KX1000

PARTICULATE FILTER CLEANING AND DIAGNOSIS

USER MANUAL

GEATEK

MADE TO LAST

Geatek Srl
Via per Sacca, 58/1
43052 Colorno (PR) ITALIA
Tel. +39 0521 815204
info@geatek.it
geatek.it

Rev. 01 of 10/06/2025
CE conformity according to the Machinery Directive
2006/42/CE, Attachment II lett. A

WARNING!
We recommend that you carefully read the operating instructions described in this manual before turning on the KX1000 to obtain optimum performance and reliability over time.

Please keep this manual near your KX1000 for quick reference by operators!

Dear Customer,

Thank you for purchasing KX1000, a practical and effective system for cleaning and diagnosing particulate filters. The safety information provided below is a guideline to help you use the KX1000 in maximum safety.
In this regard, we remind you that this manual is an integral part of the machine and contains general instructions for its correct use.
We therefore invite you to:

- read the instructions for use carefully before turning on the KX1000,
- adequately train the operators
- keep the instructions for use carefully for any future reference.

These good practices will be the guarantee for obtaining excellent performance and reliability from the KX1000 over time.

Good Work!

INDEX

1 Safety regulations

1.1 Of the KX1000

Please read this owner's manual carefully before using the KX1000!

- Do not connect KX1000 to a voltage other than that indicated on the nameplate.
- Use KX1000 only in dry, sufficiently bright and well-ventilated places.
- Do not expose the KX1000 to strong heat sources and do not place the KX1000 in the engine compartment.
- Do not subject the KX1000 to shock.
- Do not get the KX1000 wet and in any case protect it from direct contact with rain.
- Extraordinary maintenance of the KX1000 must be performed by qualified personnel.
- Opening the KX1000 by unauthorized personnel is prohibited.
- The use of non-original spare parts is prohibited.
- Use only GEATEK cleaning products
- Blown or defective fuses must be replaced with fuses of equal characteristics.

1.2 Of the operator

Please read this owner's manual carefully before using the KX1000!

- Adopt appropriate protective clothing and behavior.
- Always wear protective glasses to protect your eyes from any violent jets of hot liquid. Do not use ordinary glasses, only safety glasses.
- Always clean the floor in case of cleaning product spillage, as it may cause falls.
- Use only the power cables supplied, checking that the insulation is intact.
- Pay maximum attention to moving parts on the vehicle. In particular, electrically operated fans can activate unexpectedly even with the engine off.

Always obtain the safety data sheet of the materials used and follow its contents!

1.3 Disposal

- When you wish to dismantle the instrument, first separate the electrical, electronic, plastic and ferrous parts.
- Then proceed with the separate disposal required by current national and/or local regulations.
- It is considered WEEE according to Directive 2012/19/EU.

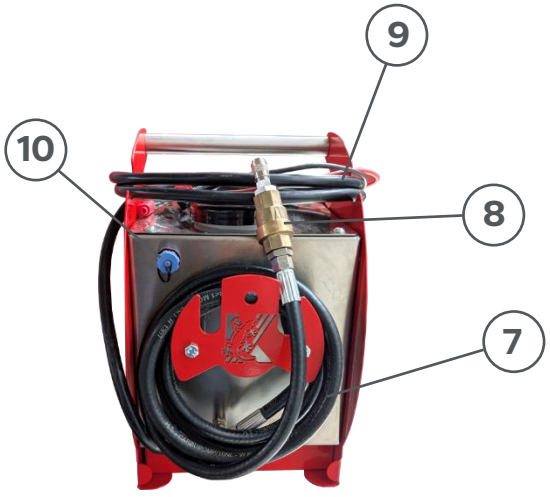
2 Technical Data

Supply:	Battery 12 Vcc (vehicle battery)
Display:	Matrix dot display
Hardware:	Electronic control board
Pump:	Max flow 2,5 litri/min Max pressure 1 bar
Dimensions:	L 200 mm; H 340 mm; P 450 mm
Weight:	~ 8 Kg
Working temperature:	+ 5°C + 40°C
Noise level:	< 80 dB
Vibrations:	< 2,5 m/s^2

3 Description

KX1000 is the equipment that allows you to diagnose and clean the particulate filter. The treatment is carried out quickly, without the need to disassemble the filter, in a simple and safe way for the repairer and his collaborators. The equipment is equipped with a display that guides the operator step by step in the procedure for diagnosing and cleaning the particulate filter.
With cleaning, based on the connection point of the equipment, the catalyst, the SCR catalyst and the particulate filter will be treated.

3.1 KX1000 Components



RETRO

1	1L tank	**7**	Liquid delivery hose
2	Display	**8**	One-way valve
3	Control panel	**9**	Power cord
4	Drawer	**10**	Pressure sensor socket

Control panel

A.  STOP ESC button: interrupts the current operation, cancels the selection or allows you to return to the previous page.

B.  UP ARROW key: allows you to move the selection cursor that appears on the display upwards.

C.  DOWN ARROW key: allows you to move the selection cursor that appears on the display downwards.

D.  ENTER START button: confirms the selection and/or starts the operation.

4 Transportation and delivery

4.1 Transportation

Transport must be carried out in strict compliance with the provisions of the current legislation on hygiene and safety at work.

In case of transport by vehicle, ensure the level of stability before proceeding with the move.

Handling: can be done easily since the machine is portable. In any case, handling must be done with the tank empty.

4.2 Delivery

The operator must unload in compliance with the current legislation on hygiene and safety at work; remove the packaging, without dispersing it in the surrounding environment. Always check the integrity of the components and devices present. If necessary, contact the dealer immediately.

Lift and remove KX1000 from carton. Total weight approx. 8kg.

5 Preparation for use

5.1 KX1000 preparation

Connect KX1000 to the car battery: the black clamp to the negative (-) pole and the red clamp to the positive (**+**) pole.

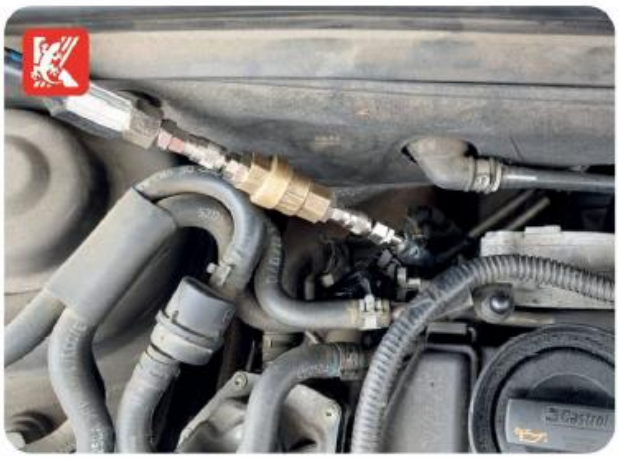
<u>WARNING</u>: KX1000 works only at 12 Volts. If the power supply is incorrect, the machine will not turn on.

5.2 Vehicle preparation

- After positioning the vehicle, put it in park position and switch off the engine.
- Check that the particulate filter temperature is below 50°C
- Check that the coolant level is correct
- Check that the engine oil does not exceed the maximum level
- Some Euro 6 engines have a low pressure EGR valve fitted. Ensure this is deactivated when cleaning (e.g. disconnect the MAF).
- Check that the engine oil does not exceed the maximum level
- Place a suitable container under the vehicle's exhaust pipe to collect any dirty liquid that may leak out during cleaning

5.3 Connection to the particulate filter

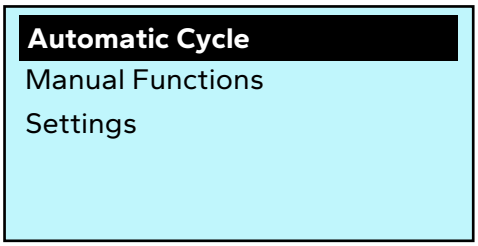
There are three possible methods to connect KX1000 to clean the particulate filter:



6 Use

6.1 Automatic Cycle

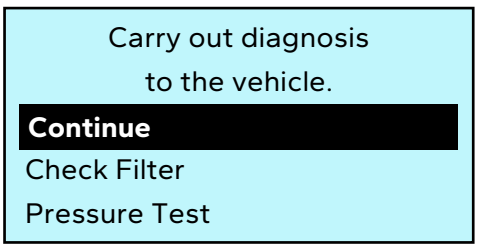
After connecting KX1000 to the vehicle battery, the following message appears:



- Select Automatic Cycle with the selection keys
- Press the ENTER START button to confirm

The subsequent displays will guide the operator in a simple and intuitive way through all the operations necessary to complete the cleaning cycle.

The following message appears on the display:

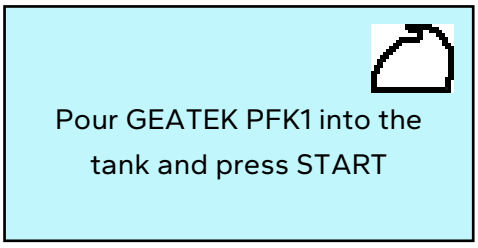


Always diagnose the vehicle before cleaning.

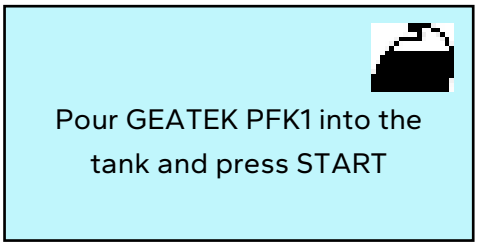
Use the supplied pressure sensor to accurately diagnose the particulate filter clogging status and the correct operation of the differential pressure sensor. These checks can be

performed using the manual functions Check Filter and Pressure Test. See chapter 6.2 Manual Functions for the use of these two functions.

- Select Continue with the selection keys
- Press the ENTER START button to confirm

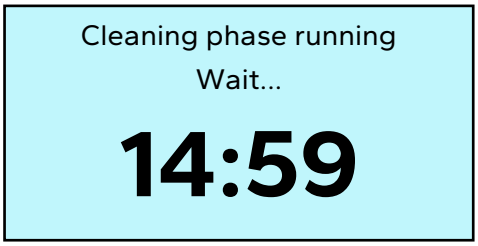


When the bottle of GEATEK PFK1 is poured into the tank KX1000 detects it

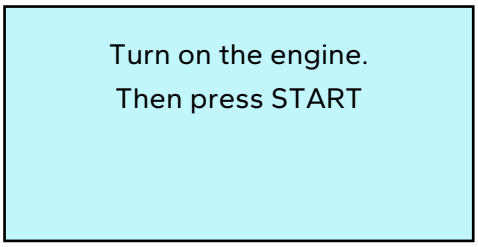


Press ENTER START to inject GEATEK PFK1 into the particulate filter

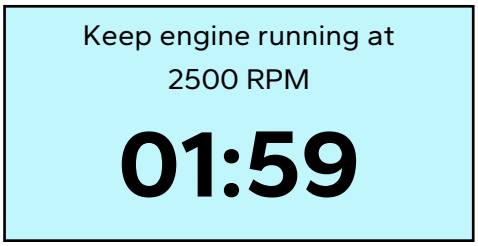
During this phase KX1000 injects GEATEK PFK1 intermittently and stops automatically when the liquid inside the tank runs out.



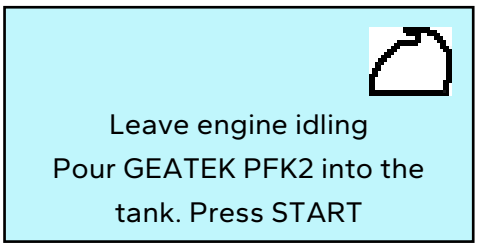
After injecting GEATEK PFK1, you must wait 15 minutes for the product to work. A countdown is displayed. At the end



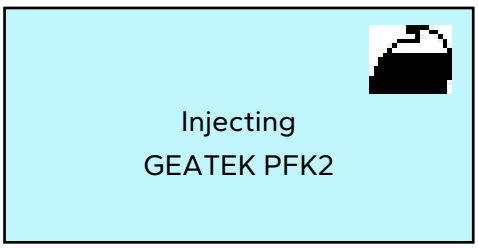
After turning on the engine, press ENTER START to continue the cleaning cycle



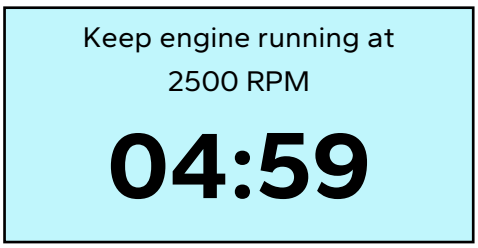
It is necessary to accelerate up to 2500 rpm for 2 minutes, or as long as the vehicle allows, to exploit the pressure generated by the exhaust gases. At the end of the countdown



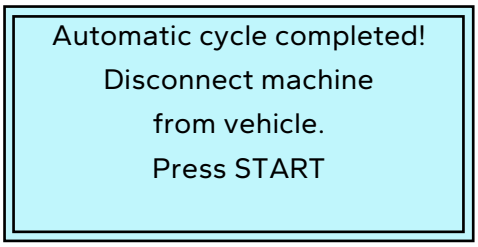
With the engine idling, press ENTER START to start the injection of GEATEK PFK2



When the injection is finished, this message will appear on the KX1000 display



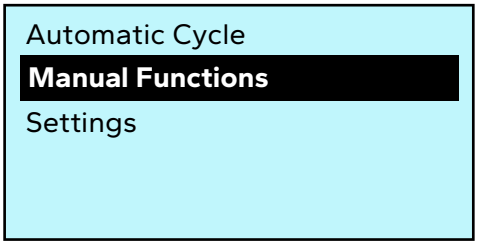
It is necessary to accelerate up to 2500 rpm for 5 minutes to exploit the pressure generated by the exhaust gases. At the end of the countdown, the display shows



The automatic cleaning cycle is finished. Press ENTER START or ESC STOP to return to the main menu. Disconnect KX1000 from the vehicle and reconnect the disconnected sensor to perform cleaning.

6.2 Manual functions

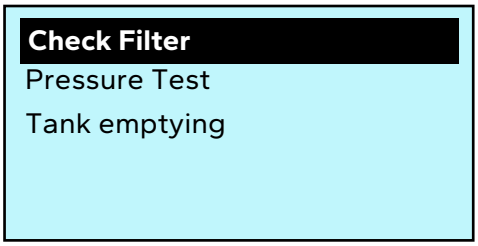
After connecting KX1000 to the vehicle battery, the following message appears:



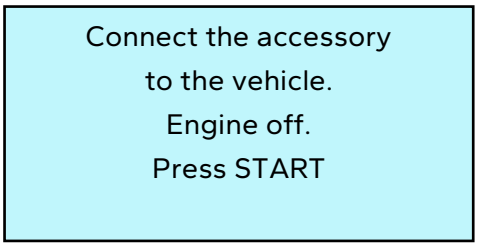
- Select Manual Functions with the selection keys
- Press the ENTER START button to confirm

6.2.1 Check Filter

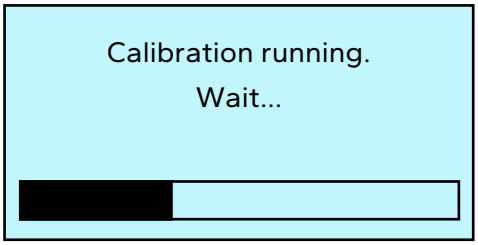
When entering the Manual Functions menu, these functions appear



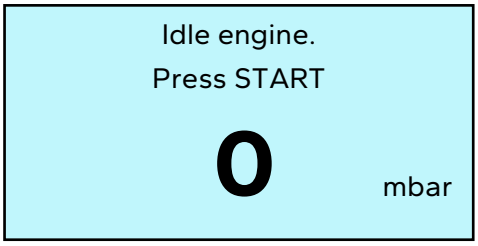
- Select Check Filter with the selection keys
- Press the ENTER START button to confirm



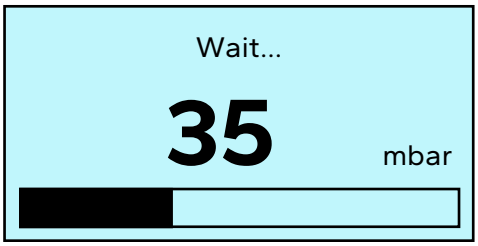
To check the clogging status of the vehicle's particulate filter, you need to connect the DPF pressure sensor to socket **10**. After connecting it and screwing the safety ring, press ENTER START to continue.



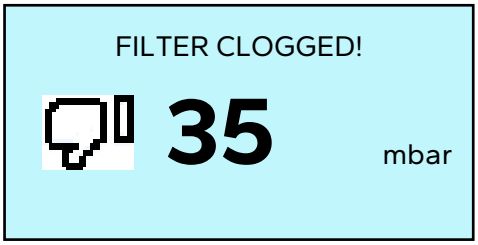
With the vehicle engine off, the sensor calibration takes place. Wait a few seconds for it to complete automatically



Start the vehicle engine and keep it idling. Press ENTER START to start the particulate filter check

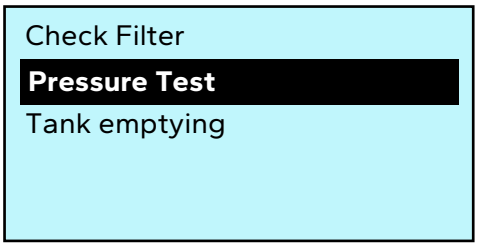


During this phase the measurement is performed and the instantaneous pressure in mbar is displayed. After a few seconds the message with the measurement result appears

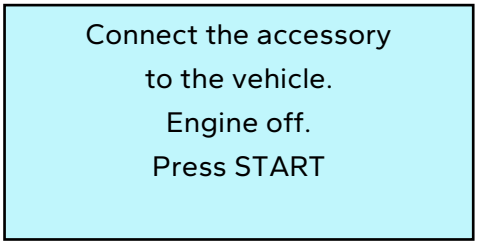


6.2.2 Pressure Test

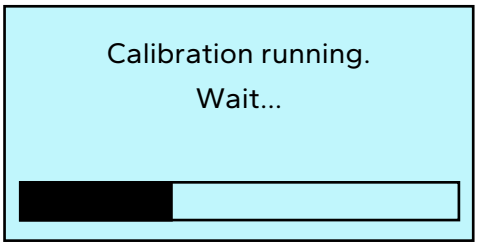
When entering the Manual Functions menu, these functions appear



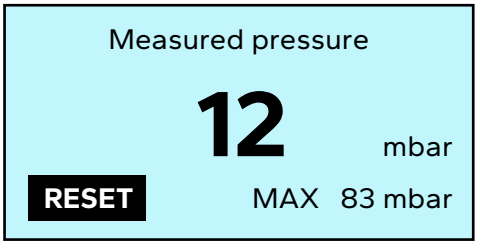
- Select Measure Pressure with the selection keys
- Press the ENTER START button to confirm



To measure the instantaneous and maximum pressure of the vehicle's particulate filter, it is necessary to connect the DPF pressure sensor to socket **10**. After connecting it and screwing the safety ring, press ENTER START to continue.



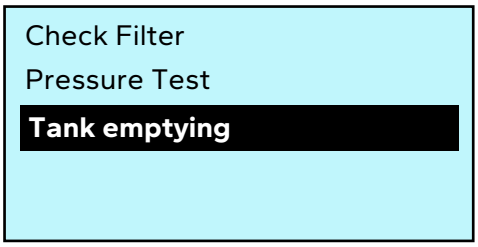
With the vehicle engine off, the sensor calibration takes place. Wait a few seconds for it to complete automatically



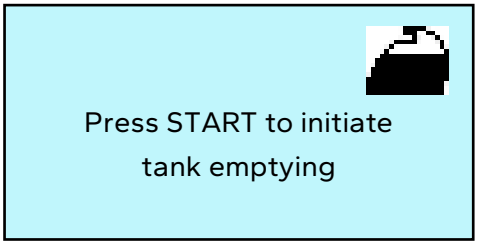
Start the vehicle engine to take the measurement. The instantaneous pressure is displayed in the center of the screen, while the maximum pressure detected during the measurement session is displayed in the lower right corner.
Press ENTER START to reset the maximum measured value.

6.2.3 Tank emptying

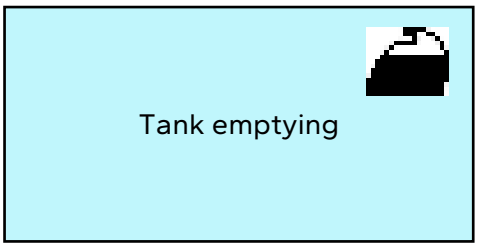
When entering the Manual Functions menu, these functions appear



- Select Tank emptying with the selection buttons
- Press the ENTER START button to confirm



Fit a vehicle fitting into tube **7** and then place tube **7** into a recovery container. Press ENTER START to begin emptying

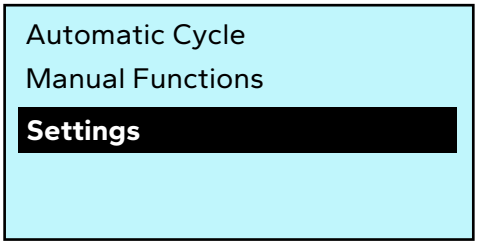


The tank is emptied intermittently. The function stops automatically when finished.

Press ENTER START to return to the main menu.

6.3 Settings

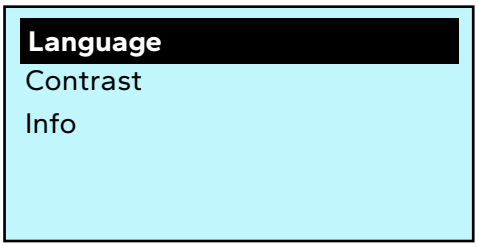
After connecting KX1000 to the vehicle battery, the following message appears:



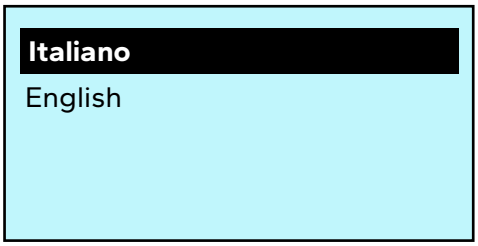
- Select Settings with the selection keys
- Press the ENTER START button to confirm

6.3.1 Language

When you enter the Settings menu, these functions appear

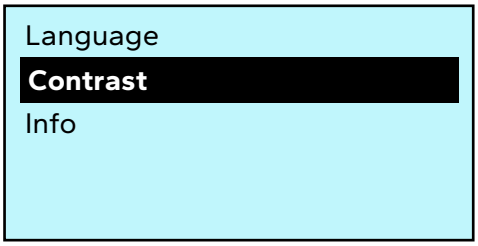


- Select Language with the selection keys
- Press the ENTER START button to confirm

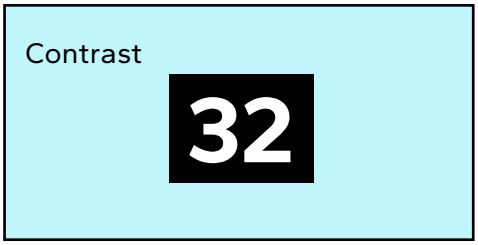


6.3.2 Contrast

When you enter the Settings menu, these functions appear



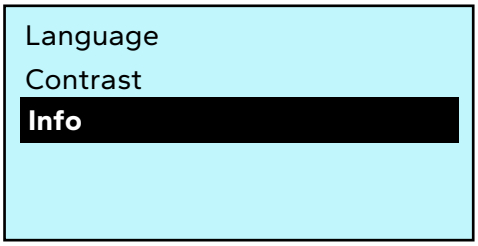
- Select Contrast with the selection keys
- Press the ENTER START button to confirm



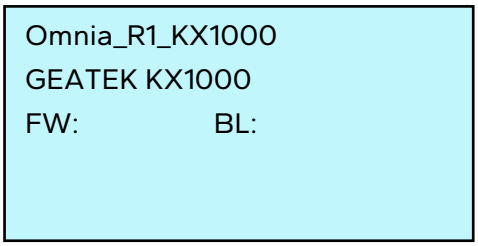
Use the selection keys to change your preferred contrast.

6.3.2 Info

When you enter the Settings menu, these functions appear



- Select Info with the selection keys
- Press the ENTER START button to confirm



KX1000 information and firmware versions are displayed

7 KX1000 Maintenance

<u>WARNING</u>: All maintenance operations must be carried out with the KX1000 disconnected from the power supply and from the vehicle. It is recommended to wear personal protective equipment and to comply with current regulations regarding hygiene and safety at work.

To ensure that your KX1000 functions properly and remains reliable for a long time, it is essential to follow the instructions below:

- Clean the KX1000 bodywork with non-aggressive and abrasive products.
- Empty the KX1000 tank after completing a cleaning cycle.
- Do not leave KX1000 exposed to sunlight or weather.
- Avoid violent impacts when handling the KX1000.
- Empty the KX1000 tank before moving.
- Periodically check the condition of the connection tube. If the tube is damaged, replace it immediately with a new one to avoid possible malfunctions and accidental product leakage.

Use only original spare parts

8 Diagnosis and troubleshooting

If a problem occurs, the equipment will display one of the following messages and warn the operator with an acoustic signal.

MESSAGE	CAUSE	POSSIBLE SOLUTION
"WARNING! Insufficient power supply"	The equipment cannot function properly at too low a voltage.	Check that the vehicle battery is charged (measure at least 13 V).
"ATTENZIONE! Impossibile iniettare il liquido"	The equipment is unable to inject cleaning liquid.	1) Check that the pump is activated. 2) Check that the adapter is correctly connected to the quick coupling of the liquid delivery tube **7**. 3) Check that the one-way valve **8** is not clogged or blocked.
"ERROR! E5"	Pump driver power supply error.	1) Check that the vehicle battery is charged (measure at least 13 V). 2) Check that the pump is not short-circuited.
"ERROR! Measured pressure"	Overpressure during DPF pressure sensor calibration	Make sure the vehicle engine is turned off during the sensor calibration phase.