



Safety recommendation no. 87

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Safety deficit	<p>On Saturday 25 April 2015 at around 02:49, the last five wagons of freight train no. 60700 linking Basel to Lausanne Triage derailed on an open stretch of track at the 19.0-kilometre mark located in the municipality of Dailens. The train consisted of 22 wagons, 14 of which contained hazardous substances. A few hundred metres before the location where the derailed wagons came to a halt, the 20th wagon lost some of the components of the running gear from one of its bogies. When passing a trackside device situated just before a righthand bend, the wagon derailed, drifted onto the lefthand side of the track causing, by dynamic effect, the preceding two wagons to tip over, the following wagon to tip over and the first bogie of the last wagon of the train to derail. Wagons 18 to 21, all containing chemical products, overturned onto their sides. When the wagons were overturned, the tank on wagon no. 19 – containing 25 tonnes of sulphuric acid – was damaged, allowing its contents to escape onto the ground beside the track. Pushed by the two wagons behind it, wagon no. 20 rotated 180° on its longitudinal axis, i.e. rotated round on itself, before tipping over onto the side of the track. Its tank had been damaged, allowing approximately 3,000 litres of caustic soda to escape. Findings made during the inquiry concerning axle boxes 1 to 4 of the 20th wagon indicated the likelihood of a quality issue in the assembly of the axle boxes. The inspection carried out on 28 October 2015 in the maintenance workshop revealed deficiencies in the assembly quality of the axle boxes. The presence of solid foreign objects (of mineral origin or residues of metallic particles) in the axle box bearing lubricant can block the bearings then give rise to rapid overheating which can cause damage to the bearing. A blocked axle bearing can result in the derailling of a wa-on. The presence of cleaning fluid in the bearings of an axle box does not present an immediate risk of bearing blockage, but degrades the quality of the lubricant. Degraded lubricant can, over the course of time, cause overheating of the bearing and therefore, gradually, cause da-mage to the bearing before its next service interval has elapsed. Quality deficiencies in the axle boxes noted during the inspection on 28 October 2015 may affect a considerable number of axle boxes currently in service and constitute a latent safety deficit.</p>
Safety recommendation	SESE recommends that OFT, through the certification body, should undertake immediate corrective measures regarding the process of mounting axle box bearings in the ECM accredited maintenance workshop.
Stage of the implementation	Implemented
Investigation report concerning the safety recommendation	<u>Schlussbericht</u>

Rapport final