



12V/24V DIGITAL BATTERY & ALTERNATOR/ STARTER TESTER WITH PRINTER

MODEL NO: **BT2012.V4**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to
instructions



Wear eye
protection



Wear protective
clothing



Wear protective
gloves



Warning!



Warning
corrosive
substance

1. SAFETY

1.1. PERSONAL PRECAUTIONS

- ✓ Ensure that there is another person within hearing range and close enough to come to your aid, should a problem arise when working near a lead-acid battery.
- ✓ Wear safety eye protection and protective clothing. Avoid touching eyes while working near battery.
- ✓ Have fresh water nearby in case battery acid contacts skin, clothing, or eyes.
- ✓ Rinse immediately with water if battery acid contacts skin or clothing. If acid enters eye, flush eye immediately with cool, clean running water for at least 15 minutes and seek immediate medical attention.
- ✓ Remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current which is high enough to weld such items to the vehicle and cause severe burns.
- ✓ Ensure that hands, clothing (especially belts) are clear of fan blades and other moving or hot parts of engine. Remove ties and contain long hair.

✗ **DO NOT** smoke or allow a spark or flame in the vicinity of the battery or engine.

1.2. GENERAL SAFETY INSTRUCTIONS

- ✓ Familiarise yourself with the application, limitations and potential hazards of the tester. Also refer to the vehicle manufacturer's hand book. IF IN ANY DOUBT CONSULT A QUALIFIED ELECTRICIAN.
- ✓ Ensure that the tester is in good condition before use. If in any doubt **DO NOT** use the unit and contact a qualified electrician.
- ✓ Only use recommended attachments and parts. To use unapproved items may be dangerous and will invalidate your warranty.
- ✓ Keep tools and other items away from the engine and ensure that you can see the battery and working parts of the engine clearly.
- ✓ Determine the system voltage before using the tester.
- ✓ If the tester receives a sharp knock or blow the unit must be checked by a qualified service agent before using.
- ✓ If the battery terminals are corroded or dirty: clean them before using the tester.
- ✓ Keep children and unauthorised persons away from the work area.
- ✗ **DO NOT** dismantle the tester for any reason. The tester must only be checked by qualified service personnel.
- ☐ **WARNING!** To prevent the risk of sparking, short circuit and possible explosion **DO NOT** drop metal tools in the battery area, or allow them to touch the battery terminals.
- ✗ **DO NOT** cross-connect tester to battery. Ensure positive (RED) clamp is to positive terminal and negative (BLACK) clamp is to negative terminal. If battery symbols cannot be distinguished: the negative terminal is the one directly connected to the vehicle bodywork.
- ✗ **DO NOT** place the tester near the engine or exhaust pipe, as high temperatures while the engine is running may cause damage.
- ✗ **DO NOT** remove battery clamps while testing.
- ✗ **DO NOT** use the tester outdoors, or in damp, or wet locations and **DO NOT** use in the vicinity of flammable liquids or gases.
- ✗ Ensure there is effective ventilation to prevent a build-up of explosive gases.
- ✗ **DO NOT** use the tester for a task for which it is not designed.
- ✓ When not in use, store the tester carefully in a safe, dry, childproof location.

2. INTRODUCTION

Professional diagnostic tool supports Lead Acid, GEL, AGM and EFB batteries including Start Stop vehicle applications. Robust and easy to operate design delivers full in vehicle testing of the battery starter motor and alternator within seconds. In vehicle test mode measures battery health state of charge, internal resistance cranking voltage and charging system performance both at rest and under load. Reviews the last five test results. Supplied with 830mm test cables for improved access in the engine bay. Battery rating is entered directly from the battery label with results clearly displayed on the 2.8" true colour screen. Produces no heat no sparks and eliminates the risk of misdiagnosis during testing.

3. SPECIFICATION

Model No:	BT2012.V4
Cable Reach:	1000mm
Charging System Capability:	12V/24V
Consumable Parts:	BT2012.V2-01 - Printing Roll for BT2012. V2 Pack of 2
Display:	2.8" TFT True Colour (320 * 240 Pixels)
Minimum Power Requirement:	12V
Nett Weight:	532g

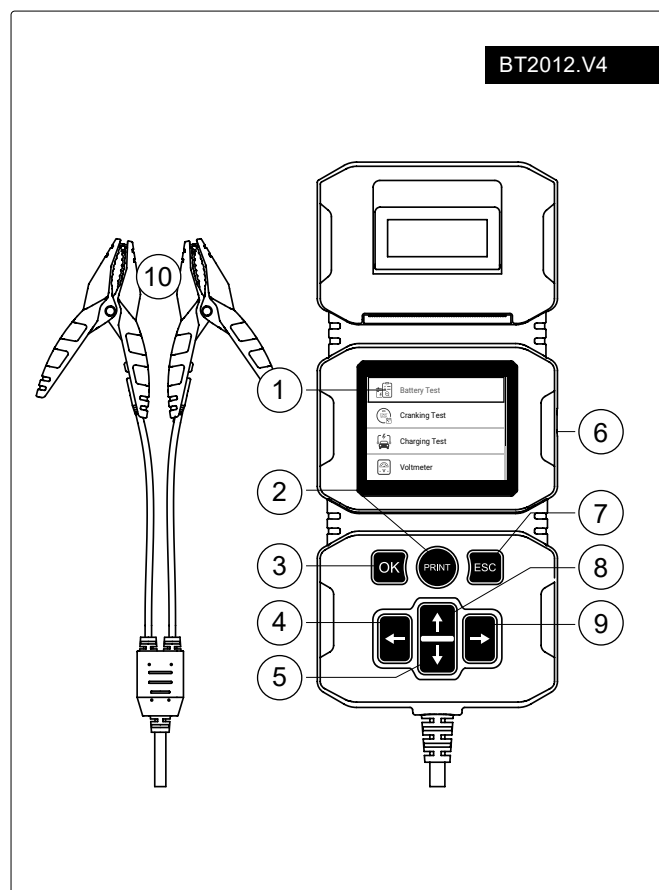
Note:	*CCA - Cold Cranking Amps
Voltage Range:	12V-30V
Storage Temperature:	-20 ~ 70°C (-4 ~ 158°F)
Working Temperature:	0 ~ 60°C (32 ~ 140°F)
Languages:	English, French, German, Italian, Portuguese, Finnish, Spanish, Russian, Dutch, Polish, Swedish, Czech, Chinese
Battery Types:	FLOODED, AGM PLATED, AGM SPIRAL, EFB, GEL
Battery Ratings:	CCA, BCI, CA, MCA, JIS, DIN, ICE, EN, SAE, GB

Battery System Standard Description	
CCA	Cold Cranking Amps (CCA): Specified by SAE and BCI, this is the most commonly used rating for a starting battery at 0°F (-17.8°C).
BCI	Battery Council International standard.
CA	Cranking Amps Standard, effective starting current value at 0°C.
MCA	Marine Cranking Amps Standard, effective starting current value at 0°C.
JIS	Japan Industrial Standard, displayed on the battery as a combination of numbers and letters (e.g., 55D23, 80D26).
DIN	German Auto Industry Committee Standard.
IEC	Internal Electro Technical Commision Standard.
EN	European Automobile Industry Association Standard.
SAE	Society of Automotive Engineers Standard.
GB	China National Standard.

The battery tester can perform tests on batteries rated between 100 and 2000CCA, with capacities ranging from 30Ah to 220Ah.	
Measure Std	Measure Range
CCA	100-2000
BCI	100-2000
CA	100-2000
MCA	100-2000
JIS	26A17-245H52
DIN	100-1200
EN	100-2000
SAE	100-2000
IEC	100-1200
GB	30-220Ah

4. FEATURES

1	LCD Display Screen – Shows menus, test results, and operating tips.
2	Print Button – Quickly switches to the review data interface, where you can select the historical data for which you want to print the test results.
3	OK Button – Executes the selected option and generally advances to the next screen.
4	Left and Right Arrow Buttons – When entering the vehicle's VIN code, move the cursor left or right to select a character.
5	Up and Down Buttons – Select an option or scroll through menu options.
6	Update Port – Used to transfer test reports from the device to a PC for printing and for software updates.
7	ESC Button – Exits the current screen and generally returns to the previous screen.
8	Up and Down Buttons – Select an option or scroll through menu options.
9	Left and Right Arrow Buttons – When entering the vehicle's VIN code, move the cursor left or right to select a character.
10	Cable Clips – Used to securely connect to the battery terminals.



5. OPERATION

5.1. BEFORE TEST

1. Connect the red clamp to the positive (+) terminal and the black clamp to the negative (-) terminal.
2. For a proper connection, rock the clamps back and forth. The tester requires both sides of each clamp to be firmly connected before testing. If the positive and negative terminals of the battery clips are not properly connected, the following display will appear.

The negative (Black test clip) contact is bad, please check.

The positive (red test clip) contact is bad, please check.

3. The preferred test position is at the battery terminals. If the battery is not accessible, you may test at the jumper post; however, the available power measurement may be lower than the actual value.

5.2. HOW TO USE

1. Battery Test

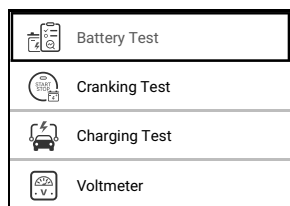
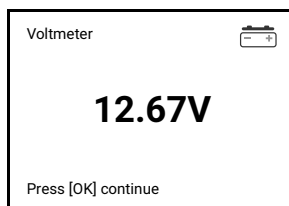
BT2012.V4 will test each battery according to the selected system standard and the rating marked on the battery to provide accurate results.

5.2.1. BEFORE TEST

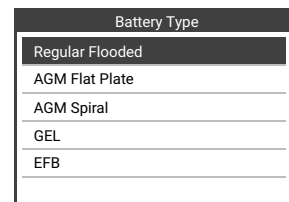
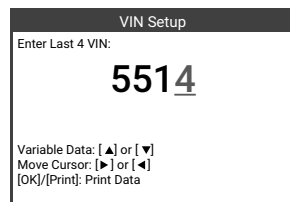
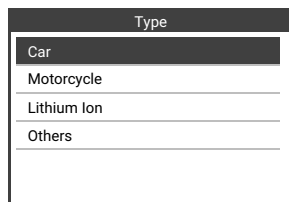
1. The engine and all accessory loads must be OFF during the test to ensure accurate results. If the battery has just been fully charged, turn on the vehicle headlights for 2–3 minutes until the battery voltage returns to a normal value.

5.2.2. STEPS

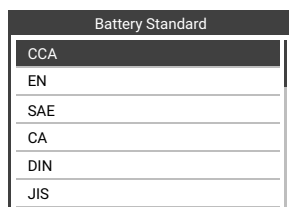
2. Connect the RED (+) positive battery clamp to the positive (+) battery terminal, and the BLACK (-) negative battery clamp to the negative (-) battery terminal. Ensure the clamps have a firm, secure grip on the battery terminals for accurate results. Press the "ESC" key to enter the boot interface, then click "OK" and select "Battery Test".



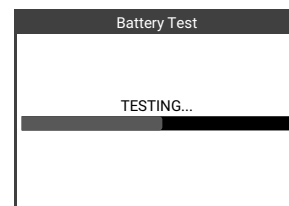
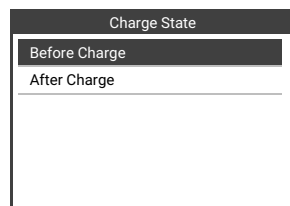
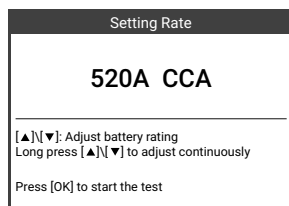
3. Press "Up" or "Down" to select the "Battery Type" (specified on the battery rating label), then press "OK" to continue.



4. Press "Up" or "Down" to select the correct testing standard (specified on the battery rating label), then press "OK" to continue.



5. Hold "Up" or "Down" to select the battery rating value (specified on the battery rating label).



6. Press "OK" to start the battery test. Pay attention to the environmental conditions selected for the battery test.

7. The test result is as follows:

Battery Test		
Health:	510A	96%
Charge:	12.54V	85%
Internal R=	5.74	mΩ
Rated:	520A	CCA
VIN	5514016	
GOOD BATTERY		

After obtaining the test result, you can press the PRINT button to print the result directly.

5.3. BATTERY TEST RESULTS

DECISION	INTERPRETATION
Good Battery	Return the battery to service.
Good - Recharge	Fully charge the battery and return it to service.
Charge & Reset	Fully charge the battery and retest. Failure to fully charge the battery before retesting may cause inaccurate results. If "Charge & Retest" appears again after the battery has been fully charged, replace the battery.
Replace Battery	Replace the battery and retest. A Replace Battery result may also indicate a poor connection between the battery cables and the battery. After disconnecting the battery cables, retest the battery using the out-of-vehicle test before replacing it.
Bad Cell - Replace	Replace the battery and retest.

NOTE: During the battery test, select the appropriate values according to the battery's actual specifications to obtain an accurate assessment of its health.

When selecting the battery current rating, press the Up button once to increase the value by 5A, or press the Down button once to decrease the value by 5A. Adjust the current rating according to the battery's actual specifications.

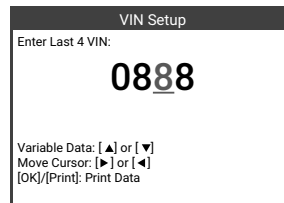
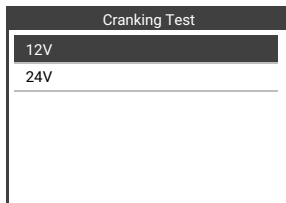
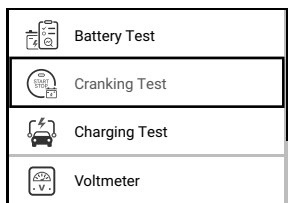
5.4. CRANKING TEST

Before test

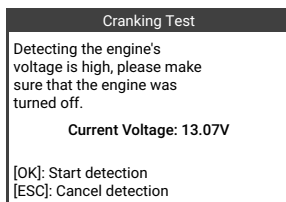
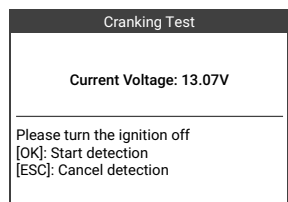
The engine and all accessory loads must be OFF before starting the test to ensure accurate results.

5.4.1. STEP

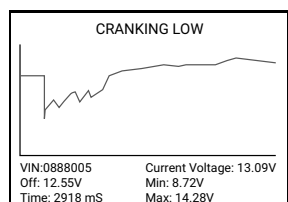
1. Connect the RED (+) positive battery clamp to the positive (+) battery terminal, and the BLACK (-) negative battery clamp to the negative (-) battery terminal. Ensure the clamps have a firm, secure grip on the battery terminals for accurate results.
2. Press the "ESC" key to enter the boot interface, then press "OK" and select "Cranking Test".



3. Press "OK" to enter the Cranking Test interface.



5.5. CRANKING TEST RESULT



After obtaining the test result, you can press the PRINT button to print the result directly.

5.6. CHARGING TEST

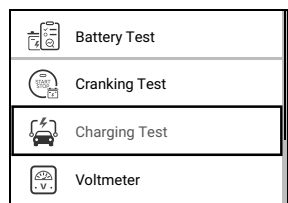
Before test

The engine must be ON during the test to ensure accurate results. Ensure all electrical accessories and devices remain OFF.

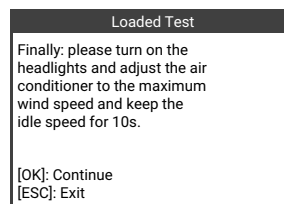
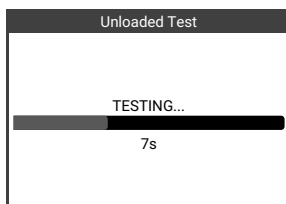
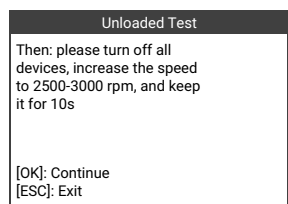
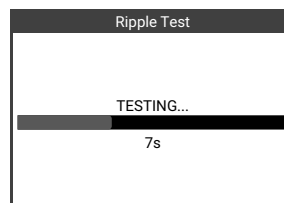
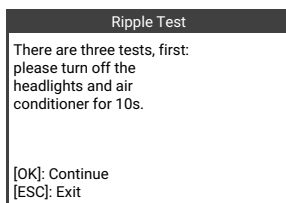
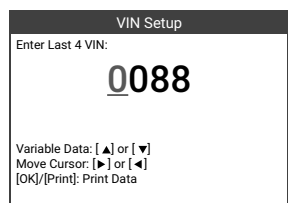
NOTE: Turning any electrical accessories or devices ON or OFF during the test will affect the accuracy of the test results.

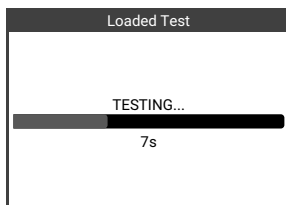
5.6.1. STEP

1. Connect the RED (+) positive battery clamp to the positive (+) battery terminal, and the BLACK (-) negative battery clamp to the negative (-) battery terminal. Ensure the clamps have a firm, secure grip on the battery terminals for accurate results.
2. Press the "ESC" key to enter the boot interface, then press "OK" and select "Charging Test".



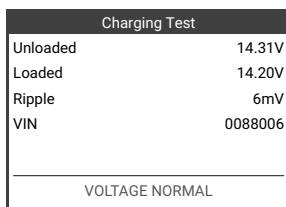
Press "OK" into the "Ripple Test" interface.





Press “OK” again, or wait a few seconds, to enter the Charging Test interface.

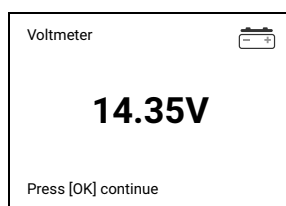
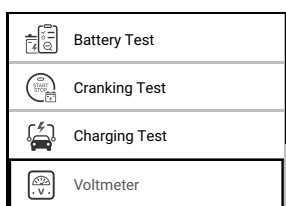
The tester prompts the operator to turn off all electrical devices and increase the engine speed to 2,500–3,000 rpm for 10 seconds. Press “OK” to begin the test and display the results.



After obtaining the test result, you can press the PRINT button to print the result directly.

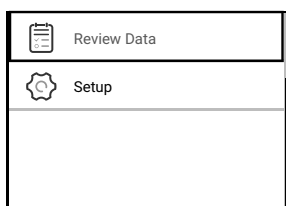
5.7. VOLTMETER

Detects the battery voltage in real time. By monitoring voltage changes over a period of time, you can determine the battery's condition from the test results.

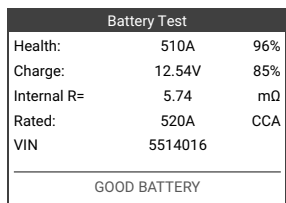
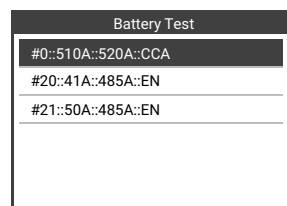
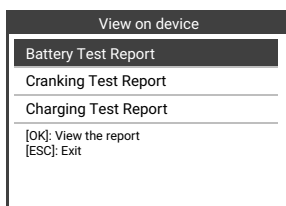
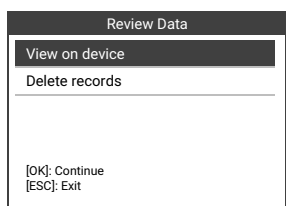


5.8. REVIEW DATA

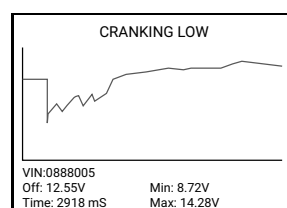
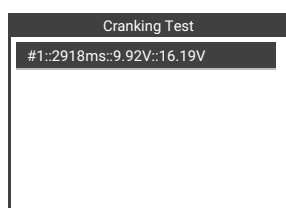
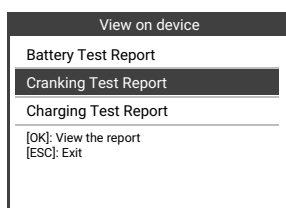
Press the “ESC” key to enter the boot interface, then press “OK” and select “Review Data”.



Press “OK” to enter the Review Data interface. Only the last five tests performed will be displayed. Review the battery test reports.



Review cranking test report



5.9. REVIEW CHARGING TEST REPORT

View on device

Battery Test Report

Cranking Test Report

Charging Test Report

[OK]: View the report

[ESC]: Exit

Charging Test

#1::14.31V::14.20V::6mV

Charging Test

Unloaded14.31V

Loaded14.20V

Ripple6mV

VIN0088006

VOLTAGE NORMAL

5.10. DELETED RECORD

If the number of recorded data entries exceeds 5, additional data cannot be saved. You need to manually delete existing data before recording new data.

Review Data

View on device

Delete records

[OK]: Continue

[ESC]: Exit

Delete on battery test

Delete records

Delete On Battery Test

Delete On Cranking Test

Delete On Charging Test

[OK]: View the deletion report directory

[ESC]: Exit

Battery Test

#1::56A::500A::CCA

#2::12A::500A::CCA

#3::57A::500A::CCA

Battery Test

Delete?

[OK]: Continue

[ESC]: Exit

Press the OK button and the battery test record will be deleted.

Battery Test

#1::12A::500A::CCA

#2::57A::500A::CCA

Delete on cranking test

Delete records

Delete On Battery Test

Delete On Cranking Test

Delete On Charging Test

[OK]: View the deletion report directory

[ESC]: Exit

Cranking Test

There's no recorded data!

Delete on charging test

Delete records

Delete On Battery Test

Delete On Cranking Test

Delete On Charging Test

[OK]: View the deletion report directory

[ESC]: Exit

Charging Test

There's no recorded data!

If more than 5 records are saved for the above three functions, the device will display the following prompt. According to the prompt, you need to delete some historical records before new records can be saved.

Battery Test

The memory is full and cannot record new results. The old records need to be deleted. wait until the alarm stops, [OK]: Continue testing.

Charging Test

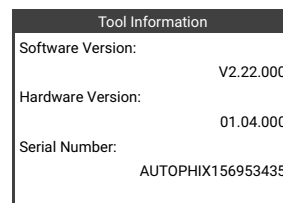
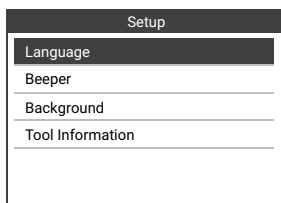
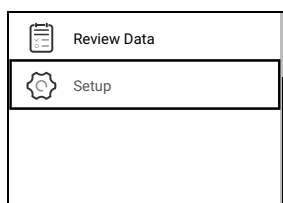
The memory is full and cannot record new results. The old records need to be deleted. wait until the alarm stops, [OK]: Continue testing.

Cranking Test

The memory is full and cannot record new results. The old records need to be deleted. wait until the alarm stops, [OK]: Continue testing.

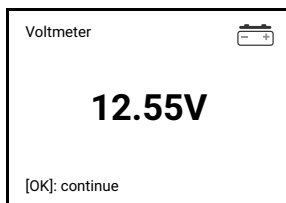
5.11. SETUP

When Setup is selected, a menu displaying available service options appears. The menu options typically include the following.

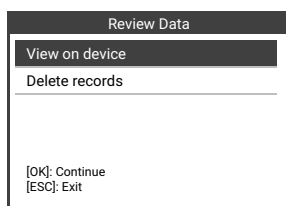


5.12. HOW TO PRINT PAPER OUT

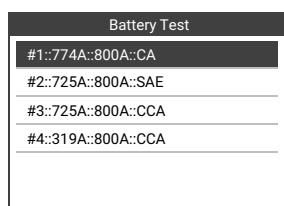
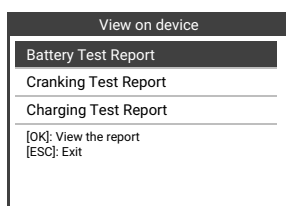
After the product's positive and negative terminals are connected, the product will display the following interface.



Then press the PRINT button, and the following interface will appear.



Press the OK button, select the historical data you want to print, and then print the report.



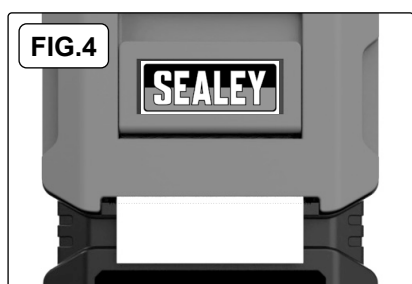
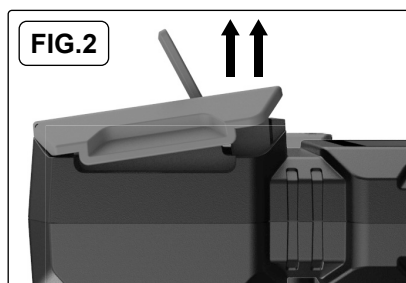
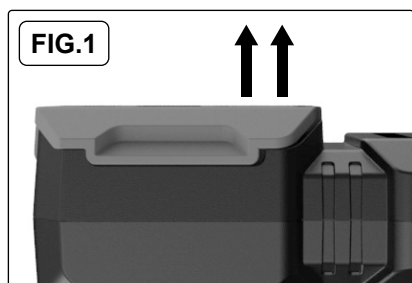
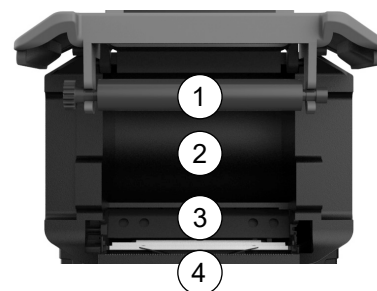
5.13. CHANGING THE PRINTER PAPER

The printer uses only thermal paper rolls with dimensions of 57 mm × 30 mm. You can purchase replacement rolls from most office supply stores.

5.14. PROCEDURE FOR CHANGING A ROLL

1. Pull the lever toward the vertical position of the device to open the printer cover. See Fig.1&2.
2. Place the new roll of paper into the printer paper tray, pull out the paper, and extend it beyond the serrated paper edge. See Fig. 3.
3. Close the printer cover and use the roller to hold down the extended paper roll. See Fig.4.

1	Roll
2	Paper Tray II
3	Printer Paper Sensor Head and Thermal Print Head
4	Serrated Paper Edge



6. MAINTENANCE

- 6.1. To keep tester in good working condition, disconnect it from the battery before cleaning and wipe the housing, display, and test leads with a soft, dry, or slightly damp cloth. **DO NOT** use solvents, abrasive cleaners, or immerse the tester in water, as these may damage the unit. Regularly inspect the test leads and clamps for signs of wear, damage, corrosion, or loose connections, and ensure the clamp contact surfaces remain clean to maintain accurate test results. Store the tester in a clean, dry place away from excessive heat, moisture, and direct sunlight, and avoid dropping or exposing it to strong impacts. With proper cleaning, careful handling, and routine inspections, the tester will continue to provide reliable battery, starter, and alternator diagnostics.

7. END OF LIFE

At the end of its service life, **DO NOT** dispose of this tester with household waste. Dispose of the product in accordance with local regulations for electrical and electronic equipment recycling. Where applicable, remove and recycle any internal batteries separately according to local requirements. Proper disposal helps conserve natural resources and reduces the environmental impact of electronic waste.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



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WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

Important: No Liability is accepted for incorrect use of this product.

Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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