

SUMMARY IN ENGLISH

A freight train loaded with iron ore derailed on 7 November 2021 between Sikträsk and Linaälv on Malmbanan (Iron Ore Line) in Norrbotten County. The train, which consisted of two locomotives and 68 wagons, derailed with 40 wagons. No one was injured. However, the accident caused significant damage to the railway vehicles and the railway infrastructure.

The assessment is that the derailment was caused by a fatigue crack in the rail which triggered a rail break. The crack formation had not been identified or remedied under the infrastructure manager's system for preventive maintenance.

Safety recommendations

In the Swedish Transport Administration's maintenance plan for 2022–2025, it is stated that for the section Gällivare–Råtsi a track change is planned to start in 2025.

In light of the plan to replace the track starting in 2025, the Swedish Accident Investigation Authority sees no reason to issue a specific recommendation on this matter.

However, in the time leading up to the track replacement, the Swedish Accident Investigation Authority finds it important that measures are taken to reduce the risk of internal cracks in the rail not being detected in time. Such measures are also important in a longer perspective since cracks can appear regardless of the type and age of rail. It is however more common in older rail. The Swedish Accident Investigation Authority therefore makes the following recommendations.

The Swedish Transport Administration is recommended to:

- Investigate what would be required to better identify transverse cracks of internal origin. The investigation should include both the need for the development of technical equipment and support in carrying out the control. (*SHK 2023:04 R1*)
- Evaluate whether the manual ultrasound checks following indications from ultrasonic train measurements should be extended, for example whether extra checks should be carried out in cases where an indicated transverse crack is not identified at the first check. (*SHK 2023:04 R2*)
- Investigate more closely which factors can contribute to increased tensile stress in the rail and how such factors can be identified. (*SHK 2023:04 R3*)