| 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 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 Lane Departure Warning function applies an oscillating torgue with very high torque (above limit.) | EV00 - Collision with other vehicle. | High haptic feedback can affect driver's ability to steer as intented. The driver loose control and could collide with another vehicle or side of the road. | The Lane Departure Warning function applies an oscillating torgue with very high torque (above limit.) | E3 - Medium probability | Driving on a highway with rain could happen between 1% and 10% of the time operating the vehicle. | S3 - Life-threatening or fatal injuries | Collisions at high speed could cause fatal injuries. | C3 - Difficult to control or uncontrollable | It is difficult to stay calm and react properly when the steering well is moving too much. | С | The oscillating steering torque from the Lane Departure Warning function shall be limited. |
| HA-002 | OM03 - Normal Driving | OS03 - Country Road | EN01 - Normal conditions | SD02 - High speed | | IU02 - Incorrectly used | Normal driving on a country road during normal conditions with high speed and incorrectly used systam. | Lane Keeping Assistance (LKA) function shall apply the steering torque when active in order to stay in ego lane | DV03 - Function is always activated | Lane Keeping function is always activated | EV00 - Collision with other vehicle. | Driver use the function as if the car was a self-driving car and loose driving attention. | The driver do not use the function properly. | E2 - Low probability | The conviation beween driving at a country road and misusing system should not happen oftern. Less than 1% of the time operating the vehicle. | 00 17 / / | Collisions at high speed could cause fatal injuries. | C3 - Difficult to control or uncontrollable | When the driver looses focus on driving, it is difficult to re-focus in the case of imminent collision. | | The Lane Keeping Assistance function shall be time limited, and additional steering torque shall end after a given time interval so the driver cannot misuse the system for autonomous driving. |
| HA-003 | OM03 - Normal Driving | OS04 - Highway | EN01 - Normal conditions | SD02 - High speed | | IU01 - Correctly used | Normal driving on a highway during normal conditions 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 camera sensor stop working and the Lane Departure Warning function continue to be activated. | EV00 - Collision with other vehicle. | The Lane Departure Warning continue to be activated and start executing random torque to the steering wheel making the driver to loose control with potential collisions with other vehicle. | The Lane Departure Warning start acting randomly when the camera sensor is not working. | E3 - Medium | Driving on a highway with rain could happen between 1% and 10% of the time operating the vehicle. | S3 - Life-threatening or fatal injuries | Collisions at high speed could cause fatal injuries. | C3 - Difficult to control or uncontrollable | When the driver loose control of the vechicle is very difficult to realize the situation and act accordingly. | С | The Lane Departure Warning function shall be deactivated when the camera sensor stop working. |
| HA-004 | OM03 - Normal Driving | OS03 - Country Road | EN01 - Normal conditions | SD02 - High speed | | IU01 - Correctly used | Normal driving on a country road 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 | DV02 - Function unexpectedly activated | The camera sensor stop working and the Lane Keeping Assistance function continue to be activated. | EV00 - Collision with other vehicle. | The Lane Keeping Assistance continue to be activated starting executing random torque to the vehicle making the driver to loose control with potential collision with other vehicle. | The Lane Keeping Assistance start acting randomly when the camera sensor is not working. | E3 - Medium probability | Driving on a highway with rain could happen between 1% and 10% of the time operating the vehicle. | S3 - Life-threatening or fatal injuries | Collisions at high speed could cause fatal injuries. | C3 - Difficult to control or uncontrollable | When the driver loose control of the vechicle is very difficult to realize the situation and act accordingly. | С | The Lane Keeping Assistance function shall be deactivated when the camera sensor stop working. |