COLLECTIVE AMENDMENTS TO SEVERAL REGULATIONS REGARDING THE COLOUR "SELECTIVE YELLOW"

At its fifty-second session, GRE decided not to re-consider the proposal from GTB TRANS/WP.29/GRE/2003/32, and accepted the offer from Germany to prepare a new proposal for the deletion of references to “selective yellow” in the respective Regulations (TRANS/WP.29/GRE/52, para. 29).

This informal document addresses those parts of the proposal by Germany (TRANS/WP.29/GRE/2004/52) which concern Regulations Nos. 37 and 99 and which are still relevant for the practical application of these Regulations; it also takes into account the proposal by Japan (TRANS/WP.29/GRE/2004/36).
1.

A.1. PROPOSAL
In case selective yellow colour would remain (partly or totally) in Regulation No. 37

ECE REGULATION No. 37 – Filaments lamps
(The following text is based upon Supplement 23 to the 03 series of amendments - TRANS/WP.29/2003/48) (and applies up to Draft Supplement 25)

Annex 1,

Sheet H1/1, footnote 4/, amend to read:
"4/ The colour of the light emitted shall be white or selective-yellow."

Sheet H3/1, footnote 1/, amend to read:
"1/ The colour of the light emitted shall be white or selective-yellow."

Sheet H4/1, footnote 3/, amend to read:
"3/ The colour of the light emitted shall be white or selective-yellow."

Sheet H7/1, footnote 3/, amend to read:
"3/ The colour of the light emitted shall be white or selective-yellow."

Sheet H8/1, footnote 4/, amend to read:
"4/ The colour of the light emitted shall be white or selective-yellow."

Sheet H11/1, footnote 4/, amend to read:
"4/ The colour of the light emitted shall be white or selective-yellow."

Sheet HB3/2, footnote 6/, amend to read:
"6/ The colour of the light emitted shall be white or selective-yellow."

Sheet HB4/2, footnote 6/, amend to read:
"6/ The colour of the light emitted shall be white or selective-yellow."

Sheet HS1/1, footnote 3/, amend to read:
"3/ The colour of the light emitted shall be white or selective-yellow."

Sheet R2/1, footnote 2/, amend to read:
"2/ The colour of the light emitted shall be white or selective-yellow."

Sheet S1/S2/1, footnote 1/, amend to read:
"1/ The colour of the light emitted shall be white or selective-yellow."

Sheet S3/1, footnote 1/, amend to read:
"1/ The colour of the light emitted shall be white or selective-yellow."
B.1. JUSTIFICATION

Corrections related to "colourless bulb"
GRE approved during the forty-seventh session in October 2001 proposals concerning "white light" (TRANS/WP.29/GRE/2000/10/Rev.1 and TRANS/WP.29/GRE/2000/10/Rev.1/Add.1). In March 2002, WP.29 approved these proposals as part of draft Supplement 22. It was promised to GRE in the justification that all filament lamp sheets would be checked in the future on the wording "colourless bulb" at the time that the sheets would be revised. However, for some of these categories of light sources, it might take a long time before such an amendment might take place. These revisions are proposed here: replace “colourless bulb” by “…emitting white light ...”.

Specifications of "yellow"
While checking all filament lamp datasheets in Regulation No. 37 on “colourless bulb” it was found that, from the introduction of H8 onwards, the colour "yellow" was introduced instead of "selective yellow" as before. This change was made at the time that selective yellow was deleted from the new headlamp Regulations Nos. 112 and 113. New selective yellow filament light sources from that moment onwards made no sense any longer except for those intended for front fog lamps, for which an enlarged area of colour boundaries is allowed. So the wording "yellow" is the wording for selective yellow with colour boundaries as specified for front fog lamps. Yellow has not been defined in Regulation No. 37 but the colour boundaries for selective yellow for front fog are. It is proposed here to replace the wordings “yellow” by “selective yellow” on sheets HB3/2 and HB4/2.

An additional proposal for aligning the definitions of the colour boundaries is made below.

*       *       *

2.

A.2. PROPOSAL
In case all “yellow” colour boundaries would be aligned including Regulation No. 37

ECE REGULATION No. 37 – Filaments lamps
(The following text is based upon Supplement 23 to the 03 series of amendments - TRANS/WP.29/2003/48) (and applies up to Draft Supplement 25)

Paragraph 3.6.2., amend to read:

"3.6.2. The colorimetric characteristics of ..... 

....

finished filament lamps emitting selective-yellow light:

limit towards red       \( y \geq 0.138 + 0.580 \, x \)
limit towards green    \( y \leq 1.290 \, x - 0.1 \)

\textbf{limit towards white:} \( y \geq 0.940 - x \) and \( y \geq 0.440; \)

finished filament lamps emitting amber light:

\textbf{......}"
B.2. JUSTIFICATION

New definitions of "selective yellow"
GTB proposed to align all "yellow", "selective yellow", ("enlarged selective yellow" and "selective yellow for front fog"); to rename into "selective yellow" with colour boundaries:

\[
\begin{align*}
\text{limit towards red} & : y \geq 0.138 + 0.580 x \\
\text{limit towards green} & : y \leq 1.290 x - 0.100 \\
\text{limit towards white:} & \begin{align*}
& y \geq 0.940 - x \\
& y \geq 0.440
\end{align*}
\]

These boundaries comprise all existing boundaries and are equal to the front fog selective yellow but extended to the spectral distribution to allow harmonization with SAE. See diagram below.

* * *

3.

A.3. PROPOSAL

In case selective yellow colour would remain in Regulation No. 99

ECE REGULATION No. 99 – Gas-discharge light sources (The following text is based upon Supplement 2 to the original version - TRANS/WP.29/2003/33)

Paragraph 2.1.2.3., amend to read:

"2.1.2.3. bulb colour. A **selective** yellow bulb or an additional **selective** yellow outer bulb, solely intended ….."

Paragraph 2.4.2., amend to read:

"2.4.2. ….. of gas-discharge light source. If the applicant so desires the same approval code may be assigned to both gas-discharge light sources emitting white and **selective** yellow light (see paragraph 2.1.2.3.)."

Paragraph 3.8., amend to read:

"3.8. Luminous flux

…… relevant data sheet. In the case where white and **selective** yellow is specified for the same type, the objective value applies to light sources emitting white light, whereas the luminous flux of the light source emitting **selective** yellow light shall be at least 68 per cent of the specified value."

Paragraph 3.9.1., amend to read:

"3.9.1. The colour of the light emitted shall be white or **selective** yellow as prescribed on the relevant data sheet."
Paragraph 3.9.3., amend to read:

"3.9.3. In case of selective yellow light, the colorimetric characteristics shall …”

Paragraph 3.11., amend to read:

"3.11. Standard gas-discharge light sources
…… relevant data sheet. In case of a type emitting white and selective yellow light, the
standard light source shall emit white light."

B.3. JUSTIFICATION

Specifications of "yellow"
In Regulation 99 the wording “yellow” is used and colour boundaries as for front fog lamps are
defined. In case the wording “selective yellow” would be used in all relevant regulations, it would
make sense to use the same wording.

* * *

4.

A.4. PROPOSAL
In case all “yellow” colour boundaries would be aligned including Regulation No. 99

Paragraph 3.9.3., amend to read:

"3.9.3. In case of selective yellow light, the colorimetric characteristics shall lie within the area
formed by the following limits:

<table>
<thead>
<tr>
<th>Limit</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>limit towards red</td>
<td>( y \geq 0.138 + 0.580 \times )</td>
</tr>
<tr>
<td>limit towards green</td>
<td>( y \leq 1.290 \times - 0.100 )</td>
</tr>
<tr>
<td>limit towards white</td>
<td>( y \geq 0.940 - x ) and ( y \geq 0.440 ).</td>
</tr>
</tbody>
</table>

B.4. JUSTIFICATION

New definitions of "selective yellow"
In case the definitions of “selective yellow” would be aligned in all relevant regulations, it would
make sense to use the same here.

C. NOTE

Notation of colour boundaries
Although GRE, in principle, decided in April 2003 at its fiftieth session to change the notation of
colour boundaries, this proposal was written in the manner as was done before.
D. DIAGRAM

![Diagram of selective yellow, front fog, SAE selective yellow, part spectral distribution, and proposal for harm selective yellow.](image-url)