



# **ILTEQ SYSTEM OPERATING INSTRUCTIONS**

## General principles

1. Do not drink alcohol!
2. Never use any substances that contain even small amounts of alcohol, since this could lead to a false test result. After consuming a liquid containing trace amounts of alcohol try to rinse your mouth with the view to obtaining a credible result.
3. Do not blow directly after consuming beverages or food. In such case rinse your mouth 2 or 3 times with the view to obtaining a credible result.
4. The test should be performed with the engine stopped and the key removed from the ignition switch.
5. Take care of the cleanliness of the system with the view to prolonging useful life of the device and avoiding false results due to accumulation of impurities.
6. Avoid storing the testing module in the conditions of bright sunlight, increased humidity or spills.
7. For your own safety, if you feel unwell (on the so-called day after) take at least two or three samples while staying in the car.

**The non-compliance with any of the above guidelines can lead to a false test result that will be unfavourable to the User and to the damage of the testing module.**

VEHICLE CATEGORY	YES	NO
Installation in second-hand cars	X	
Installation in new cars	X	
Trucks	X	
Buses	X	
Specialist cars		X

## **1. GENERAL INFORMATION**

IlteQ is a car system which serves for the identification of the intoxicated driver at the stage when he attempts to start a mechanical vehicle and for the initiation of the following activities:

- a) stopping the vehicle
- b) informing of the driver of the suspicious condition.

After the connection to car installation, the system:

- a) informs the remaining road users of a potential threat caused by an irresponsible driver,
- b) prevents the driver from starting a mechanical vehicle in the case of the negative alcohol test result or when the driver has refused to have the test made.

Moreover, the system complies with the following assumptions:

- it can be installed in the vehicles used on an everyday basis,
- it can be installed in the vehicles at the production stage,
- it is hard to inactivate,
- it is characterised by huge efficiency of operation,
- it does not present any threat to personal safety of persons who are near the “dangerous” vehicle.

## **2. GENERAL APPEARANCE**

a) The control module: a punched IlteQ sign, a light diode, the inlet for the cables of information modules, the inlet for the acquisition module.

b) Information module: LED controls

c) Acquisition module: a replaceable tip, circulation points, a light diode.

## **3. HOW TO USE THE ILTEQ DEVICE**

Before starting the vehicle the driver should test himself using a breathalyser; such test shall consist in the verification of alcohol steam presence by directing an appropriately intensive stream of exhaled air onto the sensor. If the user fails to do so, he won't be able to start the vehicle. In the case of sabotage after starting the car the IlteQ system will inform the other road users using an appropriate module that the driver has not been tested. In such case the information module placed on the windscreen and on the rear window will light in red. If after the conducted test the sensor discovers the permitted alcohol content in the blood of the tested driver, a green LED light visible on the windscreen and on the rear window will light up. If the alcohol level in blood exceeds the permitted concentrations, then the red light will light up and it will not be possible to start the vehicle.

One of the benefits of the system is the information module which is visible outside the vehicle, since the recipients of information on the driver's condition are other road users, including the police for whom the appropriate external lighting can be a signal for stopping the suspicious vehicle.

The light information system consists of LEDs which are placed next to the registration plates or on the windscreen and the rear window of the vehicle. The system is also equipped with the warning and information alarm in the sound format which starts at the moment of sabotage, e.g. when any of the cables has been cut through.

## **4. ILTEQ SYSTEM OPERATION**

a) It prevents the driver from starting a mechanical vehicle in the case of the negative result of alcohol content tests in the exhaled air or the driver's failure to take the test.

b) It prevents the sabotage consisting in the disconnection of specific modules of the system.

## **5. SYSTEM START-UP**

After switching on the power supply of the lteQ system the following events will take place:

1. After switching on the power supply, the control module will light up the diode emitting continuous green light and the tester will give out a triple sound signal- that means that the power supply of the system operates in a correct manner. At the same time the control module checks how many information modules have been connected and to which sockets, which is visible through the alternating on and off switching of the LEDs- the system remembers the settings until the plug has been disconnected from the power supply sockets in the control module.
2. The tester module blinks using a red diode, which means that it is getting ready for operation (the alcohol sensor is heating up)
3. The system is ready for operation- the signalling diode of the tester emits the discontinuous green light.

## **6. SWITCHING OFF THE SYSTEM**

The system can be switched off in the following cases:

1. If the vehicle has not been used for the period longer than 20 minutes, the system enters into the "sleep" mode. The system abandons the "sleep" mode upon any activity registered by the pod sensor, to which the system has been connected.
2. After the system has been waked up from the "sleep" mode, the procedure similar to system start-up procedure is initiated.

## **7. SAMPLING AN AIR STREAM FOR ANALYSIS**

In order to achieve credible test results it is recommended to conduct the test not earlier than 30 minutes after the last consumption of alcohol.

1. Make sure that the signalling diode on the tester emits the pulsating green light.
2. Breathe in a significant amount of air.
3. Place your mouth on the mouthpiece of the testing module.
4. After the initiation of air supply the tester will emit one sound signal and the tester diode will emit a continuous light.
5. Blow the air to the tester evenly (with a constant force) for the period of approximately 3 second until the green diode has switched off and the second sound signal can heard.
6. If the stream of the supplied air is not maintained at the required level until the sampling is completed, the test shall be interrupted by means of an error signal, which is a triple sound signal with simultaneous flashing of the red tester diode.
7. After the successful termination of air sampling, the analysis is conducted, during which the tester diode is switched off.
8. After app. 10 seconds the tester gives the result of the conducted analysis of condensed steams of ethylic alcohol in the received air sample, the result of which shall determine the possibility to drive the vehicle.
  - a) A double sound signal and the tester signalling diode lit in green indicate that the permitted alcohol concentration in the driver's body has not been exceeded. In Poland such concentration is 0.2 g/l.
  - b) A long sound signal and the tester signalling diode lit in red indicate that the permitted alcohol concentration in the driver's body has been exceeded. In Poland such concentration is 0.2 g/l.

9. If after the last test the tester signalling diode flashes in red, it means that the tester is subject to regeneration procedure and no air should be blown into the tester hole. It is a process of cleaning the diffusion chamber before conducting the next test. The duration of the regeneration process depends on a number of factors:

- a) the circulation of air in the diffusion chamber- moving the tester accelerates the cleaning;
- b) alcohol content in the previously analysed air sample- the higher the content, the longer the regeneration;
- c) in the case of zero alcohol content in the exhaled air sample, the regeneration time can be reduced to zero.

10. After reaching the readiness for operation status after tester regeneration, the tester diode pulsates in green.

## **8. POSITIVE TEST RESULT**

If the test result is positive, a single long sound signal can be heard and a red LED will light up. Under such status it will be not possible to start the vehicle.

## **9. NEGATIVE TEST RESULT**

If the test result is negative, then a double short sound signal can be heard and a green LED will light up. Under such status it will be possible to start the vehicle.

## **10. PROBLEMS WITH THE TEST RESULT**

- 1. A LED flashes every second in red- the sensor is subject to regeneration after the conducted test with a positive result or after sensor heating.
- 2. A triple red LED flash with a double sound signal will mean that the air supply has been interrupted too early or that the pressure of the supplied air was too low.

## **11. CONDUCTING AN ADDITIONAL TEST**

- 1. If after the first attempt of blowing the air in a triple sound signal can be heard, it means that the stream is too weak. Then the supply should be interrupted and it is necessary to wait until the tester is ready for another sampling. If a long sound signal can be heard with the simultaneous green diode flash, it means that the stream measurement has been initiated. The stream shall be blown in until a short single signal has been heard for the second time.
- 2. No beverages or food should be consumed before the measurement. In the case of a positive result it is necessary to flush the mouth with water a couple of times and to conduct an additional measurement, in compliance with the indications listed in section 1.

## **12. TAKING CARE OF THE DEVICE**

- 1. Avoid excessive heating of the device.
- 2. Avoid high humidity in the vehicle.
- 3. Avoid spilling any liquid on any module.
- 4. Avoid very low temperatures.
- 5. Cover the acquisition module end in order to prevent it from getting soiled.
- 6. Do not bend the cabling.
- 7. Regularly review the device.
- 8. Protect the acquisition module with a small bag.
- 9. Install the modules in places which do not compromise their correct exploitation.
- 10. Protect the system against getting soiled.
- 11. Use soft and safe agents for cleaning.

**Please note!**

**The system can be damaged as a result of: impact and spills.**

### **13. GUARANTEE**

IlteQ devices are covered with a 24-month guarantee valid from the date of purchase and having received a document confirming such purchase. The guarantee shall cover any damage which does not result from improper use, but from the faults resulting from defects attributable to the manufacturer. All ilteQ devices must be returned in an appropriately protected packaging together with a receipt directly to an authorised official service centre.

### **14. DISCONNECTING THE ACQUISITION MODULE FROM THE CONTROL MODULE**

Before disconnecting the acquisition module and the control module the user should get acquainted with the details of process operation.