

SUMMARY

TRAIN TRAFFIC INCIDENT IN KERAVA, FINLAND, ON 20 OCTOBER 2008

On Monday, 20 October 2008, at 4:46pm, an incident occurred in the Kerava railway yard when an H-marked local train en route from Riihimäki to Helsinki passed an entry signal that was in the stop position and forced open the turnout. The main track's remote control operator noticed the situation on his monitor and radio-commanded the train to stop. The train stopped on the track section after the turnout. A Pendolino train was simultaneously approaching Kerava from the direction of the Kerava–Lahti direct line. This train was behind schedule. The traffic controller had set a route for it to Kerava's track 2. After this, the traffic controller had set a northward route along Kerava's track 4 for an R-marked local train approaching Kerava from the south.

At the point when the H train was driven past the entry signal in stop position, the main signal for the Pendolino train, and also the main signal at the north end of the Kerava railway yard for the R train, switched from proceed aspect to stop position. The Pendolino train was 1.9 km from the signal, and the R train about 4.6 km from the signal. When the H train reserved the next turnout after the one it had forced open, the main signal reserved for the R train after the platform switched from proceed aspect to stop. At that point, the R train was about 2.8 km from the signal.

Because of ongoing construction work, the automatic train running control (ATC) was not in operation for the Hanala–Järvenpää section and the section was set as a construction area. The train speed limit has been set at 80 km/h in construction areas and the automatic train running control (ATC) only monitors to ensure that this speed is not exceeded.

As a result of forcing open the turnout, the H train fell 12 minutes behind schedule, the Pendolino train fell an additional 10 minutes behind schedule, and the R train fell 45 minutes behind schedule. Further delays in train traffic were experienced for 12 hours after the incident.

The reason for passing the entry signal in the stop position and forcing open the turnout was that the H train's driver did not observe the stop signal, drove past the signal, and forced open the turnout after it. The factors contributing to this incident were that:

- the engine driver was used to driving the train according to the instructions provided by the automatic train running control (ATC) and to trusting the route monitoring it provided
- the signal for the H train (E681) was set to be proceed even though the distant signal after Kyrölä was in the wait/stop position
- the stop position of the main signal (E681) is not easy to observe, because its visibility can be obstructed by bridge structures and the specially built catenary suspension
- the construction area set for the automatic train running control (ATC) was too extensive
- the advance notification provided did not give sufficient information to the engine driver
- the automatic train running control (ATC) does not notify the train driver strongly enough that the train is in a construction area and that the train must proceed according to the visible signals

In order to prevent the occurrence of similar incidents, and therefore possible accidents, the Accident Investigation Board recommends that signal E681 be placed in a more visible spot, that construction areas for automatic train running control (ATC) not be set too broadly, that advance notifications provided to train drivers be more specific about ATC construction area conditions, and that train running

control monitors and the information displayed there be improved in such a way that they better indicate the necessary information during exceptional circumstances.