

## Proposal of requirements by category based on the consolidated document (ACSF-06-28).

Green bold texts in the yellow cells are Japanese proposals.

The orange cells are the reflection of the result in CP meeting 31.5 - 1.6.2016.

**Category C and D are assumed only as the lane change function to simplify this table. Thus, respective regulations shall be applied together for combined function, e.g. C+B1.**

Cat. B2	Cat. C	Cat. D	Cat. E
* (5.1.6.1.)	* (5.1.6.1.)	* (5.1.6.1.)	5.1.6.1. Whenever an Automatically Commanded Steering function becomes active, this shall be indicated to the driver. Any termination of control shall produce a warning, in accordance with the requirements of paragraph 5.4.3.
* (5.4.3.)	* (5.4.3.)	* (5.4.3.)	5.4.3. Special Warning Provisions for Automatically Commanded Steering Functions
* (5.4.3.1.)	* (5.4.3.1.)	* (5.4.3.1.)	5.4.3.1. Any termination of control initiated by the system (i.e. when the active mode is automatically deactivated by the system), other than specified in 5.6.1.4.7 and 5.6.4.4.7 shall produce a distinctive driver warning including visual warning and either an acoustic warning or an haptic warning until the driver has resumed steering control or the vehicle is at standstill. The same warning as for a transition demand maybe used. In the case of ACSF category A, a short [but distinctive] warning is deemed to fulfill the warning requirement above. In the case of ACSF category B1, no warning is necessary.
* (5.5.2.)	* (5.5.2.)	* (5.5.2.)	5.5.2. It shall be possible to verify in a simple way the correct operational status of those Complex Electronic Systems, which have control over steering. If special information is needed, this shall be made freely available. It shall be possible to verify the correct operational status of those Electronic Systems by a visible observation of the failure warning signal status, following a "power-ON" and any bulb check. In the case of the failure warning signal being in a common space, the common space must be observed to be functional prior to the failure warning signal status check. [In the case of an ACSF system able to operate at higher speed than 10km/h, it shall be possible to confirm the failure warning signal status via the use of an electronic communication interface.] <del>In the case of an ACSF system, it shall be possible to confirm the valid software version</del> <b>related ACSF performance of the-</b>
* (5.5.2.1.)	* (5.5.2.1.)	* (5.5.2.1.)	5.5.2.1. At the time of Type Approval the means implemented to protect against simple unauthorized modification to the operation of the verification means chosen by the manufacturer (e.g. warning signal) shall be confidentially outlined. Alternatively this protection requirement is fulfilled when a secondary means of checking the correct operational status is available, e.g. by using an electronic communication interface.
* (5.6.)	* (5.6.)	* (5.6.)	5.6 Special Provisions for Automatically Commanded Steering Functions Information about the transition procedure and the consequences of delayed or omitted take over of the steering shall be provided to the users of the vehicle, at least in the owners manual.
5.6.4. Special Provisions for ACSF of Category B2	5.6.3. Special Provisions for ACSF of Category C  Any system of Category C ACSF shall fulfill the following requirements. <b>The category C shall comprise at least the category B1 specified in paragraph 5.6.5. or B2 specified in the paragraph 5.6.4.. In this context, the any relevant functions required in category B1 or B2 other than controls for keeping lane the vehicle within the lanes or assisting continuously the driver in keeping the vehicle with in the chosen lane shall be continued to function even while the category C is activated.</b>	5.6.2. Special Provisions for ACSF of Category D  Any system of Category D ACSF shall fulfill the following requirements. <b>The category D shall comprise at least the category B1 specified in paragraph 5.6.5. or B2 specified in the paragraph 5.6.4.. In this context, the any relevant functions required in category B1 or B2 other than controls for keeping lane the vehicle within the lanes or assisting continuously the driver in keeping the vehicle with in the chosen lane shall be continued to function even while the category D is activated.</b>	5.6.1. Special Provisions for ACSF of Category E  Any system of Category E ACSF shall fulfill the following requirements.
* (5.6.4.1.)	* (5.6.3.1.)	* (5.6.2.1.)	5.6.1.1. General

<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.1.1.)</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.3.1.1.)</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.2.1.1.)</p>	<p>5.6.1.1.1. [The system shall be active (deliver automatic steering) only after a deliberate action of the driver and if the conditions for operation of the system are fulfilled (all associated functions – e.g. brakes, accelerator, steering, camera/radar/lidar etc. are working properly).] Proposal: “Any safety system, other than ACSF, which is installed in the vehicle shall not be affected by activation or deactivation of the ACSF system.”</p>
<p>5.6.4.1.2. The vehicle <b>with ACSF Category B2</b> shall be equipped with a means for the driver to activate and deactivate the system. The deactivation shall be possible at any time. The activation of the system shall not be possible if the driver is not in the driver seat or if the <b>seatbelt safety belt for the driver</b></p>	<p>5.6.3.1.2. The vehicle <b>with ACSF Category C</b> shall be equipped with a means for the driver to activate and deactivate the system. The deactivation shall be possible at any time.</p>	<p>5.6.2.1.2. The vehicle <b>with ACSF Category D</b> shall be equipped with a means for the driver to activate and deactivate the system. The deactivation shall be possible at any time.</p>	<p>5.6.1.1.2. The vehicle <b>with ACSF Category E</b> shall be equipped with a means for the driver to activate and deactivate the system. The deactivation shall be possible at any time. The activation of the system shall not be possible if the driver is not in the driver seat or if the <b>seatbelt safety belt for the driver seat</b> is not fastened.</p>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.1.3.)</p> <p><b>Japanese proposal on the para 5.6.1.1.3. is also included on the para 5.6.4.1.3..</b></p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.3.1.3.)</p> <p>Underlined texts in Category E has been deleted. <b>Japanese proposal on the para 5.6.1.1.3. is also included on the para 5.6.3.1.3..</b></p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.2.1.3.)</p> <p>Underlined texts in Category E has been deleted. <b>Japanese proposal on the para 5.6.1.1.3. is also included on the para 5.6.2.1.3..</b></p>	<p>5.6.1.1.3. [<del>Deliberate Accelerating</del>, braking <b>or steering</b> operation by the driver shall take priority over a demand <del>for longitudinal movement</del> by the ACSF system. <del>Deliberate Accelerating operation by the driver shall take priority over a demand for longitudinal movement by the ACSF system.</del> <del>Deliberate Steering operation by the driver shall take priority over a demand for steering by the ACSF system.</del> <b>Notwithstanding the above, the operation by the driver may not take priority over a demand by the ACSF system when the system judges an improper operation by the driver.</b> The system may remain active provided that priority is given to the driver during the overriding period. The means to override the ACSF shall be indicated in the system information data. <u>A transition demand may be issued at the discretion of the vehicle manufacturer to request the driver for [an orderly] takeover.</u>]</p>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.1.4.)</p>	<p style="text-align: center;">delete</p>	<p style="text-align: center;">delete</p>	<p>5.6.1.1.4 The specified maximum speed V<sub>max</sub> shall not have a value of more than 130 km/h</p>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.1.5.)</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.3.1.4.)</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.2.1.45.)</p>	<p>5.6.1.1.5 The specified maximum lateral acceleration a<sub>ymax</sub> shall not have a value of more than 3 m/s<sup>2</sup> and, if V<sub>max</sub> is &gt; 60 km/h of less than 1 m/s<sup>3</sup>.</p>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.1.6.)</p>	<p style="text-align: center;">delete</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.2.1.56.)</p>	<p>5.6.1.1.6. The activated system shall at any time control the movement of the vehicle in such a way that the vehicle does not induce any safety critical situations and that the movements of the vehicle are clear to other road users.</p>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.1.7.)</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.3.1.56.)</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.2.1.67.)</p>	<p>5.6.1.1.7. The system status shall be indicated to the driver by a visual signal. The indication shall [at least] distinguish between stand-by, active and failure Mode. The indication shall be present as long as the relevant system status persists.</p>
<p>5.6.4.1.8. The vehicle <b>with ACSF category B2</b> shall be equipped with means to monitor at any time when ACSF is active a minimum range to the front (sFront), <del>to the right (sside), and to the left side (sside)</del> with the purpose to avoid or to mitigate collisions. <b>This requirement shall be confirmed in the tests for Category B2 as specified in Annex 7.</b></p>	<p>5.6.3.1.68. The vehicle <b>with ACSF category C</b> shall be equipped with means to monitor at any time when ACSF is active a minimum range <del>to the front (sFront)</del>, to the right (sside), and to the left side (sside) and behind (sRear) the vehicle with the purpose to avoid or to mitigate collisions. <b>This requirement shall be confirmed in the tests for Category C as specified in Annex 7.</b></p>	<p>5.6.2.1.78. The vehicle <b>with ACSF category D</b> shall be equipped with means to monitor at any time when ACSF is active a minimum range <del>to the front (sFront)</del>, to the right (sside), and to the left side (sside) and behind (sRear) the vehicle with the purpose to avoid or to mitigate collisions. <b>This requirement shall be confirmed in the tests for Category D as specified in Annex 7.</b></p>	<p>5.6.1.1.8. The vehicle <b>with ACSF category E</b> shall be equipped with means to monitor at any times when ACSF is active a minimum range to the front (sFront), to the right (sside), and to the left side (sside) and behind (sRear) the vehicle with the purpose to avoid or to mitigate collisions. <b>This requirement shall be confirmed in the tests for Category E as specified in Annex 7.</b></p>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.1.8.1.)</p>	<p style="text-align: center;">delete</p>	<p style="text-align: center;">delete</p>	<p>5.6.1.1.8.1. The minimal range in front (sFront) of the ACSF vehicle shall be calculated according to the following formula: <math>S_{Front} = \frac{v_{ACSF}^2}{2 \cdot a_{ACSF}}</math></p>
<p style="text-align: center;">delete</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.3.1.68.1.)</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.2.1.78.12.)</p>	<p>5.6.1.1.8.2. The minimal range to the rear (sRear) of the ACSF vehicle shall be calculated according to the following formula: <math>S_{Rear} = d_{reaction, rear} + d_{brake, rear} + d_{safety, rear}</math></p>
<p style="text-align: center;">delete</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.3.1.68.2.)</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.2.1.78.23.)</p>	<p>5.6.1.1.8.3. The minimal range to the left and to the right (side) shall be at least 7 m (measured from the medium longitudinal centerline of the vehicle equipped with ACSF)</p>

<p>[5.6.4.1.9. The vehicle <b>with ACSF category B2</b> shall <del>identify have a means to detect</del> whether the <b>direction of traffic prescribed in the country (right / left hand traffic) rule of the road is left or right hand traffic</b>, and shall behave accordingly, <del>keeping left or right as far as possible. It shall overtake on the lane outside slower traffic and returning to the original lane, once a suitable distance ahead of the overtaken traffic.</del>]</p>	<p style="text-align: center;">[*] (5.6.3.1.7.)</p> <p>Japanese proposal on the para 5.6.1.1.9. is also included on the para 5.6.2.1.8..</p>	<p style="text-align: center;">[*] (5.6.2.1.89.)</p> <p>Japanese proposal on the para 5.6.1.1.9. is also included on the para 5.6.2.1.8..</p>	<p>[5.6.1.1.9. The vehicle <b>with ACSF category E</b> shall <del>identify have a means to detect</del> whether the <b>direction of traffic prescribed in the country (right / left hand traffic) rule of the road is left or right hand traffic</b>, and shall behave accordingly, <del>keeping left or right as far as possible</del>. It shall overtake on the lane outside slower traffic and returning to the original lane, once a suitable distance ahead of the overtaken traffic.]</p>
<p>5.6.4.1.10. The vehicle <b>with ACSF Category B2</b> shall fulfill the tests for Category B2, i.e. FU1, TR1, TR2, TR3, TR4, TR5, EM1 and EM2, as specified in Annex 7.</p>	<p>5.6.3.1.87. The vehicle <b>with ACSF category C</b> shall fulfill the tests for Category C, i.e. <del>FU1</del> and FU3, as specified in Annex 7. The test FU3 shall only be carried out until a single lane change was completed. Returning into the initial lane is not required.</p>	<p>5.6.2.1.910. The vehicle <b>with ACSF category D</b> shall fulfill the tests for Category D, i.e. <del>FU1</del>, FU2, FU3, <del>TR1, TR2, TR3</del>, TR4, <del>TR5</del>, <del>EM1 and EM2</del>, as specified in Annex 7.</p>	<p>5.6.1.1.10. The vehicle <b>with ACSF category E</b> shall fulfill the tests for Category E as specified in Annex 7.</p>
<p>[5.6.4.1.x. The vehicle <b>with ACSF category B2</b> shall detect the max. speed limit of the country, where it is used and shall not activate the ACSF system (CAT <b>B2</b>) above this speed limit..]</p>	<p style="text-align: center;"><b>delete</b></p>	<p style="text-align: center;"><b>delete</b></p>	<p>[5.6.1.1.x. The vehicle <b>with ACSF category E</b> shall detect the max. speed limit of the country, where it is used and shall not activate the ACSF system (CAT E) above this speed limit..]</p>
<p style="text-align: center;">* (5.6.4.2.)</p>	<p style="text-align: center;">* (5.6.3.2.)</p>	<p style="text-align: center;">* (5.6.2.2.)</p>	<p>5.6.1.2. Operation of ACSF</p>
<p style="text-align: center;">* (5.6.4.2.1.)</p> <p>5.6.4.2.1. The ACSF system of category B2 shall only operate if:</p> <ul style="list-style-type: none"> <li>- the vehicle is travelling on a road section which is not dedicated to pedestrians or bicyclists and which has a [physical or constructional] separation of traffic moving in opposite directions</li> <li>- any traffic that can affect the safe keeping of the vehicle in the lane is identified by equipment installed on the vehicle and</li> <li>- the vehicle equipment can analyze speed and distance of the identified traffic to ensure a safe lane keeping (e.g. does not cause a deviation to the flow, or direction of other traffic.)</li> </ul>	<p style="text-align: center;">* (5.6.3.2.1.)</p> <p>5.6.3.2.1. Any lane change manoeuvre shall be indicated only if:</p> <ul style="list-style-type: none"> <li>- the vehicle is travelling on a road section which is not dedicated to pedestrians or bicyclists and which has a [physical or constructional] separation of traffic moving in opposite directions and which has at least two lanes for the direction the vehicle is driving and</li> <li>- any traffic that can affect the safe manoeuvre is identified by equipment installed on the vehicle and</li> <li>- the vehicle equipment can analyze speed and distance of the identified traffic to ensure a safe manoeuvre (e.g. does not cause a deviation to the flow, direction of other traffic or considering left- or right-</li> </ul>	<p style="text-align: center;">* (5.6.2.2.1.)</p>	<p>5.6.1.2.1. Any lane change manoeuvre shall be indicated only if:</p> <ul style="list-style-type: none"> <li>- the vehicle is travelling on a road section which is not dedicated to pedestrians or bicyclists and which has a [physical or constructional] separation of traffic moving in opposite directions and which has at least two lanes for the direction the vehicle is driving and</li> <li>- any traffic that can affect the safe manoeuvre is identified by equipment installed on the vehicle and</li> <li>- the vehicle equipment can analyze speed and distance of the identified traffic to ensure a safe manoeuvre (e.g. does not cause a deviation to the flow, direction of other traffic or considering left- or right-hand traffic).</li> </ul>
<p style="text-align: center;"><b>delete</b></p>	<p style="text-align: center;">* (5.6.3.2.2.)</p>	<p style="text-align: center;">* (5.6.2.2.2.)</p>	<p>5.6.1.2.2. If a lane change manoeuvre is carried out, the correspondent direction indicator lamps shall automatically flash minimum 3 times prior the outside of the tyre of the vehicle's front wheel closest to the lane markings has touched the inside edge of the visible lane marking to which the vehicle is being drifted.</p>
<p style="text-align: center;"><b>delete</b></p>	<p style="text-align: center;"><b>delete</b></p>	<p style="text-align: center;">* (5.6.2.2.3.)</p>	<p>5.6.1.2.3. The lane change manoeuvre shall be completed, except the system detects an imminent critical situation or the system is overridden by the steering of the driver.</p>
<p>5.6.4.2.2. The activated system shall at any time ensure that the vehicle does not cross any lane marking.</p>	<p style="text-align: center;">* (5.6.3.2.4.)</p>	<p style="text-align: center;">* (5.6.2.2.4.)</p>	<p>5.6.1.2.4 The activated system shall prior and after a lane change manoeuvre ensure that the vehicle does not cross any lane marking.</p>

* (5.6.4.2.3.) ... a transition demand shall be initiated according to <b>the paragraph 5.6.41.4.4.</b> <b>Japanese proposal on the para 5.6.1.2.5. is also included on the para 5.6.4.2.3..</b>	delete	delete	5.6.1.2.5 Detection of unfastening seatbelt The system shall detect if the <del>driver's seatbelt</del> <b>driver's seatbelt safety belt for the driver seat</b> is unfastened. When the <del>driver's seatbelt</del> <b>driver's seatbelt safety belt for the driver seat</b> is detected to be unfastened a transition demand shall be initiated according to 5.6.1.4.4.
* (5.6.4.2.4.)	delete	delete: <b>Because this is the drivers responsibility who confirmed the lane change request.</b>	5.6.1.2.6 Driver availability recognition system The system shall comprise a driver availability recognition system that is active whenever the ACSF system is active. The driver availability recognition system shall detect that the driver is present in the driver seat and that he is available to take over the steering.
* (5.6.4.2.4.1.) ... with a max. duration of [15 s] a transition demand shall be initiated according to 5.6.41.4.3.	delete	delete: <b>Because this is the drivers responsibility who confirmed the lane change request.</b>	5.6.1.2.6.1 Driver not present When the driver is not present in the driver seat the system shall provide a distinctive warning until the driver is detected to be back in the driver seat or until a transition demand is initiated. When the driver is not back in the driver seat during the distinctive warning with a max. duration of [15 s] a transition demand shall be initiated according to 5.6.1.4.3.
* (5.6.4.2.4.2.) ... with a max. duration of [15 s] a transition demand shall be initiated according to the paragraph 5.6.41.4.3. <b>Japanese proposal on the para 5.6.1.2.6.2. is also included on the para 5.6.4.2.4.2..</b>	delete	delete: <b>Because this is the drivers responsibility who confirmed the lane change request.</b>	5.6.1.2.6.2 Driver not available to take over the steering The system shall check if the driver is available to take over the steering by permanently evaluating driver's activity. The means to detect driver's activity [(e.g. head and/or eye movement and/or input to any control element of the vehicle)] shall be selected by the manufacturer. When the driver does not show any activity for a time span of maximum [3] min the system shall provide a distinctive acoustic warning until appropriate actions of the driver are detected (e.g. the driver resumes manual control, <b>driver's response</b> ) or until a transition demand is initiated. When the system does not detect appropriate actions from the driver during the distinctive warning with a max. duration of [15 s] a transition demand shall be initiated according to 5.6.1.4.3.
* (5.6.4.3.)	* (5.6.3.3.)	* (5.6.2.3.)	5.6.1.3. System information data
* (5.6.4.3.1.)	* (5.6.3.3.1.)	* (5.6.2.3.1.)	5.6.1.3.1. Following data shall be provided together with the documentation package required in Annex 6 of this regulation to the Technical Service at the time of type approval
* (5.6.4.3.1.1.)	* (5.6.3.3.1.1.)	* (5.6.2.3.1.1.)	5.6.1.3.1.1. The values for $V_{smax}$ , $V_{smin}$ and $a_{ysmax}$ .
* (5.6.4.3.1.2.)	* (5.6.3.3.1.2.)	* (5.6.2.3.1.2.)	5.6.1.3.1.2. The conditions under which the system can be activated, i. e. when the conditions for operation of the system are fulfilled.
<b>5.6.4.3.1.3. Documentation about a minimum range to the front (sFront), the vehicle according to the paragraph 5.6.4.1.8..</b>	delete	<b>5.6.2.3.1.3. Documentation about a minimum range to the right (sside), and to the left side (sside) and behind (sRear) the vehicle according to the paragraph 5.6.2.1.8..</b>	<b>5.6.1.3.1.3. Documentation about a minimum range to the front (sFront), to the right (sside), and to the left side (sside) and behind (sRear) the vehicle according to the paragraph 5.6.1.1.8..</b>
* (5.6.4.3.1.4.)	delete	delete	5.6.1.3.1.4. Information about system boundaries at which the activated system shall issue a transition demand.
* (5.6.4.3.1.5.) <b>Japanese proposal on the para 5.6.1.3.1.5. is also included on the para 5.6.4.3.1.5..</b>	delete	delete	5.6.1.3.1.5. The specific values for time according to 5.6.1.54.2 which are foreseen for safe transition to manual <b>control steering</b> under different circumstances.
[*] (5.6.4.3.1.6.)	delete	delete	5.6.1.3.1.6. Documentation about the chosen strategies regarding the minimal risk manoeuvre which is foreseen depending on the given traffic situation.
[*] (5.6.4.3.1.7.)	delete	delete	5.6.1.3.1.7. Documentation about the chosen strategies regarding the emergency manoeuvre which is foreseen in different sudden critical events.

* (5.6.4.3.1.8.)	delete	<b>delete:</b> Because the driver has confirmed the lane change request.	5.6.1.3.1.8 Information about the driver availability recognition system: - how it detects the presence of the driver in the seat and - how it detects driver availability to take over the steering and - how it evaluates driver's activity and - how it detects appropriate driver activities after a distinctive warning
* (5.6.4.3.1.9.) Japanese proposal on the para 5.6.1.3.1.9. is also included on the para 5.6.4.3.1.9..	* (5.6.3.3.1.3.) Japanese proposal on the para 5.6.1.3.1.9. is also included on the para 5.6.3.3.1.3..	* (5.6.2.3.1.48.) Japanese proposal on the para 5.6.1.3.1.9. is also included on the para 5.6.2.3.1.4..	5.6.1.3.1.9 Information about how the failure warning signal status and the confirmation of the valid software version <b>related ACSF performance</b> can be checked via the use of an electronic communication interface.
* (5.6.4.3.1.10.) Japanese proposal on the para 5.6.1.3.1.10. is also included on the para 5.6.4.3.1.10..	* (5.6.3.3.1.4.) Japanese proposal on the para 5.6.1.3.1.10. is also included on the para 5.6.3.3.1.4..	* (5.6.2.3.1.59.) Japanese proposal on the para 5.6.1.3.1.10. is also included on the para 5.6.2.3.1.5..	5.6.1.3.1.10 Documentation about which system software version <b>related ACSF performance</b> is valid. This documentation shall be updated whenever a software version was amended.
* (5.6.4.4.)	delete	* (5.6.2.4.)	5.6.1.4. Transition demand and system operation during transition
* (5.6.4.4.1.)	delete	5.6.2.4.1. If the system detects <del>that its boundaries are reached or will be reached shortly or in case of</del> a system failure it shall provide a transition demand.	5.6.1.4.1. If the system detects that its boundaries are reached or will be reached shortly or in case of a system failure it shall provide a transition demand.
* (5.6.4.4.2.) Japanese proposal on the para 5.6.1.4.2. is also included on the para 5.6.4.2.2..	delete	<b>delete</b>	5.6.1.4.2. The timing of the transition demand shall be such that sufficient time is provided for a safe transition to manual <b>control steering.</b>
* (5.6.4.4.2.1.)	delete	<b>delete</b>	5.6.1.4.2.1 In case of normal operating conditions and in case that the system anticipates that system boundaries will be reached a transition demand shall be given not later than 4 s before system boundaries are reached.
* (5.6.4.4.2.2.)	delete	<b>delete</b>	5.6.1.4.2.2 In case of a sudden unexpected event with imminent danger of a collision a transition demand shall be given immediately and an emergency manoeuvre shall be initiated.
* (5.6.4.4.2.3.) Japanese proposal on the para 5.6.1.4.2.3. is also included on the para 5.6.4.4.2.3..	delete	<b>delete</b>	5.6.1.4.2.3 In case of a sudden unexpected event without imminent danger of a collision a transition demand shall be given immediately and the system shall follow the [system/basic]* <b>designed</b> path for at least [4 s] after the transition demand, in the following cases • if the speed of the vehicle with activated ACSF exceeds v <sub>max</sub> , or • if the vehicle with activated ACSF and a specified V <sub>max</sub> > 60 km/h reaches a lateral acceleration of more than a <sub>y</sub> max , or • if a system boundary is reached due to a missing lane marking, or <del>• if a single sensor failure occurs</del>
* (5.6.4.4.3.) Japanese proposal on the para 5.6.1.4.3. is also included on the para 5.6.4.4.3..	delete	<b>delete</b>	5.6.1.4.3. If a transition demand is given because a driver availability recognition system according 5.6.1.6, the system shall follow the [system/basic]* <b>designed</b> path for at least [4 s] after the transition demand has started.
* (5.6.4.4.4.) Japanese proposal on the para 5.6.1.4.4. is also included on the para 5.6.4.4.4..	delete	<b>delete</b>	5.6.1.4.4. The system shall provide a transition demand if the <del>driver's seatbelt</del> <b>safety belt for the driver seat</b> is unfastened or if the driver's seat is left by the driver. In this case the system shall follow the <b>designed initial</b> path at least [4 s] after the transition demand.
* (5.6.4.4.5.)	delete	5.6.2.4.25. In case of <del>other</del> a failures <del>than a single sensor failure</del> a transition demand shall be given immediately and the system shall initiate the fail-safe strategy as declared by the manufacturer in Annex 6 of this regulation, as soon as the failure is detected.	5.6.1.4.5. In case of other failures than a single sensor failure a transition demand shall be given immediately and the system shall initiate the fail-safe strategy as declared by the manufacturer in Annex 6 of this regulation, as soon as the failure is detected.

* (5.6.4.4.6.)	delete	delete	5.6.1.4.6. In case the vehicle is fitted with a built-in infotainment system, content visible to the driver, which is not relevant for driving, shall be deactivated as long as a transition demand is issued.
* (5.6.4.4.7.)	delete	delete	5.6.1.4.7. The transition demand shall be provided by a visual warning signal and either an acoustic warning signal or by imposing a haptic warning signal. The warning shall be escalating with time in terms of enlarging the intensity of the warning and/or in terms of adding and/or changing the warning means, or start immediately with the highest intensity level.
* (5.6.4.5.)	delete	delete	5.6.1.5. Minimal Risk Manoeuvr
* (5.6.4.5.1.)	delete	delete	5.6.1.5.1. If the system detects that after a transition demand the driver does not take over manual control of the steering again the vehicle shall carry out a minimum risk manoeuvre not later than 4 s after the start of the transition demand. <b>Alternatively the minimal risk manoeuvre may start at the beginning of the transition demand.</b>
* (5.6.4.5.2.)	delete	delete	5.6.1.5.2. It shall at any time be possible to override the minimal risk manoeuvre by the driver. The system may be designed to exclude unintended override.
* (5.6.4.5.3.) Japanese proposal on the para 5.6.1.5.3. is also included on the para 5.6.4.5.3..	delete	delete	5.6.1.5.3 The hazard <del>warning signal-lights</del> shall be activated automatically not later than 10 s after the start of the minimal risk manoeuvre. Additionally, an acoustic warning device may be permitted to warn the other road users.
* (5.6.4.6.)	delete	delete	5.6.1.6. Emergency Manoeuvre
* (5.6.4.6.1.) ....(e.g. by braking the vehicle and/or by steering within the lane)	delete	delete	5.6.1.6.1. If the activated ACSF detects that due to a sudden unexpected event the vehicle is in imminent danger of a collision and that the time for a safe transition procedure is too short, an emergency manoeuvre shall be carried out (e.g. by braking the vehicle and/or by steering).
* (5.6.4.6.2.)	delete	delete	<b>5.6.1.6.2. It shall at any time be possible to override the emergency manoeuvre by the driver. The system may be designed to exclude unintended override.</b>
* (5.6.4.7.)	delete	delete	5.6.1.7. Longitudinal control and protective deceleration
* (5.6.4.7.1.)	delete	delete	5.6.1.7.1. Any vehicle equipped with an ACSF of category E shall be able to control the longitudinal speed of the vehicle.
* (5.6.4.7.1.1.)	delete	delete	5.6.1.7.1.1. If the activated system detects that the distance to other road users in front is less or will shortly be less than the foreseen safety distance a protective deceleration shall be carried out until the foreseen safety distance is reached again.
* (5.6.4.7.1.2.) Underlined texts in Category E has been deleted.	delete	delete	5.6.1.7.1.2. If the activated system detects that due to a sudden unexpected event the vehicle is in imminent danger to collide with another road user in front and that the time for a safe transition procedure is too short, a protective deceleration as emergency manoeuvre shall be carried out. <u>Only in case a lane change can be carried out safely, alternatively a lane change manoeuvre can be carried out to prevent the collision.</u>
* (5.6.4.7.1.3.)	delete	delete	5.6.1.7.1.3. The protective deceleration must be able to deliver full braking force of the vehicle in order to achieve a maximum deceleration.
* (5.6.4.8.)	delete	delete	5.6.1.8. Data Storage System for ACSF (DSSA)
* (5.6.4.8.1) Japanese proposal on the para 5.6.1.8.1. is also included on the para 5.6.4.8.1..	delete	delete	[ 5.6.1.8.1. The DSSA shall record and store the data during the operation of the ACSF in order to demonstrate that if the ACSF had operated properly in align with the relevant requirements in case of a road accident The DSSA shall be fitted in the vehicle <del>and should not contain any radio interface</del> . The DSSA shall be designed to ensure data security and data protection and shall be protected against tampering and misuse. The driver and the passengers of the vehicle have to be adequately informed about the data capture. Principally, they shall be enabled to decide by themselves by several options about the processing of the data

<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.8.2.)</p> <p>Japanese proposal on the para 5.6.1.8.2. is also included on the para 5.6.4.8.2..</p>	delete	delete	<p>5.6.1.8.2 The DSSA shall record <b>at the trigger when frontal air bag deployment, or change in vehicle velocity in the longitudinal direction, that not less than 8 km/h within a 150 ms interval,</b> and store following data:</p> <ul style="list-style-type: none"> <li>☒ <b>GPS-time Information about time based on trigger</b></li> <li>☒ <b>GPS-Location</b></li> <li>☒ Information about the ACSF status <b>(including off-mode of ACSF)</b> <ul style="list-style-type: none"> <li>• Information about failures</li> <li>• Information about transition demands</li> <li>• Information about minimal risk manoeuvre</li> <li>• <b>Information about deliberate action (eg. takeover of the steering by the driver)</b> <ul style="list-style-type: none"> <li>▪ <b>Information about Emergency Manoeuvre</b></li> </ul> </li> </ul> </li> <li>☒ <b>Information about Mode Trigger</b> <ul style="list-style-type: none"> <li>System boundary, Transition demand</li> </ul> </li> <li>☒ <b>Information about signal/display information</b> <ul style="list-style-type: none"> <li>Stand-by, Active, Failure, Direction Indicator, Hazard warning signal</li> </ul> </li> <li>☒ <b>Information about conditions of system activation (e.g. Vehicle speed, Acceleration control, Braking control, Steering control)</b></li> </ul>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.8.3.)</p>	delete	delete	<p>5.6.1.8.3. The recorded data shall not be deletable and not be volatilized in the DSSA without any deterioration [for at least [6] month].</p>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.8.4.)</p>	delete	delete	<p>5.6.1.8.4. If The special tools are necessary to get access to recorded data, the tools shall be made available by the manufacturer to the authorities by the manufacturer , the driver and the passengers of the vehicle and the vehicle owner.</p>
<p style="text-align: center;">*</p> <p style="text-align: center;">(5.6.4.8.5.)</p> <p>Japanese proposal on the para 5.6.1.8.5. is also included on the para 5.6.4.8.5..</p>	delete	delete	<p>5.6.1.8.5. The DSSA shall record at least for <b>[3015]</b> seconds prior to <b>and <del>[10]seconds after</del></b> an accident.</p>