

Informal Working Group Camera-Monitor Systems
Meeting 20-21 April 2009, Cologne

Draft amendments to R46, necessary to extend the application of CMS as alternatives to the use of mandatory and optional mirrors of Classes I to IV

Prepared by: Philip Hanson-Abbott, Brigade Electronics plc
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2.1

Delete the word "conventional".

2.1.1.1 and 2.1.1.2

Change from paragraph 2.1 to 2.1.1

2.1.1.13

They are classified as follows:

- Class I: "Central rear-view", giving...etc

2.1.2

Delete "for indirect vision"

2.1.3

Delete "type"

2.1.4

(c) in the case of camera-monitor devices, the class of device, the detection distance, the image dimensions of the monitor, and the horizontal and vertical angles of view of the camera.

4.2 & 5.4

General comment that it will be hard to comply in some cases; eg a monitor set into the dashboard; or a small camera built into the bodywork.

5.4.3

Replace "mirror" with "device for indirect vision"

Replace "of any device for indirect vision other than a mirror" with "of other devices for indirect vision"

6.1.2.1.1

Replace "Interior rear view mirrors" with "Interior central rear view mirrors"

6.1.2.1.2

Replace "Main exterior rear-view mirrors" with "Main rear-view mirrors"

6.1.2.1.3

Replace ““Wide-angle” exterior mirrors” with “Wide-angle view mirrors”

6.1.2.1.4

Replace ““Close-proximity” exterior mirrors” with ““Close-proximity view mirrors”

6.1.2.1.5

Replace “Front mirrors” with “Front view mirrors”

6.2.2

Delete “FOR INDIRECT VISION”

6.2.2.1.1

Delete “for indirect vision”

15.1.2

Delete “Mirrors and other”

Replace “...such a way that the mirror or other device does not...” with “such a way that they do not...”

15.2

Replace “MIRRORS” with “DEVICES FOR INDIRECT VISION”

15.2.1.1

Replace “Mirrors” with “Mirrors or cameras”

15.2.1.1.1

Replace “....number on mandatory mirrors....” with “.....number of mandatory mirrors or cameras....”

Delete the last sentence (Where the presence.....mandatory base.)

Note: There may in future be cases where devices for indirect vision other than mirrors are mandated for - without a corresponding requirement for a mirror; eg a rear view camera-monitor system on a truck or bus.

Table:

Delete the headings “Interior mirror” and “exterior mirrors”

Replace “Interior mirror” with “Central rear view”

Replace “Main mirror (large)” with “Main rear-view”

Replace “Main mirror (small)” with “Main rear-view”

Replace “Wide-angle mirror” with “Wide-angle view”

Replace “Close-proximity mirror” with “Close-proximity view”

Replace “Front mirror” with “Front view”

In squares M1 / Class III and N1 / Class III: Replace “mirrors” with “devices”

In square N2 / Class IV: Replace “mirror” with “device”

In each square in Class V and Class VI columns, prefix the bracketed text with “In the case of exterior mirrors,...”

15.2.1.1.2

Replace “described” with “Class VI”

Delete “of a front mirror”

Replace “a close proximity mirror” with “the Class V field of vision”
Replace “another” with “a”
Delete “instead of the relevant mirror or mirrors”

Replace “In case” with “In this case”, and delete rest of sentence (“a camera/monitor....exclusively show.”

15.2.1.1.2.(a)

Replace “the field of vision” with “the Class V close-proximity field of vision”
Delete “when the close proximity mirror has been substituted”
Add “must be permanently visible to the driver when ignition is on.”

15.2.1.1.2.(b)

Replace “the field of vision” with “the Class VI front view field of vision”
Delete “when the front mirror has been substituted”
Insert “must be permanently visible” (before “while the vehicle....”).

15.2.1.1.2.(c)

Replace “simultaneously the fields of vision prescribed in paragraphs 15.2.4.5 and 15.2.4.6 when the close proximity mirror and the front mirror have been substituted.” with “the class V and class VI fields of vision prescribed in 15.2.4.5 and 15.2.4.6 may be simultaneously displayed.”

15.2.1.1.3

Replace “either with an interior rear-view mirror of Class 1 and an exterior rear-view mirror of Class II or Class III” with “either with a Class I central rear-view device and a Class II or Class III main rear-view device”

Replace “or with two exterior rear-view mirrors of Class II or Class III, “ with “or with two Class II or Class III main rear-view devices for indirect vision,”

15.2.2.1

Replace “Mirrors” with “Devices for indirect vision”

15.2.2.3

Replace “Mirror” with “Device for indirect vision”
Replace “Mirrors” with “Devices for indirect vision”

15.2.2.4

Replace “exterior mirror” with “main rear-view device for indirect vision”

15.2.2.5

Replace “Mirrors” with “Devices for indirect vision”

15.2.2.7

Replace “In this case an other device for indirect vision is not requested.” With “In this case no device for indirect vision is required.”

15.2.2.8

Replace “Mirrors” with “Devices for indirect vision”

15.2.3.1

Replace “The interior mirror must be capable” with “If a Class I interior mirror is fitted it must be capable”

15.2.3.2

Replace “The exterior mirror situated on the driver’s side must be capable” with “If an exterior Class II or Class III mirror is fitted on the driver’s side, it must be capable”

15.2.4.1

Replace “Interior rear-view mirror” with “Central rear-view field of vision”

Replace “Figure 3: Field of vision of Class I mirror” with “Figure 3: Class I field of vision”

15.2.4.2

Replace “Main exterior rear-view mirrors (Class II)” with “Class II main rear-view field of vision”

15.2.4.2.1

Replace “Exterior rear-view mirror” with “Main rear-view field of vision”

15.2.4.2.2

Replace “Exterior” with “Main”
Replace “mirror” with “field of view”

Replace “Figure 4: Field of vision of Class II mirrors” with “Figure 4: Class II field of vision”

15.2.4.3

Replace “Main exterior rear-view mirrors (Class III)” with “Class III main rear-view field of vision”

15.2.4.3.1

Replace “Exterior” with “Main”
Replace “mirror” with “field of view”

15.2.4.3.2

Replace “Exterior” with “Main”
Replace “mirror” with “field of view”

Replace “Figure 5: Field of vision of Class III mirrors” with “Figure 5: Class III field of vision”

15.2.4.4

Replace ““Wide-angle” exterior mirror” with “Class IV wide-angle field of vision”

15.2.4.4.1

Replace “exterior mirror” with “field of view”

15.2.4.4.2

Replace “exterior mirror” with “field of view”

Replace “Figure 6: Field of vision of Class IV wide-angle mirrors” with “Figure 6: Class IV wide-angle field of vision”

15.2.4.5

Replace “close-proximity” exterior mirrors (Class V)” with “Class V close-proximity fields of vision”

15.2.4.5.5

Replace “wide-angle mirror” with “device for indirect vision”

Replace “front mirror” with “device for indirect vision”

Replace “mirror” with “device for indirect vision”

Replace “Figures 7a and 7b: Field of vision of Class V close-proximity mirror” with “Figures 7a and 7b: Class V close-proximity field of vision”

15.2.4.6.1 (3rd paragraph)

Replace “The provisions for front mirrors” with “The provisions for Class VI front view devices”

(last paragraph)

Replace “a front mirror or a camera/monitor device” with “a device for indirect vision”

Replace “Figure 8: Field of vision of Class VI front mirror” with “Figure 8: Class VI front view field of vision”

15.2.4.8.1

Replace “Interior rear-view mirror (Class I)” with “interior-mounted Class I rear-view devices”

15.2.4.8.2

Replace “Exterior mirrors (Classes II, III, IV, V, and VI) with “Exterior mounted devices (Classes II, III, IV, V, and VI)

Replace “field of vision of a Class VI mirror” with “field of vision of a Class VI device for indirect vision”

15.3.4

Replace “The viewing direction of the monitor shall roughly be the same direction as the one for the main mirror.” with “Monitors should be located on the same side of the steering wheel as the field of view being displayed.

21.2 and 21.3

Replace “mirror” with “device for indirect vision”