

Transmitted by the expert from the India

Informal document GRE-80-26

(80th GRE, 23 - 26 Oct 2018,
agenda item 7(b))

India's Response on Study reservation of informal document GRE 78-24 presented in 79th GRE session

Background

- India with an aim to make fitment of front position lamps optional, in view of introduction of Auto headlamp alternatively daytime running lamp in UN R53 , submitted an informal documents in GRE-76-06 & GRE-77-08 during earlier GRE sessions.
- Subsequently a consolidated document was submitted in 78th GRE session as GRE 78-24.
- At 79th GRE session India presented the document .

GRE 79th Recorded noting is as follows :

- “39. The expert from India presented GRE-78-24, which replaced GRE-77-08, with the aim to make, under certain conditions, the front position lamp optional for L3 category of vehicles*
- *The Chair invited the expert from India to submit an official document for consideration at the next session – Action 1*
 - *The experts from Austria, Italy, Finland and Netherlands pointed out the need to study this proposal in more detail. Action-2 ”*

In addition to that during 79th GRE session CP’s had queries and raised concern on the proposal , India has attempted to respond to these queries

India Response For

Action 1 : A formal document has been submitted

Action 2 : India has attempted to respond to certain study reservation / queries

Action 1-Submission of Official document

- As suggested by Chair
 - India has already submitted the formal document for discussion at 80th GRE session document reference No is [ECE/TRANS/WP.29/GRE/2018/47](#)

Action 2- India response to study reservation (Conti...)

Impact on Safety

India feels safety will not be compromised considering :

- AHO, DRL provides a much better level of conspicuity compared to FPL. Having FPL is more relevant if such lamps are not present in vehicle. This is more evident considering below table on the luminous intensity of these lamps:

Lamp type	Luminous intensity
DRL	400 cd (Min)
AHO	350 cd (Min)
FPL	140 cd (Max)

- The effect on the safety will be only when there is a failure of Headlamp or DRL. This redundancy is well explained in the justification of document no ECE/TRANS/WP.29/GRE/2018/47, this is replicated in the next slide too.

Redundancy requirements: A headlamp can have the following type of failures:

- (a) Failure of the light source.
- (b) Discontinuity in the circuit (breakage of electric wire, contact working loose etc).
- (c) A mechanical failure of the headlamp.

Circuit failures and Mechanical Failure of the headlamp will cause the FPL also to be non-functional. The general practice for the purpose of providing redundancy for any safety requirement is “only one failure at a time”. This practice is well established for braking systems (for all categories of vehicles, steering system for 4 wheelers etc.).

7.2.1 Redundancy already built in without FPL In the following cases, FPL is not needed for providing redundancy:

- (a) If DRL is used instead of AHO, in case of a failure of headlamp, DRL will provide conspicuity.
- (b) UN Regulation No. 53 prescribes different architectures for fitment of headlamp. If there are more than one headlamp (either main or passing beam), failure of one normally will not affect the operation of the other headlamp(s). Hence, FPL is not needed for redundancy.

7.2.2 Redundancy needed Redundancy is needed only in case where the passing beam headlamp and main beam headlamps are reciprocally incorporated, using a double filament light source or single filament light source operating at different voltages (e.g. H9 or distributed lighting system etc.). Failure on one filament will not be affecting the other filament. Hence if the passing beam filament fails, main beam can be put ON and vice versa. The discontinuity of electrical circuit causing both the passing beam and main beam OFF needs to be addressed. However, when a single light source is used for both passing beam headlamp and main beam headlamp, FPL will be required to take care of the redundancy.

Action 2- India's response to queries by CP's (Cont...)

- Concerns were raised on India's justification on "*No adverse effects have been reported due to failure of headlamp in absence of FPL*"

India Response :

The Indian accident database does not take into consideration the conspicuity.

Action 2- Indian response to queries by CP's

- CP's Suggested for consistence of text in R53 & R74.

India Understands that in Mopeds (R74).

- FPL is not mandatory.
- Does not contain any of the redundancy requirements

India hence feels safety requirements related to redundancy needs should be incorporated in R53. India's proposal of *para 5.14.6* "*Front Position Lamp(s) fitment is optional in the case where failure of light source of one headlamp beam will not affect the functioning of all other headlamp beam(s)*" takes care of this .

If R74 text is considered for consistency the above would not be taken into consideration.

Thanks Experts for Listening with
patience