|  |  |  |
| --- | --- | --- |
|  | E/ECE/324/Rev.2/Add.109/Rev.6/Amend.2−E/ECE/TRANS/505/Rev.2/Add.109/Rev.6/Amend.2 | |
|  |  | 2 November 2020 |

Agreement

Concerning the Adoption of Harmonized Technical United Nations Regulations for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these United Nations Regulations[[1]](#footnote-2)\*

(Revision 3, including the amendments which entered into force on 14 September 2017)

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Addendum 109 – UN Regulation No. 110

Revision 6 – Amendment 2

Supplement 2 to the 04 series of amendments – Date of entry into force: 25 September 2020

Uniform provisions concerning the approval of:

I. Specific components of motor vehicles using compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system

II. Vehicles with regard to the installation of specific components of an approved type for the use of compressed natural gas (CNG) and/or liquefied natural gas (LNG) in their propulsion system

This document is meant purely as documentation tool. The authentic and legal binding texts is: - ECE/TRANS/WP.29/2020/21.

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**UNITED NATIONS**

*Annex 3A*

*Table 6.7.,* amend to read (see next page):

"Table 6.7

**Change of Design**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Design change | *Type of test* | | | | | | | | | | | | | | | |
| Burst hydrostatic A.12 | Cycling Ambient temp A.13 | Acid  environment A.14 | Bonfire A.13 | Penetration  A.16 | Flow  Tolerance A.17 | | High temp creep A.18 | | Stress rupture A.19 | Drop test A.20 | Permeation A.21 | Boss Torque A.25 | Cycling A.27 | | PRD Performance A.24 |
| Fibre manufacturer**\*\*** | X | X |  |  |  |  | |  | | X\* | X\* |  |  |  | |  |
| Metallic cylinder or  metal liner material | X | X | X\* | X | X\* | X | | X\* | | X\* | X\* |  |  |  | |  |
| Plastic liner material |  | X | X |  |  |  | | X | |  |  | X† | X† | X† | |  |
| Fibre material**\*\*\*** | X | X | X | X | X | X | | X | | X | X |  |  |  | |  |
| Resin material |  |  | X |  | X | X | | X | |  | **X** |  |  |  | |  |
| Diameter change ≤ 20 per cent | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Diameter change  > 20 per cent | X | X |  | X | X\* | X | |  | |  | X |  |  |  | |  |
| Length change ≤ 50 per cent | X |  |  | X‡ |  |  | |  | |  |  |  |  |  | |  |
| Length change  > 50 per cent | X | X |  | X‡ |  |  | |  | |  | X |  |  |  | |  |
| Working pressure change ≤ 20 per cent @ | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Dome shape | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Opening size | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Coating change |  |  | X |  |  |  | |  | |  |  |  |  |  | |  |
| End boss design  (Change in liner interface, composite interface or layer design) |  |  |  |  |  |  | |  | |  |  | X† | X† | X† | |  |
| Change in manufacturing Process | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Pressure relief device |  |  |  | X |  |  |  | |  | |  |  |  | |  | X |

Legend:

X=required

\* test not required on metal (CNG-1) designs

† Test only required on all composite (CNG-4) designs

‡ Test only required when length increases

@ Only when thickness changes proportional to diameter and/or pressure change

\*\* according to definition “equivalent fibre” in ISO 11119-3:2013

\*\*\* as long as change is no “new fibre type” as defined in ISO 11119-3:2013"

1. \* Former titles of the Agreement:

   Agreement concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958 (original version);

   Agreement concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, done at Geneva on 5 October 1995 (Revision 2). [↑](#footnote-ref-2)