

GHG17 ACM Fault Codes

	Circuit Fault
	Rationality Fault
	Engine Protection Fault
	Component Broadcasted Fault
	Communication Data Fault
	Information Fault

SPN	FMI	ACM CODE DESCRIPTION
108	13	Ambient Air Pressure Signal Not Available via CAN
110	9	Coolant Temperature Signal Not Available via CAN
168	1	Battery Voltage Low
168	0	Battery Voltage High
171	13	Ambient Air Temperature Signal Not Available via CAN
190	9	Engine Speed Signal Not Available via CAN
513	9	Actual Torque Signal Not Available via CAN
625	9	PT-CAN Heartbeat Missing
625	2	CPC Message not Received or Stopped Arriving
1033	2	ACM2.1 engine hours data erratic, intermittent or incorrect
1231	9	MCM CAN1 Signal Missing
1669	9	CAN4 Signal Missing
1761	2	DEF Tank Level Sensor Rationality
1761	4	DEF Tank Level Sensor Circuit Failed Low
1761	3	DEF Tank Level Sensor Circuit Failed High
1761	18	DEF Tank Level 1 - Empty
1761	31	DEF Tank Level 3 - Low
3031	4	DEF Tank Temperature Sensor Circuit Failed Low
3031	3	DEF Tank Temperature Sensor Circuit Failed High
3031	10	DEF Tank Temperature Sensor Circuit Range/Performance
3056	2	SCR Inlet Nox Sensor - Error
3057	2	SCR Outlet Nox Sensor - Error
3216	13	SCR Inlet Nox Sensor Signal Not Available
3216	10	Nox Raw sensor signal erratic
3216	16	Engine Out NOx Sensor drifted low
3217	2	Engine out lambda sensor drift low
3217	5	Selective Catalyst Reduction Inlet NOx Sensor Lambda 1 Circuit Failed Open
3217	3	Selective Catalyst Reduction Inlet NOx Sensor Lambda 1 Circuit Failed High
3223	7	NOx RAW Sensor not ready after dewpoint enable check
3226	13	SCR Outlet Nox Sensor Signal Not Available
3226	21	Nox Outlet Sensor Drift High
3226	20	Nox Outlet Sensor Drift Low
3226	10	Nox Out sensor signal erratic
3227	2	Tail pipe lambda sensor drift low
3227	5	Selective Catalyst Reduction Outlet NOx Sensor Lambda 1 Circuit Failed Open
3227	3	Selective Catalyst Reduction Outlet NOx Sensor Lambda 1 Circuit Failed High
3236	9	Exhaust Mass Signal Not Available via CAN

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SPN	FMI	ACM CODE DESCRIPTION
3238	2	NOx OUT Sensor not ready after dewpoint enable check
3242	8	DOC Inlet Temperature - Signal Spike
3242	20	DOC Temperature Drift - Inlet High or Outlet Low
3242	4	DOC Inlet Temperature Circuit Failed Low
3242	3	DOC Inlet Temperature Circuit Failed High
3242	17	Diesel Oxidation Catalyst (DOC) Inlet Temperature Out Of Range Low Preventing HC Dosing
3246	8	DPF Outlet Temperature - Signal Spike
3246	21	DPF Outlet Temperature Sensor - Plausibility Error
3246	15	DPF Outlet Temperature - High
3246	4	DPF Outlet Temperature Circuit Failed Low
3246	3	DPF Outlet Temperature Circuit Failed High
3246	0	DPF Outlet Temperature Very High
3246	20	DPF Outlet/SCR Inlet Temperature - Abnormal
3246	2	Diesel Particulate Filter Outlet Temperature Signal - Not Plausible
3250	8	DOC Outlet Temperature - Signal Spike
3250	20	DOC Temperature Drift - Inlet Low or Outlet High
3250	15	DOC Outlet Temperature - High
3250	4	DOC Outlet Temperature Circuit Failed Low
3250	3	DOC Outlet Temperature Circuit Failed High
3250	0	DOC Outlet Temperature Very High
3250	31	Abnormal DOC Temperature Rise 1
3250	7	DOC Outlet Temperature Response Error
3250	2	Diesel Oxidation Catalyst temperature sensor - plausibility error
3251	21	DOC Inlet / Outlet Pressure Not Plausible
3251	0	DPF Pressure Out of Range Very High
3251	20	DOC Inlet Pressure Sensor - Not Plausible
3361	4	DEF Dosing Valve Circuit Failed Low
3361	3	DEF Dosing Valve Circuit Failed High
3361	5	DEF Dosing Valve Circuit Failed Open
3361	13	DEF Dosing Correction Factor Not Available via CAN
3361	31	Dosing Unit Error
3363	4	DEF Coolant Valve Circuit Failed Low
3363	3	DEF Coolant Valve Circuit Failed High
3363	5	DEF Coolant Valve Circuit Failed Open
3363	0	DEF Tank Temperature - High
3363	1	DEF Tank Temperature - Low
3490	4	DEF Purge Lamp Circuit Failed Low
3490	3	DEF Purge Lamp Circuit Failed High
3490	5	DEF Purge Lamp Circuit Failed Open
3509	4	ACM Sensor Supply 1 Short to Ground
3509	3	ACM Sensor Supply 1 Short to Battery
3510	4	ACM Sensor Supply 2 Short to Ground
3510	3	ACM Sensor Supply 2 Short to Battery
3511	4	3V Sensor Supply Bank 1 Circuit Failed Low
3511	3	3V Sensor Supply Bank 1 Circuit Failed High
3512	4	3V Sensor Supply Bank 2 Circuit Failed Low
3512	3	3V Sensor Supply Bank 2 Circuit Failed High
3556	0	Regen Temperature - Out of Range High
3556	1	Regen Temperature - Out of Range Low
3597	4	High Side Digital Output 1 Circuit Failed Low

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SPN	FMI	ACM CODE DESCRIPTION
3597	3	High Side Digital Output 1 Circuit Failed High
3599	4	High Side Digital Output 3 Circuit Failed Low
3599	3	High Side Digital Output 3 Circuit Failed High
3609	4	DOC Inlet Pressure Circuit Failed Low
3609	3	DOC Inlet Pressure Circuit Failed High
3610	4	DPF Outlet Pressure Circuit Failed Low
3610	3	DPF Outlet Pressure Circuit Failed High
3610	2	DPF Outlet Pressure Sensor - Not Plausible
3711	31	Parked Regen Failed - DOC Temp In Low Preventing Dosing
3713	31	Parked Regen Failed - DOC Temp Out, Not Reaching Target Temp
3719	16	Soot Level High
3719	0	Soot Level Very High
3719	31	DPF Zone 2 Condition
3719	15	DPF Zone 3 Condition
3720	15	DPF Ash Clean Request
3936	18	DPF Pressure - Out of Range Low
4331	15	DEF Dosing Quantity Low
4332	31	DOC inlet temperature out of range low preventing hc dosing
4334	4	DEF Pressure Sensor Circuit Failed Low
4334	3	DEF Pressure Sensor Circuit Failed High
4354	4	SCR Line Heater #1 Circuit Failed Low
4354	3	SCR Line Heater #1 Circuit Failed High
4354	5	SCR Line Heater #1 Open Circuit
4355	4	SCR Line Heater #2 Circuit Failed Low
4355	3	SCR Line Heater #2 Circuit Failed High
4355	5	SCR Line Heater #2 Circuit Failed Open
4356	4	SCR Line Heater #3 Circuit Failed Low
4356	3	SCR Line Heater #3 Circuit Failed High
4356	5	SCR Line Heater #3 Circuit Failed Open
4357	4	SCR Line Heater #4 Circuit Failed Low
4357	3	SCR Line Heater #4 Circuit Failed High
4357	5	SCR Line Heater #4 Circuit Failed Open
4360	8	SCR Inlet Temperature - Signal Spike
4360	20	SCR Inlet Temperature Sensor Drift High in Range
4360	4	SCR Inlet Temperature Sensor Circuit Failed Low
4360	3	SCR Inlet Temperature Sensor Circuit Failed High
4360	15	SCR Inlet Temperature High
4360	10	SCR Inlet Temperature Sensor - Rationality Error
4360	2	Selective Catalyst Reduction Inlet Temperature - Not Plausible
4363	8	SCR Outlet Temperature - Signal Spike
4363	0	SCR Outlet Temperature High
4363	20	SCR Temperature Drift - Inlet Low/Outlet High
4363	4	SCR Outlet Temperature Sensor Circuit Failed Low
4363	3	SCR Outlet Temperature Sensor Circuit Failed High
4363	10	SCR Outlet Temperature Sensor - Rationality Error
4363	2	Selective Catalyst Reduction Outlet Temperature - Not Plausible
4364	1	SCR NOX Conversion Efficiency Very Low
4364	17	SCR NOx Conversion Efficiency Low
4374	3	pump speed signal over measurement range

GHG17 ACM Fault Codes

SPN	FMI	ACM CODE DESCRIPTION
4374	4	pump speed signal below measurement range
4374	0	Under pressurized DEF system
4374	1	Over pressurized DEF system
4374	19	DEF system is not being controlled as expected
4375	4	DEF Pump Circuit Failed Low
4375	3	DEF Pump Circuit Failed High
4375	5	DEF Pump Circuit Failed Open
5016	4	High Side Digital Output 4 Circuit Failed Low
5016	3	High Side Digital Output 4 Circuit Failed High
5017	4	High Side Digital Output 5 Circuit Failed Low
5017	3	High Side Digital Output 5 Circuit Failed High
5018	18	DOC efficiency Low
5298	14	SCR Abnormal Temperature Rise
5397	31	DPF Regen Too Often
5435	7	Non DEF flow situation
5443	15	DPF HC Absorption Warning
5443	16	DPF HC Absorption High
5443	0	DPF HC Absorption Very High
5488	4	SCR Line Heater #5 Circuit Failed Low
5488	3	SCR Line Heater #5 Circuit Failed High
5488	5	SCR Line Heater #5 Circuit Failed Open
5569	4	Soot Sensor printed circuit board Temperature 1 signal range low
5569	3	Soot Sensor printed circuit board Temperature 1 signal range high
5741	4	Soot Sensor Probe short circuit
5741	12	Soot Sensor Probe self diagnostic
5741	18	Soot Sensor Data Valid But Below Normal Operating Range - Moderately Severe Level
5741	16	Soot Sensor Data Valid But Above Normal Operating Range - Moderately Severe Level
5741	9	Soot Sensor communication error
5741	13	Soot Sensor CAN Signal Missing
5747	12	Soot Sensor heater Fault
5841	14	DEF Quality Low
520232	9	NOx Mass Signal Not Available via CAN
520323	4	High Side Digital Output Supply Voltage Circuit Failed Low
520323	3	High Side Digital Output Supply Voltage Circuit Failed High
520328	7	DEF system has been over pressurized
520329	31	DEF flow quantity below normal
520332	17	Selective Catalyst Reduction (SCR) Inlet Temperature Too Low
520348	14	Soot Sensor Protection Tube
520349	14	DPF filter efficiency too low
520352	3	Supply Voltage Difference Between ACM and Soot Sensor
520353	17	Soot Sensor Temperature Rationality Failure
520357	15	Soot Sensor printed circuit board temperature high
520357	2	Soot Sensor printed circuit board Temperature rationality check.
520358	4	Soot Sensor printed circuit board Temperature 2 signal range low

GHG17 ACM Fault Codes

SPN	FMI	ACM CODE DESCRIPTION
520358	3	Soot Sensor printed circuit board Temperature 2 signal range high
520359	3	Soot Sensor heater short circuit to battery
520359	4	Soot Sensor heater short circuit to ground
520359	5	Soot Sensor heater open load
520359	12	Soot Sensor heater Printed Circuit Board circuit
520360	3	Soot Sensor Probe positive short circuit to battery diagnostic
520360	4	Soot Sensor Probe positive short circuit to ground diagnostic
520360	15	Soot Sensor Probe positive signal range high diagnostic
520361	18	Soot Sensor tempearature low
520361	2	Soot Sensor Temperature Rationality Signal Range Low
520361	16	Soot Sensor tempearature high
520362	4	Soot Sensor supply line signal range low
520362	3	Soot Sensor supply line signal range high
520363	5	Selective Catalyst Reduction Inlet NOx Sensor Heater Circuit Failed Open
520363	3	Selective Catalyst Reduction Inlet NOx Sensor Heater Circuit Failed High
520364	5	Selective Catalyst Reduction Inlet NOx Sensor Control Circuit Failed Open
520364	3	Selective Catalyst Reduction Inlet NOx Sensor Control Circuit Failed High
520365	5	Selective Catalyst Reduction Outlet NOx Sensor Heater Circuit Failed Open
520365	3	Selective Catalyst Reduction Outlet NOx Sensor Heater Circuit Failed High
520366	5	Selective Catalyst Reduction Outlet NOx Sensor Control Circuit Failed Open
520366	3	Selective Catalyst Reduction Outlet NOx Sensor Control Circuit Failed High
520367	5	Selective Catalyst Reduction Inlet NOx Sensor Lambda 2 Circuit Failed Open
520367	3	Selective Catalyst Reduction Inlet NOx Sensor Lambda 2 Circuit Failed High
520368	14	Selective Catalyst Reduction Outlet NOx Sensor Lambda 2 Circuit Failed Open
520368	31	Selective Catalyst Reduction Outlet NOx Sensor Lambda 2 Circuit Failed High
520371	16	SCR closed loop control at maximum limit (Multiples Sources)
520372	16	SCR closed loop control at maximum limit
520372	14	SCR closed loop control at maximum limit (Timeout)
520378	0	Aftertreatment Temperature not plausible
520381	2	Diesel Oxidation Catalyst Inlet Temperature Signal not plausible

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
70	2	Park Brake Status Not Plausible (Vehicle Moving)
70	19	J1939 Park Brake Switch Signal from Source #1, #2, or #3 is erratic
70	13	J1939 Park Brake Switch Signal from Source #1, #2, or #3 is missing or not available
84	21	Vehicle Speed Failure
84	3	Vehicle Speed Sensor Circuit Failed High
84	4	Vehicle Speed Sensor Circuit Failed Low
84	11	Vehicle Speed Above Programmable Threshold2 While Driving
84	0	Vehicle Speed Above Programmable Threshold1 While Driving
84	6	VSS Anti-Tamper Detection via ABS Vehicle Speed Comparison
84	19	J1939 Wheel-Based Vehicle Speed Signal from Source#1, #2, or #3 is erratic
84	13	J1939 Wheel-Based Vehicle Speed Signal from Source#1, #2, or #3 is missing or not available
84	20	Vehicle Speed Sensor Drifted High Error (VSS signal not plausible)
84	5	Vehicle Speed Sensor Open Circuit
84	14	Hall effect VSS supply voltage out of range
84	7	Hall effect VSS wiring mismatch, rationality fault
84	2	Vehicle Speed Signal lost
91	2	Accelerator Pedal Learn Error
91	0	Accelerator Pedal Circuit Failed High
91	4	Accelerator Pedal Circuit Failed Low
91	8	2-Channel Accelerator Pedal Signal 1 Missing
91	14	2-Channel Accelerator Pedal Not Learned
91	7	2-Channel Accelerator Pedal Idle Not Recognized
91	31	2-Channel Accelerator Pedal Learned Range to Large
91	13	J1939 EEC2 Message is missing or not available
91	10	Throttle pedal rationality check failed
96	13	Fuel Level Sensor Missing or Not Available
96	19	Fuel Level Sensor Received Network Data in Error
98	0	Oil Level High
98	18	Oil Level Low
98	1	Oil Level Very Low
100	18	Oil Pressure Low
100	1	Oil Pressure Very Low
107	0	Air Filter Restriction High
107	4	Air Filter Sensor failed low
107	3	Air Filter Sensor failed high
107	2	Air Filter Sensor plausibility error
110	16	Coolant Temperature High
110	0	Coolant Temperature Very High
111	18	Coolant Level Low
111	3	Coolant Level Circuit Failed High
111	4	Coolant Level Circuit Failed Low
111	1	Coolant Level Very Low
111	6	Coolant Level Sensor Circuit Failed Low
111	19	Coolant Level Sensor Received Data in Error
111	13	Coolant Level Sensor Data not received or Data not available

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
120	13	J1939 Retarder Fluid Message is missing or not available
158	2	KL15 ignition switch status of CPC and MCM do not match.
168	1	Battery Voltage Very Low
168	0	Battery Voltage High
168	18	Battery Voltage Low
168	7	Opt Idle Detected Charging System or Battery Failure
168	14	ECU powerdown not completed (Main Battery Terminal Possibly Floating)
168	9	Main battery connection lost
171	2	Ambient Temperature Sensor Data Erratic
171	14	J1587 Ambient Air Temp Sensor Data Not Received This Ign Cycle
171	9	J1587 Ambient Air Temp Sensor Data Message Stopped Arriving
171	4	Ambient Temperature Sensor Failed Low
171	3	Ambient Temperature Sensor Failed High
171	19	J1939 AMB Message (Ambient Temperature) is Missing or Not Available
191	9	J1939 ETC1 Message is missing
191	19	J1939 Transmission Output Shaft Speed Signal is erratic
191	13	J1939 Transmission Output Shaft Speed Signal is missing or not available
247	14	ACM Reported Ash Mileage is Lower then the CPC Stored Value
247	9	MCM Engine Hours Data not received or stopped arriving
247	10	MCM Engine Hours Data increasing at an implausible rate
247	0	MCM Engine Hours Data higher than expected
247	1	MCM Engine Hours Data lower than expected
523	19	J1939 Transmission Current Gear Signal is erratic
523	13	J1939 Transmission Current Gear Signal is missing or not available
524	9	J1939 ETC2 Message is missing
525	7	Transmission gear selection switch reports internal error.
525	19	Transmission gear selection switch reports implausible engine brake stage requests.
525	9	J1939 Powertrain Message (transfer case / PTO) is missing
527	9	J1939 CCVS Message is missing from either
556	9	J1939 RC Message from Transmission Retarder is missing
558	2	Idle Validation Switch Inputs Reversed
558	5	Idle Validation Switch 2 Circuit Failed Low
558	6	Idle Validation Switch 2 Circuit Failed High
558	4	Idle Validation Switch 1 Circuit Failed Low
558	3	Idle Validation Switch 1 Circuit Failed High
569	9	J1939 EAC1 Message (Electronic Axle Controller 1) is missing

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
571	4	Engine Brake Disable push-button shorted to Ground or pressed too long
596	19	J1939 Cruise Control Enable Switch Signal from Source #1, #2, or #3 is erratic
596	13	J1939 Cruise Control Enable Switch Signal from Source #1, #2, or #3 is missing or not available
597	2	Service Brake Status Not Plausible
597	19	J1939 Service Brake Switch Signal from Source #1, #2, or #3 is erratic
597	13	J1939 Service Brake Switch Signal from Source #1, #2, or #3 is missing or not available
598	2	Clutch switch status not plausible
599	4	Cruise Control SET and RESUME Circuits Failed Low
600	19	J1939 Cruise Control Coast Switch Signal from Source #1, #2, or #3 is erratic
600	13	J1939 Cruise Control Coast Switch Signal from Source #1, #2, or #3 is missing or not available
602	19	J1939 Cruise Control Accelerate Switch Signal from Source #1, #2, or #3 is erratic
602	13	J1939 Cruise Control Accelerate Switch Signal from Source #1, #2, or #3 is missing or not available
608	14	J1708 Data Link Failure
609	12	CPC Hardware Failure
609	16	Internal temperature of CPC too high.
609	13	CPC Software Diagnostics
625	2	Erratic Data or the Controller Area Network Propriety Data Link has Failed Between the Motor Control Module and the Common Powertrain Controller
625	14	MCM System ID not Received or Stopped Arriving
625	4	Erratic data or the Controller Area Network Propriety Data Link has Failed Between the Motor Control Module and the Common Powertrain Controller
625	8	Motor Control Module, Powertrain Controller Area Network DM1 Message Not Received or has Stopped Arriving
625	9	ACM PT-CAN DM1 Message Not Received or has Stopped Arriving
625	13	ECAN ID_1629 Diagnostic Message Not Received this Ignition Cycle
628	2	EEPROM Checksum Failure
628	12	EEPROM Checksum Failure for the SCR Block
628	14	XFLASH Static Fault Code Memory Page Read Write Failure
628	17	1000ms ECU OS Task Timed out Prior to Completion
629	2	CPC Hardware/Software Mismatch
629	12	DDEC Data Xflash Write Error. Replace CPC.
630	13	SCR Number Out of Range
639	14	J1939 Data Link Failure
639	9	J1939 PROP11 message is missing
639	13	HDMS Fan is configured and the J1939 message was not received or has stopped arriving.

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
667	3	Starter Pin 1 18 Circuit Failed High
684	8	Maneuver mode request error
684	9	Rock out mode request error
701	3	Digital Output 3 07 Circuit Failed High
701	4	Digital Output 3 07 Circuit Failed Low
701	5	Digital Output 3 07 Circuit Open
702	3	Digital Output 3 08 Circuit Failed High
702	4	Digital Output 3 08 Circuit Failed Low
702	5	Digital Output 3 08 Circuit Open
703	3	Digital Output 3 09 Circuit Failed High
703	4	Digital Output 3 09 Circuit Failed Low
703	5	Digital Output 3 09 Circuit Open
704	3	Digital Output 4 07 Circuit Failed High
704	4	Digital Output 4 07 Circuit Failed Low
704	5	Digital Output 4 07 Circuit Open
705	3	Digital Output 1 13 Circuit Failed High
705	4	Digital Output 1 13 Circuit Failed Low
705	5	Digital Output 1 13 Circuit Open
706	3	Digital Output 3 10 Circuit Failed High
706	4	Digital Output 3 10 Circuit Failed Low
706	5	Digital Output 3 10 Circuit Open
707	3	Digital Output 2 10 Circuit Failed High (CEL / AWL Lamp)
707	4	Digital Output 2 10 Circuit Failed Low (CEL / AWL Lamp)
707	5	Digital Output 2 10 Circuit Open (CEL / AWL Lamp)
708	3	Digital Output 3 12 Circuit Failed High
708	4	Digital Output 3 12 Circuit Failed Low
708	5	Digital Output 3 12 Circuit Open
709	3	Digital Output 3 16 Circuit Failed High
709	4	Digital Output 3 16 Circuit Failed Low
709	5	Digital Output 3 16 Circuit Open
710	3	Digital Output 4 06 Circuit Failed High
710	4	Digital Output 4 06 Circuit Failed Low
710	5	Digital Output 4 06 Circuit Open
711	3	Digital Output 1 05 Circuit Failed High
711	4	Digital Output 1 05 Circuit Failed Low
711	5	Digital Output 1 05 Circuit Open
712	3	Digital Output 1 04 Circuit Failed High
712	4	Digital Output 1 04 Circuit Failed Low
712	5	Digital Output 1 04 Circuit Open
713	7	TOP2 Shift Failure
714	3	Digital Output 4 10 Circuit Failed High
714	4	Digital Output 4 10 Circuit Failed Low
714	5	Digital Output 4 10 Circuit Open
715	5	Frequency Output 4 12 Circuit Open
715	4	Frequency Output 4 12 Circuit Failed Low
715	3	Frequency Output 4 12 Circuit Failed High
716	5	Frequency Output 1 09 Circuit Open
716	4	Frequency Output 1 09 Circuit Failed Low
716	3	Frequency Output 1 09 Circuit Failed High
904	9	J1939 EBC2 Message from ABS is missing
904	19	J1939 Front Axle Speed Signal is erratic + Anti Tamper enabled (J1939:TCO:SPN 904)
904	13	J1939 Front Axle Speed Signal is missing

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
924	3	Digital Output 4 09 Circuit Failed High
924	4	Digital Output 4 09 Circuit Failed Low
924	5	Digital Output 4 09 Circuit Open
925	3	Digital Output 3 17 Circuit Failed High
925	4	Digital Output 3 17 Circuit Failed Low
925	5	Digital Output 3 17 Circuit Open
926	3	Digital Output 4 01 Circuit Failed High
926	4	Digital Output 4 01 Circuit Failed Low
926	5	Digital Output 4 01 Circuit Open
970	4	Engine Aux. Shutdown Input Failed Low
970	3	Engine Aux. Shutdown Input Failed High
972	2	Throttle inhibit switch signal not plausible due to excess vehicle speed
973	9	J1939 EBC1 Message is missing
973	13	J1939 Engine Retarder Selection Signal Missing or not available
973	19	J1939 Engine Retarder Selection Signal Erratic
973	2	Evobus retarder lever position not plausible
974	2	Remote Accelerator Pedal Supply Voltage Out of Range
974	3	Remote Accelerator Pedal Circuit Failed High
974	4	Remote Accelerator Pedal Circuit Failed Low
979	9	J1939 PTO Message Not Received This Ignition Cycle
986	9	J1939 CM1 Message is missing
986	19	J1939 CM1 SPN986 Signal from source #1 or #2 is erratic
986	13	J1939 CM1 SPN986 Signal from source #1 or #2 is missing or not available
1089	9	J1939 AIR1 Message (Air Supply Pressure) is missing from first source address
1089	13	J1939 AIR1 Message (Air Supply Pressure) is missing from second source address
1121	19	J1939 Service Brake Switch Signal from EBC1 is erratic
1121	13	J1939 Service Brake Switch Signal from EBC1 is missing or not available
1121	2	J1939 Powertrain Message (AMT - Detroit transmission) is missing
1237	4	Stop Engine Override Switch Short Circuit to Ground
1243	14	ABS fault restricts automatic gear selection functionality. Check ABS for proper function.
1482	9	J1939 TC1 Message (Transmission Mode) is missing
1484	9	J1939 Message was lost (message counter error)
1484	13	J1939 Message was lost (CRC error)
1590	19	Adaptive Cruise Control - General Error
1590	9	Adaptive Cruise Control Message Not Received
1592	9	J1939 HRW Message (High Resolution Wheel Speed) from ABS is missing
1592	19	J1939 HRW (High Resolution Wheel Speed) Wheel Speed Signal Erroneous
1592	13	J1939 HRW (High Resolution Wheel Speed) Wheel Speed Signal Missing

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
1623	9	J1939 Tachograph Output shaft speed Signal is erratic
1623	13	J1939 Tachograph Output shaft speed Signal is missing or not available
1624	9	J1939 TCO1 Message is missing
1624	19	J1939 Tachograph Vehicle Speed Signal is erratic (J1939 TCO1:SPN1624)
1624	13	J1939 Tachograph Vehicle Speed Signal is missing or not available
1663	7	Optimized Idle Safety Loop Faulted
1681	9	J1939 BM Message (Battery Main Switch) is missing
1716	9	J1939 ERC1 Message is missing
1716	13	Evobus retarder lever calibration not plausible
1814	9	VDC1 Message was not received or has stopped arriving.
1845	9	J1939 TCFG2 Message is missing
2003	9	J1939 Message is missing from source address 3 (dec)
2011	9	J1939 Message is missing from source address 11 (dec)
2017	9	J1939 Message is missing from source address 17 (dec)
2023	9	J1939 Message is missing from source address 23 (dec)
2025	9	J1939 Message is missing from source address 25 (dec)
2033	9	J1939 Message is missing from source address 33 (dec)
2042	9	J1939 Message is missing from source address 42 (dec)
2049	9	J1939 Message is missing from source address 49 (dec)
2596	9	J1939 CM1 Message (Maximum Vehicle Speed Limit) is Missing or Not Available
2623	14	2-Channel Accelerator Pedal GAS1 and GAS2 Signal Missing
2623	8	2-Channel Accelerator Pedal Signal 2 Missing
2623	2	Accelerator pedal "in-range" fault.
2646	3	Digital Output 4 02 Circuit Failed High
2646	4	Digital Output 4 02 Circuit Failed Low
2646	5	Digital Output 4 02 Circuit Open
2882	13	Off-Highway Engine Configuration Selection message on J1939 was not received or has stopped arriving.
2900	9	J1939 ETC7 Message is missing
3187	9	Transmission Shift Console Datalink (LIN)
3353	2	Generator (Charging System) D+ terminal failure
3460	7	PTO 2 activated, but no feedback
3460	2	PTO 2 feedback, but not activated
3461	7	PTO 1 activated, but no feedback
3461	2	PTO 1 feedback, but not activated
3510	7	Accelerator Pedal Supply Voltage Circuit Failed High

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
3510	4	Accelerator Pedal Supply Voltage Circuit Failed Low
3510	8	2-Channel Accelerator Pedal Supply Voltage Missing
3511	3	Remote Accelerator Pedal Supply Voltage Circuit Failed High
3511	4	Remote Accelerator Pedal Supply Voltage Circuit Failed Low
3606	9	J1939 ESS Message is missing
3645	9	J1939 TCI Message (Transfer Case Information) is missing
3695	19	DPF Regen Inhibit MUX Switch Message Contains Data Error Indicator
3695	13	DPF Regen Inhibit MUX Switch Message Contains SNV Indicator
3695	9	DPF Regen Inhibit MUX Switch Message Stopped Arriving
3695	14	DPF Regen Inhibit MUX Switch Message Not Received this Ign Cycle
3696	19	DPF Regen Force MUX Switch Message Contains Data Error Indicator
3696	13	DPF Regen Force MUX Switch Message Contains SNV Indicator
3696	9	DPF Regen Force MUX Switch Message Stopped Arriving
3696	14	DPF Regen Force MUX Switch Message Not Received this Ign Cycle
3696	4	DPF Regeneration Switch Short Circuit to Ground
3719	16	DPF Filter Soot Level is High
3719	0	DPF Filter Soot Level is very high
3840	5	Frequency Output 4 15 Circuit Open
3840	4	Frequency Output 4 15 Circuit Failed Low
3840	3	Frequency Output 4 15 Circuit Failed High
3841	5	Frequency Output 4 11 Circuit Open
3841	4	Frequency Output 4 11 Circuit Failed Low
3841	3	Frequency Output 4 11 Circuit Failed High
3842	3	Analog Ground 3 02 Circuit Failed High
3842	4	Analog Ground 3 02 Circuit Failed Low
3842	5	Analog Ground 3 02 Circuit Open
3843	4	Digital Input 1 01 Circuit Failed Low
3843	3	Digital Input 1 01 Circuit Failed High
3844	4	Digital Input 1 02 Circuit Failed Low
3844	3	Digital Input 1 02 Circuit Failed High
3845	4	Digital Input 1 12 Circuit Failed Low
3845	3	Digital Input 1 12 Circuit Failed High
3846	4	Digital Input 1 14 Circuit Failed Low
3846	3	Digital Input 1 14 Circuit Failed High
3847	4	Digital Input 1 15 Circuit Failed Low
3847	3	Digital Input 1 15 Circuit Failed High
3848	4	Digital Input 1 16 Circuit Failed Low
3848	3	Digital Input 1 16 Circuit Failed High
3849	4	Digital Input 1 17 Circuit Failed Low
3849	3	Digital Input 1 17 Circuit Failed High
3850	4	Digital Input 1 11 Circuit Failed Low
3850	3	Digital Input 1 11 Circuit Failed High

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
3851	4	Digital Input 2 09 Circuit Failed Low
3851	3	Digital Input 2 09 Circuit Failed High
3852	4	Digital Input 2 11 Circuit Failed Low
3852	3	Digital Input 2 11 Circuit Failed High
3853	4	Digital Input 2 12 Circuit Failed Low
3853	3	Digital Input 2 12 Circuit Failed High
3854	4	Digital Input 2 13 Circuit Failed Low
3854	3	Digital Input 2 13 Circuit Failed High
3855	4	Digital Input 2 14 Circuit Failed Low
3855	3	Digital Input 2 14 Circuit Failed High
3856	4	Digital Input 2 15 Circuit Failed Low
3856	3	Digital Input 2 15 Circuit Failed High
3857	4	Digital Input 2 07 Circuit Failed Low
3857	3	Digital Input 2 07 Circuit Failed High
3858	4	Digital Input 2 08 Circuit Failed Low
3858	3	Digital Input 2 08 Circuit Failed High
3859	4	Digital Input 4 16 Circuit Failed Low
3859	3	Digital Input 4 16 Circuit Failed High
3860	4	Digital Input 4 18 Circuit Failed Low
3860	3	Digital Input 4 18 Circuit Failed High
3861	4	Digital Input 4 13 Circuit Failed Low
3861	3	Digital Input 4 13 Circuit Failed High
3862	4	Digital Input 1 10 Circuit Failed Low
3862	3	Digital Input 1 10 Circuit Failed High
3863	4	Digital Input 4 17 Circuit Failed Low
3863	3	Digital Input 4 17 Circuit Failed High
3864	4	Digital Input 3 18 Circuit Failed Low
3864	3	Digital Input 3 18 Circuit Failed High
3865	4	Digital Input 4 08 Circuit Failed Low
3865	3	Digital Input 4 08 Circuit Failed High
3866	4	Digital Input 4 04 Circuit Failed Low
3866	3	Digital Input 4 04 Circuit Failed High
3867	4	Digital Input 4 05 Circuit Failed Low
3867	3	Digital Input 4 05 Circuit Failed High
3868	4	Digital Input 4 03 Circuit Failed Low
3868	3	Digital Input 4 03 Circuit Failed High
3869	4	Digital Input 4 01 Circuit Failed Low
3869	3	Digital Input 4 01 Circuit Failed High
3870	4	Digital Input 4 02 Circuit Failed Low
3870	3	Digital Input 4 02 Circuit Failed High
3871	3	Speed Sensor 4 04 (Transmission or KL. W) Circuit Failed High
3871	4	Speed Sensor 4 04 (Transmission or KL. W) Circuit Failed Low
3871	5	Speed Sensor 4 04 (Transmission or KL. W) Circuit
3871	2	Transmission Speed Failure
3872	4	Analog Output 01 Failed Low or Open Circuit
3872	3	Analog Output 01 Failed High
3873	4	Analog Output 02 Failed Low or Open Circuit
3873	3	Analog Output 02 Failed High
3948	9	J1939 PTODE Message (PTO Drive Engagement) is missing
4041	0	20ms ECU OS Task Locked in an Endless Loop
4041	9	20ms ECU OS Task Timed out Prior to Completion
4041	16	1000ms ECU OS Task Locked in an Endless Loop

GHG17 CPC Fault Codes

SPN	FMI	CPC CODE DESCRIPTION
4206	2	TSC1 Message Counter indicates lost Messages
4207	2	TSC1 Message Checksum wrong
524275	19	RCM Message not received or stopped arriving
524276	13	MCM fuelmap to GVC emission standard calibration (02/23) mismatched
524277	19	Super Structure Cabin Mode DISABLE-State ERROR
524277	13	Super Structure Cabin Mode ENABLE-State ERROR
524277	14	Driving from SuperStructure IMPLAUSIBLE Condition
524278	13	2-Channel Rationality Accelerator Pedal Signal 1 Missing
524278	14	2-Channel Rationality Accelerator Pedal Signal 2 Missing
524278	15	Rationality Accelerator pedal "in-range" fault.
524279	3	Expansion tank pressure sensor voltage failed high
524279	4	Expansion tank pressure sensor voltage failed low
524279	2	Expansion tank pressure sensor data erratic
524279	18	Expansion Pressure Tank Pressure Loss
524279	11	Expansion Pressure Tank Pressure Set Fault
524280	2	Remote Accelerator Pedal Idle Validation Switch Inputs Reversed
524280	3	Remote Accelerator Pedal Idle Validation Switch 1 Circuit Failed High
524280	4	Remote Accelerator Pedal Idle Validation Switch 1 Circuit Failed Low
524280	6	Remote Accelerator Pedal Idle Validation Switch 2 Circuit Failed High
524280	5	Remote Accelerator Pedal Idle Validation Switch 2 Circuit Failed Low
524281	9	J1939 Powertrain Message (engine droop control) is missing
524283	14	Alternator Speed to Engine Speed mismatch
524283	2	Alternator Speed Signal available but erratic
524284	19	PMC Level 3 General Protection Fault
524284	14	PMC Level 2 fault
524285	4	CM1 DPF Regeneration Switch Short Circuit to Ground
524286	1	Automatic gear selection: automatic mode is not available
524286	2	Automatic gear selection: incompatible or missing dataset
524286	3	Automatic gear selection: eCoast is not available
524286	4	Automatic gear selection: Gear shift not plausible
524286	5	Automatic gear selection: No gear shiftable. Check TCM for proper function.
524286	6	ITPM error: vehicle calibration is inconsistent
524286	7	ITPM error: drivetrain speed signal is inconsistent
524287	9	Predictive Cruise Control Message Not Received
524287	19	Predictive Cruise Control Device Reporting Error
524287	1	Evobus cruise control lever position not plausible

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
27	0	EGR Valve Failed to Attain Closed Position
51	4	Intake Air Throttle Circuit Failed Low
51	3	Intake Air Throttle Circuit Failed High
51	2	Intake Throttle Position Deviation Error
51	18	Intake Throttle Position Rationality Error
51	10	Intake Throttle Deviation Error Cold
84	21	Vehicle Speed Sensor Erratic
84	19	vehicle speed value is outside the allowable range
84	13	vehicle speed over PTCAN SNA
94	4	Low Side Fuel Pressure Sensor Circuit Failed Low
94	3	Low Side Fuel Pressure Sensor Circuit Failed High
94	2	Low Side Fuel Pressure Not Plausible
94	15	Fuel Filter Service Warning
94	16	Fuel Filter Replacement Required
96	2	Fuel Tank Level Sensor Stuck in Position
96	13	Fuel Level Sensor Missing or Not Available
96	19	Fuel Level Sensor Signal Error
97	4	Water in Fuel Circuit Failed Low
97	3	Water in Fuel Circuit Failed High
97	14	Water-in-Fuel Warning - Ignored
97	16	Water-in-Fuel (WIF) Warning
97	31	Water-in-Fuel (WIF) Warning - Ignored
97	15	Water-in-Fuel Warning
100	4	Engine Oil Pressure Circuit Failed Low
100	3	Engine Oil Pressure Circuit Failed High
100	1	Engine Oil Pressure Very Low
100	17	Engine Oil Pressure Low
100	10	Low Oil PSI Derate
100	0	Engine Oil Pressure Stuck
103	2	Turbocharger Speed Out of Range High
103	1	Turbo Charger Speed Below Threshold (High Box)
103	0	Turbo Charger Speed Above Threshold (Low Box)
108	4	Barometric Pressure Circuit Failed Low
108	3	Barometric Pressure Circuit Failed High
110	4	Engine Coolant Outlet Temperature Circuit Failed Low
110	3	Engine Coolant Outlet Temperature Circuit Failed High
110	0	Coolant Temperature High
110	18	Failed Coolant Thermostat (Coolant Heat Up too Slow Compared to Modeled Coolant Temperature)
110	16	Coolant Temperature High Alarm
157	16	Fuel Rail Pressure too Low
157	10	Undercapacity in High Pressure Circuit
157	17	Minimum Rail Pressure for Injection Not Achieved
157	18	Fuel Rail Pressure too High
157	15	Fuel Rail Pressure too Low - Low Pressure Circuit
158	2	Ignition Switch Not Plausible
164	4	Rail Pressure Sensor Circuit Failed Low
164	3	Rail Pressure Sensor Circuit Failed High
164	20	Rail Pressure Sensor, Signal Drift (High)
164	5	Rail Pressure Sensor Circuit Failed Open
164	21	Rail Pressure Sensor, Signal Drift (Low)
164	2	Rail Pressure Fuel Trim Lower Limit
164	15	Fuel Rail Pressure too Low - High Pressure Circuit

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
168	1	Battery Voltage Low
168	0	Battery Voltage High
168	18	Low Battery Voltage
171	20	Ambient Temperature Sensor Signal Not Plausible
171	4	Ambient Temperature Circuit Failed Low
171	3	Ambient Temperature Circuit Failed High
174	4	Fuel Temperature Circuit Failed Low
174	3	Fuel Temperature Circuit Failed High
174	0	Fuel Temperature Before High Pressure Pump too High
174	17	Fuel Temperature Sensor, Minimum Temperature Plausibility Error
175	4	Engine Oil Temperature Circuit Failed Low
175	3	Engine Oil Temperature Circuit Failed High
175	15	Oil Temperature High Pre-Warning
175	0	Oil Temperature High Warning
175	18	Oil Temperature Sensor, Minimum Temperature Plausibility
175	20	Engine Oil Temperature Sensor Signal Not Plausible
188	31	Idle Speed Out of Range
190	0	Engine Speed High
190	16	Engine Overspeed while Stationary
190	15	Engine Overspeed Pre-Warning
190	14	Engine Overspeed while Driving
411	4	EGR Delta Pressure Sensor Circuit Low
411	3	EGR Delta Pressure Sensor Circuit High
411	2	EGR Delta Pressure Sensor Out of Calibration Low
411	13	EGR Delta Pressure Sensor Out of Calibration High
520	18	reduced engine brake power
523	19	J1939 Transmission Current Gear Signal is Erratic
523	13	J1939 Transmission Current Gear Signal is Missing
625	2	Invalid Data on Engine CAN Link
625	9	No Data Received from Engine CAN Link
625	17	No ACM2 Communication - Pre-Warning
625	18	No ACM2 Communication - Warning
625	8	MCM UDS DM1 Message Not Received or has Stopped Arriving
625	14	ACM UDS DM1 Message Not Received or has Stopped Arriving
636	1	Crankshaft Position Sensor Short to Ground
636	3	Crankshaft Position Sensor Open Circuit
636	8	Crankshaft Position Sensor Time Out
636	2	No Match of Camshaft and Crankshaft Signals
636	11	Crankshaft Position Sensor Failure
636	10	Crankshaft Position Sensor Signal Erratic
636	15	Timing Offset between Cam and Crankshaft
639	14	J1939 Data Link Failure
647	4	Fan Stage 1 Circuit Failed Low
647	3	Fan Stage 1 Circuit Failed High
647	5	Fan Stage 1 Circuit Failed Open
651	4	Injector Cylinder #1 Needle Control Valve, Abnormal Operation (MIN)

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
651	5	Injector Cylinder #1, Needle Control Valve Circuit Open
651	6	Injector Cylinder #1 Needle Control Valve, Valve Shorted Circuit
651	3	Injector Cylinder #1 Needle Control Valve, Abnormal Operation (MAX)
652	4	Injector Cylinder #2 Needle Control Valve, Abnormal Operation (MIN)
652	5	Injector Cylinder #2 Needle Control Valve, Circuit Open
652	6	Injector Cylinder #2 Needle Control Valve, Valve Shorted Circuit
652	3	Injector Cylinder #2 Needle Control Valve, Abnormal Operation (MAX)
653	4	Injector Cylinder #3 Needle Control Valve, Abnormal Operation (MIN)
653	5	Injector Cylinder #3 Needle Control Valve, Circuit Open
653	6	Injector Cylinder #3 Needle Control Valve, Valve Shorted Circuit
653	3	Injector Cylinder #3 Needle Control Valve, Abnormal Operation (MAX)
654	4	Injector Cylinder #4 Needle Control Valve, Abnormal Operation (MIN)
654	5	Injector Cylinder #4 Needle Control Valve, Circuit Open
654	6	Injector Cylinder #4 Needle Control Valve, Valve Shorted Circuit
654	3	Injector Cylinder #4 Needle Control Valve, Abnormal Operation (MAX)
655	4	Injector Cylinder #5 Needle Control Valve, Abnormal Operation (MIN)
655	5	Injector Cylinder #5 Needle Control Valve, Circuit Open
655	6	Injector Cylinder #5 Needle Control Valve, Valve Shorted Circuit
655	3	Injector Cylinder #5 Needle Control Valve, Abnormal Operation (MAX)
656	4	Injector Cylinder #6 Needle Control Valve, Abnormal Operation (MIN)
656	5	Injector Cylinder #6 Needle Control Valve, Circuit Open
656	6	Injector Cylinder #6 Needle Control Valve, Valve Shorted Circuit
656	3	Injector Cylinder #6 Needle Control Valve, Abnormal Operation (MAX)
677	2	Starter Switch Inconsistent
677	4	Engine Starter Relay Circuit Failed Low
677	7	Engine Starter Relay - Starter Does Not Disengage
677	3	Engine Starter Relay Shorted to High Source
705	3	Digital Output 1 13 Circuit Failed High
710	3	Digital Output 4 06 Circuit Failed High
710	4	Digital Output 4 06 Circuit Failed Low
723	8	Camshaft Position Sensor Time Out
723	11	Camshaft Position Sensor Failure
723	10	Camshaft Position Sensor Signal Erratic

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
723	31	Backwards Running Engine Detected
961	2	CPC Clock Data Invalid
1033	15	MCM Engine Run Timer Plausibility
1033	17	MCM Engine Off Timer Plausibility
1071	4	Fan Stage 2 Circuit Failed Low
1071	3	Fan Stage 2 Circuit Failed High
1071	5	Fan Stage 2 Circuit Failed Open
1072	4	Jake Brake Stage 1 Circuit Failed Low
1072	3	Jake Brake Stage 1 Circuit Failed High
1072	5	Jake Brake Stage 1 Circuit Failed Open
1073	4	Jake Brake Stage 2 Circuit Failed Low
1073	3	Jake Brake Stage 2 Circuit Failed High
1073	5	Jake Brake Stage 2 Circuit Failed Open
1077	5	Quantity Control Valve Error, Current too Low
1077	4	Quantity Control Valve (High Side) Error
1077	3	Quantity Control Valve (Low Side) Error
1077	14	Leakage in High Pressure Fuel System too High (Leak Down Test)
1077	6	Quantity Control Valve, Desired Current Doesn't Match Actual Current
1136	3	MCM Internal Injector Supply Voltage Too High
1136	4	MCM Internal Injector Supply Voltage Too Low
1172	4	Turbo Charger Compressor Inlet Temperature Circuit Failed Low
1172	3	Turbo Charger Compressor Inlet Temperature Circuit Failed High
1172	21	Compressor Inlet Temperature Sensor Signal Not Plausible
1231	9	ACM Message Not Received or has Stopped Arriving
1322	31	Multiple Cylinder Misfire Detected at Idle
1322	11	Misfire on Alternating Cylinders Detected
1322	10	Simultaneous Misfire on Multiple Cylinders Detected
1323	31	Idle Smoothness Control / Cylinder #1 Quantity Deficit at Idle
1323	10	Cylinder #1 Misfire Rate Above 5% Detected
1324	31	Idle Smoothness Control / Cylinder #2 Quantity Deficit at Idle
1324	10	Cylinder #2 Misfire Rate Above 5% Detected
1325	31	Idle Smoothness Control / Cylinder #3 Quantity Deficit at Idle
1325	10	Cylinder #3 Misfire Rate Above 5% Detected
1326	31	Idle Smoothness Control / Cylinder #4 Quantity Deficit at Idle
1326	10	Cylinder #4 Misfire Rate Above 5% Detected
1327	31	Idle Smoothness Control / Cylinder #5 Quantity Deficit at Idle
1327	10	Cylinder #5 Misfire Rate Above 5% Detected
1328	31	Idle Smoothness Control / Cylinder #6 Quantity Deficit at Idle
1328	10	Cylinder #6 Misfire Rate Above 5% Detected
1636	4	Intake Manifold Temperature Circuit Failed Low
1636	3	Intake Manifold Temperature Circuit Failed High
1636	0	Charge Air Cooler Low Efficiency

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
1636	16	Charge Air Cooler Efficiency Low
1636	14	Intake Manifold Temperature Sensor Signal Not Plausible
1637	2	Coolant Out Temperature Sensor Signal Not Plausible
1639	2	Fan Speed Error
1659	7	Coolant Thermostat Failed
1659	31	Thermostat cool down
1659	17	Coolant Temperature Low pre fail
2000	9	Lost Communication With a CPC Module
2630	4	Charge Air Cooler Outlet Temperature Circuit Failed Low
2630	3	Charge Air Cooler Outlet Temperature Circuit Failed High
2630	14	Charge Air Cooler Outlet Temperature Sensor Signal Not Plausible
2631	1	Low Air Flow
2659	18	EGR Flow Target Error Diagnostic - Low Flow
2659	0	EGR Flow Target Error Diagnostic - High Flow
2791	18	Smart Remote Actuator 3 (EGR), Learn Span too Small
2791	2	Smart Remote Actuator 3 (EGR), Position Deviation Error
2791	16	Smart Remote Actuator 3 (EGR), Learn Cycle too Large
2791	7	Smart Remote Actuator 3 (EGR), Failsafe Mode, Motor Off
2791	13	Smart Remote Actuator 3 (EGR), Calibration Error
2791	9	Smart Remote Actuator 3 (EGR), No Communication
2791	14	Smart Remote Actuator 3 (EGR), Wrong Failsafe Calibration
2791	11	Smart Remote Actuator 3 (EGR), Common Failure
2791	31	Smart Remote Actuator 3 (EGR), Position Deviation Error 2
2791	12	Smart Remote Actuator 3 (EGR), Valve frozen
2797	4	Injector Needle Control Valve Cylinder #1, #2, #3, Shorted to Ground
2797	3	Injector Needle Control Valve Cylinder #1, #2, #3, Shorted to Battery
2798	4	Injector Needle Control Valve Cylinder #4, #5, #6, Shorted to Ground
2798	3	Injector Needle Control Valve Cylinder #4, #5, #6, Shorted to Battery
3058	10	Exhaust Gas Recirculation Slow Response
3058	9	EGR Slow Response Low Box
3061	1	CSERS- cold start emission reduction strategy fault condition for boi main
3061	2	CSERS- cold start emission reduction strategy fault condition egr position
3216	16	NOX Inlet Sensor Plausibility Error High
3216	21	SCR Nox Inlet Sensor Drift Low
3464	31	H Bridge 1 IAT Circuit Open Load
3464	4	IAT Motor Circuit Shorted to Ground
3464	3	IAT Motor Circuit Shorted to Battery

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
3464	5	IAT Motor Short-Circuit / Over Current
3464	16	Intake Manifold Pressure too High due to Wastegate
3464	18	Intake Manifold Pressure too Low in System with Throttle Valve
3471	4	HC Doser Circuit Failed Low
3471	3	HC Doser Circuit Failed High
3471	5	HC Doser Circuit Failed Open
3480	4	Doser inlet pressure Sensor Circuit Failed Low
3480	3	Doser inlet pressure Sensor Circuit Failed High
3480	21	Fuel Cut Off Valve Pressure Not Plausible
3480	2	Doser Fuel Line Pressure Low
3480	1	Doser Fuel Supply Pressure Abnormal
3480	14	Doser FLP Sensors Failed Self Test
3480	0	Fuel Compensation Pressure High
3482	4	Fuel Cut Off Valve Circuit Failed Low
3482	3	Fuel Cut Off Valve Circuit Failed High
3482	5	Fuel Cut Off Valve Circuit Failed Open
3509	4	5V Sensor Supply Bank 1 Circuit Failed Low
3509	3	5V Sensor Supply Bank 1 Circuit Failed High
3510	4	5V Sensor Supply Bank 2 Circuit Failed Low
3510	3	5V Sensor Supply Bank 2 Circuit Failed High
3511	4	3V Sensor Supply Bank 1 Circuit Failed Low
3511	3	3V Sensor Supply Bank 1 Circuit Failed High
3512	4	3V Sensor Supply Bank 2 Circuit Failed Low
3512	3	3V Sensor Supply Bank 2 Circuit Failed High
3563	4	Intake Manifold Pressure Circuit Failed Low
3563	3	Intake Manifold Pressure Circuit Failed High
3563	21	Ambient and Inlet Manifold Pressure Difference (High Box)
3563	10	Barometric Pressure and Intake Manifold Pressure Rationality Error
3563	18	Intake Manifold Pressure too Low
3563	16	Intake Manifold Pressure too High
3597	4	Proportional Valve Bank 1 Circuit Failed Low
3597	3	Proportional Valve Bank 1 Circuit Failed High
3598	4	Proportional Valve Bank 2 Circuit Failed Low
3598	3	Proportional Valve Bank 2 Circuit Failed High
3599	4	MCM Internal Injector Power Supply Failed Low
3599	3	MCM Internal Injector Power Supply Failed High
3659	4	Injector Cylinder #1 Spill Control Valve ("Amplifier"), Abnormal Operation (MIN)
3659	5	Injector Cylinder #1 Spill Control Valve ("Amplifier"), Circuit Open
3659	6	Injector Cylinder #1 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
3659	3	Injector Cylinder #1 Spill Control Valve ("Amplifier"), Abnormal Operation (MAX)
3660	4	Injector Cylinder #2 Spill Control Valve ("Amplifier"), Abnormal Operation (MIN)
3660	5	Injector Cylinder #2 Spill Control Valve ("Amplifier"), Circuit Open
3660	6	Injector Cylinder #2 Spill Control Valve ("Amplifier"), Valve Shorted Circuit

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
3660	3	Injector Cylinder #2 Spill Control Valve ("Amplifier"), Abnormal Operation (MAX)
3661	4	Injector Cylinder #3 Spill Control Valve ("Amplifier"), Abnormal Operation (MIN)
3661	5	Injector Cylinder #3 Spill Control Valve ("Amplifier"), Circuit Open
3661	6	Injector Cylinder #3 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
3661	3	Injector Cylinder #3 Spill Control Valve ("Amplifier"), Abnormal Operation (MAX)
3662	4	Injector Cylinder #4 Spill Control Valve ("Amplifier"), Abnormal Operation (MIN)
3662	5	Injector Cylinder #4 Spill Control Valve ("Amplifier"), Circuit Open
3662	6	Injector Cylinder #4 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
3662	3	Injector Cylinder #4 Spill Control Valve ("Amplifier"), Abnormal Operation (MAX)
3663	4	Injector Cylinder #5 Spill Control Valve ("Amplifier"), Abnormal Operation (MIN)
3663	5	Injector Cylinder #5 Spill Control Valve ("Amplifier"), Circuit Open
3663	6	Injector Cylinder #5 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
3663	3	Injector Cylinder #5 Spill Control Valve ("Amplifier"), Abnormal Operation (MAX)
3664	4	Injector Cylinder #6 Spill Control Valve ("Amplifier"), Abnormal Operation (MIN)
3664	5	Injector Cylinder #6 Spill Control Valve ("Amplifier"), Circuit Open
3664	6	Injector Cylinder #6 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
3664	3	Injector Cylinder #6 Spill Control Valve ("Amplifier"), Abnormal Operation (MAX)
3716	31	High Idle Regeneration (HIR) Aborted - Low Coolant Temp
4077	4	Doser Outlet Pressure Sensor Circuit Failed Low
4077	3	Doser Outlet Pressure Sensor Circuit Failed High
4077	14	Doser Fuel Line Pressure Failed Self Test
4077	0	Doser Fuel Line Pressure High
4193	4	Engine Coolant Inlet Temperature Circuit Failed Low
4193	3	Engine Coolant Inlet Temperature Circuit Failed High
4193	20	Coolant In Temperature Sensor Signal Not Plausible
4257	4	Injector Amplifier Control Valve Cylinder #1, #2, #3, Shorted to Ground
4257	3	Injector Amplifier Control Valve Cylinder #1, #2, #3, Shorted to Battery
4258	4	Injector Amplifier Control Valve Cylinder #4, #5, #6, Shorted to Ground
4258	3	Injector Amplifier Control Valve Cylinder #4, #5, #6, Shorted to Battery
4752	15	EGR Cooler Performance Monitor
4752	0	EGR Cooler Low Efficiency

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
4765	0	Exhaust Temperature Out of Range High
4814	4	Water Pump Circuit Failed Low
4814	3	Water Pump Circuit Failed High
4814	5	Water Pump Circuit Failed Open
5323	13	Excessive Time to Enter Closed Loop Fuel Pressure Control
5357	16	Total Injected Fuel Mass too High
5357	18	Total Injected Fuel Mass too Low
5358	18	Engine Smoothness Control / Cylinder #1 Quantity Excess
5358	16	Engine Smoothness Control / Cylinder #1 Quantity Deficit
5359	18	Engine Smoothness Control / Cylinder #2 Quantity Excess
5359	16	Engine Smoothness Control / Cylinder #2 Quantity Deficit
5360	18	Engine Smoothness Control / Cylinder #3 Quantity Excess
5360	16	Engine Smoothness Control / Cylinder #3 Quantity Deficit
5361	18	Engine Smoothness Control / Cylinder #4 Quantity Excess
5361	16	Engine Smoothness Control / Cylinder #4 Quantity Deficit
5362	18	Engine Smoothness Control / Cylinder #5 Quantity Excess
5362	16	Engine Smoothness Control / Cylinder #5 Quantity Deficit
5363	18	Engine Smoothness Control / Cylinder #6 Quantity Excess
5363	16	Engine Smoothness Control / Cylinder #6 Quantity Deficit
5395	15	Idle Fuel Quantity Out of Range
5418	3	Quantity Control Valve High Side Error
5418	4	Quantity Control Valve Low Side Error
5444	1	Engine Crankcase Breather Oil Separator Speed too Low
5540	2	Fuel Temperature Sensor Signal Unplausible
5571	7	Pressure Limiting Valve, Failed to Close
5588	9	CAN3 Communication Error
5765	0	Smart Remote Actuator 3 (EGR), Temperature Alert
5927	2	Electronically Controlled Water Pump Limp Home Mode
5927	7	Electronically Controlled Water Pump Mechanical Defect Detected
7384	4	Injector Cylinder #1 Needle Control Valve, Abnormal Operation (MIN) Cold
7384	3	Injector Cylinder #1 Needle Control Valve, Abnormal Operation (MAX) Cold
7385	4	Injector Cylinder #2 Needle Control Valve, Abnormal Operation (MIN) Cold
7385	3	Injector Cylinder #2 Needle Control Valve, Abnormal Operation (MAX) Cold
7386	4	Injector Cylinder #3 Needle Control Valve, Abnormal Operation (MIN) Cold

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
7386	3	Injector Cylinder #3 Needle Control Valve, Abnormal Operation (MAX) Cold
7387	4	Injector Cylinder #4 Needle Control Valve, Abnormal Operation (MIN) Cold
7387	3	Injector Cylinder #4 Needle Control Valve, Abnormal Operation (MAX) Cold
7388	4	Injector Cylinder #5 Needle Control Valve, Abnormal Operation (MIN) Cold
7388	3	Injector Cylinder #5 Needle Control Valve, Abnormal Operation (MAX) Cold
7389	4	Injector Cylinder #6 Needle Control Valve, Abnormal Operation (MIN) Cold
7389	3	Injector Cylinder #6 Needle Control Valve, Abnormal Operation (MAX) Cold
520253	31	Software Reset Due to Internal Monitoring
520253	14	Software Reset Due to an Error in Engine Speed Plausibility
520261	31	Speed Limitation Fault
520268	16	Fuel Rail Pressure too Low Similar Condition
520268	18	Fuel Rail Pressure too High, Similar Condition
520280	7	Engine Brake High Inhibit due to Improper Condition
520281	7	Engine Brake Inhibit due to JB1 Improper Condition
520282	7	Engine Brake Inhibit due to JB2 Improper Condition
520286	31	Software Reset Due to Internal Monitoring
520287	13	MCM Software Reset
520287	7	MCM Hardware Reset
520287	14	MCM Missing VIN
520289	14	Engine Brake Failed Cylinder #1
520290	14	Engine Brake Failed Cylinder #2
520291	14	Engine Brake Failed Cylinder #3
520292	14	Engine Brake Failed Cylinder #4
520293	14	Engine Brake Failed Cylinder #5
520294	14	Engine Brake Failed Cylinder #6
520296	3	Smart Remote Actuator 3 (EGR), Low Supply Voltage
520321	31	Internal MCM Error
520322	31	Timing Offset between Cam and Crankshaft - Cold Mode
521005	4	MCM Internal Temperature Voltage Failed Low
521005	3	MCM Internal Temperature Voltage Failed High
521012	1	Fault Reaction Manager - Intake Manifold Pressure too Low
521013	31	Symmetric Injection Mode Expected
521018	0	Group 1 sensors not plausible
521019	0	Group 2 sensors not plausible
521020	0	Group 3 sensors not plausible
521024	31	Current Duration Trim Data Out of Range
521027	9	Lost Communication With Exhaust Gas Recirculation Control Module "A"
521029	9	Smart Remote Actuator 3 (EGR), Signal Not Valid
521030	9	Smart Remote Actuator 3 (EGR), Communication Error
521039	16	EGR Controller Effort Exceeds Limits High - Low EGR flow

GHG17 MCM Fault Codes

SPN	FMI	MCM CODE DESCRIPTION
521039	18	EGR Controller Effort Exceeds Limits Low - High EGR flow
521049	31	DEF inducement DEF lamp active
521050	31	DEF inducement SEL lamp active
521052	31	DEF inducement CEL lamp active
521099	31	SRA3 position deviation cold condition



Amber Warning Lamp (AWL) - Indicates a fault with the engine controls. Vehicle can be driven to end of shift. Call for service.



Red Stop Lamp (RSL) - Indicates a major engine fault that may result in engine damage. Move the vehicle to the nearest safe location and shutdown the engine. Call for service



DPF Regeneration Lamp - Lamp Solid indicates that a parked regeneration is required. Lamp Flashing indicates that a parked regeneration required immediately.



High Exhaust System Temperature Lamp (HEST) - Indicates exhaust temperature is above a preset limit and the unit is operating at low vehicle speed. Vehicle can be driven. When rpm is elevated for a parked regen, the lamp will flash once every ten seconds.



Malfunction Indicator Lamp (MIL) - Indicates a failure of an Emission Control device. Vehicle can be driven to end of the shift. Call for service

Unable to initiate Parked Regen via Regen Request Switch

To perform a Parked Regen, the following conditions must be met. Connect DDDL 7.0 to monitor these inputs:

- VSS must be 0 mph
- Clutch switch must be cycled ON/OFF/ON (manual trans)
- Parking Brake must be cycled ON/OFF/ON
- J1939 Gear Selected must be neutral be cycled ON/OFF/ON
- J1939 Gear Actual must be neutral be cycled ON/OFF/ON
- Must be on idle governor, not PTO Mode
- DPF Zone must not be 0

Regen Request Switch must be held for 5 seconds