

VPI-EMG

Maintenance of wagons Introductory remarks

Edition 4.21

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Modules of the European Maintenance Guide (VPI-EMG)

Module	Name
VPI-EMG	Introductory remarks
VPI-EMG 01	General part
VPI-EMG 02	Underframes, bogies
VPI-EMG 03	Vehicle superstructures and tanks
VPI-EMG 04	Wheelsets
VPI-EMG 05	Springs
VPI-EMG 06A	Draw gear
VPI-EMG 06B	Buffing gear
VPI-EMG 07	Brakes
VPI-EMG 08A	Electronic data interchange
VPI-EMG 08B	VERS Tool
VPI-EMG 09	Non-destructive testing
VPI-EMG 10	Mobile repair
VPI-EMG 11	Work Safety

The current editions of all modules can be accessed on the VERS website (www.vpi-vers.eu).

Module changes and publications

Seq. no.	Content summary	Published	Comments
1	First edition	01/01/2013	Removed from module 01
2	Change	01/06/2013	
3	New edition	15/09/2019	Switch from VPI to VERS, first VERS edition 4.0
4	Revision	10/09/2020	Edition 4.1
5	Revision	11/2020	Edition 4.2
6	Change	12/2022	Change Notification 4/2022 (4.21)

Changes from the last edition

For information on the changes incorporated into edition 4.21, please consult Change Notification 4-2022.

Section	Change

Standards and regulations

In preparing the module, the following regulations were taken into account or were used for reference and citations:

Regulations used when creating the module.

Regulation	Title

Regulations referred to in this module.

These regulations must be available for application of this module.

Regulation	Title
UIP/VPI Technical Guidelines "Safety Critical Components"	Safety critical components – Application of the definition of safety critical components to wagons
Regulation (EC) No. 2019/779	Detailed provisions for a system of certification of entities in charge of maintenance of vehicles (ECM Regulation)

Regulations cited in this module.

Regulation	Title

Foreword

To offer the keepers of wagons reliable and largely standardized as well as efficient maintenance rules and to ensure the continued development of these rules, VPI Germany, V.P.I. Austria and VAP Switzerland decided to produce and maintain guidelines for the maintenance of wagons based on the maintenance regulations developed jointly by VPI Germany and Deutsche Bahn over the course of decades.

The first edition of the VPI Maintenance Guide was published in June 2007. Various adaptations and extensions were made in the subsequent years. The group of publishers most recently consisted of VPI, V.P.I. and VAP. In 2019, the further editing and maintenance of the VPI Maintenance Guide was handed off to the newly founded VPI European Rail Service GmbH (VERS). At the same time, the group of publishers was expanded to include AFWP and UIP in addition to VPI, V.P.I. and VAP. The UIP acts as representative of all other UIP member associations. The VPI Maintenance Guide was renamed the VPI-European Maintenance Guide (VPI-EMG).

In the course of the necessary revisions and expansions, the existing VPI modules are being adapted step by step. To clearly indicate the revision history, all modules published for the first time by VERS receive the edition 4.0. Until then, the previously published editions retain their full validity.

The requirements for maintenance of safety critical components and documentation of the maintenance are taken into account during revision of the modules. The basis for selecting the safety critical components is the technical guidelines of UIP/VPI on application of the definition of safety critical components to wagons.

The VPI-EMG is reviewed at regular intervals by maintenance experts in the area of freight and tank wagons and revised and expanded, if necessary. This takes place based on the experience reports of the ECMs, including concerning the fulfilment of the requirement of Article 5(3) of EU Implementing Regulation 2019/779. The goal is to define a generally valid state of technology for the maintenance of wagons and their components.

Insofar as known and possible, the VPI-EMG takes into account binding, special national regulations on repair.

The requirements of the VPI-EMG may be insufficient or inapplicable for the respective application situation in individual cases. It should therefore fundamentally be viewed only as a recommendation by VPI European Rail Service GmbH and not as all-encompassing. Every user of the VPI-EMG must therefore evaluate for its own specific use case whether and to what extent the information in the VPI-EMG applies.

Remarks on application

For better differentiation of the ECM functions, the following terms are used in the modules:

- ECMs with the functions:
Management, maintenance development and fleet maintenance management
- Workshops or maintenance workshops with the function:
Maintenance delivery

Upon the announcement of changes or revisions, the most recent edition of the VPI-EMG is valid (see also: Explanation of the VPI-EMG edition numbers).

The ECMs must check the applicability of the modules within the scope of integrating the modules of the VPI-EMG into their maintenance programme. VERS recommends that ECMs define an implementation transition period upon publication of new editions. The precise regulations concerning deadlines, validity, deviations and additions must therefore be stipulated by the respective ECMs.

Application of the modules relieves no one of the responsibility for their own actions.

As with standards and other rules and regulations, the VPI-EMG is not retrospective. The specifications in individual modules, if no concrete instructions are in place, need not be applied until carrying out the relevant work. For work performed in the past in line with the then relevant applicable set of rules and regulations, there is strictly no obligation to upgrade or convert to the current best available technology. If an accelerated implementation is recommended upon introduction of a new maintenance task, VERS will indicate this in a separate notice.

Anyone discovering mistakes or incorrect interpretations that could result in incorrect application are requested to inform VERS immediately (see VPI-EMG 01, Annex 18) in order that any defects can be remedied.

Date of publication, edition and implementation

The VPI-EMG modules are created according to internally defined policies of VERS.

1. Publication

The publishing date given on the module cover sheet indicates the month and year in which a new or revised module was made available to the recipients of the VPI-EMG in the base German version.

This date is also given in the section 'Module changes and publications'.

All translations are based on the German version, which is translated into the various language versions of the VPI-EMG. A new or revised module will only be published by VERS once both the French and English versions are available in addition to the German version.

2. Edition

The edition date given in the page footers is the date of the last content revision prior to publication.

The publication of other language versions is sometimes delayed by several weeks, or even months in individual cases. The date of publication is not changed here; however, an additional date is given in the footer to indicate when the corresponding translation was completed and published.

3. Implementation

The implementation of the new or revised VPI-EMG modules is the responsibility of each individual ECM according to the rules of the EU Implementing Regulation 2019/779, 'ECM Regulation'. Each ECM establishes its own date for this.

Weeks or even months may pass between publication by VERS and implementation by an ECM. Each ECM is obligated to initially assess the applicability of the new and revised modules to the wagons it manages. The time of implementation by an ECM may be influenced by factors such as modifications to processes, contracting, maintenance procedures, checks, area of application and tests. The respective ECM has the option of implementing only parts of the module and/or establishing deviations. As a result, the date of implementation may differ from ECM to ECM.

Among other reasons, this can also occur because new or revised modules of the VPI-EMG may not indicate maintenance tasks or technical inspections that can be quickly implemented from a safety perspective.

Measures to be implemented at short notice as the result of investigations into safety incidents are announced either by the national safety authorities (NSA), the member associations of various organisations, such as the publishers of the VPI-EMG, or by the respectively affected ECM within the framework of the exchange of experiences called for in Article 5(3) of the EU Implementing Regulation 2019/779.

If these measures or tests to be implemented at short notice result in lasting changes to the maintenance recommendations, they will be integrated as soon as possible into the VPI-EMG.

Explanation of the VPI-EMG edition numbers

1. First edition / new edition

The first edition / new edition of a module which is published by VERS has the edition number 4.0 for its first edition. In the event of a new edition, the edition number changes as follows:

Edition 4.0 ➡ Edition 5.0

2. Revision

Issues and technical relationships are extensively modified and there are technical and structural changes without changing the basis of the module overall. No detailed change notification is created; an **edition with margin lines** for change tracking is created instead and published in the archive of the VERS website. The VPI-EMG recipients are officially informed of the revision by email. The edition number changes as follows:

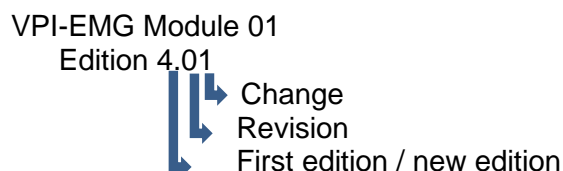
Edition 4.01 ➡ Edition 4.1

3. Change

General editorial and/or technical items were added and/or changed; the scope of the changes do not significantly alter the basic technical and structural content, only individual issues. Changes are integrated into the module, and the VPI-EMG recipients are officially informed with a **change notification**. The edition number changes as follows:

Edition 4.0 ➡ Edition 4.01

The edition number always applies to the entire module. The editions of the VPI-EMG modules are indicated with the following numbering:



Inclusion of new components, supplies and auxiliaries

At least one of the following criteria must be satisfied for the inclusion of new components, supplies and auxiliaries:

- Statutory requirements (in the future, e.g. the digital automatic coupling)
- Application by an ECM with more than 10,000 wagons serviced by it
- Joint application by at least 2 ECMs with at least 2,000 wagons serviced between them
- Proposal of the respective technical authors of a VPI-EMG module
- Specification from the technical management of VERS

The application for inclusion of a new component or manufacturer-specific products can be submitted to VERS without observing any particular formal requirements. The application must, at a minimum, include the following:

- Application letter
- Substantial description / specification of the component or the product
- Operational testing report
- Proposed text for the necessary changes in the affected modules of the VPI-EMG

Components or products that are once-off special technical solutions and that will be used infrequently in the European wagon fleet, or that are expected to be decommissioned for good or to the largest extent in the foreseeable future after the application is made, will not be included in the VPI-EMG.

Any exemptions are at the discretion of the technical management of VERS.

Legal remarks

The VPI-EMG does not relieve the ECMs of their obligation to give special consideration to specific usage conditions and special equipment/features of their wagons with regard to maintenance. The VPI-EMG encompasses only the most important and most common wagon types and components. The keeper always issues its maintenance instructions to the maintenance workshop under its own responsibility. In particular, it must ensure that its wagons that were maintained in the past according to other maintenance policies are appropriately transitioned to the new maintenance system.

Despite all the care taken, no liability can be accepted for the accuracy, currency and completeness of the VPI-EMG maintenance guidelines. Liability for damages arising through use of the VPI-EMG shall therefore be limited only to gross negligence and wilful intent.

The VPI-EMG is published and developed in German. The additionally published localised editions are derived from the German edition. In case of doubt, the German version shall take precedence.

The VPI-EMG can only be purchased from the website of VERS GmbH as a download.

The VPI-EMG may not be shared with third parties nor published without the permission of VERS GmbH.

Violations will be prosecuted under civil and criminal law.