

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 (ef situation)	Rationale (for exposure)	Severity (ef 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)	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	LDW function applies oscillating torque with vey high torque (above limit)	EV00 - Collision with other vehicle	High haptic feedback can affect driver's ability to steer as intended. The driver loses control and could collide with another vehicle or the side of the road.	The LDW function applies too high an oscillating torque to the steering wheel (above limit).	E3 - Medium probability	Driving on a highway on wet roads is a probable scenario (according to the functional safety standard).	S3 - Life-threatening or fatal injuries	Driving at high speed.	C3 - Difficult to control or uncontrollable	The vehicle is difficult to control when the steering wheel is vibrating too strong.	C	The oscillating steering torque from the LDW function shal 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 and incorrectly used system (the driver is misusing the LKA 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 - Functionalalways activated	LKA function is always activated	EV00 - Collision with other vehicle	The driver uses the function as if the car was autonomous and cannot react on dangerous situations.	The LKA function is always activated and the driver relies on the system instead of controlling the car properly.	E2 - Low probability	Driving on a country road and misusing the system does not happen often.	S3 - Life-threatening or fatal injuries	Driving at high speed.	C3 - Difficult to control or uncontrollable	The driver might not have both hands on the steering wheel and be engaged in other activities. This makes it impossible for the driver to control the situation.	B	The lane keeping assistance function shall be time limited and the additional steering torque shall end after a given time interval so that the driver cannot misuse the system for autonomous driving.
HA-003	OM03 - Normal driving	OS03 - Country Road	EN05 - Cross-wind (lateral force)	SD02 - High speed		IU01 - Correctly used	Normal driving on a country roads during strong winds (lateral force) 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	DV04 - Actor effect is too much	Given the wind goes in the same direction as the steering torque, the applied torque might be too high.	EV00 - Collision with other vehicle	The applied torque is too high and the vehicle oversteers to the opposite side of the lane actually crossing that side of the lane.	Applied torque to bring the vehicle to the center of the lane is too high. Actually brings the car to the other lane.	E3 - Medium probability	Driving on a country road with strong winds is a probable scenario.	S3 - Life-threatening or fatal injuries	Driving at high speed.	C2 - Normally controllable	The driver can react to the wind and control the vehicle.	B	The lane keeping assistance function shall apply a smaller torque when the wind (lateral force) is in the direction of the applied torque.
HA-004	OM03 - Normal driving	OS04 - Highway	EN04 - Snowfall (degraded view)	SD02 - High speed		IU01 - Correctly used	Normal driving on a highway during snowfall (degraded view) 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	DV19 - Sensor detection is wrong	Snow occludes the lane marking and the camera mistakenly detects the snow as lane line.	EV00 - Collision with other vehicle	The camera does not detect the actual lane but instead a shifted one and the car steers in between two lanes.	The vehicle is steered in between two lanes.	E2 - Low probability	Driving on a highway on snowy roads does not happen often.	S3 - Life-threatening or fatal injuries	Driving at high speed.	C2 - Normally controllable	The driver can react to the car steering off road as snowy roads require slower speed and high attention.	A	The lane keeping assistance function shall be deactivated when the camera sensor is not able to detect lane lines.