

MOTORVAC®

CPS®
AUTOMOTIVE

Brake Fluid Boiling Point Tester

Part Number: 200-0185



OWNER'S MANUAL (English)

For more information or updates, visit www.cpsproducts.com

FOR USE BY QUALIFIED PERSONNEL ONLY



SPECIFICATIONS

Electrical DC-12V, 7A, 85W

Recommended Operating Environment

Operating temperature: 32°F-104°F (0°C-40°C)

Relative humidity..... Between 20-80%

Altitude..... Below 6500 feet (2000 m)

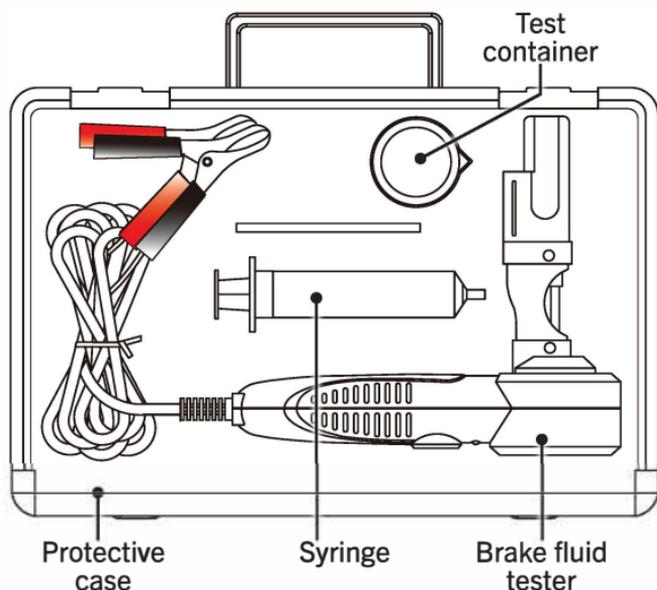
Storage and Transportation

Ambient temperature -40°C to 75°C

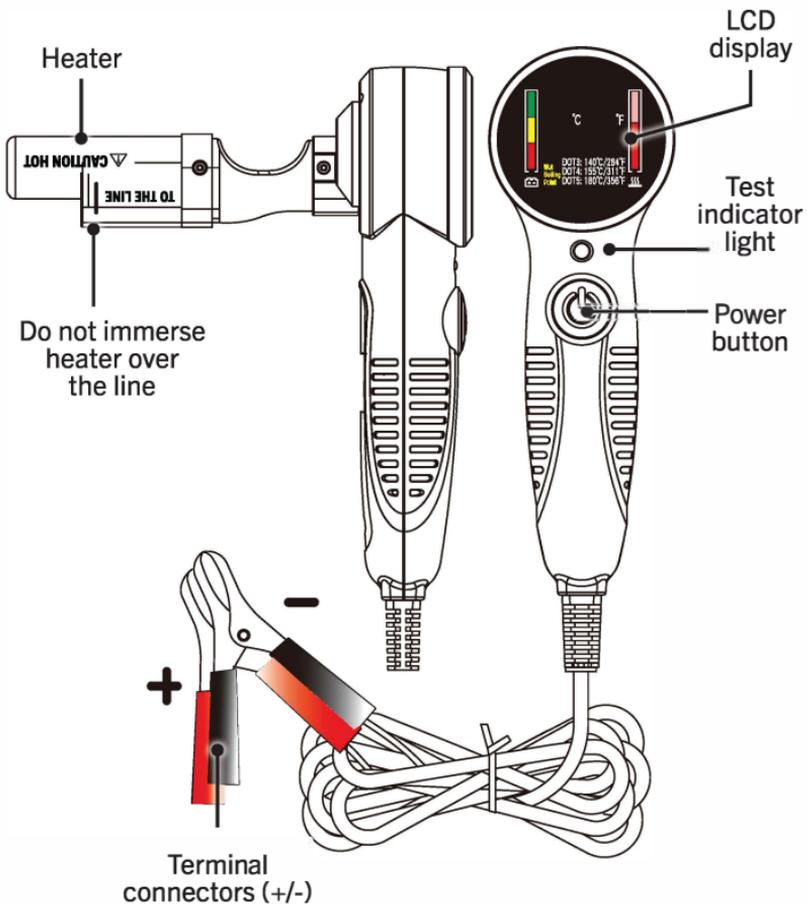
Altitude..... 25000 feet (7620 meters)

Waste Disposal

This tester's components comply with the ROHS standard. Please dispose of waste at a certified Waste Electrical and Electronic Equipment (WEEE) facility for recycling.



LAYOUT

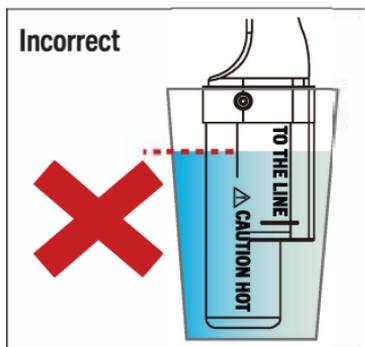
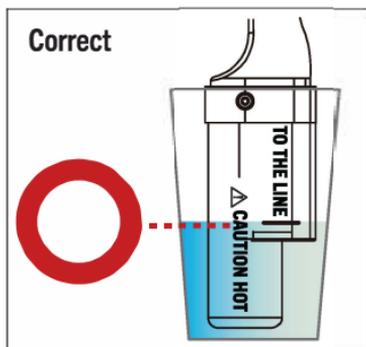


CAUTION: This product is designed solely for testing brake fluid and water. Do not use the tester with other fluids, such as gasoline, diesel, or other flammable liquids.

GENERAL SAFETY INSTRUCTIONS

Read carefully before operation and retain for future reference.

- Avoid rapid changes in temperature. It may cause water vapor condensation inside the tester.
- Do not disassemble the product
- When using a car battery as the power source, start the engine before connecting the tester to the battery to prevent battery drain after testing
- Connect the black (negative) terminal first, followed by the red (positive) terminal
- Avoid pressing the power button unless the heater is immersed to the specified liquid level
- Do not fill with liquid past the indicated “TO THE LINE” marking
- Do not operate the tester without it being in contact with the liquid
- If abnormal readings or malfunctions occur during testing, disconnect the battery connectors immediately



CLEANING

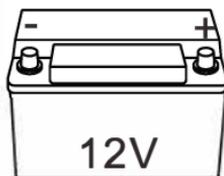
After completing the test, allow any remaining brake fluid to drip from the heater, then rinse with clean water and wipe dry. Do not immerse heater past the “TO THE LINE” marking. Dry the test container and syringe thoroughly, then place back into the supplied case.

OPERATION

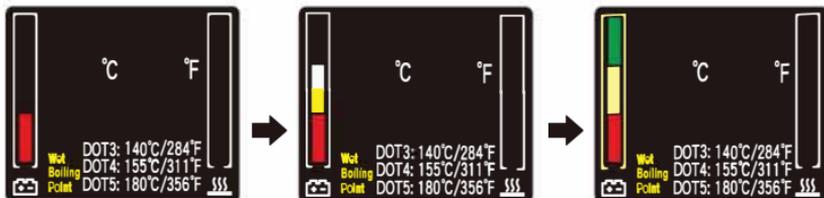
Voltage Detection

1. Start the engine and ensure the battery power is at 12V
2. Connect the battery connectors to the battery.

If the battery is low, the tester will not function, and the indicator light will display red.



LCD Display



Power-Saving Design: To conserve power, the tester will automatically shut off after 1 minute of inactivity.

Dry Burn Prevention: For safety, this tester is equipped with a feature that stops heating and displays “E-1” if the heater is not in contact with fluid. If “E-1” appears, verify proper testing conditions to ensure accurate operation.

If the tester does not activate after connecting to the battery, ensure the connectors are attached to the correct terminals.

OPERATION (continued)

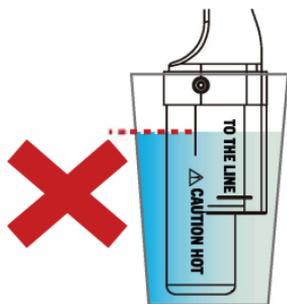
Preparing the Testing Fluid



1. Use the syringe to extract brake fluid from the master cylinder



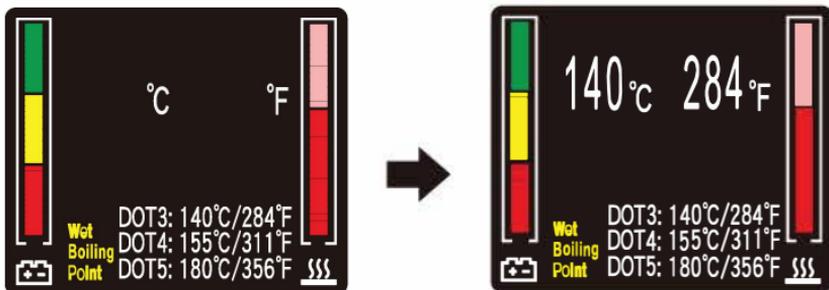
2. Transfer the brake fluid into the test container, filling it with approximately 1.01 oz (30 ml).



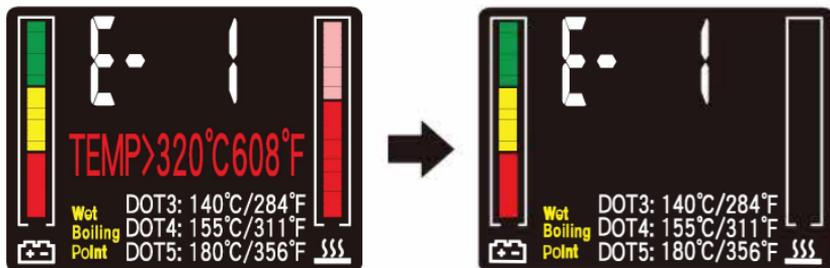
3. Insert the heater into the test container. Do not submerge the heater past the "TO THE LINE" marking. If the brake fluid level is below the "TO THE LINE" marking during testing, the results may be inaccurate. Please repeat the test with the correct fluid amount.

OPERATION (continued)

4. The indicator light will illuminate red when the tester is in standby mode. Press the Power button to begin heating the brake fluid.
5. The green light will flash during heating. Keep pressing the Power button until the test is complete. This process may take up to 30 seconds, depending on the moisture level in the brake fluid.
6. The tester will emit a “beep” when the test is finished, and the boiling point result will appear on the LCD display.
7. Once the test is complete, the indicator light will turn green. To restart the test, wait until the light turns red and then follow steps 1-3 again.



TROUBLESHOOTING



Error Code E-1

This error code indicates the heater is not in contact with the fluid, or the fluid level is below the “TO THE LINE” marking.

The indicator light will turn yellow, and a long “beep” will sound.

Release the Power button. If the temperature exceeds 320°C (608°F), it will disappear and only display “E-1”. After 1 minute, the screen display will automatically clear.

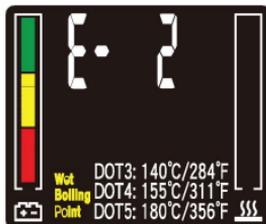
If heating occurs in a container not supplied with the set, and the remaining liquid in the heater is heatable, the temperature will still be shown. However, this is incorrect operation and may damage the heater’s functionality.

To continue using the tester, reconnect to the battery.

When the tester is connected to the battery and heating without the heater touching the fluid, it will display “E-1” and stop heating. Prolonged heating without fluid contact may damage the heater. This is a safety feature to prevent dry burning.

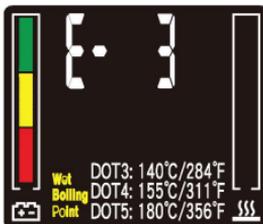
TROUBLESHOOTING (continued)

If error codes persist, please contact technical support.



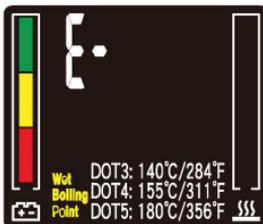
Error Code E-2

This error indicates that the voltage is either too low (below 10.8V) or too high (above 15.7V).



Error Code E-3

This error suggests a problem with the heater or a disconnection of the internal wiring. Contact technical support for more information.



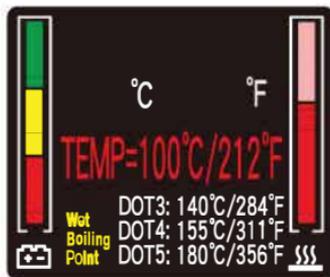
Error Code E

This error is displayed when the operation does not align with the product specifications. Reconnect power and follow the standard operating procedure before attempting the test again.

CALIBRATION TEST

To verify the accuracy of the tester, perform a test using clean water.

If the tester is functioning correctly, the result should display:
TEMP=100°C/212°F



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WET BOILING POINT

Refer to the Wet Boiling Point of the brake fluid displayed on the LCD to determine if the fluid needs to be replaced. The Wet Equilibrium Reflux Boiling Point should not fall below the following temperatures:

Brake Fluid	Composition	Fahrenheit	Celsius
DOT 3	Glycol Ether	284 °F	140 °C
DOT 4	Glycol Ether/ Borate Ester	311°F	155 °C
SUPER DOT 4	Glycol Ether/ Borate Ester	311°F	155 °C
DOT 5	Silicone	356 °F	180°C
DOT 5.1	Glycol Ether/ Borate Ester	374 °F	190°C

Due to variations in the composition and dry and wet boiling temperatures of different brake fluid brands, slight differences in test results may occur. Please refer to the specifications of the brake fluid you are testing.

If the test results show a significant deviation from the expected data, please reconnect the tester to the power source and repeat the test.



MAINTENANCE

- Do not disassemble the tester.
- Wipe the outer casing with a clean cloth. There is no need to clean the internal parts.
- Avoid using cleaners or chemical solvents, as they can damage the plastic parts and printed labels.

MODIFICATIONS

1. The manufacturer does not recommend any product modification. Doing so will void the product warranty.
2. The manufacturer and dealer are not responsible for any damage caused by self-modification or using parts without prior approval from the manufacturer.

WARRANTY

CPS Products, Inc. guarantees that all products are free of manufacturing and material defects to the original owner for one year from the date of purchase. If the equipment should fail during the guarantee period, it will be repaired or replaced (at our option) at no charge. This guarantee does not apply to equipment that has been altered, misused or solely in need of field service maintenance. All repaired equipment will carry an independent 90- day warranty. This repair policy does not include equipment that is determined to be beyond economical repair.



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov



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AUTOMOTIVE

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For latest update to this owner's manual, go to www.cpsproducts.com

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