

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
27	17	EGR Valve	DFC_EGRVlvDrftClsd		EGR valve dirty and/or defective
29	3	APP Poti 2	DFC_SRCHighAPP2	Signal Range Check High for APP2	wiring harness or component
29	4	APP Poti 2	DFC_SRLowAPP2	Signal Range Check Low for APP2	wiring harness or component
29	2	APP Synchronsition Error	DFC_SyncRmtAPP	In case of dual analog accelerator pedal, it is the plausibility check between RmtAPP1 and RmtAPP2 and in case of potentiometer switch accelerator pedal, it is the plausibility check between APP1 and idle switch	wiring harness or component
51	6	Throttle Valve	DFC_ThrVlvCurrLim		wiring harness or component sluggish.
51	0	Throttle Valve	DFC_ThrVlvDrftClsd		Throttle valve is defective
51	12	Throttle Valve	DFC_ThrVlvGovDvtClsd		Throttle valve is defective
51	13	Throttle Valve	DFC_ThrVlvJamVlvClsd		Throttle valve is defective
51	1	Throttle Valve	DFC_ThrVlvPhysSRCMin		wiring harness or sensor missadjusted
70	2	Hand Brake Switch	DFC_HndBrkAliveChk	Alive Detection for HndBrk_stDebVal	wiring harness or component
84	0	Vehicle Speed Sensor	DFC_VehVMax	Maximum threshold error for vehicle speed	
84	5		DFC_VehVNpIMon	NPL error for vehicle speed signal over Tachomter or hardware sensor	wiring harness or component
84	13	Vehicle Speed Sensor	DFC_VehVPlaus	Plausibility defect for vehicle speed	CAN transmitter from sender defect
84	3	Vehicle Speed Sensor	DFC_VehVSRCHI	signal level low error for vehicle speed signal over Tachomter or hardware sensor	wiring harness or component
84	4		DFC_VehVSRCLo	signal level low error for vehicle speed signal over Tachomter or hardware sensor	wiring harness or component
91	3	APP Poti 1	DFC_SRCHighAPP1	Signal Range Check High for APP1	wiring harness or component
91	4	APP Poti 1	DFC_SRLowAPP1	Signal Range Check Low for APP1	wiring harness or component
91	11	APP Synchronsition Error	DFC_SyncAPP	In case of dual analog accelerator pedal, it is the plausibility check between APP1 and APP2 and in case of potentiometer switch accelerator pedal, it is the plausibility check between APP1 and idle switch	wiring harness or component
91	2	APP Synchronsition Error	DFC_SyncAPPDbIPotLIS	In case of Double Poti LIS acceleration pedal there are 2 analog accelerator pedal potentiometers and a low idle switch. It is the plausibility check between APP1 , APP2 and idle switch.	wiring harness or component
94	9	Fuel Low Pressure System	DFC_FuelPDynTstMax	Maximum fuel pressure error in dynamic plausibility test	wiring harness or pre supply pump itself defective
94	10	Fuel Low Pressure System	DFC_FuelPDynTstMin	Minimum fuel pressure error in dynamic plausibility test	wiring harness or pre supply pump itself defective
94	13	Fuel Low Pressure System	DFC_FuelPLOP	Low fuel pressure error monitoring	fuel tank empty, fuel filter blocked, wiring harness or pre supply pump itself defective
94	19	Fuel Low Pressure System	DFC_FuelPSig	DFC for CAN message	Error in fuel signal or signal invalid over CAN
95	3	Fuel Low Pressure Sensor	DFC_FuelPSRCMax	SRC High for Environment Pressure	wiring harness or component
95	4	Fuel Low Pressure Sensor	DFC_FuelPSRCMin	SRC low for Environment Pressure	wiring harness or component
96	2	Fuel Level Plausibility	DFC_FILVlSnsrPlausErr	Fuel Level Sensor Plausibility Error	
96	1	Fuel System	DFC_FISysTnkLo	fuel tank below critical level or danger of an air contaminated hydraulic system	fuel tank empty
97	15	Water in Fuel	DFC_FIFWLVlWtHi	Water in fuel detected	Water in fuel detected.
97	31	Water in Fuel	DFC_FISys_WtDet	Error in water in Fuel Detection switch	Water in fuel detected.
97	17	Fuel Level	DFC_NpIFIFWLVl	Fuel Level unplausible	wiring harness or component
98	3	Oil Level	DFC_OilVlMax	Duty cycle greater than maximum	too much Oil filled in, defective cylinder head gasket,
98	4	Oil Level	DFC_OilVlMin	Duty cycle lesser than minimum	too less oil in oil tank, oil consumed by engine or leaked out of the engine
98	2	Oil Level	DFC_OilVlNpl	Plausibility Check	wiring harness or component
98	0	Oil Level	DFC_OilVlPhysRngHi	Plausibility Check	wiring harness or component
98	1	Oil Level	DFC_OilVlPhysRngLo	Plausibility Check	wiring harness or component
100	31	Oil Pressure	DFC_OilPMin	Defect fault check for minimum oil pressure from digital sensor	too less oil in oil tank, wirning harness or sensor defective, oil pump defective,
100	2	Oil Pressure	DFC_OilPNpl	Defect fault check for plausibility test in case of digital sensor	wiring harness or component



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100	0	Oil Pressure	DFC_OilPSwmpPhysRngHi	Maximum oil pressure error in plausibility check	wiring harness or component
100	1	Oil Pressure	DFC_OilPSwmpPhysRngLo	Minimum oil pressure error in plausibility check	wiring harness or component
100	19	Oil Pressure Sensor	DFC_OilPSwmpSig	Signal error on CAN for oil pressure sensor	wiring harness or component
100	3	Oil Pressure Sensor	DFC_OilPSwmpSRCMax	SRC high for oil pressure sensor	wiring harness or component
100	4	Oil Pressure Sensor	DFC_OilPSwmpSRCMin	SRC low for Oil pressure sensor	wiring harness or component
102	0	Intake Manifold Pressure	DFC_PIntkVUsPhysRngHi	Physical Range Check high for air pressure at the upstream of intake valve sensor	Over boost condition, maybe wastgate blocked
102	1	Intake Manifold Pressure	DFC_PIntkVUsPhysRngLo	Physical Range Check low for air pressure at the upstream of intake valve sensor	Under boost, maybe turbocharger defective
102	16	Intake Manifold Pressure	DFC_PIntkVUsPlsHi	Plausibility Check for air pressure at the upstream of intake valve sensor	PlntkVUss pressure sensor or EnvP sensor misadjusted or defect
102	18	Intake Manifold Pressure	DFC_PIntkVUsPlsLo	Plausibility Check for air pressure at the upstream of intake valve sensor	PlntkVUss pressure sensor or EnvP sensor misadjusted or defect
102	3	Intake Manifold Pressure Sensor	DFC_PIntkVUsSRCMax	Diagnostic fault check for SRC high in air pressure upstream of intake valve sensor	wiring harness or component
102	4	Intake Manifold Pressure Sensor	DFC_PIntkVUsSRCMin	Diagnostic fault check for SRC low in air pressure upstream of intake valve sensor	wiring harness or component
103	0	Turbo Charger Actuator	DFC_TrChOvrSpd	Turbocharger over speed monitoring	Turbocharger actuator sticks
105	0	Intercooler Downstream Temperature	DFC_TCACDsPhysRngHi	Physical Range Check high for Charged Air cooler down stream temperature	Physical Range Check high for Charged Air cooler down stream temperature
105	1	Intercooler Downstream Temperature	DFC_TCACDsPhysRngLo	Physical Range Check low for Charged Air cooler down stream temperature	Physical Range Check low for Charged Air cooler down stream temperature
105	9	PFM	DFC_TCACDsSENTSnsrInit	initialization error for SENT transmission for Charged Air cooler down stream temperature	
105	2	PFM	DFC_TCACDsSENTSnsrInt	sensor internal diagnosis for Charged Air cooler down stream temperature, SENT	
105	3	Intercooler Downstream Temperature Sensor	DFC_TCACDsSRCMax	SRC High for Charge air cooler downstream Temperature	wiring harness or component
105	4	Intercooler Downstream Temperature Sensor	DFC_TCACDsSRCMin	SRC low for Charge air cooler downstream Temperature	wiring harness or component
107	14	Air Filter	DFC_AirFitClogDet	Error path for Clog Detection in Air filter	air filter clogged/ sensor value ok?
107	2	Air Filter Downstream Pressure	DFC_PAirFitDsNpl	Signal non-plausible for AirFitDs pressure sensor	
107	0	Air Filter Downstream Pressure	DFC_PAirFitDsPhysRngHi	Physical Range high error for Inlet air pressure (P1) sensor	
107	1	Air Filter Downstream Pressure	DFC_PAirFitDsPhysRngLo	Physical Range low error for Inlet air pressure (P1) sensor	
107	3	Air Filter Differential Pressure Sensor	DFC_PAirFitDSRCMax	SRC High for Controller Mode Switch	wiring harness or component
107	4	Air Filter Differential Pressure Sensor	DFC_PAirFitDSRCMin	SRC low for Controller Mode Switch	wiring harness or component
107	5	Air Filter Downstream Pressure Sensor	DFC_PAirFitDsSRCMax	SRC high for AirFitDs pressure sensor	
107	6	Air Filter Downstream Pressure Sensor	DFC_PAirFitDsSRCMin	SRC low for AirFitDs pressure sensor	
107	9	Air Filter Differential Pressure	DFC_PAirFitDSysReac	Air Filter differential pressure check for warning condition	
108	0	Ambient Pressure	DFC_PEnvRngChkMax	Ambient air pressure sensor range check max-error	wiring harness or component
108	1	Ambient Pressure	DFC_PEnvRngChkMin	Ambient air pressure sensor range check min-error	wiring harness or component
108	3	Ambient Pressure Sensor	DFC_PEnvSigRngMax	fault check max signal range violated for ambient air pressure sensor	wiring harness or component
108	4	Ambient Pressure Sensor	DFC_PEnvSigRngMin	fault check min signal range violated for ambient air pressure sensor	wiring harness or component
108	2	Ambient Pressure Sensor	DFC_PEnvSnsrPlaus	Ambient air pressure sensor sensor error by component self diagnosis	wiring harness or component
110	17	Coolant Temperature	DFC_CEngDsTAbstTst	defect fault check for Absolute plausibility test	sensor value problems
110	18	Coolant Temperature	DFC_CEngDsTDynTst	defect fault check for dynamic plausibility test	sensor value problems
110	16	Coolant Temperature	DFC_CEngDsTNplHigh	Engine coolant temperature too high plausibility error	less cooling water, water pump defective, water cooler blocked
110	0	Coolant Temperature	DFC_CEngDsTPhysRngHi	Physical Range Check high for CEngDsT	wiring harness or component

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110	1	Coolant Temperature	DFC_CEngDsTPhysRngLo	Physical Range Check low for CEngDsT	wiring harness or component
110	3	Coolant Temperature Sensor	DFC_CEngDsTSRCMax	SRC High for Engine coolant temperature(down stream)	wiring harness or component
110	4	Coolant Temperature Sensor	DFC_CEngDsTSRCMin	SRC low for Engine coolant temperature(down stream)	wiring harness or component
111	18	Coolant Level	DFC_CIntLvIFitDetn	Fault Detection For The Digital Input	CAN transmitter
111	17	Coolant Level	DFC_CIntLvRngFltDetn	Range Fault Detection	-Low coolant level -coolant level sensor defective - wiring harness defctive
111	3	Coolant Level Sensor	DFC_SRCHighCIntLv	Fault Detection For Signal range check high	
111	4	Coolant Level Sensor	DFC_SRCLowCIntLv	Fault Detection For Signal range check low	
132	13	PFM	DFC_AfsPDifOfsErrB1	Error path of the offset diagnosis of the PFM differential pressure sensor in bank 1	Wiring harness or component (dirty or misadjusted)
132	0	PFM	DFC_AfsPDifRngErrHiB1	Error path of the upper out-of-range diagnosis of the PFM differential pressure sensor in bank 1	Wiring harness or component (dirty or misadjusted)
132	1	PFM	DFC_AfsPDifRngErrLoB1	Error path of the lower out-of-range diagnosis of the PFM differential pressure sensor in bank 1	Wiring harness or component (dirty or misadjusted)
132	2	PFM	DFC_AfsPDifSnsrErrB1	Error path to indicate internal errors of the PFM differential pressure sensor in bank 1	Wiring harness or component (dirty or misadjusted)
132	20	PFM	DFC_AfsPPhyRngHiB1	Error path of the upper physical range diagnosis of the PFM air mass flow signal in bank 1	Wiring harness or component
132	21	PFM	DFC_AfsPPhyRngLoB1	Error path of the lower physical range diagnosis of the PFM air mass flow signal in bank 1	Wiring harness or component
157	18	Injection System	DFC_InjUnStrtPres	check for rail pressure build up during start	fuel filter blocked, wiring harness, pre supply pump defective, high pressure pump defective (MeUn blocked),
157	16	High Pressure System	DFC_RailPGradMon	Rail pressure raw value is intermittent	wiring harness or components (loose contact)
157	0	High Pressure System	DFC_RailPOfsTstMax	rail pressure raw value is above maximum offset	wiring harness or component
157	1	High Pressure System	DFC_RailPOfsTstMin	rail pressure raw value is below minimum offset	wiring harness or component
157	3	Rail Pressure Sensor	DFC_RailPSRCMax	Sensor voltage above upper limit	wiring harness or component
157	4	Rail Pressure Sensor	DFC_RailPSRCMin	Sensor voltage below lower limit	wiring harness or component
167	7	Alternator Monitoring	DFC_AltIOMonPlaus	Plausibility check for input signal for monitoring the alternator	wiring harness or component
168	3	Battery/Electric Supply	DFC_BattUSRCMax	Diagnostic Fault Check for Signal Range Max Check of Battery Voltage	Battery voltage upper limit
168	4	Battery/Electric Supply	DFC_BattUSRCMin	Diagnostic Fault Check for Signal Range Min Check of Battery Voltage	Battery voltage below limit
171	3	Ambient Temperature Sensor	DFC_EnvTSRCMax	max-error of ambient air temperature sensor	wiring harness or component
171	4	Ambient Temperature Sensor	DFC_EnvTSRCMin	min-error of ambient air temperature sensor	wiring harness or component
172	8	Air Temperature	DFC_TAFSPerHi	SRC high for period duration of air temperature sensor	wiring harness or component
172	9	Air Temperature	DFC_TAFSPerLo	SRC low for period duration of air temperature sensor	wiring harness or component
172	3	Air Temperature Sensor	DFC_TAFSSRCMax	SRC high for air temperature sensor	
172	4	Air Temperature Sensor	DFC_TAFSSRCMin	SRC low for air temperature sensor	
172	2	Air Temperature Sensor	DFC_TAFSVDPlaus	Diagnostic fault check for air temperature sensor	wiring harness or component missadjusted or defective.
174	0	Fuel Low Pressure Temperature	DFC_FuelTPhysRngHi	Physical Range Check high for fuel temperature	high engine load with low fuel level and high ambient temperture
174	1	Fuel Low Pressure Temperature	DFC_FuelTPhysRngLo	Physical Range Check low for fuel temperature	very cold ambient temperture
174	3	Fuel Low Pressure Temperature Sensor	DFC_FuelTSRCMax	SRC high for fuel temperature sensor	wiring harness or component
174	4	Fuel Low Pressure Temperature Sensor	DFC_FuelTSRCMin	SRC low for fuel temperature sensor	wiring harness or component
174	11	Fuel Low Pressure Temperature Sensor	DFC_FuelTVDPlaus	DFC for fuel temperature plausibility check function	wiring harness or component
175	2	Oil Temperature	DFC_OilTNpl	Plausibility check for Oil Temperature	



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175	13	Oil Temperature	DFC_OilTNpHigh	Oil temperature too high plausibility error	oil extremely hot, maybe missuse of engine (tuning) wiring harness or component
175	0	Oil Temperature	DFC_OilTPhysRngHi	Physical Range Check high for Oil Temperature	1) Too high load on engine 2) Sensor misadjusted or wiring harness
175	1	Oil Temperature	DFC_OilTPhysRngLo	Physical Range Check low for Oil Temperature	Sensor misadjusted or wiring harness
175	3	Oil Temperature Sensor	DFC_OilTSRCMax	SRC High for Oil Temperature	wiring harness or component
175	4	Oil Temperature Sensor	DFC_OilTSRCMin	SRC low for Oil Temperature	wiring harness or component
190	8	Camshaft Speed Sensor	DFC_EpmCaS11ErrSig	DFC for camshaft signal diagnose - disturbed signal	tone wheel defective
190	12	Camshaft Speed Sensor	DFC_EpmCaS11NoSig	DFC for camshaft signal diagnose - no signal	wiring harness or component
190	2	Camshaft Speed Sensor	DFC_EpmCaS11OfsErr	DFC for camshaft offset angle exceeded	wiring harness or camshaft sensor defect or wrong mounting position or tone wheel misadjusted
190	9	Crankshaft Speed Sensor	DFC_EpmCrSErrSig	DFC for crankshaft signal diagnose - disturbed signal	– Loose connection or poor contact on socket – Change of air gap between sensor and trigger wheel (eccentric trigger wheel, air gap too big, loose sensor mounting, sensor movement) – Disturbance on sensor lines – Oscillating trigger wheel as starter engages – Bended or broken teeth on crankshaft trigger wheel
190	18	Crankshaft Speed Sensor	DFC_EpmCrSNoSig	DFC for crankshaft signal diagnose - no signal	wiring harness or crankshaft sensor defect
430	3	Starter Relay	DFC_StrtCoilHSSCB	Short circuit to battery error at High side of coil in Inhibit starter strategy	wiring harness or component
430	12	Starter Relay	DFC_StrtOvrHeatProtn	Indicates if starter is overheated	wiring harness or component
511	0	Throttle Valve	DFC_ThrVlvDrftOpn		Throttle valve is defective
511	19	Throttle Valve	DFC_ThrVlvFailSafeActv		
511	12	Throttle Valve	DFC_ThrVlvGovDvtMax		Throttle valve is defective
511	13	Throttle Valve	DFC_ThrVlvJamVlvOpn		Throttle valve is defective
511	7	Throttle Valve	DFC_ThrVlvSprgBrk		component defective
511	3	Throttle Valve	DFC_ThrVlvSRCLMax		wiring harness or component
511	4	Throttle Valve	DFC_ThrVlvSRCLMin		wiring harness or component
511	14	Throttle Valve	DFC_ThrVlvTmpErr		wiring harness or component
512	12	Throttle Valve	DFC_ThrVlvGovDvtMin		Throttle valve is defective
515	0	Throttle Valve	DFC_ThrVlvPhysSRCLMax		wiring harness or sensor missadjusted
520	2	CAN	DFC_ComTSC1TRDLC	DFC for DLC Error of CAN-Receive-Frame TSC1TR	CAN transmitter
520	9	CAN	DFC_ComTSC1TRTO	Timeout Error of CAN-Receive-Frame TSC1TR	CAN transmitter
527	11	Cruise Control	DFC_CrCUIModeNpl	Fault path which indicates the invalid combination of cruise control keys pressed	wiring harness or component
597	2	Brake System	DFC_BrkNpl	Plausibility check for Brake	wiring harness or component
597	7	Brake System	DFC_BrkNplSngSwT	Plausibility check for Brake	wiring harness or component
598	2	Clutch	DFC_ClthNpl	Plausibility check for Clutch	wiring harness or component
598	19	Clutch	DFC_ClthSig	Sig Error for Clutch	Error in clutch signal or signal invalid over CAN
604	12	CAN	DFC_ComETC5DLC	DLC Error of CAN-Receive-Frame ETC5	CAN transmitter
604	9	CAN	DFC_ComETC5TO	Timeout Error of CAN-Receive-Frame ETC5	CAN transmitter
604	2	Gear Neutral Switch	DFC_GbxAliveChk	Alive Detection for Gbx stNPos	
604	0	Gear Neutral Switch	DFC_GbxNPlausHi	Plausibility check for Gbx SCB	wiring harness or component
604	1	Gear Neutral Switch	DFC_GbxNPlausLo	Plausibility check for Gbx SCG	wiring harness or component
604	2	Gear Neutral Switch	DFC_GbxNPosSig	Check for error for CAN input	wiring harness or component
623	5	Stop Lamp	DFC_StopLmpOL	No load error	wiring harness or component
623	12	Stop Lamp	DFC_StopLmpOvrTemp	No load error	wiring harness or ECU
623	3	Stop Lamp	DFC_StopLmpSCB	Short circuit to battery error	wiring harness or component
623	4	Stop Lamp	DFC_StopLmpSCG	Short circuit to ground error	wiring harness or component
633	0	Pressure Control Valve	DFC_PCVAdaptCrvMax	learning valu too high	
633	1	Pressure Control Valve	DFC_PCVAdaptCrvMin	learning value too low	
633	16	Pressure Control Valve	DFC_PCVfacAdaptMax	learning factor too high	
633	18	Pressure Control Valve	DFC_PCVfacAdaptMin	learning factor too low	
633	7	Pressure Control Valve	DFC_PCVNoStrt	number of startup attempts exceeded the limit	
639	14	CAN	DFC_BusDiagBusOffNodeA	BusOff error CAN A	CAN transmitter
641	8	Turbo Charger Actuator	DFC_TrbChCurrLim		
641	5	Turbo Charger Actuator	DFC_TrbChHBrgOpnLd		
641	6	Turbo Charger Actuator	DFC_TrbChHBrgOvrCurr		

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641	12	Turbo Charger Actuator	DFC_TrbChHBrgOvrTemp		
641	14	Turbo Charger Actuator	DFC_TrbChHBrgShCirOvrLd		
641	4	Turbo Charger Actuator	DFC_TrbChHBrgUndrVltg		
651	5	Injection System	DFC_InjVlv_DI_NoLd_0	Open load on the power stage	wiring harness or component
651	3	Injection System	DFC_InjVlv_DI_ScCyl_0	Short circuit of the power stage low-side (cylinder error)	wiring harness or component
651	4	Injection System	DFC_InjVlv_DI_ScHsLs_0	Short circuit between high-side and low-side of the power stage (high-side non plausible error)	wiring harness or component
651	14	Injection System	DFC_IVActrVCC_0	measured injection closing time exceeds a limit	wiring harness, injector defective
651	13	Injection System	DFC_IVAdjDiaIVAdj_0	check of missing injector adjustment value programming	IMA not programmed
652	5	Injection System	DFC_InjVlv_DI_NoLd_3	Open load on the power stage	wiring harness or component
652	3	Injection System	DFC_InjVlv_DI_ScCyl_3	Short circuit of the power stage low-side (cylinder error)	wiring harness or component
652	4	Injection System	DFC_InjVlv_DI_ScHsLs_3	Short circuit between high-side and low-side of the power stage (high-side non plausible error)	wiring harness or component
652	14	Injection System	DFC_IVActrVCC_3	measured injection closing time exceeds a limit	wiring harness, injector defective
652	13	Injection System	DFC_IVAdjDiaIVAdj_3	check of missing injector adjustment value programming	IMA not programmed
653	5	Injection System	DFC_InjVlv_DI_NoLd_1	Open load on the power stage	wiring harness or component
653	3	Injection System	DFC_InjVlv_DI_ScCyl_1	Short circuit of the power stage low-side (cylinder error)	wiring harness or component
653	4	Injection System	DFC_InjVlv_DI_ScHsLs_1	Short circuit between high-side and low-side of the power stage (high-side non plausible error)	wiring harness or component
653	14	Injection System	DFC_IVActrVCC_1	measured injection closing time exceeds a limit	wiring harness, injector defective
653	13	Injection System	DFC_IVAdjDiaIVAdj_1	check of missing injector adjustment value programming	IMA not programmed
654	5	Injection System	DFC_InjVlv_DI_NoLd_2	Open load on the power stage	wiring harness or component
654	3	Injection System	DFC_InjVlv_DI_ScCyl_2	Short circuit of the power stage low-side (cylinder error)	wiring harness or component
654	4	Injection System	DFC_InjVlv_DI_ScHsLs_2	Short circuit between high-side and low-side of the power stage (high-side non plausible error)	wiring harness or component
654	14	Injection System	DFC_IVActrVCC_2	measured injection closing time exceeds a limit	wiring harness, injector defective
654	13	Injection System	DFC_IVAdjDiaIVAdj_2	check of missing injector adjustment value programming	IMA not programmed
675	5	Glow Lamp	DFC_GlwLmpOL	No load error	wiring harness or component
675	12	Glow Lamp	DFC_GlwLmpOvrTemp	Over temperature error	wiring harness or component
675	3	Glow Lamp	DFC_GlwLmpSCB	Short circuit to battery error	wiring harness or component
675	4	Glow Lamp	DFC_GlwLmpSCG	Short circuit to ground error	wiring harness or component
676	21	Glow Plugs	DFC_GlwPlg2of3	DFC for coding error when selected coding is not working	Glow Control Unit
676	11	Glow Plugs	DFC_GlwPlgDiagErr	DFC for faulty diagnostic data transmission or protocol error	Glow Control Unit
676	2	Glow Plugs	DFC_GlwPlgDiff	DFC for coding error when different coding words were received in a coding cycle	Glow Control Unit
676	5	Glow Plug Relay	DFC_GlwPlgLV SOL	No load error for Low Voltage System	wiring harness or component
676	12	Glow Plug Relay	DFC_GlwPlgLVSOvrTemp	Over temperature error on ECU powerstage for Glow plug Low Voltage System	wiring harness or component
676	3	Glow Plug Relay	DFC_GlwPlgLVSSCB	Short circuit to battery error for Low Voltage System	wiring harness or component
676	4	Glow Plug Relay	DFC_GlwPlgLVSSCG	Short circuit to ground error for Low Voltage System	wiring harness or component
676	13	Glow Plugs	DFC_GlwPlgSVSFail	DFC for SVS GCU faulty diagnostic glow plug or relay error	
676	9	Glow Plugs	DFC_GlwPlgSVSStkRly	DFC for SVS GCU faulty diagnostic sticking relayerror	
677	0	Starter Relay	DFC_StrtDummy	only a dummy - do not use!	wiring harness or component
677	12	Starter Relay	DFC_StrtLSOvrTemp	Over temperature error for Starter low side	wiring harness or component
677	3	Starter Relay	DFC_StrtLSSCB	Short circuit to battery error for Starter low side	wiring harness or component
677	4	Starter Relay	DFC_StrtLSSCG	Short circuit to ground error for Starter low side	wiring harness or component
677	5	Starter Relay	DFC_StrtOL	No load error for Starter	wiring harness or component
677	10	Terminal 50	DFC_T50Err	Defective T50 switch	switch defective or is active for a long time



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702	5	Air Filter Lamp	DFC_AirFitLmpOL	No load error	ECU internal fault
702	12	Air Filter Lamp	DFC_AirFitLmpOvrTemp	Over temperature error	ECU internal fault
702	3	Air Filter Lamp	DFC_AirFitLmpSCB	Short circuit to battery error	ECU internal fault
702	4	Air Filter Lamp	DFC_AirFitLmpSCG	Short circuit to ground error	ECU internal fault
705	5	Oil Pressure Lamp	DFC_OilPLmpOL	defect fault check for open load error	wiring harness or component
705	12	Oil Pressure Lamp	DFC_OilPLmpOvrTemp	defect fault check for over temperature error	output stage of ECU defect or wiring harness
705	3	Oil Pressure Lamp	DFC_OilPLmpSCB	defect fault check for short circuit to battery error	wiring harness or component
705	4	Oil Pressure Lamp	DFC_OilPLmpSCG	defect fault check for short circuit to ground error	wiring harness or component
729	9	Intake Air Heater	DFC_AirHtStickOn	DFC to indicate to an always switched ON Grid Heater	relay is sticky in closed position, maybe grid heater is not connected to the relay or grid heater is not connected to ground.
729	5	Intake Air Heater	DFC_IAirHtOL	DFC for open load on power stage for intake air heaters	wiring harness or component
729	12	Intake Air Heater	DFC_IAirHtOvrTemp	DFC for over temperature on power stage for intake air heaters	ECU power stage overtemperature detected: - wiring harness or component defective - ECU internal fault
729	3	Intake Air Heater	DFC_IAirHtSCB	DFC for short circuit to battery on power stage for intake air heaters	wiring harness or component
729	4	Intake Air Heater	DFC_IAirHtSCG	DFC for short circuit to ground on power stage for intake air heaters	wiring harness or component
729	2	Intake Air Heater	DFC_IAirHtSenRErr1	DFC for short circuit to ground, Over Current, Over Temperature in the Intake Air Heater feedback diagnosis line	wiring harness or component
730	2	Intake Air Heater	DFC_IAirHtSenRErr2	DFC for Open load in the Intake Air Heater feedback diagnosis line	wiring harness or component
876	5	Air Condition Compressor	DFC_AirCCmprOL	No load error on power stage for the compressor	wiring harness or component
876	12	Air Condition Compressor	DFC_AirCCmprOvrTemp	Over temperature error on powerstage for the compressor	ECU internal powerstage over temperature
876	3	Air Condition Compressor	DFC_AirCCmprSCB	Short circuit to battery error on power stage for the compressor	wiring harness or component
876	4	Air Condition Compressor	DFC_AirCCmprSCG	Short circuit to ground error on power stage for the compressor	wiring harness or component
898	2	CAN	DFC_ComTSC1TEDLC	DFC for DLC Error of CAN-Receive-Frame TSC1TE	CAN transmitter
975	5	Fan	DFC_FanDIOOL_0	No load error	
975	12	Fan	DFC_FanDIOOvrTemp_0	Over temperature error	
975	3	Fan	DFC_FanDIOSCB_0	Short circuit to battery error	
975	4	Fan	DFC_FanDIOSCG_0	Short circuit to ground error	
975	8	Fan	DFC_FanPWMOL	No load error	wiring harness or component
975	14	Fan	DFC_FanPWMOvrTemp	Over temperature error	output stage of ECU defect or wiring harness
976	5	Fan	DFC_FanDIOOL_1	No load error	
976	3	PTO	DFC_MaxPTOSwt	Diagnostic fault check for max error of COM message	wiring harness or component
976	4	PTO	DFC_MinPTOSwt	Diagnostic fault check for min error of COM message	wiring harness or component
977	3	Fan	DFC_FanDIOSCB_1	Short circuit to battery error	
977	4	Fan	DFC_FanDIOSCG_1	Short circuit to ground error	
977	5	Fan	DFC_FanPWMSCB	Short circuit to battery error	wiring harness or component
977	6	Fan	DFC_FanPWMSCG	Short circuit to ground error	wiring harness or component
986	12	CAN	DFC_ComCM1DLC	DFC for DLC Error of CAN-Receive-Frame Cab Message 1	CAN transmitter
986	9	CAN	DFC_ComCM1TO	Timeout Error of CAN-Receive-Frame Cab Message 1	CAN transmitter
987	5	SVS	DFC_SVSOL	No load error	wiring harness or component
987	12	SVS	DFC_SVSOvrTemp	No load error	wiring harness or component
987	3	SVS	DFC_SVSSCB	Short circuit to battery error	wiring harness or component
987	4	SVS	DFC_SVSSCG	Short circuit to ground error	wiring harness or component
1045	0	Brake System	DFC_BrkSigMn	Sig Error for Main Brake	
1046	2	Brake System	DFC_BrkSigRdnt	Sig Error for Redundant Brake	
1076	5	Metering Unit	DFC_MeUnOL	open load of metering unit output	wiring harness or component
1076	12	Metering Unit	DFC_MeUnOT	over tperature of device driver of metering unit	output stage of ECU defect or wiring harness
1076	16	Metering Unit	DFC_MeUnShCirLSBatt	short circuit to battery of metering unit output	wiring harness or component
1076	18	Metering Unit	DFC_MeUnShCirLSGnd	short circuit to ground of metering unit output	wiring harness or component
1079	3	Sensor Supply Monitoring 1	DFC_SSpMon1OV	Overvoltage at Sensor supply 1	
1079	4	Sensor Supply Monitoring 1	DFC_SSpMon1SCG	Short to GND at Sensor supply 1	





SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
1079	14	Sensor Supply Monitoring 1	DFC_SSpMon1UV	Undervoltage at Sensor supply 1	
1080	3	Sensor Supply Monitoring 2	DFC_SSpMon2OV	Overvoltage at Sensor supply 2	
1080	4	Sensor Supply Monitoring 2	DFC_SSpMon2SCG	Short to GND at Sensor supply 2	
1080	14	Sensor Supply Monitoring 2	DFC_SSpMon2UV	Undervoltage at Sensor supply 2	
1109	11	Injection Cut Off	DFC_EnglCO	Injection cut off demand (ICO) for shut off coordinator	ECU internal defect
1127	13	Boost Pressure Governor	DFC_PCRTIToCtl	Time to reactivate PCR control monitoring	
1127	31	Boost Pressure Governor	DFC_PCRTIToStrtCtl	Time to first activation of PCR control monitoring	
1136	16	ECU Temperature	DFC_TECUPhysRngHi	Diagnostic Fault Check for Physical Signal above maximum limit	wiring harness or component
1136	18	ECU Temperature	DFC_TECUPhysRngLo	Diagnostic Fault Check for Physical Signal below minimum limit	
1136	0	ECU Temperature Sensor	DFC_TECUSigRngMax		wiring harness or component
1136	1	ECU Temperature Sensor	DFC_TECUSigRngMin		wiring harness or component
1136	13	ECU Temperature Sensor	DFC_TECUSnsrPlaus	Diagnostic Fault Check for SMP480 ECU Temperature Plausibility	
1176	3	Turbo Charger Upstream Pressure Sensor	DFC_PTrbnUsSRCMax	SRC High for TrbnUs Pressure sensor	
1176	4	Turbo Charger Upstream Pressure Sensor	DFC_PTrbnUsSRCMin	SRC low for TrbnUs Pressure sensor	
1180	13	Turbo Charger Upstream Temperature	DFC_TTrbnUsNpl	Non Plausibility error for TTrbnUs	
1180	0	Turbo Charger Upstream Temperature	DFC_TTrbnUsPhysRngHi	Physical Range Check high for turbine upstream temperature sensor	
1180	1	Turbo Charger Upstream Temperature	DFC_TTrbnUsPhysRngLo	Physical Range Check low for turbine upstream temperature sensor	
1180	3	Turbo Charger Upstream Temperature Sensor	DFC_TTrbnUsSRCMax	SRC High for TrbnUs Temperature	
1180	4	Turbo Charger Upstream Temperature Sensor	DFC_TTrbnUsSRCMin	SRC low for TrbnUs Temperature sensor	
1213	5	MIL	DFC_MILOL	No load error	wiring harness or component
1213	12	MIL	DFC_MILOvrTemp	No load error	output power stage of ECU defect or wiring harness
1213	3	MIL	DFC_MILSCB	Short circuit to battery error	wiring harness or component
1213	4	MIL	DFC_MILSCG	Short circuit to ground error	wiring harness or component
1231	14	CAN	DFC_BusDiagBusOffNodeB	BusOff error CAN B	CAN transmitter
1235	14	CAN	DFC_BusDiagBusOffErrPasNod eC	error passive CAN C	CAN transmitter
1235	9	CAN	DFC_BusDiagBusOffNodeC	BusOff error CAN C	CAN transmitter
1244	5	Pressure Control Valve	DFC_PCVOL	open load of pressure control valve output	wiring harness or component
1244	12	Pressure Control Valve	DFC_PCVOT	over teperature of device driver of pressure control valve	wiring harness or component
1244	16	Pressure Control Valve	DFC_PCVShCirLSBatt	short circuit to battery of pressure control valve output	wiring harness or component
1244	18	Pressure Control Valve	DFC_PCVShCirLSGnd	short circuit to ground of the pressure control valve output	wiring harness or component
1244	4	Pressure Control Valve	DFC_PCVSRMax	signal range check high error of pressure control valve AD-channel	wiring harness or component
1244	3	Pressure Control Valve	DFC_PCVSRMin	signal range check low error of pressure control valve AD-channel	wiring harness or component
1382	0	Fuel Filter	DFC_FISysClgDet	Signal error for fuel filter Clg detection	
1382	13	Fuel Filter	DFC_FISysClgDetPlaus	Plausibility error for fuel filter Clg detection	
1550	12	Fan	DFC_FanDIOOvrTemp 1	Over temperature error	
1639	8	Fan	DFC_FanSpdLonPer	DFC for reporting DCM timer overflow error	wiring harness or component
1639	0	Fan	DFC_FanSpdSRCHigh	Fan speed above maximum threshold	wiring harness or component
1639	1	Fan	DFC_FanSpdSRCLow	Fan speed below minimum threshold	wiring harness or component
1656	12	Engine Compartment Button	DFC_ECBtnStopSig	fault path for signal check	wiring harness or component
1656	14	Engine Compartment Button	DFC_ECBtnStrtSig	fault path for signal check	wiring harness or component
1668	14	CAN	DFC_BusDiagBusOffErrPasNod eD	error passive CAN D	CAN transmitter
1668	9	CAN	DFC_BusDiagBusOffNodeD	BusOff error CAN D	CAN transmitter
1769	11	Engine Protection	DFC_EngPrtOvrSpd	Overspeed detection in component engine protection	overspeed caused by driver
2541	9	CAN	DFC_ComACKTO	Timeout Error of CAN-send-Frame ACK	CAN transmitter
2633	7	Turbo Charger Actuator	DFC_TrbChGovDvtCld		
2633	0	Turbo Charger Actuator	DFC_TrbChGovDvtMax		
2633	1	Turbo Charger Actuator	DFC_TrbChGovDvtMin		
2634	11	Main Relay	DFC_MRlyErlyOpng	Early opening defect of main relay	relay defect or wiring harness
2634	12	Main Relay	DFC_MRlyStk	DFC for stuck main relay error	relay defect or wiring harness



SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
2659	7	EGR Monitoring	DFC_AirMonEGRRed	Sooting in EGR Line	
2659	18	EGR Monitoring	DFC_ChrCtlFlowMon1	High flow error 1 in EGR system	Leakage in exhaust gas recirculation system
2659	1	EGR Monitoring	DFC_ChrCtlFlowMon2	High flow error 2 in EGR system	Leakage in exhaust gas recirculation system
2791	9	CAN	DFC_ComEEC5TO	Timeout Error of CAN-Transmit-Frame EEC5	CAN transmitter
2791	6	EGR Monitoring	DFC_EGRVlvCurrLim		actuator dirty
2791	15	EGR Valve	DFC_EGRVlvDrftOpn		EGR valve dirty and/or defective
2791	19	EGR Valve	DFC_EGRVlvFailSafeActv		EGR valve dirty and/or defective
2791	12	EGR Valve	DFC_EGRVlvGovDvtCld		EGR valve defective
2791	18	EGR Valve	DFC_EGRVlvGovDvtMax		EGR valve dirty or defective
2791	16	EGR Valve	DFC_EGRVlvGovDvtMin		EGR valve dirty or defective
2791	1	EGR Valve	DFC_EGRVlvJamVlvClsd		EGR valve defective or blocked
2791	0	EGR Valve	DFC_EGRVlvJamVlvOpn		EGR valve defective or blocked
2791	20	EGR Valve	DFC_EGRVlvPhysSRCMax		EGRVlv missadjusted or dirty
2791	21	EGR Valve	DFC_EGRVlvPhysSRCMin		EGRVlv missadjusted or dirty
2791	7	EGR Valve	DFC_EGRVlvSprngBrk		EGRVlv return spring broken or valve misadjusted or dirty
2791	13	EGR Valve	DFC_EGRVlvSRCMax		wiring harness or component
2791	14	EGR Valve	DFC_EGRVlvSRCMin		wiring harness or component
2791	11	EGR Valve	DFC_EGRVlvTmpErr		wiring harness or component
2795	21	Turbo Charger Actuator	DFC_TrbChDrftClsd		
2795	20	Turbo Charger Actuator	DFC_TrbChDrftOpn		
2795	12	Turbo Charger Actuator	DFC_TrbChFailSafeActv		
2802	14	ECU Internal	DFC_EEPRdErr	EEP Read Error based on the error in reading blocks from memory media	ECU internal fault
2802	12	ECU Internal	DFC_EEPPwrErr	EEP Write Error based on the error in storing the blocks in memory media	disconnection of battery while writing of EEPROM ( afterrun).ECU internal fault
3062	5	Air Condition Compressor	DFC_AirCCmprRedTrqOL	No load error on power stage for the reduce torque instruction	wiring harness or component
3062	12	Air Condition Compressor	DFC_AirCCmprRedTrqOvrTemp	Over temperature error on powerstage for the reduce torque instruction	wiring harness or component
3062	3	Air Condition Compressor	DFC_AirCCmprRedTrqSCB	Short circuit to battery error on power stage for the reduce torque instruction	wiring harness or component
3062	4	Air Condition Compressor	DFC_AirCCmprRedTrqSCG	Short circuit to ground error on power stage for the reduce torque instruction	wiring harness or component
3242	0	Particulate Filter Upstream Temperature	DFC_TPFItUsPhysRngHi	Physical Range Check high for particulate filter upstream temperature sensor	wiring harness or component
3242	1	Particulate Filter Upstream Temperature	DFC_TPFItUsPhysRngLo	Physical Range Check low for particulate filter upstream temperature sensor	wiring harness or component
3244	9	CAN	DFC_ComAT1IG2TO	Timeout error of aftertreatment 1 Diesel Particulate Filter Intake Gas Temperature	CAN transmitter
3244	2	Particulate Filter Upstream Temperature	DFC_TPFItUsNpl	Diagnostic fault check for Plausibility errors in Particle filter upstream temperature	wiring harness or component
3244	3	Particulate Filter Upstream Temperature Sensor	DFC_TPFItUsSRCMax	Diagnostic fault check for Signal Range Check max error for the temperature sensor installed at the upstream of particulate filter.	wiring harness or component
3244	4	Particulate Filter Upstream Temperature Sensor	DFC_TPFItUsSRCMin	Diagnostic fault check for Signal Range Check min error for the temperature sensor installed at the upstream of particulate filter.	wiring harness or component
3248	2	Particulate Filter Downstream Temperature	DFC_TPFItDsNpl	Diagnostic fault check for plausibility of particle filter downstream temperature	wiring harness or component
3248	3	Particulate Filter Downstream Temperature Sensor	DFC_TPFItDsSRCMax	DFC for Max-error of Signal-Range-Check	wiring harness or component
3248	4	Particulate Filter Downstream Temperature Sensor	DFC_TPFItDsSRCMin	DFC for Min-error of Signal-Range-Check	wiring harness or component
3251	13	Particulate Filter Differential Pressure Sensor Hoseline	DFC_NplHsChngPPFitDiff	Fault check for Hoseline connection	wiring harness or component
3251	2	Particulate Filter Differential Pressure Sensor	DFC_NplPresSensPPFitDiff	Fault check for the pressure sensor plausibility	wiring harness or component
3252	9	CAN	DFC_ComAT1IMGTO	Timeout Error of CAN-Transmit-Frame AT1IMG	CAN transmitter
3253	0	Particulate Filter Monitoring	DFC_PFitCharPDiffMax	Diagnostic fault check for maximum pressure differential charecterstics	Particulate Filter Overload



SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
3253	1	Particulate Filter Monitoring	DFC_PFitCharPDiffMin	Diagnostic fault check for minimum pressure differential characteristics	Particulate Filter damaged
3253	2	Particulate Filter Monitoring	DFC_PFitCharPDiffMinHiLd	Check for minimum exhaust gas differential pressure for high load	Differential pressure sensor hose
3253	12	Particulate Filter Monitoring	DFC_PFitDstrMin	Diagnostic fault check for min deviation measure from simulated and measured particulate mass	
3353	9	CAN	DFC_ComASTO	Timeout Error of CAN-Transmit-Frame AS	CAN transmitter
3361	9	CAN	DFC_ComDM1DCUBAM2PCKT O	Time out BAM to packet	CAN transmitter
3361	10	CAN	DFC_ComDM1DCUPCK2PCKT O	Time out Packet to packet	CAN transmitter
3470	21	Turbo Charger Actuator	DFC_TrbChJamVlvClsd		
3470	20	Turbo Charger Actuator	DFC_TrbChJamVlvOpn		
3470	12	Turbo Charger Actuator	DFC_TrbChSprgBrk		
3470	14	Turbo Charger Actuator	DFC_TrbChTmpErr		
3509	2	Sensor Supply Monitoring 1	DFC_SSpMon1	Voltage fault at Sensor supply 1	Boost pressure/ Boost Temperature Pin A9 APP2 Pin K44 Fuel low pressure/ Fuel temperature Pin A21 Oil pressure/ Oil temperature Pin A24
3510	2	Sensor Supply Monitoring 2	DFC_SSpMon2	Voltage fault at Sensor supply 2	Airfilter pressure K23 EGR position sensor A22 APP1 K45 Camshaft sensor A08
3511	2	Sensor Supply Monitoring 3	DFC_SSpMon3	Voltage fault at Sensor supply 3	Rail pressure A06
3609	16	Particulate Filter Differential Pressure	DFC_PPFitDiffEnhSRCMax	Enhanced SRC high for PFit differential pressure sensor	
3609	18	Particulate Filter Differential Pressure	DFC_PPFitDiffEnhSRCMin	Enhanced SRC low for PFit differential pressure sensor	
3609	9	Particulate Filter Differential Pressure	DFC_PPFitDiffNpIDyn	DFC for dynamic plausibility check for differential pressure across the Particulate filter	
3609	12	Particulate Filter Differential Pressure	DFC_PPFitDiffNpIHsLn	DFC to check for hose/line error	
3609	31	Particulate Filter Differential Pressure	DFC_PPFitDiffSot	Diagnostic Fault Check for Soot on hose/line monitoring	
3609	3	Particulate Filter Differential Pressure Sensor	DFC_PPFitDiffSRCMax	SRC High for PFit differential pressure sensor	wiring harness or component
3609	4	Particulate Filter Differential Pressure Sensor	DFC_PPFitDiffSRCMin	SRC low for PFit differential pressure sensor	wiring harness or component
3675	8	Turbo Charger Actuator	DFC_TrbChHBrgShCirBatt1		
3675	14	Turbo Charger Actuator	DFC_TrbChHBrgShCirGnd1		
3675	0	Turbo Charger Actuator	DFC_TrbChPhysSRCMax		
3675	1	Turbo Charger Actuator	DFC_TrbChPhysSRCMin		
3675	3	Turbo Charger Actuator	DFC_TrbChSRCMax		
3675	4	Turbo Charger Actuator	DFC_TrbChSRCMin		
4009	5	Fuel Filter Heater	DFC_FIFitHTOL	No load error in powerstage of fuel filter heating	wiring harness or component
4009	12	Fuel Filter Heater	DFC_FIFitHTOvrTemp	Over Temperature error in powerstage of fuel filter heating	output power stage of ECU defect or wiring harness
4009	3	Fuel Filter Heater	DFC_FIFitHTSCB	Short circuit to battery error in powerstage of fuel filter heating	wiring harness or component
4009	4	Fuel Filter Heater	DFC_FIFitHTSCG	Short circuit to ground error in powerstage of fuel filter heating	wiring harness or component
4228	0	Turbo Charger Actuator	DFC_TrbChHBrgTempOvrCurr		
4752	1	EGR Monitoring	DFC_EGRClgMonEta	DFC for monitoring EGR cooler efficiency	EGR cooler leakage or blocked
4770	9	CAN	DFC_ComA1DOC_TO	Timeout Error of CAN-Transmit-Frame A1DOC	CAN transmitter
4781	0	Particulate Filter Monitoring	DFC_PFitAshLdMax	To check if volume of Ash load has exceeded the limit	
4781	1	Particulate Filter Monitoring	DFC_PFitEff	Diagnostic fault check for particulate filter efficiency	
4781	8	Particulate Filter Monitoring	DFC_PFitFreq	Diagnostic fault check for too frequent regeneration of the particulate filter	
4781	31	Particulate Filter Monitoring	DFC_PFitRgnNoCompl	Diagnostic fault check for incomplete regeneration of particulate filter	

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
4781	16	Particulate Filter Monitoring	DFC_PFitSotMsDvtMax	Diagnostic fault check for pressure differential characteristics	
4781	18	Particulate Filter Monitoring	DFC_PFitSotMsDvtMin	Diagnostic fault check for pressure differential characteristics	
4781	13	Particulate Filter Monitoring	DFC_PFitSotMsMax	Diagnostic fault check for Maximum soot mass	Particulate Filter Overload
4781	7	Particulate Filter Monitoring	DFC_PFitSotMsTrqLim	torque soot mass limit dfc	
4785	9	CAN	DFC_ComDPF1STxTO	Timeout Error of CAN-Transmit-Frame DPF1S	CAN transmitter
4791	5	Oxidation Catalyst Heater Plugs	DFC_OxiCatHeatrDiag01OI	DFC for open circuit to ground, for the DOC Heater feedback relay diagnosis line	wiring harness or component
4791	6	Oxidation Catalyst Heater Plugs	DFC_OxiCatHeatrDiag01Sc	DFC for short circuit to ground, for the DOC Heater feedback relay diagnosis line	wiring harness or component
4791	3	Oxidation Catalyst Heater Plugs	DFC_OxiCatHeatrDiag02OI	DFC for open circuit to ground, for the DOC Heater feedback relay diagnosis line	wiring harness or component
4791	4	Oxidation Catalyst Heater Plugs	DFC_OxiCatHeatrDiag02Sc	DFC for short circuit to ground, for the DOC Heater feedback relay diagnosis line	wiring harness or component
4793	5	Oxidation Catalyst Heater Relay	DFC_OxiCatHeatrPsOL	No load error	wiring harness or component
4793	12	Oxidation Catalyst Heater Relay	DFC_OxiCatHeatrPsOvrTemp	Over temperature error	wiring harness or component
4793	3	Oxidation Catalyst Heater Relay	DFC_OxiCatHeatrPsSCB	Short circuit to battery error	wiring harness or component
4793	4	Oxidation Catalyst Heater Relay	DFC_OxiCatHeatrPsSCG	Short circuit to ground error	wiring harness or component
5077	5	Warning Lamp	DFC_WrnLmpOL	No load error	wiring harness or component
5077	12	Warning Lamp	DFC_WrnLmpOvrTemp	Over Temperature error	wiring harness or component
5077	3	Warning Lamp	DFC_WrnLmpSCB	Short circuit to battery error	wiring harness or component
5077	4	Warning Lamp	DFC_WrnLmpSCG	Short circuit to ground error	wiring harness or component
5100	5	Coolant Temperature Display	DFC_TCIntDspIOL	No load error	wiring harness or component
5100	12	Coolant Temperature Display	DFC_TCIntDspIovrTemp	Over temperature error on ECU powerstage coolant temperature PWM output	wiring harness or component
5100	3	Coolant Temperature Display	DFC_TCIntDspISCB	Short circuit to battery error	wiring harness or component
5100	4	Coolant Temperature Display	DFC_TCIntDspISCG	Short circuit to ground error	wiring harness or component
5317	16	Oxidation Catalyst Monitoring	DFC_OxiCatLv1rLdMon	DFC for soot load monitoring in first threshold	
5317	0	Oxidation Catalyst Monitoring	DFC_OxiCatLv2rLdMon	DFC for soot load monitoring in first threshold	
5319	2	Particulate Filter Monitoring	DFC_PFitRgnDmdDrvrErr	Diagnostic fault check for driver demand regeneration button stuck	
5319	0	Particulate Filter Monitoring	DFC_PFitRgnPerm	Diagnostic fault check for a locked regeneration	1. Oxidation catalyst upstream temperature sensor exchanged with particulate filter upstream temperature sensor 2. Oxidation catalyst defective
5324	11	Glow Plugs	DFC_GlwPlgPLUGErr_0	Array of DFCs for failure in i+1th Glow Plug	Glow plug cyl 1 defective
5324	4	Glow Plugs	DFC_GlwPlgPLUGSC_0	Array of DFCs for short circuit in i+1th Glow Plug	Glow plug cyl 1 defective
5324	0	Glow Plugs	DFC_GlwPlgRIErr_0	Array of DFCs for resistance out of rane of i+1th Glow Plug	
5324	14	Glow Plugs	DFC_GlwPlgWrngTyp_0	Array of DFCs for wrong type of i+1th Glow Plug	
5325	11	Glow Plugs	DFC_GlwPlgPLUGErr_1	Array of DFCs for failure in i+1th Glow Plug	Glow plug cyl 2 defective
5325	4	Glow Plugs	DFC_GlwPlgPLUGSC_1	Array of DFCs for short circuit in i+1th Glow Plug	Glow plug cyl 2 defective
5325	0	Glow Plugs	DFC_GlwPlgRIErr_1	Array of DFCs for resistance out of rane of i+1th Glow Plug	
5325	14	Glow Plugs	DFC_GlwPlgWrngTyp_1	Array of DFCs for wrong type of i+1th Glow Plug	
5326	11	Glow Plugs	DFC_GlwPlgPLUGErr_2	Array of DFCs for failure in i+1th Glow Plug	Glow plug cyl 3 defective
5326	4	Glow Plugs	DFC_GlwPlgPLUGSC_2	Array of DFCs for short circuit in i+1th Glow Plug	Glow plug cyl 3 defective
5326	0	Glow Plugs	DFC_GlwPlgRIErr_2	Array of DFCs for resistance out of rane of i+1th Glow Plug	
5326	14	Glow Plugs	DFC_GlwPlgWrngTyp_2	Array of DFCs for wrong type of i+1th Glow Plug	
5327	11	Glow Plugs	DFC_GlwPlgPLUGErr_3	Array of DFCs for failure in i+1th Glow Plug	Glow plug cyl 4 defective



SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
5327	4	Glow Plugs	DFC_GlwPlgPLUGSC_3	Array of DFCs for short circuit in i+1th Glow Plug	Glow plug cyl 4 defective
5327	0	Glow Plugs	DFC_GlwPlgRIErr_3	Array of DFCs for resistance out of rane of i+1th Glow Plug	
5327	14	Glow Plugs	DFC_GlwPlgWrngTyp_3	Array of DFCs for wrong type of i+1th Glow Plug	
5328	11	Glow Plugs	DFC_GlwPlgPLUGErr_4	Array of DFCs for failure in i+1th Glow Plug	
5328	4	Glow Plugs	DFC_GlwPlgPLUGSC_4	Array of DFCs for short circuit in i+1th Glow Plug	
5328	0	Glow Plugs	DFC_GlwPlgRIErr_4	Array of DFCs for resistance out of rane of i+1th Glow Plug	
5328	14	Glow Plugs	DFC_GlwPlgWrngTyp_4	Array of DFCs for wrong type of i+1th Glow Plug	
5329	11	Glow Plugs	DFC_GlwPlgPLUGErr_5	Array of DFCs for failure in i+1th Glow Plug	
5329	4	Glow Plugs	DFC_GlwPlgPLUGSC_5	Array of DFCs for short circuit in i+1th Glow Plug	
5329	0	Glow Plugs	DFC_GlwPlgRIErr_5	Array of DFCs for resistance out of rane of i+1th Glow Plug	
5329	14	Glow Plugs	DFC_GlwPlgWrngTyp_5	Array of DFCs for wrong type of i+1th Glow Plug	
5369	3	Turbo Charger Actuator	DFC_TrbChHBrgShCirBatt2		
5369	4	Turbo Charger Actuator	DFC_TrbChHBrgShCirGnd2		
5375	5	Throttle Valve	DFC_ThrVlvHBrgOpnLd		wiring harness or component
5375	6	Throttle Valve	DFC_ThrVlvHBrgOvrCurr		wiring harness or component
5375	3	Throttle Valve	DFC_ThrVlvHBrgShCirBatt1		wiring harness or component
5375	4	Throttle Valve	DFC_ThrVlvHBrgShCirGnd2		wiring harness or component
5375	8	Throttle Valve	DFC_ThrVlvHBrgShCirOvrLd		wiring harness or component
5375	11	Throttle Valve	DFC_ThrVlvHBrgTempOvrCurr		wiring harness or component
5375	14	Throttle Valve	DFC_ThrVlvHBrgUndrVltg		wiring harness or component
5377	3	Throttle Valve	DFC_ThrVlvHBrgShCirBatt2		wiring harness or component
5377	4	Throttle Valve	DFC_ThrVlvHBrgShCirGnd1		wiring harness or component
5386	5	Turbo Charger Actuator	DFC_TrbChOL		wiring harness or component
5386	12	Turbo Charger Actuator	DFC_TrbChOvrTemp		output stage of ECU defect or wiring harness
5386	3	Turbo Charger Actuator	DFC_TrbChSCB		wiring harness or component
5386	4	Turbo Charger Actuator	DFC_TrbChSCG		wiring harness or component
5579	3	Fuel Filter Downstream Pressure Sensor	DFC_FIFitDsPSRCMax	Short circuit to battery error on fuel filter clog detection sensor ecu pin	wiring harness or component
5579	4	Fuel Filter Downstream Pressure Sensor	DFC_FIFitDsPSRCMin	Short circuit to ground error on fuel filter clog detection ECU pin	wiring harness or component
5609	31	Brake System	DFC_BrkCrCtlLmp	Plausibility check for Brake	wiring harness or component
5609	14	Brake System	DFC_BrkCrCtlRIs	Plausibility check for Brake	wiring harness or component
5631	3	PFM	DFC_PThrVlvUsLineHiB1	DFC: SRC high in throttle valve upstream pressure sensor Bank1	wiring harness or component
5631	4	PFM	DFC_PThrVlvUsLineLoB1	DFC: SRC low in throttle valve upstream pressure sensor Bank1	wiring harness or component
5631	9	PFM	DFC_PThrVlvUsPlausHiB1	Plausibility high fault boost pressure sensor bank1	wiring harness or component
5631	10	PFM	DFC_PThrVlvUsPlausLoB1	Plausibility low fault boost pressure sensor bank1	wiring harness or component
5631	0	PFM	DFC_PThrVlvUsPrcHiB1	Physical Range high fault boost pressure sensor bank1	wiring harness or component
5631	1	PFM	DFC_PThrVlvUsPrcLoB1	Physical Range low fault boost pressure sensor bank1	wiring harness or component
5631	16	PFM	DFC_PThrVlvUsSigRngHiB1	Fault boost pressure sensor range high bank1	wiring harness or component
5631	18	PFM	DFC_PThrVlvUsSigRngLoB1	Fault boost pressure sensor range low bank1	wiring harness or component
5631	12	PFM	DFC_PThrVlvUsSnsrErrB1	Fault boost pressure sensor self diagnosis bank1	wiring harness or component
5763	5	EGR Valve	DFC_EGRVlvHBrgOpnLd		wiring harness or component
5763	6	EGR Valve	DFC_EGRVlvHBrgOvrCurr		wiring harness component or ECU internal fault
5763	12	EGR Valve	DFC_EGRVlvHBrgOvrTemp		wiring harness component or ECU internal fault
5763	3	EGR Valve	DFC_EGRVlvHBrgShCirBatt1		wiring harness or component
5763	4	EGR Valve	DFC_EGRVlvHBrgShCirGnd1		wiring harness or component
5763	11	EGR Valve	DFC_EGRVlvHBrgTempOvrCurr		wiring harness component or ECU internal fault
5770	3	EGR Valve	DFC_EGRVlvHBrgShCirBatt2		wiring harness or component
5770	4	EGR Valve	DFC_EGRVlvHBrgShCirGnd2		wiring harness or component
5770	6	EGR Valve	DFC_EGRVlvHBrgShCirOvrLd		ECU internal powerstage over load
5771	4	EGR Valve	DFC_EGRVlvHBrgUndrVltg		ECU supply under voltage
5784	12	Throttle Valve	DFC_ThrVlvHBrgOvrTemp		wiring harness or component



SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
5797	2	Oxidation Catalyst Upstream Temperature	DFC_TOxiCatUsNpl	Diagnostic fault check for Plausibility errors in Oxidation Catalyst upstream temperature	wiring harness or component
5797	0	Oxidation Catalyst Upstream Temperature	DFC_TOxiCatUsPhysRngHi	Physical Range Check high for temperature sensor upstream oxidation catalyst	wiring harness or component
5797	1	Oxidation Catalyst Upstream Temperature	DFC_TOxiCatUsPhysRngLo	Physical range check low for temperature sensor upstream oxidation catalyst	wiring harness or component
5797	3	Oxidation Catalyst Upstream Temperature Sensor	DFC_TOxiCatUsSRCMax	Diagnostic fault check for SRC high in Oxidation Catalyst upstream temperature	wiring harness or component
5797	4	Oxidation Catalyst Upstream Temperature Sensor	DFC_TOxiCatUsSRCMin	Diagnostic fault check for SRC low in Oxidation Catalyst upstream temperature	wiring harness or component
5826	0	Cruise Control	DFC_CrpModeActv		wiring harness or component
6385	12	Starter Relay	DFC_StrtHSOvrTemp	Over temperature error for Starter high side	wiring harness or component
6385	3	Starter Relay	DFC_StrtHSSCB	Short circuit to battery error for Starter high side	wiring harness or component
6385	4	Starter Relay	DFC_StrtHSSCG	Short circuit to ground error for Starter high side	wiring harness or component
6719	5	Pre Supply Pump	DFC_PSPOL	open load of pre-supply pump output	wiring harness or component
6719	12	Pre Supply Pump	DFC_PSPOvrTemp	Over temperature error on ECU powerstage for Pre supply pump	ECU internal fault
6719	3	Pre Supply Pump	DFC_PSPSCB	short circuit to battery of pre-supply pump output	wiring harness or component
6719	4	Pre Supply Pump	DFC_PSPSCG	short circuit to ground of pre-supply pump output	wiring harness or component
7332	16	Energizing Time Control	DFC_ETCtllnrLopCtVMax	Error path for not reaching the setpoint of the inner loop with maximal control variable	
7332	18	Energizing Time Control	DFC_ETCtllnrLopCtVMin	Error path for not reaching the setpoint of the inner loop with minimal control variable	
7332	9	Energizing Time Control	DFC_ETCtllnrLopRpT	Error path for response time of inner loop	
7332	15	Energizing Time Control	DFC_ETCt!OutrLopCtVMax	Error path for not reaching the setpoint of the outer loop with maximal control variable	
7332	17	Energizing Time Control	DFC_ETCt!OutrLopCtVMin	Error path for not reaching the setpoint of the outer loop with minimal control variable	
7332	10	Energizing Time Control	DFC_ETCt!OutrLopRpT	Error path for response time of outer loop	
7576	2	Glow Control Unit	DFC_GlwPlgGCU4ComErr	DFC for error in reception	
7576	4	Glow Control Unit	DFC_GlwPlgGCU4CPUV	DFC for chargepump under voltage	
7576	3	Glow Control Unit	DFC_GlwPlgGCU4OvrVltg	DFC for Over Voltage error	
7576	12	Glow Control Unit	DFC_GlwPlgGCU4PRFlgErr	DFC for PRFlag =0 if GE_SET has been sent	
7576	14	Glow Control Unit	DFC_GlwPlgGCU4T30Miss	DFC for T30 missing error	
7576	31	Glow Control Unit	DFC_GlwPlgGCU4Var	DFC for GCU4 variant error	
7576	13	Glow Control Unit	DFC_GlwPlgGCU4Typ	DFC for wrong GCU type	
7577	12	Glow Control Unit	DFC_GlwPlgGCU4OT	DFC for Over temperature error	
7759	2	CAN	DFC_ComEngStartStopNP	Non Plausible check Error of CAN-Receive-Frame Cab Message 1	CAN transmitter
20277	3	RmtAPP Poti 1	DFC_SRCHighRmtAPP1	Signal Range Check High for RmtAPP1	wiring harness or component
20277	4	RmtAPP Poti 1	DFC_SRCLowRmtAPP1	Signal Range Check Low for RmtAPP1	wiring harness or component
20278	3	RmtAPP Poti 2	DFC_SRCHighRmtAPP2	Signal Range Check High for RmtAPP2	wiring harness or component
20278	4	RmtAPP Poti 2	DFC_SRCLowRmtAPP2	Signal Range Check Low for RmtAPP2	wiring harness or component
22000	14	CAN	DFC_BusDiagBusOffErrPasNod eA	error passive CAN A	CAN transmitter
22001	15	CAN	DFC_BusDiagBusOffErrPasNod eB	error passive CAN B	CAN transmitter
22040	19	CAN	DFC_ComTSC1TETO	Timeout Error of CAN-Receive-Frame TSC1TE	CAN transmitter
23618	3	Battery/Electric Supply	DFC_DevLibBattUHI	The DFC is set if the battery voltage exceed the higher calibrated limit longer than the debounce time. If the DFC is set, diagnoses of the power stages can be disabled.	Jump Start with voltage higher than system voltage Alternator damaged



SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
23618	4	Battery/Electric Supply	DFC_DevLibBattULo	The DFC is set if the battery voltage exceed the lower calibrated limit longer than the debounce time. If the DFC is set, diagnoses of the power stages can be disabled.	High power consumption Battery damaged Alternator damaged
516096	0	PFM	DFC_AfsPErrPlausyMax	DFC to indicate the occurrence of maximum plausibility error for PFM	Wiring harness or component (dirty or misadjusted)
516096	1	PFM	DFC_AfsPErrPlausyMin	DFC to indicate the occurrence of minimum plausibility error for PFM	Wiring harness or component (dirty or misadjusted)
516097	8	PFM	DFC_AfsPSent2ComB1	Error path to display communication errors of the 2nd SENT line of the PFM sensor in bank 1	Wiring harness or component
516097	0	PFM	DFC_AfsPSent2LineHiB1	Error path of electrical line hi diagnosis of the 2nd SENT line of the PFM sensor in bank 1	Wiring harness or component
516097	1	PFM	DFC_AfsPSent2LineLoB1	Error path of electrical line low diagnosis of the 2nd SENT line of the PFM sensor in bank 1	Wiring harness or component
516098	19	PFM	DFC_AfsPSentComB1	Error path to display communication errors of the SENT line of the PFM sensor in bank 1	Wiring harness or component
516098	0	PFM	DFC_AfsPSentLineHiB1	Error path of electrical line hi diagnosis of the SENT line of the PFM sensor in bank 1	Wiring harness or component
516098	1	PFM	DFC_AfsPSentLineLoB1	Error path of electrical line low diagnosis of the SENT line of the PFM sensor in bank 1	Wiring harness or component
522001	14	Air Condition Compressor	DFC_AirCSwtNpl	Plausibility error for CAN input	CAN transmitter
522002	14	Air Condition Compressor	DFC_AirCSwtSig	Signal error for CAN input	CAN transmitter
522003	9	CAN	DFC_ComEEC2TO	Timeout Error of CAN-Transmit-Frame EEC@	CAN transmitter
522004	9	CAN	DFC_ComEFL_P1TO	Timeout Error of CAN-Transmit-Frame EFL_P1	CAN transmitter
522005	12	CAN	DFC_ComETC2DLC	DFC for DLC Error of CAN-Receive-Frame ETC2	CAN transmitter
522005	9	CAN	DFC_ComETC2TO	Timeout Error of CAN-Receive-Frame ETC2	CAN transmitter
522006	9	CAN	DFC_ComLFCTO	Timeout Error of CAN-Transmit-Frame FIC	CAN transmitter
522008	19	CAN	DFC_ComRCBAMTO	Timeout Error of Engine Retarder Configuration BAM message	CAN transmitter
522009	9	CAN	DFC_ComRCPACTO	Timeout Error of Engine Retarder Configuration packet frame	CAN transmitter
522010	2	CAN	DFC_ComTCO1DLC	DFC for DLC Error of CAN-Receive-Frame TCO1	CAN transmitter
522011	9	CAN	DFC_ComTI1TO	Timeout Error of CAN-Receive-Frame TI1	CAN transmitter
522012	2	CAN	DFC_ComTimeDateDLC	DFC for DLC Error of CAN-Receive-Frame TimeDate	CAN transmitter
522012	9	CAN	DFC_ComTimeDateTO	Timeout Error of CAN-Receive-Frame TimeDate	CAN transmitter
522013	9	CAN	DFC_ComTOTSC1DRAct	Passive DFC TimeOut of TSC1DR Message	CAN transmitter
522014	9	CAN	DFC_ComTOTSC1DRPas	Passive DFC TimeOut of TSC1DR Message	CAN transmitter
522015	9	CAN	DFC_ComTOTSC1PEAct	Active DFC TimeOut of TSC1PE Message	CAN transmitter
522016	9	CAN	DFC_ComTOTSC1PEPas	Passive DFC TimeOut of TSC1PE Message	CAN transmitter
522017	9	CAN	DFC_ComTOTSC1VEAct	Active Time out for TSC1VE	CAN transmitter
522018	9	CAN	DFC_ComTOTSC1VEPas	Passive Time out for TSC1VE	CAN transmitter
522019	9	CAN	DFC_ComTOTSC1VRAct	Active Time out for TSC1VR	CAN transmitter
522020	9	CAN	DFC_ComTOTSC1VRPas	Passive Time out for TSC1VR	CAN transmitter
522021	2	CAN	DFC_ComTSC1DEDLC	DFC for DLC Error of CAN-Receive-Frame TSC1DE	CAN transmitter
522021	9	CAN	DFC_ComTSC1DETO	Timeout Error of CAN-Receive-Frame TSC1DE	CAN transmitter
522022	2	CAN	DFC_ComTSC1DRDLC	DFC for DLC Error of CAN-Receive-Frame TSC1DR	CAN transmitter
522022	9	CAN	DFC_ComTSC1DRTO	Timeout Error of CAN-Receive-Frame TSC1DR	CAN transmitter
522023	2	CAN	DFC_ComTSC1PEDLC	DFC for DLC Error of CAN-Receive-Frame TSC1PE	CAN transmitter
522023	9	CAN	DFC_ComTSC1PETO	Timeout Error of CAN-Receive-Frame TSC1PE	CAN transmitter
522024	2	CAN	DFC_ComTSC1VEDLC	DFC for DLC Error of CAN-Receive-Frame TSC1VE	CAN transmitter

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
522024	9	CAN	DFC_ComTSC1VETO	Timeout Error of CAN-Receive-Frame TSC1VE	CAN transmitter
522025	2	CAN	DFC_ComTSC1VRDLC	DFC for DLC Error of CAN-Receive-Frame TSC1VR	CAN transmitter
522025	9	CAN	DFC_ComTSC1VRTO	Timeout Error of CAN-Receive-Frame TSC1VR	CAN transmitter
522026	9	CAN	DFC_ComTxPGNRQGbTO	Timeout DFC for NOxSensGlbReqTx.	CAN transmitter
522027	9	CAN	DFC_ComTxPGNRQTO	Timeout DFC for TxPGNRQ.	CAN transmitter
522028	9	CAN	DFC_ComVDTO	Timeout Error of CAN-Transmit-Frame VD	CAN transmitter
522029	9	CAN	DFC_ComVEP1TO	Timeout Error of CAN-Transmit-Frame VEP1	CAN transmitter
522030	9	CAN	DFC_ComWFI	Timeout Error of CAN-Transmit-Frame WFI	CAN transmitter
522041	0	High Pressure System	DFC_RailDvtMaxCSERS	DFC for monitoring the positive rail pressure deviation during CSERS and active RHU	
522041	1	High Pressure System	DFC_RailDvtMinCSERS	DFC for monitoring the negative rail pressure deviation during CSERS and active RHU	
522041	18	High Pressure System	DFC_RailNegDvtCSERS	Common DFC for monitoring the negative rail pressure deviation for CSERS during RHU (pressure to high)	
522042	1	High Pressure System	DFC_RailMonInjRIs	check of minimum rail pressure	leakage in the high pressure fuel system
522042	0	High Pressure System	DFC_RailMonTTC	check for TTC rail pressure build up during start	
522052	0	Air Control Governor	DFC_AirCtlGovDvtEOMMax	Positive governor deviation above limit for regeneration	1.) leakage in the air system or blocked air system 2.) Exhaust gas valve defect 3.) PFM dirty or misadjusted
522052	1	Air Control Governor	DFC_AirCtlGovDvtEOMMin	negative governor deviation below limit for regeneration	1.) leakage in the air system or blocked air system 2.) Exhausted gas valve defect 3.) PFM dirty or misadjusted 4.) boost pressure actuator misadjusted (exhausted gas back pressure to low) 5.) vacuum system defect
522053	0	Air Control Governor	DFC_AirCtlGovDvtMax	Status of diagnostic fault check for maximum airmass governor deviation	1.) leakage in the air system or blocked air system 2.) Exhaust gas valve defect 3.) HFM dirty or misadjusted
522054	1	Air Control Governor	DFC_AirCtlGovDvtMin	Status of diagnostic fault check for minimum airmass governor deviation	1.) leakage in the air system or blocked air system 2.) Exhaust gas valve defect 3.) AFM dirty or misadjusted 4.) boost pressure actuator misadjusted (exhausted gas back pressure to low) 5.) vacuum system defect
522055	9	Air Control Governor	DFC_AirCtlRmpTOut	Error path for too longtime spent in transtion mode Rgn to Nrm	Error in the EGR valve during transition between regeneration and normal mode
522056	9	Air Control Governor	DFC_AirCtlAirSlwRespNeg	Error case for SlowResponse of the air mass in case of a negative gradient of the air mass setpoint	
522056	10	Air Control Governor	DFC_AirCtlAirSlwRespPos	Error case for SlowResponse of the air mass in case of a positive gradient of the air mass setpoint	
522057	0	Air Control Governor	DFC_AirCtlGovrDeMilTqLimrMax	Status of diagnostic fault check for maximum airmass governor deviation	
522057	1	Air Control Governor	DFC_AirCtlGovrDeMilTqLimrMin	Status of diagnostic fault check for minimum airmass governor deviation	
522058	9	Air Control Governor	DFC_AirCtlTiToCtl	Status of diagnostic fault check to monitor time to activate close loop control system for airmass	
522058	10	Air Control Governor	DFC_AirCtlTiToStrtCtl	Status of diagnostic fault check to monitor time to start close loop control system for airmass	



SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
523010	2	High Pressure System	DFC_RailMeUn8	setpoint of metering unit in idle mode not plausible	Leakage in the high pressure range, injection injector jammed in open position, worn high pressure pump, worn injector, leaking pressure limiting valve Possible error in the low pressure stage The metering unit no longer works correctly when fuel quantities are small.
523011	0	CAN	DFC_ComDM1DCUSPN1	Error path SPN1 matching of DM1DCU message	CAN transmitter
523012	0	CAN	DFC_ComDM1DCUSPN2	Error path SPN2 matching of DM1DCU message	CAN transmitter
523013	0	CAN	DFC_ComDM1DCUSPN3	Error path SPN3 matching of DM1DCU message	CAN transmitter
523014	0	CAN	DFC_ComDM1DCUSPN4	Error path SPN4 matching of DM1DCU message	CAN transmitter
523015	0	CAN	DFC_ComDM1DCUSPN5	Error path SPN5 matching of DM1DCU message	CAN transmitter
523016	9	CAN	DFC_ComDM1DCUTO	Time out for DM1DCU BAM or single message	CAN transmitter
523017	9	CAN	DFC_ComPROSCR1TO	Timeout Error of CAN-Transmit-Frame PROSCR1	CAN transmitter
523018	9	CAN	DFC_ComPROSCR2TO	Timeout Error of CAN-Transmit-Frame PROSCR2	CAN transmitter
523019	2	CAN	DFC_ComRESET_NPL	DFC for RESETRx Frame Non Plausible error	CAN transmitter
523020	9	CAN	DFC_ComStOutTO	Timeout Error of CAN-Transmit-Frame StOut	CAN transmitter
523021	5	Error Lamp	DFC_ERLampOL	No load error	wiring harness or component
523021	12	Error Lamp	DFC_ERLampOvrTemp	Over temperature error	wiring harness or component
523021	3	Error Lamp	DFC_ERLampSCB	Short circuit to battery error	wiring harness or component
523021	4	Error Lamp	DFC_ERLampSCG	Short circuit to ground error	wiring harness or component
523022	5	Fuel Consumption Display	DFC_FICDsplOL	No load error for Fuel consumption display signal component	wiring harness or component
523022	12	Fuel Consumption Display	DFC_FICDsplOT	Over Temperature error for Fuel consumption display signal component	wiring harness or component
523022	3	Fuel Consumption Display	DFC_FICDsplSCB	Short circuit to battery error for Fuel consumption display signal component	wiring harness or component
523022	4	Fuel Consumption Display	DFC_FICDsplSCG	Short circuit to ground error for Fuel consumption display signal component	wiring harness or component
523023	0	Fuel Balance Control Monitoring	DFC_FBCMon_0	FBC correction quantities at limitation	engine hardware defective Injector defective
523024	0	Fuel Balance Control Monitoring	DFC_FBCMon_1	FBC correction quantities at limitation	engine hardware defective Injector defective
523025	0	Fuel Balance Control Monitoring	DFC_FBCMon_2	FBC correction quantities at limitation	engine hardware defective Injector defective
523026	0	Fuel Balance Control Monitoring	DFC_FBCMon_3	FBC correction quantities at limitation	engine hardware defective Injector defective
523027	5	Fuel Level Lamp	DFC_FuLvlLampOL	Open load of Fuel Level lamp output	
523027	12	Fuel Level Lamp	DFC_FuLvlLampOT	Over temperature error on ECU powerstage for Fuel Level lamp	
523027	3	Fuel Level Lamp	DFC_FuLvlLampSCB	Short circuit to battery of Fuel Level lamp output	
523027	4	Fuel Level Lamp	DFC_FuLvlLampSCG	Short circuit to ground of Fuel Level lamp output	
523028	5	Turbo Charger Upstream Temperature Lamp	DFC_TTLmpOL	No load error	
523028	12	Turbo Charger Upstream Temperature Lamp	DFC_TTLmpOvrTemp	No load error	
523028	3	Turbo Charger Upstream Temperature Lamp	DFC_TTLmpSCB	Short circuit to battery error	
523028	4	Turbo Charger Upstream Temperature Lamp	DFC_TTLmpSCG	Short circuit to ground error	
523029	0	High Pressure System	DFC_RailCPC1	set value of PCV not in plausibility range	
523030	0	High Pressure System	DFC_RailCPC3	minimum rail pressure exceeded	
523031	0	High Pressure System	DFC_RailCPC4	maximum rail pressure exceeded	
523032	0	High Pressure System	DFC_RailMeUn13	Rail pressure monitor for rail pressure deviation	
523033	0	High Pressure System	DFC_RailOverPresAlrm	Exceeding of max. rail pressure level, that is an alarm (Alrm) sign and might need action soon.	

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
523034	0	High Pressure System	DFC_RailOverPresImdt	Exceeding of max. rail pressure level, that needs immediate (Imdt) action	
523035	0	High Pressure System	DFC_RailOverPresReact	Activating reactions for fighting the over pressure	
523036	0	High Pressure System	DFC_RailOverPresReactMaxCnt	Maximum number of activations of the reaction that fights the over pressure exceeded	
523037	0	High Pressure System	DFC_RailPCV0	maximum positive deviation of rail pressure exceeded	maximum positive deviation of rail pressure exceeded
523038	0	High Pressure System	DFC_RailPCV1	maximum positive deviation of rail pressure exceeded concerning set value PCV	maximum negative rail pressure deviation with closed pressure control valve exceeded
523039	0	High Pressure System	DFC_RailPCV22	maximum negative rail pressure deviation with closed pressure control valve exceeded (second stage)	maximum rail pressure exceeded (second stage)
523040	0	High Pressure System	DFC_RailPCV2	maximum negative rail pressure deviation with closed pressure control valve exceeded	maximum negative rail pressure deviation with closed pressure control valve exceeded
523041	0	High Pressure System	DFC_RailPCV3	minimum rail pressure exceeded	
523042	0	High Pressure System	DFC_RailPCV42	maximum rail pressure exceeded (second stage)	maximum rail pressure exceeded (second stage)
523043	0	High Pressure System	DFC_RailPCV4	maximum rail pressure exceeded	maximum rail pressure exceeded
523044	16	High Pressure System	DFC_RailPosDvtCSERS	Common DFC for monitoring the positive rail pressure deviation for CSERS during RHU (pressure to high)	
523211	12	CAN	DFC_ComEBC1DLC	DFC for DLC Error of CAN-Receive-Frame EBC1	CAN transmitter
523211	9	CAN	DFC_ComEBC1TO	Timeout Error of CAN-Receive-Frame EBC1	CAN transmitter
523213	9	CAN	DFC_ComERC1TO	Timeout Error of CAN-Transmit-Frame ERC1	CAN transmitter
523214	12	CAN	DFC_ComETC1DLC	DFC for DLC Error of CAN-Receive-Frame ETC1	CAN transmitter
523214	9	CAN	DFC_ComETC1TO	Timeout Error of CAN-Receive-Frame ETC1	CAN transmitter
523218	2	CAN	DFC_ComRxCVSDLC	DFC for DLC Error of CAN-Receive-Frame RxCVSDLC	CAN transmitter
523218	9	CAN	DFC_ComRxCVSTO	Timeout Error of CAN-Receive-Frame ETC1	CAN transmitter
523222	9	CAN	DFC_ComTCO1TO	Timeout Error of CAN-Receive-Frame TCO1	CAN transmitter
523324	8	Glow Control Unit	DFC_GlwPlgGCU4MOSFETErr_0	DFC for short circuit to battery error	
523324	5	Glow Control Unit	DFC_GlwPlgGCU4OL_0	DFC for open load error	
523324	6	Glow Control Unit	DFC_GlwPlgGCU4OvrLd_0	DFC for Over load error	
523324	3	Glow Control Unit	DFC_GlwPlgGCU4ShrtCir_0	DFC for short circuit to ground error	
523325	8	Glow Control Unit	DFC_GlwPlgGCU4MOSFETErr_1	DFC for short circuit to battery error	
523325	5	Glow Control Unit	DFC_GlwPlgGCU4OL_1	DFC for open load error	
523325	6	Glow Control Unit	DFC_GlwPlgGCU4OvrLd_1	DFC for Over load error	
523325	3	Glow Control Unit	DFC_GlwPlgGCU4ShrtCir_1	DFC for short circuit to ground error	
523326	8	Glow Control Unit	DFC_GlwPlgGCU4MOSFETErr_2	DFC for short circuit to battery error	
523326	5	Glow Control Unit	DFC_GlwPlgGCU4OL_2	DFC for open load error	
523326	6	Glow Control Unit	DFC_GlwPlgGCU4OvrLd_2	DFC for Over load error	
523326	3	Glow Control Unit	DFC_GlwPlgGCU4ShrtCir_2	DFC for short circuit to ground error	
523327	8	Glow Control Unit	DFC_GlwPlgGCU4MOSFETErr_3	DFC for short circuit to battery error	
523327	5	Glow Control Unit	DFC_GlwPlgGCU4OL_3	DFC for open load error	
523327	6	Glow Control Unit	DFC_GlwPlgGCU4OvrLd_3	DFC for Over load error	
523327	3	Glow Control Unit	DFC_GlwPlgGCU4ShrtCir_3	DFC for short circuit to ground error	
523350	4	Injection System	DFC_InjVlv_DI_ScBnk_0	Short circuit of the power stage high-side (bank error)	wiring harness or component
523352	4	Injection System	DFC_InjVlv_DI_ScBnk_1	Short circuit of the power stage high-side (bank error)	wiring harness or component
523450	2	PTO	DFC_NpIPTOSwt	Diagnostic fault check non plausibility of COM message	wiring harness or component
523450	19	PTO	DFC_SigPTOSwt	Diagnostic fault check for signal error of COM message	CAN transmitter defective

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
523460	0	Boost Pressure Governor	DFC_PCRGovDvtMax	positive governor deviation above limit	1.) air system blocked or leakage 2.) turbo charger defect 3.) EPW (electric pneumatic converter) defect 4.) vacuum system defect 5.) boost pressure actuator defect 6.) boost pressure sensor defect
523460	16	Boost Pressure Governor	DFC_PCRGovDvtMaxCol	Error case for the collected max error status	
523460	15	Boost Pressure Governor	DFC_PCRGovDvtMaxNoCtl	Error case for boost pressure crossing max limit for open-loop mode	
523460	13	Boost Pressure Governor	DFC_PCRGovDvtMaxPartLd	Error case for permanent control max deviation for partial load	
523461	1	Boost Pressure Governor	DFC_PCRGovDvtMin	negative governor deviation below limit	1.) air system blocked or leakage 2.) turbo charger defect 3.) EPW (electric pneumatic converter) defect 4.) vacuum system defect 5.) boost pressure actuator defect 6.) boost pressure sensor defect
523461	18	Boost Pressure Governor	DFC_PCRGovDvtMinCol	Error case for the collected min error status	
523461	17	Boost Pressure Governor	DFC_PCRGovDvtMinNoCtl	Error case for boost pressure crossing min limit for open-loop mode	
523461	13	Boost Pressure Governor	DFC_PCRGovDvtMinPartLd	Error case for permanent control min deviation for partial load	
523591	2	Vehicle Speed Sensor	DFC_VehVCANSig	Signal error for vehicle speed over CAN	CAN transmitter defective
523592	0	Vehicle Speed Sensor	DFC_VehVTachMax	Max error for vehicle speed signal over Tachometer sensor	wiring harness or component
523592	1	Vehicle Speed Sensor	DFC_VehVTachMin	Min error for vehicle speed signal over Tachometer sensor	wiring harness or component
523592	2	Vehicle Speed Sensor	DFC_VehVTachSig	Signal error for vehicle speed over Tachometer	wiring harness or component
523601	3	Sensor Supply Monitoring 3	DFC_SSpMon3OV	Overvoltage at Sensor supply 3	
523601	4	Sensor Supply Monitoring 3	DFC_SSpMon3SCG	Short to GND at Sensor supply 3	
523601	14	Sensor Supply Monitoring 3	DFC_SSpMon3UV	Undervoltage at Sensor supply 3	
523602	12	Sensor Supply Monitoring	DFC_SSpMonOT	Sensor supply over temperature	
523605	2	CAN	DFC_ComTSC1AEDLC	DFC for DLC Error of CAN-Receive-Frame TSC1AE	CAN transmitter
523605	9	CAN	DFC_ComTSC1AETO	Timeout Error of CAN-Receive-Frame TSC1AE	CAN transmitter
523606	2	CAN	DFC_ComTSC1ARDLC	DFC for DLC Error of CAN-Receive-Frame TSC1AR	CAN transmitter
523606	9	CAN	DFC_ComTSC1ARTO	Timeout Error of CAN-Receive-Frame TSC1AR	CAN transmitter
523613	0	High Pressure System	DFC_RailMeUn0	maximum positive deviation of rail pressure exceeded	1.) Leakage in the high pressure section 2.) injection nozzle stuck in open position 3.) worn high pressure pump 4.) worn injector (to high injector backflow quantity) 5.) fuel filter clogged up 6.) PSP (electric pre-supply pump) output too low
523613	1	High Pressure System	DFC_RailMeUn3	minimum rail pressure exceeded	1.) Leakage in the high pressure section 2.) injection nozzle stuck in open position 3.) worn high pressure pump 4.) worn injector (to high injector backflow quantity) 5.) fuel filter clogged up 6.) PSP (electric pre-supply pump) output too low 7.) very last action: change ECU
523613	16	High Pressure System	DFC_RailMeUn4	maximum rail pressure exceeded	1.) Metering unit is stuck in open position 2.) zero delivery throttle clogged up 3.) metering unit without power due to electrical error. 4.) pressure after zero-delivery throttle too high. 5.) very last action: change ECU



SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
523613	2	High Pressure System	DFC_RailMeUn7	setpoint of metering unit in overrun mode not plausible	Leakage in the high pressure range, injection nozzle stuck in open position, worn high pressure pump, worn injector, leaking pressure limiting valve Possible error in the low pressure stage There is no zero delivery in the metering unit (leakage in metering unit too great), defective high pressure pump.
523615	2	Metering Unit	DFC_MeUnIntCtct	Intermittent contact between ECU and MeUn	wiring harness or component
523615	5	Metering Unit	DFC_MeUnSRCMax	signal range check high error of metering unit AD-channel	wiring harness or component
523615	6	Metering Unit	DFC_MeUnSRCMin	signal range check low error of metering unit AD-channel	wiring harness or component
523616	14	Injection System	DFC_InjCrvInjLimChrgBal	Number of injections is limited by charge balance of booster capacity	ECU internal fault
523676	14	Glow Plugs	DFC_GlwPlgT30Miss	DFC for T30 missing error in GCU-T	T30 not connected at Glow Control Unit
523676	0	Glow Plugs	DFC_GlwPlgTypDiffGCU	DFC for wrong glow plug type	
523676	12	Glow Plugs	DFC_GlwPlgUnErr	DFC for glow module error in GCU-T	Glow Control Unit
523677	5	Glow Plug Relay	DFC_GlwPlgOL	No load error for Standard Voltage System	
523677	12	Glow Plug Relay	DFC_GlwPlgOvrTemp	Over temperature error on ECU powerstage for Glow plug Standard Voltage System	
523677	3	Glow Plugs	DFC_GlwPlgSCB	Short circuit to battery error for Standard Voltage System	
523677	4	Glow Plugs	DFC_GlwPlgSCG	Short circuit to ground error for Standard Voltage System	
523703	9	CAN	DFC_ComEEC1TO	Timeout Error of CAN-Transmit-Frame EEC1	CAN transmitter
523704	9	CAN	DFC_ComEEC3TO	Timeout Error of CAN-Transmit-Frame EEC3	CAN transmitter
523705	9	CAN	DFC_ComEngTempTO	Timeout Error of CAN-Transmit-Frame EngTemp	CAN transmitter
523706	9	CAN	DFC_ComFIEcoTO	Timeout Error of CAN-Transmit-Frame FIEco	CAN transmitter
523714	9	CAN	DFC_ComTxCCVSTO	Timeout Error of CAN-TransmitFrame	CAN transmitter
523717	9	CAN	DFC_ComAmbConTO	Timeout Error of CAN-Transmit-Frame AmbCon	CAN transmitter
523741	14	CAN	DFC_ComEngShOffEBC1	Engine shut off request through CAN	CAN transmitter
523747	9	CAN	DFC_ComIC1TO	Timeout Error of CAN-Transmit-Frame INCON	CAN transmitter
523762	5	Particulate Filter Lamp	DFC_PFitLmpOL	No load error	
523762	12	Particulate Filter Lamp	DFC_PFitLmpOvrTemp	Over temperature error	
523762	3	Particulate Filter Lamp	DFC_PFitLmpSCB	Short circuit to battery error	
523762	4	Particulate Filter Lamp	DFC_PFitLmpSCG	Short circuit to ground error	
523763	9	CAN	DFC_ComShutDwnTO	Timeout Error of CAN-Transmit-Frame ShutDwn	CAN transmitter
523766	9	CAN	DFC_ComTOTSC1AEAct	Active DFC TimeOut of TSC1AE Message	CAN transmitter
523767	9	CAN	DFC_ComTOTSC1AEPas	Passive DFC TimeOut of TSC1AE Message	CAN transmitter
523768	9	CAN	DFC_ComTOTSC1ARAct	Active DFC TimeOut of TSC1AR Message	CAN transmitter
523769	9	CAN	DFC_ComTOTSC1ARPas	Passive DFC TimeOut of TSC1AR Message	CAN transmitter
523770	9	CAN	DFC_ComTOTSC1DEPas	Passive DFC TimeOut of TSC1DE Message	CAN transmitter
523771	9	CAN	DFC_ComTOTSC1DEAct	Passive DFC TimeOut of TSC1DE Message	CAN transmitter
523776	9	CAN	DFC_ComTOTSC1TEAct	Active Time out for TSC1VE	CAN transmitter
523777	9	CAN	DFC_ComTOTSC1TEPas	Passive Time out for TSC1TE	CAN transmitter
523778	9	CAN	DFC_ComTOTSC1TRAct	Active Time out for TSC1TR	CAN transmitter
523779	9	CAN	DFC_ComTOTSC1TRPas	Passive Time out for TSC1TR	CAN transmitter
523867	12	CAN	DFC_ComUAA1TO	Timeout Error of CAN-Transmit-Frame UAA1	CAN transmitter
523878	12	CAN	DFC_ComUAA2TO	Timeout Error of CAN-Transmit-Frame UAA1	CAN transmitter
523882	12	CAN	DFC_ComUAA3TO	Timeout Error of CAN-Transmit-Frame UAA3	CAN transmitter
523883	12	CAN	DFC_ComUAA4TO	Timeout Error of CAN-Transmit-Frame UAA4	CAN transmitter
523884	12	CAN	DFC_ComUAA5TO	Timeout Error of CAN-Transmit-Frame UAA5	CAN transmitter

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
523885	12	CAN	DFC_ComUAA6TO	Timeout Error of CAN-Transmit-Frame UAA6	CAN transmitter
523886	12	CAN	DFC_ComUAA7TO	Timeout Error of CAN-Transmit-Frame UAA7	CAN transmitter
523887	12	CAN	DFC_ComUAA8TO	Timeout Error of CAN-Transmit-Frame UAA8	CAN transmitter
523891	14	Intake Air Heater	DFC_AirHt_TstOffHi	DFC to SRC High error when heater is Off	wiring harness or component
523901	11	Injection System	DFC_InjUnStrtTst	Detection of Failed Engine Start	tbd
523946	0	Zero Fuel Learning Monitoring	DFC_ZFLETMax_0	DFC reporting error state on comparing energising time to Max value	- Injection valve sooted or misadjusted - bad compression (e.g. engine valve did not close, piston ring worn,...) - disturbances from drivetrain (e.g. defective TMFW,...) - bad fuel / additives
523946	1	Zero Fuel Learning Monitoring	DFC_ZFLETMin_0	DFC reporting error state on comparing energising time to Min value	- Injection valve sooted or misadjusted - bad compression (e.g. engine valve did not close, piston ring worn,...) - disturbances from drivetrain (e.g. defective TMFW,...) - bad fuel / additives
523947	0	Zero Fuel Learning Monitoring	DFC_ZFLETMax_3	DFC reporting error state on comparing energising time to Max value	
523947	1	Zero Fuel Learning Monitoring	DFC_ZFLETMin_3	DFC reporting error state on comparing energising time to Min value	
523948	0	Zero Fuel Learning Monitoring	DFC_ZFLETMax_1	DFC reporting error state on comparing energising time to Max value	
523948	1	Zero Fuel Learning Monitoring	DFC_ZFLETMin_1	DFC reporting error state on comparing energising time to Min value	
523949	0	Zero Fuel Learning Monitoring	DFC_ZFLETMax_2	DFC reporting error state on comparing energising time to Max value	
523949	1	Zero Fuel Learning Monitoring	DFC_ZFLETMin_2	DFC reporting error state on comparing energising time to Min value	
523961	3	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMaxT1ExhTMon	Diagnostic Fault Check for enhanced SRC-Max of First exhaust gas temperature	wiring harness or component
523961	4	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMinT1ExhTMon	Diagnostic Fault Check for enhanced SRC-Min of First exhaust gas temperature	wiring harness or component
523961	2	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlaus_0	Diagnostic Fault check array for cold start condition of exhaust-gas temperature	
523961	14	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlausPos1	Diagnostic Fault check for Model based plausibility check of exhaust-gas temperature sensor 1	
523962	3	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMaxT2ExhTMon	Diagnostic Fault Check for enhanced SRC-Max of Second exhaust gas temperature	wiring harness or component
523962	4	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMinT2ExhTMon	Diagnostic Fault Check for enhanced SRC-Min of Second exhaust gas temperature	wiring harness or component
523962	2	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlaus_1	Diagnostic Fault check array for cold start condition of exhaust-gas temperature	
523962	14	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlausPos2	Diagnostic Fault check for Model based plausibility check of exhaust-gas temperature sensor 2	
523963	3	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMaxT3ExhTMon	Diagnostic Fault Check for enhanced SRC-Max of third exhaust gas temperature	wiring harness or component
523963	4	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMinT3ExhTMon	Diagnostic Fault Check for enhanced SRC-Min of third exhaust gas temperature	wiring harness or component
523963	2	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlaus_2	Diagnostic Fault check array for cold start condition of exhaust-gas temperature	
523963	14	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlausPos3	Diagnostic Fault check for Model based plausibility check of exhaust-gas temperature sensor 3	

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
523964	3	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMaxT4ExhTMon	Diagnostic Fault Check for enhanced SRC-Max of Fourth exhaust gas temperature	wiring harness or component
523964	4	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMinT4ExhTMon	Diagnostic Fault Check for enhanced SRC-Min of Fourth exhaust gas temperature	wiring harness or component
523964	2	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlaus_3	Diagnostic Fault check array for cold start condition of exhaust-gas temperature	
523964	14	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlausPos4	Diagnostic Fault check for Model based plausibility check of exhaust-gas temperature sensor 4	
523965	3	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMaxT5ExhTMon	Diagnostic Fault Check for enhanced SRC-Max of fifth exhaust gas temperature	wiring harness or component
523965	4	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMinT5ExhTMon	Diagnostic Fault Check for enhanced SRC-Min of fifth exhaust gas temperature	wiring harness or component
523965	2	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlaus_4	Diagnostic Fault check array for cold start condition of exhaust-gas temperature	
523965	14	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlausPos5	Diagnostic Fault check for Model based plausibility check of exhaust-gas temperature sensor 5	
523966	3	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMaxT6ExhTMon	Diagnostic Fault Check for enhanced SRC-Max of sixth exhaust gas temperature	wiring harness or component
523966	4	Exhaust Gas Temperature Monitoring	DFC_EnhSRCMinT6ExhTMon	Diagnostic Fault Check for enhanced SRC-Min of sixth exhaust gas temperature	wiring harness or component
523966	2	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlaus_5	Diagnostic Fault check array for cold start condition of exhaust-gas temperature	
523966	14	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlausPos6	Diagnostic Fault check for Model based plausibility check of exhaust-gas temperature sensor 6	
523967	2	Exhaust Gas Temperature Monitoring	DFC_ExhTMonPlausGen	Diagnostic Fault check during cold start condition of exhaust-gas temperatures	
523970	11	Performance Limiter	DFC_CoVehPrfmLimAct	performance limiter is active.	Performance limiter active
523994	5	Engine Speed Output	DFC_EngSpdOL	No load error on the engine speed output	wiring harness or component
523994	12	Engine Speed Output	DFC_EngSpdOvrTemp	Over Temperature error on the engine speed output	wiring harness or component
523994	3	Engine Speed Output	DFC_EngSpdSCB	Short circuit to battery error on the engine speed output	wiring harness or component
523994	4	Engine Speed Output	DFC_EngSpdSCG	Short circuit to ground error on the engine speed output	wiring harness or component
523995	0	Performance Limiter	DFC_CoVehPrfmLimEngBlk	Third level of performance limiter is active	Performance limiter active
524054	3	ECU Internal	DFC_HLSDem_MonOBDMMax	Low-idle Speed above Limit	
524054	4	ECU Internal	DFC_HLSDem_MonOBDMIn	Low-idle Speed below Limit	
524058	2	ECU Internal	DFC_PhyModNonMonMapNpl	Not plausible fault: PhyMod_trq2qBas_MAP contains non strictly monotonous q curves	ECU internal fault (wrong calibration)
524059	12	ECU Internal	DFC_MoCADCTst	Diagnostic fault check to report the ADC test error	ECU internal fault
524059	1	Oxidation Catalyst Monitoring	DFC_OxiCatMonPasMin	Diagnostic fault check for characteristic of OxiCat	Oxidation catalyst defective
524060	12	ECU Internal	DFC_MoCADCVItgRatio	Diagnostic fault check to report the error in Voltage ratio in ADC monitoring	ECU internal fault
524060	1	Oxidation Catalyst Monitoring	DFC_OxiCatMonRHU	DFC for passive monitoring of the oxidation catalyst during rapid heat up	
524061	12	ECU Internal	DFC_MoCComErrCnt	Diagnostic fault check to report errors in query-/response-communication	ECU internal fault
524062	12	ECU Internal	DFC_MoCComSPI	Diagnostic fault check to report errors in SPI-communication	ECU internal fault
524063	12	ECU Internal	DFC_MoCROMErrXPg	Diagnostic fault check to report multiple error while checking the complete ROM-memory	ECU internal fault
524064	12	ECU Internal	DFC_MoCSOPerrMMRespByte	Loss of synchronization sending bytes to the MM from CPU.	ECU internal fault

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
524065	12	ECU Internal	DFC_MoCSOPErrNoChk	DFC to set a torque limitation once an error is detected before MoCSOP's error reaction is set	ECU internal fault
524066	12	ECU Internal	DFC_MoCSOPErrRespTime	Wrong set response time	ECU internal fault
524067	12	ECU Internal	DFC_MoCSOPErrSPI	Too many SPI errors during MoCSOP execution.	ECU internal fault
524068	12	ECU Internal	DFC_MoCSOPLoLi	Diagnostic fault check to report the error in undervoltage monitoring	ECU internal fault
524069	12	ECU Internal	DFC_MoCSOPMM	Diagnostic fault check to report that WDA is not working correct	ECU internal fault
524070	12	ECU Internal	DFC_MoCSOPOSTimeOut	OS timeout in the shut off path test. Failure setting the alarm task period.	ECU internal fault
524071	12	ECU Internal	DFC_MoCSOPPsVtstErr	Diagnostic fault check to report that the positive test failed	ECU internal fault
524072	12	ECU Internal	DFC_MoCSOPTimeOut	Diagnostic fault check to report the timeout in the shut off path test	ECU internal fault
524073	12	ECU Internal	DFC_MoCSOPUpLi	Diagnostic fault check to report the error in overvoltage monitoring	ECU internal fault
524074	12	ECU Internal	DFC_MoFAPP	Diagnostic fault check to report the accelerator pedal position error	ECU internal fault
524075	12	ECU Internal	DFC_MoFESpd	Diagnostic fault check to report the engine speed error	ECU internal fault
524076	12	ECU Internal	DFC_MoFinjDatET	Diagnostic fault check to report the plausibility error between level 1 energizing time and level 2 information	ECU internal fault
524077	12	ECU Internal	DFC_MoFinjDatPhi	Diagnostic fault check to report the error due to plausibility between the injection begin v/s injection type	ECU internal fault
524078	12	ECU Internal	DFC_MoFinjQnt	Diagnostic fault check to report the error due to non plausibility in ZFC	ECU internal fault
524079	12	ECU Internal	DFC_MoFMode1	Diagnosis fault check to report the demand for normal mode due to an error in the Pol2 quantity	ECU internal fault
524080	12	ECU Internal	DFC_MoFMode2	Diagnosis fault check to report the error to demand for an ICO due to an error in the Pol2 shut-off	ECU internal fault
524081	12	ECU Internal	DFC_MoFMode3	Diagnosis fault check to report the error to demand for an ICO due to an error in the Pol3 efficiency factor	ECU internal fault
524082	12	ECU Internal	DFC_MoFOvR	Diagnostic fault check to report the error due to Over Run	ECU internal fault
524083	12	ECU Internal	DFC_MoFOvRHtPrt	Diagnostic fault check to report the error due to cooling injection in Over Run	ECU internal fault
524084	12	ECU Internal	DFC_MoFQntCor	Diagnostic fault check to report the error due to injection quantity correction	ECU internal fault
524085	12	ECU Internal	DFC_MoFRailP	Diagnostic fault check to report the plausibility error in rail pressure monitoring	ECU internal fault
524086	12	ECU Internal	DFC_MoFRmtAPP	Diagnostic fault check to report the remote accelerator pedal position error	ECU internal fault
524087	12	ECU Internal	DFC_MoFTTrqCmp	Diagnostic fault check to report the error due to torque comparison	ECU internal fault
524088	12	ECU Internal	DFC_MonLimCurr	Diagnosis of curr path limitation forced by ECU monitoring level 2	ECU internal fault
524089	12	ECU Internal	DFC_MonLimLead	Diagnosis of lead path limitation forced by ECU monitoring level 2	ECU internal fault
524090	12	ECU Internal	DFC_MonLimSet	Diagnosis of set path limitation forced by ECU monitoring level 2	ECU internal fault
524091	3	ECU Internal	DFC_MonUMaxSupply1	Reported OverVoltage of VDD5	ECU internal fault
524092	4	ECU Internal	DFC_MonUMinSupply1	Reported UnderVoltage of VDD5	ECU internal fault
524093	12	ECU Internal	DFC_MoFinjDatBlkShtET	Diagnostic fault check to report the plausibility error for Blankshot injection	ECU internal fault
524098	12	ECU Internal	DFC_OCWDACom	Diagnostic fault check to report "WDA active" due to errors in query-/response communication	ECU internal fault
524099	12	ECU Internal	DFC_OCWDALowVltg	Diagnostic fault check to report "ABE active" due to undervoltage detection	ECU internal fault
524100	12	ECU Internal	DFC_OCWDAOvrVltg	Diagnostic fault check to report "ABE active" due to overvoltage detection	ECU internal fault



SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
524101	12	ECU Internal	DFC_OCWDARreasUnkwn	Diagnostic fault check to report "WDA/ABE active" due to unknown reason	ECU internal fault
524103	0	High Pressure System	DFC_RailMeUn1	maximum positive deviation of rail pressure exceeded concerning set flow of fuel	1.) Leakage in the high pressure section 2.) injection nozzle stuck in open position 3.) worn high pressure pump 4.) worn injector (to high injector backflow quantity) 5.) fuel filter clogged up 6.) PSP (electric pre-supply pump) output too low. 7.) very last action: change ECU
524104	0	High Pressure System	DFC_RailMeUn10	leakage is detected based on fuel quantity balance	Maladjusted rail pressure sensor, defective high pressure pump, leakage, Possible error in the low pressure stage, Backflow too low
524105	0	High Pressure System	DFC_RailMeUn2	maximum negative rail pressure deviation with metering unit on lower limit is exceeded	1.) Metering unit is stuck in open position 2.) zero delivery throttle clogged up 3.) metering unit without power due to electrical error. 4.) pressure after zero-delivery throttle too high.
524106	0	High Pressure System	DFC_RailMeUn22	maximum negative rail pressure deviation with metering unit on lower limit is exceeded (second stage)	1.) Metering unit is stuck in open position 2.) zero delivery throttle clogged up 3.) metering unit without power due to electrical error. 4.) pressure after zero-delivery throttle too high.
524107	0	High Pressure System	DFC_RailMeUn42	maximum rail pressure exceeded (second stage)	1.) Metering unit is stuck in open position 2.) zero delivery throttle clogged up 3.) metering unit without power due to electrical error. 4.) pressure after zero-delivery throttle too high.
524108	0	High Pressure System	DFC_RailMeUn5	positive deviation of rail pressure under fast condition exceeded	1.) Metering unit is stuck in open position 2.) zero delivery throttle clogged up 3.) metering unit without power due to electrical error. 4.) pressure after zero-delivery throttle too high.
524109	0	High Pressure System	DFC_RailMeUn9	maximum rail pressure exceeded - overrun detection	1.) Metering unit is stuck in open position 2.) zero delivery throttle clogged up 3.) metering unit without power due to electrical error. 4.) pressure after zero-delivery throttle too high.
524110	14	Injection System	DFC_InjCrvInjLimQntBal	Number of injections is limited by quantity balance of high pressure pump	ECU internal fault
524111	14	Injection System	DFC_InjCrvInjLimSys	Number of injections is limited by system	ECU internal fault
524112	14	Injection System	DFC_InjCrvNumInjRtmLim	Number of injections is limited by runtime	ECU internal fault
524113	14	Intake Air Heater	DFC_AirHt_TstOffLo	DFC to SRC Low error when heater is Off	wiring harness or component
524114	14	Intake Air Heater	DFC_AirHt_TstOnHi	DFC to SRC High error when heater is On	wiring harness or component
524115	14	Intake Air Heater	DFC_AirHt_TstOnLo	DFC to SRC Low error when heater is On	wiring harness or component
524120	14	ECU Internal	DFC_SWReset_0	Visibility of SoftwareResets in DSM	ECU internal fault
524121	14	ECU Internal	DFC_SWReset_1	Visibility of SoftwareResets in DSM	ECU internal fault
524122	14	ECU Internal	DFC_SWReset_2	Visibility of SoftwareResets in DSM	ECU internal fault
524124	12	ECU Internal	DFC_MoCADCNTP	Diagnostic fault check to report the NTP error in ADC monitoring	ECU internal fault
524128	12	ECU Internal	DFC_MoFStrt	function monitoring: fault in the monitoring of the start control	ECU internal fault
524131	12	ECU Internal	DFC_Cy327SpiCom	CY327 SPI Communication Error	ECU internal error
524131	31	Creep Mode	DFC_EngReqCrpAftFlg		
524132	31	Creep Mode	DFC_EngReqCrpAftPrk		
524133	31	Creep Mode	DFC_EngReqCrpAftRstr		

SPN	FMI	Component	FaultCheckName	FaultCheckDescription	Possible Causes
524134	31	Creep Mode	DFC_EngReqCrpAftTout		
524135	31	Creep Mode	DFC_EngReqCrpModeTout		
524136	1	Oxidation Catalyst Monitoring	DFC_OxiCatMonActvMin	Diagnostic fault check for active oxidation catalyst monitoring	
524137	0	Particulate Filter Monitoring	DFC_PFitDrvRdmdRgnMax	Diagnostic fault check for maximum number of regenerations of the particulate filter by the driver	
524138	0	Particulate Filter Monitoring	DFC_PFitEngPrt	Diagnostic fault check for the engine protection	
524139	0	Particulate Filter Monitoring	DFC_PFitSRCMaxFlwRstn	Diagnostic fault check for SRC high in Flow Resistance	
524140	0	Particulate Filter Monitoring	DFC_PFitSRCMinFlwRstn	Diagnostic fault check for SRC low in Flow Resistance	
524141	1	High Pressure System	DFC_RailColl0Neg	Common DFC for negative rail pressure (pressure to high)	
524142	0	High Pressure System	DFC_RailColl0Pos	Common DFC for positive rail pressure (pressure to low)	
524143	1	High Pressure System	DFC_RailColl1Neg	Common DFC for MeUn negative rail pressure (pressure to high)	
524144	0	High Pressure System	DFC_RailColl1Pos	Common DFC for MeUn positive rail pressure (pressure to high)	
524145	1	High Pressure System	DFC_RailColl2Neg	Common DFC for PCV negative rail pressure (pressure to high)	
524146	0	High Pressure System	DFC_RailColl2Pos	Common DFC for PCV positive rail pressure (pressure to high)	
524148	0		DFC_TCDBstPrtTrqLim	Error in boost protection limitation	
524149	0	Error in Limiter	DFC_TCDEngPrtTrqLim	Error in engine protection limitation	
524150	0	Error in Limiter	DFC_TCDInjSysTrqLim	Error in injection systems limitation	
524151	0	Error in Limiter	DFC_TCDLimInfo	Error in limitation	
524153	0	Error in Limiter	DFC_TCDPDiffTrqLim	Error in differential protection	
524154	0	Error in Limiter	DFC_TCDPrfmLimTrqLim	Error in performance limitation	
524155	0	Error in Limiter	DFC_TCDSmkTrqLim	Error in smoke limitation	