
Addressed to:

- ERA Cooperation of ECM certification bodies
- NIB Network
- NSA Network
- OTIF Secretariat

Brussels, 6 November 2025

Sector communication by the Joint Sector Group (JSG) of the Joint Network Secretariat (JNS) on the updated harmonised European safety measures

The sector associations CER, ERFA, UIC, UIP, UNIFE and UIRR form part of the Joint Sector Group, which is an important part of the pan-European Joint Network Secretariat (JNS). In this capacity, we would like to underline the JSG's commitment to the improved safety of European rail freight transport. The serious derailment in the Gotthard Base Tunnel on August 10, 2023, caused by a broken monobloc wheel, necessitated effective and harmonised risk control measures to be adopted across the European railway sector. The JNS "Broken Wheels" task force promptly set to work to develop those measures as past experiences demonstrated that anything less than a strong, Europe-wide approach risks critical safety gaps in the network.

Start of the work of the JNS taskforce

Statistically, broken wheels occur very rarely. Nevertheless, on 10 August 2023 a freight train derailed in the Gotthard Base Tunnel as a result of a broken wheel. Sixteen wagons of a train composed of thirty wagons and two locomotives, derailed causing considerable damages to the rolling stock and to the infrastructure. The cause of the broken wheel was found to be thermal overload/crack initiation on the running surface with crack growth through the wheel rim into the wheel web and subsequent failure of the wheel. The Swiss Transportation Safety Investigation Board (STSB) recommended that the Swiss Federal Office of Transport (FOT) request the reactivation of the JNS "Broken Wheels" task force to the European Union Agency for Railway. Extensive discussions were then held at the European level to define immediate measures that could be implemented. These measures came into effect before the publication of the final STSB report on the accident.

Outcome of JNS taskforce before STSB report

The wheelset type from the Gotthard accident was quickly identified as technically similar to the wheel type from the dedicated European JNS procedure in 2017. In response to the thermomechanically initiated broken wheels between 2017 and 2019, the JNS "Broken wheels" had introduced European measures for operation and wheelset maintenance to avoid broken wheels on two previously thermal stable monobloc wheel types. In the follow-up, the measures were implemented in an update of the requirements in standards for design, product requirements and maintenance of wheels and in standards and contracts, like the GCU.

With the Gotthard accident and the reactivation of the JNS, it became clear—as this task had not been covered by the first JNS “Broken wheels”—that all wheel sets that are likely to have the same design characteristics and thus the same potential failure behavior must be inventoried. The JNS established a list of relevant types of wheelsets together with more stringent measures to avoid broken wheels in July 2024. The information was disseminated by the sector and [published on the dedicated webpage](#) of ERA with a call to proceed to implementation of these recommendations. An updated publication limited to better readability in form and wording followed in April 2025.

Revision of JNS recommendations after STSB report and FOT measures

The STSB report was published on 2 June 2025. The Swiss FOT then initiated two roundtables on freight transport safety, during which the JNS made concrete proposals to adapt its measures to achieve a European solution. The FOT decided to go ahead, nevertheless, with its own national measures that notably go beyond the active measures of the JNS in terms of scope and intensity. They came into force immediately upon publication on 11 September with implementation at the latest by the end of this year. A few weeks later the FOT extended the deadline until 31 December 2026 for the measure on the technical wagon inspection.

The way forward

The JNS is currently developing technically justified revisions to its European measures to prevent cracked and broken wheels. The findings of the STSB report form a serious evidential basis that the JNS is actively integrating into the on-going discussions. The JNS aims to publish these improved measures by the end of 2025.

The Joint Sector Group (JSG), invites all actors, including the other members of the JNS, to take part in the discussions to achieve workable, efficient and European-harmonised measures to preserve a green, safe, interoperable and competitive rail freight transport for Europe. This includes Switzerland and all national safety authorities.

Objective and balanced pan-European learnings from accidents are achieved through collaboration and they represent an opportunity for system-wide progress. Current and future implementation of JNS measures by all actors is critical for the continued improvement of rail freight safety while maintaining Europe’s competitiveness and the seamless movement of goods.



Community of European Railways and
Infrastructures Companies (CER)




European Rail Freight Association (ERFA)



The International Union of
Railways (UIC)



International Union of Wagon Keepers
(UIP)



International Union of Combined Road-
Rail Transport Companies (UIRR)



The European Rail Supply
Industry Association (UNIFE)

MORE INFORMATION

Use of monobloc wheels in tread braked freight application

Freight wagons are usually braked on the running surface of the wheels. The associated functional combination of driving and thermal loads caused by braking in the wheel has been a challenge since the introduction of the railway. This has led to the continuous further development of rail wheels from tyred wheels to the thermal stable monobloc wheels in accordance with EN 13979-1 used today. Despite increased operational demands, such as increase in speed from 80 to 120 km/h, higher utilisation of the wagon fleet and conversion from cast iron to composite brake blocks, the number of broken wheels experienced in freight transport has been significantly reduced in recent decades. Examples of measures in maintenance and construction are the avoidance of clamping notches under the rim, avoidance of oversliding brake blocks, particular maintenance of wheelsets with thermal overload with residual stress measurement and the introduction of so called thermostable wheels.

Principle of the Joint Network Secretariat (JNS)

In 2014, the European Union Agency for Railways (ERA) set up the "Joint Network Secretariat" to develop harmonised short-term ("urgent") and long-term ("normal") risk mitigation measures for the whole EU railway system in response to safety-related issues.

In the so-called urgent procedure the focus is on short-term risk control measures to respond as quickly as possible to the identified risks and to ensure safety, maintain or restore interoperability, while balancing costs of the measures recommended on the sector. The 'normal procedure' develops mid- and long-term measures, to sustainably restore / increase the safety level, ensure interoperability and consider the long-term sustainability of the measures in terms of application and business impact. Rail freight transport in Europe in particular requires transnationally coordinated and harmonised regulations, and the JNS procedure has been successfully applied over the years.

Any actor in the railway sector can register a JNS procedure. The nomination of experts from all stakeholders (ERA, NSA, ECM, RU, IMs, wagon keepers, manufacturers, etc.) is done via the networks of national safety authorities and representative bodies as well as national investigation bodies with ERA as moderator and secretariat. Within this JNS, the Joint Sector Group (JSG), consisting of experts from ECMs, wagon keepers, RUs and manufacturers was also established to analyse the topic in depth.