Proposal for Supplement 14 to the 02 series of amendments to Regulation No. 3 (Retro-reflectors)

Submitted by the expert from Germany*

The text reproduced below was prepared by the expert from Germany updating the Conformity of Production requirements (CoP). The modifications to the current text of the Regulation are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, program activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.
I. Proposal

Paragraph 8.1. amend to read:

"8.1. Retro-reflectors shall be so manufactured as to conform to the type approved under this Regulation.

The compliance with the requirements set forth in paragraphs 6 and 7 above shall be verified as follows:"

Paragraph 8.2. (former), renumber as paragraph 8.1.1.

Paragraph 8.3. (former), renumber as paragraph 8.1.2.

Paragraph 8.4. (former), renumber as paragraph 8.2.

Annex 6, paragraph 2. to 6., amend to read:

"2. First sampling

In the first sampling four retro-reflectors are selected at random. The first sample of two is marked A, the second sample of two is marked B.

2.1. The conformity of mass-produced retro-reflectors shall not be contested if the deviation of any specimen of samples A and B (all four retro-reflectors) is not more than 20 per cent.

In the case, that the deviation of both retro-reflectors of sample A is not more than 0 per cent, the measurement can be closed.

2.2. The conformity of mass-produced retro-reflectors shall be contested if the deviation of at least one specimen of samples A or B is more than 20 per cent.

The manufacturer shall be requested to bring his production in line with the requirements (alignment) and a repeated sampling according to paragraph 3. below shall be carried out within two months' time after the notification. The samples A and B shall be retained by the Technical Service until the entire CoP process is finished.

3. First repeated sampling

A sample of four lamps is selected at random from stock manufactured after alignment.

The first sample of two is marked C, the second sample of two is marked D.

3.1. The conformity of mass-produced retro-reflectors shall not be contested if the deviation of any specimen of samples C and D (all four retro-reflectors) is not more than 20 per cent.

In the case, that the deviation of both retro-reflectors of sample C is not more than 0 per cent, the measurement can be closed.

3.2. The conformity of mass-produced retro-reflectors shall be contested if the deviation of at least one specimen of samples C or D is more than 20 per cent but the deviation of all specimen of these samples is not more than 30 per cent.
The manufacturer shall be requested again to bring his production in line with the requirements (alignment).

A second repeated sampling according to paragraph 4. below shall be carried out within two months' time after the notification. The samples C and D shall be retained by the Technical Service until the entire CoP process is finished.

3.2.2. one specimen of samples C and D is more than 30 per cent.

In this case the approval shall be withdrawn and paragraph 5 below shall be applied.

4. Second repeated sampling

A sample of four lamps is selected at random from stock manufactured after alignment.

The first sample of two is marked E, the second sample of two is marked F.

4.1. The conformity of mass-produced retro-reflectors shall not be contested if the deviation of any specimen of samples E and F (all four retro-reflectors) is not more than 20 per cent. In the case, that the deviation of both retro-reflectors of sample E is not more than 0 per cent the measurement can be closed.

4.2. The conformity of mass-produced retro-reflectors shall be contested if the deviation of at least one specimen of samples E or F is more than 20 per cent.

In this case the approval shall be withdrawn and paragraph 5 below shall be applied.

5. Approval withdrawn

Approval shall be withdrawn according to paragraph 9. of this Regulation.

6. Resistance to penetration of water

With respect to the verification of the resistance to penetration of water, the following procedure shall be applied:

One of the retro-reflectors of sample A, after sampling procedure in Paragraph 2 of this annex, shall be tested according to the procedure described in paragraph 1 of annex 8 respectively paragraph 3 of annex 14 for class IVA reflectors.

The retro-reflectors shall be considered as acceptable if the test has been passed.

However, if the test on sample A is not complied with, the two retro-reflectors of sample B shall be subjected to the same procedure and both shall pass the test."

*Figure 1.* shall be deleted.
II. Justification

1. The present set of proposals for amendments to the CoP provisions in a number of Regulations on lighting and light-signalling is based on ECE/TRANS/ WP 29/GRE/2012/19 which was considered at the sixty-eighth GRE session. GRE invited the expert from Germany to prepare a revised proposal covering all relevant lighting UN Regulations and adding the necessary background information. The proposals reflect the results of discussions and evaluation of input from experts carried out after the sixty-seventh GRE session.

2. The scope of the proposals was defined as follows:

   (a) The package of collective amendments covers the CoP provisions in Regulations Nos. 3, 4, 6, 7, 19, 23, 38, 65, 69, 70, 77, 87, 91, 98, 112, 113 and 119. In addition to the proposals for Regulation No. 7 and 98 are two informal documents prepared, which contain the entire text of the Regulations.

   (b) Regulations Nos. 37, 48, 53, 74 and 99 have not been included, as they are written in a different format.

   (c) Regulations Nos. 1, 5, 8, 20, 56, 57, 72 and 82 remain unchanged, because they are not applicable for new approvals.

   (d) Regulations Nos. 50, 88 and 104 have also been left behind for the time being, as their CoP provisions are set out as a general paragraph of the Regulation and contain no detailed requirements like the existing annexes on "Minimum requirements for conformity of production control procedures" and "Minimum requirements for sampling by an inspector". The update of these Regulations would require a fundamental approach and can be done after GRE has taken a decision on the CoP issue.

3. The proposals clarify in the relevant paragraphs of the above mentioned Regulations, that the specimens taken at random may deviates unfavourably by not more than 20 per cent from the prescribed (required) values.

4. In the relevant annexes on "Minimum requirements for conformity of production control procedures" of the light-signalling-regulations, tables equivalent to the lighting regulations were incorporated, which show the equivalent deviation in candela for small values (e.g. geometric visibility).

5. The relevant annexes on "Minimum requirements for sampling by an inspector" were completely restructured and simplified. All former examples which caused a great deal of confusion were deleted.

6. CoP is now described in a clear structured stepwise process (with limited steps), which gives the manufacturer the chance in the first step - in the case of deviations of more than 20 per cent - to align his production process. Also, the CoP process can be completed earlier when the first two samples are in the full specifications.

7. The proposal details the "third step" which defines the condition where the approval shall be withdrawn, when after the second repetition of this process the manufacturer was not in the position to "align" his production process in the correct way.

8. The attached drawing shall demonstrate this stepwise process.
9. The existing Figure 1 could therefore be deleted, because this Figure has rather increased than clarified the confusion - and with the new simplified description it is not necessary anymore.