

Minutes

Committee / topic	GRSP TF on the transposition of GTR 13 P2 to UN-R 134 (26)
Location	MS Teams
Date	Thursday, 13 June 2024
Time	8:00 AM to 9:30 AM CET
Chair	Hans Lammers (RDW)
Secretariat	Annett Schuessling (VDA)

Item	Description	Responsible	Time
1	<p>Welcome</p> <p>Participants: Akihiro Yamaguchi (METI) Alex Millward (Luxfer) Amy Ryan (Toyota) Anaïs Garo (UTAC) Anne Serra (European Commission) Annett Schüßling (VDA) Anton Weiler (IAV) Ayumu Ishizuka (Honda) Chiaki Kataoka (Toyota) Daniel Frame (Arrowhead) Gerhard Gissibl (BMW) Gilles Jouvenot (Plastic Omnium) Harald Beck (MAN) Hiroaki Tamura (Jari) Johan Broeders (DAF) Jürgen Herter (BMW) Klaus Weis (Hexagon) Koie (Meti, Japan) KyungReol Min (Hyundai) Masaaki Iwasaki (Toyota) Masaaki Kondo (Toyota) Matthias Kuntz (Bosch) Morinaga (KHK) Nobuyuki Ohgami (Toyota) Paul Dijkhof (Kiwa) Richard Trott (Forvia) Romary Daval (Luxfer) Salim Abdennadher (Renault) Satoru Kanai (MLIT) Hiroaki Tamura (JARI) Tobias Emig (Ford) Tohru Nakanishi (METI, Japan) Torigoe (KHK) Valentin Hettrich (Daimler Truck) Yoshinori Tanaka (NTSEL) Yoshio Fujimoto (NTSEL) Yuto Sekiya (KHK)</p>	Annett	08:00
2	Continuation of discussion	60 min All	8:05

Requirements for remote TPRDs / supply lines

- The group discussed the slide provided by Japan
- Japan proposed to add language to the definitions

(1) Insights concerning "Supply lines for additional TPRDs"



Cylinder Assembly – Type 3

Supply and Vent lines cannot be too rigid due to cylinder expansion

Source: Document from the J46 GRSP TP on the transposition of GTR 13 Phase 2 to UN R 114, dated 10/07/2023 - 12/07/2023

This parts is considered that provide additional support and/or protection to the supply lines for additional TPRDs. In the current proposal, this parts is not included in the definition of CHSS but may be used for each test such as Verification tests for performance durability. It is necessary to consider whether this parts should also be defined together with supply lines for additional TPRDs or not.

(Updates for the TF Meeting on 05/17/2024)

Proposal from Japan

Regarding the parts, as we consider them to have the same functionality as a container attachment, [1] Additionally, we are concerned that attaching the parts to the container may cause severe abrasion to the composite surface like mounting straps. [2] Therefore, we propose adding the following footnote to the draft definition of "Container Attachment" [1] and amending "Surface damage test" in Annex 3, Paragraph 3.3.(a) as follows [2]:

[1] "2.5. "Container Attachments" mean non-pressure bearing parts attached to the container that provide additional support and/or protection to the container and that may be only temporarily removed for maintenance and/or inspection only with the use of tools.

Note : The non-pressure bearing parts attached to the container that provide additional support and/or protection to additional TPRDs and supply lines are also considered as container attachments.

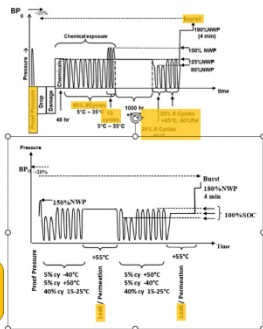
[2] 3.3. Surface damage test (unpressurized):
 "(a) Surface flaw generation: A saw cut at least 0.75mm deep and 200mm long is made on the surface specified above.
 If the container is to be affixed to the vehicle by compressing its composite surface or container attachments for additional TPRDs and/or supply lines are attached to composite surface of the container, then a second cut at least 1.25 mm deep and 25 mm long is applied at the end of the container which is opposite to the location of the first cut;"

- OICA / CLEPA was not able to discuss this proposal in detail before the meeting. A slide had been prepared by Forvia summarizing the practical issues with the sequential tests regarding the supply lines

Practical issues of including remote TPRD in sequential test

- Remote TPRDs are predominantly used for CV
 - Lower production numbers compared to PV
 - More variants
 - In particular the remote TPRD routing may be adapted for different vehicles
- Remote TPRDs are predominantly (if not always) made of stainless-steel lines
 - However, 5.2 and 5.3 are made for cylinders and include tests tailored for composite reinforced containers in particular
 - What part of the 5.2 and 5.3 would actually affect remote TPRD lines? -> Only proof, cycling, burst and leak (see orange mark on right)

➢ How about rather performing a proof and ambient temperature cycling test on the container with remote TPRD + leak and burst separately on the lines.



- OICA / CLEPA will prepare a comparison between the requirements in the GTR 13 phase 2 and the industry standards HGV 3.1 and the upcoming ISO 19887.

Periodic inspection

- France had proposed to align UN-R 134 with UN-R 110 Annex 3, para. 4.1.4.
- The question was raised whether the scope of a type-approval regulation would allow for such a requirement
- The secretary of the TF will raise this question to the secretary of the GRSP

Number of hydraulic cycles
 - Japan informed the TF about a misalignment in the text of the regulation

(2) Insights concerning "The number of hydraulic sequential tests conducted"

GTR13 Phase 2	UNR134 02 series
<p>5.1.1.2. Baseline initial pressure cycle life</p> <p>Three (3) new containers randomly selected from the design qualification batch are hydraulically pressure cycled without rupture for 22,000 cycles or until a leak occurs in accordance with paragraph 6.2.2.2. The container attachments, if any, shall also be included in this test, unless the manufacturer can demonstrate that the container attachments do not affect the test results and are not affected by the test procedure. Leakage shall not occur within 7,500 or 11,000 cycles for light-duty vehicles, at the Contracting Parties' discretion and 11,000 cycles for heavy-duty vehicles.</p> <p>5.1.2. Verification tests for performance durability (Hydraulic sequential tests)</p> <p>If all three pressure cycle life measurements made in para. 5.1.1.2 are greater than 11,000 cycles, or if they are all within ± 25 per cent of each other, then only one (1) container is tested in para. 5.1.2. Otherwise, three (3) containers are tested in para. 5.1.2. (The rest is omitted.)</p>	<p>5.1.2. Baseline initial pressure cycle life</p> <p>Three (3) containers shall be hydraulically pressure cycled without rupture for 22,000 cycles or until a leak occurs in accordance with Annex 3, paragraph 2.2. The container attachments, if any, shall also be included in this test, unless the manufacturer can demonstrate that the container attachments do not affect the test results and are not affected by the test procedure. Leakage shall not occur within 11,000 cycles.</p> <p>5.2. Verification tests for performance durability (Hydraulic sequential tests)</p> <p>²⁾ [If all three pressure cycle life measurements made in paragraph 5.1.2 are greater than 11,000 cycles,] ¹⁾ or if they are all within ± 25 per cent of each other, then ¹⁾ only one (1) container is tested in paragraph 5.2. [Otherwise, three (3) containers are tested in paragraph 5.2.] (The rest is omitted.)</p>

We believe that the underlined portion of 5.1.2. is applicable when the pressure cycle life of containers, tested based on 5.1.1.2., are greater than 11,000 cycles or less (for instance, 7,500 cycles for LDV), and the difference of the pressure cycle life are within $\pm 25\%$.

On the other hand, in UNR134, since the pressure cycle life are unified to 11,000 cycles in 5.1.2., so, the provision for a pressure cycle life of 7,500 cycles is unnecessary. Therefore, we believe that the highlighted area of, ¹⁾, should be deleted. Furthermore, if ¹⁾ is to be deleted, it is also considered that ²⁾ should be deleted.

- The group agreed that the observations were correct, and the next proposal document should include the suggested deletions

3	Next steps	15 min	All	09:05
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Workshop preparation
 - The dates of the workshop are August 26, 2024 1pm to August 28, 2024 5pm

The workshop will be held at the VDA offices in Berlin. Invitations and more details will be sent out.

4	Next meeting	5 min	All	09:10
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July 16, 2024 8 am to 9.30 am (CET)
 3 pm to 4.30 pm (JST/KST)
 July 15, 2024 11 pm to 12.30 am (PDT)