OBD Service $01

Request current powertrain diagnostic data	SID 0x01				
PID Description	PID	Bytes	Rang,Scaling	Service x01	Sevice x02
Request supported PIDs from PID 0x01-0x20	PID $00	4		√	√
	ByteA				
	ByteB				
	ByteC				
	ByteD				
01 Monitor status since DTCs cleared	PID$01	4		√	×
	ByteA				
	ByteB				
	ByteC				
	ByteD				
DTC that caused required freeze frame data storage	PID $02	2	0000~FFFF	×	√
Fuel system status	PID $03	ByteA	Bit coding	√	√
		ByteB	Bit coding		
Calculated Load Value	PID $04	1	0~100%,100/255%	√	√
Engine Coolant Temperature	PID $05	1	-40~215℃, 1℃	√	√
Intake Manifold Absolute Pressure	PID $0B	1	0~255kpa, 1kpa	√	√
Engine RPM	PID $0C	2	0~16383.75/min, 0.25/min	√	√
Vehicle speed sensor	PID $0D	1	0.0...511.9922	√	√
Ignition Timing Advance for #1 Cylinder	PID $0E	1	-64~63.5 °, 0.5 °	√	√
Intake Air Temperature	PID $0F	1	-40~215℃, 1℃	√	√
Absolute Throttle Position	PID $11	1	0%~100%, 100/255%	√	√
Location of Oxygen sensor	PID $13	1	Bit coding	√	×
Oxygen Sensor Output Voltage Bank1 sensor1	PID $14	2	0~1.275, 0.005V	√	×
Short term fuel trim Bank 1 Sensor 1		1	-100%~99.22%, 100/128%	√	√
OBD requirements to which vehicle or engine is certified.	PID $1C	1	Bit coding	√	×
Distance traveled while MIL is activated	PID $21	1		√	×
Barometric Pressure	PID $33	1	0~255kpa, 1kpa	√	√
Control module voltage	PID $42	ByteA Byte B			
Engine run time while MIL is activated	PID $4D	ByteA Byte B	65.535sec,1sec	√	√

OBD Service $02

Outputs	Decription
PID $02	Pcode of the fault which freeze frame
PID $03	Fuel system bank1/bank2 status
PID $04	Calculated load value
PID $05	Engine coolant temperature
PID $0B	Intake manifold absolute pressure
PID $0C	Engine speed
PID $0D	Vehicle speed
PID $0E	Ignition angle
PID $0F	Intake air temperature
PID $11	Absolute throttle position
PID $13	Location of lambda sensor 1
PID $14	Lambda Bank 1
PID $18	Lambda Bank 2

Service 03

P Code	Description of DTC	Class	Active MIL
P 0118	Engine Coolant Temperature Sensor Circuit High / Open Circuit	1	√
P 0117	Engine Coolant Temperature Sensor Circuit Low	1	√
P 0119	Engine Coolant Temperature Sensor signal performance	3	√
P 0116	Engine Coolant Temperature Sensor signal out of range	3	√
P 0335	Crankshaft Position Sensor "A" open Circuit	1	√
P 2300	Ignition Coil "A" Primary Control Circuit Low / Open Circuit	1	√
P 0123	Throttle Position Sensor/Switch "A" Circuit High / open circuit	1	√
P 0120	Throttle Position Sensor/Switch "A" Circuit Low	1	√
P 0231	Fuel Pump circuit short Low / Open Circuit	1	√
P 0232	Fuel Pump circuit short High	1	√
P 0201	Cylinder 1 Fuel Injector "A" Open Circuit	1	√
P 0262	Cylinder 1 Fuel Injector "A" Circuit High	1	√
P 0261	Cylinder 1 Fuel Injector "A" Circuit Low	1	√
P 0108	Manifold Absolute Pressure Sensor Circuit High	1	√
P 0107	Manifold Absolute Pressure Sensor Circuit Low/Open Circuit	1	√
P 0106	Manifold Absolute Pressure Sensor Out of Range	1	√
P 0105	Manifold Absolute Pressure Sensor Plausibility	3	√
P 0113	Intake Air Temperature Sensor Circuit High / Open Circuit	1	√
P 0112	Intake Air Temperature Sensor Circuit Low	1	√
P 0111	Intake Air Temperature Sensor signal stuck	3	√
P 0114	Intake Air Temperature Sensor Circuit Intermittent	3	√
P 0132	O2 Sensor Circuit High Voltage Bank 1 Sensor 1	1	√
P 0131	O2 Sensor Circuit Low Voltage Bank 1 Sensor 1	3	√
P 0133	O2 Sensor Frequency error Bank 1 Sensor 1	3	√
P 0130	O2 Sensor not Plausibility Bank 1 Sensor 1	1	√

P 0031	O2 Sensor Heater Control Circuit Low Bank 1 Sensor 1	1	√
P 0032	O2 Sensor Heater Control Circuit High Bank 1 Sensor 1	1	√
P 0030	O2 Sensor Heater Control Circuit OC Bank 1 Sensor 1	1	√
P 0138	O2 Sensor Circuit High Voltage Bank 1 Sensor 2	1	√
P 0137	O2 Sensor bank1 sensor2 Circuit Low Voltage Bank 1 Sensor 2	3	√
P 0140	O2 Sensor OC Bank 1 Sensor 2	3	√
P 2271	O2 Sensor signal stuck rich Bank 1 Sensor 2	1	√
P 0037	O2 Sensor Heater Control Circuit OC or CC GND Bank 1 Sensor 2	1	√
P 0038	O2 Sensor Heater Control Circuit High Bank 1 Sensor 2	1	√
P 0650	MIL Lamp Open Circuit	1	√
P 0505	Idle air control system Open Circuit	1	√
P 0508	Idle air control system Circuit Low	1	√
P 0509	Idle air control system Circuit High	1	√
P 0511	Idle air control system Circuit not Plausible	1	√
P1300	Headlight lamp relay oc/ cc to GND/ cc to Battery	1	√
P0562	System voltage low	1	√
P0563	System voltage high	1	√
P 0300	Cylinder 1 Misfire Detected	3	√
P0420	Catalyst efficiency low	3	√

OBD Service $06

Monitor ID	Test ID	Unit ID	Test value	Min value	Max value	Description
01	83	30	0	0	calibrated	Exhaust Gas Sensor Monitor Bank 1- Sensor 1 (Frequency)
21	93	2F	0	0	65535	Catalyst Monitor bank1 (OSC)
A2	0C	24	0	0	65535	Misfire counts for last/current driving cycle

OBD Service $09

VID 02		VIN	Vehicle Identification Number
VID 04		CALI D	Calibration Identifications
VID 06		CVN	Calibration Verification Numbers
VID 08	In use performance tracking	IPT	
	OBDCON	0	General denominator
	IGNCNTR	0	ignition counter
	CATCOMP1	0	numerator, catalyst monitor completion counts bank1
	CATCOND1	0	denominator, catalyst monitor completion counts bank1
		7.995	calculated ratio
	CATCOMP2	0	numerator, catalyst monitor completion counts bank2
	CATCOND2	0	denominator, catalyst monitor completion counts bank2
		7.995	calculated ratio
	O2SCOMP1	0	numerator, O2 sensor monitor completion counts bank1
	O2SCOND1	0	denominator, O2 sensor monitor completion counts bank1
		7.995	calculated ratio
	O2SCOMP2	0	numerator, O2 sensor monitor completion counts bank2
	O2SCOND2	0	denominator, O2 sensor monitor completion counts bank2
		7.995	calculated ratio
	EGRCOMP	0	numerator, EGR/VVT monitor completion counts
	EGRCOND	0	denominator, EGR/VVT monitor completion counts
		7.995	calculated ratio
	AIRCOMP	0	numerator, secondary air monitor completion counts
	AIRCOND	0	denominator, secondary air monitor completion counts
		7.995	calculated ratio
	EVAPCOMP	0	numerator, EVAP monitor completion counts
	EVAPCOND	0	denominator, EVAP monitor completion counts
		7.995	calculated ratio
	SO2SCOMP1	0	numerator, Secondary O2 sensor monitor completion counts bank1
	SO2SCOND1	0	denominator, Secondary O2 sensor monitor completion counts bank1
		7.995	calculated ratio
	SO2SCOMP2	0	numerator, Secondary O2 sensor monitor completion counts bank2
	SO2SCOND2	0	denominator, Secondary O2 sensor monitor completion counts bank2
		7.995	calculated ratio