www.sdsauto.com

The emulator of catalyst's work SK-06

Function

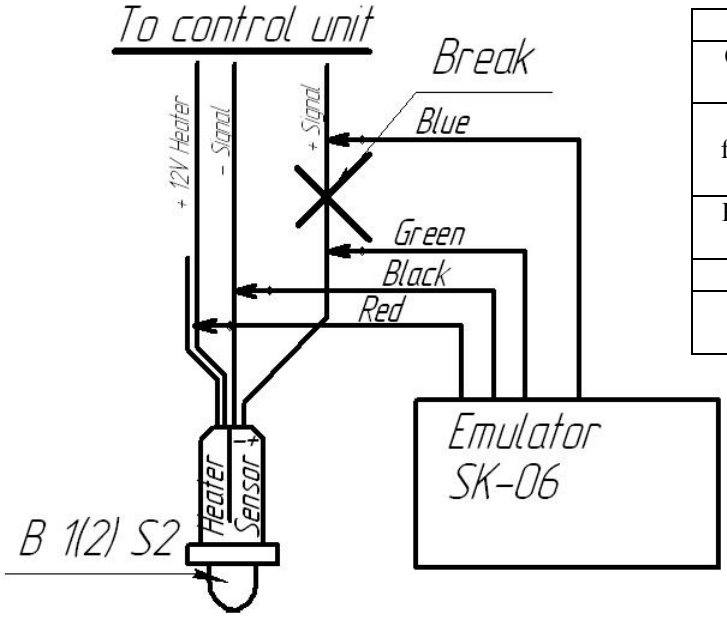
The emulator is designed for processing the signal from the oxygen sensor by the algorithm of serviceable catalyst's work. Processed signal has already proffered to the input of the ECU in the form in which it was at the proper catalyst.
Emulator SK-06 is compatible with all cars of last year's release. (See compatibility list on our website).

Installation

Installation is made according to the scheme in the picture. The emulator is connected to the second sensor, which is located in the back of catalyst. The powering of emulator is made by heating chain of oxygen sensor or by ignition coil through the red wire. (must be powered when the ignition is on) Green and blue wires are connected to the signal wire of oxygen sensor. The voltage on this wire is in the range from 0.1 to 1 volt.

If 2nd oxygen sensor (after the catalyst) is defective, the signal for the emulator can be taken from 1st oxygen sensor if the voltage is around 0....1 V. To do this, the green wire of the emulator should be connected to the signal wire of the first sensor.
If the output "-" of the signal sensor(sensor's gray wire) voltage relative to the body is bigger than 0.2 volts - consult by e-mail: sdsmix@gmail.com

Possible colors of the car wires



European car		Japanese car		
Oxygen sensor	Emulator	Oxygen sensor	Emulator	
Black from the sensor	Green	Blue from the sensor	Green	+ signal
Black to ECU	Blue	Blue to ECU	Blue	+ signal
Gray	Black	White	Black	- signal
White	Red	Black	Red	+ heating

For the proper operation of the device it is required that the oxygen sensors were in good condition, because the emulator function based on their indications.
There should be direct access of exhaust gases to oxygen sensor, it should not be obstructed.

Problem search(if any)

All measurements are made on a running heated engine.

Problem	Possible cause	Corrective action
The voltage from the emulator more than 1 volt	No contact with the mass	the black wire of the emulator should be connected to signal minus of the sensor's signal Black wire of the emulator should be called with mass.
	Signal minus of the sensor isn't connected with the mass	On some cars (Nissan, Mitsubishi, Chrysler, Dodge) black wire should be connected to the car's body or use emulator SK-07. On some cars like Mitsubishi black wire is connected to the body through the diode.
Voltage from the emulator is constantly about 0.75 volts	No signal from the sensor	You need to check whether the sensor is warming up. On the green wire of the emulator voltage should vary randomly and respond to pressing the gas pedal. Warm-up time of the sensor should be no more than 5 minutes. No signal from the sensor may occur due to its distance from the exhaust gas or malfunction of the sensor itself. If the 2nd sensor is defective, and the 1st one has a signal 0 ... 1 V - connect the green wire of the emulator to the signal of the first sensor.
The output voltage of the emulator preferably about 0 volts at idle (according to diagnosis)	No power	Check the main power on the red wire of the emulator
	Problem with emulator	Consult your dealer for replacement of the emulator.
	Problems with gas balloon car equipment	Check the operation of the emulator on gasoline. If gasoline emulator is working properly - make installation of gas balloon car equipment
	Problems with motor control system	If the voltage at the front and back sensor is approximately 0 volts - check for air leaks in the intake manifold, pressure in the fuel rail, injectors, etc. Pay attention to the fuel correction ECU.
Voltage in the emulator at idle is about 0,15 volts or	Problems with the front sensor	Check the front sensor

about 0.75 volts and does not range , respond to the strong pressing on the gas pedal.	Problems with other motor control systems	Diagnose.
	Adapts	On some cars, it may be normal immediately after the installation of the emulator. After about 5 km of the trip ECU adapts to new parameters and should function normally.

If all of the above is correct, check the hornblende. Measure voltage or look for diagnosis between black and blue wire. With the engine running at idle, the voltage should range around 0.6 .... 0,85V, occasionally may fall to 0 V. With a sharp and strong pressing and releasing of the gas pedal, the output voltage of the emulator should drop to 0,15 volts after 1 ... 2 seconds after the cut-off.

Warranty

The manufacturer guarantees the efficiency of products if the rules of operation are followed properly, which are written in detail in the instruction manual.
Warranty period - 2 years from the date of implementation.
During the warranty period the owner, in case of failure of the product is eligible for a free repair.
During the warranty period, repairs are accomplished at the expense of the owner if he exploits the optimizer not in accordance with the instruction manual, or does not comply with the manufacturer's recommendations.

The system is removed from the warranty in the following cases:
• If there is mechanical damage;
• If the operation is not carried out in accordance with this manual.

Emulator SK-06 meets necessary technical conditions and is considered suitable for use.

Release date _____ 201__

Vendor _____ [Seal]

Brand (in which the equipment is installed): _____

Installed by: _____ / _____ /

Installation Date: _____