

Hazard ID	Situational Analysis						
	Operational Mode	Operational Scenario	Environmental Details	Situation Details	Other Details (optional)	Item Usage (function)	Situation Description
HA-001	OM03 - Normal driving	OS04 - Highway	EN06 - Rain (slippery road)	SD02 - High speed	High speed + slippery road	IU01 - Correctly used	Normal driving on a highway during rain (slippery road) with high speed and correctly used system
HA-002	OM03 - Normal driving	OS03 - Country Road	EN01 - Normal conditions	SD02 - High speed	High speed	IU02 - Incorrectly used (the driver is misusing the lane keeping assistance function as an autonomous function)	Normal driving on a country road during normal conditions with high speed and the driver is misusing the lane keeping assistance function as an autonomous function
HA-003	OM03 - Normal driving	OS02 - City Road	EN07 - Snow (slippery road)	SD01 - Low speed	Slippery road + a lot of other cars	IU01 - Correctly used	Normal driving on a city road during snow (slippery road) with low speed and correctly used system
HA-004	OM03 - Normal driving	OS02 - City Road	EN07 - Snow (slippery road)	SD01 - Low speed	Slippery road + a lot of other cars	IU02 - Incorrectly used (the driver is misusing the lane keeping assistance function as an autonomous function)	Normal driving on a country road during snow (slippery road) with low speed and the driver is misusing the lane keeping assistance function as an autonomous function

Hazard Identification					
Function	Deviation	Deviation Details	Hazardous Event (resulting effect)	Event Details	Hazardous Event Description
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 steering 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 collides with another vehicle or with road infrastructure	The LDW function applies too high an oscillating torque to the steering wheel (above limit) OR
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 during turning a vehicle towards lane center	EV00 - Collision with other vehicle	During working the LKA function a driver can treat the function as if it were meant for fully autonomous driving taking take both hands off the steering wheel and the vehicle collides with another vehicle or with road infrastructure	The LKA function always applies the steering torque during turning a vehicle towards lane center
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Hazardous Event Classification					
Exposure (of situation)	Rationale (for exposure)	Severity (of potential harm)	Rationale (for severity)	Controllability (of hazardous event)	Rationale (for controllability)
E3 - medium probability	Normal driving on a highway during rain (slippery road) with high speed occurs a few times per month	S3 - Life-threatening or fatal injuries	The vehicle moves with a high speed	C3 - Difficult to control or uncontrollable	Many drivers would have difficulty controlling the vehicle because excessive the steering wheel vibration and high speed
E2 - Low probability	Normal driving on a country road during normal conditions with high speed occurs a few times per year	S3 - Life-threatening or fatal injuries	The vehicle moves with a high speed	C3 - Difficult to control or uncontrollable	Driver's hands aren't on the wheel at high speed
E2 - Low probability	Normal driving on a city road during snow (slippery road) with low speed occurs a few times per year	S2 - Severe and life-threatening injuries	The vehicle moves with a low speed, but there are a lot of other vehicles on a road in a city	C3 - Difficult to control or uncontrollable	Many drivers would have difficulty controlling the vehicle because excessive the steering wheel vibration and slippery road
E2 - Low probability	Normal driving on a city road during snow (slippery road) with low speed occurs a few times per year	S2 - Severe and life-threatening injuries	The vehicle moves with a low speed, but there are a lot of other vehicles on a road in a city	C2 - Normally controllable	Driver's hands aren't on the wheel, but the speed is low

Determination of ASIL and Safety Goals	
ASIL Determination	Safety Goal
C	The oscillating steering torque from the LDW function shall be limited
B	The LKA function shall be time limited and the additional steering torque shall end after a given time interval
A	The oscillating steering torque from the LDW function shall be limited
QM	The LKA function shall be time limited and the additional steering torque shall end after a given time interval