

Hazard ID	Situational Analysis						Hazard Identification						Hazardous Event Classification						Determination of ASIL and Safety Goals		
	Operational Mode	Operational Scenario	Environmental Details	Situation Details	Other Details (optional)	Item Usage (optional)	Situation Description	Function	Deviation	Deviation Details	Hazardous Event (resulting effects)	Event Details	Hazardous Event Description	Exposure (of situation)	Rationale (for exposure)	Severity (of potential harm)	Rationale (for severity)	Controllability (of hazardous event)	Rationale (for controllability)	ASIL Determination	Safety Goal
HA-001	DA01 - Normal driving	DS04 - Highway	EA04 - Rain (poorly rainy)	SD01 - High speed		UJ01 - Correctly used	Normal driving on a highway during rain (poorly rainy road) with high speed and correctly used system	Lane Departure Warning (LDW) function that apply an oscillating steering torque to provide the driver with tactile feedback	DA04 - Action effect is too much	The LDW function applies an oscillating torque with very high torque (above 100N)	DA04 - Collision with other vehicle	High torque feedback can affect driver's ability to steer as intended. The driver could lose control of the vehicle and collide with another vehicle or with road infrastructure	The LDW function applies an oscillating torque with very high torque (above 100N)	SA - Medium probability	Driving on the highway in the rain happens relatively regularly	SA - Life-threatening or fatal injuries	The velocity of the ego vehicle is high	SA - Difficult to control or uncontrollable	High steering wheel oscillations are unexpected and it is not clear in only one direction, making them difficult to counteract	4	The oscillating steering torque from the lane departure warning function shall be limited
HA-002	DA02 - Normal driving	DS02 - Country Road	EA01 - Normal conditions	SD02 - High speed		UJ02 - Incorrectly used	Normal driving on country roads during normal conditions with high speed (the driver is requesting the lane-keeping assistance function as a fully autonomous function)	Lane Keeping Assistance (LKA) function that apply the steering torque when active in order to stay in ego lane	DA02 - Function always activated	Lane-keeping assistant is always activated	DA02 - Collision with other vehicle	The driver requests the system as a help but the system is not capable of handling in such a way	The lane assistant is activated not as an emergency driver's aid but capable of handling in such a way	SA - Low probability	The combination of a driver in country road and driving on a country road will not occur any other for the emergency	SA - Life-threatening or fatal injuries	The velocity of the ego vehicle is high	SA - Difficult to control or uncontrollable	When the driver is not paying attention to the traffic ahead, it will be difficult to react accordingly in case of increased danger	4	The lane keeping assistance function shall be time limited and the additional steering torque shall not be active after a given time interval so that the driver cannot misuse the system for autonomous driving
HA-003	DA02 - Normal driving	DS02 - Country Road	EA01 - Normal conditions	SD02 - High speed		UJ01 - Correctly used	Normal driving on a country road during normal conditions with high speed and correctly used system	Lane Keeping Assistance (LKA) function that apply the steering torque when active in order to stay in ego lane	DA02 - Function unexpectedly activated	The camera sensor stops working and the Lane-Keeping Assistance function continues to be activated	DA02 - Collision with other vehicle	The Lane Keeping Assistance continues to be activated and it is steering to apply random torque to the vehicle making the driver to lose control	The Lane Keeping Assistance that during working when the camera sensor is not working	SA - Medium probability	Driving on country road happens relatively regularly	SA - Life-threatening or fatal injuries	The velocity of the ego vehicle is high	SA - Difficult to control or uncontrollable	High steering wheel oscillations are unexpected and it is not clear in only one direction, making them difficult to counteract	4	The Lane Keeping Assistance function shall be deactivated when the camera sensor information is insufficient
HA-004	DA02 - Normal driving	DS04 - Highway	EA01 - Normal conditions	SD02 - High speed		UJ01 - Correctly used	Normal driving on a highway during normal conditions with high speed and correctly used system	Lane Keeping Assistance (LKA) function that apply the steering torque when active in order to stay in ego lane	DA04 - Sensor sensitivity is too low	The torque emitted by the driver is not detected properly and the system continues to be activated	DA02 - Collision with other vehicle	Misinterpretation of the driver's input torque on the wheel hub, is overcompensating or it is not detected properly, leading to a steering torque that could lead to driver confusion and a collision with other vehicles or to collisions with traffic or boundaries	The lane keeping assistant applies torque to turn (steering) torque onto the wheel	SA - High probability	Normal high speed driving on the highway occurs relatively often	SA - Life-threatening or fatal injuries	The velocity of the ego vehicle is high	SA - Difficult to control or uncontrollable	The System will overcompensate the too high measured driver torque at all times, which will occur partly in the driver and the vehicle will be uncontrollable	4	The torque emitted by the driver shall always be measured correctly within a defined accuracy and redundancy