Goldau – Biasca • Biasca – Shunting Yard Limmattal → both runs via via GBT	• Recording of measurement data • Tests ep-brakes
14. – 16.03.2022	Ground Level Shunting	Zürich Mülligen	• Coupling / decoupling on straight tracks • Coupling / decoupling on tracks with narrow curves
19. – 20.03.2022	Hump Operations	Shunting Yard Limmattal	• Decoupling on hump • Decoupling in entrance group • Coupling on directional tracks
21.03.2022	Train Run	• Shunting Yard Limmattal – Biasca • Biasca – Basel RB → Both runs via Gotthard panoramic route (- 27 0/00)	• Recording of measurement data • Tests ep-brakes
22.03.2022	Works on Train	Basel RB	Various works on test composition
23. – 24.03.2022	Hump Operations	Basel RB II	Tests on gravity yard, see slide 3
25.03.2022	Presentation of Train	Basel GB	Presentation of DAC to SBB Cargo and SBB Infrastructure personnel

Hump Operation „Gravity Yard“ Basel RB II

General Points

Due to the topology and the system technology, shunting operation can be carried out without using a shunting locomotive.



Hump Operation „Gravity Yard“ Basel RB II

Operational Process → First Conclusions

Operational Process Now

- When the train arrives in the entrance group, it is parked with the first axles in track brake 1 and „held“ with it. The locomotive can then be uncoupled and driven away.
- In preparation for the process, the brake pipes are vented, the car brakes are released and the screw couplings are turned long at the separation points.
- By opening track brake 1, the wagon composition rolls in the direction of the hump.
  The speed is regulated by using track brakes 1 and 2.
- In the uncoupling zone, the screw couplings are ejected manually at the separation points and the wagons / wagon groups run into track brake 3, where they are braking again as required.
- From the track brake 3, the wagons / wagon groups roll over the track brakes 4 and 5 into the intended direction tracks where they are pushed together by the conveyor system
- The functionality of the rail brakes leads sometimes to heavy impacts between the preceding and the following wagons / wagon groups.

First Conclusions

- A pre-uncoupling in the direction track is not possible, because in this case the wagons / wagon groups would run away uncontrolled between the track brakes 1 and 2 or 2 and 3.
- The uncoupling and setting of the „prevent recoupling“ function must be done manually or remotely in the area of the uncoupling zone and the „prevent recoupling“ function may only be deactivated after passing track brake 3
- With the DACs provided on the demonstrator train, the tests could only be carried out to a limited extent, since access to the uncoupling-devices was limited or not possible at all.
- The functionality of the push button made it easier to uncouple, but it‘s not practical either, since the carriage sometimes had to be uncoupled very shortly before it rolled off.
- From today‘s point of view, the use of „prevent recoupling“ in the gravity station is absolutely necessary.
- In order to be able to adjust any processes and systems, tests must be carried out with further developed coupling systems.

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Thank You!