

Century 125ie E4

On Board Diagnostic (OBD)



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Introduction

Introduction

This document describes the characteristics of the On Board Diagnostic system (OBD) used by the ECU and assembled on the Strada 125ie Euro 4.

The OBD system checks and shows one or more faults concerning:

- Emission up to Euro 4 limits.
- Engine power limitation.

On this document you can find all information needed to solve the OBD Errors found on the bikes.

OBD System

OBD System

The ECU is provided by the OBD system, when the OBD detects a failure it shows the following symbol on the dashboard:



To know the cause of the failure you will need to connect to the ECU with a OBDII reader, this tool can be show the diagnostic Error and erase it, once the error has been erased the symbol on the dashboard will switch off, if after erasing the failure the symbol continues it means that the problem is not solved.

Specific tool

To connect the bike at the OBDII reader is necessary have on harness adapter to connect the standard connector of the bike to the connector SAE J1962 Type A use on the OBDII readers.

Rieju has the next part available to use the OBD systems:

0/000.160.4000 – HARNESS SUPPLEMENT OBD E4 STRADA



System for auto diagnostics

0/K00.160.4000 – KIT OBD READER WITH HARNES SUPPLEMENT



If you have a standard OBD reader you will need only the harness supplement to connect it with the ECU of the bike. If you don't have an OBD reader Rieju suggest use the KIT OBD READER WITH HARNES SUPPLEMENT, this kit has been tested on Rieju bikes and its operation is guaranteed

Connection OBD reader with the bike

The OBD connector is placed under the seat.



OBD System

1. Check that the key is in OFF position.
2. Take out the cap protection.
3. Plug the OBD harness supplement with the main harness.
4. Plug the OBD reader on the harness.



5. Turn ON the key (it will not necessary run the bike).

When the key is in the ON position the OBD reader will switch ON automatically. Look at the OBD reader instructions to know the error codes and erase it if necessary.

If the OBD reader does not switch ON, and the OBD reader is not supplied by Rieju it's possible that your OBD reader is not compatible with the OBD II system and you will need replace it.

If the OBD reader is provided by Rieju but it cannot switch ON please check the battery is correctly connected and is full charged, check the fuse of the main harness. If the problem continues contact with the Rieju after sales department.



Error code

Error code

Once the OBD reader is connected with the ECU we can find the following error code:

Component	Trouble	Diagnostic trouble code	Monitoring strategy	Fault detection criteria
O2 sensor heater	Circuit high	P0032	O2 sensor heater feedback signal	Check the signal is it higher than setting value. If it is and continue a setting time, then means it is circuit high. Check the continuity of the wires in the harness.
	Circuit low / Open circuit	P0031		Check the signal is it lower than setting value. If it is and continue a setting time, then means it is circuit low or open circuit .
Manifold absolute pressure sensor	Circuit high	P0108	Manifold absolute pressure sensor signal	First judge the signal is normal or not, if not then check signal is it higher than setting value. If it is and continue a setting time, then it is circuit high.
	Circuit low / Open circuit	P0107		First judge the signal is normal or not, if not then check signal is it lower than setting value. If it is and continue a setting time, then it is circuit low or open circuit.
Engine temperature sensor	Circuit high / Open circuit	P0118	Engine temperature sensor signal	Check the signal is it higher setting value. If it is and continue a setting time, then means it is circuit high.
	Circuit low	P0117		Check the signal is it lower than setting value. If it is and continue a setting time, then means it is circuit low.

Error code

Component	Trouble	Diagnostic trouble code	Monitoring strategy	Fault detection criteria
Intake air temperature sensor	Circuit high / Open circuit	P0113	Intake air temperature sensor signal	when enging is running Check the signal is it higher than limit If it is and continue a setting time, then means it is circuit high.
	Circuit low	P0112		when enging is running Check the signal is it lower than limit If it is and continue a setting time, then means it is circuit low.
Throttle position sensor	Circuit high	P0123	Throttle position sensor signal	when key-on Check the signal is it higher than limit If it is and continue a setting time, then means it is circuit high.
	Circuit low / Open circuit	P0122		when key-on Check the signal is it lower than limit If it is and continue a setting time, then means it is circuit low.
O2 sensor	Circuit high	P0132	O2 sensor signal	Check the signal is it higher than 1000mv If it is and continue a setting time, then means it is circuit high.
	Circuit low	P0131		Check the signal is it lower than 30mv If it is and continue a setting time, then means it is circuit low.
Fuel pump relay	Circuit high	P0232	Fuel pump relay feedback signal	Check the signal is confirmed too high and continue a setting time, then means it is circuit high.
	Circuit low / Open circuit	P0231		Check the signal is confirmed too low and continue a setting time, then means it is circuit low or open circuit.

Error code

Component	Trouble	Diagnostic trouble code	Monitoring strategy	Fault detection criteria
Fuel injector	Injector A Circuit high	P0262	Fuel injector feedback signal	Check the signal is confirmed too high and continue a setting time, then means it is circuit high.
	Injector A Circuit low	P0261		Check the signal is confirmed too low and continue a setting time, then means it is circuit low or open circuit.
Crankshaft position sensor	CKP Sensor Circuit A Range/Performance	P0336	Crankshaft position sensor signal	Check the delta map and delta voltage signal to detect cranking, if delta map more than 6kpa and delta voltage more than 1V without engine being started and continue more than 30 seconds, then means cpk sensor noisy signal or Range/Performance
	CKP Sensor A Circuit low	P0337		Check the delta map and delta voltage signal to detect cranking, if delta map higher 6kpa and delta voltage higher 1V and without engine being started then means cpk sensor Circuit low
Ignition coil	Cylinder A Ignition Coil Circuit low	P2300	Ignition coil feedback signal	When cranking, The Ignition coil feedback signal is not equal to the command and continue a setting time, then means it is low.
	Cylinder A Ignition Coil Circuit high	P2301		When cranking, The Ignition coil feedback signal is not equal to the command and continue a setting time, then means it is high.

Error code

Component	Trouble	Diagnostic trouble code	Monitoring strategy	Fault detection criteria
Idle Control System	Idle Speed Control Error	P0505	Idle air control system feedback signal	when RPM error above or below the desired RPM more than 250rpm and continue 45 seconds, then means Idle Speed Control Error.
ECU	ECU Error	P0601	ECU ROM Error check	if ignition key is on, the ECU will check malcode, if there's ECU error, the code P0601 is indicated. The fuel injection will be cut off accordingly.
CCP	CCP short to high	P0459	CCP feedback signal	Check the signal is it higher than limit If it is and continue a setting time, then means it is circuit high.
	CCP short to low/open	P0458		Check the signal is it lower than limit If it is and continue a setting time, then means it is circuit low/open



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