Manual

Adapter OBD v2

Software version:

NEVO-4.0.4.0

DiegoG3-3.0.8.0

Full compatibility with OBD Adapter v2 2.0B

1   Description

The **OBD Adapter v2** enables communication between NEVO or Diego gas injection system and petrol controller that uses OBDII diagnostic interface. The applications of this communication are as following:

- reading parameters form the OBDII system, and their visualization in the NEVO/DiegoG3 application,
- reading and controlling (including deleting) recorded and awaiting errors (trouble codes) of the petrol controller,
- automatic regulation and adaptation gas system on the basis of the corrections read from OBD (see NEVO or DiegoG3 program instructions).

Adapter OBD v2 can work as a standalone device or it can be connected to the gas installation from DiegoG3 or NEVO family.

When connected to NEVO or NEVO PLUS system Adapter OBDv2 requires NEVO-4.0.2.1 or newer software.

When connected to DiegoG3 Adapter OBDv2requires DiegoG3 3.0.8.0 or newer software.

When Adapter OBDv2 is not connected to gas ECU it works as an OBD scanner and can be communicated by NEVO 4.0.3.0 or newer software.

Details about usage of OBD Adapter v2 with KME gas systems are available in the instructions for these systems. The use of Adapter with gas installation allows it to automatically adjust and adapt the gas system, using the data read from the petrol ECU - OBD adaptation (in the NEVO from version 4.0C, in DiegoG3 from version 30J). Adapter may be also used for the time of calibration. In that case it is a tool facilitating the calibration, and – to some extend – automatizing it. Adapter may also be installed in car permanently. In that case it works as an interface between petrol and gas controllers and enables the gas controller to introduce constant, adaptive correction.

The adapter may be connected to OBD using protocols that are applied in most cars produced after year 2000:

- ISO9141,
- KWP2000slow,
- KWP2000fast,
- CAN_11bitID_500kbps,
- CAN_29bitID_500kbps,
- CAN_11bitID_250kbps,
- CAN_29bitID_250kbps.

KME Sp. z o.o. ● ul. Św. Teresy od Dzieciątka Jezus ● 91-222 Łódź ● tel +48(42) 611 00 26 ● fax +48(42) 611 82 52 ● www.kme.eu
NIP: 732-199-00-33 ● REGON: 473207460 ● Nr KRS: 0000181402
Sąd Rejonowy dla Łodzi Śródmieścia XX Wydział Krajowego Rejestru Sądowego ● Kapitał Zakładowy 50000zł wpłacony w całości

2   Installation

The adapter is designed to make its installation as easy as it is possible. The assembly requires only connecting three plugs: two to the communication interface (one to the PC and one to Diego), and one to OBD. Adapter is installed serially into the communication path between PC computer and the controller and should be mounted inside the driver cabin, which requires putting the communication wire through into the driver cabin. For the convenience, extension cords to communication interface are added to the installation set. The connection diagram for the standalone configuration is shown on the figure below.
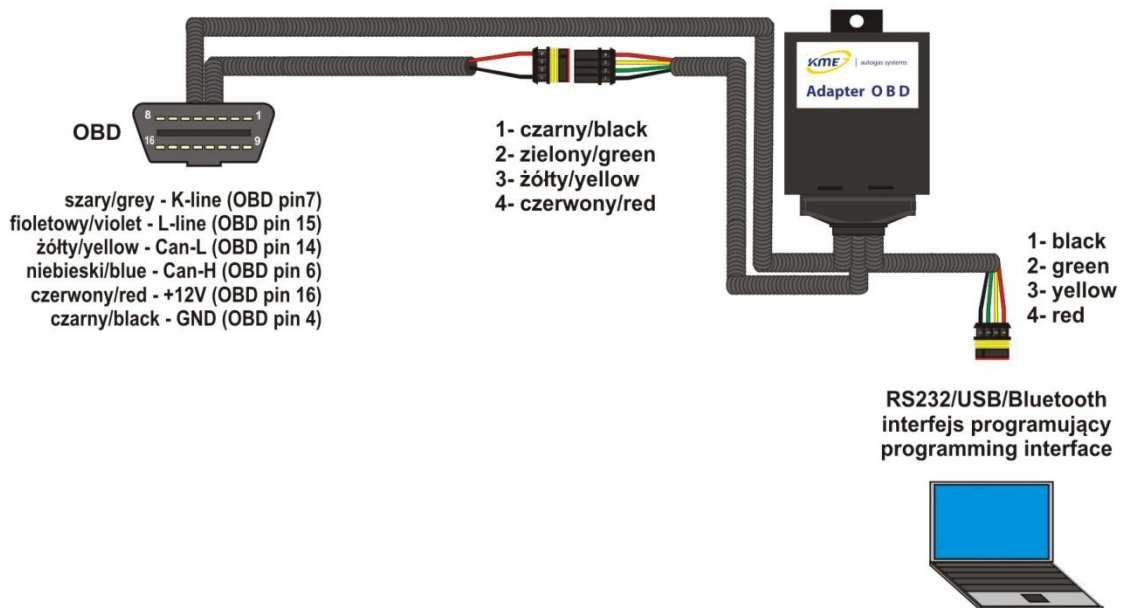
If the gas controller has and old, non-hermetic standard of the communication plug, it needs to be replaced by a plug in a new, hermetic standard (trade number: 239 000 033).

!!! WARNING: In cars with flap on the OBD connector, the flap should be removed before connecting OBD module wires.

3   Operating the software

3.1   Software actualization

Updating the software changes the OBD Adapter v2 firmware and stores the device to the factory settings of the loaded version. The current driver version and date of compilation is shown in the frame. The box below displays a list of available updates.
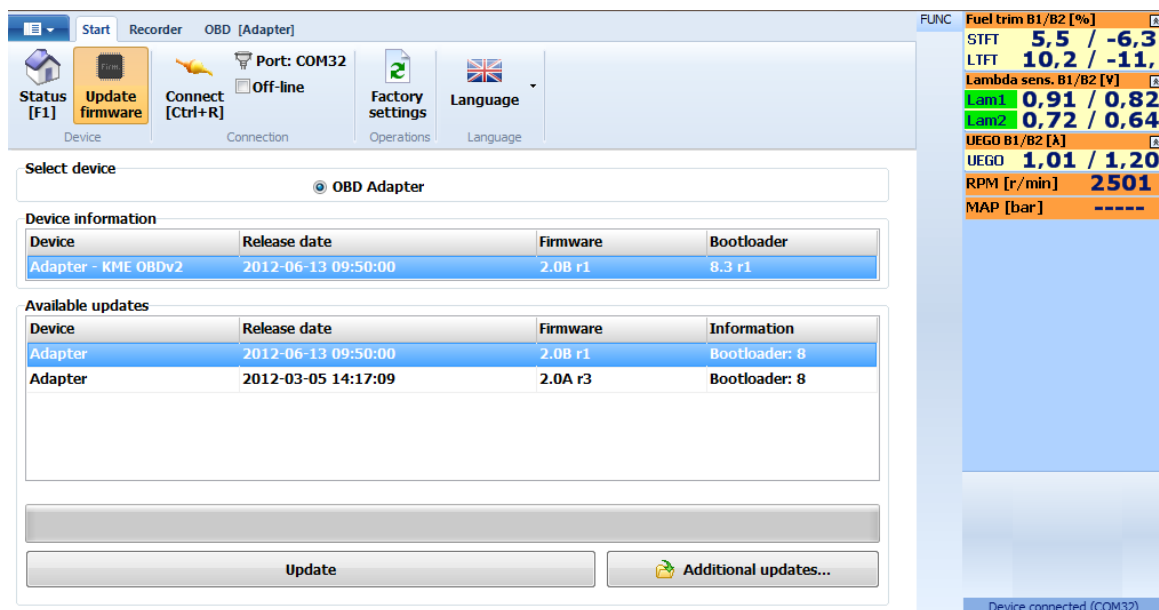
Fig. 3.1 Firmware update window.

Procedure of updating is as follows:

- o If desired update file is not on the list of available updates press "Additional updates…" button and choose file from your PC. It will be added to the list.

- o Choose update file and press "Update" button. First the window with question about saving current settings to a file will appear. After saving or choosing not to save the update confirmation window will appear (Fig. **3.2**). To start actualization process press "Yes".
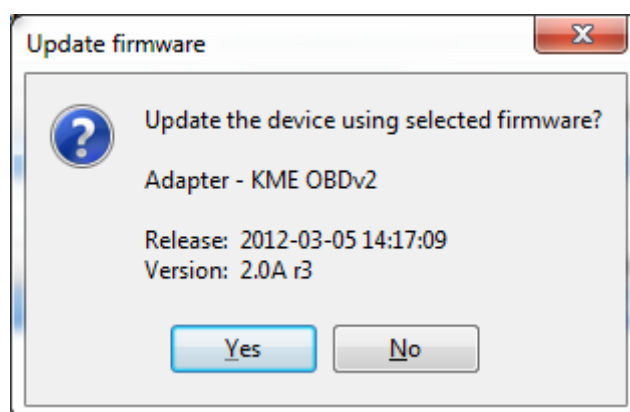
Fig. 3.2 Staring update confirmation window.

o During actualization process progress the progress bar is shown (Fig. **3.3**). Also the status bar indicates execution of actualization process (Fig. **3.4**).
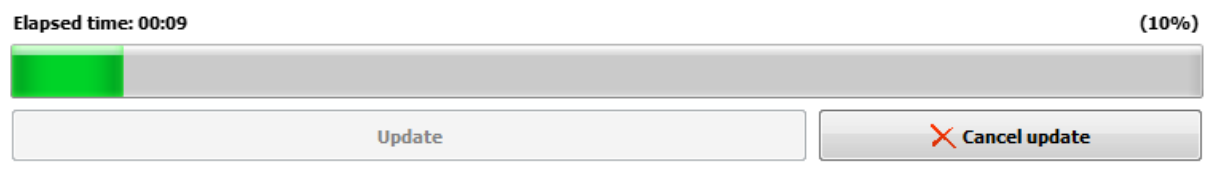
Fig. 3.3 Actualization progress bar.

Fig. 3.4 Information about running actualization.

o In case of fault in communication during actualization, (Fig. **3.5**, press „OK") press "Auto connect"
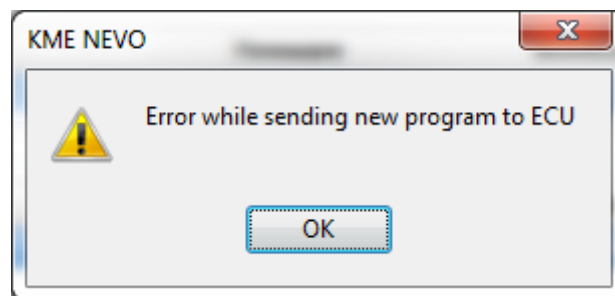
Fig. 3.5 Information about communication failure.

Window shown on Fig. **3.6** appears after retrieving lost connection. Press "Ok" to restart actualization process.

o After finishing update, the program informs user about it.
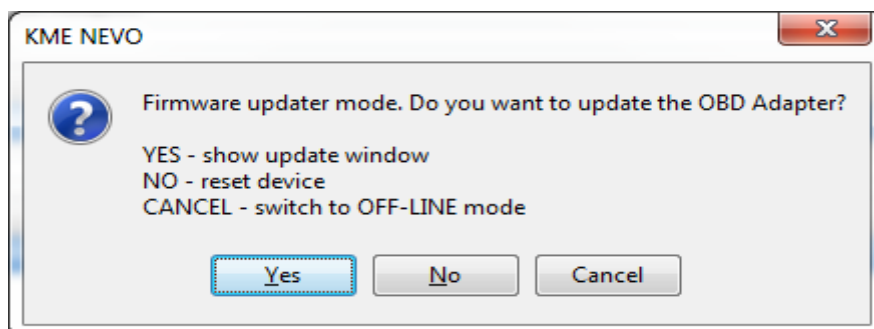
Fig. 3.6 Window shown after communication failure during the actualization process.

3.2   OBD tab

OBD tab element are divided into groups:

- OBD Connection
    - *Protocol* – is used to determine the protocol of the communication with the OBD.
    - *Detect* – enables to automatically detect the proper protocol.
    - *Connect* – connects with the OBD using the chosen or the detected protocol.
    - *Disconnect* – disconnects with OBD.
    - *Auto connect to OBD* – when turned on, this option makes adapter to automatically connect to the OBD after engine starts.
    - *State bar* – indicates current OBD connection status.
- OBD Scanner
    - *Live data* – opens Live data window.
    - *Trouble codes* – opens Trouble codes window.
    - *Read* – reads trouble codes from petrol ECU.
    - *Clear* – clears ECU trouble codes.

3.3   Live data window

Live Data tab provides functionality of controlling the readings from OBD. By every value there is a check box, which turning on causes cyclic reading of the chosen value and displaying it. If some values are not visible, they cannot be read from the OBD interface in the particular car. Any value read from OBD can be displayed on the chart of the NEVO system's recorder (Recorder tab).

Fig. 1 Live data window.

3.4 Trouble codes window

This tab provides functionality of monitoring, controlling and deleting recorded and awaiting errors (trouble codes) of the petrol controller. To read recorded and awaiting trouble codes press the Read button. To delete all trouble codes, the Clear button is used.

Fig. 2 Trouble codes window.