

Hazard ID	Situational			
	Operational Mode	Operational Scenario	Environmental Details	Situation Details
HA-001	Normal Driving	Highway	Rain (slippery road)	High Speed
HA-002	Normal Driving	Country Road	Normal Conditions	High Speed
HA-003	Normal Driving	Highway	Normal Conditions	High Speed

I Analysis			
Other Details (optional)	Item Usage (function)	Situation Description	Function
	Correctly Used	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
Driver uses lane keeping assistance function as an autonomous driving function.	Incorrectly Used	Normal driving on country road during normal conditions with high speed and incorrectly used system. (Driver uses lane keeping assistance function as an autonomous driving function.)	Lane Keeping Assistance (LKA) function shall apply the steering torque when active in order to stay in ego lane
	Correctly Used	Normal driving on highway during normal conditions with high speed and correctly used system.	Lane Keeping Assistance (LKA) function shall apply the steering torque when active in order to stay in ego lane

Hazard Identification			
Deviation	Deviation Details	Hazardous Event (resulting effect)	Event Details
Actor effect is too much	The LDW function applies an oscillating torque with very high torque (above limit).	EV00 - Collision with other vehicle	High-torque feedback may affect the driver's ability to control the vehicle. The driver may lose control of the vehicle and collide with another vehicle.
Function Always Activated	The LKA function allows the driver to stop focusing on driving and lose situational awareness.	EV00 - Collision with other vehicle	If the driver uses the LKA function as an autonomous driving function, the driver will lose situational awareness and be unable to respond to prevent a collision.
Actor effect is too much	The LKA function applies large torque (above limit) that cannot be overcome by the driver.	EV00 - Collision with other vehicle	The driver may wish to override the LKA to avoid a collision or other purposes. If the LKA provides too much torque, the driver cannot overcome it.

Hazardous Event Description	Exposure (of situation)	Rationale (for exposure)
The LDW function applies a very high oscillating torque (above limit).	E3 (Medium Probability)	Driving on wet roads.
The LKA function allows the driver to stop focusing on driving and lose situational awareness.	E2 (Low Probability)	Drivers are not likely to misuse the system.
The LKA function applies large torque (above limit) that cannot be overcome by the driver.	E4 (High Probability)	Driving under normal conditions

Hazardous Event Classification

Severity (of potential harm)	Rationale (for severity)	Controllability (of hazardous event)
S3 (Life-threatening or fatal injuries)	Driving with high speed	C3
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Rationale (for controllability)	ASIL Determination
Because the driver cannot control the steering wheel, the vehicle cannot be controlled.	ASIL C
Because the driver's hands are not on the wheel, the vehicle cannot be controlled.	ASIL B
Because the driver cannot control the steering wheel, the vehicle cannot be controlled.	ASIL D

Definition of ASIL and Safety Goals
Safety Goal
The oscillating steering torque delivered to the steering wheel by the LDW function shall be limited.
The lane keeping assistance function shall be time-limited such that the additional steering torque shall end after a given time interval so that the driver cannot misuse the system for autonomous driving.
The steering torque delivered to the steering wheel by the LKA function shall be limited.