Proposed amendment to
to the GCU

Title	*JNS recommendations on "Accident Gotthard base tunnel"*
Nummer	*AP-TTI-2025-02*
Planned entry into force	*01.01.2026*
Related Topic proposal	*TP-TTI-2025-02 – JNS recommendations on "Accident Gotthard base tunnel"*
Proposer / issuing working group	*WG TTI*
Section of the GCU	*GCU Appendix 9*
Concise description (Management Summary)	*Implementation of the recommendations mentioned in the JNS report on "Accident Gotthard base tunnel – broken wheels".*

Record of amendments:

Status	Date	Comment
Work order	*14/01/2025*	*Creation for the WG TTI meeting in January, 2025*
In creation	*14/01/2025*	*By the WG TTI*
Update	*19/03/2025*	*Corrections in accordance with the minutes of the TTI working group meeting of March 2025*
Decision Working group	*19/03/2025*	*Approval in accordance with the minutes of the TTI working group meeting of 20 March 2025*
Feedback loop WG TTI after UIC WU SG, UIP and ERFA meetings	*16/05/2025*	*No change reported, approved by all*
Decision GCU JC	*12/06/2025*	*Approved by the GCU JC*

1. **Subject matter and reason for the amendment:**
    - **Description of the current situation:**

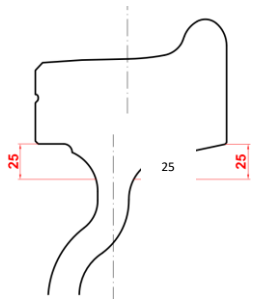
      The JNS Normal Procedure “Accident Gotthard base tunnel - broken wheels” Final report. version 2.0 from 11.07.2024 developed improved risk control measures and concrete proposals for the GCU.
    - **Reason for the planned change (trigger)**
      The proposals for the GCU are meant to further reduce the probability of potentially tremendously costly accidents caused by broken wheels.
2. **Description of the intended amendment and reason to implement it in the GCU:**
    - **What is the proposed solution?**
      1. The detection of burned paint with »25 mm or more» shall be made unambiguous by inserting a picture ((see page 54 of JNS report)
    - 2. Introduce into GCU the possibility that thermal overload was detected with Hot Wheel Detection System (see page 57 of JNS report)
    - 3. Introduce a separate damage code for cracked or broken wheel rims comparable to Code 1.1.6 for tyred wheels.
    - **Why should it be implemented in the GCU and not regulated outside?**

      The focus for JNS measures is the entire sector, not just GCU signatories. JNS Report page 22: “The Task Force members …. developed concrete proposals for the General Contract of Use for wagons (GCU). Actors who are not members of the GCU shall translate this in their respective company rules”
3. **Is it reasonable to amend the contract?**
    - **Is the change critical to keep the GCU up to date?**
      In the words of the JNS: The *change shall further reduce the probability of potentially tremendously costly accidents caused by broken wheels*
    - **Is the implementation of the change urgent?**
      The JNS believes that the amendment is urgent.
    - **What is the estimated scope of application of the amendment (e.g. number waggons affected, number of maintenance operations…)**
      The amendments affect 100% of GCU signatories.
    - **Consequences of not implementing the proposal**
      The rejection of the proposed amendments might lead to the JNS seeking direct dialogue with the joint GCU committee.
4. **Annex:** JNS Report “JNS Normal Procedure “Accident Gotthard base tunnel - broken wheels” Final report| version 2.0 | 11.07.2024”

Proposed amendment to the GCU:

Colour codes for amendment proposals:
Black: Currently applicable text; provides information and remains unchanged
Red: New text
Blue: (may be crossed out): Text to be deleted

English Version:

1.2.2	Thermal overload due to braking • Obviously ~~recent~~ paint burns of > 25 ~~50~~ mm ~~or more~~ at connection between rim and wheel plate (cracks and shelling on paint or traces of rust)  • ~~Traces of rust on rim (plate not painted)~~ • Fusion of brake blocks • Deterioration of wheel tread with build-up of metal (see also No. 1.3.4) • Cracked or broken (see also No. 1.3.6.5) • Uneven blueish appearance on rim due to the effect of thermal overload	Proceed in accordance with Annex 8, point 4	
1.2.2.1	- Without gauge widening of the inner faces for wheels NOT marked as able to withstand high thermal stresses	K + R1 (isolate brake)	4
1.2.2.2	- With gauge widening of the inner faces for wheels NOT marked as able to withstand high thermal stresses	Detach wagon	5
1.2.2.3	- For wheels marked as able to withstand high thermal stresses	M	3
1.2.3*	Confirmation of thermal overload stresses (applied brake alert - wagons fitted with brake blocks) by the RU during transport (see No. 1.2.2)	Proceed in accordance with Annex 8, point 4	

*Thermal overload: Detected by measuring device (applied brake detection system) – Observed during a special inspection separate to the technical inspection

1.3.6.5	Damage to the rim or web: - cracked - broken	Detach wagon	5

Annex 8:

Handling of wagons

4. With wheels displaying the criteria for thermal overload as per No. 1.2.2

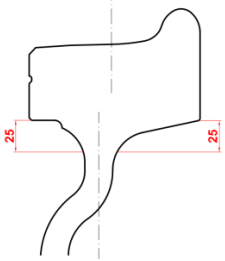
For wheels displaying indications of thermal overload as per No. 1.2.2 and ~~not~~ NOT being marked as being able to withstand high thermal stresses:

- measure the widening of the inner faces (E value) at the running surface of the rail at 3 points, at distances of 120°, and verify No. 1.7.1
- inspect the tread for isolated cracks in the cross-section (see No. 1.3.6.4)
- inspect the rim and web for cracks/breaks (see No. 1.3.6.5)
- complete Annex 12 (traceability)

For wheels being marked as being able to withstand high thermal stresses:

- inspect the tread for isolated cracks in the cross-section (see No. 1.3.6.4)
- inspect the rim and web for cracks/breaks (see No. 1.3.6.5)

German Version:

1.2.2	Thermische Überbeanspruchung durch die Bremse • eindeutiger ~~neuer~~ Farbabbrand an der Radkranzverbindung (Farbe rissig und abgeblättert oder Oxidationsspuren) von >~~50~~25 mm ~~und mehr~~  • ~~Oxidationsspuren am Radkranz (Radscheibe nicht gefärbt~~) • angeschmolzene Bremssohlen • Beschädigung der Lauffläche mit Metallauftragung (siehe auch Code 1.3.4) • Riss/Bruch (siehe auch Code 1.3.6.5) • Radkranz durch Überhitzung nicht gleichmäßig bläulich verfärbt	Nach Anhang 8, Punkt 4 verfahren	
1.2.2.1	- bei eingehaltenen Toleranzen des Innenabstands für Räder, die NICHT als stark beanspruchbar gekennzeichnet sind	K + R1 (Bremse ausschalten)	4
1.2.2.2	- bei nicht eingehaltenen Toleranzen des Innenabstands für Räder, die NICHT als stark beanspruchbar gekennzeichnet sind	Aussetzen	5
1.2.2.3	- Räder, die als stark beanspruchbar gekennzeichnet sind	M	3
1.2.3*	Bestätigung einer thermischen Überbeanspruchung (Heissalarm von Klotzbremsen) durch die EVU während des Transports (siehe Code 1.2.2)	Nach Anhang 8, Punkt 4 verfahren	

*thermische Überbeanspruchung, Feststellung durch Messeinrichtungen (Festbremsortungsanlage) – Feststellung außerhalb der TÜ auf besondere Untersuchung

1.3.6.5	Beschädigung des Radkranzes oder Radsteg: - gerissen - gebrochen	Aussetzen	5

ANHANG 8
Behandlung von Wagen:

Punkt 4. mit Rädern, welche die Merkmale der thermischen Überbeanspruchung gemäß Code 1.2.2 aufweisen.

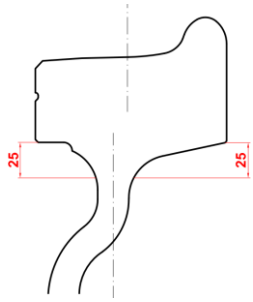
Bei Rädern, welche die Merkmale der thermischen Überbeanspruchung gemäß Code 1.2.2 aufweisen und ~~nicht~~ NICHT als thermisch stark beanspruchbar ~~belastbar~~ gekennzeichnet sind,

- muss der Innenabstand E mittels 3-Punktmessung 120° versetzt am Radaufstandspunkt gemäß Code 1.7.1 ermittelt werden,
- ist eine Prüfung auf einzelne Querrisse auf der Lauffläche durchzuführen (siehe Code 1.3.6.4).
- ist eine Prüfung auf Risse/Brüche im Bereich des Radkranzes und des Radstegs durchzuführen (siehe Code 1.3.6.5).
- Die Masse sind im Anhang 12 (Nachweisdokument) einzutragen.

Bei Rädern, welche als thermisch stark beanspruchbar gekennzeichnet sind,

- ist eine Prüfung auf einzelne Querrisse auf der Lauffläche durchzuführen (siehe Code 1.3.6.4).
- ist eine Prüfung auf Risse/Brüche im Bereich des Radkranzes und Radstegs durchzuführen (siehe Code 1.3.6.5).

French Version:

1.2.2	Surcharge thermique due au freinage • dégradation manifeste~~ment récente~~ de la peinture de > ~~50~~ 25 mm ~~ou plus~~ dans le raccordement jante toile (peinture fissurée et écaillée ou traces d'oxydation)  • ~~traces d'oxydation sur la jante bandage (toile non peinte)~~ • fusion des semelles de frein • détérioration de la table de roulement avec apport de métal (voir aussi code 1.3.4) • fissurée/cassée (voir aussi code 1.3.6.5) • jante ~~bandage~~ bleutée de manière inégale sous l'effet de la surcharge thermique	Procéder selon le point 4 de l'appendice 8	
1.2.2.1	- écartement des faces internes dans les tolérances pour les roues NON repérées comme tolérant de fortes sollicitations thermiques	K + R1 (isoler le frein)	4
1.2.2.2	- écartement des faces internes en dehors des tolérances pour les roues NON repérées comme tolérant de fortes sollicitations thermiques	Retrait	5
1.2.2.3	- Roues repérées comme tolérant de fortes sollicitations thermiques	M	3
1.2.3*	Confirmation d'une surcharge thermique (alerte frein serré - wagons équipés de semelles de frein) par l'EF au cours du transport (voir code 1.2.2)	Procéder selon le point 4 de l'appendice 8	

*Surcharge thermique : Constatation par détection automatique (détecteur de freins serrés) – Constatation en dehors de la VT par visite spéciale

1.3.6.5	Détérioration de la jante ou de la toile : - fissurée - cassée	Retrait	5

Appendice 8
Traitement des wagons

Point 4 : avec des roues présentant les critères de surcharge thermique selon le code 1.2.2

Pour les roues présentant les indices de surcharges thermiques selon le code 1.2.2 et n'étant ~~pas~~ PAS repérées comme tolérant de fortes sollicitations thermiques :

- mesurer l'écartement des faces internes (cote E) au niveau du sommet du rail en 3 points distants de 120° et vérifier le code 1.7.1,
- examiner la table de roulement pour détecter les fissures transversales isolées (voir code 1.3.6.4),
- examiner la jante et la toile pour détecter des fissures/ruptures (voir code 1.3.6.5)
- renseigner la traçabilité de l'appendice 12.

Pour les roues repérées comme tolérant de fortes sollicitations thermiques :

- examiner la table de roulement pour détecter les fissures transversales isolées (voir code 1.3.6.4),
- examiner la jante et la toile pour détecter des fissures/ruptures (voir code 1.3.6.5).

Annex: Safety Assessment of proposed amendment

Description of actual/target system, and scope of change to be made (see points 1 and 2).

Performance of risk analysis is unnecessary where only recognised standards are implemented.

This Safety Assessment is created and released by the working group and validated by the vote of the GCU signatories

1.1. Does the proposed change have an impact on safety?	☐No ☒ Yes
Justification:	
1.2. Is the proposed change significant?	☒No ☐ Yes
Justification:	
1.3. Determining and classifying risk, if necessary	☐ N/A
1.3.1 Effect of change in normal operation: 1.3.2 Effect of change in the event of disruption/deviation from normal operation: 1.3.3 Potential misuse of system: ☐ no ☐ yes (describe possible misuse):	
1.4. Have safety measures been applied?	☐No ☐ Yes
For each type of risk, one of the following risk acceptance criteria is to be selected: • *Code of practice* • *Use of reference system* • *Explicit risk assessment*	
1.5. Has a risk analysis been submitted to the assessment body?	☐No ☐ Yes
Assessment body: Attach the verdict reached by the assessment body	[Appendix]