

1	2	(3)	4	5	(6)	(7)
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E 3	Whole Document		ge	We have a positive opinion on the draft prepared by AVLI. For the time being we do not see the need for further substantial/technical changes.		Noted
E12	Title	---	ge	Due to the general change of the scope and the high number of new requirements this amendment must lead to a new Series 01 of amendments to have a distinction for the stage of technical provisions fulfilled by the vehicle type. The next stage as proposed must be 02 series of amendments then.	Proposal <u>for 01 Series of amendments to Regulation No. 86 [...]</u>	Yes. After completion of the discussions Chapter 12 (transitional provisions) has to be added.
CEMA Kuhn	2.20.3		ed	pane	Panel	OK.
EU-COM	2.20.3		te		2.20.3.: Commission agrees with drafting corrections by CEMA and deleting the term "long vehicle" from the definition of "signalling panel or signalling foil".	See CEMA below
CEMA Kuhn	2.20.3		ed	Long vehicle	Leave it out; it is not defined	Keep it as it is. "long" and "wide" are general information indicating that not all vehicles will be equipped with signalling panels.
CEMA AGCO Fendt (D)	2.20.3		ed	Writing mistakes in " <i>Signalling pane or signaling foill</i> " means ...	" <i>Signalling panel or signalling foil</i> "	OK, see CEMA above.

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E12	4.2	---	ed	<p>The stage of fulfilled requirements must be indicated in the type-approval number. The proposed text in principal is taken over from UNECE-R48.05, Point 4.2.</p> <p>→the model of the type-approval marking in Annex 2 – page 58 shall be amended accordingly (no proposal in this comments – use the standard format)</p>	<p>4.2. An approval number shall be assigned to each type approved. Its first two digits (at present 0001, <u>corresponding to the 01 series of amendments for the Regulation in its original form</u>) shall indicate the series of amendments incorporating the most recent major technical amendments to the Regulation. The same Contracting Party may not assign the same number to another vehicle type or to the same vehicle type submitted with equipment not specified in the list referred to in paragraph 3.2.2. above subject to paragraph 7. of this Regulation.</p>	OK.
E12	5.1.1		ed	<p>Current issue of ISO 1724 is 2003; all former issues are repealed. The title of that standard should be aligned to its present title.</p> <p>Current issue of ISO 1185 is 2003; all former issues are repealed. The title of that standard should be aligned to its present title.</p>	<p>5.1.1. Vehicles must be fitted with the permanently connected socket outlet specified in ISO standard 1724 (1980) (Electrical connections for vehicles with 6 or 12 volt electrical systems applying more specifically to private motor cars and lightweight trailers or caravans);2003 (Road vehicles - Connectors for the electrical connection of towing and towed vehicles - 7 pole connector type 12 N (normal) for vehicles with 12 V nominal supply voltage), or ISO 1185 (1975) (Electrical connections between towing and towed vehicles having 24 volt electrical systems used for international commercial transport purposes);2003 (Road vehicles -- Connectors for the electrical connection of towing and towed vehicles -- 7-pole connector type 24 N (normal) for vehicles with 24 V nominal supply voltage), or both when they have a connection for attaching trailed vehicles or mounted machines.</p>	OK.

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E 17	5.9.1		Te	Flashing of amber side-marker lamps could be clearly allowed in paragraph 5.9.1. The current paragraph 6.18.9 already says: "Rearmost side-marker lamps shall be amber if they flash with the rear direction-indicator lamp."	Current text: Direction-indicator lamps and the vehicle-hazard warning signal shall be flashing lamps. New text: Direction-indicator lamps and the vehicle-hazard warning signal shall be flashing lamps. Amber side-marker lamps may be flashing lamps.	OK.
E 4	6.1.1.	Main-beam Headlamps	ge	For fast tractors please consider making the installation of main-beam headlamps mandatory.	<i>Presence:</i> <i>Optional on vehicles of category T</i> However, two main-beam headlamps are mandatory in case the maximum vehicle (design) speed exceeds 40 km/h <i>Prohibited on vehicles of categories R and S</i>	OK. Appropriate transitional provisions necessary. Proposed text from E 12 selected. - General wording of transitional provisions to be prepared by GRE and AVLI secretariat. - Specific timing in alignment and to be discussed with EU-COM .
EU-COM	6.1.1				6.1.1.: Main beam headlamp mandatory on fast tractors: Commission supports comment by E4, E12 and E17 (safety enhancement).	See E 4 above.

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E12	6.1.1		Te	<p>It is not acceptable, that a vehicle running up to 80 km/h has no main-beam headlamp. Illumination of dipped-beam headlamps is only ~ 30 m (see 6.2.6.1.2). For speeds over 40 km/h a longer stopping distance than 30 m is required. The illumination of the street in front of the vehicle must enable the driver to stop the vehicle inside the illuminated area.</p> <p>Such provision of main-beam headlamp for vehicles running faster than 40 km/h is state of the art since decades. There is no reason to decrease the present level of traffic safety.</p>	<p>6.1.1. Presence: <u>Mandatory for vehicles of category T having maximum design speed of more than 40 km/h,</u> Optional on <u>other</u> vehicles of category T. Prohibited on vehicles of categories R and S.</p>	See E 4 above.
E 17	6.1.1		Te	Main-beam headlamps could be mandatory in fast tractors.	<p>Current text: Optional on vehicles of category T. Prohibited on vehicles of categories R and S.</p> <p>New text: Mandatory on vehicles of category T with a maximum design speed above 40 km/h. Prohibited on vehicles of categories R and S. Optional on other vehicles.</p>	See E 4 above.
E12	6.2.6.1.2		Te	The "15 m" should be reviewed. It might be reasonable to change to 20 m to have an illuminated area of 40 m in front of the vehicle	6.2.6.1.2. The dipped-beam headlamps must be aligned in such a way that, measured at 15 m from the lamp, the horizontal line separating the lit zone from the unlit zone is situated at a height of equivalent to only half the distance between the ground and the center of the lamp.	Keep as it is including the latest amendment from IWG AVLI in 72 nd GRE (GRE 72-12).

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E 17	6.2.9		ge	What was the reason to delete text "The requirements of paragraph 5.5.2. shall not apply to the passing lamps"? The 5.5.2 is: "Be symmetrical to one another in relation to the median longitudinal plane;". Passing lamps have still asymmetrical beams.	Undelete the text.	Keep as it is. Beam patterns may have asymmetrical shape.
E12	6.3.6.1		Te	To avoid the situation, that front fog lamps produce glare	[new] 6.3.6.1 or 6.3.7]: Vertical orientation: the vertical orientation shall be lower than that for the dipped-beam headlamps.	Keep as it is. The issue of glaring is sufficiently addressed with the present text in 6.3.6, last sentence.
E 1	6.5.1		Te	For tractors exceeding a certain length it is not sufficient to further permit Arrangement D due to the limited lateral visibility of the DI. The accident study from German GDV of 2010 showed that a majority of the accidents with agricultural vehicles occur during turning and crossing roads. A reason could be the insufficient visibility of the DI. This can be improved by the proposal to prohibit arrangement D for tractors exceeding a certain length.	Arrangement A [and D] shall be allowed only on vehicles of category T whose overall length does not exceed 4,600 mm and in the case of which the distance between the outer edges of the illuminating surfaces is not more than 1.60 m. Arrangements B and C [D] shall apply to all vehicles of category T.	In principle accepted by majority, but no consensus. Therefore in square brackets. Final decision by GRE. If accepted finally, appropriate transitional period needed, see also conclusion of E 4 comment on 6.1.1.
EU-COM	6.5.1				6.5.1.: Should evidence exist that arrangement D is not suitable to all tractors, Commission agrees with the amendment proposed by E1. However, the tractor length, above which arrangement D is prohibited, should be based on evidence too (e.g. the length of tractors that have been detected to present a problem during the stated accident cause study in Germany).	See E 1 above.
AVLI Sec	6.5.1 and 6.5.3.2		ed	Category 2 is not existing. It should read "Category 2a"	6.5.1 ... For vehicles of categories R and S category 2 a lamps shall be used. 6.5.3.2. For vehicles of categories R and S: Two rear direction-indicator lamps (category 2 a).	OK

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EU-COM	6.5.1. and 6.5.3.2				6.5.1. and 6.5.3.2.: category 2a instead of category 2: Commission agrees with AVLI secretariat.	See AVLI secretariat above.
CEMA Kuhn	6.5.2		ed	For vehicles of categories R and S category 2 lamps shall be used.	48 has a drawing, should we not add a drawing	See CEMA below.
CEMA Kuhn	6.5.3.2.		te	Two rear direction-indicator lamps (category 2).	Two rear direction-indicator lamps (category 2a) with angles of geometric visibility according to Arrangement B, C or D.	OK
E 4	6.5.3.2.	Rear Direction-Indicator Lamps	te	Should you use category 2a or category 2b? Or can you use both categories?	Specify which category(y)(ies) can/shall be used	See AVLI secretariat above.
E 4	6.5.4.2. 6.7.4.1. 6.9.4.1. 6.9.4.2. 6.14.4.1. 6.14.4.2. 6.17.4.1.		(ge?) (te?) (ed?)	6.5.4.2. For vehicles with a maximum width not exceeding 1,300 mm ... 6.7.4.1. ... if the overall width of the vehicle tractor is less than 1,400 mm 6.9.4.1. ... where the overall width of the vehicle tractor is less than 1,400 mm . 6.9.4.2. For vehicles with a maximum width not exceeding 1,300 mm ... 6.14.4.1. ... where the overall width of the vehicle tractor is less than 1,300 mm . 6.14.4.2. For vehicles with a maximum width not exceeding 1,300 mm ... 6.17.4.1. ... the overall width of the vehicle is less than 1,300 mm In these paragraphs two different values for the width		Keep as it is. There are reasons why the values are different.

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				(1,300 mm and 1,400 mm) are used for applying certain exemptions. This seems a bit peculiar/inconsistent...		
EU-COM	6.5.4.2. 6.7.4.1. 6.9.4.1. 6.9.4.2. 6.14.4.1. 6.14.4.2. 6.17.4.1.				6.5.4.2., 6.7.4.1., 6.9.4.2., 6.9.4.1., 6.9.4.2., 6.14.4.1., 6.14.4.2., 6.17.4.1. comments by E4: the same criterion should be used, i.e. maximum width, and, if possible, with the same limit value.	See E 4 above.
E 17	6.7.5.		ed	Text: "15° above and below the horizontal" is written twice.	Delete the duplicated text.	OK.
CEMA	6.8		te	Compromise: ... Mandatory on all vehicles of categories R and S exceeding 1,600 mm in width and exceeding a maximum design speed of 40 km/h. ...	Add: The front position lamp may be omitted if an end outline marker lamp is mounted according the specification of the front position lamp. (Argumentation: in many cases the wheels are the outer edge of the S vehicles. Machines would require both end outline marker lamps and front position lamps at the same position ; the requirements for end outline marker lamps and front position lamps in R7 are identical.)	

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E12	6.8.1		ed	To avoid misinterpretations, that Category T vehicles smaller than 1600 mm need no front position lamps.	6.8.1. Presence: Mandatory on all vehicles of category T. Mandatory on all and vehicles of categories R and S exceeding 1,600 mm in width. Optional on other vehicles of categories R and S.	OK. See also CEMA below (Compromise).
EU-COM	6.8.1				6.8.1., comment by E12: in RVFSR, tractors and other vehicle categories already clearly separated in the drafting; width condition introduced only to R- and S-category vehicles. Should the width of R- and S-category vehicles be under debate, Commission notes that the width of R-category vehicles is limited to 2.55 m for EU type-approval.	See E 12 above.
CEMA Kuhn	6.8.1.		te	Presence: Mandatory on all vehicles of category T and vehicles of categories R and S exceeding 1,600 mm in width. Optional on other vehicles of categories R and S.	To be reviewed in line with end outline marker lamps	Compromise: ... Mandatory on all vehicles of categories R and S exceeding 1,600 mm in width and exceeding a maximum design speed of 40 km/h. ... Compromise between R 48 and R 86. Only the fast vehicles are comparable to those vehicles covered by R 48 which are used for long distance transportation.
CEMA KRONE	6.8.1	1	te	Why are front position lamps already mandatory on vehicles which are exceeding 1.600 mm in width? Why is this requirement so important?	Mandatory on all vehicles of category T and vehicles of categories R and S exceeding 1,600 2.550 mm in width. Optional on all other vehicles of category R and S.	See CEMA above.
CEMA Kuhn	6.8.4.1.		te	shall be not more than 400 mm from the extreme outer edge	For R &S the light is obscured by the pulling vehicle see front retroreflector	Keep it as it is.

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CEMA Kuhn	6.8.5.		te	the angle of 10° inwards may be reduced to 5° if the shape of the bodywork makes it impossible to keep to 10°.	For R&S there should be an exemption to 0	Comment withdrawn.
E 17	6.9.8.		ed	Reference "(see 5.11)" should be in paragraph 6.9.7 (Electrical connections). This is the case with other lamps.	Move text "(see paragraph 5.11)" to paragraph 6.9.7.	OK
EU-COM	6.9.8				6.9.8.: ref to 5.11. should move to 6.9.7. : Commission agrees with the comment by E17.	See E 17 above.
CEMA	6.12		te	Mandatory on vehicles of category S with a total width of more than 2.55 m. Optional on vehicles of category S with a total width not exceeding 2.55 m.		
E 4	6.12.1.	End-outline marker lamps	ge	Why only mandatory when the vehicle's width exceeds 2,550 mm? Why not consider making it - as in R.48 - mandatory from widths exceeding 2,100 mm?	<i>Optional on vehicles exceeding 4,80 2,10 1,800 mm in width. Mandatory on vehicles exceeding 2,550 2,100 mm in width. Prohibited on all other vehicles.</i>	Keep as it is.
EU-COM	6.12.1				6.12.1.: end-outline marker lamps (comments by E4 and CEMA). Should they be mandatory only for vehicles exceeding 2.55m in width, these would be only S-category, when it concerns EU type-approval. If an amendment in the width criterion is envisaged for R-category vehicles EU type-approval with respect to installation of such lamps, this should be lower than 2.55m, as they cannot exceed such width limit for EU type-approval.	See E 4 above.

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CEMA Kuhn	6.12.1.		te	Presence:	To be reviewed in relation with end outline marker lamps.	See E 4 above.
CEMA KRONE	6.12.1	1	te	End-outline-marker-lamps which are mounted on machines exceeding 2.550 mm in width are not state of the art. The lighting and signalling parts of agricultural vehicles have to be mounted as close to the machine as possible, because if they are mounted as close as possible to the extremer outer edge of the vehicle the possibility of lamp or panel destruction is given.	Optional for vehicles exceeding 1,800 mm in width. Mandatory on vehicles exceeding 2.550 mm in width. Prohibited for all other vehicles.	See E 4 above.
CEMA Kuhn	6.12.2.		te	Two visible from the front and two visible from the rear.	Two or four visible from the front and two or four visible from the rear.	In principle OK. Copy 6.13.2 of R 48.
CEMA Kuhn	6.12.4.2.		te	. Height:	What about the low position at the rear?	Replace by extract from 6.13.4.2 of R 48 as follows: At the maximum height compatible with the requirements relating to the width, design and operational requirements of the vehicle and to the symmetry of the lamps. Both optional and mandatory (as applicable) lamps to be fitted as far separated in height as practicable and compatible with design/operational requirements of the vehicle and symmetry of the lamps.

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CEMA SDFD	6.14.2		te		Insert after “Two or four (see paragraph 6.14.5.1.) The performances of these devices shall conform to the requirements concerning Class IA or IB retro-reflectors in Regulation No. 3. Additional retroreflecting devices and materials (including two retro-reflectors not complying with paragraph 6.14.4. below), are permitted provided they do not impair the effectiveness of the mandatory lighting and light-signalling devices. (see reg. No. 48, 6.14.2 and proposal no. 86, 6.15.2)	OK.
CLE PA	6.15.1.	Presence	te	To align the provisions of ECE R86 with ECE 48 for certain categories of trailers and towed machinery by making the placement of retroreflectors optional for those categories and consequently placement of conspicuity marking mandatory for same categories as indicated in par. 6.21.	Mandatory on vehicles of category T the length of which exceeds 6 m and on all vehicles of categories R and S R1, R2 and S1. Optional on tractors the length of which does not exceed 6 m and vehicles of categories R3, R4 and S2.	
E 4	6.15.4.3.	Side retro-reflectors, non triangular	ge	Why (significantly) different requirement than in R.48? In R.48 the ‘middle third’ is addressed... here it's not. In R.48 the distance between two retro-reflectors on the same side is 3 m (or exceptionally 4 m), but not 6 m.		See CEMA below.

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CEMA Kuhn	6.15.4.3.		te	One reflector must be not more than 3 m from the foremost point of the tractor vehicle , and either the same reflector or a second reflector must be not more than 3 m from the rearmost point of the tractor vehicle . The distance between two reflectors on the same side of the tractor vehicle must not exceed 6	Identical to side lamps	Add from 6.17.4.3 of R 48 after the first sentence: For vehicles of category R and S the distance between the rearmost side retro reflector and the rear of the vehicle shall not exceed 1 m. Replace 6 m by 3 m in the last sentence. Add from 6.17.4.3 of R 48: If the structure, design or the operational use of the vehicle makes it impossible to comply with such a requirement, this distance may be increased to 4 m. Replace tractor by vehicle in the whole paragraph.
CEMA KRONE	6.15.4.3		te	Almost all international standards define the distance between two side retro-reflectors as 3 m and the distance between a second reflector and the rearmost point of the vehicle as 1 m. Why deviate from this standard?	One reflector must not be mounted more than 3 m from the foremost point of the tractor vehicle and either . Neither the same reflector nor second reflectors must be not are-mounted more than 3 1 m from the rearmost point of the vehicle. The distance between two reflectors on the same side of the tractor vehicle must not exceed 6 3 m.	See CEMA above.

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EU-COM	6.15.4.3				6.15.4.3.: Commission supports comment by CEMA on keeping the distances of side retro-reflectors on the same vehicle side according to most of international standards. This provides the possibility for more side retro-reflectors installation on longer vehicles and thus enhanced safety.	See CEMA above.
CEMA KRONE	6.17.1	1	te	Why are front retro-reflectors mandatory on all vehicles of categories R and S? Usually, the requirements must be in accordance with the requirements for the front position lamps. Nowadays, a front reflector is already integrated in many position lamps.	Optional on vehicles of category T. Mandatory on vehicles of categories R and S exceeding 2.550 mm in width.	Keep as it is.
EU-COM	6.17.1				6.17.1. (CEMA comment): same comment as for 6.8.1. concerning width criterion on R- and S-category vehicles.	See CEMA above.
CEMA Kuhn	6.17.4.1.		te	not be more than 400 mm from the extreme outer edge	not be more than 150 mm from the extreme outer edge	OK, but only for R and S. For T keep 400 mm.
CEMA Kuhn	6.17.4.3.		te	At the front of the vehicle.	No requirement	Keep it as it is.
CEMA Kuhn	6.17.5.		te	vertical angle below the horizontal may be reduced to 5° i	0 degrees	Keep it as it is.
E 4	6.18.1.	Side-marker lamps	ge	For long vehicles consider making the installation of side-marker lamps mandatory.	<i>Presence:</i> Optional Mandatory: On all vehicles the length of which exceeds 6 m, Optional: On all other vehicles.	See E 17 below.

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E 17	6.18.1.		te	Presence of side-marker lamps is "Optional". Side-marker lamps could be mandatory in some vehicles. Finland requires currently side-marker lamps for agricultural trailers over 6 m in length, which are towed by our national over 40 km/h "traffic tractors".	New text: Mandatory on all vehicles [of categories T and R] exceeding 6 m in length [and with a maximum design speed above 40 km/h.] Optional on other vehicles.	To be further discussed during the next meeting. CEMA to provide practical cases where problems may occur. Appropriate transitional period needed, see also conclusion of E 4 comment on 6.1.1.
EU-COM	6.18.1				6.18.1. (comment by E4 and E17): is evidence available for length or speed criterion(a) in order to make such lamps mandatory?	See CEMA above.
CEMA AGCO Fendt (D)	6.19.7.1.		te	It has to be possible that the operator could switch OFF the daytime running lamps while working in the field.	To add in 6.19.7.1. the following text: "It should be possible to switch the daytime running lamps OFF if the tractor is running with a speed below 25 km/h. In this case the daytime running lamps shall switch ON automatically if the tractor reaches a speed of 25 km/h."	Keep as it is. Not necessary to switch off DRL during field work.
EU-COM	6.19.7.1				6.19.7.1.: the minimum speed at which the daytime lights are automatically on should be justified, in order to avoid situations where the tractor goes on public traffic with those lights manually switched-off.	See CEMA above.
CLEPA	6.21		te	To align the provisions of ECE R86 with latest ECE 48 regarding the fitment of conspicuity markings. Several improvements have been introduced into R48 that should be reflected in R86.	Introduce provisions for number, geometric visibility, position etc. for conspicuity marking	Keep as it is. Further discussion on this issue possible on the basis of a common proposal of CEMA and CLEPA when available. Possible scenario: if

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						conspicuity marking is fitted, side retro reflectors can be omitted.
EU-COM	6.21				6.21. (CLEPA comments): should the UNECE R48 be followed, then conspicuity marking should be mandatory for R3, R4 and S2 vehicles, with the same dimension criteria as in that Regulation for O3 and O4.	See CLEPA above and below.
CLEPA	6.21.1		te	To align the provisions of ECE R86 with ECE 48 (after 2011) for trailers.	Optional on vehicles of category T. Mandatory on vehicles of categories R and S.	Keep as it is. Further discussion on this issue possible on the basis of a common proposal of CEMA and CLEPA when available. Possible scenario: if conspicuity marking is fitted, side retro reflectors can be omitted.
CLEPA	6.21.1.	Presence	te	To align the provisions of ECE R86 with ECE 48 for certain categories of trailers and towed machinery by making the placement of conspicuity marking mandatory for some categories and placement of retroreflectors optional for those categories as indicated in par. 6.15.1.	Mandatory on vehicles of categories R3, R4 and S2. Optional on vehicles of category T and vehicles of categories R1, R2 and S1.	

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1	2	(3)	4	5	(6)	(7)
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CLE PA	New par. 6.21.1.1.	To the side:	te	Identify the placement of conspicuity marking on a vehicle	Partial contour marking on vehicles exceeding 6,000 mm in length (including the drawbar for trailers)	
CLE PA	New par. 6.21.1.2.	To the rear:	te	Identify the placement of conspicuity marking on a vehicle	Full contour marking on vehicles exceeding 2,100 mm in width	
CLE PA	6.21.3	Arrangement :	te	Identify the placement of conspicuity marking on a vehicle	A line marking may be installed instead of the mandatory contour marking if the shape, structure, design or operational requirements of the vehicle make it impossible to install the mandatory contour marking.	

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CLE PA	6.21.4.	Position:	te	Identify position of conspicuity marking	No individual specifications. In length, the conspicuity marking shall be as close as practicable to the ends of the vehicle and reach to within 600 mm of each end of the vehicle (excluding the drawbar). The cumulative horizontal length of the conspicuity marking elements, as mounted on the vehicle, excluding any horizontal overlap of individual elements, shall equate to at least 70 per cent of the overall length of the vehicle (excluding the drawbar).	
CLE PA	6.21.5.	Geometric Visibility:	te	Identify visibility requirements	No individual specifications. The conspicuity marking shall be considered visible, if at least 70 per cent of the illuminating surface of the installed marking is visible when viewed by an observer positioned at any point within the observation plane parallel to the longitudinal median plane of the vehicle and situated 25 m from the extreme outer edge of the vehicle and bounded by:	
CLE PA	New par. 6.21.5.1.		te		in height, by two horizontal planes 1.0 m and 1.5 m respectively above the ground,	

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CLE PA	New par. 6.21.5.2.		te		in width, by two vertical planes which form an angle of 4° outwards from a plane perpendicular to the vehicle's longitudinal axis and which pass through the intersection of the vertical planes perpendicular to the vehicle's longitudinal axis delimiting the vehicle's overall length and the extreme outer edge of the vehicle.	
CLE PA	6.21.6.	Orientation:	te	Identify orientation of conspicuity marking	As close as practicable to being parallel to the median longitudinal plane of the vehicle, compatible with the shape, structure, design and operation requirements of the vehicle; if this is not possible, it shall follow as close as practicable the contour of the outer shape of the vehicle.	
CLE PA	6.21.7.	Other Requirements:	te	Align with provisions in ECE 48	In the case of a partial contour marking, each upper corner shall be described by two lines at 90°, to each other and each at least 250 mm in length; if this is not possible, the marking shall follow as close as practicable the contour of the outer shape of the vehicle. The locations on the vehicle designated for conspicuity markings shall allow for the installation of markings of at least 60 mm in width.	
CEMA Kuhn	6.25.4.2.1.		te	Rear retro reflectors for overlength parts or components within a maximum height of 4,000 mm .	What is overlength	See E 17 below.

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E 17	6.25.4.2.1		te	The text is: "Rear retro reflectors for overlength parts or components within a maximum height of 4,000 mm." This paragraph is not in latest draft of EU RVFSR. Are the overlength parts (which are not defined in Reg. 86) in the scope of type-approval Regulation or is this more like a road-use requirement?	Delete the paragraph 6.25.4.2.1	OK.
CEMA Kuhn	6.25.5.1.		te	If it is impossible to observe the above position and visibility requirements, four retro-reflectors may be fitted in accordance with the following installation specifications:	One pair must comply with the width specificaitons, one pair must comply with the height specification	Keep as it is. Wording is clear.
CEMA Kuhn	6.26		te	Signalling panel and signalling foils	Add un-ecce regulation (they need to be approved)	Check whether requirements of R 70 and R 104 are compatible with Annex 6 and align if need be. Consider to add "Regulations Nos. 70 and 104" to 6.26 headline later.
CEMA Kuhn	6.26.1		te	Optional on vehicles of category S with a total width not exceeding 2.55 m.	Is it wise to allow this?	Put [of category S] and [Optional on vehicles of category S with a total width not exceeding 2.55 m.]in square brackets. Continue discussion next meeting.

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EU-COM	6.26				6.26. (CEMA comments): in EU type-approval, signalling panels and signalling foils installation requirements concern the safety (visibility) of S-category vehicles that exceed 2.55m in width. The traffic hazards are not part of the type-approval procedure. For the rest of the comments, concerning their number and their positioning with respect to the vehicle, Commission has no objection.	See CEMA above.
E 4	6.26.1.	Signalling panel and signalling foil	ge	Mandatory on vehicles of category S wider than 2,55 m and optional when they're less wide. What about vehicles of categories R and T...?		See CEMA above.
CEMA KRONE	6.26.1	2		Why are signalling panels and signalling foils mandatory on all vehicles of categories S exceeding 2.550 mm? There are two different reasons for mounting signalling panels on machines. First, there is the possibility of attachment parts posing a traffic hazard. Second, there is the possibility of an excess width. So there should be a difference in mounting these panels between both possibilities.	Mandatory on vehicles of category S with a total width of more than 2.55 2.750 mm. Optional on vehicles of category S with a total width not exceeding 2.55 2.750 mm. Mandatory on vehicles of category S with attachments parts posing a traffic hazard.	See CEMA above.
CEMA	6.26.1		te/ed	Mandatory on vehicles of category S with a total width of more than 2.55 m. Optional on vehicles of category S with a total width not exceeding 2.55 m.	Mandatory on vehicles of category S with a total width of more than 2.55 m and on vehicles that have an external surface of the vehicle comprising <ul style="list-style-type: none"> • directed outwards, pointed or sharp parts, • rough surfaces, or 	


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					<ul style="list-style-type: none"> projections of such shape, dimensions, direction or hardness <p>as to be likely to increase the risk or seriousness of bodily injury to a person hit by the external surface or brushing against it in the event of a collision</p> <p>and</p> <p>the external surface of the vehicle (mentioned above) can practically not sufficiently be covered by protective devices.</p>	
CEMA	6.26.2		te/ed		<p>2 towards the front, 2 towards the rear;</p> <ol style="list-style-type: none"> Each panel/foil shall be according the specifications of R70 class 5 or R104 class F ; The size of each panel/foil shall be such that the visible surface is at least equal to 4 basic squares and Each panel/foil shall comprise at least 3 entire basic squares. <p><i>(If required by the design and operational requirements of the vehicle) Each panel may be split into 2 parts as long as the combination of the parts comply with the requirements of a single panel/foil.</i></p>	
CEMA Kuhn	6.26.2		te	Two or four (Annex 6).	For indication of the over 2.55 2 to the front and 2 to the rear are a minimum.	See CEMA above.

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CEMA KRONE	6.26.4	2	te	<p>If signalling panels are mounted as near as possible to the extreme outer edge of the vehicle, the chance of destruction is very high. Therefore, it is necessary to have a chance to mount the panel, especially in case of parts of the attachments, posing a traffic hazard within the machine outline.</p> <p>Marking an excess width it is really important to have a short distance between the outer edge of the vehicle and the beginning of the signalling panel, so that the width of the vehicle is visible.</p> <p>An example:</p> 	<p>That point on the illuminating surface which is furthest from the vehicle's median longitudinal plane shall not be more than 100 mm from the extreme outer edge of the vehicle, when exceeding width of 2.750 mm.</p> <p>This value may increase if the shape of the bodywork makes it impossible to keep within 100 mm.</p> <p>In case of attachments parts posing a traffic hazard the value should be not higher than 400 mm.</p>	See CEMA above.

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CEMA	6.26.4		te	illuminating surface of at least one basic square which is farthest from the.....	
CEMA Kuhn	6.26.5			No individual specifications	Visible from the rear and visible to the rear	See CEMA above.
IWG AVLI	Annex 5			Align with R 48, give manufacturers more freedom of choice.	Add in drawings of Arrangement B and C: "Category 5 or 6" (Add in whole document)	OK.
E 4	Annex 6	Table 2	ge	Directly under table 2 it reads: <i>Warning boards of Form A may be combined with lamps, if the surface of the boards covered by the lamps does not exceed 150 cm².</i> Not clear what is meant exactly... and what kind of lamp(s) can be used for this...?		See CEMA on 6.26 above.
E 17	Annex 6	Paragraph 3	te	The text is: "Signalling panels which comply with the requirements of this Regulation are marked with the number of this Regulation and the name of the manufacturer." Is the signalling panel marking according to Reg. 86 really necessary? It creates some additional burden for manufacturers. It is not an actual type-approval marking, which could be confusing. There is no corresponding requirement with conspicuity markings in Reg. 48. Anyway, the reflecting materials shall be marked	Delete the paragraph 3 (Identification) in Annex 6	See CEMA on 6.26 above.

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				according to Regulation No 104.		
CLE PA	Annex 6	Par. 2	te	First and second line of par. 2: Change the reference points to colorimetric properties of Reg. 48 as the existing references are incorrect	White according to point 2.29.4 2.30.1. of UNECE regulation..... Red according to point 2.29.4 2.30.4. of UNECE regulation.....	
CLE PA	Annex 6	Par. 2 cont.	te	Last line of par. 2 The photometric performance of all panels, not only Form B, should fulfil the highest available visibility characteristics since they play an integral role in early recognition of the extremities of large-mass machinery by an oncoming vehicle and should be so described	Panels or foils of Form B must comply with Annex 7 of UNECE regulation No. 104, Class C. Photometric performance requirements of all Panels or foils of Form B identified in Table 2 above must shall comply with Class 5 or Class F requirements of Reg. 70 or Reg. 104 respectively.	

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CEMA	Annex 6		Te/ed	Figure 1 and 2	Delete; is in R70 and R104	
CEMA	Table 1		Te/ed	Delete	Froms A, B, R, L are covered by: <i>...The size of each panel/foil shall be such that the visible surface is at least equal to 4 basic squares...</i> Form K is covered by: <i>.... Each panel may be split into 2 parts as long as the combination of the parts comply with the requirements of a single panel/foil....</i>	
CEMA	Table 1		Te/ed	Deviations from the specified formats are permitted, if the surface of the unspecified formats contains at least 3 basic squares. The number of panels/foils for each effective direction to the front and the rear are specified in Table 2.	Delete; is covered by: <i>...The size of each panel/foil shall be such that the visible surface is at least equal to 4 basic squares...</i>	

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CEMA			Te/ed	Warning boards of Form A may be combined with lamps, if the surface of the boards covered by the lamps does not exceed 150 cm²	Delete; is covered by: <i>...The size of each panel/foil shall be such that the visible surface is at least equal to 4 basic squares...</i>	
CEMA			te	2. Colouring and photometric minimum requirements.... 3. Identification	Delete; covered in R70 and R104	
CEMA			Te/ed	Annex 6	Alternatively the requirements of 6.26.2 can be put in the annex 6 Examples of panels/foils can be given in this annex.	

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