



EN

Original Instructions
Version 2 – September 2024

BATTERY **DIAGNOSTIC TOOL**

81164



1.1 Intended Use

This battery diagnostic tool is designed to allow you to easily, quickly and accurately measure the actual cold cranking amps capability of the vehicle's starting battery, health state of the battery and the vehicle's starting system and charging system.

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.

1.2 Specification

Stock No.	81164
Part No.	BDT/M
Measure Range	
CCA	100-2000
BCI	100-2000
CA	100-2000
MCA	100-2000
JIS	26A17--245H52
DIN	100-1400
IEC	100-1400
EN	100-2000
SAE	100-2000
GB	100-1400
Working Environment Temp	-20°C-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 battery.

- Turn off the ignition before connecting or disconnecting the tool from the battery to prevent injury to the user or damage to the vehicle's electrical components.
- **DO NOT** allow the positive and negative test clamps to touch.
- **DO NOT** exceed the voltage limits between inputs as specified in this manual.
- **ALWAYS** wear appropriate eye protection to protect from propelled objects as well as hot or caustic liquids.
- Fuel, oil vapours, hot steam, hot toxic exhaust gases, acid, refrigerant and other debris produced by a malfunction engine can cause serious injury or death.
- **DO NOT** use the diagnostic tool in areas where explosive vapour may collect, such as in below-ground pits, confined areas, or areas that are less than 45cm (18 inches)) above the floor.
- Use in a well ventilated room and avoid breathing in the exhaust emission and vapour. **DO NOT** smoke in the vicinity and keep away from flames.
- Keep a dry chemical fire extinguisher suitable for gasoline, chemical and electrical fires in work area.
- Always be aware of rotating parts that move at high speed when an engine is running and keep a safe distance from these parts as well as other potentially moving objects to avoid serious injury.
- **DO NOT** touch any high temperature parts or any running vehicle components to prevent a hazard.

- Block drive wheels before testing with engine running.
- Put the transmission in park (for automatic transmission) or neutral (for manual transmission).
- **NEVER** leave a running engine unattended.
- **DO NOT** wear jewellery or loose-fitting clothing when working on the engine.
- **DO NOT** use this device if the clamps or leads are damaged in any way.
- **DO NOT** attempt to repair this device; it contains no user-serviceable parts.

Unpacking & Checking

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.

3.1 Product Overview



- | | |
|-----------------------------------|---------------------------|
| (1) LCD display | (6) 'OK'/Confirm key |
| (2) Battery status light – Good | (7) Test leads and clamps |
| (3) Battery status light - Charge | (8) 'DOWN' key |
| (4) Battery status light – Bad | (9) 'RETURN' key |
| (5) 'UP' key | (10) 'MENU' key |

4.1 How to use

Connect the red test clamp with the positive battery terminal and black test clamp to the negative battery terminal, the tester will power on automatically.

Note: If the battery is below 7.0V, there will not be enough power for the Diagnostic tool to work, press OK key to continue.

4.2 Select Language (Fig. 1)

- Press MENU to choose Language.
- Using the key pad, press UP/DOWN to choose.
- Press OK to continue.

Using the key pad, press UP/DOWN to choose:

- 1) Battery Test
- 2) Cranking Test
- 3) Charging Test
- 4) Review Data

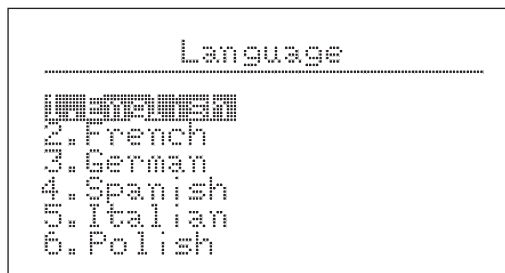


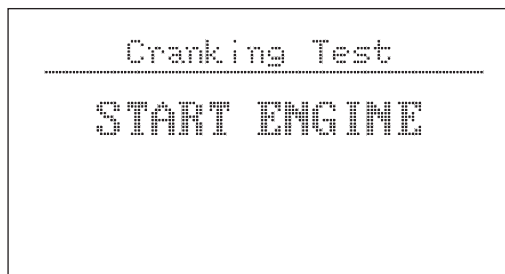
Fig. 1

4.3 Battery Test

Select the battery test and press OK key to continue:

- Input testing standard: the standard can be found on the battery you are testing, such as CCA, BCI, DIN.
- Input rated capacity: this will be found on the battery. Such as BCI/300A for example.
- Then press OK key to start testing.
- The relevant LED will light up as a quick indicator of the battery's status.

Light	Indicator	Battery Status
Green	Good	Fully charged
Yellow	Charge	Charging required
Red	Bad	Replace battery



4.4 Cranking Test (Fig. 2)

- Select the cranking test function, press OK key to continue:
- Start the engine as prompted. The diagnostic tool will automatically complete the cranking test and display the result.

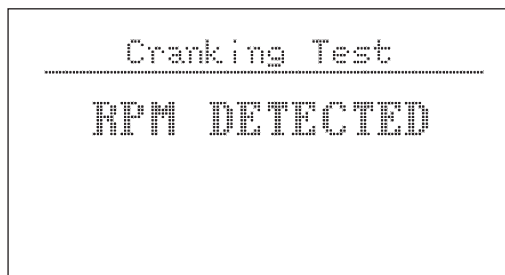


Fig. 2

Test result of the diagnostic tool includes actual cranking voltage and actual cranking time. (Fig. 3)

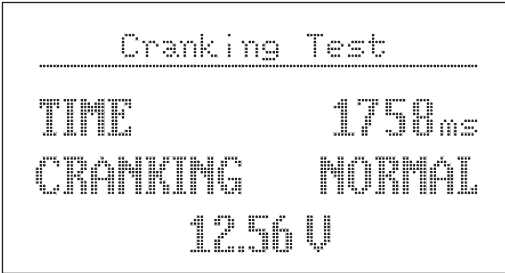
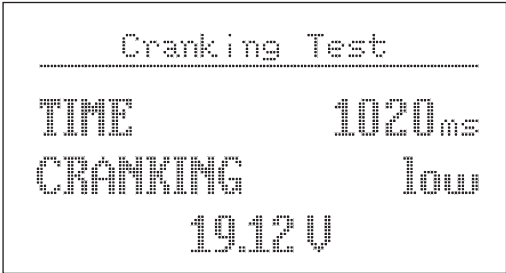


Fig. 3



4.5 Charging Test (Fig. 4)

- Select the charging test. The diagnostic tool will prompt "RIPPLE TEST".

Note: Do not turn off the engine during the test. Turn on/off any electrical appliances in the vehicle during the test.

Follow on screen instructions.

- Refer to the vehicle's instructions or Haynes manual for the recommended procedure to fix the diagnosis.

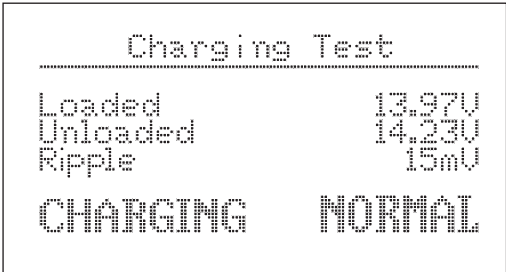
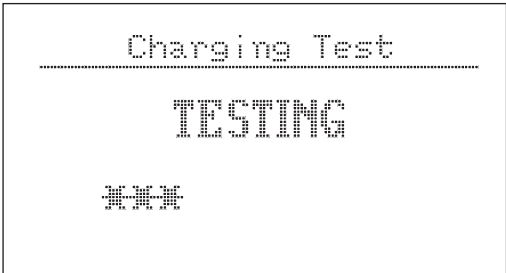
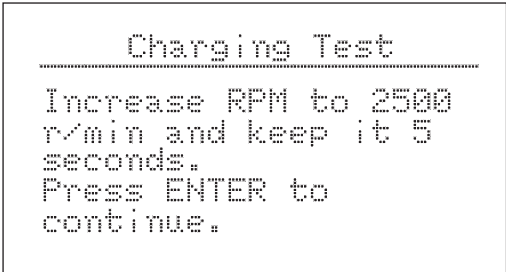


Fig. 4

5. Explanation of Symbols

EN



Read the instruction manual



European conformity



Warning!



UK Conformity Assessed



WEEE –

Waste Electrical & Electronic Equipment

Do not dispose of Waste Electrical & Electronic Equipment
in with domestic rubbish

6. Spares, Returns and 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.



WEEE –

Waste Electrical & Electronic Equipment

Do not dispose of Waste Electrical & Electronic Equipment
in with domestic rubbish

7. Warranty

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

Contact Details

Draper Tools

Draper Tools Limited
Hursley Road
Chandler's Ford
Eastleigh
Hampshire
SO53 1YF
UK

Website: drapertools.com

Email: sales@drapertools.com

Product Helpline: +44 (0) 23 8049 4344

Telephone Sales Desk: +44 (0) 23 8049 4333

General Enquiries: +44 (0) 23 8026 6355

Delta International

Delta International BV
Oude Graaf 8
6002 NL
Weert
Netherlands

Please contact the Draper Tools Product Helpline for repair and servicing enquiries.