

# Clarke®



## ANALOGUE BATTERY TESTER

MODEL NO: CVT3

PART NO: 6260104

## OPERATION & MAINTENANCE INSTRUCTIONS

UK | CE



ORIGINAL INSTRUCTIONS

DL0324

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## INTRODUCTION

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Thank you for purchasing this CLARKE Analogue Battery Tester.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

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## GUARANTEE

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This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

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## ENVIRONMENTAL RECYCLING POLICY

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Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste. It must be disposed of according to the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

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# SAFETY INSTRUCTIONS

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**WARNING: PLEASE READ THESE INSTRUCTIONS AS WELL AS THOSE IN YOUR VEHICLE HANDBOOK VERY CAREFULLY BEFORE USING THE TESTER, KEEP THEM IN A SAFE PLACE FOR FUTURE REFERENCE.**

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**WARNING: HIGH VOLTAGES ARE PRESENT AT THE FOLLOWING POINTS: - THE IGNITION COILS, DISTRIBUTOR CAP, IGNITION CABLE, SPARK PLUGS.**

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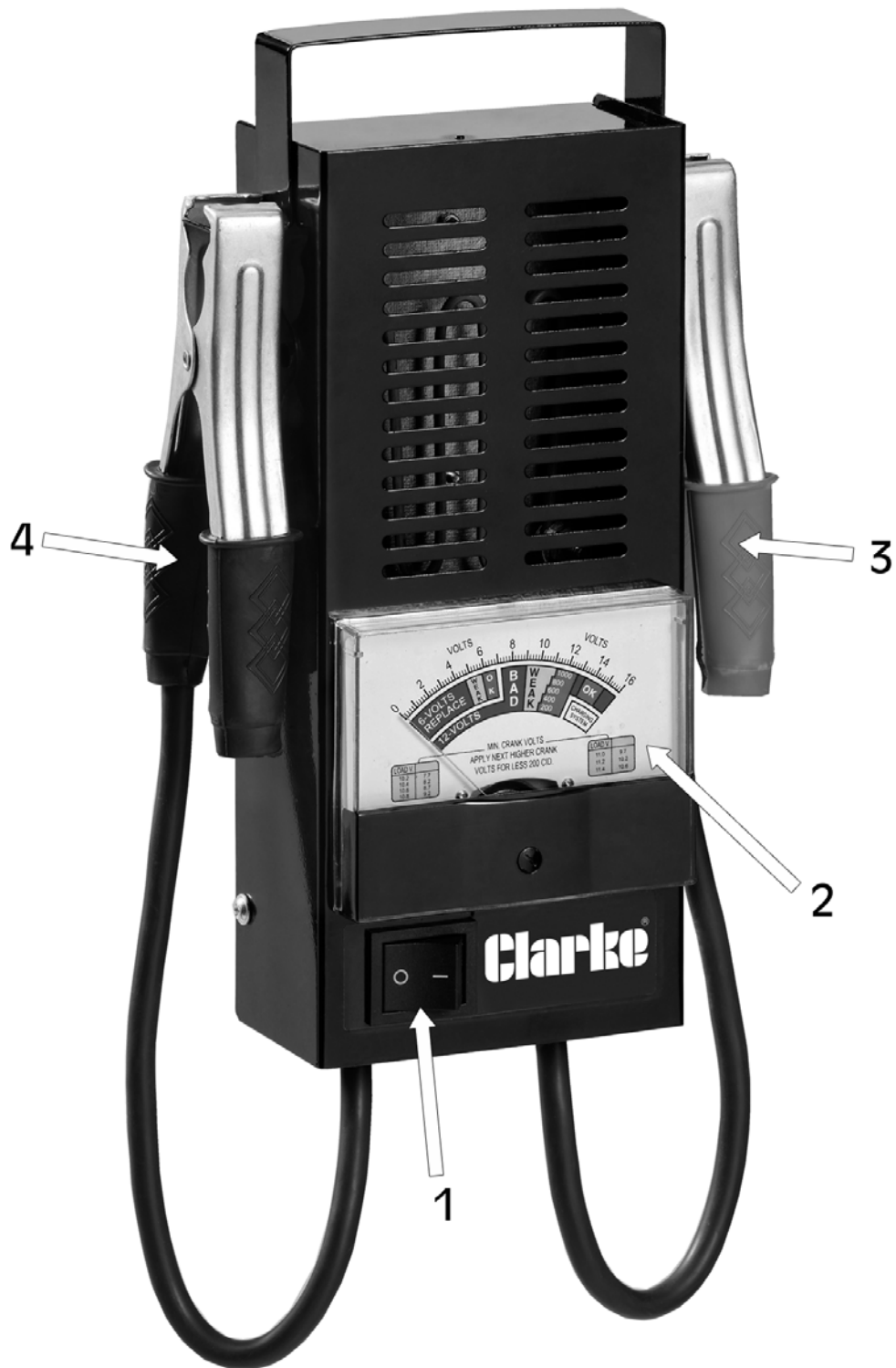
1. CLARKE International are not liable for any damages or consequences resulting from:
  - Connection and installation errors.
  - Damage to the device due to mechanical influences or voltage surges or any modification to the device.
  - Any unauthorized manipulation to the product which would lead to cancellation of the guarantee.
  - Use of the device for purposes other than described in this instruction manual.
  - Any influence of fluids.
2. **DO NOT** use the device in a moist or wet environment.
3. **DO NOT** smoke, strike a match or cause a spark near the vehicle while testing.
4. **DO NOT** use the tester close to flammable materials.
5. **DO NOT** use the tester in an explosive environment.
6. Make sure the device is always positioned in a safe place.
  - The device must be placed out of reach of children.
  - **DO NOT** expose the device to direct sunlight or other heat source.
7. Store the tester in a safe, dry place after use.
8. **DO NOT** try to use other cables with this product.
9. **DO NOT** open the case. There are no replaceable parts inside the product.
10. If the device malfunctions, please consult your CLARKE dealer.

11. **DO NOT** test a battery within a short period of time after charging or use, as the result may be inaccurate.
12. Perform the test when the battery is in a cold state, when the voltage is stable.
13. Make sure all electrical equipment is turned off when testing.
14. **DO NOT** use the device while the vehicle is in motion, the tester is not suitable for permanent installation in a motor vehicle.
15. Make sure the vehicle is securely parked and the handbrake applied before using the tester. For vehicles with automatic transmissions the "park position" must be engaged and the hand brake must be engaged.
16. **DO NOT** use other measuring devices when using the tester.
17. Seek professional help if you are unsure about anything related to the electrical system in your vehicle.
18. When using the crocodile clips for testing, the red clip must be clamped to the positive pole (+ or Red) of the battery, and the black clip must be clamped to the negative pole (- or black). **DO NOT** reverse the connections.
19. If the outer insulation of the cable is damaged, it may cause a short circuit. Stop using it immediately and contact your CLARKE dealer.

## **OTHER INFORMATION**

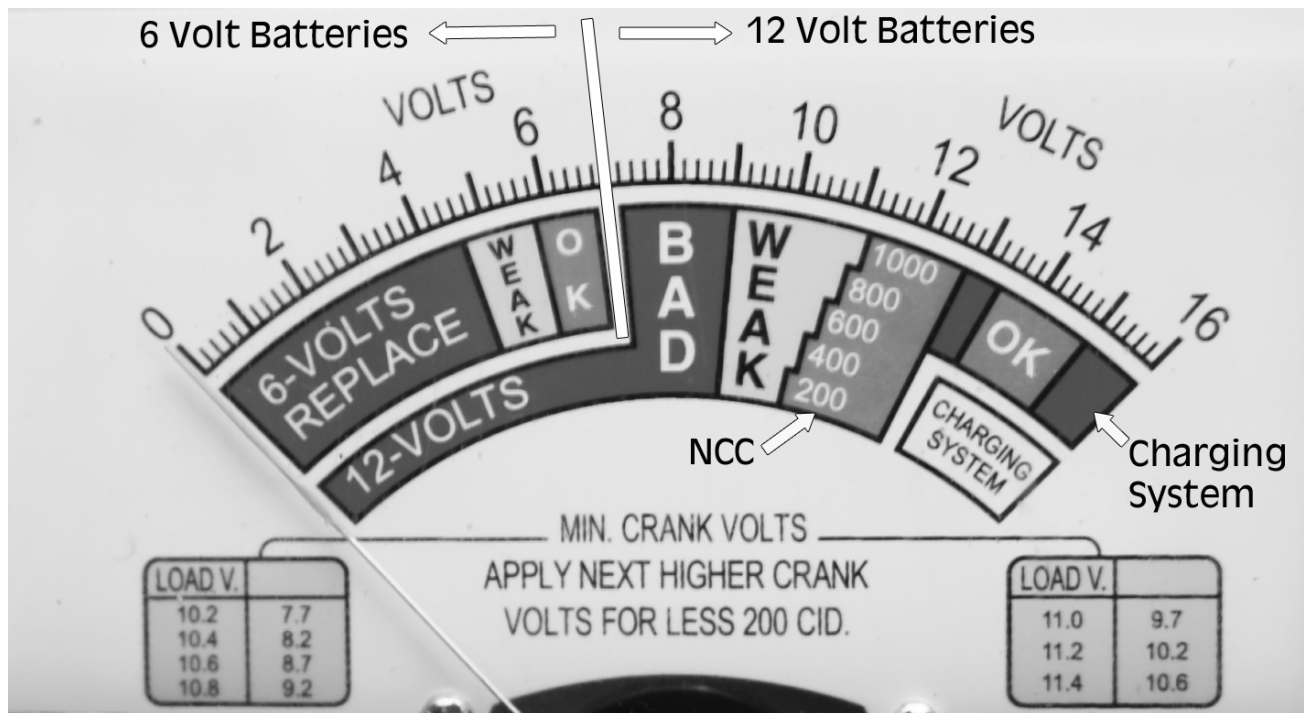
1. The Battery Tester is suitable for all types of 6V & 12V lead acid batteries (vehicle batteries).

# PRODUCT IDENTIFICATION



1	Battery Load Test Switch	2	Voltmeter Display
3	Red/Positive Crocodile Clip Test Lead	4	Black/Negative Crocodile Clip Test Lead

## BATTERY TESTER OPERATION



**WARNING: ON THE FIRST LOAD TEST, SMOKE MAY BE EMITTED FROM THE LOUVRES IN THE CASING. THIS IS NORMAL AND TEMPORARY.**

## BATTERY LOAD TEST

1. Attach the red/positive crocodile clip test lead to the red/positive (+) battery terminal.
2. Attach the black/negative crocodile clip test lead to the black/negative (-) battery terminal.

**NOTE:** Correct connection of the terminals will send the pointer clockwise (right) across the voltage scale, incorrect connection will send the pointer anticlockwise (left). If there is no movement of the pointer, there is either a bad connection of the battery terminals or the battery is dead.

3. Press the battery load test switch to the on position (I) and hold until the voltmeter stabilises or for a maximum of 10 seconds.

**NOTE:** Failure to release the switch within 10 seconds may result in the switch burning out.

4. Note the meter reading and then release the battery load test switch.

5. The following chart will show the condition of the battery.

Pointer Location	Battery Condition
Green: 'OK'	Battery is in a good condition and near full charge
Yellow: 'Weak'	Battery condition is low and may need charging.
Red: 'Bad'	Battery condition is very low and needs charging. If battery still shows Red after charging, replace the battery.

**NOTE:** For 12 volt batteries, the Green: 'OK' section is marked with Nominal Cranking Current (NCC) from 200 to 1000 amps in 200 amp intervals. Note this figure and compare with the battery manufacturers quoted figure to give an indication of any deterioration.

### BATTERY VOLTAGE/CHARGE LEVEL

1. If the load test results indicates a battery fault (yellow/red), allow the battery to stabilise for a few minutes and then read the open circuit voltage, which is a meter reading not utilizing the load switch.
2. Use the following chart to estimate the charge level

6 Volt Battery	12 Volt Battery	Charge%
5.8 or Lower	11.7 or Lower	0
6.0	12.0	25
6.1	12.2	50
6.2	12.4	75
6.3 or Higher	12.6 or Higher	100

**NOTE:** The battery is considered charged at 75% or higher. If it fails the load test with this charge, it should be replaced. If the voltage indicates a charge below 75%, then charge the battery and retest. If the battery fails a second time, replace it.

### CHARGING SYSTEM (12 VOLT SYSTEM ONLY)

1. Attach the red/positive crocodile clip test lead to the red/positive (+) battery terminal.
2. Attach the black/negative crocodile clip test lead to the black/negative (-) battery terminal.

**NOTE:** Correct connection of the terminals will send the pointer clockwise (right) across the voltage scale, incorrect connection will send the pointer anticlockwise (left). If there is no movement of the pointer, there

is either a bad connection of the battery terminals or the battery is dead.

3. Start the engine and allow it to warm up. Turn off all electrical accessories such as radio, headlights, heating etc.
4. Run the engine to between 1200 & 1500rpm and note the reading. This should be in the green zone (OK), between 13.6V & 15V.

**NOTE: DO NOT press the battery load test switch.**

5. Switch on the headlights and heater system to its maximum. The meter reading should stay in the green zone.
6. A reading below 13.6V (red zone) indicates a fault in the charging system and/or the battery is under charged. A reading above 15V (red zone) indicates the battery is overcharged.

### **STARTER MOTOR (12 VOLT SYSTEM ONLY)**

**NOTE:** This test requires the battery to be in a good charged condition of at least 75% (9V).

1. Attach the red/positive crocodile clip test lead to the red/positive (+) battery terminal.
2. Attach the black/negative crocodile clip test lead to the black/negative (-) battery terminal.

**NOTE:** Correct connection of the terminals will send the pointer clockwise (right) across the voltage scale, incorrect connection will send the pointer anticlockwise (left). If there is no movement of the pointer, there is either a bad connection of the battery terminals or the battery is dead.

3. Disable the ignition system by removing the fuse. (consult the vehicle manual for correct procedure and fuse).
4. Carry out a load test (see page 6) and note voltage reading.
5. Use the following table (also displayed on the lower half of the Voltmeter display), determine the minimum cranking voltage.

Load Voltage	Minimum Cranking Voltage	
	3.5L and Above Engine Size	Below 3.5L Engine Size
10.2	7.7	8.2
10.4	8.2	8.7
10.6	8.7	9.2
10.8	9.2	9.7
11	9.7	10.2



11.2	10.2	10.6
11.4	10.6	11.1

**NOTE:** An engine size of less than 3.5L, you should take the next higher cranking voltage.

6. Operate the vehicle starter motor and note the voltage during cranking.

**NOTE: DO NOT press the battery load test switch.**

7. A reading below the minimum cranking voltage indicates that the starter motor is taking too much current. This may be due to a poor connection, a faulty starter motor or the battery being too small for the vehicle.

8. Reinststate the ignition system by replacing the fuse.

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## MAINTENANCE & CLEANING

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- If needed, clean the device with a light, damp, soft cloth.
- Before cleaning, disconnect the device from the electrical system.
- **DO NOT** use any liquid cleaning product.
- **DO NOT** use any inflammable cleaning product.
- **DO NOT** submerge the device or spill any liquids over it.
- **AVOID** engine oil, petrol, antifreeze and electrolyte from contacting the tester as this may cause surface deterioration of the device.

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## SPECIFICATION

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Model No.	CVT3
Product Description	6V & 12V Analogue Battery Tester
Part number	6260104
Input Voltage	0V - 16V DC
Measurement (H x W x D)	300 x 160 x 70mm
Product Weight	963g

# DECLARATION OF CONFORMITY - UKCA



Hemnall Street, Epping, Essex, CM16 4LG

## DECLARATION OF CONFORMITY

**This is an important document and should be retained.**

**We hereby declare that this product(s) complies with the following legislation:**

*The Electromagnetic Compatibility Regulations 2016*

*The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012*

**The following standards have been applied to the product(s):**

*EN 61000-3-3:2013/A1:2019/A2:2021, EN 55032:2015/A1:2020/A11:2020, EN 55035:2017/A11:2020,  
EN IEC 61000-3-2:2019/A1:2021, IEC 62321-7-1:2015, IEC 62321-7-2:2017, IEC 62321-3-1:2013,  
IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-8:2017*

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

**The UKCA mark was first applied in: 2024**

**Product Description:** Battery Tester  
**Model Number(s):** CVT3  
**Serial/Batch Number:** Refer to product/packaging label  
**Date of Issue:** 19/01/2024

**Signed:**

**J.A Clarke**

**Director**

# DECLARATION OF CONFORMITY - CE



**Clarke**<sup>®</sup>  
**INTERNATIONAL**

Fitzwilliam Hall, Fitzwilliam Place, Dublin 2

## DECLARATION OF CONFORMITY

**This is an important document and should be retained.**

**We hereby declare that this product(s) complies with the following legislation:**

2014/30/EU                      *Electromagnetic Compatibility Directive*  
2011/65/EU                     *Restriction of Hazardous Substances (RoHS) Directive*

**The following standards have been applied to the product(s):**

*EN 61000-3-3:2013/A1:2019/A2:2021, EN 55032:2015/A1:2020/A11:2020, EN 55035:2017/A11:2020,  
EN IEC 61000-3-2:2019/A1:2021, IEC 62321-7-1:2015, IEC 62321-7-2:2017, IEC 62321-3-1:2013,  
IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-8:2017*

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

**The CE mark was first applied in: 2024**

**Product Description:**            Battery Tester  
**Model Number(s):**                CVT3  
**Serial/Batch Number:**            Refer to product/packaging label  
**Date of Issue:**                      19/01/2024

**Signed:**

**J.A Clarke**

**Director**

# A SELECTION FROM THE VAST RANGE OF

# Clarke®

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