APPENDIX A: CODES

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	27	0	111	EGR Valve Position Feedback Failed (High Box*)
MCM2	27	1	111	EGR Valve Position Feedback Failed (Low Box†)
MCM2	27	3	111	EGR Valve Position Circuit Failed High
MCM2	27	4	111	EGR Valve Position Circuit Failed Low
MCM2	27	2	111	EGR Valve Position Feedback Failed
MCM2	27	7	111	EGR Valve Stuck Open
MCM2	27	14	111	EGR Valve Position Positive Torque Error
MCM2	27		1521	Smart Actuator Indicates EGR Position Error
MCM2	51	2	112	Intake Throttle Position Deviation Error
MCM2	51	0	112	Intake Air Throttle Position Low
MCM2	51	1	112	Intake Air Throttle Position High
MCM2	51	3	112	Intake Air Throttle Circuit Failed High
MCM2	51	4	112	Intake Air Throttle Circuit Failed Low
MCM2	51	7	112	Intake Throttle Auto Calibration Error
MCM2	70		599	J1939 Park Brake Switch Signal from Source #1 is erratic
MCM2	70	13	600	J1939 Park Brake Switch Signal from Source #1 is missing
MCM2	70	19	601	J1939 Park Brake Switch Signal from Source #2 is erratic
MCM2	70	13	602	J1939 Park Brake Switch Signal from Source #2 is missing
MCM2	70	19	603	J1939 Park Brake Switch Signal from Source #3 is erratic
MCM2	70	13	604	J1939 Park Brake Switch Signal from Source #3 is missing
MCM2	84	3	579	Vehicle Speed Sensor Circuit Failed High
MCM2	84	4	582	Vehicle Speed Sensor Circuit Failed Low
MCM2	84	19	591	J1939 Wheel-Based Vehicle Speed Signal from Source#1 is erratic
MCM2	84	13	592	J1939 Wheel-Based Vehicle Speed Signal from Source#1 is missing
MCM2	84	19	593	J1939 Wheel-Based Vehicle Speed Signal from Source#2 is erratic
MCM2	84	13	594	J1939 Wheel-Based Vehicle Speed Signal from Source#2 is missing
MCM2	84	19	595	J1939 Wheel-Based Vehicle Speed Signal from Source#3 is erratic
MCM2	84	13	596	J1939 Wheel-Based Vehicle Speed Signal from Source#3 is missing

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	97	4	615	Water-in-Fuel Circuit Failed Low
MCM2	97	3	615	Water-in-Fuel Circuit Failed High
MCM2	97		641	Water-in-Fuel
MCM2	97		641	Water-in-Fuel Lifetime exceeded
MCM2	98	3	1114	Oil Level Circuit High
MCM2	98	4	1114	Oil Level Circuit Low
MCM2	98	13	1634	Oil Level Measurement, Configuration Error
MCM2	98	14	1634	Oil Level Measurement, Oil Level Too Low or Too High
MCM2	100	1	1114	Engine Oil Pressure Low
MCM2	100	2	1114	Oil Pressure Plausibility - Engine Running
MCM2	100	2	1114	Oil Pressure Plausibility - Stop
MCM2	100	3	1114	Engine Oil Pressure Circuit Failed High
MCM2	100	4	1114	Engine Oil Pressure Circuit Failed Low
MCM2	103	0	1115	Turbocharger Speed Above Threshold (Low Box†)
MCM2	103	1	1115	Turbocharger Speed Below Threshold (High Box*)
MCM2	103	2	1115	Turbocharger Speed Not Plausible
MCM2	103	3	1115	Turbo Charger Speed Sensor Circuit Failed High
MCM2	103	4	1115	Turbo Charger Speed Sensor Circuit Failed Low
MCM2	108	2	1211	Ambient Pressure Plausibility Fault (High Box*)
MCM2	108	1	1211	Ambient Pressure Plausibility Fault (Low Box†)
MCM2	108	3	1211	Barometric Pressure Circuit Failed High
MCM2	108	4	1211	Barometric Pressure Circuit Failed Low
MCM2	110	0	1212	Coolant Temperature High
MCM2	110	2	1212	Engine Coolant Temp/Engine Oil Temp Plausibility Fault
MCM2	110	3	1212	Engine Coolant Inlet Temperature Circuit Failed High
MCM2	110	4	1212	Engine Coolant Inlet Temperature Circuit Failed Low
MCM2	110		1615	COOL_TEMP_OUT
MCM2	110	2	1212	Engine Coolant Sensor (OUT), General Temp. Plausibility Error
MCM2	111	3	580	Coolant Level Circuit Failed High
MCM2	111	4	581	Coolant Level Circuit Failed Low
MCM2	111		1212	Coolant Level Low (CAN)
MCM2	111		587	Coolant Level Very Low
MCM2	132	7	1213	Intake Air Throttle Valve Closure Detection - Positive Torque
MCM2	132	14	1213	Intake Air Throttle-Valve Closure Detection - Braking Condition
MCM2	132		1635	HC-Doser Fuel Pressure Not Plausible

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	132	1	1213	Air Mass Flow Too Low
MCM2	132		1213	Air Mass Auto Calibration Failed
MCM2	157		1615	Pressure Control Valve High Side Error
MCM2	157		1215	Fuel Rail Pressure Sensor Signal Erratic
MCM2	157		1215	Fuel Rail Pressure Low
MCM2	158	2	1214	Ignition Switch Not Plausible
MCM2	164	3	1215	Rail Pressure Governor Sensor Circuit Failed High
MCM2	164	4	1215	Rail Pressure Governor Sensor Circuit Failed Low
MCM2	164	3	1215	Rail Pressure Governor (High Side) Error
MCM2	164	4	1215	Rail Pressure Governor (Low Side) Error
MCM2	164	2	1615	Rail Pressure Governor Sensor, Signal Drift
MCM2	164	5	1615	Rail Pressure Governor Sensor, Sensor Supply Line Broken
MCM2	164	7	1615	High Pressure Pump, Leakage or TDC Position Wrong
MCM2	168	0	1221	Battery Voltage High
MCM2	168	1	1221	Battery Voltage Too Low
MCM2	171	3	1222	Ambient Air Temperature Circuit Failed High
MCM2	171	4	1222	Ambient Air Temperature Circuit Failed Low
MCM2	174	3	1223	Fuel Temperature Circuit Failed High
MCM2	174	4	1223	Fuel Temperature Circuit Failed Low
MCM2	174	2	1223	Fuel Temperature Sensor, General Temp. Plausibility
MCM2	174	0	1223	'Fuel Temperature Too High
MCM2	175	2	1224	Engine Oil Temperature Sensor, General Temp, Plausibility Error
MCM2	175	3	1224	Engine Oil Temperature Circuit Failed High
MCM2	175	4	1224	Engine Oil Temperature Circuit Failed Low
MCM2	175	14	1224	Engine Oil Temperature Sensor Plausibility Fault
MCM2	175		1114	Oil Temperature High Pre-Warning
MCM2	175		1114	Oil Temperature High Warning
MCM2	190	2	1225	Engine Speed High
MCM2	191	19	589	J1939 Transmission Output Shaft Speed Signal is erratic
MCM2	191	13	590	J1939 Transmission Output Shaft Speed Signal is missing
MCM2	354	3	1231	Relative Humidity Circuit Failed High
MCM2	354	4	1231	Relative Humidity Circuit Failed Low
MCM2	411	0	1232	EGR Differential Pressure Failed (High Box*)
MCM2	411	1	1232	EGR Differential Pressure Failed (Low Box†)
MCM2	411	5	1232	EGR Sampling Range Failed

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	411	3	1232	EGR Delta Pressure Sensor Circuit High
MCM2	411	4	1232	EGR Delta Pressure Sensor Circuit Low
MCM2	411		1232	EGR Delta Pressure Sensor Out Of Calibration
MCM2	412	20	1233	EGR Temperature Drift (High Box*)
MCM2	412	21	1233	EGR Temperature Drift (Low Box†)
MCM2	412	2	1233	EGR Temperature Sensor General Temperature Plausibility Error
MCM2	412	3	1233	EGR Temperature Sensor Circuit Failed High
MCM2	412	4	1233	EGR Temperature Sensor Circuit Failed Low
MCM2	412		1512	EGR Temperature Very High
MCM2	412		1233	EGR Temperature Sensor / Temperature Too High
MCM2	412		0	EGR Cooler Performance Monitor
MCM2	523	19	597	J1939 Transmission Current Gear Signal is erratic
MCM2	523	13	598	J1939 Transmission Current Gear Signal is missing
MCM2	609		1615	Microcontroller Trap has been activated
MCM2	625	2	1234	Invalid Data Received on Engine CAN Link
MCM2	625	9	1234	No Data Received from Engine CAN Link
MCM2	625	9	1234	Engine CAN Low Wire Defect - Wire 1
MCM2	625	9	1234	Engine CAN High Wire Defect - Wire 2
MCM2	625		605	MCM UDS DM1 Message Not Received or has Stopped Arriving
MCM2	625		606	ACM UDS DM1 Message Not Received or has Stopped Arriving
MCM2	630	12	1452	EEPROM Read / Write Operation Failed
MCM2	630	13	1455	Calibration Data Not Plausible
MCM2	630	13	1455	Calibration Data Not Plausible (CPLD)
MCM2	636	1	1235	Crankshaft Position Sensor Signal Voltage Too Low
MCM2	636	2	1235	No Match of Camshaft and Crankshaft Signals
MCM2	636	8	1235	Crankshaft Position Sensor Time Out
MCM2	636	14	1235	Crankshaft Position Sensor Pins Swapped
MCM2	636	4	1235	Crankshaft Position Sensor Short to Ground
MCM2	636	3	1235	Crankshaft Position Sensor Open Circuit
MCM2	639	14	576	J1939 Data Link Failure
MCM2	641	4	1542	Turbo Control Circuit Failed Low
MCM2	641	3	1542	Turbo Control Circuit Failed High
MCM2	641	5	1542	Turbo Control Circuit Open

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	647	4	1334	Fan Stage 1 Circuit Failed Low
MCM2	647	3	1334	Fan Stage 1 Circuit Failed High
MCM2	647	5	1334	Fan Stage 1 Circuit Failed Open
MCM2	651	10	1242	Injector Cylinder #1 Needle Control Valve Abnormal Rate of Change
MCM2	651	14	1242	Injector Cylinder #1 Needle Control Valve Abnormal Operation
MCM2	651	5	1242	Injector Cylinder 1, Nozzle Control Valve or Spill Control Valve, Jammed Closed
MCM2	651	7	1242	Injector Cylinder 1, Nozzle Control Valve or Spill Control Valve, Jammed Open or Leakage
MCM2	651	1	1242	Injector Cylinder #1 Needle Control Valve, Valve Shorted Circuit
MCM2	651	1	1242	Engine Smoothness Control / Cylinder #1 Value Out of Range
MCM2	652	10	1243	Injector Cylinder #2 Needle Control Valve Abnormal Rate of Change
MCM2	652	14	1243	Injector Cylinder #2 Needle Control Valve Abnormal Operation
MCM2	652	5	12423	Injector Cylinder #2, Nozzle Control Valve or Spill Control Valve, Jammed Closed
MCM2	652	7	1242	Injector Cylinder #2, Nozzle Control Valve or Spill Control Valve, Jammed Open or Leakage
MCM2	652	1	1243	Injector Cylinder #2 Needle Control Valve, Valve Shorted Circuit
MCM2	652	1	1243	Engine Smoothness Control / Cylinder #2 Value Out of Range
MCM2	653	10	1244	Injector Cylinder #3 Needle Control Valve Abnormal Rate of Change
MCM2	653	14	1244	Injector Cylinder #3 Needle Control Valve Abnormal Operation
MCM2	653	5	1244	Injector Cylinder #3, Nozzle Control Valve or Spill Control Valve, Jammed Closed
MCM2	653	7	1244	Injector Cylinder #3, Nozzle Control Valve or Spill Control Valve, Jammed Open or Leakage
MCM2	653	1	1244	Injector Cylinder #3 Needle Control Valve, Valve Shorted Circuit
MCM2	653	1	1244	Engine Smoothness Control / Cylinder #3 Value Out of Range
MCM2	654	10	1245	Injector Cylinder #4 Needle Control Valve Abnormal Rate of Change
MCM2	654	14	1245	Injector Cylinder #4 Needle Control Valve Abnormal Operation
MCM2	654	5	1245	Injector Cylinder #4, Nozzle Control Valve or Spill Control Valve, Jammed Closed
MCM2	654	7	1245	Injector Cylinder #4, Nozzle Control Valve or Spill Control Valve, Jammed Open or Leakage

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	654	1	1245	Injector Cylinder #4 Needle Control Valve, Valve Shorted Circuit
MCM2	654	1	1245	Engine Smoothness Control / Cylinder #4 Value Out of Range
MCM2	655	10	1246	Injector Cylinder #5 Needle Control Valve Abnormal Rate of Change
MCM2	655	14	1251	Injector Cylinder #5 Needle Control Valve Abnormal Operation
MCM2	655	5	1251	Injector Cylinder #5, Nozzle Control Valve or Spill Control Valve, Jammed Closed
MCM2	655	7	1246	Injector Cylinder #5, Nozzle Control Valve or Spill Control Valve, Jammed Open or Leakage
MCM2	655	1	1251	Injector Cylinder #5 Needle Control Valve, Valve Shorted Circuit
MCM2	655	1	1251	Engine Smoothness Control / Cylinder #5 Value Out of Range
MCM2	656	10	1252	Injector Cylinder #6 Needle Control Valve Abnormal Rate of Change
MCM2	656	14	1252	Injector Cylinder #6 Needle Control Valve Abnormal Operation
MCM2	656	5	12527	Injector Cylinder #6, Nozzle Control Valve or Spill Control Valve, Jammed Closed
MCM2	656	7	1252	Injector Cylinder #6, Nozzle Control Valve or Spill Control Valve, Jammed Open or Leakage
MCM2	656	1	1252	Injector Cylinder #6 Needle Control Valve, Valve Shorted Circuit
MCM2	656	1	1252	Engine Smoothness Control / Cylinder #6 Value Out of Range
MCM2	657	10	1253	Injector Cylinder #7 Needle Control Valve Abnormal Rate of Change
MCM2	657	14	1253	Injector Cylinder #7 Needle Control Valve Abnormal Operation
MCM2	657	1	1253	Engine Smoothness Control / Cylinder #7 Value Out of Range
MCM2	658	10	1254	Injector Cylinder #8 Needle Control Valve Abnormal Rate of Change
MCM2	658	14	1254	Injector Cylinder #8 Needle Control Valve Abnormal Operation
MCM2	658	1	1254	Engine Smoothness Control / Cylinder #8 Value Out of Range
MCM2	677	2	1255	Starter Switch Inconsistent
MCM2	677	4	1255	Engine Starter Relay Circuit Failed Low
MCM2	677	3	1255	Engine Starter Relay Shorted to High Source
MCM2	677	14	1255	Starter Electronic Fault / MCM Internal Failure
MCM2	677	5	1255	Engine Starter Relay Open Circuit
MCM2	677	7	1255	Engine Starter Relay — Starter Does Not Engage
MCM2	677	7	1255	Engine Starter Relay jammed
MCM2	677	14	1615	Starter Jammed (Tooth to Tooth Jam)

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† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	677	31	1615	Starter Electronic Fault / ECU internal (Main)
MCM2	698	3	1312	Grid Heater Circuit Failed High
MCM2	698	4	1312	Grid Heater Circuit Failed Low
MCM2	698	5	1312	Grid Heater Circuit Failed Open
MCM2	705	3	583	Digital Output 1 13 Circuit Failed High
MCM2	705	4	584	Digital Output 1 13 Circuit Failed Low
MCM2	710	3	585	Digital Output 4 06 Circuit Failed High
MCM2	710	4	584	Digital Output 4 06 Circuit Failed Low
MCM2	715	3	1412	High Side Digital Output #1 Circuit Failed High
MCM2	715	4	1412	High Side Digital Output #1 Circuit Failed Low
MCM2	716	3	1412	High Side Digital Output #2 Circuit Failed Open
MCM2	716	4	1413	High Side Digital Output #2 Circuit Failed Low
MCM2	723	1	1415	Camshaft Position Sensor Signal Voltage Too Low
MCM2	723	3	1415	Camshaft Position Sensor Open Circuit
MCM2	723	4	1415	Camshaft Position Sensor Short to Ground
MCM2	723	8	1415	Camshaft Position Sensor Time Out
MCM2	723	14	1415	Camshaft Position Sensor Pins Swapped
MCM2	729	14	1421	Grid Heater Special Instructions
MCM2	729	4	1421	Grid Heater Circuit Failed Low
MCM2	729	3	1421	Grid Heater Circuit Failed High
MCM2	729	7	1421	Grid Heater Defect
MCM2	729	0	1421	Grid Heater Permanently On
MCM2	876	3	1615	Air Compressor Clutch, Circuit Failed High
MCM2	876	4	1615	Air Compressor Clutch, Circuit Failed Low
MCM2	876	5	1615	Air Compressor Clutch, Circuit Failed Open
MCM2	977		1615	Fan Clutch Issue
MCM2	1071	3	1314	Fan Stage 2 Circuit Failed High
MCM2	1071	4	1314	Fan Stage 2 Circuit Failed Low
MCM2	1071	5	1314	Fan Stage 2 Circuit Failed Open
MCM2	1072	3	1422	Jake Brake Stage 1 Circuit Failed High
MCM2	1072	4	1422	Jake Brake Stage 1 Circuit Failed Low
MCM2	1072	5	1422	Jake Brake Stage 1 Circuit Failed Open
MCM2	1073	3	1315	Jake Brake Stage 2 Circuit Failed High
MCM2	1073	4	1315	Jake Brake Stage 2 Circuit Failed Low
MCM2	1073	5	1315	Jake Brake Stage 2 Circuit Failed High

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	1077		1241	Rail Pressure Governor Error, Open Loop Error
MCM2	1077		1423	Rail Pressure Governor Error, Current Governor, Current Too Low
MCM2	1077		1423	Rail Pressure Governor Error, Pressure Governor, Pressure Not Plausible
MCM2	1077		1615	Term Value Too High
MCM2	1077		1615	Rail Pressure Governor, Leakage in High Pressure Too High
MCM2	1077		1423	Rail Pressure Governor Error, Current Too High
MCM2	1112	4	1615	MDEG Brake System (Two Stage Brake), Circuit Failed Low
MCM2	1112	3	1615	MDEG Brake System (Two Stage Brake), Circuit Failed High
MCM2	1112	5	1615	MDEG Brake System (Two Stage Brake), Circuit Failed Open
MCM2	1127	3	1424	Turbocharger Compressor Outlet Pressure Circuit Failed High
MCM2	1127	4	1424	Turbocharger Compressor Outlet Pressure Circuit Failed Low
MCM2	1172	2	1425	Coolant Temp/Compressor Inlet Plausibility Error
MCM2	1172	3	1425	Turbocharger Compressor Inlet Temperature Circuit Failed High
MCM2	1172	4	1425	Turbocharger Compressor Inlet Temperature Circuit Failed Low
MCM2	1176	3	1431	Turbocharger Compressor Inlet Pressure Circuit Failed High
MCM2	1176	4	1431	Turbocharger Compressor Inlet Pressure Circuit Failed Low
MCM2	1176	2	1431	Compressor Pressure Plausibility Fault (High Box*)
MCM2	1176	5	1431	Compressor Inlet Pressure Plausibility Fault (Delta)
MCM2	1176	20	1431	Compressor Inlet Pressure Plausibility Error, Pressure Too High (High Box*)
MCM2	1188	14	1432	Smart Remote Actuator 1 (Wastegate), No Fail Safe Mode, Motor Off
MCM2	1188	9	1432	Smart Remote Actuator 1 (Wastegate), Fail Safe Mode, Motor Off
MCM2	1188	16	1432	Smart Remote Actuator 1 (Wastegate), Temperature Fault
MCM2	1188	7	1432	Smart Remote Actuator 1 (Wastegate), Fail Safe Mode, Motor On
MCM2	1188	11	1432	Smart Remote Actuator 1 (Wastegate), Restricted Operability
MCM2	1188	15	1432	Smart Remote Actuator 1 (Wastegate), Temperature Warning
MCM2	1188	8	1432	Smart Remote Actuator 1 (Wastegate), Internal Test Running
MCM2	1188	31	1432	Smart Remote Actuator 1 (Wastegate), Unknown Error Code
MCM2	1188		1432	Smart Actuator Indicates Turbocharger Wastegate Position Error
MCM2	1213	4	1333	MIL Lamp Circuit Failed Low

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	1213	3	1333	MIL Lamp Circuit Failed High
MCM2	1213	5	1333	MIL Lamp Circuit Failed Open
MCM2	1323	31	1433	Cylinder 1 Misfire detected
MCM2	1323	14	1443	Misfire Detected
MCM2	1324	31	1435	Cylinder 2 Misfire detected
MCM2	1325	31	1441	Cylinder 3 Misfire detected
MCM2	1326	31	1442	Cylinder 4 Misfire detected
MCM2	1327	31	1443	Cylinder 5 Misfire detected
MCM2	1328	31	1444	Cylinder 6 Misfire Detected
MCM2	1329	31	1445	Cylinder 7 Misfire Detected
MCM2	1330	31	1446	Cylinder 8 Misfire Detected
MCM2	1351		1615	Air Compressor Clutch
MCM2	1636	2	11511	Intake Manifold Temperature Plausibility Error
MCM2	1636	14	11511	Difference Intake Manifold Temperature and EGR Temp. Less Than Threshold (Low Box†)
MCM2	1636	14	11511	Difference Intake Manifold and I Cooler Temperature Out Less than Threshold (Low Box†)
MCM2	1636	3	1511	Intake Manifold Temperature Circuit Failed High
MCM2	1636	4	1511	Intake Manifold Temperature Circuit Failed Low
MCM2	1636	20	1511	Intake Manifold Temperature Drift (Low Box†)
MCM2	1636	21	1511	Intake Manifold Temperature Drift (High Box*)
MCM2	2629	2	1513	Turbocharger Compressor Outlet Sensor, General Temp Plausibility Error
MCM2	2629	3	1513	Turbocharger Compressor Outlet Temp Circuit Failed High
MCM2	2629	4	1513	Turbocharger Compressor Outlet Temp Circuit Failed Low
MCM2	2629	20	1513	Turbocharger Out Temperature, Temperature Too High (Low Box†)
MCM2	2629	21	1513	Turbocharger Out Temperature, Temperature Too Low (High Box*)
MCM2	2630	20	1514	Charge Air Outlet Temperature Drift (Low Box†)
MCM2	2630	21	1514	Charge Air Outlet Temperature Drift (High Box*)
MCM2	2630	2	1514	Charge Air Cooler Outlet Sensor Plausibility Error
MCM2	2630	3	1514	Charge Air Cooler Outlet Temperature Circuit Failed High
MCM2	2630	4	1514	Charge Air Cooler Outlet Temperature Circuit Failed Low
MCM2	2630		1511	Difference Intake Manifold and I Cooler Temperature Out Less Than Threshold (High Box*)
MCM2	2630		0	Charge Air Cooler Performance Monitor

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† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	2631	3	1515	Charge Air Outlet Pressure Circuit Failed High
MCM2	2631	4	1515	Charge Air Outlet Pressure Circuit Failed Low
MCM2	2631	3	1515	Oil Separator Circuit Failed High
MCM2	2631	2	1615	Turbocharger/Supercharger Boost System Performance
MCM2	2631		1642	Charge Air Control, Pressure not plausible in brake mode
MCM2	2659	0	1515	EGR Flow Target Error Diagnostic - High Flow
MCM2	2659	1	1515	EGR Flow Target Error Diagnostic - Low Flow
MCM2	2791	3	1521	EGR Valve Circuit Failed High
MCM2	2791	4	1521	EGR Valve Circuit Failed Low
MCM2	2791	5	1521	EGR Valve Circuit Failed Open
MCM2	2791	7	1521	EGR Valve Position Incorrect
MCM2	2791	14	1521	Smart Remote Actuator 3, No Fail Safe Mode, Motor Off
MCM2	2791	9	1521	Smart Remote Actuator 3, Fail Safe Mode, Motor Off
MCM2	2791	16	1521	Smart Remote Actuator 3 (EGR), Temperature Fault
MCM2	2791	7	1521	Smart Remote Actuator 3 (EGR), Fail Safe Mode, Motor On
MCM2	2791	11	1521	Smart Remote Actuator 3 (EGR), Restricted Operability
MCM2	2791	15	1521	Smart Remote Actuator 3 (EGR), Temperature Warning
MCM2	2791	8	1521	Smart Remote Actuator 3 (EGR), Internal Test Running
MCM2	2791	31	1521	Smart Remote Actuator 3 (EGR), Unknown Error Code
MCM2	2795	9	1241	CAN3 Communication Error
MCM2	2795	0	1522	VNT Valve Position Feedback, Position Too Low (High Box*)
MCM2	2795	1	1522	VNT Valve Position Feedback, Position Too High (Low Box†)
MCM2	2795	2	1522	VNT Valve Position Feed Back Failed
MCM2	2795	3	1522	Position Waste Gate (VNT) Failed High
MCM2	2795	4	1522	Position Waste Gate (VNT) Failed Low
MCM2	2795		1522	Smart Actuator Indicates Turbocharger Vane Position Error
MCM2	2797	4	1523	Injector Needle Control Valve Cylinder 1, 2, 3 Shorted to Ground
MCM2	2797	3	1523	Injector Needle Control Valve Cylinder 1,2,3 Shorted to Battery
MCM2	2798	4	1524	Injector Needle Control Valve Cylinder 4, 5, 6 Shorted to Ground
MCM2	2798	3	1524	Injector Needle Control Valve Cylinder 4,5,6, Shorted to Battery
MCM2	2833		588	Park Brake Status Not Plausible (Vehicle Moving)
MCM2	2988	4	1411	EGR Water Cooling Regulator Circuit Failed Low
MCM2	2988	3	1411	EGR Water Cooling Regulator Circuit Failed High
MCM2	2988	5	1411	EGR Water Cooling Regulator Circuit Failed Open

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	3050	0	1525	Engine Air Flow Out of Range Low
MCM2	3050	1	1525	Active Regen Temp Out of Range Low/DOC Missing
MCM2	3058	13	1615	EGR System Parametrization Failure
MCM2	3064		1615	DPF System Parametrization Failure
MCM2	3216	2	1615	NOX Sensor Plausibility Check Error
MCM2	3242	2	1531	DOC Inlet Temperature Sensor - Plausibility Error
MCM2	3242	3	1531	DOC Inlet Temperature Circuit Failed High
MCM2	3242	4	1531	DOC Inlet Temperature Circuit Failed Low
MCM2	3242	10	1531	DOC Inlet Temperature Sensor Stuck
MCM2	3242		1531	DOC Inlet Temperature, Sensor Drift
MCM2	3246	14	1532	Abnormal DPF Temperature Rise
MCM2	3246	0	1532	DPF Outlet Temperature High
MCM2	3246	2	1532	DPF Outlet Sensor, General Temperature Plausibility
MCM2	3246	3	1532	DPF Outlet Temperature Circuit Failed High
MCM2	3246	4	1532	DPF Outlet Temperature Circuit Failed Low
MCM2	3246	10	1532	DPF Outlet Temperature Sensor Stuck
MCM2	3250	31	1533	Abnormal DOC Temperature Rise 1
MCM2	3250	2	1533	DOC Outlet Temperature Sensor - Plausibility Error
MCM2	3250	3	1533	DOC Outlet Temp Circuit Failed High
MCM2	3250	4	1533	DOC Outlet Temp Circuit Failed Low
MCM2	3250	10	1533	DOC Outlet Temperature Sensor Stuck
MCM2	3250	14	1533	Abnormal DOC Temperature Rise 2
MCM2	3250		1533	DOC Outlet Temperature High
MCM2	3250		1533	DOC Outlet Temperature, Sensor Drift
MCM2	3251	0	1534	DPF Pressure Out of Range High
MCM2	3251	1	1534	DPF Pressure Out of Range Low
MCM2	3251	16	1534	DPF Pressure - Out of Range Very High
MCM2	3251	9	1534	Abnormal Soot Rate
MCM2	3358	3	1535	EGR Pressure Failed High
MCM2	3358	4	1535	EGR Pressure Failed Low
MCM2	3363	4	1615	Urea Tank Heater Circuit Failed Low
MCM2	3363	3	1615	Urea Tank Heater Circuit Failed High
MCM2	3363	5	1615	Urea Tank Heater Circuit Failed Open
MCM2	3464		1615	High Bridge 1 Open Load
MCM2	3464	2	1615	Intake Throttle Valve, Spring Response Time Not Plausible

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	3464	7	1615	Intake Throttle Valve, Stuck
MCM2	3464	14	1615	Intake Throttle Valve, Integrated Absolute Error Plausibility
MCM2	3464	8	1615	Intake Throttle Valve, Current Deviation Too High
MCM2	3464	4	1615	H Bridge 1 Circuit Shorted to Ground
MCM2	3464	3	1615	H Bridge 1 Circuit Shorted to Battery
MCM2	3464	5	1615	H Bridge 1 Circuit Open Load
MCM2	3470	4	1311	Actuator Turbo Compound Bypass Circuit Failed Low
MCM2	3470	3	1311	Actuator Turbo Compound Bypass Circuit Failed High
MCM2	3470	5	1311	Actuator Turbo Compound Bypass Circuit Failed Open
MCM2	3471	1	1542	EDV Failed Self Test
MCM2	3471	3	1323	HC Doser Circuit Failed High
MCM2	3471	4	1323	HC Doser Failed Low
MCM2	3471	5	1323	HC Doser Open Circuit
MCM2	3480	4	1112	Fuel Compensation Pressure Sensor Circuit Failed Low
MCM2	3480	3	1112	Fuel Compensation Pressure Sensor Circuit Failed High
MCM2	3480		1901	Fuel Pressure Fuel Cut Off Valve Not Plausible
MCM2	3480		1112	Fuel Pressure Too High/Too Low
MCM2	3480	2	1543	Doser Fuel Line Pressure Abnormal
MCM2	3480	14	1543	Doser FLP Sensors Failed Self Test
MCM2	3482	7	1544	FCV Failed Self Test
MCM2	3482	4	1332	Fuel Cut Off Valve Circuit Failed Low
MCM2	3482	3	1332	Fuel Cut Off Valve Circuit Failed High
MCM2	3482	5	1332	Fuel Cut Off Valve Circuit Failed Open
MCM2	3509	4	1642	5V Sensor Supply Bank 1 Circuit Failed Low
MCM2	3509	3	1642	5V Sensor Supply Bank 1 Circuit Failed High
MCM2	3510	4	1643	5V Sensor Supply Bank 2 Circuit Failed Low
MCM2	3510	3	1643	5V Sensor Supply Bank 2 Circuit Failed High
MCM2	3511	4	1644	3V Sensor Supply Bank 1 Circuit Failed Low
MCM2	3511	3	1644	3V Sensor Supply Bank 1 Circuit Failed High
MCM2	3512	4	1645	3V Sensor Supply Bank 2 Circuit Failed Low
MCM2	3512	3	1645	3V Sensor Supply Bank 2 Circuit Failed High
MCM2	3556	1	1545	Regen Temperature - Out of Range Low
MCM2	3556	0	1551	Regen Temperature - Out of Range High
MCM2	3563	4	1551	Intake Manifold Pressure Circuit Failed Low
MCM2	3563	3	1551	Intake Manifold Pressure Circuit Failed High

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	3563	0	1551	Inlet Manifold Pressure Failed High
MCM2	3563	1	1551	Inlet Manifold Pressure Failed Low
MCM2	3563	20	1551	Ambient and Inlet Manifold Pressure Difference (Low Box†)
MCM2	3563	21	1551	Ambient and Inlet Manifold Pressure Difference (High Box*)
MCM2	3563	3	1551	Inlet Manifold Pressure Sampling Range Failed
MCM2	3588	4	1552	Ether Start, Shorted to Ground
MCM2	3588	3	1552	Ether Start, Shorted to Battery
MCM2	3588	5	1552	Ether Start, Open Load
MCM2	3597	4	1553	Proportional Valve Bank 1 Circuit Failed Low
MCM2	3597	3	1615	Proportional Valve Bank 1 Circuit Failed High
MCM2	3597		1325	Current Flow on HS1 IM1 Too High
MCM2	3598	4	1615	Proportional Valve Bank 2 Circuit Failed Low
MCM2	3598	3	1615	Proportional Valve Bank 2 Circuit Failed High
MCM2	3599		1615	MCM Internal Injector Power Supply Failed Low
MCM2	3599		1615	MCM Internal Injector Power Supply Failed High
MCM2	3609	20	1554	DPF Inlet Pressure Sensor Drifted High In Range Fault (Low Box†)
MCM2	3609	2	1554	DPF Inlet Pressure Sensor Drifted High In Range Fault (High Box*)
MCM2	3609	21	1554	DPF Inlet Pressure Sensor Drifted Low In Range Fault (Low Box†)
MCM2	3609	21	1554	DPF Inlet Pressure Sensor Drifted Low In Range Fault (High Box*)
MCM2	3609	3	1554	DPF Inlet Pressure Circuit Failed High
MCM2	3609	4	1554	DPF Inlet Pressure Circuit Failed Low
MCM2	3609	10	1554	DPF Inlet Pressure Sensor Stuck
MCM2	3609		1554	'DPF Inlet Pressure High, Sensor Drift
MCM2	3610	2	1555	DPF Outlet Pressure Sensor Plausibility Error
MCM2	3610	20	1555	DPF Outlet Pressure Sensor Drifted High In Range Fault (Low Box†)
MCM2	3610	14	1555	DPF Outlet Pressure Sensor Drifted High In Range Fault (High Box*)
MCM2	3610	21	1555	DPF Outlet Pressure Sensor Drifted Low In Range Fault (Low Box†)
MCM2	3610	2	1555	DPF Outlet Pressure Sensor Drifted Low In Range Fault (High Box*)
MCM2	3610	3	1555	DPF Outlet Pressure Circuit High
MCM2	3610	4	1555	DPF Outlet Pressure Circuit Low

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	3610	10	1555	DPF Outlet Pressure Sensor Stuck
MCM2	3610		1555	DPF System Back Pressure Too High
MCM2	3659	14	1611	Injector Cylinder #1 Spill Control Valve Abnormal Operation
MCM2	3659	10	1611	Injector Cylinder #1 Spill Control Valve Abnormal Rate of Change
MCM2	3659	6	1611	Injector Cylinder #1 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
MCM2	3660	14	1612	Injector Cylinder #2 Spill Control Valve Abnormal Operation
MCM2	3660	10	1612	Injector Cylinder #2 Spill Control Valve Abnormal Rate of Change
MCM2	3660	6	1612	Injector Cylinder #2 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
MCM2	3661	14	1613	Injector Cylinder #3 Spill Control Valve Abnormal Operation
MCM2	3661	10	1613	Injector Cylinder #3 Spill Control Valve Abnormal Rate of Change
MCM2	3661	6	1613	Injector Cylinder #3 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
MCM2	3662	14	1614	Injector Cylinder #4 Spill Control Valve Abnormal Operation
MCM2	3662	10	1614	Injector Cylinder #4 Spill Control Valve Abnormal Rate of Change
MCM2	3662	6	1614	Injector Cylinder #4 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
MCM2	3663	14	1615	Injector Cylinder #5 Spill Control Valve Abnormal Operation
MCM2	3663	10	1615	Injector Cylinder #5 Spill Control Valve Abnormal Rate of Change
MCM2	3663	6	1615	Injector Cylinder #5 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
MCM2	3664	14	1621	Injector Cylinder #6 Spill Control Valve Open Circuit
MCM2	3664	10	1621	Injector Cylinder #6 Spill Control Valve Abnormal Rate of Change
MCM2	3664	6	1621	Injector Cylinder #6 Spill Control Valve ("Amplifier"), Valve Shorted Circuit
MCM2	3665	5	1621	Injector Cylinder #7 Spill Control Valve Open Circuit
MCM2	3665	10	1622	Injector Cylinder #7 Spill Control Valve Abnormal Operation
MCM2	3719	0	1624	Soot Level Very High
MCM2	3719	16	1624	Soot Level High
MCM2	3719	31	1635	DPF Zone 2 Condition
MCM2	3719	15	1636	DPF Zone 3 Condition
MCM2	3720	15	1625	DPF Ash Clean Request

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	3720	16	1625	DPF Ash Clean Request - Derate
MCM2	4076	4	1212	'Engine Coolant Inlet Temperature Circuit Failed Low
MCM2	4076	3	1212	'Engine Coolant Inlet Temperature Circuit Failed High
MCM2	4076	2	1615	Engine Coolant Sensor (IN), General Temp. Plausibility Error
MCM2	4076		1615	MU_ISP_COOL_TEMP_SENS
MCM2	4076		1615	MU_ISP_THERM_MON
MCM2	4076		1212	Coolant Temperature Differential High
MCM2	4077	4	1543	Doser Fuel Line Pressure Sensor Circuit Failed Low
MCM2	4077	3	1543	Doser Fuel Line Pressure Sensor Circuit Failed High
MCM2	4077	14	1543	Doser Fuel Line Pressure Failed Self Test
MCM2	4193			MU_ISP_COOL_TEMP_IN
MCM2	4226	4	1615	Compressor Differential Pressure Inlet Failed Low
MCM2	4226	3	1615	Compressor Differential Pressure Inlet Failed High
MCM2	4226	0	1615	Turbocharger Compressor Inlet Differential Pressure Too High (Low Box†)
MCM2	4226	1	1615	Turbocharger Compressor Inlet Differential Pressure Too Low (High Box*)
MCM2	4226	5	1615	Turbocharger Compressor Inlet Differential Pressure Sampling Range Failure
MCM2	4226	13	1454	Turbocharger Compressor Inlet Differential Pressure Sensor Out Of Calibration 1
MCM2	4226	13	1454	Turbocharger Compressor Inlet Differential Pressure Sensor Out Of Calibration 2
MCM2	4227	4	1615	'Oil Separator Circuit Failed Low
MCM2	4227	7	1615	Oil Separator, Max. Duration Time Reached
MCM2	4227		1615	MU_ISP_CCV_OSS_LOW
MCM2	4257	4	1615	Injector Needle Control Valve Bank 3, Shorted to Ground
MCM2	4257	3	1615	Injector Needle Control Valve Bank 3, Shorted to Battery
MCM2	4258	4	1615	Injector Spill Control Valve Cylinder 1, 2, 3 Shorted to Ground
MCM2	4258	3	1615	Injector Spill Control Valve Cylinder 1,2,3, Shorted to Battery
MCM2	4809	3	1615	Catalyst Temperature Sensor Circuit High Input (Bank 1 Sensor 1)
MCM2	4809	4	1615	Catalyst Temperature Sensor Circuit Low Input (Bank 1 Sensor 1)
MCM2	4810	3	1615	Catalyst Temperature Sensor Circuit High (Bank 1 Sensor 2)
MCM2	4810	4	1615	Catalyst Temperature Sensor Circuit Low (Bank 1 Sensor 2)
MCM2	520192		1623	MU_EGR_OBD_1
MCM2	520193		1623	MU_EGR_OBD_2

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	520194		1623	MU_EGR_OBD_3
MCM2	520195		1623	MU_EGR_OBD_4
MCM2	520196		1623	MU_EGR_OBD_5
MCM2	520197		1623	MU_OBD_PROTO_EV_1
MCM2	520198		1623	MU_OBD_PROTO_EV_2
MCM2	520199		1623	MU_OBD_PROTO_EV_3
MCM2	520200		1623	MU_OBD_PROTO_EV_4
MCM2	520201		1623	MU_OBD_PROTO_EV_5
MCM2	520202	4	1313	Intake Throttle Valve Circuit Failed Low
MCM2	520202	3	1313	Intake Throttle Valve Circuit Failed High
MCM2	520202	4	1313	Intake Throttle Valve Circuit Failed Open
MCM2	520203		1615	H Bridge 1 Circuit Open Load
MCM2	520203	4	1615	H Bridge 1 Circuit Shorted to Ground
MCM2	520203	3	1615	H Bridge 1 Circuit Shorted to Battery
MCM2	520203		1615	H Bridge 1 Circuit Open Load
MCM2	520204	4	1615	Reserved Monitoring Unit For Temperature Diagnostics, Circuit Failed Low
MCM2	520204	3	1615	Reserved Monitoring Unit For Temperature Diagnostics, Circuit Failed High
MCM2	520205	4	1615	Reserved Monitoring Unit For Temperature Diagnostics, Circuit Failed Low
MCM2	520205	3	1615	Reserved Monitoring Unit For Temperature Diagnostics, Circuit Failed High
MCM2	520206	4	1615	Thermal Switch Circuit Failed Low
MCM2	520206	3	1615	Thermal Switch Circuit Failed High
MCM2	520207	4	1331	Turbo Compound Valve Circuit Failed Low
MCM2	520207	3	1331	Turbo Compound Valve Circuit Failed High
MCM2	520207	5	1331	Turbo Compound Valve Circuit Failed Open
MCM2	520208	4	1335	Turbo Brake Sleeve Circuit Failed Low
MCM2	520208	3	1335	Turbo Brake Sleeve Circuit Failed High
MCM2	520208	5	1335	Turbo Brake Sleeve Circuit Failed Open
MCM2	520209	4	1615	Function 19 Circuit Failed Low
MCM2	520209	3	1615	Function 19 Circuit Failed High
MCM2	520209	5	1615	Function 19 Circuit Failed Open
MCM2	520210	3	1451	Service Push Button Circuit Failed High
MCM2	520211		1615	Rail Pressure Governor, Valve Stays Open
MCM2	520212		1615	Compressor Differential Pressure Outlet Failed Low

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	520212		1615	Compressor Differential Pressure Outlet Failed High
MCM2	520212	13	1454	Turbocharger Compressor Outlet Differential Pressure Sensor Out Of Calibration
MCM2	520213		1615	Doser Metering and Safety Unit Valve Seals Check
MCM2	520214	4	1615	Function 22 Circuit Failed Low
MCM2	520214	3	1615	Function 22 Circuit Failed High
MCM2	520214	5	1615	Function 22 Circuit Failed Open
MCM2	520215	4	1615	Water Pump Circuit Failed Low
MCM2	520215	3	1615	Water Pump Circuit Failed High
MCM2	520215	5	1615	Water Pump Circuit Failed Open
MCM2	520215		1615	Water Pump Limp Home Mode
MCM2	520215	7	1615	Water Pump Mechanical Defect Detected
MCM2	520216	4	1615	Function 25 Circuit Failed Low
MCM2	520216	3	1615	Function 25 Circuit Failed High
MCM2	520216	5	1615	Function 25 Circuit Failed Open
MCM2	520217	4	1615	RCP Test Function 1 Circuit Failed Low
MCM2	520217	3	1615	RCP Test Function 1 Circuit Failed High
MCM2	520217	5	1615	RCP Test Function 1 Circuit Failed Open
MCM2	520218	4	1615	RCP Test Function 2 Circuit Failed Low
MCM2	520218	3	1615	RCP Test Function 2 Circuit Failed High
MCM2	520218	5	1615	RCP Test Function 2 Circuit Failed Open
MCM2	520219	4	1615	Volute Control Valve, Shorted to Ground
MCM2	520219	3	1615	Volute Control Valve, Shorted to Battery
MCM2	520219		1615	Volute Control Valve, Open Load
MCM2	520220	4	1615	Volute Shut Off Valve, Shorted to Ground
MCM2	520220	3	1615	Volute Shut Off Valve, Shorted to Battery
MCM2	520220		1615	Volute Shut Off Valve, Open Load
MCM2	520221		1615	Variable Camshaft Phase, Shorted to Ground
MCM2	520221		1615	Variable Camshaft Phase, Shorted to Battery
MCM2	520221		1615	Variable Camshaft Phase, Open Load
MCM2	520222	4	1615	Function 31 Circuit Failed Low
MCM2	520222	3	1615	Function 31 Circuit Failed High
MCM2	520222	5	1615	Function 31 Circuit Failed Open
MCM2	520223		1453	Smart Remote Actuator 2, No Failsafe Mode, Motor Off
MCM2	520223		1453	Smart Remote Actuator 2, Failsafe Mode, Motor Off
MCM2	520223		1453	Smart Remote Actuator 2, Temperature Fault

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
MCM2	520223		1453	Smart Remote Actuator 2, Failsafe Mode, Motor On
MCM2	520223		1453	Smart Remote Actuator 2, Restricted Operability
MCM2	520223		1453	Smart Remote Actuator 2, Temperature Warning
MCM2	520223		1453	Smart Remote Actuator 2, Internal Test Running
MCM2	520223		1453	Smart Remote Actuator 2, Unknown Error Code
MCM2	520223		16347	Smart Actuator Indicates Actuator Position Error
MCM2	520224	4	1615	Function 8 Circuit Failed Low
MCM2	520224	3	1615	Function 8 Circuit Failed High
MCM2	520224	5	1615	Function 8 Circuit Failed Open
MCM2	520225	4	1324	Electrostatic Oil Separator Circuit Failed Low
MCM2	520225	3	1324	Electrostatic Oil Separator Circuit Failed High
MCM2	520225	5	1324	Electrostatic Oil Separator Circuit Failed Open
MCM2	520226	2	1551	Intake Manifold Pressure Plausibility (Low Box†)
MCM2	520226	21	1551	Intake Manifold Pressure Plausibility Error, Pressure Too Low (High Box*)
MCM2	520227	3	1631	Multiplexer 1 Channel 1, Shorted High
MCM2	520228	3	1631	Multiplexer 1 Channel 2, Shorted High
MCM2	520229	3	1632	Multiplexer 2 Channel 1, Shorted High
MCM2	520230	3	1632	Multiplexer 2 Channel 2, Shorted High
MCM2	520231	3	1633	Multiplexer 3 Channel 1, Shorted High
MCM2	520232	3	1633	Multiplexer 3 Channel 2, Shorted High
MCM2	520233	1	577	Coolant Level Low

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
CPC2	70	2		Park Brake Status Not Plausible (Vehicle Moving)
CPC2	70	19		J1939 Park Brake Switch Signal from a calibrated source is erratic
CPC2	70	13		J1939 Park Brake Switch Signal from a calibrated source is not received or has stopped arriving
CPC2	84	21		Vehicle Speed Failure
CPC2	84	2		VSS Anti Tamper Detection via Virtual Gear Ratio
CPC2	84	3		Vehicle Speed Sensor Circuit Failed High
CPC2	84	4		Vehicle Speed Sensor Circuit Failed Low
CPC2	84	8		VSS Anti Tamper Detection via Fixed Frequency Device
CPC2	84	11		Vehicle Speed Above Programmable Threshold2 While Driving
CPC2	84	0		Vehicle Speed Above Programmable Threshold1 While Driving
CPC2	84	6		VSS Anti-Tamper Detection via ABS Vehicle Speed Comparison
CPC2	84	19		J1939 Wheel-Based Vehicle Speed Signal from a calibrated source is erratic
CPC2	84	13		J1939 Wheel-Based Vehicle Speed Signal from a calibrated source is not received or has stopped arriving
CPC2	84	20		Vehicle Speed Sensor Drifted High Error (VSS signal not plausible)
CPC2	91	2		Accelerator Pedal Learn Error
CPC2	91	0		Accelerator Pedal Circuit Failed High
CPC2	91	4		Accelerator Pedal Circuit Failed Low
CPC2	91	8		PWM Accelerator Pedal Signal 1 Frequency Out Of Range
CPC2	91	7		PWM Accelerator Pedal Idle Not Recognized
CPC2	91	14		PWM Accelerator Pedal not Learned
CPC2	91	31		PWM Accelerator Pedal Learned Range to Large
CPC2	91	3		Accelerator Pedal Signal Circuit Failed High
CPC2	91	13		J1939 EEC2 Message is missing
CPC2	98	0		Engine Oil Level High
CPC2	98	18		Engine Oil Level Low
CPC2	98	1		Engine Oil Level Very Low
CPC2	100	1		Engine Oil Pressure Low
CPC2	100	18		Oil Pressure Low
CPC2	107	0		Air Filter Restriction High

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
CPC2	110	0		Coolant Temperature Very High
CPC2	110	16		Coolant Temperature High
CPC2	111	1		Coolant Level Very Low
CPC2	111	3		Coolant Level Circuit Failed High
CPC2	111	4		Coolant Level Circuit Failed Low
CPC2	111	18		Coolant Level Low
CPC2	120	13		J1939 Retarder Fluid Message is Missing
CPC2	168	0		Battery Voltage High
/CPC2	168	1		Battery Voltage Very Low
CPC2	168	18		BatteryVoltage Low
CPC2	168	7		Opt Idle Detected Charging System or Battery Failure
CPC2	168	14		ECU powerdown not completed (Main Battery Terminal Possibly Floating)
CPC2	171	2		Ambient Air Temperature Sensor Data Erratic
CPC2	171	14		J1587 Ambient Air Temp Sensor Data Not Received This Ign Cycle
CPC2	171	9		J1587 Ambient Air Temp Sensor Data Message Stopped Arriving
CPC2	187	4		Idle Volume Sensor Shorted to Ground
CPC2	187	3		Idle Volume Sensor Shorted to Battery
CPC2	191	9		J1939 ETC1 Message is missing
CPC2	191	19		J1939 Transmission Output Shaft Speed Signal is erratic
CPC2	191	13		J1939 Transmission Output Shaft Speed Signal is missing
CPC2	247	14		MCM Reported Ash Mileage is Lower then the CPC Stored Value
CPC2	247	9		MCM Engine Hours Data not received or stopped arriving
CPC2	247	10		MCM Engine Hours Data increasing at an implausible rate
CPC2	247	0		MCM Engine Hours Data higher than expected
CPC2	247	1		MCM Engine Hours Data lower than expected
CPC2	523	19		J1939 Transmission Current Gear Signal is erratic
CPC2	523	13		J1939 Transmission Current Gear Signal is missing
CPC2	524	9		J1939 ETC2 Message is missing
CPC2	527	9		J1939 CCVS Message from a calibrated source is not received or has stopped arriving
CPC2	558	2		Idle Validation Switch Inputs Reversed

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
CPC2	558	3		Idle Validation Switch 1 Circuit Failed High
CPC2	558	4		Idle Validation Switch 1 Circuit Failed Low
CPC2	558	5		Idle Validation Switch 2 Circuit Failed Low
CPC2	558	6		Idle Validation Switch 2 Circuit Failed High
CPC2	596	19		J1939 Cruise Control Enable Switch Signal from a calibrated source is erratic
CPC2	596	13		J1939 Cruise Control Enable Switch Signal from a calibrated source is not received or has stopped arriving
CPC2	597	2		Service Brake Status Not Plausible
CPC2	597	19		J1939 Service Brake Switch Signal from a calibrated source is erratic
CPC2	597	13		J1939 Service Brake Switch Signal from a calibrated source is not received or has stopped arriving
CPC2	599	4		Cruise Control SET and RESUME Circuits Failed Low
CPC2	600	19		J1939 Cruise Control Coast Switch Signal from a calibrated source is erratic
CPC2	600	13		J1939 Cruise Control Coast Switch Signal from a calibrated source is not received or has stopped arriving
CPC2	602	19		J1939 Cruise Control Accelerate Switch Signal from a calibrated source is erratic
CPC2	602	13		J1939 Cruise Control Accelerate Switch Signal from a calibrated source is not received or has stopped arriving
CPC2	608	14		J1587 Data Link Failure
CPC2	609	12		CPC2 Hardware Failure
CPC2	625	2		Incorrect MCM System ID Received
CPC2	625	4		ECAN Link Circuit Failure
CPC2	625	9		ACM PT-CAN DM1 Message Not Received or has Stopped Arriving
CPC2	625	8		MCM PT-CAN DM1 Message Not Received or has Stopped Arriving
CPC2	625	14		MCM System ID Not Received or Stopped Arriving
CPC2	628	2		EEPROM Checksum Failure
CPC2	628	12		EEPROM Checksum Failure for the SCR Block
CPC2	628	14		XFLASH Static Fault Code Memory Page Read Write Failure
CPC2	628	17		1000ms ECU OS Task Timed out Prior to Completion
CPC2	629	2		CPC Hardware/Software Mismatch
CPC2	629	12		DDEC Data Xflash Write Error – Replace CPC2.
CPC2	630	13		SCR Number Out of Range
* High box — Code received under high speed, high load conditions † Low box — Code received under low speed, low load conditions				

Module	J1939 SPN	FMI	Flash Code	Description
CPC2	639	9		J1939 PROP11 message is missing
CPC2	639	14		J1939 Data Link Failure
CPC2	639	13		HDMS Fan is configured and the J1939 message was not received or has stopped arriving
CPC2	701	3		Digital Output 4/09 Circuit Failed High
CPC2	701	4		Digital Output 4/09 Circuit Failed Low
CPC2	702	3		Digital Output 3/17 Circuit Failed High
CPC2	702	4		Digital Output 3/17 Circuit Failed Low
CPC2	703	3		Digital Output 3/09 Circuit Failed High
CPC2	703	4		Digital Output 3/09 Circuit Failed Low
CPC2	704	3		Digital Output 4/07 Circuit Failed High
CPC2	704	4		Digital Output 4/07 Circuit Failed Low
CPC2	705	3		Digital Output 1/13 Circuit Failed High
CPC2	705	4		Digital Output 1/13 Circuit Failed Low
CPC2	706	3		Digital Output 3/10 Circuit Failed High
CPC2	706	4		Digital Output 3/10 Circuit Failed Low
CPC2	707	3		Digital Output 2/10 Circuit Failed High (CEL / AWL Lamp)
CPC2	707	4		Digital Output 2/10 Circuit Failed Low (CEL / AWL Lamp)
CPC2	708	3		Digital Output 3/12 Circuit Failed High
CPC2	708	4		Digital Output 3/12 Circuit Failed Low
CPC2	709	3		Digital Output 3/16 Circuit Failed High
CPC2	709	4		Digital Output 3/16 Circuit Failed Low
CPC2	710	3		Digital Output 4/06 Circuit Failed High
CPC2	710	4		Digital Output 4/06 Circuit Failed Low
CPC2	711	3		Digital Output 1/05 Circuit Failed High
CPC2	711	4		Digital Output 1/05 Circuit Failed Low
CPC2	712	3		Digital Output 1/04 Circuit Failed High
CPC2	712	4		Digital Output 1/04 Circuit Failed Low
CPC2	713	3		Digital Output 3/07 Circuit Failed High
CPC2	713	4		Digital Output 3/07 Circuit Failed Low
CPC2	713	5		Digital Output 3/07 Open Circuit
CPC2	713	7		Top2 Shift Failure
CPC2	714	3		Digital Output 3/08 Circuit Failed High
CPC2	714	4		Digital Output 3/08 Circuit Failed Low
CPC2	714	5		Digital Output 3/08 Failed Open
CPC2	715	3		Digital Output 4/10 Circuit Failed High

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
CPC2	904	9		J1939 EBC2 Message from ABS is missing
CPC2	904	19		J1939 Front Axle Speed Signal is erratic
CPC2	904	13		J1939 Front Axle Speed Signal is missing
CPC2	972	2		Throttle inhibit switch signal not plausible due to excess vehicle speed
CPC2	973	9		J1939 EBC1 Message is missing
CPC2	973	13		J1939 Engine Retarder Selection Signal Missing
CPC2	973	19		J1939 Engine Retarder Selection Signal Erratic
CPC2	974	2		Remote Accelerator Pedal Supply Voltage Out of Range
CPC2	974	3		Remote Accelerator Pedal Circuit Failed High
CPC2	974	4		Remote Accelerator Pedal Circuit Failed Low
CPC2	979	9		J1939 PTO Message Not Received This Ignition Cycle
CPC2	986	9		J1939 CM1 Message is missing
CPC2	1267	3		Digital Output 4 10 Circuit Failed Open
CPC2	1267	4		Digital Output 4 10 Circuit Failed Low
CPC2	1590	19		Adaptive Cruise Control Message Not Received
CPC2	1590	9		Adaptive Cruise Control Device Reporting Error
CPC2	1624	9		J1939 TCO1 Message is missing
CPC2	1624	19		J1939 Tachograph Vehicle Speed Signal is erratic
CPC2	1624	13		J1939 Tachograph Vehicle Speed Signal is missing
CPC2	1663	7		Optimized Idle Safety Loop Fault
CPC2	1716	9		J1939 ERC1 Message is missing
CPC2	1814	9		VDC1 Message was not received or has stopped arriving
CPC2	1845	9		J1939 TCFG2 Message is missing
CPC2	2623	8		PWM Accelerator Pedal Signal 2 Frequency Out Of Range
CPC2	2623	14		PWM Accelerator Pedal GAS1 and GAS2 Signal Missing
CPC2	2900	9		J1939 ETC7 Message is missing
CPC2	3510	3		Accelerator Pedal Supply Voltage Circuit Failed High
CPC2	3510	7		Accelerator Pedal Supply Voltage Circuit Failed High
CPC2	3510	4		Accelerator Pedal Sensor Supply Voltage Circuit Failed Low
CPC2	3510	8		PWM Accelerator Pedal Supply Voltage Missing
CPC2	3606	9		J1939 ESS Message is missing
CPC2	3695	19		DPF Regen Inhibit MUX Switch Message Contains Data Error Indicator

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
CPC2	3695	13		DPF Regen Inhibit MUX Switch Message Contains SNV Indicator
CPC2	3695	9		DPF Regen Inhibit MUX Switch Message Stopped Arriving
CPC2	3695	14		DPF Regen Inhibit MUX Switch Message Not Received this Ign Cycle
CPC2	3696	19		DPF Regen Force MUX Switch Message Contains Data Error Indicator
CPC2	3696	13		DPF Regen Force MUX Switch Message Contains SNV Indicator
CPC2	3696	9		DPF Regen Force MUX Switch Message Stopped Arriving
CPC2	3696	14		DPF Regen Force MUX Switch Message Not Received this Ign Cycle
CPC2	4041	0		20ms ECU OS Task Locked in an Endless Loop
CPC2	4041	9		20ms ECU OS Task Timed out Prior to Completion
CPC2	4041	16		1000ms ECU OS Task Locked in an Endless Loop

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
ACM	51	4	1112	Reserve Sensor (POSITION) signal range Failed Low
ACM	108	13	0	Ambient Air Pressure Over CAN Signal Not Available
ACM	110	9	0	Coolant Temperature Over CAN Signal Not Available
ACM	168	0	1221	Battery Voltage High
ACM	168	1	1221	Battery Voltage Too Low
ACM	171	13	0	Ambient Air Temperature Over CAN Signal Not Available
ACM	190	9	0	Engine Speed Over CAN Signal Not Available
ACM	354	3	0	Inlet Air Humidity Signal Range Failed High
ACM	354	4	0	Inlet Air Humidity Signal Range Failed Low
ACM	513	9	0	Actual Engine Torque Over CAN Signal Not Available
ACM	628	14	0	
ACM	629	12	1641	µC Trap logging: internal system-, program- or microcontroller-error
ACM	630	12	0	Read/Write Error EEPROM
ACM	715	3		Short Circuit to UBatterie on KL15-Switch
ACM	715	4		Short Circuit to Ground on KL15-Switch
ACM	975	3		PWM Fan Control Driver Circuit Failed High
ACM	975	4		PWM Fan Control Driver Circuit Failed Low
ACM	975	5		PWM Fan Control Driver Failed Open
ACM	1127	3		Turbocharger Compressor Outlet Pressure Circuit Failed High
ACM	1127	4		Turbocharger Compressor Outlet Pressure Circuit Failed Low
ACM	1172	2		Coolant Temp/Compressor Inlet Plausibility Error
ACM	1172	3		Turbocharger Compressor Inlet Temperature Circuit Failed High
ACM	1172	4		Turbocharger Compressor Inlet Temperature Circuit Failed Low
ACM	1176	3		Turbocharger Compressor Inlet Pressure Circuit Failed High
ACM	1176	4		Turbocharger Compressor Inlet Pressure Circuit Failed Low
ACM	1176	5		Compressor Inlet Pressure Plausibility Fault (Delta)
ACM	1176	20		Compressor Inlet Pressure Plausibility Error, Pressure Too High (High Box*)
ACM	1188	14		Smart Remote Actuator 1 (Wastegate), No Fail Safe Mode, Motor Off

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
ACM	1188	14		Smart Remote Actuator 1 (Wastegate), Fail Safe Mode, Motor Off
ACM	1188	14		Smart Remote Actuator 1 (Wastegate), Temperature Fault
ACM	1188	14		Smart Remote Actuator 1 (Wastegate), Fail Safe Mode, Motor On
ACM	1188	14		Smart Remote Actuator 1 (Wastegate), Restricted Operability
ACM	1188	14		Smart Remote Actuator 1 (Wastegate), Temperature Warning
ACM	1188	14		Smart Remote Actuator 1 (Wastegate), Internal Test Running
ACM	1188	14		Smart Remote Actuator 1 (Wastegate), Unknown Error Code
ACM	1636	0		Intake Manifold Temperature High
ACM	1636	2		Intake Manifold Temperature Plausibility Error
ACM	1636	2		Difference Intake Manifold and I Cooler Temperature Out Less than Threshold (Low Box†)
ACM	1636	2		Difference Intake Manifold and I Cooler Temperature Out Less than Threshold (High Box*)
ACM	1636	3		Intake Manifold Temperature Circuit Failed High
ACM	1636	4		Intake Manifold Temperature Circuit Failed Low
ACM	1636	20		Intake Manifold Temperature Drift (Low Box†)
ACM	1636	21		Intake Manifold Temperature Drift (High Box*)
ACM	1693	7		Turbocharger Wastegate Mechanical Failure, Jammed in Closed Position
ACM	2629	2		Turbocharger Compressor Outlet Sensor, General Temp Plausibility Error
ACM	2629	3		Turbocharger Compressor Outlet Temp Circuit Failed High
ACM	2629	4		Turbocharger Compressor Outlet Temp Circuit Failed Low
ACM	2629	20		Turbocharger Out Temperature, Temperature Too High (Low Box†)
ACM	2629	21		Turbocharger Out Temperature, Temperature Too Low (High Box*)
ACM	2630	20		Charge Air Outlet Temperature Drift (Low Box†)
ACM	2630	21		Charge Air Outlet Temperature Drift (High Box*)
ACM	2630	2		Charge Air Cooler Outlet Sensor Plausibility Error
ACM	2630	3		Charge Air Cooler Outlet Temperature Circuit Failed High

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
ACM	2630	4		Charge Air Cooler Outlet Temperature Circuit Failed Low
ACM	2631	3		Charge Air Outlet Pressure Circuit Failed High
ACM	2631	4		Charge Air Outlet Pressure Circuit Failed Low
ACM	2659	0		EGR Flow Target Error Diagnostic - High Flow
ACM	2659	1		EGR Flow Target Error Diagnostic - Low Flow
ACM	2791	3		EGR Valve Circuit Failed High
ACM	2791	4		EGR Valve Circuit Failed Low
ACM	2791	5		EGR Valve Circuit Failed Open
ACM	2791	7		Actuator Manager Position EGR Deviation
ACM	2791	14		Smart Remote Actuator 3, No Fail Safe Mode, Motor Off
ACM	2791	14		Smart Remote Actuator 3, Fail Safe Mode, Motor Off
ACM	2791	14		Smart Remote Actuator 3 (EGR), Temperature Fault
ACM	2791	14		Smart Remote Actuator 3 (EGR), Fail Safe Mode, Motor On
ACM	2791	14		Smart Remote Actuator 3 (EGR), Restricted Operability
ACM	2791	14		Smart Remote Actuator 3 (EGR), Temperature Warning
ACM	2791	14		Smart Remote Actuator 3 (EGR), Internal Test Running
ACM	2791	14		Smart Remote Actuator 3 (EGR), Unknown Error Code
ACM	2795	0		VNT Valve Position Feedback, Position Too Low (High Box*)
ACM	2795	1		VNT Valve Position Feedback, Position Too High (Low Box†)
ACM	2795	2		VNT Valve Position Feed Back Failed
ACM	2795	3		Position Waste Gate (VNT) Failed High
ACM	2795	4		Position Waste Gate (VNT) Failed Low
ACM	2795	7		Turbocharger Wastegate Mechanical Failure
ACM	3050	0		Engine Air Flow Out of Range Low
ACM	3050	1		Active Regen Temp Out of Range Low/DOC Missing
ACM	3242	2		DOC Inlet Sensor, General Temperature
ACM	3242	3		DOC Inlet Temperature Circuit Failed High
ACM	3242	4		DOC Inlet Temperature Circuit Failed Low
ACM	3242	10		DOC Inlet Temperature Sensor Stuck
ACM	3246	14		Supplemental Fuel Source Detected
ACM	3246	0		DPF Outlet Temperature Too High
ACM	3246	2		DPF Outlet Sensor, General Temperature Plausibility
ACM	3246	3		DPF Outlet Temperature Circuit Failed High

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
ACM	3246	4		DPF Outlet Temperature Circuit Failed Low
ACM	3246	10		DPF Outlet Temperature Sensor Stuck
ACM	3250	14		Electronic Diesel Dosing Valve Failed Self Test
ACM	3250	2		DOC Outlet Sensor, General Temperature
ACM	3250	3		DOC Outlet Temp Circuit Failed High
ACM	3250	4		DOC Outlet Temp Circuit Failed Low
ACM	3250	10		DOC Outlet Temperature Sensor Stuck
ACM	3251	0		DPF Pressure Out of Range High
ACM	3251	1		DPF Pressure Out of Range Low
ACM	3358	3		EGR Valve Circuit Failed High
ACM	3358	4		EGR Valve Circuit Failed Low
ACM	3471	1		Electronic Diesel Dosing Valve ATS Failed Self Test
ACM	3471	3		Electronic Diesel Dosing Valve Driver Circuit Failed High
ACM	3471	4		Electronic Diesel Dosing Valve Driver Circuit Failed Low
ACM	3471	5		Electronic Diesel Dosing Valve Driver Open Circuit
ACM	3480	1		HC-Doser Fuel Pressure Too Low
ACM	3480	2		DPF Doser Unit, Pressure not Plausible
ACM	3480	2		HC-doser Fuel Pressure Not Plausible
ACM	3480	3		Doser Fuel Pressure Sensor Circuit Failed High
ACM	3480	4		Doser Fuel Pressure Sensor Circuit Failed Low
ACM	3480	14		Doser FPS Failed Self Test
ACM	3480	14		MDIV (HC Doser) Failed Self Test Fuel Doser Valve ATS Failed Self Test
ACM	3482	7		FCV ATS Failed Self Test
ACM	3556	0		Electronic Diesel Dosing Valve Over Fueling
ACM	3556	1		Electronic Diesel Dosing Valve Insufficient Fueling
ACM	3563	0		Inlet Manifold Pressure High
ACM	3563	1		Inlet Manifold Pressure Low
ACM	3563	1		Turbocharger Boost Pressure is Too Low in Braking Mode
ACM	3563	3		Inlet Manifold Pressure Sampling Range Failed
ACM	3563	3		Intake Manifold Pressure Circuit Failed High
ACM	3563	4		Intake Manifold Pressure Circuit Failed Low
ACM	3563	20		Ambient and Inlet Manifold Pressure Difference (Low Box†)
ACM	3563	21		Ambient and Inlet Manifold Pressure Difference (High Box*)

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
ACM	3563	20		Intake Manifold Pressure Plausibility (Low Box†)
ACM	3563	21		Intake Manifold Pressure Plausibility Error, Pressure Too Low (High Box*)
ACM	3597	3		Proportional Valve Bank 1 Circuit Failed Low
ACM	3609	20		DPF Inlet Pressure Sensor Drifted High In Range Fault (Low Box†)
ACM	3609	2		DPF Inlet Pressure Sensor Drifted High In Range Fault (High Box*)
ACM	3609	21		DPF Inlet Pressure Sensor Drifted Low In Range Fault (Low Box†)
ACM	3609	2		DPF Inlet Pressure Sensor Drifted Low In Range Fault (High Box*)
ACM	3609	3		DPF Inlet Pressure Circuit Failed High
ACM	3609	4		DPF Inlet Pressure Circuit Failed Low
ACM	3609	10		DPF Inlet Pressure Sensor Stuck
ACM	3610	2		DPF Outlet Pressure Sensor Plausibility Error
ACM	3610	20		DPF Outlet Pressure Sensor Drifted High In Range Fault (Low Box†)
ACM	3610	2		DPF Outlet Pressure Sensor Drifted High In Range Fault (High Box*)
ACM	3610	21		DPF Outlet Pressure Sensor Drifted Low In Range Fault (Low Box†)
ACM	3610	2		DPF Outlet Pressure Sensor Drifted Low In Range Fault (High Box*)
ACM	3610	3		DPF Outlet Pressure Circuit High
ACM	3610	4		DPF Outlet Pressure Circuit Low
ACM	3610	10		DPF Outlet Pressure Sensor Stuck
ACM	3659	5		Injector Cylinder #1 Spill Control Valve Open Circuit
ACM	3659	10		Injector Cylinder #1 Spill Control Valve Abnormal Rate of Change
ACM	3660	5		Injector Cylinder #2 Spill Control Valve Open Circuit
ACM	3660	10		Injector Cylinder #2 Spill Control Valve Abnormal Rate of Change
ACM	3661	5		Injector Cylinder #3 Spill Control Valve Open Circuit
ACM	3661	10		Injector Cylinder #3 Spill Control Valve Abnormal Rate of Change
ACM	3662	5		Injector Cylinder #4 Spill Control Valve Open Circuit
ACM	3662	10		Injector Cylinder #4 Spill Control Valve Abnormal Rate of Change
ACM	3663	5		Injector Cylinder #5 Spill Control Valve Open Circuit

* High box — Code received under high speed, high load conditions

† Low box — Code received under low speed, low load conditions

Module	J1939 SPN	FMI	Flash Code	Description
ACM	3663	10		Injector Cylinder #5 Spill Control Valve Abnormal Rate of Change
ACM	3664	5		Injector Cylinder #6 Spill Control Valve Open Circuit
ACM	3664	10		Injector Cylinder #6 Spill Control Valve Abnormal Rate of Change
ACM	3665	5		Injector Cylinder #7 Spill Control Valve Open Circuit
ACM	3665	10		Injector Cylinder #7 Spill Control Valve Abnormal Rate of Change
ACM	3666	5		Injector Cylinder #8 Spill Control Valve Open Circuit
ACM	3666	10		Injector Cylinder #8 Spill Control Valve Abnormal Rate of Change
ACM	3719	0		Soot Level Very High
ACM	3719	16		Soot Level High
* High box — Code received under high speed, high load conditions † Low box — Code received under low speed, low load conditions				