



INSTRUCTIONS FOR:

## BATTERY DROP TESTER 12V

MODEL NO: **BT91/3.V2**

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.**

### 1. SAFETY



Refer to instruction manual



Wear Eye Protection



No Open Flame



Corrosive Substance

**DANGER! LEAD-ACID BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS VERY IMPORTANT TO READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY, EACH TIME YOU USE THE BATTERY TESTER.**

Follow these instructions and those published by the battery and vehicle manufacturers, and the maker of any equipment you intend to use in the vicinity of the battery. Remember to review warning marks on all products and on engines.

#### 1.1. PERSONAL PRECAUTIONS

- ✓ Ensure there is another person within hearing range of you 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 and soap nearby in case battery acid contacts skin, clothing, or eyes.
- ✓ Wash immediately with soap and 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, which would cause severe burns.
- ✓ Ensure hands, clothing (especially belts) are clear of fan blades and other moving or hot parts of engine. Remove ties and contain long hair.
- x **DO NOT** smoke or allow a spark or flame in the vicinity of the battery or engine.

#### 1.2. GENERAL SAFETY

- ✓ Familiarise yourself with the application, limitations and potential hazards of the tester. Also refer to the vehicle manufacturer's handbook. *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 engine clearly.
- ✓ Confirm that the battery to be tested is 12V, and not 6V or 24V, 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.
- x **DO NOT** dis-assemble 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.
- x **DO NOT** use the tester outdoors, or in damp, or wet locations and **DO NOT** use within the vicinity of flammable liquids or gases.
- ✓ Ensure there is effective ventilation to prevent a build-up of explosive gases.
- x **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.
- x **DO NOT** connect the tester for more than 8 seconds at a time. Use for longer may result in overheating and will invalidate your warranty.

### 2. INTRODUCTION

The BT91/3 is a traditionally styled drop tester for all 12V automotive batteries. It applies a load across the cells and measures the output on the meter. This gives an indication of the battery voltage, a faulty cell or a short circuited cell.

### 3. OPERATION

- WARNING!** Ensure you read, understand and apply the safety and operational instructions before applying the tester probes to the battery. Only when you are sure that you understand the procedures is it safe to proceed with the testing process.
- 3.1. Preparation
  - 3.1.1. Check battery casing for cracks or leakage and confirm that it is 12V.
  - 3.1.2. Clean battery terminals.
  - 3.1.3. If possible, check electrolyte levels and top up with distilled water as necessary.
  - WARNING!** Ensure vehicle, or battery, is in a well ventilated area before starting to test.
  - 3.1.4. Remove the caps from the ends of the probes, press one probe to the positive (+) battery terminal and the other probe to negative (-) terminal. Note that this tester is not polarity sensitive. If the pointer does not move, either there is a bad connection or the battery is completely dead.
  - 3.1.5. Note the meter reading, remove the tester from the battery and re-fit the caps to the end of the probes.
  - 3.1.6. Refer to the chart below for diagnostics.

BATTERY CONDITION	METER READING	ACTION NECESSARY
1) Battery fully charged and healthy.	Needle will indicate approximately 9V and will remain steady in this position. <b>NOTE:</b> Smaller capacity or 'Economy' batteries may read 7 or 8V. Very heavy duty batteries may read a steady 10 or 11V.	
2) Battery healthy but discharged.	Needle will indicate as above but will drop away steadily to 3V and remain there.	This condition should be checked by the use of a hydrometer. The battery should be removed, recharged and retested.
3) Faulty Cell*	Needle will indicate approximately 9V and drop rapidly to approximately 3V, remaining there or rising slowly to approximately 6V.	Battery should be replaced.
4) Shorted Cell(s)	Needle will indicate zero volts and then rise to approximately 6V and remain there.	Battery should be replaced.
*Condition indicated in 3 & 4 may cause suspect cell to boil.		



#### Environmental 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 off any fluids (if applicable) into approved containers and dispose of the product and the fluids according to local regulations.

**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 will be required for any claim.

**INFORMATION:** For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.



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