**UNITED
NATIONS**

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**Economic and Social
Council**

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Construction of Vehicles

DRAFT SUPPLEMENT 7 TO REGULATION No. 4
(Illumination of rear registration plates)

Note: The text reproduced below was adopted by the Administrative Committee
(AC.1) of the amended 1958 Agreement at its fifth session, following the
recommendation by the Working Party at its one-hundred-and-eleventh session.
It is based on document TRANS/WP.29/R.781, as amended (French only)
(TRANS/WP.29/534, paras. 49 and 111).

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Under <u>Contents, "Annexes"</u>, insert two new titles to read:

"<u>Annex 6</u> - Minimum requirements for conformity of production control procedures

<u>Annex 7</u> - Minimum requirements for sampling by an inspector"

<u>Paragraph 4.4.1., footnote <u>1</u>/</u>, amend to read:

"<u>1</u>/ 1 for Germany, ... 8 for the Czech Republic, ... 15 (vacant), ... 22 for the Russian Federation, 23 for Greece, 24 (vacant), 25 for Croatia, 26 for Slovenia, 27 for Slovakia, 28 for Belarus, 29 for Estonia, 30-36 (vacant) and 37 for Turkey. Subsequent numbers ...."

<u>Paragraph 10</u>, replace by the following text:

"10.   CONFORMITY OF PRODUCTION

        The conformity of production procedures shall comply with those set out in the Agreement, Appendix 2 (E/ECE/324-E/ECE/TRANS/505/Rev.2), with the following requirements:

10.1.   Devices for the illumination of rear registration plates (henceforth called devices), approved under this Regulation shall be so manufactured as to conform to the type approved by meeting the requirements set forth in paragraphs 5, 6 and 9 above. If there is more than one device necessary, then in the following text a device means a set of devices.

10.2.   The minimum requirements for conformity of production control procedures set forth in annex 6 to this Regulation shall be complied with.

10.3.   The minimum requirements for sampling by an inspector set forth in annex 7 to this Regulation shall be complied with.

10.4.   The authority which has granted type approval may at any time verify the conformity control methods applied in each production facility. The normal frequency of these verifications shall be once every two years."

<u>Add new Annexes 6 and 7</u> to read:

<div align="center">

"<u>Annex 6</u>

MINIMUM REQUIREMENTS FOR CONFORMITY OF PRODUCTION CONTROL PROCEDURES

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1.   GENERAL

1.1.   The conformity requirements shall be considered satisfied from a mechanical and geometric standpoint, if the differences do not exceed inevitable manufacturing deviations within the requirements of this Regulation.

1.2.   With respect to photometric performances, the conformity of mass-produced devices shall not be contested if, when testing photometric performances of any device chosen at random and equipped with a standard filament lamp, or when the lamps are equipped with non-replaceable light sources (filament lamps or other), and when all measurements are made at 6.75 V, 13.5 V or 28.0 V respectively:

1.2.1.   no measured value deviates unfavourably by more than 20 per cent from the values prescribed in this Regulation.

1.2.2.   With respect to the gradient of luminance the unfavourable deviation may be:

2.5 x Bo/cm	comparable to	20 per cent
3.0 x Bo/cm	comparable to	30 per cent

1.2.3.   If, in the case of a device equipped with a replaceable light source and if results of the test described above do not meet the requirements, tests on devices shall be repeated using another standard filament lamp.

2.   MINIMUM REQUIREMENTS FOR VERIFICATION OF CONFORMITY BY THE MANUFACTURER

For each type of device the holder of the approval mark shall carry out at least the following tests, at appropriate intervals. The tests shall be carried out in accordance with the provisions of this Regulation.

If any sampling shows non-conformity with regard to the type of test concerned, further samples shall be taken and tested. The manufacturer shall take steps to ensure the conformity of the production concerned.

2.1.   <u>Nature of tests</u>

Tests of conformity in this Regulation shall cover the photometric characteristics.

2.2.   <u>Methods used in tests</u>

2.2.1.   Tests shall generally be carried out in accordance with the methods set out in this Regulation.

2.2.2.   In any test of conformity carried out by the manufacturer, equivalent methods may be used with the consent of the competent authority responsible for approval tests. The manufacturer is responsible for proving that the applied methods are equivalent to those laid down in this Regulation.

2.2.3.   The application of paragraphs 2.2.1. and 2.2.2. requires regular calibration of test apparatus and its correlation with measurements made by a competent authority.

2.2.4.   In all cases the reference methods shall be those of this
          Regulation, particularly for the purpose of administrative
          verification and sampling.

2.3.   <u>Nature of sampling</u>

          Samples of devices shall be selected at random from the production
          of a uniform batch. A uniform batch means a set of devices of the
          same type, defined according to the production methods of the
          manufacturer.

          The assessment shall in general cover series production from
          individual factories. However, a manufacturer may group together
          records concerning the same type from several factories, provided
          these operate under the same quality system and quality
          management.

2.4.   <u>Measured and recorded photometric characteristics</u>

          The sampled device shall be subjected to photometric measurements
          provided for in the Regulation.

2.5.   <u>Criteria governing acceptability</u>

          The manufacturer is responsible for carrying out a statistical
          study of the test results and for defining, in agreement with the
          competent authority, criteria governing the acceptability of his
          products in order to meet the specifications laid down for
          verification of conformity of products in paragraph 10.1. of this
          Regulation.

          The criteria governing the acceptability shall be such that, with
          a confidence level of 95 per cent, the minimum probability of
          passing a spot check in accordance with annex 7 (first sampling)
          would be 0.95.

                              <u>Annex 7</u>

              MINIMUM REQUIREMENTS FOR SAMPLING BY AN INSPECTOR

1.   GENERAL

1.1.   The conformity requirements shall be considered satisfied from a
          mechanical and a geometric standpoint, in accordance with the
          requirements of this Regulation, if any, if the differences do not
          exceed inevitable manufacturing deviations.

1.2.   With respect to photometric performance, the conformity of mass-
          produced devices shall not be contested if, when testing
          photometric performances of any device chosen at random and
          equipped with a standard filament lamp, or when the lamps are
          equipped with non-replaceable light sources (filament lamps or
          other), and when all measurements are made at 6.75 V, 13.5 V or
          28.0 V respectively:

1.2.1. no measured value deviates unfavourably by more than 20 per cent from the values prescribed in this Regulation.

1.2.2. With respect to the gradient of luminance the unfavourable deviation may be:

2.5 x Bo/cm	comparable to	20 per cent
3.0 x Bo/cm	comparable to	30 per cent

1.2.3. If, in the case of a device equipped with a replaceable light source and if results of the test described above do not meet the requirements, tests on devices shall be repeated using another standard filament lamp.

1.2.4. Devices with apparent defects are disregarded.

2. FIRST SAMPLING

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

2.1. The conformity is not contested

2.1.1. Following the sampling procedure shown in Figure 1 of this annex the conformity of mass-produced devices shall not be contested if the deviation of the measured values of the devices in the unfavourable directions are:

2.1.1.1. sample A

A1:	one device	0 per cent
	one device not more than	20 per cent

A2:	both devices more than	0 per cent
	but not more than	20 per cent
	go to sample B	

2.1.1.2. sample B

B1:	both devices	0 per cent

2.2. The conformity is contested

2.2.1. Following the sampling procedure shown in Figure 1 of this annex the conformity of mass-produced devices shall be contested and the manufacturer requested to make his production meet the requirements (alignment) if the deviations of the measured values of the devices are:

2.2.1.1. sample A

A3:	one device not more than	20 per cent
	one device more than	20 per cent
	but not more than	30 per cent

2.2.1.2.   sample B

B2:   in the case of A2
one device more than   0 per cent
but not more than   20 per cent
one device not more than   20 per cent

B3:   in the case of A2
one device   0 per cent
one device more than   20 per cent
but not more than   30 per cent

2.3.   <u>Approval withdrawn</u>

Conformity shall be contested and paragraph 11 applied if,
following the sampling procedure in Figure 1 of this annex, the
deviations of the measured values of the devices are:

2.3.1.   sample A

A4:   one device not more than   20 per cent
one device more than   30 per cent

A5:   both devices more than   20 per cent

2.3.2.   sample B

B4:   in the case of A2
one device more than   0 per cent
but not more than   20 per cent
one device more than   20 per cent

B5:   in the case of A2
both devices more than   20 per cent

B6:   in the case of A2
one device   0 per cent
one device more than   30 per cent

3.   REPEATED SAMPLING

In the cases of A3, B2, B3 a repeated sampling, third sample C of
two devices and fourth sample D of two devices, selected from
stock manufactured after alignment, is necessary within two
months' time after the notification.

3.1.   <u>The conformity is not contested</u>

3.1.1.   Following the sampling procedure shown in Figure 1 of this annex
the conformity of mass-produced devices shall not be contested if
the deviations of the measured values of the devices are:

3.1.1.1.   sample C

                C1:   one device   0 per cent
                      one device not more than   20 per cent

                C2:   both devices more than   0 per cent
                      but not more than   20 per cent
                      go to sample D

3.1.1.2.   sample D

                D1:   in the case of C2
                      both devices   0 per cent

3.2.   The conformity is contested

3.2.1.   Following the sampling procedure shown in Figure 1 of this annex
            the conformity of mass-produced devices shall be contested and the
            manufacturer requested to make his production meet the
            requirements (alignment) if the deviations of the measured values
            of the devices are:

3.2.1.1.   sample D

                D2:   in the case of C2
                      one device more than   0 per cent
                      but not more than   20 per cent
                      one device not more than   20 per cent

3.3.   Approval withdrawn

            Conformity shall be contested and paragraph 11 applied if,
            following the sampling procedure in Figure 1 of this annex, the
            deviations of the measured values of the devices are:

3.3.1.   sample C

                C3:   one device not more than   20 per cent
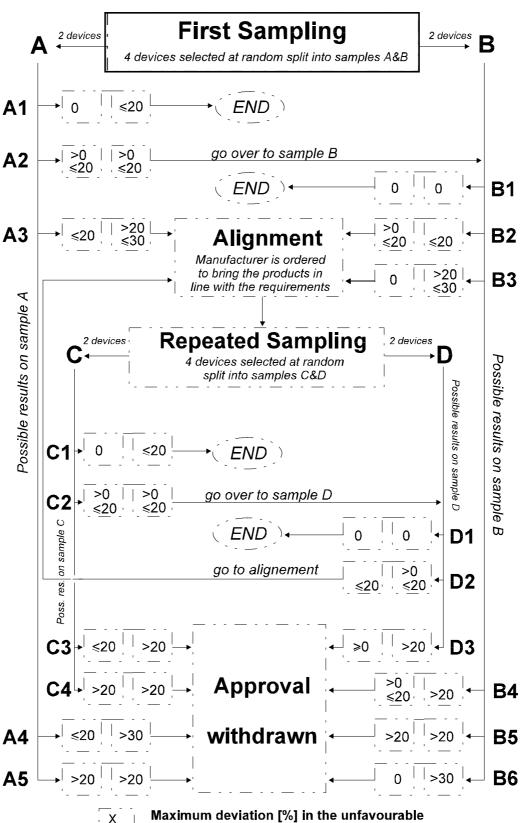   one device more than   20 per cent
                C4:   both devices more than   20 per cent

3.3.2.   sample D

                D3:   in the case of C2
                      one device 0 or more than   0 per cent
                      one device more than   20 per cent

Figure 1

First Sampling

4 devices selected at random split into samples A&B

A ← 2 devices

2 devices → B

A1 → 0 | ≤20 → (END)

A2 → >0 ≤20 | >0 ≤20 — *go over to sample B* →

(END) ← 0 | 0 ← B1

A3 → ≤20 | >20 ≤30 → **Alignment**

Manufacturer is ordered to bring the products in line with the requirements

← >0 ≤20 | ≤20 ← B2

← 0 | >20 ≤30 ← B3

Possible results on sample A

Repeated Sampling

4 devices selected at random split into samples C&D

C ← 2 devices

2 devices → D

C1 → 0 | ≤20 → (END)

C2 → >0 ≤20 | >0 ≤20 — *go over to sample D* →

(END) ← 0 | 0 ← D1

go to alignement ← ≤20 | >0 ≤20 ← D2

Poss. res. on sample C

C3 → ≤20 | >20 →

← >0 | >20 ← D3

C4 → >20 | >20 →

Approval

← >0 ≤20 | >20 ← B4

A4 → ≤20 | >30 →

withdrawn

← >20 | >20 ← B5

A5 → >20 | >20 →

← 0 | >30 ← B6

Possible results on sample D

Possible results on sample B

[X] **Maximum deviation [%] in the unfavourable direction in relation to the limit values**