

Intermediate report on the activities of the Task Force Freight Wagon Maintenance

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1 Introduction

Following the accident in Viareggio (Italy) and the Agency's Preparatory Meeting on 20th August for the EC Conference on "*Railway Safety: the way forward*" held on 8th September in Brussels, the Agency proposed to set up a Task Force (TF) made up of experts in the field of freight wagon maintenance and railway axles and coming from all stakeholders (RUs, keepers, ECMs, suppliers, NSAs, etc.). The idea was supported and accepted by the NSAs and representatives of the sector organisations (CER, ERFA, ETF, UIP, UNIFE) (cf. ANNEX 1: Terms of Reference).

During the first phase of works (September - December 2009) the TF has had 4 meetings (18/ September, 27 October, 24 November and 16-17 December), of these only the December meeting was held in Viareggio (Italy), all the others were held in the Agency's premises in Lille.

The objective of the first phase of works was to address and develop urgent measures as a follow-up to information on problems with broken axles (cases in AT, DE, IT). For this purpose the sector set up a Joint Sector Support Group (JSSG) and focused on the following tasks:

- Investigate further and with urgency the width and character of the problem with broken axles, based on information from NSAs and the operators and study the need to reduce the maximum permitted axle load for wagons with certain types of axles that may have been overloaded without adequate maintenance supervision
- Review the relevant actions in the sector action plan and develop the necessary accompanying measures (European Visual Inspection Catalogue – EVIC, etc.)
- Review ongoing standardization activities and identify further areas for standardization and/or the need for review of standards

2 The deliverables of the 1st phase

2.1 The European Visual Inspection Catalogue (EVIC) for freight wagon axles

The EVIC can be considered as a reference manual for RUs and keepers providing the criteria to freight wagon maintenance staff to visually identify, during light maintenance in workshops (i.e. without disassembling from the wagon the wheel-sets), axles with a potentially increased risk for safe operation. A wheel-set/axle which doesn't meet the EVIC-criteria will be discarded from service and undergo non-destructive tests (NDTs). Additionally, a sample of axles which fulfill the EVIC-criteria will also be subject to NDT.

Comparisons of the NDT results of "EVIC failed" and "EVIC passed" axles will be performed. The results will be compared also to the results from heavy maintenance currently undertaken. According to the return of experience, the JSSG will propose appropriate measures to deal with identified risk areas.

Overall, there will be a 30-40% increase of NDT checks in the next years.

The TF agreed to start the EVIC campaign by sampling specific operational regimes as dangerous and corrosive goods transport and corrosive environment operations.

The sampling will take place over a 12 month period after which an evaluation of the results and of the effectiveness of the campaign will be carried out to decide on the way forward. A preliminary evaluation of the results should be done after 6 months from the start of the campaign.

The consolidated version of the EVIC was presented by the JSSG to the TF members, according to schedule, at the 4th meeting held in Viareggio (16-17 December 2009). Its content was discussed, clarified and approved by the TF and the JSSG proposed to start the implementation of the inspection campaign 3 months after its approval by the TF: this 3 month period has formally started on 1 January 2010.

The sector has to present as soon as possible the complete documentation for the inspection campaign and the implementation timetable detailing the different stages and processes to be considered (translation, dissemination, training, etc.).

The sector has also committed to set up a centralized follow-up and documentation of the campaign and to report and discuss as soon as possible the results of the sampling methods with the Agency which will inform the NSAs.

2.2 Overloading of UIC type A wheel-sets

The JSSG presented the findings of its work on the over-loading of UIC type A axles. Many operators/keepers have allowed these types of axles to be overloaded from 20,6 tons (e.g. France and Belgium since 1990) up to 22,5 tons (Sweden) without experiencing problems, there are therefore no indications that the allowed minimum diameter of the wheel-seat (which varies widely from country to country) as well as the design specifications (EN 13103, EN 15313, etc.) of this type of axle are a concern. Nevertheless, to increase operational safety further, the sector has decided to continuously download the type A I+II axles from 21t to 20t axle load.

Additionally, when changing wheels and if the wheel-set is operated at 20t axle load, the worn diameter of the wheel-seat will be limited to 182 mm, this will also mean the continuous phasing out of axles with wheel-seat diameters of 180 mm (mainly belonging to Trenitalia, ÖBB, SBB) and a greater harmonization and interchangeability of wheels and axles.

The JSSG has reviewed existing relevant standards and ongoing standardisation activities and, whilst it has not identified the need for new standards, it proposes to amend the EN 13103.

The JSSG clarified how the standardisation bodies will take into account the results of the TF: with the support of the Agency, criteria and requirements agreed upon within the TF will be shared with the CEN/CENELEC working groups and be reflected into the relevant EN standards (prEN15313, EN13103, etc.).

2.3 First draft of the European Minimum Maintenance Criteria (EMMC) for freight wagon axles

Although the EMMC relates to the second phase of activities of the TF, the JSSG presented a first draft of its works on the EMMC identifying some first elements of the maintenance criteria which can be harmonized.

The detailed description of the EMMC will be included in the final report.

3 Challenges faced by the Task Force

The activities and the positive and constructive mood of the TF have been partly irritated by unilateral, independent initiatives (request for detailed information on vehicle maintenance) of some National Safety Authorities, namely Italy and Germany, towards their freight operators (railway undertakings as well as wagon keepers).

In the case of Italy the request to freight operators was addressed through a letter from the Italian NSA to operators in Italy. After several exchanges of letters with the European associations representing railway undertakings and keepers a meeting between the Ministry of Transport of Italy, the NSA and the sector associations was organised in Viareggio on the 16th of December, in parallel with the task force meeting. The parties came to an agreement on the supply of information to the Italian NSA. The Agency has no further knowledge of the content of this agreement.

In the case of Germany the request for information was published by the German NSA (EBA) through an “Allgemeinverfügung” (Public announcement).

Since the Agency has received by the beginning of January 2010 a request from the Commission to give an opinion on this ruling, we will not comment on it in this report.

A challenge for ERA has been the additional, unplanned increased workload for the Safety Unit/SafeCert Sector as well as other Units and Sectors of the Agency.

Additionally Mr. Marcel Verslype and Vice-President Mr. Antonio Tajani had agreed to hold a TF meeting in Viareggio to honour the victims of the accident which occurred on 29 June 2009: this decision required a great deal of additional organisational, logistical and coordination work with the local authorities not to mention the efforts by the Agency to reassure the TF participants that there would be no disturbances due to the sensitive location of the meeting.

In the end all the practical arrangements worked out very well and almost all participants showed up at this final meeting of the year. All in all the meeting and arrangements must be seen as successful and it was probably a comfort to the local community to know about the attention paid to their suffering from the European institutions and associations.

Lastly some challenges regarding the implementation and recognition of the decisions taken by the TF were identified: how to ensure the timely and consistent implementation of the EVIC for all entities in charge of freight wagon maintenance (RUs/IMs, keepers, others), belonging to EU and non-EU companies? How to ensure that all NSAs, and not only those represented in the TF, recognize the decisions of the TF and the provisions of the EVIC?

Regarding these two issues the Agency proposes to include the EVIC in the next amendment of the GCU: the GCU is currently recognized by over 600 signatories and extends also to the COTIF countries outside the EU. Additionally the Agency will ensure that all NSAs, even those not present in the TF, are informed and consider recognizing the EVIC.

4 Preliminary conclusions

A first consideration that can be drawn from these first four months of activities is that for the first time the institutional representatives and all stakeholders from the freight transport business were represented and worked together around the same table to discuss common measures for the European freight wagon fleet.

A general agreement was reached and the conclusions of the first phase of activities of the TF were unanimously adopted and included in a note published in Viareggio (cf. Annex 2); the sector organisations have also published a note on the results of these first four months of activities (Annex 3).

Given the expectations and short deadline to deliver the first results we can conclude that the work for the TF has been very intense and motivation high.

5 2010 Work Program and objectives

The second phase of activities of the TF, from January to July 2010, will focus on further measures to review the different maintenance regimes existing across Europe and draw up a programme for further harmonization.

The main objectives for the second phase are:

- Propose a programme for development of a minimum maintenance criteria catalogue, starting with axle and wheel set criteria
- Assess effectiveness of different NDT methods used for axle inspections and, in case it is judged necessary, take the initiative for development of a harmonized standard
- Review the different main maintenance regimes for freight wagons established in Europe and identify, where necessary, areas for further harmonization
- Assess the need and feasibility of a European sector system for traceability of critical components
- Assess the feasibility of organising exchange of information and return of experience on the use of freight wagons

The meetings planned for this year will take place in Lille on the following dates:

- 5th meeting: 2 February
- 6th meeting: 20 April
- 7th meeting: 22 June

A final report on the activities of the TF will be delivered by the Agency to the Commission by July 2010, the final report shall focus, amongst others, on the:

- findings of the TF in relation to the relevant issues outlined in step 1 and 2 of its activities, as well as those emerged during the meetings;
- deliverables of the activities of the TF (European Visual Inspection Catalogue, Minimum Maintenance Criteria Catalogue, etc.);
- measures/proposals to address other relevant issues/problems, and
- conclusions and the way forward.

ANNEX 1: Terms of Reference

Terms of Reference

For the Task Force on

Freight Wagon Maintenance

Version: 0.2
Date: 23/11/2009
Status: Final
Author: ERA Safety Unit SafeCert Team

Change Control

Version No	Changed Section	Description of Change
0.2	Chapter 3, 1§	Change of reimbursements rules for TF participants. Interpretation services (FR, DE, EN) now provided by the Agency.

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1 Introduction

Following the accident in Viareggio (Italy) and the Agency's Preparatory Meeting on 20th August for the EC Conference on "*Railway Safety: the way forward*" held on 8th September in Brussels, the Agency proposed to set up a Task Force (TF) made up of experts in the field of freight wagon maintenance and railway axles and coming from all stakeholders (RUs, keepers, ECMs, suppliers, NSAs, etc.). The idea was supported and accepted by the NSAs and representatives of the sector organisations (CER, ERFA, ETF, UIP, UNIFE).

2 Scope and objectives of the Task Force

The objectives of the Task Force are to (this list may not be exhaustive):

- discuss relevant actions/information resulting from the EC Conference;
- exchange and analyse information relating problems with broken axles/fatigue and relevant testing methods;
- assist the sector and NSAs to establish sound evidence and advice on the causes of the problems with broken axles;
- propose/develop appropriate controls and monitoring tools;
- propose measures to review the different maintenance regimes existing across Europe and draw up a programme for further harmonization;
- evaluate the role of standards for wheel-sets in the different countries.

3 Working methods, resources and work programme

This Task Force is not set under the provisions of Article 3 of the Agency Regulation, setting the legal basis for Working Parties, and its activities are not part of the Agency's agreed work programme. As a general rule the Agency does not reimburse participants in these cases, however, to ensure the widest participation possible of relevant experts and in consideration of the importance of the activities to be carried out by the TF, the Agency will reimburse expert's expenses in accordance to its rules of reimbursement and provide, for each TF meeting, translation services for English, French and German.

The Agency will chair the meetings and have a role of coordinator and facilitator of the work to be carried out by the TF. To best carry out its activities and to ensure that the TF meets the objectives and deadlines set in the work programme, sub-task force groups may be established to carry out parallel work-streams; these sub-task force groups may be chaired by a sector representative approved by the other participants to the TF.

As a means of collecting relevant information, the Agency may develop and use surveys or questionnaires to be addressed to the NSAs or other interested parties.

A dedicated web space will be available (by mid October 2009 at the latest) on the Agency's EXTRANET, under the activities of the Safety Unit – Safety Certification Sector, where information and documentation relating the TF meetings will be available to the members having an authorised access (LOGIN and PASSWORD).

In consideration of the relevance of the subject and of the scope of the Task Force, which cross-cuts different areas of the Agency's work, the Agency will ensure the participation of experts its other Units (Cross Acceptance, Interoperability and Safety).

Vital interest in this work is assumed to come from the National Safety Authorities, as being part of the SMS and ECM certification system, and from the mainly concerned sector associations, as:

- Community of European Railway and Infrastructure Companies (CER),
- European Infrastructure Managers (EIM),
- European Rail Freight Association (ERFA),
- International Union of Private Wagons (UIP),
- International Union of combined Road-Rail transport companies (UIRR),
- International Association of Public Transport (UITP)
- Association of the European Rail Industry (UNIFE)

There shall be two phases in the work carried out by the TF with a final report delivered to the Agency by July 2010. The two phases shall address the following issues:

- 1. Urgent measures as a follow-up to information on problems with broken axles (cases in AT, DE, IT)**
- 2. Further measures to review the different maintenance regimes existing across Europe and draw up a programme for further harmonization**

Step 1 (September 2009 to December 2009)

- Investigate further and with urgency the width and character of the problem with broken axles, based on information from NSAs and the operators and study the need to reduce the maximum permitted axle load for wagons with certain types of axles that may have been overloaded without adequate maintenance supervision
- Review the relevant actions in the sector action plan and develop the necessary accompanying measures (European Visual Inspection Catalogue – EVIC, etc.)
- Based on information (collected by the NSAs through the NVR) from all relevant ECM:s across Europe assess whether further immediate actions need to be taken and, in such case, recommend a European action plan with clear deliverables, requirements and time frames
- Review ongoing standardization activities and identify further areas for standardization and/or the need for review of standards

Step 2 (January 2010 to July 2010):

- Propose a programme for development of a minimum maintenance criteria catalogue, starting with axle and wheel set criteria
- Assess effectiveness of different NDT methods used for axle inspections and, in case it is judged necessary, take the initiative for development of a harmonized standard
- Review the different main maintenance regimes for freight wagons established in Europe and identify, where necessary, areas for further harmonization
- Assess the need and feasibility of a European sector system for traceability of critical components

- Assess the feasibility of organizing exchange of information and return of experience on the use of freight wagons

WORK PLAN TIMETABLE

Seven meetings have been planned altogether, 4 in 2009 and 3 in 2010. The complete schedule, submitted for approval of the participants at the 1st meeting on 18 September, is presented below: Because of the detail and amount of work envisaged, it is necessary that the TF meets on a monthly basis in 2009 and have 3 meetings in 2010: the provisional dates for 2009 and 2010 have been sent out to the nominated experts for approval at the first meeting.

2009

1st meeting: 18/09
2nd meeting: 27/10
3rd meeting: 24/11
4th meeting: 17/12

2010

5th meeting: 02/02
6th meeting: 20/04
7th meeting: 22/06

REPORTS

An intermediate report on the outcome of the activities carried out by the TF in the first phase (Step 1 – Sept. – Dec. 2009) will be finalized by the Agency, in cooperation with the TF, by December 2010.

A final report will be delivered by the Agency to the Commission (DG TREN) by July 2010, i.e. after the end of the second phase of activities.

The final report shall focus, amongst others, on the:

- findings of the TF in relation to the relevant issues outlined in step 1 and 2 of its activities, as well as those emerged during the meetings;
- deliverables of the activities of the TF (European Visual Inspection Catalogue, Minimum Maintenance Criteria Catalogue, etc.);
- measures/proposals to address other relevant issues/problems, and
- conclusions and the way forward.

ANNEX 2

Conclusions from the 4th TF FWM meeting

The TF welcomes the initiative of the sector to start as soon as possible the European Visual Inspection Catalogue (EVIC) campaign as presented and clarified on the 17 of December.

The sector is invited by the TF to present as soon as possible the full documentation of the inspection campaign and a timetable for its implementation.

The sector commits itself to set up a centralised follow-up and documentation of the campaign and to report on the results to the Agency. The results of the sampling methods will be reported as soon as possible and discussed with the Agency which will inform the NSAs.

In addition the sector will provide an intermediate report with analyses of the results of the first 6 months of inspections and indicate if specific risks have been identified and the measures that will be taken to address these areas.

After 1 year the results will be further analysed and, depending on identified risk areas, the Agency will enter into discussions with the sector and the NSAs on the continuation and/or the regularisation of the EVIC program.

Following the accident in Viareggio the representatives of the sector associations have agreed, in a parallel meeting, to collect and provide the information requested to the ANSF (NSA IT).

Viareggio, 17 December 2009

ANNEX 3



Joint Sector Group information Results of the 1st phase of the ERA Task Force on wagon/axle maintenance

In the last meeting of the 1st phase of the ERA Task Force held in Viareggio (I) on 17.12.2009, the European Railway Agency, the National Safety Agencies and the undersigning sector organisations agreed on a European action programme, based on the proposals developed by the *Joint Sector Group* and to be implemented from now on. The main elements of the programme are the visual inspection of the European axle fleet, a more in-depth investigation with non-destructive testing methods of samples of axles operating in defined domains (e.g. corrosive environments) and the European-wide implementation of a systematic traceability of wheelset maintenance data. In the 2nd phase 2010, the ERA Task Force will regularly evaluate the experience gained from these measures and decide on potential further actions.

The 20t axle load was confirmed as the European standard axle load for the UIC type A axle.

The *Joint Sector Group* underlines the high importance of the common decisions both for an enhanced rail safety and a sustainable development of rail freight traffic.

In der letzten Sitzung der ersten Phase der ERA Task Force am 17.12.2009 in Viareggio (I) haben die Europäische Eisenbahnagentur, die nationalen Sicherheitsbehörden und die unterzeichnenden Sektororganisationen ein europäisches Aktionsprogramm verabschiedet, das auf den von der *Joint Sector Group* ausgearbeiteten Vorschlägen basiert und ab sofort umgesetzt wird. Die Kernelemente des Programms sind eine Sichtprüfung des europäischen Radsatzwellenparks, eine vertiefte Untersuchung mit zerstörungsfreier Prüfung von Probenmengen von Radsatzwellen aus bestimmten Betriebsbereichen (z. B. korrosive Umgebungen) sowie die europaweite Einführung einer systematischen Nachverfolgbarkeit von Radsatzinstandhaltungsdaten. Die ERA Task Force wird die gesammelten Erfahrungswerte in der zweiten Phase 2010 regelmäßig bewerten und gegebenenfalls weitere Maßnahmen beschließen.

Die Radsatzlast von 20t wurde als europäische Standard-Radsatzlast für UIC Typ A-Radsatzwellen bestätigt.

Die *Joint Sector Group* unterstreicht die enorme Wichtigkeit der gemeinsamen Beschlüsse sowohl für eine verbesserte Eisenbahnsicherheit als auch für eine nachhaltige Entwicklung des Schienengüterverkehrs.

A l'occasion de la dernière réunion de la 1^{ère} phase de l'ERA Task Force tenue à Viareggio (I) le 17.12.2009, l'Agence Ferroviaire Européenne, les Agences Nationales de Sécurité et les organisations sectorielles signataires ont approuvé un programme d'actions européen basé sur les propositions élaborées par le *Joint Sector Group* et entrant en vigueur dès à présent. Les éléments-clé du programme sont une inspection visuelle du parc européen des essieux, l'investigation approfondie par des méthodes d'examen non destructifs d'échantillons d'essieux opérés dans des domaines définis (p. ex. environnements corrosifs) ainsi que l'implémentation partout en Europe d'une traçabilité systématique de données de la maintenance des essieux. Dans la 2^{ème} phase en 2010, l'ERA Task Force évaluera régulièrement l'expérience acquise à partir de ces mesures et décidera d'activités supplémentaires éventuelles.

La charge d'essieu de 20 t a été confirmée comme charge d'essieu standard européenne pour les axes UIC du type A.

Le *Joint Sector Group* souligne la haute importance des décisions communes tant pour une sécurité ferroviaire améliorée que pour un développement durable du trafic de fret ferroviaire.



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