

TOP 4 mechanical coupling devices ECE R55.01

The working document ECE/TRANS/WP.29/GRRF/2014/14 included a proposal to change references to ISO7641:1983 to ISO7641:2012. This change was challenged by the GRRF. The informal working group responded ECE/TRANS/WP.29/GRRF/2014/28 in to that challenge by a withdrawal of that proposal for change.

Now in the agenda of 78th session of GRRF raised a question about the two editions of the standard. In order to respond to that question the table below has been prepared.

Comparison	ISO7641:1983	ISO7641:2012
1. Title	Road vehicles-Caravans and light trailers-Calculation of the mechanical strength of the drawbar- part 1 : steel drawbars	Road vehicles- Trailers up to 3,5t-Calculation of the mechanical strength of steel drawbars
2. Scope	This part gives a simplified procedure for the calculation of the mechanical strength of drawbars for caravans and light trailers (footnote : Categories O1 and O2 as in ECE /UNO classification) where the vertical static load on the coupling head does not exceed the limits specified in ISO/TR4114	It is specified, that the standard is applicable for « simple constructions » welded or not, that enable a calculation in bending The max static load for the application of this standard is now given in a diagram (figure 3)
3. Field of application	Limited to 0,22% Carbon in case of welding	No field of application, the Carbon limit is given under requirement 4.2, the limit is now 0,25% Carbon
4. references	Item 3: ISO 1176, ISO/TR4114, ISO 7237	Item 2 only UNECE (R.E.3)
5. 1 definitions	4. Symbols and definitions	All symbols of old 7641:1983 are named in 3.2, it was added the S-value as the vertical force , the D value became D_{It} , basis for D calculation is increased from 22 000 to 32000
5.2 more definitions		3.1 terms and definitions. Definitions on “mechanical coupling device », « mechanical coupling component » « drawbar », « chassis part » have been added to the updated standard

6. requirements	5. resistance calculation Old chapter 5. Became new chapter 4.3 strength calculation without any modification	4. requirements 4.1 limits the S-value for the application of this standard (former ISO TR4114) by showing figure 3 4.2 gives the Carbon limit for the weldability (increased !)
7. permissible stress	5.3. permissible stress	4.3.4. calculation of permissible stress Identical as before, but added distinguished formulae for σ for drawbars welded or not manufactured by welding
8 annex	No annex	Figures show examples of chassis and drawbars to underline item 3.1