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	N06 - Rain (slippery roa	SD02 - High speed	N / A	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.	Loss of of vehicle control (steering) with possible collision.	E3 - Medium probability	Highway during rain (slippery road) occurs once a month or more often for an average driver	S3 - Life-threatening or fatal injuries	The driver is traveling at high speed and could lose control.	C3 - Difficult to control or uncontrollable	Since the system applies high torque on the steering wheel, a normal driver would have difficulty controlling the vehicle on a slippery road at high speed.	ASIL C	The oscillating steering torque from the Lane Departure Warning function shall be limited.
HA-002	OM03 - Normal driving	OS03 - Country Roads	EN01 - Normal Conditions	SD02 - High speed	N / A	IU02 - Incorrectly used	**Normal driving** on **country roads** during **normal conditions** with **high speed** and **incorrectly used** system (the driver is using the LKA function as a fully autonomous function).	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 is not time limited, so the driver can misuse it as an autonomous driving function.	EV00 - Collision with other vehicle	The driver is misusing the function by taking both hands off the wheel, overstimating the car´s self-driving capabilities. The vehicle could collide with other vehicles or get off the road.	Loss of vehicle control (steering) with possible collision.	E2 - Low probability	The driver is on a country road and misusing the system as an ADAS system. We consider this combination a low probability, so we will label the exposure E2	S3 - Life-threatening or fatal injuries	The driver is traveling at high speed and could lose control.	C3 - Difficult to control or uncontrollable	If driver has both hands off the wheel at high speeds, the driver may not be not be able to regain control fast enough to react to road situations.	ASIL 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 Roads	EN03 - Fog (degraded view)	SD01 - Low speed	N / A	IU01 - Correctly used	**Normal driving** on a **country roads** during **fog (degraded view)** with **low speed** and **correctly** used system.	Lane Departure Warning (LDW) function shall apply an oscillating steering torque to provide the driver with haptic feedback.	DV19 - Sensor Detection is Wrong	The camera subsystem detection of lane lines can be wrong due to low visibility conditions, leading to non-activation of the LDW.	EV00 - Collision with other vehicle	The malfunction of the LDW warning due to fog or similar low-visibility conditions, together with a driver's mistake, also due to bad visibility and/or dependence on the LDW system, could lead to a collision with other vehicle.	Collision with traffic or road infrastructure.	E2 - Low probability	A normal driver would take extra care driving on fog or very low visibility conditions, and usually will not trust the system in such conditions	S3 - Life-threatening or fatal injuries	Even at low speeds, the vehicle is drifting into another lane and may have a head-on collision with oncoming traffic.	C2 - Normally Controlable	Most drivers (>90%) would be able to take back the ego car to its lane when detecting other traffic, even if the distance is short due to visibility conditions.	ASIL A	The Lane Departure Warning shall detect conditions where it cannot operate as expected (such as very low visibility due to fog or heavy rain) and warn the vehicle operator with an audible and visible warning about this fact ("function unavailable").
HA-004	OM03 - Normal driving	OS02- City Roads	EN04 - Snowfall (degraded view)	SD01 - Low speed	N / A	IU01 - Correctly used	**Normal driving** on **city roads** during **snowfall (degraded view)** with **low speed** and **correctly used** system.	Lane Departure Warning (LDW) function shall apply an oscillating steering torque to provide the driver with haptic feedback.	DV19 - Sensor Detection is Wrong	The LDW function is activated inadvertently due to the camera subsystem identifying a patch of snow as lane line.	EV00 - Collision with other vehicle	Unexpected 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.	Loss of of control (steering) with possible collision.	E2 - Low probability	Even though snow in an urban area is common, the likelihood of the camera subsystem misdetecting a lane is low.	S1 - Light and moderate injuries	The severity would normally be low because of slow speeds in urban traffic.	C2 - Normally controllable	Since the vehicle is traveling a slow speed, the driver should be able to control the vehicle most of the time.	QM	The Lane Departure Warning function shall differentiate between snow and lane lines.