

# GEDORE

KLANN EXPERIENCE

Operating instructions

EN

## KL-0860-100

Brake fluid tester



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**ENGLISH****EN**

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## 1. READ AND UNDERSTAND FOR YOUR SAFETY



Read and understand these operating instructions **before using** the brake fluid tester and observe all safety and warning instructions! Misuse can result in **DEATH** or **SEVERE INJURIES**! The operating instructions are a part of the brake fluid tester. Keep these operating instructions at a safe place for future reference, and always pass them on to subsequent users of the brake fluid tester! The brake fluid tester complies with the recognised rules of technology as well as the relevant safety regulations.

### 1.1 Target group

These operating instructions are **exclusively** intended for skilled personnel in specialised motor vehicle workshops!

The brake fluid tester **may only be** used by skilled personnel in specialised motor vehicle workshops who are familiar with the basic regulations on work safety and accident prevention!

✔ **Never** allow unauthorised, inexperienced persons, minors and children or persons with limited physical, sensory, and mental abilities to use the brake fluid tester!

### 1.2 Obligations of the owner

Pursuant to the German Ordinance on Industrial Safety and Health (*BetrSichV*), employers are obliged to provide their employees with safe work equipment in accordance with the recognised rules of technology and the relevant safety regulations!

✔ The owner of the brake fluid tester **must** ensure that **only** trained personnel in specialised vehicle workshops use the brake fluid tester.

✔ The owner of the brake fluid tester **must** ensure that the instructions for use are available to the user and that the user has completely read and understood the operating instructions for use **before** using the brake fluid tester.

✔ The owner of the brake fluid tester **must** ensure that the user is familiar with the basic regulations on work safety and accident prevention and that the personal protective equipment is available to him.

### 1.3 Intended use

**The brake fluid tester ...**

✔ **may only** be used on motor vehicles such as cars, vans and motorbikes with **DOT 3**, **DOT 4** and **DOT 5.1** glycol-based brake fluids!

✔ **may only** be used to measure the water content % in brake fluids!

✔ **may only** be used with **GEDORE Automotive** genuine spare parts and accessories!

✔ **may only** be used in the way described in these operating instructions!

⚠ Any other use can result in **DEATH** or **SEVERE INJURIES**!

### 1.4 Reasonably foreseeable misuse

**The brake fluid tester ...**

✔ **must never** be used to measure other fluids or in any other way than intended!

✔ **must never** be used in explosive areas or immersed in highly flammable liquids and gases!

✔ **must never** be used with bridged, modified, or removed safety devices!

✔ **must never** be modified, converted, or used for other purposes without authorisation!

⚠ **Always** use the brake fluid tester as intended. Any other use can result in **DEATH** or **SEVERE INJURIES**!

## 1.5 Basic safety instructions and warnings

### **⚠ WARNING - Failure to observe this warning may result in an accident or death.**




When using the brake fluid tester, **always** observe the following safety and warning instructions as well as measures to avoid **DEATH** or **SERIOUS INJURY** as well as property damage due to hazards, misuse, abuse and unsafe handling!

- ✔ Read and understand these operating instructions **before using** the brake fluid tester and observe all safety and warning instructions for **safe use!**
- ✔ **Always** work with the brake fluid tester extractor in accordance with the basic regulations on work safety, accident prevention and environmental protection!
- ✔ **Always** use the brake fluid tester as intended! **GEDORE Automotive GmbH** accepts no liability or warranty or guarantee claims for injuries and damage resulting from improper use or failure to observe the safety!
- ✔ **Before each use**, check the brake fluid tester extractor **carefully** for damage, loose parts, or unauthorised , modifications. **Never** use it , if you notice any such deficiencies!
- ✔ The brake fluid tester may **only** be opened, checked and repaired by specially trained personnel at **GEDORE Automotive GmbH!**
- ✔ **Only** use original spare parts and accessories from **GEDORE Automotive GmbH** for the brake fluid tester!
- ✔ **Always** observe the vehicle-specific manufacturer's specifications when working with the brake fluid tester!
- ✔ It is **essential** to avoid dropping, hitting or knocking the brake fluid tester!
- ✔ **Never** use the brake fluid tester when you are tired or under the influence of alcohol, drugs, or medication!
- ✔ **Always** keep the brake fluid tester as out of the reach of unauthorised, inexperienced and underage persons as well as children, or persons with limited physical, sensory and mental abilities!
- ✔ Electrical and electronic devices can cause a spark discharge. **Never** use the brake fluid tester in areas where there is a risk of explosion and **never** immerse it in flammable liquids or gases, e.g. in a fuel tank!
- ✔ **Avoid** direct sunlight on the videoscope for a longer period of time and keep it away from heat and fire!
- ✔ The measuring probe on the brake fluid tester is **IP67**dust/water protected and may be immersed in brake fluid for short periods. The remaining components are not waterproof. It is therefore **essential** to avoid contact with liquids and **never** use it with wet hands!
- ✔ **Never** bend the measuring probe on the brake fluid tester. This can damage it.
- ✔ **Always** wear your personal protective equipment, e.g. safety goggles, protective gloves when working if necessary!
- ✔ Interrupt your work **immediately** if you are unsure about using the brake fluid tester tool , and contact **GEDORE Automotive GmbH!**
- ✔ Technical changes and errors reserved!

## 1.6 Labelling of the warnings

Warnings warn of potential **hazards**. Always observe these warnings to avoid **DEATH** or **INJURIES!**

For better differentiation, warnings in these operating instructions are classified as follows:

Warning sign	Meaning
 <b>WARNING</b>	<b>Indicates</b> a hazardous situation, which, if not avoided, could cause <b>DEATH</b> or <b>SERIOUS INJURIES</b> .
 <b>CAUTION</b>	<b>Indicates</b> a hazardous situation which, if not avoided, could cause <b>MODERATE</b> or <b>MINOR INJURIES</b> .
<b>ATTENTION</b>	<b>Indicates</b> a situation which, if not avoided, could cause damage to the tool or an object in its vicinity.
	<b>Note</b> on important information and useful tips.

## 1.7 Care / storage

### CAUTION

Improper care and storage can damage the brake fluid tester.

- ✔ Therefore, **never** immerse the brake fluid tester in water, solvents, or other cleaning liquids.
- ✔ After use, clean the brake fluid tester with a clean, soft and dry cleaning cloth.
- ✔ Store the brake fluid tester and the operating instructions in a dry and clean place.

## 1.8 Environmentally friendly disposal

Dispose of the injector extractor brake fluid tester the packaging material in an environmentally compatible way in accordance with the legal requirements. If necessary, ask your local authorities about environmentally friendly disposal options.

## 1.9 Duty to provide information pursuant to the Electrical and Electronic Equipment Act (*ElektroG*)

Electrical and electronic equipment contains harmful substances and valuable resources. Therefore, do not dispose of defective appliances in household waste, but recycle them separately. This is indicated by the symbol of the crossed-out dustbin on the appliance. If your old device cannot be reused, you are welcome to send it to us at the following address:

**GEDORE Automotive GmbH**  
**Breslauer Straße 41**  
**78166 Donaueschingen**



We will then take over the complete take-back and professional disposal via our certified waste disposal companies.

## 1.10 Duty to provide information pursuant to the Battery Act (*BattG*)

Batteries must not be disposed of in household waste. This is indicated by the symbol of the crossed-out dustbin on the appliance. As the end user, you are legally obliged to return them. Batteries may contain harmful substances that can damage the environment or health if not stored or disposed of properly. Used batteries can be returned to designated collection points, e.g. municipal collection points or retailers. Used batteries may only be returned to collection points when discharged and with the battery terminals protected against short-circuits!

**The symbols on the batteries have the following meaning:**

*Crossed-out dustbin* = The battery must not be disposed of in household waste.

*Pb* = Battery contains more than 0.004% lead by mass.

*Cd* = Battery contains more than 0.002% cadmium by mass.

*Hg* = Battery contains more than 0.0005% mercury by mass.



**2. PRODUCT DESCRIPTION**

**2.1 KL-0860-100 - Brake fluid tester**

Can be used universally on cars, vans and motorbikes with conventional DOT 3, DOT 4 and DOT 5.1 glycol-based brake fluids.

For professional testing of brake fluid quality. The test is carried out using an electrolytic measuring method and indicates the water content % in the brake fluid.

- Rapid analysis of brake fluids of classes DOT 3, DOT 4, DOT 5.1
- Precise measurement of the water content in % using the electrolytic measuring method
- High measuring range from 0.1% to 6.0% water content
- Fast measurement result within 0.5 seconds
- Simple and convenient one-handed operation
- Automatic switch-off function after 5 minutes
- Easy-to-read 2" LCD display with backlighting
- Visual and audible alarm function depending on brake fluid quality
- Flexible measuring probe 250 mm long
- Measuring probe dust and water protected to IP67
- Power supply with 9V block battery (not included!)
- Weight without battery 120g



**2.2 Scope of delivery**

- 1x brake fluid tester
- 1x product manual

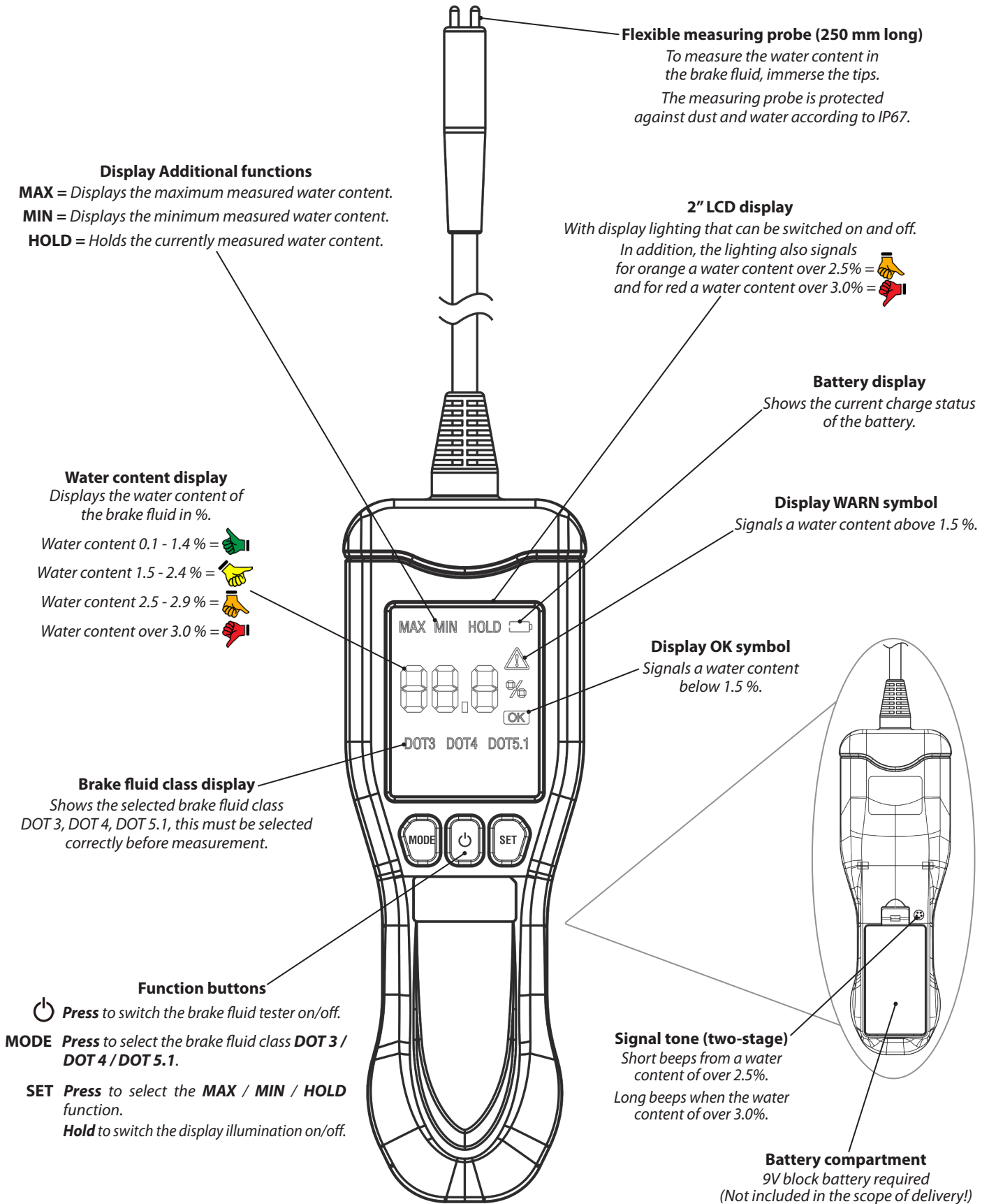
**2.3 Specifications**

For brake fluid classes: .....	DOT 3, DOT 4, DOT 5.1
Measuring range (water content in %): .....	min. 0.1% - max. 6.0%
Time to measurement result: .....	0.5 seconds
LCD display: .....	2" (54 mm)
Measuring probe: .....	IP67 (dust and water protected)
Power supply: .....	9 V block battery (not included in the scope of delivery!)
Temperature range: .....	-10°C to +50°C (14 °F to 122 °F)
Weight: .....	120g (without battery!)




## 3. OPERATION AND FUNCTION OVERVIEW







This overview shows basic components, designations, information and instructions for using the brake fluid tester.






**Measure the water content % of the brake fluid:**

1. Before using the brake fluid tester for the first time, first insert a conventional 9V block battery in the battery compartment. This is not included in the scope of delivery!
  2. Switch on the brake fluid tester. To do this, briefly press the button , the display is switched on and briefly lights up completely (self-test).
    - ⓘ If the brake fluid tester cannot be switched on, check the charge status of the battery and replace it if necessary.
  3. By holding the **SET** button for about 3 seconds, you can switch the display illumination on or off as required.
  4. Determine the brake fluid class to be tested (**DOT 3 / DOT 4 / DOT 5.1**) on the vehicle according to the manufacturer's specifications and then select it correctly on the brake fluid tester. To do this, briefly press the **MODE** button, the selected brake fluid class is shown on the display.
- ⚠** Always observe the vehicle manufacturer's specifications when analysing the measurement result!
5. Immerse the tip of the measuring probe in the brake fluid to be tested; the measurement result (water content of the brake fluid in %) appears on the display after approx. 0.5 seconds.
    - ⓘ The additional **MAX / MIN / HOLD** functions can be used during the measurement by pressing the **SET** button.

Water content %			Signal tone	Display illumination	Condition assessment
0.1 – 1.4 %	Lit	-	-	-	
1.5 – 2.4 %	-	Lit	-	-	
2.5 – 2.9 %	-	Lit	Short beeps	Lights up ORANGE	
over 3.0%	-	Lit	Long beeps	Lights up RED	

6. Switch off the brake fluid tester after use. To do this, briefly press the button .
  - ⓘ When not in use, the brake fluid tester switches itself off after 5 minutes.
7. Finally, wipe the measuring probe on the brake fluid tester with a clean, soft and dry cleaning cloth.



## 4. EU DECLARATION OF CONFORMITY / UK DECLARATION OF CONFORMITY

### EU DECLARATION OF CONFORMITY (Original EU Declaration of Conformity)

**Name and address of the manufacturer**

GEDORE Automotive GmbH  
Breslauer Straße 41  
78166 Donaueschingen, GERMANY



**We herewith declare** that the product that is described below:

**Designation:** Brake fluid tester

**Series / type:** KL-0860-100

complies with all relevant provisions of the **EMC Directive 2014/30/EU** on the electromagnetic compatibility of electrical and electronic equipment, the **Low Voltage Directive 2014/35/EU** on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits and the **RoHS Directive 2011/65/EU and 2015/863/EU (ROHS III)** on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

The declaration loses its validity if the product is converted or modified without our consent.

**Applied harmonised EN standards:**

EN 55011:2016+A2:2021 - *Industrial, scientific and medical equipment - Radio disturbance - Limits and methods of measurement*

EN 61010-1:2010+A1:2019 - *Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements*

EN IEC 61000-3-2:2019+A1:2021 - *Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic currents (Device input current  $\leq 16$  A per conductor)*

EN 61000-3-3:2013+A1:2019 - *Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems for equipment with a rated current  $\leq 16$  A per conductor not subject to a special connection condition*

EN IEC 61000-6-1:2019 - *Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments*

**Other applied national technical standards and specifications:**

DIN EN IEC/IEEE 82079-1:2021-09 - *Preparation of instructions for use of products - Part 1: Principles and general requirements*

**Authorised representative of GEDORE Automotive GmbH for the compilation of all technical documents:**

Head of product development, Breslauer Straße 41, 78166 Donaueschingen, GERMANY

Donaueschingen, 27 November 2023

ppa. Michael Wehler, Head of Global Business Development, GEDORE Automotive GmbH

**UK DECLARATION OF CONFORMITY (Original UK Declaration of conformity)****Name and address of manufacturer**

GEDORE Automotive GmbH  
Breslauer Straße 41  
78166 Donaueschingen, GERMANY



**We hereby declare** that the product described below

**Designation:** Brake fluid tester

**Series / Type:** KL-0860-100

conforms to all relevant provisions of the **Electromagnetic Compatibility Regulations 2016** on the harmonisation of the laws of the Member States relating to electromagnetic compatibility, the **Electrical Equipment (Safety) Regulations 2016** on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits and the **Electrical and Electronic Equipment Regulations 2012 (as amended)** on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

The declaration loses its validity if the product is converted or modified without our consent.

**Designated (UK) or harmonised (NI) standards applied:**

BS EN 55011:2016+A2:2021 - Industrial, scientific and medical equipment. Radio-frequency disturbance characteristics. Limits and methods of measurement

BS EN 61010-1:2010+A1:2019 - Safety requirements for electrical equipment for measurement, control, and laboratory use  
General requirements

BS EN IEC 61000-3-2:2019+A1:2021 - *Electromagnetic compatibility (EMC). Limits. Limits for harmonic current emissions (equipment input current = 16 A per phase)*

BS EN 61000-3-3:2013+A2:2021 - *Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection*

BS EN IEC 61000-6-1:2019 - *Electromagnetic compatibility (EMC) - Generic standards. Immunity standard for residential, commercial and light-industrial environments*

BS EN IEC 61326-1:2021 - *Electrical equipment for measurement, control and laboratory use. EMC requirements. General requirements*

**Other technical standards and specifications applied:**

EN IEC/IEEE 82079-1:2020 - *Preparation of information for use (instructions for use) of products - Part 1: Principles and general requirements*

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Donaueschingen, 27 November 2023

ppa. Michael Wehler, Head of Global Business Development, **GEDORE Automotive GmbH**

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