

Hazard ID																				Determination of ASIL and Safety Goals	
Situational Analysis						Hazard Identification				Hazardous Event Classification				ASIL Determination		Safety Goal					
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	Safety Goal	
HA-001	OM03 - Normal Driving	OS04 - Highway	EN06 - Rain (slippery)	SD02 - High speed	IJ01 - Correctly used	Normal driving on the highway in the rain at high speed.	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	Vehicle crashes into the oncoming vehicle or road infrastructure	Total loss	E3 - Medium probability	The driver is on an Highway and using the system correctly. This probably happen often.	S3 - Life threatening or fatal injuries	On highway speed of vehicle is expected to be high	C3 - Difficult to control or uncontrollable	The driver could loose control on 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	IJ02 - Incorrectly used	Normal driving on country roads during normal conditions at high speed.	Lane Keeping Assistance (LKA) function shall apply the steering torque when active in order to stay in ego lane	DV03 - Function always activated	The LKA function always applies the steering torque. The driver is misusing the function by taking both hands off the wheel and incorrectly treating the car as a fully autonomous vehicle.	EV00 - Collision with other vehicle	Vehicle crashes into the oncoming vehicle or road infrastructure	Total loss	E2 - Low probability	The driver is on a country road and misusing the system. That combination probably does not happen often, so we will label the exposure E2.	S3 - Life threatening or fatal injuries	On country road speed of vehicle is expected to be high	C3 - Difficult to control or uncontrollable	The malfunction was that the lane keeping assistance was always on and had no time limit, so drivers could take both hands off the wheel. Because hands aren't on the wheel at high speeds, a vehicle accident would not be controllable. We will label this hazardous situation as C3.	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	OS01 - City Road	EN06 - Rain (slippery road)	SD01 - Low speed	IJ01 - Correctly used	Normal driving on a wet road on a city street at low speed.	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	Vehicle crashes into the oncoming vehicle or road infrastructure	Total loss	E3 - Medium probability	Exposure is E3 because of the wet road.	S1 - Light and moderate injuries	A low speed collision implies severity of S1	C3 - Difficult to control or uncontrollable	Controllability is C3 because the steering wheel jerking back and forth violently would be difficult to control even at lower speeds.	A	The oscillating steering torque from the lane departure warning function shall be limited.	
HA-004	OM03 - Normal Driving	OS05 - Mountain Pass	EN07 - Snow (slippery road)	SD01 - Low speed	IJ01 - Correctly used	Normal driving on a slippery road on a mountain pass at low speed.	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).	EV04 - Car comes off the road	Vehicle falls off the mountain.	Total loss	E1 - Very low probability	The driver is on a mountain pass during snow and using the system correctly. This probably doesn't happen often.	S3 - Life threatening or fatal injuries	Even in a low speed, the narrow pass and the slippery road imply severity of S3	C3 - Difficult to control or uncontrollable	Controllability is C3 because the steering wheel jerking back and forth violently would be difficult to control even at lower speeds.	A	The oscillating steering torque from the lane departure warning function shall be limited.	