

List of Diagnostic Trouble Codes			
J1939			ATA
Code	Code Description	Troubleshooting Procedure	Code
		This code indicates that Cat ET is not communicating on the J1939 data link. Cat ET must be communicating on the J1939 data link and the ATA data link in order to fully service the engine. Refer to Troubleshooting, “Electronic Service Tools” for additional information on establishing communication on both data links. Establish communication with both data links in order to view the J1939 equivalent of the 154-14 code.	154-14
38-3	Second Fuel Level : Voltage Above Normal	Troubleshooting, “Fuel Level – Test”	38-3
38-4	Second Fuel Level : Voltage Below Normal	Troubleshooting, “Fuel Level – Test”	38-4
69-9	Two Speed Axle Switch : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
69-19	Two Speed Axle Switch : Data Error	Troubleshooting, “Customer Device – Test”	231-12
70-9	Parking Brake Switch : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
70-19	Parking Brake Switch : Data Error	Troubleshooting, “Customer Device – Test”	231-12

84-0	Wheel-Based Vehicle Speed : High – Most Severe (3)	Troubleshooting, “Vehicle Overspeeds”	84-0
84-1	Wheel-Based Vehicle Speed : Low – Most Severe (3)	Troubleshooting, “Vehicle Speed – Test”	84-1
84-2	Wheel-Based Vehicle Speed : Erratic, Intermittent, or Incorrect	Troubleshooting, “Vehicle Speed – Test”	84-2
84-8	Wheel-Based Vehicle Speed : Abnormal Frequency, Pulse Width, or Period	Troubleshooting, “Vehicle Speed – Test”	84-8
84-10	Wheel-Based Vehicle Speed : Abnormal Rate of Change	Troubleshooting, “Vehicle Speed – Test”	84-10
84-14	Wheel-Based Vehicle Speed : Special Instruction	Troubleshooting, “Quick Stop Occurrence”	84-14
91-8	Accelerator Pedal Position 1 : Abnormal Frequency, Pulse Width, or Period	Troubleshooting, “Sensor Signal (PWM) – Test”	91-8
91-13	Accelerator Pedal Position 1 : Calibration Required	Troubleshooting, “Sensor Signal (PWM) – Test”	91-13
94-3	Engine Fuel Delivery Pressure : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	94-3

94-4	Engine Fuel Delivery		
	Pressure : Voltage	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	94-4
96-3	Fuel Level : Voltage		
	Above Normal	Troubleshooting, “Fuel Level – Test”	96-3
96-4	Fuel Level : Voltage		
	Below Normal	Troubleshooting, “Fuel Level – Test”	96-4
100-1	Engine Oil Pressure :		
	Low – Most Severe (3)	Troubleshooting, “Oil Pressure Is Low”	100-11
100-3	Engine Oil Pressure :	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	
	Voltage Above Normal		100-3
100-4	Engine Oil Pressure :	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	
	Voltage Below Normal		100-4
100-10	Engine Oil Pressure :		
	Abnormal Rate of Change	Troubleshooting, “Sensor Supply – Test”	100-10
100-17	Engine Oil Pressure :		
	Low – Least Severe (1)	Troubleshooting, “Oil Pressure Is Low”	100-1
101-3	Engine Crankcase		
	Pressure : Voltage	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	
101-4	Engine Crankcase		
	Pressure : Voltage	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	
101-15	Engine Crankcase		
	Pressure : High – Least Severe (1)	Troubleshooting, “Crankcase Pressure Is High”	101-0

101-16	Engine Crankcase Pressure : High – Moderate Severity (2)	Troubleshooting, “Crankcase Pressure Is High”	101-11
101-18	Engine Crankcase Pressure : Low – Moderate Severity (2)	Troubleshooting, “Crankcase Pressure Is Low”	101-1
102-3	Engine Intake Manifold #1 Pressure : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	102-3
102-4	Engine Intake Manifold #1 Pressure : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	102-4
102-10	Engine Intake Manifold #1 Pressure : Abnormal Rate of Change	Troubleshooting, “Sensor Supply – Test”	102-10
102-18	Engine Intake Manifold #1 Pressure : Low – Moderate Severity (2)	Troubleshooting, “Intake Manifold Air Pressure Is Low”	102-1
105-3	Engine Intake Manifold 1 Temperature : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	105-3
105-4	Engine Intake Manifold 1 Temperature : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	105-4
105-15	Engine Intake Manifold 1 Temperature : High – Least Severe (1)	Troubleshooting, “Intake Manifold Air Temperature Is High”	105-0

105-16	Engine Intake Manifold 1 Temperature : High – Moderate Severity (2)	Troubleshooting, “Intake Manifold Air Temperature Is High”	105-11
110-3	Engine Coolant Temperature : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	110-3
110-4	Engine Coolant Temperature : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	110-4
110-15	Engine Coolant Temperature : High – Least Severe (1)	Troubleshooting, “Coolant Temperature Is High”	110-0
110-16	Engine Coolant Temperature : High – Moderate Severity (2)	Troubleshooting, “Coolant Temperature Is High”	110-11
111-1	Engine Coolant Level : Low – Most Severe (3)	Troubleshooting, “Coolant Level Is Low”	111-11
111-2	Engine Coolant Level : Erratic, Intermittent, or Incorrect	Troubleshooting, “Coolant Level – Test”	111-2
111-3	Engine Coolant Level : Voltage Above Normal	Troubleshooting, “Coolant Level – Test”	111-3
111-4	Engine Coolant Level : Voltage Below Normal	Troubleshooting, “Coolant Level – Test”	111-4
111-14	Engine Coolant Level : Special Instruction	Troubleshooting, “Coolant Level Is Low”	111-14
111-17	Engine Coolant Level : Low – Least Severe (1)	Troubleshooting, “Coolant Level Is Low”	111-1

158-2	Battery Potential (Voltage) Switched : Erratic, Intermittent, or Incorrect	Troubleshooting, “Electrical Power Supply – Test”	43-2
168-2	Electrical Potential (Voltage) : Erratic, Intermittent, or Incorrect	Troubleshooting, “Electrical Power Supply – Test”	168-2
168-3	Electrical Potential (Voltage) : Voltage Above Normal	Troubleshooting, “Electrical Power Supply – Test”	168-3
168-4	Electrical Potential (Voltage) : Voltage Below Normal	Troubleshooting, “Electrical Power Supply – Test”	168-4
171-3	Ambient Air Temperature : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	171-3
171-4	Ambient Air Temperature : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	171-4
171-9	Ambient Air Temperature : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
171-11	Ambient Air Temperature : Other Failure Mode	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	171-11
171-19	Ambient Air Temperature : Data Error	Troubleshooting, “Customer Device – Test”	231-12

172-2	Engine Air Inlet Temperature : Erratic, Intermittent, or Incorrect	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	172-2
172-3	Engine Air Inlet Temperature : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	172-3
172-4	Engine Air Inlet Temperature : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	172-4
173-15	Engine Exhaust Gas Temperature : High – Least Severe (1)	Troubleshooting, “Exhaust Temperature Is High”	173-0
174-0	Engine Fuel Temperature : High – Most Severe (3)	Troubleshooting, “Fuel Temperature Is High”	174-0
174-3	Engine Fuel Temperature : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	174-3
174-4	Engine Fuel Temperature : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Passive) – Test”	174-4
186-4	Power Takeoff Speed : Voltage Below Normal	Troubleshooting, “Power Take-Off – Test”	186-4
186-14	Power Takeoff Speed : Special Instruction	Troubleshooting, “Power Take-Off – Test”	186-14
190-8	Engine Speed : Abnormal Frequency, Pulse Width, or Period	Troubleshooting, “Engine Speed – Test”	190-8

190-15	Engine Speed : High – Least Severe (1)	Troubleshooting, “Engine Overspeeds”	190-0
191-7	Transmission Output Shaft Speed : Not Responding Properly	Troubleshooting, “Transmission Shift Control – Test”	191-7
224-11	Anti-Theft Component Status States : Other Failure Mode	Troubleshooting, “Theft Deterrent Is Active”	224-11
224-14	Anti-theft Component Status States : Special Instruction	Troubleshooting, “Theft Deterrent Is Active”	224-14
310-0		A successful active regeneration causes this code’s number of occurrences to increment. No troubleshooting is required.	310-0
310-1		A successful active regeneration causes this code’s number of occurrences to increment. No troubleshooting is required.	310-1
310-2		A successful active regeneration causes this code’s number of occurrences to increment. No troubleshooting is required.	310-2
310-3		A successful active regeneration causes this code’s number of occurrences to increment. No troubleshooting is required.	310-3
524-9	Transmission Selected Gear : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
524-19	Transmission Selected Gear : Data Error	Troubleshooting, “Customer Device – Test”	231-12

592-31	Engine Idle Shutdown Timer Override	Troubleshooting, “Shutdown Timer (Idle) – Test”	71-0
593-31	Engine Idle Shutdown has Shutdown Engine	Troubleshooting, “Shutdown Timer (Idle) – Test”	71-1
593-31	Engine Idle Shutdown has Shutdown Engine	Troubleshooting, “Shutdown Timer (PTO) – Test”	71-14
596-9	Cruise Control Enable Switch : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
596-19	Cruise Control Enable Switch : Data Error	Troubleshooting, “Customer Device – Test”	231-12
597-9	Brake Switch : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
597-11	Brake Switch : Other Failure Mode	Troubleshooting, “Speed Control (Auxiliary) – Test”	246-11
597-19	Brake Switch : Data Error	Troubleshooting, “Customer Device – Test”	231-12
598-9	Clutch Switch : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
598-19	Clutch Switch : Data Error	Troubleshooting, “Customer Device – Test”	231-12
599-9	Cruise Control Set Switch : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
599-19	Cruse Control Set Switch : Data Error	Troubleshooting, “Customer Device – Test”	231-12

	Cruise Control Coast (Decelerate) Switch :		
600-9	Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
	Cruise Control Coast (Decelerate) Switch :		
600-19	Data Error	Troubleshooting, “Customer Device – Test”	231-12
	Cruise Control Resume Switch : Abnormal		
601-9	Update Rate	Troubleshooting, “Customer Device – Test”	231-12
	Cruise Control Resume Switch : Data Error		
601-19	Switch : Data Error	Troubleshooting, “Customer Device – Test”	231-12
	Cruise Control Accelerate Switch :		
602-9	Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
	Cruise Control Accelerate Switch :		
602-19	Data Error	Troubleshooting, “Customer Device – Test”	231-12
603-11	Brake Pedal Switch #2 : Other Failure Mode	Troubleshooting, “Speed Control (Auxiliary) – Test”	247-11
	Engine Start Enable Device 1 : Current		
626-5	Below Normal	Troubleshooting, “Starting Aid – Test”	237-5
	Engine Start Enable Device 1 : Current		
626-6	Above Normal	Troubleshooting, “Starting Aid – Test”	237-6
	Calibration Memory : Erratic, Intermittent, or		
630-2	Incorrect	Troubleshooting, “ECM Memory – Test”	253-2

630-11	Calibration Memory : Other Failure Mode	Troubleshooting, "Transmission Shift Control – Test"	253-11
631-11	Calibration Module : Other Failure Mode	Troubleshooting, "ECM Memory – Test"	252-2
637-11	Engine Timing Sensor : Other Failure Mode	Troubleshooting, "Engine Speed – Test"	22-11
637-13	Engine Timing Sensor : Calibration Required	Troubleshooting, "Timing – Calibrate"	22-13
644-8	Engine External Speed Command Input : Abnormal Frequency, Pulse Width, or Period	Troubleshooting, "Sensor Signal (PWM) – Test"	30-8
644-13	Engine External Speed Command Input : Calibration Required	Troubleshooting, "Sensor Signal (PWM) – Test"	30-13
651-5	Engine Injector Cylinder #01 : Current Below Normal	Troubleshooting, "Injector Solenoid – Test"	1-5
651-6	Engine Injector Cylinder #01 : Current Above Normal	Troubleshooting, "Injector Solenoid – Test"	1-6
652-5	Engine Injector Cylinder #02 : Current Below Normal	Troubleshooting, "Injector Solenoid – Test"	2-5
652-6	Engine Injector Cylinder #02 : Current Above Normal	Troubleshooting, "Injector Solenoid – Test"	2-6

653-5	Engine Injector	Below Normal	Troubleshooting, "Injector Solenoid – Test"	3-5
	Cylinder #03 : Current			
653-6	Engine Injector	Above Normal	Troubleshooting, "Injector Solenoid – Test"	3-6
	Cylinder #03 : Current			
654-5	Engine Injector	Below Normal	Troubleshooting, "Injector Solenoid – Test"	4-5
	Cylinder #04 : Current			
654-6	Engine Injector	Above Normal	Troubleshooting, "Injector Solenoid – Test"	4-6
	Cylinder #04 : Current			
655-5	Engine Injector	Below Normal	Troubleshooting, "Injector Solenoid – Test"	5-5
	Cylinder #05 : Current			
655-6	Engine Injector	Above Normal	Troubleshooting, "Injector Solenoid – Test"	5-6
	Cylinder #05 : Current			
656-5	Engine Injector	Below Normal	Troubleshooting, "Injector Solenoid – Test"	6-5
	Cylinder #06 : Current			
656-6	Engine Injector	Above Normal	Troubleshooting, "Injector Solenoid – Test"	6-6
	Cylinder #06 : Current			
678-3	ECU 8 Volts DC	Supply : Voltage Above Normal	Troubleshooting, "Sensor Signal (PWM) – Test"	41-3

678-4	ECU 8 Volts DC	Troubleshooting, “Sensor Signal (PWM) – Test”	41-4
	Supply : Voltage Below Normal		
706-5	Auxiliary I/O #06 :	Troubleshooting, “Output Selection Parameters”	54-5
	Current Below Normal		
706-6	Auxiliary I/O #06 :	Troubleshooting, “Output Selection Parameters”	54-6
	Current Above Normal		
707-5	Auxiliary I/O #07 :	Troubleshooting, “Output Selection Parameters”	55-5
	Current Below Normal		
707-6	Auxiliary I/O #07 :	Troubleshooting, “Output Selection Parameters”	55-6
	Current Above Normal		
723-8	Engine Speed Sensor	Troubleshooting, “Engine Speed – Test”	64-8
	#2 : Abnormal Frequency, Pulse Width, or Period		
925-5	Auxiliary Output #2 :	Troubleshooting, “Output Selection Parameters”	40-5
	Current Below Normal		
925-6	Auxiliary Output #2 :	Troubleshooting, “Output Selection Parameters”	40-6
	Current Above Normal		
926-5	Auxiliary Output #3 :	Troubleshooting, “Output Selection Parameters”	51-5
	Current Below Normal		
926-6	Auxiliary Output #3 :	Troubleshooting, “Output Selection Parameters”	51-6
	Current Above Normal		
973-9	Engine Retarder	Troubleshooting, “Customer Device – Test”	231-12
	Selection : Abnormal Update Rate		
973-19	Engine Retarder	Troubleshooting, “Customer Device – Test”	231-12
	Selection : Data Error		

979-9	Engine Remote PTO	Troubleshooting, "Customer Device – Test"	231-12
	Preprogrammed Speed		
	Control Switch :		
979-9	Abnormal Update Rate	Troubleshooting, "Customer Device – Test"	231-12
979-19	Engine Remote PTO	Troubleshooting, "Customer Device – Test"	231-12
	Preprogrammed Speed		
	Control Switch : Data		
979-19	Error	Troubleshooting, "Customer Device – Test"	231-12
980-9	Engine PTO Enable	Troubleshooting, "Customer Device – Test"	231-12
	Switch : Abnormal		
	Update Rate		
980-19	Switch : Data Error	Troubleshooting, "Customer Device – Test"	231-12
982-9	Engine PTO Resume	Troubleshooting, "Customer Device – Test"	231-12
	Switch : Abnormal		
	Update Rate		
982-19	Switch : Data Error	Troubleshooting, "Customer Device – Test"	231-12
984-9	Engine PTO Set Switch	Troubleshooting, "Customer Device – Test"	231-12
	: Abnormal Update		
	Rate		
984-19	: Data Error	Troubleshooting, "Customer Device – Test"	231-12
985-9	A/C High Pressure Fan	Troubleshooting, "Customer Device – Test"	231-12
	Switch : Abnormal		
	Update Rate		
985-19	Switch : Data Error	Troubleshooting, "Customer Device – Test"	231-12

	Requested Percent		
	Fan Speed : Abnormal		
986-9	Update Rate	Troubleshooting, “Customer Device – Test”	231-12
	Requested Percent		
986-19	Fan Speed : Data Error	Troubleshooting, “Customer Device – Test”	231-12
	Engine (Compression)		
	Brake Output #1 :		
1072-5	Current Below Normal	Troubleshooting, “Retarder – Test”	121-5
	Engine (Compression)		
	Brake Output #1 :		
1072-6	Current Above Normal	Troubleshooting, “Retarder – Test”	121-6
	Engine (Compression)		
	Brake Output #2 :		
1073-5	Current Below Normal	Troubleshooting, “Retarder – Test”	122-5
	Engine (Compression)		
	Brake Output #2 :		
1073-6	Current Above Normal	Troubleshooting, “Retarder – Test”	122-6
1110-31			
There are			
none of the			
following			
associated			
codes:			
100-1	Engine Protection		
110-16	System Has Shutdown	Troubleshooting, “Diesel Particulate Filter	
111-1	Engine	Collects Excessive Soot”	154-14
	Engine Protection		
1110-31	System Has Shutdown		154-14
With the	Engine	Troubleshooting, “Diesel Particulate Filter	With the
associated	With the associated	Collects Excessive Soot”	associated

code	code		code
3719-00	Diesel Particulate Filter		151-11
	#1 Soot Load Percent :		
	High – Most Severe (3)		
	The engine has		
	shutdown do to		
	excessive soot.		
	Engine Protection		
	System Has Shutdown		
	Engine		
	With the associated		
	code		
1110-31	Engine Oil Pressure :		154-14
With the	Low – Most Severe (3)		With the
associated	The engine has		associated
code	shutdown do to low oil		code
100-1	pressure.	Troubleshooting, “Oil Pressure Is Low”	100-11
	Engine Protection		
	System Has Shutdown		
	Engine		
	With the associated		
	code		
	Engine Coolant		
1110-31	Temperature : High –		154-14
With the	Moderate Severity (2)		With the
associated	The engine has		associated
code	shutdown do to a high	Troubleshooting, “Coolant Temperature Is	code
110-16	coolant temperature.	High”	110-11
	Engine Protection		
1110-31	System Has Shutdown		154-14
With the	Engine		With the
associated	With the associated		associated
code	code		code
111-1		Troubleshooting, “Coolant Level Is Low”	111-11

	Engine Coolant Level : Low – Most Severe (3) The engine has shutdown do to low coolant level.		
1237-14	Engine Shutdown Override Switch : Special Instruction	Troubleshooting, “Engine Shutdown Override Occurrence”	71-11
1237-31	Engine Shutdown Override Switch	Troubleshooting, “Engine Shutdown Override Occurrence”	71-11
1633-9	Cruise Control Pause Switch : Abnormal Update Rate	Troubleshooting, “Customer Device – Test”	231-12
1633-19	Cruise Control Pause Switch : Data Error	Troubleshooting, “Customer Device – Test”	231-12
2646-5	Auxiliary Output #4 : Current Below Normal	Troubleshooting, “Output Selection Parameters”	52-5
2646-6	Auxiliary Output #4 : Current Above Normal	Troubleshooting, “Output Selection Parameters”	52-6
2647-5	Auxiliary Output #5 : Current Below Normal	Troubleshooting, “Output Selection Parameters”	53-5
2647-6	Auxiliary Output #5 : Current Above Normal	Troubleshooting, “Output Selection Parameters”	53-6
2813-31	Engine Air Shutoff Command Status	Troubleshooting, “Air Shutoff – Test”	52-11
2948-1	Engine Intake Valve Actuation System Oil Pressure : Low – Most Severe (3)	Troubleshooting, “Variable Valve Actuator Response – Test”	385-1

2948-3	Engine Intake Valve Actuation System Oil Pressure : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	385-3
2948-4	Engine Intake Valve Actuation System Oil Pressure : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	385-4
2949-5	Engine Intake Valve Actuation System Oil Pressure Control Valve : Current Below Normal	Troubleshooting, “Variable Valve Actuator Oil Pressure – Test”	283-5
2949-6	Engine Intake Valve Actuation System Oil Pressure Control Valve : Current Above Normal	Troubleshooting, “Variable Valve Actuator Oil Pressure – Test”	283-6
2949-7	Engine Intake Valve Actuation System Oil Pressure Control Valve : Not Responding Properly	Troubleshooting, “Variable Valve Actuator Response – Test”	283-7
2950-5	Engine Intake Valve Actuator #1 : Current Below Normal	Troubleshooting, “Variable Valve Actuator – Test”	285-5
2950-6	Engine Intake Valve Actuator #1 : Current Above Normal	Troubleshooting, “Variable Valve Actuator – Test”	285-6

2950-7	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator Response – Test"	285-7
	Actuator #1 : Not Responding Properly		
2951-5	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator – Test"	286-5
	Actuator #2 : Current Below Normal		
2951-6	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator – Test"	286-6
	Actuator #2 : Current Above Normal		
2951-7	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator Response – Test"	286-7
	Actuator #2 : Not Responding Properly		
2952-5	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator – Test"	287-5
	Actuator #3 : Current Below Normal		
2952-6	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator – Test"	287-6
	Actuator #3 : Current Above Normal		
2952-7	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator Response – Test"	287-7
	Actuator #3 : Not Responding Properly		
2953-5	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator – Test"	288-5
	Actuator #4 : Current Below Normal		
2953-6	Engine Intake Valve	Troubleshooting, "Variable Valve Actuator – Test"	288-6
	Actuator #4 : Current Above Normal		

2953-7	Engine Intake Valve Actuator #4 : Not Responding Properly	Troubleshooting, “Variable Valve Actuator Response – Test”	288-7
2954-5	Engine Intake Valve Actuator #5 : Current Below Normal	Troubleshooting, “Variable Valve Actuator – Test”	289-5
2954-6	Engine Intake Valve Actuator #5 : Current Above Normal	Troubleshooting, “Variable Valve Actuator – Test”	289-6
2954-7	Engine Intake Valve Actuator #5 : Not Responding Properly	Troubleshooting, “Variable Valve Actuator Response – Test”	289-7
2955-5	Engine Intake Valve Actuator #6 : Current Below Normal	Troubleshooting, “Variable Valve Actuator – Test”	290-5
2955-6	Engine Intake Valve Actuator #6 : Current Above Normal	Troubleshooting, “Variable Valve Actuator – Test”	290-6
2955-7	Engine Intake Valve Actuator #6 : Not Responding Properly	Troubleshooting, “Variable Valve Actuator Response – Test”	290-7
3241-3	Exhaust Gas Temperature 1 : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	326-3
3241-4	Exhaust Gas Temperature 1 : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	326-4

3241-20	Exhaust Gas		
	Temperature 1 : Data Drifted High	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	N/A
3242-2	Diesel Particulate Filter Intake Gas		
	Temperature (bank 1) : Erratic, Intermittent, or Incorrect	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	318-2
3242-3	Diesel Particulate Filter Intake Gas		
	Temperature (bank 1) : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	318-3
3242-4	Diesel Particulate Filter Intake Gas		
	Temperature (bank 1) : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	318-4
3242-16	Diesel Particulate Filter Intake Gas		
	Temperature (bank 1) : High – Moderate Severity (2)	Troubleshooting, “Diesel Particulate Filter Temperature Is High”	318-11
3242-18	Diesel Particulate Filter Intake Gas		
	Temperature (bank 1) : Low – Moderate Severity (2)	Troubleshooting, “Diesel Particulate Filter Temperature Is Low”	318-14
3245-3	Exhaust Gas		
	Temperature 3 : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	328-3

3245-4	Exhaust Gas		
	Temperature 3 : Voltage Below Normal	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	328-4
3245-15	Exhaust Gas		
	Temperature 3 : High – Least Severe (1)	Troubleshooting, "ARD Combustion Air – Test"	328-0
3245-20	Exhaust Gas		
	Temperature 3 : Data Drifted High	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	N/A
3246-2	Diesel Particulate Filter		
	Outlet Gas		
3246-2	Temperature (bank 1) : Erratic, Intermittent, or Incorrect	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	320-2
3246-3	Diesel Particulate Filter		
	Outlet Gas		
3246-3	Temperature (bank 1) : Voltage Above Normal	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	320-3
3246-4	Diesel Particulate Filter		
	Outlet Gas		
3246-4	Temperature (bank 1) : Voltage Below Normal	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	320-4
3246-15	Diesel Particulate Filter		
	Outlet Gas		
3246-15	Temperature (bank 1) : High – Least Severe (1)	Troubleshooting, "Diesel Particulate Filter Temperature Is High"	320-0
3246-16	Diesel Particulate Filter		
	Outlet Gas		
3246-16	Temperature (bank 1) : Temperature (bank 1) :	Troubleshooting, "Diesel Particulate Filter Temperature Is High"	320-11

	High – Moderate Severity (2)		
3246-18	Diesel Particulate Filter Outlet Gas Temperature (bank 1) : Low – Moderate Severity (2)	Troubleshooting, “Diesel Particulate Filter Temperature Is Low”	320-1
3249-3	Exhaust Gas Temperature 2 : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	327-3
3249-4	Exhaust Gas Temperature 2 : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	327-4
3249-20	Exhaust Gas Temperature 2 : Data Drifted High	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	N/A
3251-0	Diesel Particulate Filter Differential Pressure (bank 1) : High – Most Severe (3)	Troubleshooting, “Diesel Particulate Filter Has Differential Pressure Problem”	324-11
3251-2	Diesel Particulate Filter Differential Pressure (bank 1) : Erratic, Intermittent, or Incorrect	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	324-2
3251-3	Diesel Particulate Filter Differential Pressure (bank 1) : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	324-3

3251-4	Diesel Particulate Filter Differential Pressure (bank 1) : Voltage Below Normal	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	324-4
3251-16	Diesel Particulate Filter Differential Pressure (bank 1) : High – Moderate Severity (2)	Troubleshooting, "Diesel Particulate Filter Has Differential Pressure Problem"	324-0
3251-18	Diesel Particulate Filter Differential Pressure (bank 1) : Low – Moderate Severity (2)	Troubleshooting, "Diesel Particulate Filter Has Differential Pressure Problem"	324-1
3251-20	Diesel Particulate Filter Differential Pressure (bank 1) : Data Drifted High	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	N/A
3251-21	Diesel Particulate Filter Differential Pressure (bank 1) : Data Drifted Low	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	N/A
3276-2	Diesel Particulate Filter Intake Gas Temperature (bank 2) : Erratic, Intermittent, or Incorrect	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	319-2
3276-3	Diesel Particulate Filter Intake Gas Temperature (bank 2) : Voltage Above Normal	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	319-3

3276-4	Diesel Particulate Filter		
	Intake Gas		
	Temperature (bank 2) :	Troubleshooting, "Sensor Signal (Analog,	
	Voltage Below Normal	Active) – Test"	319-4
3276-16	Diesel Particulate Filter		
	Intake Gas		
	Temperature (bank 2) :		
	High – Moderate Severity (2)	Troubleshooting, "Diesel Particulate Filter Temperature Is High"	319-11
3276-18	Diesel Particulate Filter		
	Intake Gas		
	Temperature (bank 2) :		
	Low – Moderate Severity (2)	Troubleshooting, "Diesel Particulate Filter Temperature Is Low"	319-14
3280-2	Diesel Particulate Filter		
	Outlet Gas		
	Temperature (bank 2) :		
	Erratic, Intermittent, or Incorrect	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	321-2
3280-3	Diesel Particulate Filter		
	Outlet Gas		
	Temperature (bank 2) :		
	Voltage Above Normal	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	321-3
3280-4	Diesel Particulate Filter		
	Outlet Gas		
	Temperature (bank 2) :		
	Voltage Below Normal	Troubleshooting, "Sensor Signal (Analog, Active) – Test"	321-4
3280-15	Diesel Particulate Filter		
	Outlet Gas		
	Temperature (bank 2) :	Troubleshooting, "Diesel Particulate Filter Temperature Is High"	321-0

	High – Least Severe (1)		
3280-16	Diesel Particulate Filter Outlet Gas Temperature (bank 2) : High – Moderate Severity (2)	Troubleshooting, “Diesel Particulate Filter Temperature Is High”	321-11
3280-18	Diesel Particulate Filter Outlet Gas Temperature (bank 2) : Low – Moderate Severity (2)	Troubleshooting, “Diesel Particulate Filter Temperature Is Low”	321-1
3285-0	Diesel Particulate Filter Differential Pressure (bank 2) : High – Most Severe (3)	Troubleshooting, “Diesel Particulate Filter Has Differential Pressure Problem”	325-11
3285-2	Diesel Particulate Filter Differential Pressure (bank 2) : Erratic, Intermittent, or Incorrect	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	325-2
3285-3	Diesel Particulate Filter Differential Pressure (bank 2) : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	325-3
3285-4	Diesel Particulate Filter Differential Pressure (bank 2) : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	325-4

3285-16	Diesel Particulate Filter Differential Pressure (bank 2) : High – Moderate Severity (2)	Troubleshooting, “Diesel Particulate Filter Has Differential Pressure Problem”	325-0
3285-18	Diesel Particulate Filter Differential Pressure (bank 2) : Low – Moderate Severity (2)	Troubleshooting, “Diesel Particulate Filter Has Differential Pressure Problem”	325-1
3285-20	Diesel Particulate Filter Differential Pressure (bank 2) : Data Drifted High	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	N/A
3285-21	Diesel Particulate Filter Differential Pressure (bank 2) : Data Drifted Low	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	N/A
3473-31	Aftertreatment #1 Failed to Ignite	Troubleshooting, “ARD Ignition – Test”	356-11
3474-15	Aftertreatment #1 Loss of Combustion : High – Least Severe (3)	Troubleshooting, “ARD Combustion Air – Test”	357-0
3474-31	Aftertreatment #1 Loss of Combustion	Troubleshooting, “ARD Combustion Air – Test”	357-11
3479-5	Aftertreatment #1 Fuel Pressure Control : Current Below Normal	Troubleshooting, “Solenoid Valve – Test”	333-5
3479-6	Aftertreatment #1 Fuel Pressure Control : Current Above Normal	Troubleshooting, “Solenoid Valve – Test”	333-6

3480-3	Aftertreatment #1 Fuel Pressure #1 : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	332-3
3480-4	Aftertreatment #1 Fuel Pressure #1 : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	332-4
3480-16	Aftertreatment #1 Fuel Pressure #1 : High – Moderate Severity (2)	Troubleshooting, “Fuel System Pressure – Test”	332-11
3480-18	Aftertreatment #1 Fuel Pressure #1 : Low – Moderate Severity (2)	Troubleshooting, “Fuel System Pressure – Test”	332-1
3482-5	Aftertreatment #1 Fuel Enable Actuator : Current Below Normal	Troubleshooting, “Solenoid Valve – Test”	334-5
3482-6	Aftertreatment #1 Fuel Enable Actuator : Current Above Normal	Troubleshooting, “Solenoid Valve – Test”	334-6
3484-5	Aftertreatment #1 Ignition : Current Below Normal	Troubleshooting, “ARD Ignition – Test”	335-5
3484-6	Aftertreatment #1 Ignition : Current Above Normal	Troubleshooting, “ARD Ignition – Test”	335-6
3486-7	Aftertreatment #1 Purge Air Pressure : Not Responding Properly	Troubleshooting, “ARD Purge Air – Test”	349-7

3486-17	Aftertreatment #1 Purge Air Pressure :	Troubleshooting, "ARD Purge Air – Test"	349-1
	Low – Least Severe (1)		
3487-5	Aftertreatment #1 Air Pressure Control :	Troubleshooting, "Solenoid Valve – Test"	350-5
	Current Below Normal		
3487-6	Aftertreatment #1 Air Pressure Control :	Troubleshooting, "Solenoid Valve – Test"	350-6
	Current Above Normal		
3487-7	Aftertreatment #1 Air Pressure Control : Not	Troubleshooting, "ARD Combustion Air – Test"	350-7
	Responding Properly		
3490-6	Aftertreatment #1 Purge Air Actuator :	Troubleshooting, "ARD Purge Air – Test"	341-6
	Current Above Normal		
3509-3	Sensor Supply Voltage 1 : Voltage Above	Troubleshooting, "Sensor Supply – Test"	212-3
	Normal		
3509-4	Sensor Supply Voltage 1 : Voltage Below	Troubleshooting, "Sensor Supply – Test"	212-4
	Normal		
3510-3	Sensor Supply Voltage 2 : Voltage Above	Troubleshooting, "Sensor Supply – Test"	211-3
	Normal		
3510-4	Sensor Supply Voltage 2 : Voltage Below	Troubleshooting, "Sensor Supply – Test"	211-4
	Normal		

3556-7	Aftertreatment #1 Fuel Injector : Not Responding Properly	Troubleshooting, "ARD Nozzle – Test"	153-7
3659-5	Engine Injector Cylinder #1 Actuator 2 : Current Below Normal	Troubleshooting, "Injector Solenoid – Test"	362-5
3659-6	Engine Injector Cylinder #1 Actuator 2 : Current Above Normal	Troubleshooting, "Injector Solenoid – Test"	362-6
3660-5	Engine Injector Cylinder #2 Actuator 2 : Current Below Normal	Troubleshooting, "Injector Solenoid – Test"	363-5
3660-6	Engine Injector Cylinder #2 Actuator 2 : Current Above Normal	Troubleshooting, "Injector Solenoid – Test"	363-6
3661-5	Engine Injector Cylinder #3 Actuator 2 : Current Below Normal	Troubleshooting, "Injector Solenoid – Test"	364-5
3661-6	Engine Injector Cylinder #3 Actuator 2 : Current Above Normal	Troubleshooting, "Injector Solenoid – Test"	364-6
3662-5	Engine Injector Cylinder #4 Actuator 2 : Current Below Normal	Troubleshooting, "Injector Solenoid – Test"	365-5
3662-6	Engine Injector Cylinder #4 Actuator 2 : Current Above Normal	Troubleshooting, "Injector Solenoid – Test"	365-6

3663-5	Engine Injector Cylinder #5 Actuator 2 :	Troubleshooting, "Injector Solenoid – Test"	366-5
	Current Below Normal		
3663-6	Engine Injector Cylinder #5 Actuator 2 :	Troubleshooting, "Injector Solenoid – Test"	366-6
	Current Above Normal		
3664-5	Engine Injector Cylinder #6 Actuator 2 :	Troubleshooting, "Injector Solenoid – Test"	367-5
	Current Below Normal		
3664-6	Engine Injector Cylinder #6 Actuator 2 :	Troubleshooting, "Injector Solenoid – Test"	367-6
	Current Above Normal		
3695-9	Diesel Particulate Filter Regeneration Inhibit Switch : Abnormal	Troubleshooting, "Customer Device – Test"	231-12
	Update Rate		
3695-19	Diesel Particulate Filter Regeneration Inhibit Switch : Data Error	Troubleshooting, "Customer Device – Test"	231-12
3696-9	Diesel Particulate Filter Regeneration Force Switch : Abnormal	Troubleshooting, "Customer Device – Test"	231-12
	Update Rate		
3696-19	Diesel Particulate Filter Regeneration Force Switch : Data Error	Troubleshooting, "Customer Device – Test"	231-12
3703-31	Diesel Particulate Filter Active Regeneration Inhibited Due to Inhibit Switch	The Aftertreatment Regeneration Device (ARD) is disabled by the "ARD Disable Switch".	393-11

3711-31	Diesel Particulate Filter Active Regeneration Inhibited Due to Low Exhaust Gas	Temperature (2)	Troubleshooting, “ARD Combustion Air – Test”	311-14
3714-31	Diesel Particulate Filter Active Regeneration Inhibited Due to Temporary System Lockout		The “Data Link ARD Disable” configuration parameter is programmed to “Disabled”. This parameter is in the “Emissions Parameters”. Program the value of the parameter to “Not Disabled” in order to clear the code.	394-11
3715-31	Diesel Particulate Filter Active Regeneration Inhibited Due to Permanent System Lockout		This code indicates that the DPF contains too much soot. The ECM disables the ARD when this code is active.	388-11
3719-0	Diesel Particulate Filter #1 Soot Load Percent : High – Most Severe (3)		Troubleshooting, “Diesel Particulate Filter Collects Excessive Soot”	151-11
3719-16	Diesel Particulate Filter #1 Soot Load Percent : High – Moderate Severity (2)		Troubleshooting, “Diesel Particulate Filter Collects Excessive Soot”	151-0
3830-3	Aftertreatment #1 Secondary Air Differential Pressure : Voltage Above Normal		Troubleshooting, “Sensor Signal (Analog, Active) – Test”	373-3
3830-4	Aftertreatment #1 Secondary Air Differential Pressure : Voltage Below Normal		Troubleshooting, “Sensor Signal (Analog, Active) – Test”	373-4

3832-15	Aftertreatment #1 Secondary Air Mass Flow : High – Least Severe (1)	Troubleshooting, “ARD Combustion Air – Test”	3832-0
3832-17	Aftertreatment #1 Secondary Air Mass Flow : Low – Least Severe (1)	Troubleshooting, “ARD Combustion Air – Test”	3832-1
4077-3	Aftertreatment #1 Fuel Pressure #2 : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	336-3
4077-4	Aftertreatment #1 Fuel Pressure #2 : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	336-4
4077-16	Aftertreatment #1 Fuel Pressure #2 : High – Moderate Severity (2)	Troubleshooting, “Fuel System Pressure – Test”	336-11
4077-17	Aftertreatment #1 Fuel Pressure #2 : Low – Least Severe (1)	Troubleshooting, “Fuel System Pressure – Test”	336-1
4077-18	Aftertreatment #1 Fuel Pressure #2 : Low – Moderate Severity (2)	Troubleshooting, “Fuel System Pressure – Test”	336-14
4265-6	Aftertreatment #1 Transformer Secondary Output : Current Above Normal	Troubleshooting, “ARD Ignition – Test”	396-6
520192-15	CGI Mass Flow Rate : High – Least Severe (1)	Troubleshooting, “Clean Gas Induction – Test”	316-0

520192-16	CGI Mass Flow Rate : High – Moderate	Troubleshooting, “Clean Gas Induction – Test”	316-11
	Severity (2)		
520192-18	CGI Mass Flow Rate : Low – Moderate	Troubleshooting, “Clean Gas Induction – Test”	316-14
	Severity (2)		
520193-3	CGI Gas Temperature : Voltage Above Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	315-3
520193-4	CGI Gas Temperature : Voltage Below Normal	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	315-4
520193-18	CGI Gas Temperature : Low – Moderate	Troubleshooting, “Clean Gas Induction – Test”	315-1
	Severity (2)		
520193-20	CGI Gas Temperature : Data Drifted High	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	N/A
520194-5	CGI Actuator Shaft Position : Current	Troubleshooting, “Solenoid Valve – Test”	317-5
	Below Normal		
520194-6	CGI Actuator Shaft Position : Current	Troubleshooting, “Solenoid Valve – Test”	317-6
	Above Normal		
520196-3	CGI Differential Pressure : Voltage	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	316-3
	Above Normal		
520196-4	CGI Differential Pressure : Voltage	Troubleshooting, “Sensor Signal (Analog, Active) – Test”	316-4
	Below Normal		

	CGI Absolute Pressure		
	: Voltage Above	Troubleshooting, “Sensor Signal (Analog,	
520197-3	Normal	Active) – Test”	314-3

	CGI Absolute Pressure	Troubleshooting, “Sensor Signal (Analog,	
520197-4	: Voltage Below Normal	Active) – Test”	314-4