Hazard ID	Situational Analysis					
	Operational Mode	Operational Scenario	Environmental Details	Situation Details	Other Details (optional)	Item Usage (function)
HA-001	OM03 - Normal driving	OS04 - Highway	EN06 - Rain (slippery road)	SD02 - High speed		IU01 - Correctly used
HA-002	OM03 - Normal driving	OS03 - Country road	EN01 - Normal conditions	SD02 - High speed		IU02 - Incorrectly used
HA-003	OM03 - Normal driving	OS04 - Highway	EN04 - Snowfall (degraded view)	SD02 - High speed		IU01 - Correctly used
HA-004	OM03 - Normal driving	OS10 - City road	EN01 - Normal conditions	SD01 - Low speed	pedestrian crossing the road unexpectedly	IU01 - Correctly used

	Hazard Identification			
Situation Description	**Function**	**Deviation**	**Deviation Details**	**Hazardous Event (resulting effect)**
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
Normal driving on country roads during normal conditions with high speed (the driver is misusing the lane keeping assistance 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 - Function always activated	The LKA is always activated and the driver is not forced to keep his hands at the steering wheel.	EV00 - Collision with other vehicle
Normal driving on a highway during snowfall (degraded view) 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	DV02 - Function unexpectedly activated	The LDW is unexpectedly activated and applies an oscillating torque even if the lane is almost invisible and impossible to detect under this condition	EV00 - Collision with other vehicle
Normal driving on city road (with unexpected road crossing pedestrain) during normal conditions 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	DV02 - Function unexpectedly activated	The LDW is unexpectedly activated and applies an oscillating torque even if the driver applies the brake	EV02 - Collision with pedestrian

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Event Details	**Hazardous Event Description**	**Exposure (of situation)**	**Rationale (for exposure)**	**Severity (of potential harm)**
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	Driving on a highway with slippery road once a month or more often for an average driver	S3
The driver is misusing the lane keeping assistance function as an fully autonomous function and collides with another vehicle as he does not observe the traffic on the country road..	The LKA is always activated and the driver is not forced to keep his hands at the steering wheel.	E2	Driving on a country road on misusing the system does not happen often	S3
The lane is invisible for camera to detect under such a condisiton. The system may get activated and apply an oscillating steering torque to warn	The LDW function is activated without expectation and gives a wrong signal which influences the driver's decision.	E2	Driving on a highway with snowfall occurs a few times a year for the great majority of drivers	S3
The driver applies the brake to avoid collision with pedestrian but the system is unexpectedly activated and applies an oscillating torque. The driver could lose control of the vehicle and collide with the pedestrian.	The LDW function is activated without expectation and gives an unexpected oscillatiton to the steering wheel.	E3	Driving on a city road with pedestrian crossing the road occurs once a month or more often for an average driver	S2

dous Event Classification			Determination of ASIL and Safety Goals	
Rationale (for severity)	**Controllability (of hazardous event)**	**Rationale (for controllability)**	**ASIL Determination**	**Safety Goal**
Driving with high speed can cause fatal injuries	C3	Most drivers would have difficulty controlling the vehicle when the steering wheel vibrates excessively	ASIL C	The oscillating steering torque from the lane departure warning function shall be limited.
Driving with high speed can cause fatal injuries	C3	Drivers take both hands off the wheel at high speeds, hence a vehicle accident would not be controllable.	ASIL B	The LKA 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.
Driving with high speed can cause fatal injuries	C2	Most drivers can control the vehicle again as soon as they deactivate LDW by appling the brake or pressing the button on the panel.	ASIL A	The LDW function shall be disabled in low visibility environment.
Collision with pedestrian even with low speed can lead to severe and life-threatening injuires.	C3	Most drivers would have difficulty controlling the vehicle under such an emergency case.	ASIL B	The LDW function shall be deactivated automatically and promptly when the drive applies the brake.