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[

{

"Requirement": "Req\_SZ\_01",

"RequirementClassification": "SafetyGoal",

"LESS Requirement": "THE System SHALL PREVENT dangerous unintended acceleration"

},

{

"Reference": "test-Req\_SZ\_01",

"Requirement": "Req\_SZ\_01",

"Testobjects": ["System", "acceleration"],

"PRE": {},

"POST": {}

}

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{

"Requirement": "Req\_SZ\_03",

"RequirementClassification": "SafetyGoal",

"LESS Requirement": "THE System SHALL PREVENT dangerous unintended deceleration"

},

{

"Reference": "test-Req\_SZ\_03",

"Requirement": "Req\_SZ\_03",

"Testobjects": ["System", "deceleration"],

"PRE": {},

"POST": {}

}

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{

"Requirement": "Req\_SZ\_04",

"RequirementClassification": "SafetyGoal",

"LESS Requirement": "THE System SHALL PREVENT unintended loss of deceleration"

},

{

"Reference": "test-Req\_SZ\_04",

"Requirement": "Req\_SZ\_04",

"Testobjects": ["System", "deceleration"],

"PRE": {},

"POST": {}

}

],

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{

"Requirement": "SReq\_01",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Drive\_Pedal SHALL CHECK THE sensor\_signals OF THE Drive\_Pedal FOR plausibility"

},

{

"Reference": "test-SReq\_01",

"Requirement": "SReq\_01",

"Testobjects": ["Drive\_Pedal", "sensor\_signals", "plausibility"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "SReq\_01",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Drive\_Pedal SHALL CHECK THE internal sensor\_signals OF THE Drive\_Pedal FOR plausibility"

},

{

"Reference": "test-SReq\_01",

"Requirement": "SReq\_01",

"Testobjects": ["Drive\_Pedal", "sensor\_signals", "plausibility"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "SReq\_02",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Throttle\_Valve SHALL CHECK THE sensor\_signals OF THE Throttle\_Valve FOR plausibility"

},

{

"Reference": "test-SReq\_02",

"Requirement": "SReq\_02",

"Testobjects": ["Throttle\_Valve", "sensor\_signals", "plausibility"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "SReq\_04",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Engine\_Control\_Unit SHALL protect THE torque\_signals\_affecting\_requirements\_of\_other\_ECUs BY USING signal\_compound"

},

{

"Reference": "test-SReq\_04",

"Requirement": "SReq\_04",

"Testobjects": ["Engine\_Control\_Unit", "torque\_signals\_affecting\_requirements\_of\_other\_ECUs", "signal\_compound"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "SReq\_05",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Engine\_Control\_Unit SHALL DETECT THE errors OF THE actuator BY USING appropriate plausibility\_checks"

},

{

"Reference": "test-SReq\_05",

"Requirement": "SReq\_05",

"Testobjects": ["Engine\_Control\_Unit", "errors", "actuator", "plausibility\_checks"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "SReq\_05a",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Engine\_Control\_Unit SHALL CHECK THE internal actuator signals FOR plausibility"

},

{

"Reference": "test-SReq\_05a",

"Requirement": "SReq\_05a",

"Testobjects": ["Engine\_Control\_Unit", "actuator", "plausibility"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "SReq\_06a",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Engine\_Control\_Unit SHALL DETECT AND confirm ANY undesired High Driving\_Torque state"

},

{

"Reference": "test-SReq\_06a",

"Requirement": "SReq\_06a",

"Testobjects": ["Engine\_Control\_Unit", "Driving\_Torque"],

"PRE": {},

"POST": {}

}

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[

{

"Requirement": "SReq\_06a2",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Engine\_Control\_Unit SHALL DETECT AND confirm unintended acceleration"

},

{

"Reference": "test-SReq\_06a2",

"Requirement": "SReq\_06a2",

"Testobjects": ["Engine\_Control\_Unit", "acceleration"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "SReq\_06b",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "IF undesired High Driving\_Torque IS detected THEN THE Engine\_Control\_Unit SHALL SWITCH TO safe\_state"

},

{

"Reference": "test-SReq\_06b",

"Requirement": "SReq\_06b",

"Testobjects": ["Engine\_Control\_Unit", "Driving\_Torque", "safe\_state"],

"PRE": {"Driving\_Torque": {"detected": true}},

"POST": {"Engine\_Control\_Unit": {"safe\_state": true}}

}

],

[

{

"Requirement": "SReq\_06b2",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE Engine\_Control\_Unit SHALL monitor THE Function\_Controller"

},

{

"Reference": "test-SReq\_06b2",

"Requirement": "SReq\_06b2",

"Testobjects": ["Engine\_Control\_Unit", "Function\_Controller"],

"PRE": {},

"POST": {}

}

],

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{

"Requirement": "SReq\_07",

"RequirementClassification": "SafetyFunctional",

"LESS Requirement": "THE System SHALL protect THE integrity OF THE Lamp\_switch\_on\_request AGAINST spoofing"

},

{

"Reference": "test-SReq\_07",

"Requirement": "SReq\_07",

"Testobjects": ["System", "integrity", "Lamp\_switch\_on\_request", "spoofing"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "Req\_SEC\_ISO10",

"RequirementClassification": "SecurityGoal",

"LESS Requirement": "THE Navigation\_ECU SHALL DETECT malicious control\_signals"

},

{

"Reference": "test-Req\_SEC\_ISO10",

"Requirement": "Req\_SEC\_ISO10",

"Testobjects": ["Navigation\_ECU", "control\_signals"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "Req\_SEC\_ISO40",

"RequirementClassification": "SecurityFunctional",

"LESS Requirement": "THE Navigation\_ECU SHALL PREVENT malicious control\_signals FROM being\_transmitted"

},

{

"Reference": "test-Req\_SEC\_ISO40",

"Requirement": "Req\_SEC\_ISO40",

"Testobjects": ["Navigation\_ECU", "control\_signals"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "Req\_SEC\_ISO41",

"RequirementClassification": "SecurityFunctional",

"LESS Requirement": "THE Gateway SHALL DETECT malicious control\_signals"

},

{

"Reference": "test-Req\_SEC\_ISO41",

"Requirement": "Req\_SEC\_ISO41",

"Testobjects": ["Gateway", "control\_signals"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "Req\_SEC\_ISO50",

"RequirementClassification": "SecurityFunctional",

"LESS Requirement": "THE Gateway SHALL drop ANY detected malicious control\_signals"

},

{

"Reference": "test-Req\_SEC\_ISO50",

"Requirement": "Req\_SEC\_ISO50",

"Testobjects": ["Gateway", "control\_signals"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "Req\_SEC\_ISO51",

"RequirementClassification": "SecurityFunctional",

"LESS Requirement": "IF request THEN THE Body\_Control\_ECU SHALL generate A MAC FOR THE Lamp\_switch\_on\_request"

},

{

"Reference": "test-Req\_SEC\_ISO51",

"Requirement": "Req\_SEC\_ISO51",

"Testobjects": ["Body\_Control\_ECU", "MAC", "Lamp\_switch\_on\_request"],

"PRE": {"request": true},

"POST": {"MAC": {"generated": true}}

}

],

[

{

"Requirement": "Req\_SEC\_ISO60",

"RequirementClassification": "SecurityFunctional",

"LESS Requirement": "THE Body\_Control\_ECU SHALL transmit THE generated MAC FOR A Lamp\_switch\_on\_request WITH THE MAC OF THE Body\_Control\_ECU"

},

{

"Reference": "test-Req\_SEC\_ISO60",

"Requirement": "Req\_SEC\_ISO60",

"Testobjects": ["Body\_Control\_ECU", "MAC", "Lamp\_switch\_on\_request"],

"PRE": {},

"POST": {}

}

],

[

{

"Requirement": "Req\_SEC\_ISO61",

"RequirementClassification": "SecurityFunctional",

"LESS Requirement": "THE Gateway SHALL NOT transfer THE signals FROM THE Navigation\_ECU TO THE Headlamp\_system EXCEPT FOR signals\_in\_white\_list"

},

{

"Reference": "test-Req\_SEC\_ISO61",

"Requirement": "Req\_SEC\_ISO61",

"Testobjects": ["Gateway", "signals", "Navigation\_ECU", "Headlamp\_system", "white\_list"],

"PRE": {},

"POST": {}

}

]

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