Discussion paper on parameters of R13 Annex 21 Appendix 2 1.1. i

	Proposal of AMEVSC IG	**Proposed amendments to Proposal of AMEVSC IG**	Mandatory	Deletion	Justification
(a)	Vehicle category:	(Deletion)		*	'Vehicle category' and 'Character of the vehicle' are no numerical values and not suitable for a parameter. They are described in Appendix3 Vehicle stability function simulation tool test report.
(b)	Character of the vehicle;	(Deletion)		*	
(c)	Vehicle configuration(s) (e.g. 4x2, 6x2, etc., identifying axle functionality (e.g. free running, driven, lifted, steered) and position);	No change compared to proposal of AMEVSC IG	*		
(d)	Additional steering axles (e.g. forced steering, self-steering);	Additional steering axles **(if fitted)**(e.g. forced steering, self-steering);	* **if fitted**		This paragraph applies only to vehicles which are equipped with additional steering axles.
(e)	Steering ratio;	(This paragraph is same as proposal of AMEVSC IG.)	*		
(f)	Drive axles (effect on wheel speed sensing and vehicle speed);	Drive axles **configuration(s)** (effect on wheel speed sensing and vehicle speed);	*		
(g)	Lift axles (detection/control and wheelbase change effect when lifted);	Lift axles **(if fitted)**(detection/control and wheelbase change effect when lifted);	* **if fitted**		This paragraph applies only to vehicles which are equipped with lift axles.
(h)	Engine management (communication, control and response);	Engine management **(when necessary)**(communication, control and response);	* **when necessary**		There may be cases where the engine management is performed by a hardware system. In this case the engine management is not installed in the simulation tool.
(h')		**Engine characteristic value (e.g. engine torque);**	*		Paragraph(h') is inserted. Engine characteristic value is represented as numerical value to install in the simulation tool.
(i)	Gearbox type (e.g. manual, automated manual, semi-automatic, automatic);	(Deletion)		*	Gearbox type is not a numerical value and not suitable for a parameter. Paragraph (i') is inserted instead of this paragraph.
(i')		**Drivetrain characteristic value (e.g. transmission gear ratio, differential gear ratio, shift schedule);**	*		Drivetrain characteristic value which contains Gearbox characteristic value is represented as numerical value to install in the simulation tool.
(j)	Drive train options (e.g. retarder);	Drive train options **characteristic value (if fitted)** (e.g. **retarder torque**);	* **if fitted**		This paragraph applies only to vehicles which are equipped with drive train options.
(k)	Differential type (e.g. standard or self-locking);	(Deletion)		*	Differential type is no numerical value and not suitable for a parameter. Paragraph (i') which includes differential gear ratio is inserted instead of this paragraph.
(l)	Differential lock(s) (driver selected);	Differential lock(s) **(when necessary)**(driver selected);	* **when necessary**		This paragraph applies only to vehicles which are equipped with differential lock(s). There may be cases where a vehicle is equipped with a means to automatically disable EVSC to provide increased traction by modifying the functionality of the drive train. In this case parameter of differential lock(s) is not installed in the simulation tool.
(m)	Brake system type (e.g. air over hydraulic, full air);	(Deletion)		*	Brake system type or Brake type is not a numerical value and not suitable for a parameter. Paragraph(n') is inserted instead of this paragraph.
(n)	Brake type (e.g. disc, drum (single wedge, twin wedge, S-cam);	(Deletion)		*	
(n')		**Brake characteristic value (e.g. brake torque);**	*		Paragraph (n') is inserted. Brake characteristic value is represented as numerical value to install in the simulation tool.
(o)	Anti-lock braking configuration;	**EVSC/**Anti-lock braking configuration **(when necessary)**;	* **when necessary**		There is a case that actual EVSC/Anti-lock braking system ECU and/or Actuators are used as hardware of HILS system. In this case EVSC/Anti-lock braking configuration is not installed in the simulation tool. Furthermore, configuration is not suitable for a parameter because it is represented as a block-diagram in the simulation tool.
(p)	Wheelbase;	No change compared to proposal of AMEVSC IG	*		
(q)	Tire type (e.g. structure, category of use, size);	(Deletion)		*	Tire type is not a numerical value and not suitable for a parameter. Paragraph (q') is inserted instead of this paragraph.
(q')		**Tire characteristic value (e.g. rolling resistance moment, stiffness);**	*		Paragraph (n') is inserted. Tire characteristic value is represented as numerical value to install in the simulation tool.
(r)	Track width;	No change compared to proposal of AMEVSC IG	*		
(s)	Suspension type (e.g. air, mechanical, rubber);	(Deletion)		*	Suspension type is not a numerical value and not suitable for a parameter. Paragraph (s') is inserted instead of this paragraph.
(s')		**Suspension characteristic value (e.g. spring constant, Load-stroke, roll stiffness);**	*		Paragraph(s') is inserted. Suspension characteristic value is represented as numerical value to install in the simulation tool.
(t)	Centre of gravity height;	No change compared to proposal of AMEVSC IG	*		
(t')		**Moment of inertia;**	*		Paragraph (t') is inserted. Moment of inertia is required as a basic characteristic value.
(u)	Lateral acceleration sensor position;	Lateral acceleration sensor position **(when necessary)**;	* **when necessary**		There may be cases where the Lateral acceleration sensor position and/or Yaw rate sensor position is automatically adjusted to the center of gravity by EVSC system. Therefore the sensors' position in the simulation tool is placed at center of gravity regardless of their actual position in the vehicle. In such cases the sensor position is not a parameter.
(v)	Yaw rate sensor position;	Yaw rate sensor position **(when necessary)**;	* **when necessary**		
(w)	Loading.	No change compared to proposal of AMEVSC IG	*		