Transmitted by the expert from Italy

Informal document No. **GRE-57-17**
(57th GRE, 26-30 March 2007
agenda item 4.13.)

Considerations and proposals of Italy concerning ECE/TRANS/WP.29/2007/20

During the previous GRE session (March 2006) a proposal for the mandatory fitting of dedicated DRL and the related installation/wiring requirements was approved (ECE/TRANS/WP.29/2006/88). It was based on a German/Dutch proposal originally requiring also the presence of an automatic control (operating in relation to ambient conditions) to switch from DRL to headlamps when the use of the latter is required.
This specific requirement was not included in the final GRE proposal based on technical, political and cost/benefit considerations.

For the 141st WP29 Session (March 2007) the requirement for the above-described automatic control was proposed again with a document presented by the EU Commission (see document ECE/TRANS/WP.29/2007/20), together with the request for a manual system to override the automatic control and with the possibility for a Contacting Party of the 1958 Agreement to forbid the presence of dedicated DRL on vehicles registered on its territory (this last proposal is also contained in the Japanese document ECE/TRANS/WP.29/2007/15).

Please find below our considerations:

- the use of dedicated DRL alone instead of other daytime running light functions (headlamps and related signalization lamps, direction indicator lamps steady burning, reduced intensity headlamps, etc) is a very good solution to reduce fuel consumption and consequently the emission of polluting substances and to optimize the use of the light sources in headlamps and other "night-driving" lamps (position lamps, rear plate lamp, side marker lamps, end-outline marker lamps) not stressed by the continuous use during daytime.
- the mandatory fitting of dedicated DRL has been proven to be a very satisfactory solution to improve the conspicuity of the vehicles during daytime meanwhile the supposed reduction in motorcycle conspicuity (the reason for which Japan requested not to install dedicated DRL on vehicles registered in its territory) was not recorded as dangerous or critical by the studies, included the most recent ones, conduced in many countries.
- the ambient conditions requesting the use of DRL or headlamps, as indicated in the in use requirements of the various countries, are not uniform as far as the ambient light level and the reduced visibility for fog or other atmospheric phenomena is concerned.
  However, the use of a DRL function has been considered suitable in very different ambient conditions, from Sweden to Italy.
- the luminous intensity of dedicated DRL is between 400 cd and 1200 cd, while the intensity for the illuminating area of a dipped beam is at least 3,750 cd (6 lux at 25 m) directly in front of the vehicle and at least 7,500 cd (12 lux at 25 m) in the front -right area (for a right hand traffic headlamps).

  Moreover DRL light is emitted trough a small area (to increase the luminance, necessary for better conspicuity from other vehicles during day light) and without the projection effect used in the lighting equipments (headlamps and front fog lamps).
  Consequently the visibility of this light from the driver of the "emitting vehicle" is greatly lower than the visibility of the light emitted by the headlamps of the same vehicle.

- the light sensors that should be used to automatically switch-on headlamps when their use is required are almost sophisticated systems, able to detect and analyze not only the diffused

illumination due to sun light but also the illumination in tunnels (high intensity at the entrance even during night and then decreasing intensity), the non constant public road illumination (dark zone between the high illuminated zone located directly under the public light) and different atmospheric conditions reducing visibility (fog more or less intense, heavy rain and snow). In particular the correct detection of fog (that during daytime increase the diffusion of light) is not totally reliable by means of the presently available sensors.

Based on the above consideration, Italy proposes the following:

- As a first step, an obligation to mandate the use of headlamps (and requested signalling lamps) during day for all vehicles in circulation is established in the EU territory (or in other non EU Contracting Parties). This new rule will establish the conditions for the use of dedicated DRL in relation to ambient condition that all EU Countries will have to introduce as in use requirements in their own territory (in a reasonable time period).
  In parallel the present GRE proposal of amendment to ECE Regulation No. 48 will be approved in WP29 June/ November session (as indicated by the official report of WP.29 140th session, postponing to the 142nd session of June 2007 the discussion of the point of the agenda relating to DRL question).

- As a second step, EU and other ECE Countries will monitor the application of both the in use requirements for switching-on of headlamps during daytime and the implementation and use of dedicated DRL in such a way that the effective necessity for the automatic switching from DRL to headlamps will be evaluated.

- Where deemed necessary after at least two years of monitoring, as a third step EU will propose the mandatory fitting of automatic switching from dedicated DRL to headlamps by means of ambient conditions/light sensor (with suitable transitional provisions).

The proposals above are based on the fact that GRE already takes into account all the following contradictions, introduced again in the EU proposal, deleting them from the text of its proposal to WP.29:

- mandatory fitting of a lamp that, on the other hand, can be forbidden by some Countries;
- mandatory fitment of an automatic device and at the same time mandatory fitment of a manual device to override the automatic one;
- mandatory automatic activation of certain lamps in certain conditions without any uniform provision indicating technically which these conditions are (absence of activation parameters);
- mandatory fitment of an automatic device without any real justification since the characteristics of the two lamps involved are such to reduce at a very low level the possibility of misuse by manual activation, that in any case may occurs since the manual control is mandatory too;
- mandatory fitment of an automatic device, considered a safety item, without taking into account any technical feasibility of the device required and without establish a minimum of performance characteristics.

In any case, Italy is of the opinion that the light sensor is merely a "comfort item" avoiding that the driver takes care of the correct use of the lights. From this point of view such a system would become a negative factor, encouraging the drivers to forget to use correctly also the other lamps whose switching on and off cannot be automatic.