

DPF CONTROL – USER MANUAL

1. Theoretical introduction

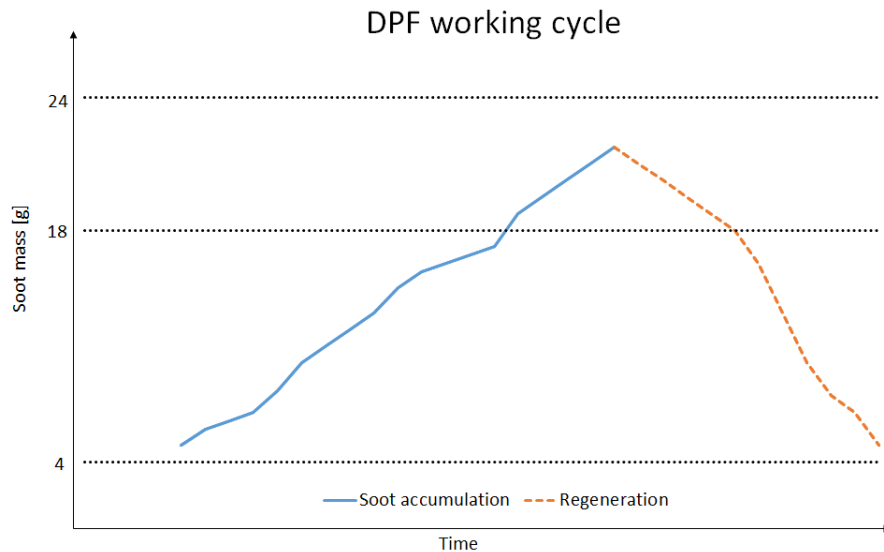


Fig. 1. Diagram which shows a standard working cycle of a DPF.

A diagram illustrating the DPF duty cycle is shown above. It can be divided into two parts, i.e. soot accumulation period and regeneration period. The time of filling the filter is influenced by many factors, these include: the way of vehicle use (short or long distances), the state of wear of the DPF, ECU type. This period can last from about 200 to about 600 km. The regeneration process starts when the ECU decides that the filling of the filter (soot mass) is suitable to start it and other necessary conditions (e.g. engine temperature) are met. In most cars, this will be between 18 and 24 grams. When the saturation reaches the aforementioned range and other conditions are met, an ECU starts the regeneration of the DPF, which by default can take about 25 minutes and will end when the soot mass reaches a level of about 5-7 grams – the calculated soot mass will never reach 0.

2. User manual

Enjoy the awareness and possibility to manage the regeneration process of the particulate filter in your car. Install the device in the vehicle OBD socket (generally around the driver's left knee, purple color). The device can be permanently mounted as it is powered only when the ignition is on. Mount the **LED** in any place visible to you 😊

As standard, the device emits the following signals:

- 1) One short beep -> information that the device is active when the ignition is switched ON [**LED** blinks once].
- 2) Two-second series of short beeps -> beginning of a DPF regeneration [**LED** will light up].
- 3) Three medium length beeps -> end of a DPF regeneration [**LED** will go off].

Additional device functions and their signals performed with ignition ON (IG ON):

- A. Press the button once -> you will be informed by sound and light signals about the soot mass in your DPF filter:

1 beep + 1 LED flash = 1 gram of soot

- B. Press and hold the button until you hear:

- a. the first short beep -> the device will clear all DTC's from all car ECU's and will confirm this with a long beep [**LED** blinks once]
- or
- b. second short beep -> you activate the so called "silent mode" i.e. normal operation of the device without any information via beeps but only via the **LED**.*

*To DEACTIVATE the 'silent mode' follow the same steps as in Bb, i.e. press, hold and release the button after the second short beep.

3. Frequently reported problems:

- 1) *'The device does not emit sounds'* – check if the device signals the ignition switch on and the soot mass with an LED (if you do not have an LED, skip this step). If YES, turn on the ignition, press, hold and release the button after hearing a second short beep.
If, after following the above instructions, the unit still does not beep or the LED flashes, please send the unit back with the return form. Once we have received your device, we will review it and get back to you as soon as possible.
- 2) *'The device does not indicate the soot mass'* – due to a very wide range of vehicles, engines, ECUs and their software versions, we are not able to guarantee that the device will support every vehicle and every ECU, even though it is on our list. The device has been tested on a limited group of cars, which unfortunately does not correspond to all vehicles produced. If your device does not indicate the soot weight, it will also not inform you about the DPF regeneration process. In this case, please complete the return form carefully and send the device back to us. On this basis, we will issue a refund, and if we are able to identify and fix the problem, we will notify you immediately.
- 3) *'The device does not inform about regeneration'* - in this case the cause of the problem is the same as in point 2 above. Please follow the same steps to return the device.
- 4) *'The device signals the start of regeneration, but not the end'* – in some vehicles and ECUs, the so-called false regeneration can occur, i.e. a situation in which the device signals the beginning of DPF regeneration process, and will not signal its end. Standard filter regeneration should last approx. 25 minutes (the duration depends on the current condition of the DPF). If, after this time, the device does not signal the end of the process, check the soot mass (see page 1 point A in this manual). Then wait another 10 minutes and check the soot mass again and:
 - a. if the value has decreased (e.g. from 10 to 9 grams), it means that a regeneration is actually taking place, so then you should wait until it is properly completed,
 - b. if the value has not changed or increased, it means that "false regeneration" has occurred.In case of a false regeneration (as explained above), please complete the return form and send back the device to us.
- 5) *'The device does not indicate the start of regeneration'* – in some cases DPF filter regeneration is connected to some additional symptoms that may be noticed by the vehicle user, e.g. increased engine speed at idle. However, it may happen that this situation is due to another reason, e.g. engine warm-up or heater turned on. Therefore, if your vehicle experiences symptoms that sometimes comply with the filter regeneration, and the device fails to signal it, it does not necessarily mean that it is not working properly. If you suspect that the DPF filter regeneration is in progress and the device does not indicate it, please check the soot mass (see manual page 1 point A). Then wait 10 minutes and check the soot weight again and:
 - a. if the value has not changed or increased, it means that the filter is not regenerated and the device is working properly,
 - b. if the value has decreased (eg from 10 to 9 grams), it means that a regeneration is actually taking place. Then fill in the return form and send the device back to us.
- 6) *'The device generates errors in the car or messages on the dashboard'* – in exceptional situations, it may happen that after inserting the device into the OBD socket, some faults or error messages will appear on the vehicle dashboard. Such situation is extremely rare (2 cases out of about 1000 devices sold), and it indicates the incompatibility of the device with the vehicle, which may be due to e.g. modifications to the vehicle related to the CAN network. The device does not interfere with the vehicle in any way and is not able to make any changes. In the event of such a situation, please contact us at the address provided on the website www.ms-group.pl/en in the Contact tab.

Please check YouTube for a short video showing normal operation of our device: <https://tinyurl.com/5edewtnt>