

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 (function)	Situation Description	Function	Deviation	Deviation Details	Hazardous Event (resulting effect)	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	OM03 - Normal driving	OS04 - Highway	EN06 - Rain (slippery road)	SD02 - High speed		IU01 - Correctly used	Normal driving on a highway during rain (slippery road) with high speed and correctly used system.	Lane Departure Warning (LDW) function shall apply an oscillating steering torque to provide the driver with haptic feedback	DV04 - Actor effect is too much	The LDW function applies an oscillating torque with very high torque (above limit)	EV00 - Collision with other vehicle	High haptic 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 limit) function applies an oscillating torque with very high torque (above limit.)	E3 - Medium probability	1 % to 10 % of average operating time	S3 - Life-threatening or fatal injuries	Collisions at high speed could cause fatal injuries	C3 - Difficult to control or uncontrollable	In wet condition and at high speed, it is difficult to control the steering wheel	C	The oscillating steering torque from the Lane Departure Warning function shall be limited
HA-002	OM03 - Normal Driving	OS03 - Country Road	EN01 - Normal conditions	SD02 - High speed		IU02 - Incorrectly used	Normal driving on country roads during normal conditions with high speed (the driver is misusing the lane keeping assistance function as an autonomous function)	Lane Keeping Assistance (LKA) function shall apply the steering torque when active in order to stay in ego lane	DV03 - Function is always activated	Lane Keeping function is always activated	EV00 - Collision with other vehicle other vehicle	the driver was misusing the function by taking both hands off the wheel and incorrectly treating the car as a fully autonomous vehicle	The driver do not use the function properly	E2 - Low probability probability	<1 % of average operating time	S3 - Life-threatening or fatal injuries	Collisions at high speed could cause fatal injuries	C3 - Difficult to control or uncontrollable	after the driver distracted from driving he cannot react quick enough to the situation	B	The Lane Keeping Assistance function shall be time limited, and additional time interval so the driver cannot misuse the system for autonomous driving.
HA-003	OM03 - Normal driving	OS04 - Highway	EN04 - Snowfall (degraded view)	SD02 - High speed		IU01 - Correctly used	Normal Driving on Highway during Snowfall (degraded view) with High speed (Night time + Obstacle on the road or upcoming curve)	Lane Departure Warning (LDW) function shall apply an oscillating steering torque to provide the driver with haptic feedback	DV07 - Actor action too late	the drive wheel vibrates too late	EV02 - Side collision with other traffic	The lane departure warning function acts to late, so that the driver cannot react ontime to keep the vehicle in the middle of lane. The vehicle can crash into other vehicles in the next lane.	The LDW function reacts to late when vehicle deviates from the lane center	E2 - Low probability probability	<1 % of average operating time	S3 - Life-threatening or fatal injuries	Collisions at high speed could cause fatal injuries	C3 - Difficult to control or uncontrollable	When driving on highway at high speed in snow it is difficult to control the vehicle if it deviates from it lane	B	Late reaction of lane warning function shall be prevented
HA-004	OM03 - Normal driving	OS10 - Road with construction site	EN06 - Rain (slippery road)	SD02 - High speed		IU01 - Correctly used	Normal driving on road with construction site during raining with high speed and correctly used system	Lane Keeping Assistance (LKA) function shall apply the steering torque when active in order to stay in ego lane	DV11 - Actor effect is wrong	lane keeping function does not work correctly due to disturbance at construction site	EV00 - Collision with other vehicle other vehicle	Actor effect is wrong, therefore vehicle is not kept in the lane mide, that causes collision with construction obstacle	Lane keeping function does not work correctly	E2 - Low probability probability	<1 % of average operating time	S2 - Severe and life-threatening injuries	Collisions at high speed with obstacle could cause severe injures	C3 - Difficult to control or uncontrollable	When driving on road at construction site, it is difficult to control because the lane is often narrow	A	Actor effect should be precise enough with an acceptable tolerance