

Hazard ID	Operational Mode		Operational Scenario	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
HA-001	Normal Driving	Highway	Rain(Slippery Road)	High Speed		Correct Usage	Normal Driving on a highway during rain 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	Steering Wheel vibrates too much	LDW function applies oscillating torque with high torque(above limit)	Collision with other vehicle	High haptic feedback can affect the driver's ability to steer as intended. The driver could lose control of the vehicle and collide with another vehicle or road infrastructure	The LDW function applies too high an oscillating torque to the steering wheel	E3	According to functional safety standards, highway driving on wet roads is E3	S3	Driver traveling at high speed	C3	Most drivers would have difficulty in controlling the vehicle if the steering wheel vibrates excessively.	ASIL C	The oscillating steering torque from the lane departure warning function shall be limited
HA-002	Normal Driving	Counrty Road	Normal Conditions	High Speed		Incorrect Usage	Driver is misusing the lane keeping assistance 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	Lane Keeping assistance function is always activated	Lane Keeping Assistance is always activated	Collision with other vehicle	The driver assumes that the lane keeping assistance function will take care of keeping the car in the lane. However, it will only apply torque for a short period. After this the vehicle may lose control and collide with another vehicle if the driver does not have both hands on the wheel.	Collision with another vehicle due to driver not controlling the car after lane assistance function locks in.	E2	The driver is on a country road and misusing the system, which does not happen that often	S3	Driver travelling at high speed	C3	The lane keeping assistance is always on so drivers could take both hands off the wheels. Because hands are not on the wheels at high speeds, a vehicle accident would not be controllable.	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	Normal Driving	Highway	Fog(Degraded View)	High Speed		Correct Usage	Normal Driving on a highway during fog with high speed and correctly used system	Lane Departure	Function unexpectedly activated	Due to reduced visibility, lane lines may not be clearly visible. Hence, even though the driver is driving along the lane, the lane departure warning system may get activated	Car Comes off road	As visibility is low, the car may drive off the road if the lane departure warning system activates incorrectly	Lane departure warning function activates when the driver is moving correctly along the lane. The driver may assume that he is driving incorrectly and steer off the road to comply with the lane departure warning system	E3	Highway Driving on foggy roads	S3	Driver travelling at high speed	C3	A wrong steering action made by the driver at high speeds is difficult to control.	ASIL C	The lane departure warning function shall be disabled in low visibility environments
HA-004	Normal Driving	Highway	Cross-wind(Lateral Force)	High Speed		Correct Usage	Normal Driving on a highway during strong winds with high speed and correctly used system	Lane Keeping Assistant	Actor effect is too less	If the direction of strong wind is opposite to the direction of torque applied to keep the vehicle in lane, the amount of torque applied maybe too small to keep the vehicle in lane	Collision with other vehicle	If the amount of torque applied is not sufficient to keep the vehicle in lane, the vehicle might be in the lane boundary and could collide with other vehicles.	Amount of torque applied is smaller than what is required to keep the vehicle in lane.	E3	Highway Driving on windy roads	S3	Driver travelling at high speed	C2	Driver can control the vehicle and steer it into the right lane	ASIL B	The lane keeping assistance function shall apply a higher torque when the prevailing winds is in the direction opposite to the direction of application of torque.