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Original Instructions
Version 1
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12V LCD

BRAKE FLUID BOILING POINT TESTER

23708



UK
CA



User Manual for: Brake Fluid Boiling Point Tester**Stock No:** 23708**Part No:** BFT5

Read this manual in full before using this product and retain it for future use. Always use the latest version of the manual. Please visit drapertools.com/manuals for the latest version.

1. Intended Use

This product is designed to accurately measure the water content and boiling point of brake fluid essential for safety checks and servicing. Additional to brake fluid, the tester can also measure the temperature of other fluids in conjunction with a thermocouple.

Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

This product is suitable for use by enthusiasts and tradespersons alike.

2. Specification

Stock No.	23708
Part No.	BFT5
Compatible Brake Fluid:	Dot 3 / Dot 4 / Dot 5.1
Power Supply:	12V Car battery
Testing Current:	5-7A
Brake Fluid Measuring Range:	≤ 320°C
Boiling Point Accuracy:	+/- 5%
Tester Dimensions:	90 x 168 x 40mm
Probe Length:	100mm
Probe Diameter:	25mm
Net Weight:	436g
Syringe Capacity:	10ml
Plastic Beaker Capacity:	50ml
Positive Lead Length:	2m
Negative Lead Length:	2m
Flexible Tube Length:	200mm
Working Environment:	0-50°C

Important: Read all the Health and Safety instructions before attempting to operate, maintain or repair this product. Failure to follow these instructions may result in injury or damage to the user, the product or the vehicle.

3.1 General Health & Safety

- **DO NOT** use the tester for any other purpose than which it is designed for.
- **DO NOT** touch the probe while it is switched on as it will be hot.
- **DO NOT** allow untrained persons to use the tester.
- Keep children and unauthorised person away from the work area.
- **DO NOT** use whilst under the influence of drugs, alcohol or intoxicating medication.
- Keep the work clean and tidy and ensure adequate lighting.
- After testing, ensure to keep the tester submerged for least 3 seconds to allow the heating coil to cool down.
- When testing the brake fluid level **MUST** be above the minimum volume level stated on the beaker.
- The tester is for use with 12V circuits only.
- Only use the leads and clips supplied with the tester.
- Avoid shaking or knocking the testing probe especially after testing.
- Handle the unit with care and if dropped or showing signs of damaged get it checked by a qualified service person.

3.2 Brake Fluid Safety



WARNING! – Brake fluid is flammable – keep away from sources of ignition and hot surfaces such as the exhaust manifold.



WARNING! – Brake fluid will damage paintwork, clear up any spillages immediately.

- Always read and follow the safety instructions on the brake fluid container.
- Wear suitable eye and hand protection. If brake fluids enter eyes rinse with plenty of water and seek medical advice.
- Dispose of waste fluid in accordance with local authority regulations.

3.3 Working with Vehicle Batteries



WARNING! – Risk of explosive gases - Working in the vicinity of lead-acid batteries is dangerous as they generate explosive gases during normal operation. Follow these instructions and those published by the battery manufacturer when working in the vicinity of the battery.

- When working near a lead-acid battery, ensure someone is within range of your voice or close enough to come to your aid.
- Never smoke or allow a spark or flame near the battery or engine.
- Take extra care not to drop a metal tool onto the battery. It could spark or short circuit the battery.
- Wear suitable eye and face protection.
- Have plenty of fresh water and soap nearby in case battery acid contacts eyes, skin or clothing. If acid enter eyes, wash eye under cold clean running water for at least 15 minutes and get medical attention immediately.
- Remove any metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short circuit current high enough to weld a metallic item, which may cause a severe burn.

3.4 Explanation of Symbols



Read the instruction manual



Warning!



Do not abandon in the environment



Wear face mask and safety glasses



Keep out of reach of children



WEEE – Waste Electrical & Electronic Equipment
Do not dispose of this product with domestic waste

4. Identification

Carefully remove the product from the packaging and examine it for any signs of damage that may have occurred during shipment. If any part is damaged or missing, do not attempt to use the product.

Please contact the Draper Helpline; contact details can be found at the back of this manual.



Please visit drapertools.com for our full range of accessories and consumables.

Important: Before operating this product, read and understand all the safety instructions listed in this manual.

5.1 Brake Fluid Boiling Point

- The wet boiling point is the reference temperature for changing the brake fluid.
- The dry boiling point is the reference temperature for new brake fluid.

Brake Fluid Type	DOT 3	DOT 4	DOT 5.1
Dry Boiling Point	≥ 205°C	≥ 230°C	≥ 260°C
Wet Boiling Point	≥ 140°C	≥ 155°C	≥ 180°C

5.2 Testing the Brake Fluid

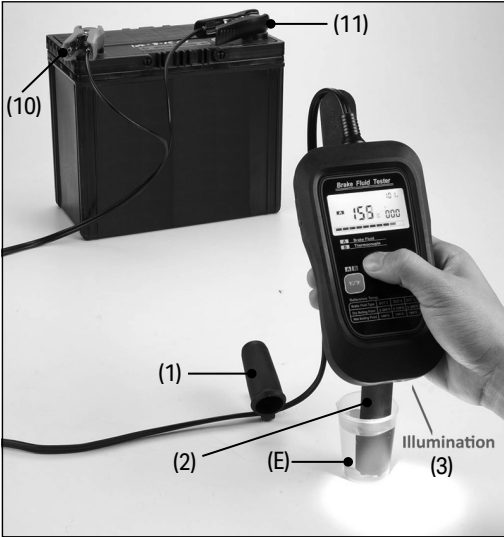


Fig. 1

1. Connect the clips to a 12V vehicle battery – ensuring the red (+) clip is connected to the positive terminal on the battery and the black (-) clip is connected to the negative terminal.
2. The tester will switch on automatically when connected to the battery and function 'A' (Brake fluid test) will be displayed.

3. Remove the cover (1) from the testing probe (2) and use the syringe (C) supplied to draw some brake fluid into the test beaker (E).
4. Fully immerse the end of the probe (2) into the brake fluid – ensure the brake fluid level is above the minimal brake fluid volume line on the beaker.
5. Press and hold the 'Start' button (4) to start the test – ensure that the probe remains upright in the fluid during the test.
6. Refer to the chart under **section 5.1 Brake fluid boiling point** to determine whether the brake fluid needs replacing.
- After testing wait at least 3 seconds for the heating wire to cool down before removing the probe from the brake fluid.
- If 'Wait cool' appears on the screen allow the heating wire to cool down before the next test.

5.3 Measuring using External Thermocouple (not supplied)

1. Connect the clips to a 12V vehicle battery – ensuring the red (+) clip is connected to the positive terminal on the battery and the black (-) clip is connected to the negative terminal.
2. The tester will switch on automatically when connected to the battery and function 'A' (Brake fluid test) will be displayed. Press and hold the 'C/F' button (5) for 3 seconds to switch to function 'B' (External Thermocouple).
3. Connect a K-type thermocouple to the tester socket (9) to start the measurement.
- During function 'B' if the thermocouple is not connected or the measured temperature is above 500°C, 'Hi' will appear on the screen.
- During function 'B' if measured temperature is below -60°C, 'Lo' will appear on the screen.

5.4 Save Button Operation

- Press and hold the 'Save' button to save the current brake fluid boiling point.
- Press the 'Save' button to retrieve the last 5 reading saved.

6.1 Maintenance

- After use, wipe clean the testing probe and replace the cover.
- After use and when storing wrap the leads round the storage bracket (8).
- Store all the parts in the case supplied and store in a cool, dry, childproof area.

6.2 Calibration Test

- To confirm the accuracy of the tester, carry out a test using clean water.
- If the tester is working correctly the temperature reading will be 100°C/212°F.

6.3 Disposal

At the end of its working life, dispose of the product responsibly and in line with local regulations. Recycle where possible.

- **DO NOT** dispose of this product with domestic waste; most local authorities provide appropriate recycling facilities.



- Dispose of brake fluid/oil separately and in accordance with local regulations;
DO NOT abandon it in the environment.



7. Warranty

24 months

Visit [drapertools.com/warranty](https://www.drapertools.com/warranty) for full details.

Contact Details

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