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{  
"Requirement":"Req\_SZ\_01",  
"RequirementClassification":"SafetyGoal",  
"LESS Requirement":"The system should prevent dangerous unintended acceleration"  
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{  
"Reference":"test-Req\_SZ\_01",  
"Requirement":"Req\_SZ\_01",  
"Testobjects":["system","acceleration"],  
"PRE":{},  
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"Requirement":"Req\_SZ\_02",  
"RequirementClassification":"SafetyGoal",  
"LESS Requirement":"The system should avert hazardous unintended acceleration"  
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{  
"Reference":"test-Req\_SZ\_02",  
"Requirement":"Req\_SZ\_02",  
"Testobjects":["system","acceleration"],  
"PRE":{},  
"POST":{}  
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{  
"Requirement":"Req\_SZ\_03",  
"RequirementClassification":"SafetyGoal",  
"LESS Requirement":"Any dangerous unintended deceleration shall be prevented by the system"  
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{  
"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 should prevent loss of deceleration that is unintended"  
},  
{  
"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 should 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":{}  
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{  
"Requirement":"SReq\_01a",  
"RequirementClassification":"SafetyFunctional",  
"LESS Requirement":"The drive pedal must check its internal sensor signals for plausibility"  
},  
{  
"Reference":"test-SReq\_01a",  
"Requirement":"SReq\_01a",  
"Testobjects":["drive\_pedal","sensor\_signals","plausibility"],  
"PRE":{},  
"POST":{}  
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{  
"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":{}  
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{  
"Requirement":"SReq\_05",  
"RequirementClassification":"SafetyFunctional",  
"LESS Requirement":"Using appropriate plausibility checks the engine control unit must detect errors in the actuator"  
},  
{  
"Reference":"test-SReq\_05",  
"Requirement":"SReq\_05",  
"Testobjects":["engine\_control\_unit","actuator","errors","plausibility\_checks"],  
"PRE":{},  
"POST":{}  
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{  
"Requirement":"SReq\_05a",  
"RequirementClassification":"SafetyFunctional",  
"LESS Requirement":"The engine control unit must check internal actuator signals for plausibility"  
},  
{  
"Reference":"test-SReq\_05a",  
"Requirement":"SReq\_05a",  
"Testobjects":["engine\_control\_unit","actuator\_signals","plausibility"],  
"PRE":{},  
"POST":{}  
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{  
"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":{"driving\_torque":{"high":true}},  
"POST":{"engine\_control\_unit":{"confirm":true}}  
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{  
"Requirement":"SReq\_06a2",  
"RequirementClassification":"SafetyFunctional",  
"LESS Requirement":"Unintended acceleration shall be detected and confirmed by the engine control unit"  
},  
{  
"Reference":"test-SReq\_06a2",  
"Requirement":"SReq\_06a2",  
"Testobjects":["engine\_control\_unit","acceleration"],  
"PRE":{"acceleration":{"unintended":true}},  
"POST":{"engine\_control\_unit":{"confirm":true}}  
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{  
"Requirement":"SReq\_07",  
"RequirementClassification":"SafetyFunctional",  
"LESS Requirement":"The engine control unit should monitor the function controller"  
},  
{  
"Reference":"test-SReq\_07",  
"Requirement":"SReq\_07",  
"Testobjects":["engine\_control\_unit","function\_controller"],  
"PRE":{},  
"POST":{}  
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{  
"Requirement":"Req\_SEC\_ISO40",  
"RequirementClassification":"SecurityFunctional",  
"LESS Requirement":"The navigation ECU must detect control signals that are malicious"  
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{  
"Reference":"test-Req\_SEC\_ISO40",  
"Requirement":"Req\_SEC\_ISO40",  
"Testobjects":["navigation\_ECU","control\_signals"],  
"PRE":{"control\_signals":{"malicious":true}},  
"POST":{"navigation\_ECU":{"detect":true}}  
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{  
"Requirement":"Req\_SEC\_ISO41",  
"RequirementClassification":"SecurityFunctional",  
"LESS Requirement":"The navigation ECU should avoid malicious control signals from being transmitted"  
},  
{  
"Reference":"test-Req\_SEC\_ISO41",  
"Requirement":"Req\_SEC\_ISO41",  
"Testobjects":["navigation\_ECU","control\_signals"],  
"PRE":{"control\_signals":{"malicious":true}},  
"POST":{"navigation\_ECU":{"transmit":false}}  
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{  
"Requirement":"Req\_SEC\_ISO50",  
"RequirementClassification":"SecurityFunctional",  
"LESS Requirement":"Control signals that are malicious must be detected by the gateway"  
},  
{  
"Reference":"test-Req\_SEC\_ISO50",  
"Requirement":"Req\_SEC\_ISO50",  
"Testobjects":["gateway","control\_signals"],  
"PRE":{"control\_signals":{"malicious":true}},  
"POST":{"gateway":{"detect":true}}  
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{  
"Requirement":"Req\_SEC\_ISO51",  
"RequirementClassification":"SecurityFunctional",  
"LESS Requirement":"The gateway shall drop any detected malicious control signals"  
},  
{  
"Reference":"test-Req\_SEC\_ISO51",  
"Requirement":"Req\_SEC\_ISO51",  
"Testobjects":["gateway","control\_signals"],  
"PRE":{"control\_signals":{"malicious\_detected":true}},  
"POST":{"gateway":{"drop":true}}  
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{  
"Requirement":"Req\_SEC\_ISO61",  
"RequirementClassification":"SecurityFunctional",  
"LESS Requirement":"Lamp switch-on requests that are detected as spoofed should be dropped by the power switch"  
},  
{  
"Reference":"test-Req\_SEC\_ISO61",  
"Requirement":"Req\_SEC\_ISO61",  
"Testobjects":["power\_switch","lamp\_switch\_on\_request"],  
"PRE":{"lamp\_switch\_on\_request":{"spoofed":true}},  
"POST":{"power\_switch":{"drop":true}}  
}  
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{  
"Requirement":"Req\_SEC\_ISO72",  
"RequirementClassification":"SecurityTechnical",  
"LESS Requirement":"The gateway must not transfer the signals from the navigation ECU to the headlamp system except for those included in the whitelist"  
},  
{  
"Reference":"test-Req\_SEC\_ISO72",  
"Requirement":"Req\_SEC\_ISO72",  
"Testobjects":["gateway","navigation\_ECU","headlamp\_system","whitelist"],  
"PRE":{"signals":{"from\_navigation\_ECU":true}},  
"POST":{"gateway":{"transfer":false}}  
}  
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