Hazard ID			
	Operational Mode	**Operational Scenario**	**Environmental Details**
HA-001	OM03 - Normal Driving	OS04 - Highway	EN06 - Rain (slippery ro
HA-002	OM03 - Normal Driving	OS03 - Country Road	EN01 - Normal
HA-003	OM03 - Normal Driving	OS03 - Country Road	EN03 - Fog (degraded
HA-004	OM03 - Normal Driving	OS04 - Highway	EN04 - Snowfall

Situational Analysis

Situation Details	Other Details (optional)	Item Usage (function)
SD02 - High speed	-	IU01 - Correctly used
SD02 - High speed	-	IU02 - Incorrectly
SD03 - High speed	-	IU01 - Correctly used
SD02 - High speed	-	IU01 - Correctly used

Situation Description	Function
Normal driving on a highway during rain	Lane Departure Warning
Normal driving on a country road during	Lane Keeping
Normal driving on a country road with fog at	Lane Keeping
Normal driving on a highway during snowfall	Lane Departure Warning

Deviation
DV04 - Actor effect is too much
DV03 - Function is always activated
DV02 - Function unexpectedly activated
DV02 - Function unexpectedly activated

Deviation Details
The Lane Departure Warning function applies an oscillating torque with very strong torque (above limit.)
Lane Keeping function is always activated
Lane Keeping does not turn off when driver puts on hazards (turn signal not functional at this time) to drive off to shoulder in an emergency stop situation
The camera sensor stop working and the Lane Keeping Assistance function continue to be activated.

Hazardous Event (resulting effect)
EV00 - Collition with other vehicle.
EV00 - Collition with other vehicle.
EV-05 - Front collision with ahead traffic
EV-04 - Front collision with obstacle

Event Details
If the haptic effect of the lane departure warning is too strong,
The lane keeping assist is not engineered as a self-driving
Unexpected haptics prevent driver from executing pull-over maneuver and front collision occurs
Unexpected/random steering wheel vibration the driver to lose control

Hazardous Event Description	Exposure (of situation)
The Lane Departure Warning function malfunctions	E3 - Medium probability
The user is not using the system as intended and	E2 - Low probability
Lane Keeping keeps applying lane centering torque while the driver is trying to pull off to shoulder	E2 - Low probability
Malfunction in camera subsystem causes lane departure warning to trigger off at random moments	E3 - Medium probability

Hazardous Event Classification

Rationale (for exposure)	Severity (of potential harm)	Rationale (for severity)
Driving on a highway with rain could	S3 - Life-threatening or	Collitions at high speed
Driving on a country road at high	S3 - Life-threatening or	Collitions at high speed
Fog is an isolated event and driving	S3 - Life-threatening or fatal injuries	Frontal collision is life-
Highway driving in snow is very common where snow falls during	S3 - Life-threatening or fatal injuries	Frontal collision is life-

		Determi
Controllability (of hazardous event)	**Rationale (for controllability)**	**ASIL Determination**
C3 - Difficult to control or	It is difficult to stay calm and react properly when an	C
C3 - Difficult to control or	While using the system as a self-driving feature, the	B
C3 - Difficult to control or	The unexpected torque applied by the lane keeping assist may cause interference with the driver	B
C1 - Simply controllable	Haptics vibrations are not strong and easily controllable	A

nation of ASIL and Safety Goals

Safety Goal
The oscillating steering torque from the
The Lane Keeping Assistance function shall
The lane assistance system shall turn off when the driver turns on the hazards
The lane warning feature should be deactivated if the camera sensor has a fault