

ANNEX 1 to the report of the 8th SESSION

Item 4 – Adoption of the report of the previous session

Tomasz Targosinski explains that he is expecting some more details for the report and it is needed to find a compromise to have enough details but not a huge report. This is why he proposed to The Secretary to submit his own conclusions without any final report

Antoine Pamart is confused by the practice and he doesn't see the same conclusions than the Tomasz Targosinski as it is more some personal ones. We should go on a normal process of working with report in time.

Pauline Lejeune suggests to have a conclusion defined during the meeting for each item to make sure that everyone has the same understanding. Then a detailed report will support the conclusions later on. We can even add the position from each Contracting Parties.

Tomasz Targosinski supported.

Jean-Marc Prigent proposes to have clear conclusion after each item

Antoine Pamart fully supported and reminded that the diagram was the agreement in January and now we only have to prepare the justification. This work is in progress for 3 meetings.

Pauline Lejeune we have to separate the compromise and the positions of the different CPs. The conclusion is the group conclusion and not mandatory to reflect all the positions.

Jean-Marc Prigent took in example his job for TF EMC explaining that we cannot have all the same position but we can have conclusions.

Antoine Pamart supported

→ *During this session the conclusions were made progressively item per item*

VGL-08-08 - Comments from OICA (Pauline Lejeune) on conclusions proposed by Tomasz Targosinski:

A) **Diagram:**

The discussions start on the Line 2 of the diagram

Antoine Pamart reminds the conclusions of the previous session of the group and expresses that in last session, the line 7 was confirming that the line 2 is safer. So the majority of the group decided to keep the line 2.

Phil Bailey supports of the French comments that with a report done in time, it is better to understand this graph and also to justify his presence in the meeting (on budget point of view). The credibility of this group could be damaged.

Tomasz Targosinski accepts the comments and recognizes that the modification of the line 7 is a new item for this session.

Discussion about the different Classes.

Pauline Lejeune precizes that difference has to be done between what was decided at previous meeting and additional information – She explains that some cars have very low mounting height and then some consequences with the different lines 7 and 8.

Valter Genone supported concern with 'city car' – no correlation – too complicated to correlate speed with mounting height – he is not in favour to have Classes as some high level car like SUV are going fast as well as the sport car so the Classes are not really applicable.

Antoine Pamart supports - He expresses that the conclusion on last session was that there are 2 alternatives: Lines 3&4 and Line 8 or Line 9 according to the feedback from Industry (to be decided on this session).

Tomasz Targosinski we have to make clear what was the compromise

Pauline Lejeune: edge of the apparent surface / centre of reference, will give more flexibility – to design the vehicles we need to have the technical definition in advance and to know where will be the centre of reference is more difficult than the lower edge

Antoine Pamart asks to finalize the conclusions from the last session to be able to start this 8th session.

Agreement from Tomasz Targosinski

To change the lower edge to optical axis for the Stage II: supported mainly by the group on last session.

Discussion about the number of vehicles tested and 'diesel' or not between **Pauline Lejeune** and **Tomasz Targosinski**.

Antoine Pamart reminds that we discuss about the same without starting the session yet. We are losing our time.

B) 2000lm criterion Agreement. No criteria needed but manufacturer to prove that the vehicle has to comply.

C) Loading conditions

There was an agreement to keep the actual Annex 5 for loading conditions in view to verify the performance of the system.

Valter Genone was proposing to make an evolution of the loading conditions → *to be followed with Stage 2.*

→ **See conclusions written and shared during the meeting in VGL-08-13**

Item 5 – Last new diagram: Feedbacks from attendees on the last new diagram & Improvement of the justification

Introduction of the document **VGL-08-05 – German PTI requirements** by Tomasz Targosinski.

According to their test with manual or automatic devices – looks much better repeatability than this 1.6%

Pauline Lejeune: we will need more time to provide more feedback – in Germany they have more stricter requirements – PTI is national requirement – you may have different national requirements and may be more stringent than the regulations – A regular driver checks his vehicle by himself before passing the test because he does not want to go to the garage and want to avoid to pass the PTI again (cost issue) - PTI allows to check the situation –

According to her understanding in the document according to the ECE R48 regulation -1 and -1,5% and the tolerances with the point 2 +/-0,5% - 2nd the tolerance whose we are talking concerns all the loading conditions not only the initial aiming condition – the variation will lowest than for the full load vehicle

Tomasz Targosinski: yes there are PTI conditions – for example, no one of the national test cover all cases – for repeatability there are much more factors

Thomas Goldbach Goldbach asks if it is linked to the 1.6 tolerances.

Tomasz Targosinski confirms this point.

In conclusion of the presentation, **Tomasz Targosinski** concludes that this is lower than the 1.6 tolerances requested by Industry

Pauline Lejeune: you mixed it up a lot of different information – there are many different criteria – Some differences occur:

- There is no driver during the PTI and during the type approval, there is a driver so this is not the same conditions.
- Also, when there is one driver, the deviations should be less than when testing with full load. 1% tolerance for one loading condition – Industry request is 1.6% for all loading conditions is not so far of what was presented here – we cannot extrapolate from this.

Tomasz Targosinski: this is another example – what was interesting is the new attempt for loading condition – conditions are different – fix value of initial value – there are few parameters that are not defined and it is including in this 1% tolerances (level of tank filled, tires pressure, etc....) – only for R48 vehicle test –

Pauline Lejeune fully understands that the unknown conditions are covered by the 1% tolerances - However, the 6 loading conditions are covered by the 1.6% tolerances.

Jean-Marc Prigent: so this is the supporting document to support the 1.6% proposed by Industry

Tomasz Targosinski: a lot of criteria are not taken into account in this document

Pauline Lejeune: if you take into account all criteria as full load ... - if we consider the 1% for one case with no load – if we are taking all loading conditions with 1.6% we are not so bad up to the extreme case with all load on the rear axle

Tomasz Targosinski: they also try to find out other conditions with unknown trunk, unknown tyres pressure ... - need to take tolerance to compensate all these unknown factors - the 1% could be even better when respecting the parameters - and then the 1.6 tolerances should much more justified.

Pauline Lejeune: for one test with nobody in the car, with no load, they need 1% - potential influence of load, trunk, tyre pressure ... - this 1.6% is not oversize because it supposes to cover all cases

Tomasz Targosinski: re-explain the content of his email

Pauline Lejeune: agreed with the content but disagreed with the conclusion

Tomasz Targosinski: his understanding of this side of our issue test experiment result and research – repeatability is much narrower than 1.6% - how it can be adapted and taking into account – no direct guideline which values we have to propose here – this value is much bigger

Valter Genone: exactly what he means about tolerances – one measurement for one car – not the behaviour of all vehicles – original limit is -1% and only for this value - the vehicle has to take into account that the vehicle is not new, the precision of equipment according to the different test houses ... - the possibility of variation due to a certain factor – here 6 different conditions and the range – it is totally different – it is the same thing – probably we will be more than 1.6% - what is the pressure, is the vehicle stabilized, how many km ... ? – not considered the variation of the vehicle - the wording 1.6 tolerances is not the good one - it should be the limits as discussed previously - the tolerances applies to one conditions of loading with specific parameters but it doesn't reflect whole loading conditions.

Tomasz Targosinski: given value gives maximum limit to pass the test

Valter Genone: no 'tolerance' in R48 but 'range' - this is correct by definition – this is the range we can allow – ONE specific value – all position are correct – for each of these we have the same tolerance

Tomasz Targosinski: if you have for PTI, you have been inside some area

Thomas Goldbach: from the diagram, the line 3, if you check this for vehicles where the mounting height above 0,8mm, we have the 1.6% but below, with cheaper vehicles – he does not understand why we have to discuss this with PTI – overburden for Fiesta, ... -

Tomasz Targosinski: the discussion is for the 1.6%

Thomas Goldbach: the complete line we have the 1.6% up to 1,2m – and we have to go upper

Antoine Pamart: understands this comment and reminds the discussions in Warsaw with the building of this parallel to the line 4 – it was already discussed - we should keep the tolerances whatever the mounting height.

Tomasz Targosinski: 1.6% value is not convincingly justified – for vehicles aged, some other results – it is needed to have more data (not confidential).

Pauline Lejeune: reminds that at the time being, the tolerances is 2% and with COP, it is 2.6%. So 1.6% is more accurate than actual situation. She claims that every time OICA presents something Tomasz Targosinski is always complaining that it is not enough, not representative, not accurate...

Tomasz Targosinski: tolerance something different – quality means also quality to convince people and other people – different groups verify similar data – probably because we really need more tests, the values researches from PTI shall much lower repeatable - there are 3 main points: glare, visibility and manufacturing - we try to change Regulation with performance - he will prepare a more detailed description of the Poland request to make the whole group understanding

Valter Genone: to apply this diagram with PTI we should add the limits of PTI – this means we should add tolerances – it is why he talked about range and not about tolerances – all this range is good and we need to stay in this range – for being in line with PTRI we have to add tolerances

Tomasz Targosinski: do not mix PTI

Jean-Marc Prigent: when Tomasz talked about Poland, which manufacturer in Poland? – 1% limit can you complain? they will answer 'no'

Tomasz Targosinski: what to do to have data? – please describe procedure –

Pauline Lejeune: if you look as today's regulation, the approval zone is 2% tolerance and 2,6% with CoP – so any case we proposed an improvement – of we look the PTI they cover the tolerances as trunk but it does not cover the tolerances with all loads possible – you need to check right & left, rear/front, springs – 3rd general one : everytime OICA brings information, it is considered by you not enough accurate – what we did last time, we need 1.6% – we did not ask more than the minimum but what we need to live

Tomasz Targosinski: between other he said that the amount of information is not convincing him – we need some data which was accessible – this helps us to go to a conclusion - the line 3 is the line which is tried us in fact design the line – vehicles are designed some way, it gives some restrictions – because comparing the performance line (line 6), it is safety in performance reality – in conflict with manufacturing possibilities

Thomas Goldbach: we are questioning the complete area (including above 1,2mm)

Tomasz Targosinski: the visibility and also glare – we have to compromise to make real life possible

Thomas Goldbach: concern for low mounting height

Tomasz Targosinski: 1.6% line we have to do something with this

Jean-Marc Prigent: the 1.6% is covering the tolerance of brand – this graph is not taking into account only one car

Pauline Lejeune: PTI covers only one loading condition – further quick comment, we had a compromise with lines 3 & 4 – Poland against – she proposes to continue only explaining that Poland still disagreed

Tomasz Targosinski: misunderstanding of priorities - now we are going to define performance - area for freedom is narrow for 1.6% - you decide lower performance to move to the right giving less performance – OK for 1.6% if it is really true – he is sure that we can have less

Pauline Lejeune: the 1.6% is not according to the type levelling device

Tomasz Targosinski: you need more positions for manual levelling levelling – inside 1.6%

Thomas Goldbach: can we focus on the diagram

Antoine Pamart: we have to stay technologically neutral – we only speaks about the box limits – for the right part of the box, we agreed at last meeting with either lines 3+4 or lines 8 or 9 – we have 2 alternatives – and not to discuss again the previous conclusions – we all understand the Polish position

Tomasz Targosinski: this is technical problem

Antoine Pamart: comes back on the discussion of this morning that the system to adjust the cut-off position is not part of discussion - if we speak about the previous Warsaw version, we choose the blue box from the green line and exemption for the line 3 because of some understandable things – the blue box that was such a consensus at Warsaw version based on the Polish proposal with the line 5 – The 'box' is the limits that should be respected in any case with any system to adjust - the line 4 was agreed and there was a derogation for the line 3 due to practical reason (manufacturing)it is correct as consensus in keeping the 1.6% tolerance – there is nothing to add on this part – it is clear – we have not to discuss that again except for the lines 8 or 9 as alternatives

Tomasz Targosinski: line 3 is for practical reasons

Antoine Pamart: it is already the case in the justification – the job has already be done

Lunch break

Starting after the lunch break, **Tomasz Targosinski** doesn't agree with the conclusion that the German PTI requirements is confirming the 1.6% limit.

Tomasz Targosinski restarts the meeting from the document VGL-08-07 related to the centre of ref in comparison with the low edge of apparent surface – even if for stage 2 - already currently the description is not clear in R48

Pauline Lejeune: §.6.2.4.2 is for low-beam headlamp – here for vertical inclination and the other for the localization of the headlamp on the vehicle for all functions - This means §.6.3.4.2 should not be modified

Valter Genone: comes back that for PTI we are talking about tolerances - for type approval, we are talking about limits - difference in application has to be precised

Pauline Lejeune: because so many topics, this should be discussed for stage 2 to be able to work on other topics as confirmed with the conclusions of the 7th session

Tomasz Targosinski raises that the German PTI is resulting from research

Phil Bailey: different manufacturers will have different lamps sizes – technical justification, we should improve current situation and really determined the performance of the headlamp – is their justification to maintain the lower edge of apparent surface? - he asks to see the document to be able to state on it

Review of the proposal from **Tomasz Targosinski** for the change from **lower edge to optical axis**:

Tomasz Targosinski: Poland in favor of the centre of reference – Poland want to have clear position regarding this topic – most of the group does not like to change this one

Pauline Lejeune: it is needed to change more paragraphs than the ones in paragraphs 6.2. as Definitions, paragraph 5.8.1... -

it is not so simple - it is the same we do not have information in advance in the development of our vehicles, the consequence is important – more important to push it for phase 2 and to change for the next future - it was decided on last session that it was planned to work in phase II about this subject.

Phil Bailey: we try to solve the glare issue but using the lower edge of the apparent surface is not going in the right way - he asks what could be the consequences on distance

Valter Genone replies that on technical point of view, the design is prepared for optical axis but some additional considerations should be taken into account and so we should keep this for stage II.

Pauline Lejeune: impact also for suppliers – we are not against but even if it should not be a concern this is not so simple

Tomasz Targosinski: no problem regarding glare

Pauline Lejeune: we are still in the limits

Jean-Marc Prigent: we have time

Tomasz Targosinski: maybe TPs will be needed

Valter Genone: strongly disagreed

→ After discussion, we stay as the Regulation N°48 is and the Polish proposal for the stage II even if there is some disagreement between Contracting Parties but we should move forward and avoid any delay for the initial target from the IWG VGL.

VGL-08-07 – Proposal for centre of reference: how much measurements it will make? Could be useful for stage 2

Thomas Goldbach: we have now conclusion – not need for such detail for the moment – we should stop it

Valter Genone to answer Phil Bailey: in this particular case, all measurement are made on 2nd line – in practical there is no big difference.

VGL-08-10 – Improvement of the justification of the diagram after the 8th session:

Tomasz Targosinski expresses that the line 7 is crossing the line 2

Pauline Lejeune and **Jean-Marc Prigent**: this is the state of the art from the May/June session where the line 7 was not crossing - we should take it into account.

Pauline Lejeune: explains again the justification – she also reminds the line 7 is in the justification for Line 2 because it supports this last one

Phil Bailey: comes back on an interview that the actual Regulation is even more on the right side and with CoP, also - so, having a line more on the 'safe side' seems strange for him when he receives so much complains on glare.

Pauline Lejeune: we use the line 7 for the justification - the 'blue box' is including the CoP so these are the absolute limits.

Tomasz Targosinski: in fact this line 7 will restrict the area for high mounting height

Thomas Goldbach: line 7 is helping to justify line 2 because more in a safe side

Phil Bailey: line 2 is based on OICA/GTB study and Warsaw meeting – line 7 on Poland calculation

Tomasz Targosinski: glare from other many factors – this is the impression

Thomas Goldbach: we should also be aware that the line 7 - if we are now going more on the left compared to the current R48 – we have different basements for the discussion

Phil Bailey: reminds the current limit with the 2000lm

Thomas Goldbach: do you know where they are coming from? – can we get the history from e.g. *Dieter Mattes* to understand how it was built and also why it is starting from 0.5 on the left.

Phil Bailey: to ensure to address the criticism

Pauline Lejeune: it is why we need help for the 1 lumen – new information and helping to understand why being no more glare

Phil Bailey: need to develop a proper justification to convince also the WP.29 members to avoid that the proposal is forward back to GRE again.

Valter Genone: we are speaking about the theory – the practical way the tolerances are above – we need additional tolerances – CoP on the current diagram is the dotted line

Jean-Marc Prigent: it was made clear that the blue box integrated the CoP

Pauline Lejeune: it is very political – the main justification that glare is not coming from the inclination of the dipped-beam on the road – this is in the ToR – many criteria to impact or contribute – the issue is to improve as much as possible the glare and the visibility – it is needed to find agreement on the diagram then it will be possible to finalize the justification - as it is moving a lot after each session, this is not workable

Thomas Goldbach: we should have an explanation of the old and the new graph – do we know who will have the explanation of the old graph? – as Dieter Mattes maybe – this would help to accept – to show what we made in the past was not very helpful

Valter Genone: it was for the UE directive but he does not know why

Tomasz Targosinski: the worst case - we put some simple 1.6% manufacturing freedom or level

Thomas Goldbach: he is talking about the old existing requirement – CPs could have some concern because we are going more in the left and could disturb some of them – to know how was constructed the old graph should be a good help

Valter Genone: at the origin same limit for all height – at a certain moment, it was decided to have higher mounting height which could cause some glare – with the additional concern for vehicles in between

Thomas Goldbach: why do we choose 0.5 to 1.5m?

Valter Genone: he knows why but not the values – discussions in 1974

Thomas Goldbach: proposes to ask to Dieter Mattes who could have some further information

Jean-Marc Prigent: why this black box including the CoP

Tomasz Targosinski: supports what Phil Bailey mention to help the justification

→ **JMP to ask.**

Pauline Lejeune: we still have to take some margin tolerances and reminds the max at 0.8m vs. the 0.94m at 0%

Phil Bailey: we have to show we will better than today – from his experience with GTR EV, we need a level of details with some crossed reference – if we have something like that it will make easier the decision by the WP29

Tomasz Targosinski: good point – as still lack of this clear justification for each part – it is easy to find element to make the decision and to understand

Thomas Goldbach: we are only working on this justification – for EV the job is also with the US

Phil Bailey: wants just mention it – provide a lot reassurance – not dealing – just helpful

Pauline Lejeune: we want to spend more time on justification but only when we all agree on the diagram to be sure to have more appropriate justifications – explains again the justification from the improved justification with Line 4, then Line 3 and Line 5 with concern for OICA with additional sentence for city cars

Phil Bailey: requests to Tomasz Targosinski for having justification on Line 7

Thomas Goldbach: supports we need this input

Tomasz Targosinski: from VGL-07-06 cut-off line horizontal with road illumination distance at 25m

Thomas Goldbach: why do we have this change of the graph with the line 7 (*last point of the line*)?

Tomasz Targosinski: different results for different headlamps – Line 2 is not strong justified

→ Additional corrections for improvement of the justification to be done from all comments → especially graphic to be improved + the 1lm criteria to be develop – tolerances to be replaced by limits and/or range - add the justification from Tomasz Targosinski on line 7.

2nd day after lunch:

Tomasz Targosinski restarts the meeting with the lines 8 & 9 –

Pauline Lejeune: as OICA we supported the 'blue box' – it lacks the 1.6% for low high mounting heights – it is still in progress because no yet all feedback from other OEMs – we supports the blue box and for the other lines to be followed at next meetings

Thomas Goldbach: with these 2 lines 8 & 9, we will decrease the visibility for small cars – to avoid this impact, we have the compromise with blue box and the 1.6% - do we really want to discuss again or go ahead with the justification? – blue box should be presented at next GRE

Tomasz Targosinski: for small cars, cheap cars, the road illumination distance is decreased with the lines 8&9

Thomas Goldbach: what is the opinion of the other CPs?

Tomasz Targosinski: we expected data of 1.6%

Pauline Lejeune: reminds also Japan could support this blue box and understands the issue and the need of 1.6% according to information on existing and future vehicles – it would be fair to have opinion from other CPs if still needed

Tomasz Targosinski: Poland not in favour – do we need feedback from Industry?

Antoine Pamart: we finish the meeting in Warsaw with consensus with blue box – at following meeting there were alternatives with lines 8/9 – during last meeting we have 2 alternatives in keeping the blue box or lines 8/9 – today we were supposed to have feedback – he would prefer to have it – but quiet OK to keep the blue box – the only point was the line 1 – main position was to support the blue box as consensus

Valter Genone: tries to be more close of the reality – the 50m line is considering with the line CoP at -0.2% is unacceptable – he can understand the line 5 is too short for the road illumination distance – quite close to the 1st part – if we accept lines 3&4, we have more space to include all the variables – the blue box is the most acceptable figure – how may countries without technical basis could request 0,2 for line 1? – blue line as it is the best compromise

Derwin Rovers: his view is similar to Antoine Pamart and Valter Genone – his understanding it was a consensus with the blue box in Warsaw – it could be acceptable – experience in GRE some could ask to move the line 1 – alternatives with lines 8 or 9 and feedback – blue box acceptable for the time being

Satoshi Tsukamoto: agrees with blue line but for line 1 they need clear evidence and justification why we can relax the requirement – otherwise Satoshi Tsukamoto as Japan will propose to move line 1 at 0.2%

Phil Bailey: in Warsaw and according to information provided we had a broad consensus on the blue box – it is the starting point – we need to provide sufficient justification for having confidence on it – broad agreement to justify – if we cannot justify in writing lines 1, 2, 3 & 4 – then he will not necessary support the blue box but with a good justification he could be confident from the 1lm justification, Klettwitz tests ...

Tomasz Targosinski: he also remembers the difficulty to combine – in Warsaw, we obtained the line 3 at the end of the meeting – some people was happy with it – he never agreed for it – even if he remembered what means according performance – 2 alternatives lines – similar as Phil Bailey – not consensus but many opinions – because this line destroys to have performance – justification is not clear until today – from Poland point of view the justification of OICA is not clear enough – 1.6% basic influence point is strange – therefore was proposed at last meeting lines 8 & 9 as performance lines – with this box there are more tolerances

Thomas Goldbach: the outcome is as WG to make a compromise – from Phil Bailey comments, we can start with the blue box with the justification – we have the basis – we can spend time to have this for the next meeting

Tomasz Targosinski: for him as expert of lighting, this 1lm criteria is not enough

Derwin Rovers: recalls in the meanwhile the TC4-45 is became an established standard as IEC– also discussed last time – in the future it can be improved

Tomasz Targosinski: the intention was to have tool to compare in the background – even if standard, he can be made clear evidence that it is not proper – easily questionable

Derwin Rovers: we have the CIE it is not pure measurement – it is a collection of a lot of data – for the scientific world, we need a certain balance

Antoine Pamart: relating to the Phil Bailey comment, he understands we spend a lot of time and make some progress – in favour to consider the blue box as starting point and to improve the justification – we have not to spend more time on it – clearly not sure to continue to attend this meeting according to the too few progress – next meeting will be the last time to improve the justification – too much time has been spent for too few progress – next session to discuss the justification

Derwin Rovers: maybe we could consider to spend a bit of time to have the key words just to be agree on the justification even if some elements are missing or we do not like

Tomasz Targosinski: has also some expectations

Phil Bailey: difficult to justify to attend next meeting if no document available before the meetings – we need in advance to have the justification to be able to analyse it

Jean-Marc Prigent: data are not easy to collect

Pauline Lejeune: we all drafting but we do not know what is the opinion of CPs on it

After break afternoon 2nd day

Pauline Lejeune: presents again the justification – it is the document already discussed during the 1st day

Phil Bailey: Concern with reference to CIE

Derwin Rovers: it is only for the justification not for the regulation

In the justification, 'OICA' or any other 'CPs' should be deleted to have 'IWG VGL'

Phil Bailey: it should be clearly says how CoP will work → proposes to talk about the limits including CoP without more information to be as clear and simple as possible - We also need to clean-up diagram

Tomasz Targosinski: again ask more evidence for line 3 – request for adding information related to PTI – what is the range needed according to present situation with good automatic levelling in comparison with a manual levelling? – how much OEM needs for manual and automatic levelling?

Pauline Lejeune: 1.6% does not take into account this point

Valter Genone; it is the same

Pauline Lejeune: try to precise the question

Pascal Vetter: according to the range of steps of the manual levelling

Tomasz Targosinski: who understand his request?

Derwin Rovers: to provide a good performance

Valter Genone: according to his experience, this will be exactly the same

Pauline Lejeune: supports

Thomas Goldbach: automatic system has also different steps – the automatic is not a continuous system and works also per steps – small interval to be compared with manual – he has to check it

Pascal Vetter: for what is this explanation needed because we will be always in the box independently of the technology – OEM can choose the steps

Jean-Marc Prigent: according to his own experience in his previous company, it depends of the set makers

...

Tomasz Targosinski: we have present box

Pauline Lejeune: explains the current situation with the levelling – the electronic order is the same but because the behaviour of the vehicle is different, so it will not behave in the same way – when we have both systems on a vehicle, they will work in the same way because the behaviour of the vehicle is the same

Tomasz Targosinski: for which kind of system we need this 1.6%

Valter Genone: we are talking about the regulation – we use exactly the same system – only small setting – same system if possible – this is independent of the requirement – we have requirements and we have to be inside

Thomas Goldbach: the challenge is line 3

Pauline Lejeune: you are mixing up the 1.6% with the accuracy of the type of levelling device – the number of steps can be the same or not for manual or automatic levelling devices – this is accuracy of the system – this is not the tolerance

Tomasz Targosinski: requests including manual or automatic levelling

→ **See conclusions written and shared during the meeting in VGL-08-13**

Item 6 – Improvement of the justification to the non-criterion of decision for the type of levelling device

VGL-08-11 – Justification for the deletion of the 2000lm criterion

Jean-Marc Prigent: suggests to ask Phil Bailey & Thomas Goldbach their opinions because they were not able to attend the last meeting

Phil Bailey: comes back on the complains that vehicles with high mounting height headlamps are making glares and then maybe an artificial criterion may be needed to avoid any glare.

Tomasz Targosinski: reminds that during the Kletwitz tests, it was found that glare is independent from the type of light sources - so the amount of luminous intensity is another parameter to be verified as a possible cause of glare - some more tests should be done to verify.

Phil Bailey: Germany was not present → their opinion? - we have to consider also their views even if they are not here today – one important point is the perception = it is bright

Tomasz Targosinski: many factors have to be taken into account

Valter Genone: different characteristics according to night town increase the glare / disturbance – this is the reason why 1st requirement was indicated according to the light sources – well never officially explained – now the situation is different because of the performance halogen LS, LED – the light sources have more disturbance than another one – the problem with the 2000lm is not the 2000lm itself – it is not corresponding to the LED – more correct factors have to be found – when we decide the 2000lm, it was for the LED instead of the headlamp not easy to define – to have something – from a technical point of view there is a different point of view – it is correct to delete – not replace can be discussed but not necessary

Tomasz Targosinski: request from GRE was to have an automatic or manual levelling because at that time, we had 3 choices nothing/manual/automatic – the performance between manual and automatic device are different – the manual does not need precision – from the past it was decided to define 2 different types of levelling device according to the type of the light source – it cannot be justified – the base is not proper – with OICA/GTB proposal and Polish proposals even if both have some logic, we have to have proper levelling device – guarantee to use any device to be inside tolerances – of course open question if manual device can guarantee in one step or two steps – it is not matter according to the performance – 2 different issues –

Phil Bailey: it remains that the general acceptance because of manual levelling is not used – there is a brightly you get because the not proper use of the levelling – it is to understand

Discussion about the colour and other parameters of new technologies between Phil Bailey, Valter Genone and Tomasz Targosinski.

Pauline Lejeune: we do not need it so often - usually the driver will regularly drive by himself – with current limits this will need a manual device in general

Antoine Pamart: supports that the wording is not so understandable - the subject have been discussed several times in the past – France not opposed to use a manual device – the problem is to stay in the box whatever you use a manual or an automatic device – but if you use a manual device we have to work the ergonomic aspects because it is not correctly used – this is what France expressed – we could use the manual device but we have to work on it to improve its use

Tomasz Targosinski: this is the 2nd step

Antoine Pamart: yes for sure

Tomasz Targosinski: automatic/manual/both? What conditions to guaranty proper use? - asks to Contracting Parties present in the room if they can accept the principle of the proposal.

Thomas Goldbach: for the moment the 2000lm criteria is the criteria to decide the need of levelling – now we want to express we have to remain in the box whatever the mean we use – after this discussion, he understands what is behind this but here we need to improve the justification in this way – the 2000lm is no longer as criteria necessary when we have the box

Antoine Pamart: at the beginning we talked about the criteria of decision to choose the type of levelling device – the main idea is the deletion of the criteria of decision

Tomasz Targosinski: yes but the decision will be to bundle separately

Phil Bailey: some countries have very clear position on this topic

Thomas Goldbach: here few of CPs attended in this meeting, this fundamental issue has to be presented to GRE for having the feedback – currently only from UK, France, Italy, NL, Poland – we should work on this – with more explanation and asking for feedback

Phil Bailey: just to say our position is we want something to reduce glare – then the 2000lm can go from his view – justification to keep it – really insurance we do have a system good enough – if justification demonstrates we can move it then it is fine

Derwin Rovers: it is something we could consider – in general we think we are already today in the wrong way in some conditions – in our view we would rather view the manual levelling to properly to phase out – it could be because the technical development – we could consider this – it may be helpful to say that just in case of technologic system we could consider to have a sunset clause in there by saying we expected the

2000lm – they would be able to adapt, the box – this is the beginning of the end of the manual levelling – to be followed in the future in 10/15 years with matrix beam

Phil Bailey: when we try to get back the history, you had LS, lamps, levelling devices ... in the future we probably have more intelligent control system

Derwin Rovers: we have this fix pattern – it is the general case – if you have a very intelligent system and staying in the box – there is some merit – other CPs give a sort of guarantee in this time just to stop the wrong way

Tomasz Targosinski: 2 parts of this issue – if we forgot the 2000lm criteria and 2nd part to remain in the box – no/manual/automatic no need - this does not work with manual or automatic levelling - how to describe this general requirement?

Valter Genone: more or less deletion of manual levelling is more political than technical decision from the pressure of public – maintain manual levelling justifies nothing on the position of the control, how to use it Nothing is said – we can do something to improve the system – if nothing more than manual levelling we will have some concern

Tomasz Targosinski: we look for something impossible to define

Thomas Goldbach: we have to stay in the new box we have defined – for the manual device it should stay to consider some TPs – if we can improve this then he thinks we are in the right way – it is really needed TPs and improve requirements for manual levelling device – he is confident if we can improve it – to know when we can use it – for him, the right direction we should bring to the GRE and see what is the reaction from there

Derwin Rovers: supports – considering TPs – to improve the HMI – for instance with the intensity of the dashboard – fair indication what should be choosing – terribly lost with all information in the vehicle

Tomasz Targosinski: Poland also in favor not having this kind of criteria – the next part of this thinking how to guarantee the performance in term of road illumination

Jean-Marc Prigent: from his understanding, we are discussing about the performance based and the phase 2 with the ergonomics, visibility of the manual levelling

Tomasz Targosinski: device shall be such easy for the driver – the problem this device is not used

Jean-Marc Prigent: it is written in the ToR for phase 2 – if we have conclusions on the box we need TPs

Tomasz Targosinski: if we do something it does not matter – unexpected process – need TPs is obvious - prefers to talk about the effectiveness – in this future manual device is allowed we should work on it to have no trouble for the driver

Thomas Goldbach: based on discussions, it is important it gives us an improve to use also manual levelling – TPs kind of sunset clause saying for instance in 10 years the manual levelling should disappear – under conditions of the sunset clause we have to improve the HMI – we are now discussing this idea which has to be all together in the presentation to be discussed at next GRE in October than we can go further and develop the requirement

Derwin Rovers: ToR Phase 1 is at least – we can address that but we need to have a complete report for GRE – yes there are ToR – we do at least in phase 1 find a compromise with a solution to solve this problem and improvement of the beam

Pauline Lejeune: proposed to keep the sentence of the conclusion of the previous meeting

Phil Bailey: only is we go out of the box then we can have a manual levelling – justification for having different system

Pauline Lejeune: but in this case we replace the 2000lm criteria

Tomasz Targosinski: this is not the right direction – how to measure – the Philosophy is to be inside the box and to make proper things to be inside

Phil Bailey: the reason why he said that you could have very close to the edge

Tomasz Targosinski: we start play to be so far the border – you are always be ready to control to solve our problem we should stay in the box

Phil Bailey: agreed to stay in the box – if you go outside the box, manual levelling not used so often for very rare cases

Pauline Lejeune: ergonomics design

Antoine Pamart: it is quite difficult to imagine such kind of examples – we should stay technological neutral – important if we have to use the manual levelling device to have a good HMI

Phil Bailey: situation where you get outside, if you use the vehicle in a bad way you can cause problem – we annoy

Tomasz Targosinski: it was a part of the Polish proposal – the situations are allowed to use the switch with double tolerance – each car, each system can be different - prediction difficult

Phil Bailey: overriding we are aware the driver misused the levelling device

Tomasz Targosinski: yes but they are a lot of reasons with different nature

Phil Bailey: do the misuse – nothing changes the driver behavior – something to do to change the driver behavior

Pauline Lejeune: how often you need to by-pass the driver? – from statistic it is very rare – the cost benefit is positive or negative? – really negative is the OICA position – if significantly impact then OK – that was why the OICA/GTB suggested to have another criteria to define the need to use this manual levelling

Phil Bailey: at the moment he saw nothing to change the behavior and was one reason why some CPs asked for having automatic levelling

Tomasz Targosinski: it is possible to have manual levelling which guarantee the requirements – but difficult to try to solve all things about manual levelling – any kind of levelling should guarantee the general performance requirements – is not in favor to define another criteria to use manual or automatic levelling device

Phil Bailey: at the moment there is a large amount of vehicles – with the revised diagram we can have manual device

Pauline Lejeune: except for AFS

Phil Bailey: they want to have only automatic levelling because of the driver – how to improve the situation – for driver misuse and will be outside the box

Thomas Goldbach: we are discussing this issue in a wrong way – what we discuss today here, if we want to have in the future manual levelling we have to improve it – in staying with a performance approach without restrictive position for manual levelling – maybe with only 2 steps – we should try to this – misuse maybe we cannot avoid it

Phil Bailey: we would improve or reduce the misuse – something in place – currently we have vehicles having automatic levelling with glare issue

Thomas Goldbach: pitch angle

Phil Bailey: pitch sensibility

Thomas Goldbach: this is the base of our diagram

Derwin Rovers: yes absolutely pitch is the base

2ND DAY

Phil Bailey: if you take away – we need someplace to demonstrate – vehicle with bright light have a system

Tomasz Targosinski: we still have to define box

Phil Bailey: the possibility to take away

Tomasz Targosinski: what as group, do we have to do if we are not able to find a criteria? - a proper solution has to be found allowing the manual levelling – even if we stay with any criteria we still have concern for manual levelling – light source is not the right criteria

Valter Genone: agrees for equivalence for light source /glaring – could Phil Bailey make a proposal to explain this position on more glare? – it is not correct – since you have many complaints so you should have a lots of data – so please provide information

Phil Bailey: agrees with the 2000lm as not the good criteria – we can reduce the glare – no longer criteria is difficult – he does not if it is really necessary – criteria is not perfect but taking away shall give a similar insurance that could not glare

Valter Genone: not possible for us to give different criteria – our work is based on the conditions of glaring – light sources based, no evidence with difference – we can change this parameter – we have to say in GRE that the group is not able to find a solution

Phil Bailey: with his suggestion we can have more problem than before

Valter Genone: it has been analyzed – which vehicle have complaints? – are all light sources without correction?

Phil Bailey: at the present we have requirement but we need to do something to prevent glare and to improve the situation

Thomas Goldbach: following discussions, if you have problem to trust the German/NL proposal, we can accept automatic levelling to be in line with what you said and stop discussions here in our group – your main concerns are if we make the initial aim very close to the left side then the manual levelling has to be activated – possibility if you are using manual levelling we can introduce restrictions for the manual and if automatic then manufacturer free to choose anywhere in the box – you can discuss there is requirement for initial aiming for manual levelling with 0,2 from the diagram

Derwin Rovers: he would like to response to the intervention of OICA as compromise – we discussed about a phase-in on – the latest proposal was Germany/Japan with TPs – other alternative as mentioned by Thomas Goldbach, in case as OEM we can choose then if you choose manual levelling then there are additional requirements – perhaps like Phil Bailey, we give freedom – can be manual but additional requirements impose something on the initial aim – this is something we should explore

Antoine Pamart: from the beginning of the group, France is not convinced that the automatic levelling will solve all the glare problems – it was why we support to find a compromise – like Phil Bailey focus on the new limit of the box – France open to have technological neutral solution – agrees with OICA – we can still discuss about the left limit – the main equipment should be done with the definition of the new box – we could keep the

manual levelling device then we should focus in the 2nd step of the group on the improvement of this device especially for the ergonomics aspects to use it by the driver in a better way

Phil Bailey: supports the idea of OICA to have manual levelling more far of the border – but it is something the manual system by locating the initial aiming makes no sense

Tomasz Targosinski: shows new document

Thomas Goldbach: more important is the left side on the road for the glare so does not understand the interest of this document

Tomasz Targosinski: reminds we have mixture of situations especially with curves – current OICA/GTB & Polish proposals are not accepted – then if we want to keep a criteria we have to find it – in parallel still to be discussed the criteria of decision between manual or automatic levelling + the box – he proposed to stop to work on the criteria but to work on the manual/automatic levelling devices and the box

Thomas Goldbach: he thinks we already did this – we have the box – the manual levelling is the issue of Phil Bailey

Derwin Rovers: he thinks what you mean – we already considered the limits of the box – you are specifically referred to this particular criteria – that's part – this part to leave as it is – we already on that way – you confuse me, with the 2 boxes (on the whiteboard)

Tomasz Targosinski: the box for the Manual/Automatic levelling should be changed for something to guarantee to be in the box

Antoine Pamart: we should focus only on the box – we should not discuss what kind of levelling device – some requirements when the vehicle has to stay in the blue box in a second step

Tomasz Targosinski: current regulation is maybe not enough precized – the performances of the device are not described

Derwin Rovers: his understanding is very similar to Antoine Pamart – the principle is already in the regulation R48 – when we loaded we have to stay in the box – the other consideration, if we need correction, the choice is up to do but with additional requirements – we have to discuss the loading conditions and additional requirements in case the manual levelling is used

Tomasz Targosinski: you talked about manual/automatic, we try to avoid to define manual or automatic

Derwin Rovers: extra requirement in case of manual requirements to take into account the concerns expressed by Phil Bailey

Phil Bailey: it is not the driver who has to make some intervention to keep the aiming in the box

Tomasz Targosinski: it is like autonomous driving – this is the philosophy

Derwin Rovers: intervention of driver is needed – it is fully technological neutral

Thomas Goldbach: philosophical discussions – we have the box – we have to stay in the box

Tomasz Targosinski: criteria separating this doesn't describe the reality

Phil Bailey: concern – we do anything to solve this issue – we highlighted the distribution, slight curves – this group cannot fix

Tomasz Targosinski: very big difference according to the distribution – very big differences of effects – completely not proper – we need requirements for component, requirements for glare zone – it is really easy to restrict

Thomas Goldbach: misunderstanding of these graphs – right side is not so important – oncoming traffic is on the left

Phil Bailey: there are issues mentioned, this group cannot addressed

Derwin Rovers: even if the ToR, because of the geometry of the road we cannot solve all the glare issues

Tomasz Targosinski: the base of this is the 2000lm criteria – can we conclude the opinion of the group?

BREAK morning

Satoshi Tsukamoto: without any safeguard this cannot be accepted – same for PHIL BAILEY and Antoine Pamart

Antoine Pamart: do we need a justification? – Only a report to GRE is enough

→ **See conclusions written and shared during the meeting in VGL-08-13**

→ **Report to be done to next GRE to get feedback**

Item 7 – Conditions and process for loading - Discussion on counter-proposal from Italy

Presentation by **Valter Genone** of document VGL-08-03 to simplify the current loading conditions in the Annex 5 of the Regulation N°48

Phil Bailey: It is an interesting proposal – It seems to be based on evidences and confidential survey - The proposal will not simplify the tests but makes easier the procedure - However he is concerned about the worst case condition to be removed.

Valter Genone; argues that the worst case is very difficult in some design cases.

Phil Bailey: you say that worst case is the unrealistic case - this design cases should not be a rule for deletion of this worst loading.

Antoine Pamart: He is not oppose to simplify the Annex 5 – but we need to keep the worst case and all current loading conditions – even if it is rare, we have to check this case – But in case of the worst loading condition, it could be possible to adapt the Regulation to avoid this test in specific conditions.

Derwin Rovers: invoke to consider the worst case but it should be realistic – but if we need gold bar instead of sand, he started to wonder if it makes sense – we need a degree of realism in the distribution of the load – he supports the comment from Antoine Pamart to improve the wording: when it could not be possible to put the whole weight in the rear trunk, then to allow to adapt the distribution also on the rear seats in addition to the trunk

Tomasz Targosinski presents some examples of loading → **See document VGL-08-04**

Derwin Rovers confirms that we are not discussing about the maximum weight allowed but how to share this weight in the vehicle

Antoine Pamart supports.

Phil Bailey: There are extreme cases in the life of a vehicle

Thomas Goldbach: according to the examples in VGL-08-04, we are touching some fundamental of R48 – R48 is the approval of the vehicles and not the vehicle with the trailer – Do we need to consider the trailer – From our side, we have shown the extreme loading conditions with gold bars this is unrealistic in the real world – this will not happen – with the towing then we have to change the approach of the R48

Derwin Rovers: if artificial things have to be done for the test so is it really made sense? –he think we should have a degree of realism

Valter Genone: not allow more than xx kilos according to the maximum mass technically allowed – we stay in the maximum – we are not talking about overload

Phil Bailey: there is a possibility of having 100kg even if gold bar.

Tomasz Targosinski continues to present the document VGL-08-04 with some extreme examples - those examples are the reality and if we want to modify the Regulation according to reality as mentioned by Italy, we have to think about those examples - He proposes to define the maximum and minimum loading conditions.
Intense discussions according to the different examples

Derwin Rovers: slide 6 really unrealistic to have all this load in the back

Antoine Pamart: from the slide 6, he makes a reference to the test method for approval – we could start test with the left example on the picture – if all not possible in the trunk, then we add the load in the rear row of seats – the logic could be the same for the front

Phil Bailey: what density of the load – the volume also has to be taken into account – we should define – we still need to take into account the maximum rear axle – how to determine the max and min pitch angles – to determine very quickly – he is not interesting in the weight or how to share it but by the pitch angle after loading

Tomasz Targosinski: page 10, example with packing cartons – what is the content? Books? ... – Page 11, example with bicycles on a bike carrier not cover by the regulation – similar to page 4 –

Pauline Lejeune: this is trailer related because on the towing device – 18kg

Tomasz Targosinski: there are examples of reality – extreme pitches – whiteboard → behaviors of vehicle are not linear

Pauline Lejeune; there is a relationship but it is not proportional - explained the worst case with all the load in the trunk– from a certain mass, the vehicle will be in abutment and the pitch will no longer vary

Thomas Goldbach: where do these pictures come from? – we have max permissible load for each vehicle with approval accordingly – it is the current system – we have to accept that – he agrees to take into account the towing and to see what can be done – when we discussed the 50% loading condition, it was because this situation with 100% loading condition does not happen – from Italian proposal, we keep the extreme conditions – we have to simulate – we should be a little realistic and not everytime in theory – another thing, here we do the loading conditions in a physical condition – this means we, as OEM, have to do this with software – we have no physical vehicles when we design our vehicles – we have to do with calculations – we should stop this discussion in theory

Valter Genone: in calculation of vehicles – headlamp levelling is the last of topic because a lot of other problems more sensitive to safety as braking ...

LUNCH TIME

Tomasz Targosinski: during lunch time, he prepared a document about the way of loading and the resulting curves according to the reality → see VGL-08-15 – he explains this new document

Pauline Lejeune: it clearly shows there is a big misunderstanding between real life and theory - The picture for Polish proposal is not true, the 1st drawing creates a misunderstanding – what is shown here is not realistic on vehicles - For R48, the mass is also in the trunk and not on the axle – In real life, each vehicle has a 'stop' position on mechanical structure or the vehicle will be broken - there is a point where the vehicle will not move anymore - At this 'stop' position, there will not be any more pitch variation. – the curve and the blue point - with the R48 the blue point is above the blue point of the Polish proposal but not at the end of vehicle
Debate and 'demonstration' with a 'toy car'.

Valter Genone: there is something wrong in the loading conditions – for something that is not prove.

Tomasz Targosinski: it is not including – the picture/drawing showed are not representative of the Italian proposal

Antoine Pamart: this makes the Italian proposal more complex than it is – we have to make test to reach the worst case – we can discuss how to load the vehicle to reach this worst case – as suggested this morning in starting with the trunk

Phil Bailey: the current requirements – we do not have physical assessment for gold bar – he had a look on very popular vehicles – we actually cover max rear axle

Antoine Pamart: we will also be consistent with the R0 – due to the trailer on the rear axle – the worst case is the maximum load on the trunk – with realistic loading conditions

Tomasz Targosinski: if you load behind the rear axle you decrease

Antoine Pamart: according to his experience, he never need to add load on the rear row

Valter Genone: it is not really true that it is not cover by the R48 – the max load in the trunk – this covers also load outside the vehicle – we cannot pass the maximum mass

Valter Genone: for normal car you have the same result

Valter Genone: it never happens what has been presented by Tomasz Targosinski – correction of headlamp is the last problem because of the lot of other more important safety issue

Phil Bailey: is it reasonable we should not modify the current R48 – R48 is imperfect but not productive to all time to trick it

→ **Decision = no modification of the current Annex 5**

→ **See conclusions written and shared during the meeting in VGL-08-13**

Item 8 - Preparation of the Phase 2 (if enough time)

Item 9 - Homework and preparations to next meeting

Feedback from industry on lines 7 & 8:

OICA was supporting the blue line 3 from Warsaw. After the lines 7 & 8 were proposed, OICA is still in process to collect feedback from the different OEMs and to come back September.

Thomas Goldbach is then pointing out that the diagram is not finalized yet and also we will decrease the road illumination distance. If we can keep the blue line 3, the visibility will stay for most of vehicle 50m. Do we want to discuss it again or go for another discussion in September?

Antoine Pamart was thinking the consensus in Warsaw was clear. Then alternatives came in 7th session. He is interesting in the feedback but he can also accept the 'blue box' except on the line 1 to be still discussed.

Valter Genone, from practical point of view and after few explanations, he can support the 'blue box' as the most acceptable. On the line 1, some countries could consider that the horizontal line is not acceptable. Possibility to move line 1 to 0.2.

Derwin Rovers also understood in Warsaw there was a consensus and the 'blue box' is acceptable. However, for GRE, it could be that line 1 could move to 0.2 too.

Satoshi Tsukamoto also agrees on 'blue box' except on the line 1 that could be moved to 0.2 or strong justification is needed.

Phil Bailey was also understanding the 'blue box' was like a consensus without his full acceptance. To write the justifications for the different lines and it will be a base for discussion.

→ **Justification is really needed to help most of the Contracting Parties present in the room**

Tomasz Targosinski remembers that the line 3 was defined at the end of the session and never the Poland agreed to it. Poland didn't treat it as a consensus. He still asking for data as the previous ones were confidential.

Thomas Goldbach understands that in this kind of group, a consensus is not satisfying all parties and this is the game. OICA will try to get information and feedback for the next session in 3 months.

→ **To get information from Gert Langhammer about this 1 lumen issued from the CIE standard. Seems Gert Langhammer is better.**

Derwin Rovers points out that using a standard for extracting a value (1 lumen) is a good justification and we should always debate on the validity of this standard.

Antoine Pamart asks strongly that the Justification should be finalized on the next session and full stop. The 'blue box' is a good base for the discussion and then move on.

Support from **Derwin Rovers** and asks if we can spend some time after the meeting to discuss about the justification to make clear the open points.

Review of the justifications for open points to be explained:

To refer not to the VGL-05-04 but to the GRE document from GTB/OICA.

1 lumen: get info from Gert Langhammer and support from Tomasz Targosinski.

Concern about the heights over 1.2m for heavy trucks due to line 7.

For line 1, we can use the line 7 with the oncoming eyes height at 0.94m and 0.8 is below this so this is more safer

Thomas Goldbach thinks it is needed to import most of the references from other documents in this one to avoid jumping to one to the other.

Satoshi Tsukamoto expresses the point of view for Line 1 to be moved to 0.2D to 0.

Line 4: to add this is a performance based requirement. To check the explanations from Tomasz Targosinski in Warsaw and add it to the justification.

Then decision to remove history and CPs' name.

To not forget to include the CoP in. To compare with the old CoP box to be able to compare the same idea.

Line 3: difference between ideal world and real word.

Request from **Tomasz Targosinski** to have information to be verified independently.

Question of the accuracy of steps from manual or automatic levelling devices. **Tomasz Targosinski** is still thinking this is important but this is technological based. Request to be prepared for next time to allow everyone to understand clearly the point from Poland.

For the 1.2m and over, it is less important for the moment and it will come later.

- ***According to the 8th session discussions, OICA will provide for next meeting an improved justification from the inputs and requests of all IWG VGL experts***
- ***See conclusions written and shared during the meeting in VGL-08-13***