Extract from the investigation report RJ 2010:03 on an incident occurred on 05/08/2007

Summary

On Sunday, 5 August 2007, a near-collision occurred at Stockholms östra (east) between train 219 and a derailed shunting movement.

A vintage locomotive was to be shunted (switched) from one siding to another siding at the Museum area at Stockholms östra. The shunting foreman perceived a down track lock as permission to start the shunting and showed the hand signal "forward" to the driver of the vintage locomotive who started the movement. When the locomotive passed a track lock it folded up under the locomotive, the locomotive derailed, and end up in a position which meant that adjacent tracks were not free from obstacles. At this same time, train 219 was approaching Stockholms östra and had the "proceed" signal to pass the spot where the locomotive had derailed. Because there were no connections in one of the track circuit, train 219 had received the "go" signal even though the derailed locomotive meant that the line was not free from obstacles. The shunting foreman and locomotive driver realised that train 219 would pass the spot and took steps to stop train 219, which they succeeded in doing.

The direct cause of the event was that shunting to the main line began without the dispatcher having given oral permission for the shunting to start.

An underlying reason for the incident developing into a near-collision was that the track lock could move to the on position and the interlocking route could be used, although the track section over the track lock and towards the shunt was occupied by a rail vehicle. This was possible because the track circuit for the section was not connected to the signalling system following a rebuild. Another underlying cause of the incident was that the traffic safety instructions did not contain rules on how an oral starting permission should be given.

SHK (Swedish Accident Investigation Board) has not been able to determine why the track circuit was not connected because rebuild documentation is missing from SL's archives. However, the fact that the system was put into service without the track circuit being connected clearly shows that SL at the time lacked a sufficiently extensive system to ensure that systems that became operational had the intended function. That the fault was not discovered before the event occurred indicates that the inspection and follow-up system was not comprehensive.

Recommendations

It is recommended that the Transport Agency:

- in connection with licensing and audit of the infrastructure manager check that the safety management system ensures that safety-critical equipment meets the requirements for safe operations (see section 1.5.6) (RJ 2010:03 R1)
- conduct an audit of how the requirements for archiving documentation are followed, with regard to both staff qualifications and completed inspections (see sections 1.6 and 2.2.2) (RJ 2010:03 R2).

- investigate the feasibility of establishing a qualification registry (similar to the registry of driver licenses) for all personnel with duties of importance to traffic safety in order to facilitate the transition between different operators (see section 2.2.2) (RJ 2010:03 R3).
- in connection with the approval of traffic safety instructions, check that there are clear rules for safety-critical communications that should occur to avoid misunderstandings (see sections 2.3.2 and 3.3) (RJ 2010:03 B4).