

FINAL DRAFT
RECOMMENDATION

Drafts 7 and 8

49th CIML Meeting

Auckland 2014

INFORMATION

Revision of R 139-1 and R 139-2

Compressed gaseous fuels measuring systems
for vehicles.

Part 1: Metrological and technical requirements



CIML Preliminary Online Ballot: R 139
Deadline 2014-03-20

Result: 22 votes cast – 1 abstention – 21 “Yes” votes

Country	Vote
AUSTRALIA	Voted Yes
AUSTRIA	Voted Yes
CANADA	Voted Yes
DENMARK	Voted Yes
EGYPT	Voted Yes
FRANCE	Voted Yes
GERMANY	Voted Yes
JAPAN	Voted Yes
KAZAKHSTAN	Voted Yes
KOREA (R.)	Voted Yes
MONACO	Voted Yes
NETHERLANDS	Voted Yes

POLAND	Voted Yes
SAUDI ARABIA	Voted Abstain
SERBIA	Voted Yes
SLOVAKIA	Voted Yes
SLOVENIA	Voted Yes
SWITZERLAND	Voted Yes
TURKEY	Voted Yes
UNITED KINGDOM	Voted Yes
UNITED STATES	Voted Yes
VIET NAM	Voted Yes



Compilation of comments on Committee Draft			OIML TC 8/SC 7/P04/N063/CC
TC8 / SC7 Comments on: OIML TC 8/SC 7/P04/N059-060_DR	Draft Recommendation: OIML R139-1/2 DR	Title: <i>Compressed gaseous fuel measuring systems for vehicles</i>	Project: p4 ; revision of R 139 <i>Compressed gaseous fuel measuring systems for vehicles</i>
DR date: 20 Dec 2013	Circulation date: 1 May 2014	Closing date for comments: 20 March 2014	
Secretariat: NL Mr. George Teunisse			

Country Code	Clause/ paragraph/ table	gen./ edit./ techn.	COMMENTS	PROPOSED CHANGE	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
JP-1	General	gen.	There are significant differences in density and maximum operating pressure between CNG and hydrogen. In addition, the national measurement standard for volume (or mass) of hydrogen supplied to vehicles with a fueling system at a high pressure has not been established in many countries. Therefore we request that an application to hydrogen of the technical requirements, which have been provided for CNG, should be decided by each member state.	Several changes are requested in the respective clauses.	The OIML Member states are free to limit the scope of instruments subject to national legal metrology control and a member state is not obliged to implement the Recommendation for the specific measuring system when it does not fit the specific needs of the member state . Therefore it is considered not necessary to explicitly reminding this in clauses of Recommendations. The actual draft is in its final stage of drafting (approval phase) and passed committee phase which implies that the subcommittee is not allowed to make technical changes. The convener is only allowed to make some editorial improvements.
JP-2	5.2 5.2.1 Maximum permissible error	gen. /tech.	As it was mentioned in the general comment, the MPEs should be decided by a national authority in each member state.	Change the note as shown below. <i>Note: National Authorities may decide on whether to implement the above maximum permissible errors for initial and subsequent verifications.</i>	See reply on JP-1 Moreover: It is expected that the JP-2 comment refers to hydrogen only. The proposed change in the note does not introduce any relaxation The note is editorial amended on basis of US-1
JP-3	5.2.4	Gen.	It is difficult to apply the present requirement to	Add a note shown below (same with 5.2.1).	See reply on JP-1 and JP-2

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		/tech.	hydrogen regarding the MPEs applicable to the minimum measured quantity because the density of hydrogen is very small. It should be decided by a national authority in each member state.	<i>Note: National authorities may decide on whether to implement the above maximum permissible errors for initial and subsequent verifications.</i>	5.2.4 does not concern MPE.
JP-4	5.3.2 Minimum measured quantity	tech.	We understand table 1 is merely an example and not a technical requirement. Is it correct?	No changes are requested if Table 1 is an example.	Table 1 provides wide ranges and is not an example
JP-5	5.4 Repeatability	tech.	The requirement to the maximum repeatability error of 0.6 % is too severe in practice.	We request changing the maximum repeatability error from 0.6 % to <u>1.0 %</u> .	This is a technical issue on which was decided by the sub committee . The 0.6 % concerns only the meter. Taking into account the total of 1 % MPE for the meter a relaxation of the repeatability to 1 % would leave too little tolerance for deviations caused by environmental or other influences. Further see reply on JP-1
JP-6	5.7.1 Table 3, 5.7.2 Table 4, 5.7.3 Table 5	tech /edit	The testing conditions in the third columns of Tables 3-5 are specified in the clause 18 in part 2. Therefore, these tables should list only the test items.	Delete the third column in each of the Tables 3-5.	This specification in the third column is required in part 1 of OIML Recommendations. This is a technical issue cannot be changed after the committee stage in this final stage of drafting
JP-7	A.1.4.1 Support of fault detection	edit.	Correct a typo.	Correct A.1.4.1 to <u>A.1.4</u> .	Thank you ;corrected
JP-8	17.2.1.6 (new clause)	tech	Standard fueling protocols rerated hydrogen should be referred in a new clause.	Add a new clause shown below. <i>17.2.1.6 Take a note to standard fueling protocol(s) for hydrogen gas such as SAE J2601.</i>	This is a technical issue and cannot be changed in this final stage of drafting..
JP-9	17.2.7.1 Tests at variable	tech.	A fueling system equipped with an automated control valve is used widely in Japan. This	Add a note shown below.	Considered no need to change while clause 17.2.7 provides in the option of deviation for

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	flow rate		system enables to control pressure and flow rate actively and automatically while fueling to a vehicle cylinder. Using this system, sudden changes in pressure and flow rate are suppressed significantly. Therefore, such an automated system should be exempt from the test procedure in clause 17.2.7.1 and covered by clause 17.2.7.3 alternatively.	<i>Note 3: This test is not applied to a fueling system equipped with an automated control valve for pressure and flow rate.</i>	other techniques. Moreover a technical issue cannot be changed in this final stage of drafting.
JP-10	17.2.7.3 Accuracy tests involving only one bank	gen./tech.	As it was mentioned in clause 17.2.7.1, a fueling system equipped with an automated control valve should be covered by the test procedure in clause 17.2.7.3. As it was mentioned in the general comment, this test item should be employed under a decision by a national authority when it is applied to hydrogen.	Add two notes shown below. <i>Note 1: This test item is also applied to a fueling system equipped with an automated control valve for pressure and flow rate.</i> <i>Note 2: National authorities may decide on whether to apply this test item for hydrogen.</i>	Considered no need to change see further reply on JP -9
JP-11	17.2.5.2.1 Test setup	gen./tech.	As it was mentioned in the general comment, this test item should be employed under a decision by a national authority when it is applied to hydrogen.	Add a note shown below. <i>Note: National authorities may decide on whether to apply this test item for hydrogen.</i>	Considered no need to change see further reply on JP -9
US-1	5.2.1	edit.	This is a proposed <u>editorial clarification</u> that was discussed with the R139 PG Convener.	Note: National Authorities may decide on whether subsequent verifications should be conducted and whether a different to implement maximum permissible error should be used during a for subsequent verification.	amended
US-2	5.2.3	edit.	This is a proposed <u>editorial clarification</u> that was discussed with the R139 PG Convener.	Note 2: National Authorities may decide on whether in-service inspections should be conducted and whether a different to implement maximum permissible error should be used during an in-service inspection. in service surveillance and/or	amended

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				to apply a different maximum permissible error.	
US-3	5.8.2	edit.	This is a proposed <u>editorial clarification</u> that was discussed with the R139 PG Convener. There are two problems with the current Section 5.8.2: (1) there is nothing in 5.8.2 that specifically mentions the “2000 delivery” option for the durability test that is offered in Section 17.2.7.5 of R139-2, and (2) the current wording of the note implies that there could be several different options for testing allowed, when (if fact) there are really only two options allowed.	Note: One alternative option offered in R139-2 to accomplish this durability requirement is the satisfactory completion of 2000 deliveries in actual use without showing a significant durability error. While being a forecasting issue, different approaches are allowed during testing for gaining the presumption of compliance.	amended
US-4	18.4.2.2.	edit.	The US appreciates the response to its request for further clarification on the appropriate order in which to make a comparison of data resulting from a repeatability test. The US suggestion to include either a new matrix or additional text was submitted to ensure that individual test results represent the same conditions for the measuring system and test apparatus. Test results used to establish repeatability would be from a minimum number of consecutive deliveries, but would also represent the same phase of the delivery where conditions (such as pressure, temperature, delivery size, flow rate, etc.) for the system and test apparatus are similar.	Remove the newly added reference to footnote 2 at the end of the clause to read: “...specified in 5.4 shall be fulfilled. ² ...” The text in the footnote appears to indicate that no specific order is necessary when comparing the test results taken from a minimum of at least three deliveries, when each delivery is carried out in multiple phases.	Appears to introduce confusion. Deleted