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Freightliner Business Class M2 Automated-Manual Transmissions

Fault Code Guide

Fault Code Guide (MID 130 SIDs)

SID	FMI	Text Message	Failure Reason
18	02	Prim Selector Erratic	The shift lever does not shift gears.
33	03	MultiPress Ind Short Hi	The hydraulic pressure sensor circuit is shorted to power.
33	04	MultiPress Ind Short Lo	The hydraulic pressure sensor circuit is shorted to ground.
33	05	MultiPress Ind OPEN	The hydraulic pressure sensor circuit is open.
52	05	Hydraulic Sys OPEN	The hydraulic pump circuit is open.
52	07	Hydraulic Sys NoRESPONSE	The hydraulic pressure does not increase even though the hydraulic pump is activated.
52	11	Clutch Act Not Known	The hydraulic pump temperature is too high.
55	00	Clutch Act HIGH	The clutch is too hot.
55	07	Clutch Act NoRESPONSE	The clutch does not operate properly.
55	13	Clutch Act Calibrate	The clutch needs to be calibrated.
231	02	SAE J1939 Datalink Erratic	The J1939 datalink is not communicating properly.
231	09	SAE J1939 Datalink UPDATE	The J1939 datalink has timed out.
231	12	SAE J1939 Datalink Bad	The J1939 datalink is not communicating with the transmission.
251	00	POWER SUPPLY HIGH	The power supply voltage is too high.
251	01	POWER SUPPLY Low	The power supply voltage is too low.
251	05	POWER SUPPLY OPEN	There is no power to the transmission with the engine running.
251	14	POWER SUPPLY RSRVD	The power supply is not properly grounded.
253	02	Calibration Memory Erratic	The transmission needs to be recalibrated.
253	12	Calibration Memory Bad	The transmission needs to be recalibrated.
253	13	Calibration Memory Calibrate	The transmission needs to be recalibrated.
253	14	Calibration Memory RSRVD	The transmission needs to be recalibrated.

SID	FMI	Text Message	Failure Reason
254	04	Controller Short Lo	The TCU is shorted to ground.
254	05	Controller OPEN	The TCU has an open circuit.
254	11	Controller Not Known	The TCU AUTO mode software module has an error.
254	12	Controller Bad	The TCU has a hardware problem.
254	13	Controller Calibrate	The TCU has a software memory problem.

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Fault Code Guide (MID 130 PIDs)

PID	FMI	Text Message	Failure Reason
33	02	Erratic	The clutch position sensor gives invalid data.
33	03	Short Hi	The clutch position sensor circuit is shorted to power.
33	04	Short Lo	The clutch position sensor circuit is shorted to ground.
33	05	OPEN	The clutch position sensor circuit is open.
33	14	RSRVD	The clutch position sensor gives incorrect resistance readings.
59	02	Shift FNGR Gear Erratic	The shift rod position sensor gives invalid data.
59	03	Shift FNGR Gear Short Hi	The gear position sensor circuit is shorted to power.
59	04	Shift FNGR Gear Short Lo	The gear position sensor circuit is shorted to ground.
59	05	Shift FNGR Gear OPEN	The gear position sensor circuit is open.
59	14	Shift FNGR Gear RSRVD	The gear position sensor gives incorrect resistance readings.
60	02	Shift FNGR Rail Erratic	The rail position sensor circuit gives invalid data.
60	03	Shift FNGR Rail Short Hi	The rail position sensor circuit is shorted to power.
60	04	Shift FNGR Rail Short Lo	The rail position sensor circuit is shorted to ground.
60	05	Shift FNGR Rail OPEN	The rail position sensor circuit is open.
60	14	Shift FNGR Rail RSRVD	The rail position sensor gives incorrect resistance readings.
64	09	Dir Switch Update	The output shaft speed sensor is not providing accurate directional information.
64	11	Dir Switch Not Known	The output shaft speed sensor is not providing accurate directional information.
158	00	Volts (BattSw) HIGH	The voltage in the ignition power circuit is too high.
158	01	Volts (BattSw) Low	The voltage in the ignition power circuit is too low.
161	02	In shaft SPEED Erratic	The input shaft speed sensor circuit gives invalid data.
161	03	In shaft SPEED Short Hi	The input shaft speed sensor circuit is shorted to power.
161	04	In shaft SPEED Short Lo	The input shaft speed sensor circuit is shorted to ground.
161	05	In shaft SPEED OPEN	The input shaft speed sensor circuit is open.
161	08	In shaft SPEED Update	The input shaft speed sensor circuit is broadcasting an abnormal frequency.

PID	FMI	Text Message	Failure Reason
162	02	RANGE Selected Erratic	The transmission is not properly calibrated.
163	02	RANGE Attained Erratic	The gears do not shift properly.
191	02	OUTPUT SPEED Erratic	One or both of the output shaft speed sensor circuits give invalid data.
191	05	OUTPUT SPEED OPEN	One or both of the output shaft speed sensor circuits are open.
191	08	OUTPUT SPEED SIGNAL	There is no signal coming from one or both output shaft speed sensors.
191	14	OUTPUT SPEED RSRVD	The output shaft speed sensor is providing invalid data.

For a list of proprietary fault codes viewable on ServiceLink

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AGS Proprietary Fault Codes (J1708)	
Fault Code	Description
3000109	High voltage supply voltage—external (connector X1/12 and X1/15)
3000113	High voltage ignition key line—external (connector X1/9)
3000209	Low voltage supply voltage—external (connector X1/12 and X1/15)
3000213	Low voltage ignition key line—external (connector X1/9)
3001210	EEPROM parameter values error—internal
3001510	Clutch displacement control module parameter error—internal
3001781	Clutch calibration offset off limit—internal
3002009	Open load supply voltage—external (connector X1/12 and X1/15)
3002016	Open load/Short circuit VCC temperature sensor circuit board—internal
3002017	Open load/Short circuit VCC temperature sensor pump—internal
3002116	Short circuit GND temperature sensor circuit board—internal
3002117	Short circuit GND temperature sensor pump—internal
3002214	Short circuit VCC peripherals supply—external (connector X2/15)
3003001	EBC1 message timeout—external (J1939)
3003101	EEC1 message timeout—external (J1939)
3003201	EEC2 message timeout—external (J1939)
3003301	EEC3 message timeout—external (J1939)
3003401	ERC1 message timeout—external (J1939)
3003501	Wheel speed information message timeout—external (J1939)
3003601	CruiseControl (VCU) message timeout—external (J1939)
3003701	CruiseControl (bulkhead) message timeout—external (J1939)
3003801	Engine configuration message timeout—external (J1939)
3003901	Retarder configuration message timeout—external (J1939)
3004001	Component identification message timeout—external (J1939)
3004101	PTO information message timeout—external (J1939)
3006101	Incorrect engine data—external (J1939)
3006201	Timeout converted engine data for clutch module (low priority)—internal
3006701	Incorrect retarder data—external (J1939)
3006801	Incorrect ABS data—external (J1939)
3006901	Incorrect internal data—internal
3007001	Incorrect clutch module data—internal
3007101	Incorrect automated gear shift module data—internal
3007201	Incorrect internal data—internal
3008881	Clutch overload—internal
3009280	Plausibility error actual transmission gear ratio—internal
3009710	Test software—internal
3009810	Test electronic—internal

AGS Proprietary Fault Codes (J1708)	
Fault Code	Description
3009910	Test bench mode activated—internal
3010390	Automatic module: signal group cruise control / retarder—internal
3010690	Automatic module: signal output speed—internal
3010790	Automatic module: signal group MR—internal
3010890	Automatic module: signal group gear ratio—internal
3010990	Automatic module: learning values engine—internal
3011081	Plausibility error intended clutch position can not be reached within specified time—internal
3011090	Automatic module: learning values transmission—internal
3011310	Clutch calibration data missing/error—internal
3011410	Clutch parameter error—internal
3011590	Automatic module: signal group shifting time—internal
3011690	Automatic module: signal group ABS—internal
3011790	Automatic module: signal group pedal activation—internal
3011890	Automatic module: signal group lever—internal
3011990	Automatic module: error target system—internal
3012014	Open load peripherals supply—external (connector X2/15)
3012019	Plausibility error valve relay V-V2 on—internal
3012035	Open load power stage solenoid valve (clutch open 1)—internal
3012036	Open load power stage solenoid valve (clutch open 2)—internal
3012037	Open load power stage solenoid valve (clutch close 1)—internal
3012038	Open load power stage solenoid valve (clutch close 2)—internal
3012050	Open load speed sensor transmission output (DZ1)—external (connector X2/14)
3012051	Open load speed sensor transmission input—external (connector X2/11)
3012052	Open load speed sensor transmission output (D3)—external (connector X2/9)
3012090	Automatic module: system identification gearshift module—internal
3012114	Short circuit to GND peripherals supply—external (connector X2/15)
3012118	Plausibility error valve relay V-V1 off—internal
3012119	Plausibility error valve relay V-V2 off—internal
3012136	Short circuit GND power stage solenoid valve (clutch open 2)—internal
3012138	Short circuit GND power stage solenoid valve (clutch close 2)—internal
3012151	Short circuit GND speed sensor transmission input—external (connector X2/11)
3012251	Short circuit VCC speed sensor transmission input—external (connector X2/11)
3012461	Hydraulic level too low external—external
3016201	Timeout converted engine data for clutch module (medium priority)—internal
3016401	Timeout driving direction information—internal
3016501	Timeout internal communication shift module to clutch module (medium priority)—internal

AGS Proprietary Fault Codes (J1708)	
Fault Code	Description
3018681	Plausibility error clutch open request while inlet valves are closed—internal
3018781	Plausibility error clutch open request while outlet valves are closed—internal
3019480	Plausibility error driving direction—internal
3019621	SmartShift lever data invalid—external (connector X1/8, X1/11, X1/14)
3019650	Tooth signal interruption speed sensor transmission output (DZ1)—external (connector X2/14)
3019651	Tooth signal interruption speed sensor transmission input—external (connector X2/11)
3019652	Tooth signal interruption speed sensor transmission output (D3)—external (connector X2/9)
3020110	High voltage distance sensor supply—internal
3020111	Power supply high voltage—external (connector X3/1)
3020210	Low voltage distance sensor supply—internal
3020211	Power supply low voltage—external (connector X3/1)
3021010	Flash checksum error—internal
3021110	EEPROM calibration values error—internal
3021610	Clutch displacement offset failure—internal
3022011	Supply voltage open load—external (connector X3/1)
3022012	Open load GND connection—external (connector X1/18 and X1/21)
3022015	Open load pressure sensor signal—internal
3022018	Plausibility error valve relay V-V1 on—internal
3022020	Open load GND pump motor—external (connector X3/2)
3022030	Open load power stage solenoid valve (selection direction R)—internal
3022031	Open load power stage solenoid valve (selection direction 5/6)—internal
3022032	Open load power stage solenoid valve—internal
3022033	Open load power stage solenoid valve (gear direction 1,3,5)—internal
3022034	Open load power stage solenoid valve (pressure regulation)—internal
3022041	Open load distance sensor (gear)—internal
3022042	Open load distance sensor (selection)—internal
3022044	Open load distance sensor (clutch)—internal
3022060	Open loop power stage pump motor—internal
3022115	Short circuit GND pressure sensor signal—internal
3022130	Short circuit GND power stage solenoid valve (selection direction R)—internal
3022131	Short circuit GND power stage solenoid valve (selection direction 5/6)—internal
3022132	Short circuit GND power stage solenoid valve (gear direction R,2,4,6)—internal
3022133	Short circuit GND power stage solenoid valve (gear direction 1,3,5)—internal
3022134	Short circuit GND power stage solenoid valve (pressure regulation)—internal
3022135	Short circuit GND power stage solenoid valve (clutch open 1)—internal
3022137	Short circuit GND power stage solenoid valve (clutch close 1)—internal

AGS Proprietary Fault Codes (J1708)	
Fault Code	Description
3022141	Short circuit GND distance sensor (gear)—internal
3022142	Short circuit GND distance sensor (selection)—internal
3022144	Short circuit GND distance sensor (clutch)—internal
3022160	Short circuit GND power stage pump motor—internal
3022215	Short circuit VCC pressure sensor signal—internal
3022241	Short circuit VCC distance sensor (gear)—internal
3022242	Short circuit VCC distance sensor (selection)—internal
3022244	Short circuit VCC distance sensor (clutch)—internal
3022317	Over temperature power stage pump motor—internal
3022590	Automatic module: no signal vehicle speed—internal
3022690	Automatic module: signal group MR (high priority)—internal
3022790	Automatic module: signal group gear ratio (high priority)—internal
3022890	Automatic module: learning values engine (high priority)—internal
3022990	Automatic module: learning values transmission (high priority)—internal
3024341	Erratic distance sensor (gear)—internal
3024342	Erratic distance sensor (selection)—internal
3024344	Erratic distance sensor (clutch)—internal
3024441	Wrong coil resistance value distance sensor (gear)—internal
3024442	Incorrect coil resistance value distance sensor (selection)—internal
3024444	Incorrect coil resistance value distance sensor (clutch)—internal
3024610	Timeout displacement sensor value—internal
3026001	CAN bus off—external (connector X1/13 and X1/7)
3026301	Timeout converted engine data for clutch module (high priority)—internal
3026501	Timeout internal communication shift module to clutch module (high priority)—internal
3027401	No J1939 communication—internal / external (connector X1/13 and X1/7)
3027501	Timeout internal communication shift module to clutch module (high priority)—internal
3028581	Clutch displacement control failure—internal
3029180	No calculation of redundant transmission output speed—internal
3029380	Incorrect transmission type—internal
3029580	Plausibility error pressure build up—internal

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