

## **Open issues – R XXX Adaptive Front Lighting Systems**

The key points which still need resolving are as follows:

1. Safety Concept (2.2.2.1, 5.9.4, 6.2.7)

Is it possible or necessary to use Annex 18 from R13.09 to govern technical service access to manufacturer FMEA or similar documents?

2. Light sources not approved to R37 or R99. (2.1.5, 2.1.6, 2.2.2.3, 2.2.8, 3.5, 3.6, 5.3.2, 5.3.3, 5.3.4)

A decision was taken at the last meeting to disallow the use of light sources modules, and light sources which are not approved. Governments were concerned over the use of unregulated light sources and the possibility of LED headlamps with beam patterns which the current test points do not control adequately. Some further text remains to be deleted.

3. Traffic change mode (2.2.2.4, 3.3 (?), 3.4, 5.1.1, 5.4, 5.4bis)

There is some disagreement over the precise form and possibilities of the traffic change mode (s), the switching system and informing the driver of its setting.

4. Adjustment of lighting units (5.2, 5.2.1, 5.2.2, 5.2.3, 6.5.6)

Which lighting units need to be adjustable when the headlamp is composed of two or more lighting units.

5. Electromagnetic compatibility EMC (5.8)

How are the requirements for EMC fulfilled and how to cater for the two possibilities?

- AFS sold only on the vehicle and not sold separately
- AFS sold as an accessory.

6. Failure provisions (5.9, 5.9.1., 5.9.4)

How is a failure of the AFS system to be signalled to the driver and what are the provisions required to ensure that it is fail-safe, and continues to provide a minimum of road illumination?

7. Photometric values. (6.2.9.1, Annex 3 Tables)

6.2.9.1 in square brackets. The UK has promised some comments on the Annex 3 tables.

8. Annex 9 Cut-off line. Awaiting a joint German/Polish (and others?) proposal. In GRE the UK still maintains a reservation on 10m or 25m (or both).

9. New regulation.

At GRE the GRE Chairman suggested that the number of Lighting Regulations should be reduced. This point has also been made by others. It might be possible for AFS Regulation XXX to be incorporated within R112 and/or R98, perhaps combining them both later on. This would have the benefit of speeding up the introduction of AFS because the amendments to R98/R112 can be signed off quite quickly via WP29 in the normal way. On the other hand a new AFS Regulation may take 4 or 5 years being translated and passing through the European Union procedures before it arrives at WP29. This question is one for governments to discuss with their industry. If a new Regulation is inevitable then so be it. On the other hand modifying R98/R112 will take longer, but when finished will quickly result in the introduction of AFS. Large parts of the document are common with R98 and R112.