

SAFETY ALERT	
Subject	Rolling stock - other
Equipment	ETCS On-Board System (OBU) from Alstom, version GATC 5.7.1 with Speed and Distance Measurement Unit (SDMU) version MK1, GATC 4.9.0.A5+ and possibly other
Description	<p>In dedicated situations, the SDMU calculates a confidence interval (CI) which is too small – i.e. the real front end is physically located outside of the safe confidence interval CI. If occurring, a dangerous condition may follow, because the CI is not reset/corrected at the passage of a balise group (linking consistency error) before a signal being the End of Authority (EoA). In areas with cab signalling, when the driver erroneously surpasses this signal in Release Speed Monitoring (the distance to target displayed on the DMI may also be inaccurate), the emergency brake (EB) triggered at passing the EoA with the min safe front end may no longer be sufficient to stop the train in front of the danger point. In first approximations, the Tolerable Hazard Rate THR attributed to ETCS_OB01 (SUBSET-091) corresponding roughly to SIL 4 (1E-09/h) is exceeded by a factor of 1E05 and is therefore no longer fulfilled.</p> <p>Deviations of the sensors (radar, wheel sensors, accelerometer) are not correctly managed by the SDMU. A wrong calculated CI may be identified as hazard event KERNEL-28 (Incorrect confidence interval) and/or ODO-4 (distance measurement is incorrect) in SUBSET-088 and SUBSET-091.</p>
Country	Switzerland
Issuer	NSA
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