

Response to Switzerland's Proposal for Amendment to Document
ECE/TRANS/WP.29/2008/87 (Regulation No. 53) (Document WP29-146-03)

1. Background

The proposal contained in WP.29/2008/87 was originally prepared by IMMA, based on discussions with the interested administrations in GRE and research by JARI into the issue of glare, using four typical types of motorcycle.

The advantage of HID lamps for motorcyclists is that they provide a wider and brighter light distribution, which substantially increases safety. As the JARI study showed, any additional glare from road irregularities, banking or chassis pitching is a temporary phenomenon. The main concern is the different loading conditions.

Unlike passenger cars, motorcycles only have two basic loading conditions, rider-alone and fully laden. The JARI study found that the cutoff rose above the HH line in the fully laden condition. To counter this, and because a motorcycle only has two loading conditions, IMMA proposed the fitting of a manual switch to re-align the beam. Riders are much more likely to use such a device, because without it, they will be unable to see the road ahead of them properly.

At GRE, some administrations said that they wanted the leveling of the headlamp to be automatic, as this was the direction in which the regulations for passenger cars were going. IMMA's response was that, like passenger cars, it would be satisfactory to start with a manual system and, if there really was a problem of glare in the future, to re-discuss the concept of automatic leveling. One of the main reasons for IMMA's position was that there are few, if any, technical solutions currently available for automatic leveling on motorcycles.

After discussion, GRE agreed that, manufacturers would be allowed a 5-year lead-time before the requirement for automatic leveling came into force. In part, this was due to the fact that such lamps are already fitted in the USA and Japan, without any leveling requirements, and have given no cause for concern.

2. Switzerland's comments and a new IMMA proposal

Since the publication of document WP29-146-03, IMMA has had discussions with the Swiss expert. Recognising the Swiss concerns, IMMA now wishes to make a further proposal.

Switzerland's point is that the present proposal does not foresee any testing of the alignment of HID lamps for the first 5 years. The issue discussed by GRE was that devices for automatic levelling are not currently available for motorcycles, although the desirability of fitting HID lamps from the safety point of view was agreed by all.

To make progress, IMMA therefore proposes that the text should be amended to allow a manual switch to be used as an alternative to the automatic levelling requirement for the first 5 years. Then, as proposed by Switzerland, the tests foreseen for checking the levelling of

HID systems could be used from the date that the Supplement came into force, for motorcycles equipped with HID lamps having an objective luminous flux which exceeds 2,000 lumen.

3. Revised text of the proposal

The original text agreed by GRE has since been corrected at 60/GRE. To clarify this latest IMMA proposal, the two texts agreed at GRE have been combined and the additional text of the proposal added, as follows:

- the base text is contained in WP.29/2008/87 (shown in black)
- the Corrigendum to paragraph 6.2.5.4., agreed at 60/GRE, is marked in **red, with bold lettering for the changes**)
- the latest IMMA proposal for paragraph 6.2.5.3. is marked in *blue italics*.

Text of WP.29/2008/87, Rev1

Insert new paragraphs 2.22. and 2.23., to read:

"2.22. "Gross vehicle mass" or "maximum mass" means the technically permissible maximum laden mass as declared by the manufacturer.

2.23. "Laden" means so loaded as to attain the gross vehicle mass as defined in paragraph 2.22."

Paragraphs 6.1.1.1. and 6.1.1.2., amend to read:

"6.1.1.1. For motorcycles having a cylinder capacity $\leq 125 \text{ cm}^3$

One or two of approved type according to:

- (a) Class B, C, D or E of Regulation No. 113;
- (b) Regulation No. 112;
- (c) Regulation No. 1;
- (d) Regulation No. 8;
- (e) Regulation No. 20;
- (f) Regulation No. 57;
- (g) Regulation No. 72;
- (h) Regulation No. 98.

6.1.1.2. For motorcycles having a cylinder capacity $> 125 \text{ cm}^3$

One or two of approved type according to:

- (a) Class B, D or E of Regulation No. 113;
- (b) Regulation No. 112;
- (c) Regulation No. 1;
- (d) Regulation No. 8;
- (e) Regulation No. 20;
- (f) Regulation No. 72;
- (g) Regulation No. 98.

Two of approved type according to:

(h) Class C of Regulation No. 113."

Paragraphs 6.2.1.1. and 6.2.1.2., amend to read:

"6.2.1.1. For motorcycles having a cylinder capacity $\leq 125 \text{ cm}^3$

One or two of approved type according to:

- (a) Class B, C, D or E of Regulation No. 113;
- (b) Regulation No. 112;
- (c) Regulation No. 1;
- (d) Regulation No. 8;
- (e) Regulation No. 20;
- (f) Regulation No. 57;
- (g) Regulation No. 72;
- (h) Regulation No. 98.

6.2.1.2. For motorcycles having a cylinder capacity $> 125 \text{ cm}^3$

One or two of approved type according to:

- (a) Class B, D or E of Regulation No. 113;
- (b) Regulation No. 112;
- (c) Regulation No. 1;
- (d) Regulation No. 8;
- (e) Regulation No. 20;
- (f) Regulation No. 72;
- (g) Regulation No. 98.

Two of approved type according to:

- (h) Class C of draft Regulation No. 113."

Insert new paragraphs 6.2.5.3. and 6.2.5.4., to read:

~~"6.2.5.3. For passing beam headlamps with a light source having an objective luminous flux which exceeds 2,000 lumen, the vertical inclination of the passing beam headlamp shall remain between 0.5 and 2.5 per cent. A headlamp levelling device may be used to satisfy the requirements of this paragraph but its operation shall be automatic."~~

"6.2.5.3. Vertical inclination of the passing beam.

6.2.5.3.1. For passing beam headlamps with a light source having an objective luminous flux which exceeds 2,000 lumen, the vertical inclination of the passing beam headlamp shall remain between -0.5 and -2.5 per cent. A headlamp levelling device may be used to satisfy the requirements of this paragraph.

6.2.5.3.2. Until 60 months after the entry into force of paragraph 6.2.5.3., the headlamp levelling device may be manual or automatic.

6.2.5.3.3. From 60 months after the entry into force of paragraph 6.2.5.3., the headlamp levelling device shall be automatic."

(Corrigendum agreed by 60/GRE)

6.2.5.4. The requirement in paragraph 6.2.5.3. shall be tested on the vehicle in the following conditions:

Condition A (rider alone):

a mass of 75 kg \pm 1 kg, simulating the rider, shall be placed on ~~the seat of~~ the vehicle in such a way as to reproduce the axle loads declared by the manufacturer for this loading condition.

The vertical inclination (initial aiming) of the passing beam headlamp shall be set, following the manufacturer's instructions, between -1.0 and -1.5 per cent.

Condition B (fully laden motorcycle):

masses, simulating the manufacturer's maximum total mass, shall be placed on ~~the seat of~~ the vehicle in such a way as to reproduce the axle loads declared by the manufacturer for this loading condition.

Before making the measurements, the vehicle shall be rocked 3 times up and down and then moved backwards and forwards for at least a complete wheel revolution."

Paragraph 6.2.7., amend to read:

"6.2.7. Electrical connections

The control for changing over to the passing beam(s) shall switch off the driving beam(s) simultaneously.

Passing beam headlamps with a light source approved in accordance with Regulation No. 99 shall remain switched on when the driving-beam is illuminated."

Paragraphs 11.1. to 11.3., amend to read:

"11.1. ~~Subject to paragraph 11.4., a~~ As from the official date of entry into force of Supplement 10 to the 01 series of amendments, no Contracting Party applying this Regulation shall refuse to grant approvals under this Regulation as amended by Supplement 10 to the 01 series of amendments.

11.2. As from 60 months after the date of entry into force mentioned in paragraph 11.1. above, Contracting Parties applying this Regulation shall grant approvals only if the vehicle type with regard to the number and mode of installation of the lighting and light-signalling devices corresponds to the requirements of the Supplement 10 to the 01 series of amendments to this Regulation.

11.3. Existing approvals granted under this Regulation before the date mentioned in paragraph 11.2. above shall remain valid. In the case of vehicles first registered more than 84 months after the date of entry into force mentioned in paragraph 11.1. above Contracting Parties applying this Regulation may refuse the vehicle

type with regard to the number and mode of installation of the lighting and light-signalling devices which do not meet the requirements of the Supplement 10 to the 01 series of amendments to this Regulation."

Insert a new paragraph 11.4., to read:

~~*"11.4. The provisions of paragraphs 6.2.5.3. and 6.2.5.4. shall come into force as from 60 months after the date of entry into force of Supplement 10 to the 01 series of amendments."*~~

Annex 1, Communication form,

Insert new items 11. to 11.2., to read (including the reference to footnote 3/ and footnote 3/):

- "11. Masses as declared by the manufacturer (3/)
- 11.1. mass in running order:
 - Total mass: kg
 - Mass on the front wheel: kg
 - Mass on the rear wheel: kg
- 11.2. Gross vehicle mass:
 - Total mass:..... kg
 - Mass on the front wheel: kg
 - Mass on the rear wheel: kg

3/ These sections only need to be completed if the test according to paragraph 6.2.5.4. is performed."

Items 11. to 17. (former), renumber as items 12. to 18.

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