

# KINCROME

PROFESSIONAL QUALITY TOOLS

## BATTERY LOAD TESTER

6/12V

TEST  
VEHICLES  
CHARGING  
SYSTEMS

ANALYZE  
BATTERY  
CONDITION

TEST  
STARTER  
MOTOR

UP TO  
100AMPS



KP1460

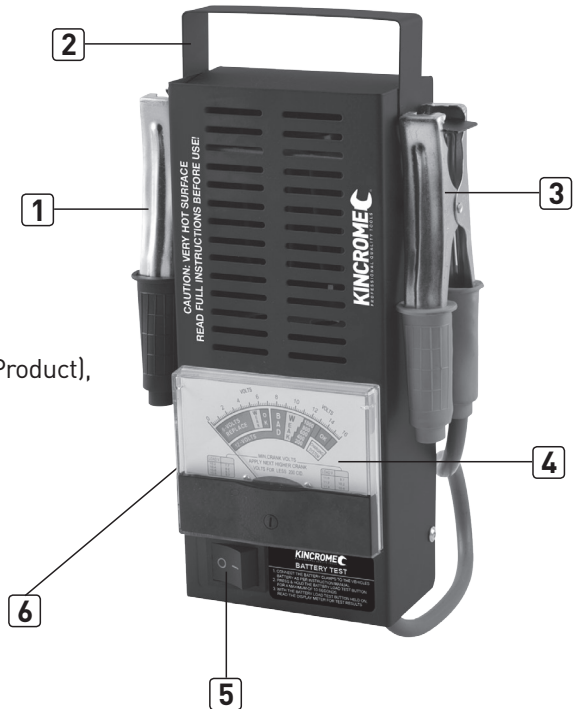
ED1 (SEPT 15)

## Table of Contents

Know Your Product .....	2
Battery Load Tester Safety Instructions.....	3-4
Battery Load Tester Operation ....	5-8
Maintenance & Warranty .....	9

## Know Your Product

1. (-) Negative Battery Clamp
2. Carry Handle
3. (+) Positive Battery Clamp
4. Display Meter
5. Battery Load Switch
6. Battery Analysis Label (On Rear of Product),  
(Refer to Page 7 of This Manual)



## Specifications

Model: .....	KP1460
Battery Test Capability: .....	6VDC or 12VDC Lead Acid Batteries
Load Test Capacity: .....	100Amps @ 12VDC or 50Amps @ 6VDC
Amps Capacity: .....	200 to 1000CCA (Cold Cranking Amps)
Amps Setting: .....	100Amps
Display Meter: .....	Analog, 0-16VDC (Max)
Voltage Range: .....	0-16VDC
Accuracy: .....	+/- 0.2VDC
Test Cycle:.....	10 Seconds Per Test (Max) 1 Minute Cool Down Per Test

## General Safety Warnings



Save all warnings and instructions for future reference.

**WARNING!** Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

### 1) General Safety Warnings

- a) Save all warnings and instructions for future reference.
- b) The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur.
- c) Common sense and caution are factors that cannot be built into this product, but must be supplied by the operator.

### 2) Work Area

- a) Operate in a safe work environment. Keep your work area clean and well lit.
  - b) Keep anyone not wearing the appropriate safety equipment away from the work area.
- Note: Minimize distractions in the work environment.**
- c) Distractions can cause you to lose control of the tool.
  - d) When connecting the battery load tester cables to the battery, avoid creating sparks; especially when the battery is being charged. Explosive gases are created during charging. Sparking could also damage the vehicle electrical system.
  - e) Always lock up tools and keep them out of the reach of children

### 3) Personal Safety

- a) Wear ANSI-approved safety goggles during set up and use of the Battery Tester.
- b) Test in a well ventilated area. Explosive gases may be produced during testing. Do not smoke, cause sparks, or strike matches near the battery when testing.
- c) Protective, electrically non-conductive clothes and non-skid footwear are recommended when working. Wear steel-toed boots to prevent injury from falling objects.
- d) Refer to the user manual of the battery being tested for testing instructions and precautions prior to using the battery load tester.
- e) Do not connect in reverse polarity.
- f) Use this product in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of this product for operations different from those intended could result in a hazardous situation.
- g) This product is not a toy. Keep it out of reach of children.
- h) Maintain labels and nameplates on the unit. These carry important safety information. If unreadable or missing, contact Kincrome Tools for a replacement.
- i) People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near coil, spark plug cables, or distributor of running engine. Engine should be off during distributor adjustment.
- j) Undercharged lead-acid batteries will freeze during cold weather. Do not test or charge a frozen battery.
- k) Do not smoke or have open flames near the battery.
- l) Never remove battery load tester clamps while testing.

### 4) Risk of Electric Shock

- a) Never touch the clamps and the terminals with wet hands.
- b) Do not pull the clamps from the terminals by pulling on the clamp cables.
- c) Check the power cord and mains plug for damage before every use.
- d) Do not touch the cooling vents on the battery load tester during or immediately after testing the battery. They become very hot.
- f) When placing the battery load tester in the vehicle's engine compartment, take special care that the metal housing of the battery load tester does not come in contact with either terminal of the battery or other electrical connections.
- g) Be certain of the test battery polarity before connecting the tester battery clamps (1 & 3). The RED (+) positive battery clamp (3) goes to the positive terminal of the battery. The BLACK (-) negative battery clamp (1) goes to the negative terminal of the battery. Reversing the battery load tester battery clamps (1 & 3) on the battery will damage the Battery Load Tester.
- h) Do not drop the Battery Tester as it may affect proper operation.
- i) Do not smoke or have open flames near the battery.

#### 4) Risk of Electric Shock (Continued)

- g) Do not connect the battery load tester to the battery while the engine is running. Turn the engine off before connecting.
- h) The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



**WARNING!** Never attach the unit to a battery that is connected to any other tester or charging unit. Damage may result.

#### 5) Tester Use and Care Instructions

This Battery Load Tester was designed for a specific function.

**DO NOT:**

1. Modify or alter the battery load tester, all parts and accessories are designed with built-in safety features that may be compromised if altered.
2. Use the battery load tester in a way for which it was not designed.

#### 6) Icons on Product

The following symbols are shown on the product:



Hand protection should be used when operating this product.



Warning hot surface DO NOT TOUCH.



Eye Protection should be used when operating this product.



Warning!



Read the instruction manual before use.

#### 7) Unpacking

Unpack all the components from the box.

When unpacking the KP1460 100A Battery Load Tester, carefully inspect for any damage that may have occurred during transit. Check for loose parts, missing parts or damaged parts.

1. Ensure all packaging materials are disposed of as per your local council guide lines.

#### 8) Assembly

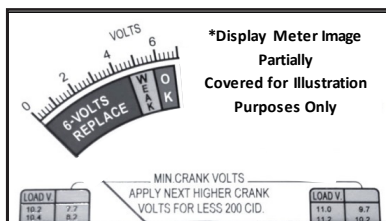
1. The KP1460 100A Battery Load Tester comes fully assembled. Therefore no assembly is required!

## 9) Operation

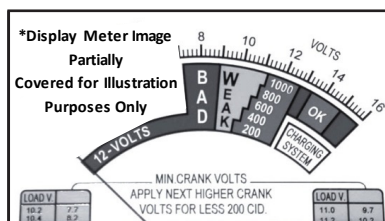
- WARNING!**
1. Variable load carbon pile testers produce heat when in use. Take care to allow sufficient time to cool down between tests to avoid injury due to heat build up of the tester body surface.
  2. Ensure the battery tester cables & all loose clothing is kept clear of the vehicles moving parts or hot surfaces.
  3. Never incorrectly connect the RED (+ positive) battery clamp (3) or BLACK (- negative) battery clamp (1) to the vehicles battery terminals noted polarity. Doing so can cause damage to the battery tester or vehicles components and this is not covered under warranty by Kincrome.
  4. Be sure the battery load tester is OFF prior to use. Ensure the battery load tester switch (5) is in the OFF (0) position before attaching or removing the RED (+ positive) battery clamp (3) or BLACK (- negative) battery clamp (1) to prevent arcing or potential explosion from battery gasses. Always use eye protection and keep any sparks away during testing.
  5. During initial use of the battery load tester it is possible a small amount of smoke or burning smell can be experienced. This can be a result of a small amount of debris being left on the carbon pile element during the assembly of the product and is not of concern to the user or product. If the smoke or burning smell does not cease after the first 2-3 uses have the unit checked by a qualified service provider or sales representative.

## 10) Testing a Vehicle Battery

1. To help ensure a good connection of the battery load tester clamps (1 & 3), clean the battery terminals with a solution of baking soda and water, and wipe the battery terminals with a cloth to remove any dirt and grease.
2. Connect the RED (+ positive) battery clamp (3) to the positive terminal (+) on the vehicles battery.
3. Connect the BLACK (- negative) battery clamp (1) to the negative terminal (-) on the vehicles battery.
4. Twist the clamps slightly on the post to ensure a good connection.
5. With both the battery clamps connected, the battery load tester's display meter (4) will show the battery's current state of charge (Fig 1 & Fig 2).
- 5a. If it is less than 12V, disconnect the battery and recharge before re-testing.
- 5b. If recharging will not bring the reading above 12V, the battery is defective.
- 5c. If the display meter (4) indicates no reading, check that the battery load testers battery clamps (1&3) are connected properly.
- 5d. If the battery load tester is connected properly, then the battery is defective.
6. If the battery indicates it is fully charged, press (and hold) the battery load switch (5) for at least 5 seconds to simulate load being applied to the battery.
7. View the display meter (4) to identify the battery condition (Fig 1 & Fig 2).
8. Refer to the Battery Condition Analysis table on page 7 for result details.
9. Release the battery load switch (5) and remove the battery clamps (1&3) from the battery.
- 9a. 6VDC battery condition indication can be checked in in the area noted in (Fig.1).
- 9b. 12VDC battery condition indication can be checked in in the area noted in (Fig.2).



(Fig.1)



(Fig.2)

**Note: Refer to the Battery Condition Analysis table on page 7 for additional result details.**

## 11) Testing a Vehicles Charging System

**Note:** The engine should be at normal operating temperature during this test.



**WARNING:** Be sure load is OFF before attaching or removing + or - battery clamps (1 & 3) to prevent arcing and potential explosion from battery gases. Always shield eyes and keep sparks, flames or cigarettes away from batteries.



**WARNING!** Avoid carbon monoxide poisoning. This gas comes from the vehicle's exhaust and is colourless and odourless. It can cause serious injury or death if inhaled. Never run the vehicle's engine inside a garage or any other enclosed space.

### Multiple Battery System Tests

- In heavy duty applications, 6 and 12 volt charging systems are created by combining 6 and 12 Volt batteries in various combinations (e.g. Series or parallel).
- To conduct the appropriate test, batteries must be tested individually, and the charging system must be tested at its rated voltage (6 or 12 Volts).

**CAUTION:** Care must be taken when disconnecting battery clamps (1 & 3) to prevent shorting of loose cables to ground or positive. Arcing caused by shorting cables can ignite gas found in batteries and cause an explosion.

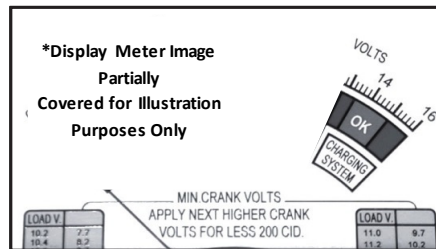
The proper way to prevent arcing at battery is by disconnecting the ground cable at the chassis or engine block and preventing it from contacting any metal. Then the remaining cables can be disconnected safely at each battery.

**CAUTION:** Do not press the battery load switch (5) during this test!

1. Connect the RED (+ positive) battery clamp (3) to the positive terminal (+) on the vehicles battery.
2. Connect the BLACK (- negative) battery clamp (1) to the negative terminal (-) on the vehicles battery.
3. Insure the vehicle is outside, or in a well-ventilated area, start the vehicle's engine and run at fast idle speed.

**Caution:** Never start and run the vehicle's engine in a closed garage.

4. View the battery load tester display meter (4) and read the charging system condition located on the far right side of the display meter (4) (Fig.3).



[Fig.3]

**Note:** Refer to the Battery Condition Analysis table on page 7 for additional result details.

**12) Battery Condition Analysis Table**

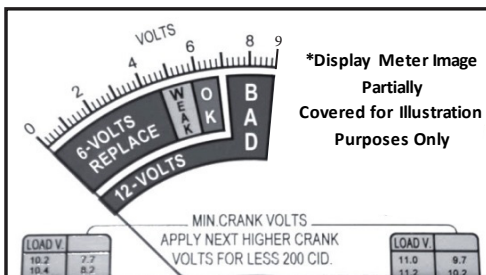
<b>Load Test /15 Seconds (Display Reading)</b>	<b>DC Volts Display Meter Details</b>
<b>OK (GREEN Area)</b>	Battery capacity is good. May or may not be fully charged. Check the charge state by testing the Specific Gravity (SG) with a Hydrometer. If SG is less than full charge, check for possible charging system trouble. Recharge to full level.
<b>WEAK (Yellow Area)</b>	If the display meter needle is steady, the battery capacity is not good. The battery may be defective or partly discharged. Check the SG. If over 1.225, the battery is defective. If below 1.225, recharge the battery and re-test. If there is a difference in SG between cells over 2 points (0.025), a particular cell may be damaged. If charging does not bring SG to full charge level, then the battery is either sulfated, or has lost its active material.
<b>BAD (RED Area)</b>	If the display meter is falling, the battery is defective or has a bad cell. For a quick check, release the battery load switch (5) and note the display meter reaction. If voltage recovers to its full potential after only a few seconds, the battery is probably defective. If the voltage recovers slowly, the battery may only be run down. Check SG, recharge, and re-test.
<b>CHARGING SYSTEM (White Area)</b>	If the display meter needle reads OK, charging system is functional. If it falls on the low red or high red areas, the charging system may be malfunctioning.

### 13) Testing the Vehicles Starter Motor

**NOTE:** The vehicles engine should be off, at normal operating temperature and the vehicles battery should be fully charged before doing this test.

**CAUTION:** Do not press the battery load switch (5) during this test!

1. Connect the RED (+ positive) battery clamp (3) to the positive terminal (+) on the vehicles battery.
2. Connect the BLACK (- negative) battery clamp (1) to the negative terminal (-) on the vehicles battery.
3. Disable the ignition of the vehicle so the engine will not start. (Refer to your vehicle's user/instruction manual or automotive professional technician for advice).
4. Have an assistant crank the vehicles engine so you can view the display meter (4) and note the voltage reading on the display meter (4) during cranking.
- 4a. A reading of 9 volts or less indicates excessive current draw. This may be due to a poor connection, a failing starter, or a battery of insufficient size for the motor capacity (Fig.4).



(Fig.4)



## 14) Care, Maintenance & Storage

1. Clean the outside of the battery load tester with a damp cloth.
2. Never use solvents to clean any parts of the battery load tester.
3. Use compressed air to blow out debris from the load vents.
4. After each use, clean the battery clamps (1&3) of any possible battery electrolyte (corrosion).
5. Apply a thin coat of silicon grease to prevent corrosion. (Not Supplied)

## 15) Spare Parts

There are no spare parts available for this battery load tester.

## 16) Service

Have your product serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.

## 17) Office Contact Details



**Phone:** 1300 657 528



**Fax:** 1300 556 005



**Email:** [enquiries@kincrome.com.au](mailto:enquiries@kincrome.com.au)



**Website:** [www.kincrome.com.au](http://www.kincrome.com.au)

## 18) Caring For The Environment



When a tool is no longer usable it should not be disposed of with household waste, but in an environmentally friendly way. Please recycle where facilities exist. Check with your local council authority for recycling advice.



Recycling packaging reduces the need for landfill and raw materials. Reuse of recycled material decreases pollution in the environment. Please recycle packaging where facilities exist. Check with your local council authority for recycling advice.

## 19) Warranty

**12**  
**MONTH**  
**WARRANTY**

Warranty given by Kincrome Australia Pty Ltd of 3 Lakeview Drive, Caribbean Park, Scoresby, Victoria (Tel 1300 657 528). The applicable warranty period (12 months) commences on the date that the product is purchased. If this product has materials or workmanship defects (other than defects caused by abnormal or non warranted use) you can, at your cost, send the product to place of purchase, an authorised Kincrome service agent or one of Kincromes addresses for repair or replacement. Your rights under this warranty are in addition to any other rights you have under the Australian Consumer Law or other applicable laws. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. For further details please visit [www.kincrome.com.au](http://www.kincrome.com.au) or call us. Due to minor changes in design or manufacture, the product you purchase may sometimes differ from the one shown on the packaging.

**Notes:**



**KINCROME**   
PROFESSIONAL QUALITY TOOLS

[www.kincrome.com.au](http://www.kincrome.com.au)