OBD fault-code overview list

Component/ System	Fault Type	Fault Code	Fault Code description	Monitor Strategy Description	Malfuntion Criteria	Secondary Parameters	Enable Conditions	Time Required since Diagnosis Enable	MIL Activation Criteria	Preconditioning	Demonstration Test
Engine coolant temperature sensor	circuit Hi/Open circuit	P 0118	ISO15031	coolant temperature signal	Voltage of coolant temperature sensor is higher than 4.9V.	None	1. Vehicle soaktime is larger than 2Min 2. Engine is running	120S	1st Cycle	None	Idle
	circuit Lo	P 0117	ISO15031	coolant temperature signal	Voltage of coolant temperature sensor is lower than 0.1V	Engine speed	1. Vehicle soaktime is larger than 2Min 2. Engine is running	120S	1st Cycle	None	Idle
	Performance	P 0116	ISO15031	coolant temperature signal	Signal value change is no larger than 20 degrees centigrade when engine is fully warmed up compared to the startup temperature	Engine speed, fuel mass	1. Vehicle soaktime is larger than 240Min 2. Engine is running 3. Accumulated fuel mass mets the requirement	30S	2nd Cycle	1 Driving cycle	Driving cycle
	Out of Range	P 1116	ISO15031	coolant temperature signal	Startup coolant temperature is higher than 60 degrees centigrade compared to the ambient temperature	Engine speed, fuel mass	1. Vehicle soaktime is larger than 240Min 2. Engine is running 3. Accumulated fuel mass mets the requirement	30S	2nd Cycle	1 Driving cycle	Driving cycle
Crankshaft position sensor	Device not present	P 0335	ISO15031	23X signal	the corresponding feedback is different from the command	None	Engine is running	20S	1st Cycle	None	Engine Running
Ignition Coil "A" Primary Control Circuit	circuit Lo/Open circuit	P 2300	ISO15031	Circuit check	the corresponding feedback is different from the command	None	Engine is running	20S	1st Cycle	None	Key ON
Throttle position sensor	circuit Hi	P 0123	ISO15031	Circuit check	Voltage of throttle position sensor is higher than 4.75V.	None	Key on	20S	1st Cycle	None	Engine Running
	circuit Lo/Open circuit	P 0122	ISO15031	Circuit check	Voltage of throttle position sensor is lower than 0.25V.	None	Key on	20S	1st Cycle	None	Key ON
Fuel Pump	circuit Hi	P 0232	ISO15031	Circuit check	the corresponding feedback is different from the command	None	Engine is running	20S	1st Cycle	None	Engine Running
	circuit Lo/Open circuit	P 0231	ISO15031	Circuit check	the corresponding feedback is different from the command	None	Engine is running	20S	1st Cycle	None	Key ON
ECM	Memory Checksum	P 0601	ISO15031	FileRom Checksum	CVN check	None	Key on	20S	1st Cycle	None	Key ON
Cylinder 1 Fuel Injector	circuit Hi	P 0262	ISO15031	Circuit check	the corresponding feedback is different from the command	None	Engine is running	20S	1st Cycle	None	Engine Running
	circuit Lo/Open circuit	P 0261	ISO15031	Circuit check	the corresponding feedback is different from the command	None	Engine is running	20S	1st Cycle	None	Key ON
Manifold Absolute Pressure Sensor	circuit Hi	P 0108	ISO15031	MAP signal	Voltage of Manifold absolute pressure sensor is higher than 4.9V.	None	Key on	20S	1st Cycle	None	Key ON
	circuit Lo/Open circuit	P 0107	ISO15031	MAP signal	Voltage of Manifold absolute pressure sensor is lower than 0.1V	None	Key on	20S	1st Cycle	None	Key ON
	Performance	P 3106	ISO15031	MAP signal	MAP Signal value is lower than some threshold during stable Running situation	Engine speed, TPS	Engine is running	20S	2nd Cycle	1 Driving cycle	Driving cycle
	Signal Stuck	P 0105	ISO15031	MAP signal	MAP Signal change is lower than 10kpa during Crank to Run and Running situation	Engine speed	Engine is running	20S	2nd Cycle	1 Driving cycle	Engine Running

Component/ System	Fault Type	Fault Code	Fault Code description	Monitor Strategy Description	Malfunction Criteria	Secondary Parameters	Enable Conditions	Time Required since Diagnosis Enable	MIL Activation Criteria	Preconditioning	Demonstration Test
Intake Air Temperature Sensor	circuit Hi/Open circuit	P 0113	ISO15031	Intake Air Temperature signal	Voltage of intake Air Temperature sensor is higher than 4.9V.	None	Key on	20S	1st Cycle	None	Key ON
	circuit Lo	P 0112	ISO15031	Intake Air Temperature signal	Voltage of intake Air Temperature sensor is lower than 0.1	None	Key on	20S	1st Cycle	None	Key ON
	Signal Stuck	P 0111	ISO15031	Intake Air Temperature signal	Intake Air Temperature value change is no larger than 2 degrees centigrade when engine is fully warmed up compared to the startup temperature	Engine speed，TPS，Engine runtime	1. Vehicle soaktime is larger than 240Min 2. Engine is running 3. Accumulated Air mass mets the requirement	90S	2nd Cycle	1 Driving cycle	Driving cycle
	Performance	P 0114	ISO15031	Intake Air Temperature signal	Intake Air temperature Sensor signal erratic change rate Is larger than 3.2degrees centigrade	None	Key on or engine is running	150S	2nd Cycle	1 Driving cycle	Key ON
O2 sensor 1 cylinder	circuit Hi	P 0132	ISO15031	O2 sensor signal	O2 voltage Higher than 1000mv	Engine speed	Engine is running	200S	2nd Cycle	None	Idle
	circuit Lo/Open circuit	P 0131	ISO15031	O2 sensor signal	O2 voltage Lower than 30mv	Engine speed	Engine is running	200S	2nd Cycle	None	Idle
	Out of Range	P 2195	ISO15031	O2 sensor signal	O2 signal is constantly lower than 400mv when PE mode is enabled	Engine speed, TPS, coolant temperature	Overheat protection mode is enabled	200S	2nd Cycle	None	Driving cycle
	Performance	P 014D	ISO15031	O2 sensor signal	O2 signal switching from lean state to rich state response rate time is longer than some calibrated value	Engine speed, coolant temperature	Engine is running Enginge Temperature is larger than 50℃	200S	3rd Cycle	2 Type I cycles	Type I cycles
	Performance	P 014C	ISO15031	O2 sensor signal	O2 signal switching from Rich state to Lean state response rate time is longer than some calibrated value	Engine speed, coolant temperature	Engine is running Enginge Temperature is larger than 50℃	200S	3rd Cycle	2 Type I cycles	Type I cycles
O2 sensor heater 1 cylinder	circuit Hi	P 0031	ISO15031	Circuit check	the corresponding feedback is different from the command	None	Engine is running	20S	1st Cycle	None	Key ON
	circuit Lo/Open circuP 00D1it	P 0032	ISO15031	Circuit check	the corresponding feedback is different from the command	None	Engine is running	20S	1st Cycle	None	Idle
	performance	P 00D1	ISO15031	Circuit check	Low O2 heater current input	None	Engine is running	200S	2nd Cycle	None	Idle
Misfire detection	performance	P 0301	ISO15031	Misfire dection	Misfire incident creation	Engine speed, TPS	1.Engine is running 2.Misfire incident is happened	900S	3rd Cycle	2 Type I cycles	Type I cycles
Vehicle Speed Sensor detection	performance	P 0500	ISO15031	Vehicle Speed signal	No vehicle sensor signal input	Engine Speed	1.Vehicle speed plus signal inpput 2.Engine is running	200S	2nd Cycle	1 Driving cycle	Driving cycle
Idle air control system	performance	P 0505	ISO15031	Engine Speed check	Engine Speed higher than 500rpm comparing to the target warmed up engine speed	Engine speed, coolant temperature Intake air temperature Engine Runtime	Engine is running in idle mode	240S	2nd Cycle	None	Idle