

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 Highway during Rain (slippery road) with High speed	Lane Departure Warning (LDW) function shall apply an oscillating steering torque to provide the driver with haptic feedback	DV04 - Actor effort	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 too high an oscillating torque to the steering wheel (above limit).	E3 - Medium probability	Highway driving on wet roads can happen quite often	S3 - Life-threatening or fatal injuries	On highway speed of vehicle is expected to be high	C3 - Difficult to control or uncontrollable	Since most drivers would have difficulty controlling the vehicle if LDW vibrates the steering too strong.	C	The oscillating steering torque from the LDW function shall be limited.
HA-002								Lane Keeping Assistance (LKA) function shall apply the steering torque when active in order to stay in ego lane													
HA-003	OM03 - Normal Driving	OS03 - Country Road	EN01 - Normal conditions	SD02 - High speed		IU02 - Incorrectly used	Normal Driving on Country Road during Normal condition with High speed	Lane Departure Warning (LDW) function shall apply an oscillating steering torque to provide the driver with haptic feedback	DV03 - Function not activated	The Lane Keeping Assistance function is always activated.	EV00 - Collision with other vehicle	If Lane Keeping Assistance function is always activated, the driver will misunderstand that the system is fully autonomous driving system and lose caution for other vehicles. That can results in collision with other vehicle.	The LKA function is activated too long.	E2 - Low probability	Misusing the system on a country road does not happen often.	S3 - Life-threatening or fatal injuries	On high speed of vehicle is expected to be high	C3 - Difficult to control or uncontrollable	Since the hands of driver is not on the wheel, the driver cannot control the vehicle	B	The LKA 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-004	OM03 - Normal Driving	OS04 - Highway	EN01 - Normal conditions	SD02 - High speed		IU01 - Correctly used	Normal Driving on Highway during Normal condition with High speed	Lane Departure Warning (LDW) function shall apply an oscillating steering torque to provide the driver with haptic feedback	DV01 - Function not activated	The LDW function does not give feedback torque.	EV04 - Car comes off the road	As LDW did not give torque feedback, the driver did not notice that the vehicle is going out of the road.	The LDW function applies no torque.	E3 - Medium probability	Highway driving happen quite often	S3 - Life-threatening or fatal injuries	On highway speed of vehicle is expected to be high	C1 - Simply controllable	Even though LDW did not give feedback, the driver can control the vehicle.	A	The LDW should give feedback torque if needed.
HA-004	OM03 - Normal Driving	OS03 - Country Road	EN02 - Sun blares (degraded view)	SD02 - High speed		IU01 - Correctly used	Normal Driving on Country Road during the Sun blares (degraded view) with High speed	Lane Keeping Assistance (LKA) function shall apply the steering torque when active in order to stay in ego lane	DV19 - Sensor detection is wrong	The sensor cannot detect lane because of excessive sun light in front of the vehicle	EV00 - Collision with other vehicle	As LKA stops working suddenly, the driver cannot control the vehicle and collide with other vehicle.	The LKA function stops working suddenly.	E3 - Medium probability	Strong sun lights in front of the vehicle can happen often	S3 - Life-threatening or fatal injuries	On high speed of vehicle is expected to be high	C2 - Normally controllable	In most cases, driver can control the vehicle even though LKA suddenly stop working	B	The LKA should warn the driver if it is unconfident with its sensor output.