



# AUTO PROBE EXCEL KIT 6 - 24v

MODEL NO: PPLK

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

## 1. SAFETY

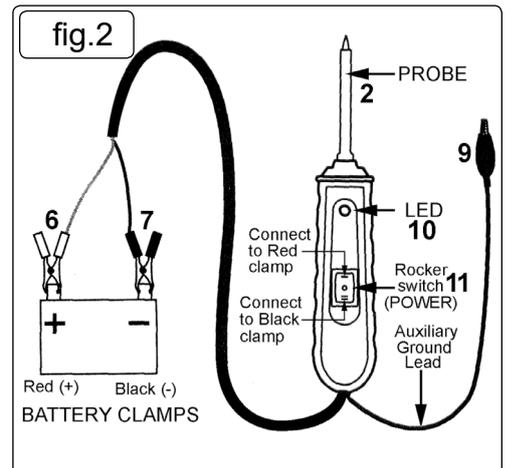
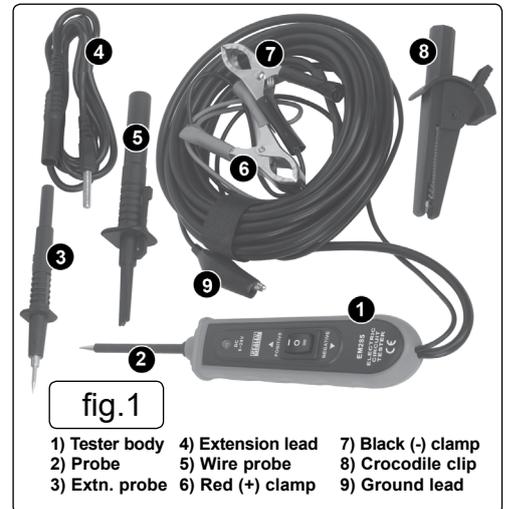
- ✓ IF YOU ARE IN ANY DOUBT ABOUT ELECTRICAL SAFETY CONSULT A QUALIFIED ELECTRICIAN.
- ✓ Only for use with 6 - 24 volt DC systems.
- ✗ **DO NOT** apply voltage or current to the probe that exceeds the specified maximum of 24V DC.
- ✗ **DO NOT** use with industrial 110V systems.
- ✗ **DO NOT** use on any circuit directly or indirectly connected to AC lines or any other AC power source.
- ✗ **DO NOT** use with any component or circuits of the ignition system.
- ✓ Before using this device, check the vehicle's electrical wiring and disconnect any part or system sensitive to voltage and current pulses such as air bags, electronic control modules, etc.
- ✓ Always check your instructions and procedures indicated in the vehicle service manual before attempting to disconnect any part or subsystem of the electrical circuit.
- ✓ When not in use, store the meter carefully in a safe, dry, childproof location. Avoid extremes of temperature.
- ✗ **DO NOT** use the unit around explosive gases, vapor or dust. When the power switch is operated (forwards or backwards), battery current is conducted to the tip of the probe which may cause sparks when contacting ground or other certain circuits.
- ✗ **DO NOT** use leads if damaged or if the wire is bared in any way.
- ✗ **DO NOT** use this tester for any purpose other than that for which it has been designed.
- ✗ **DO NOT** use the probe to supply battery voltage to any circuit or component either on or off the vehicle that has a different voltage supply rating

## 2. INTRODUCTION

Comprehensive 6-24V DC test kit. Find bad earths, breaks in continuity and short circuits quickly and easily. Can even power up components on and off the vehicle. Kit includes flexible extension cable, crocodile clip, wire probe and back-probe.

## 3. OPERATION

- 3.1. BASIC CONNECTIONS. (See Fig.1)** The probe (2) is screwed directly into the tester body (1). To increase accessibility replace the probe (2) with the extension lead (4). The other accessories, extension probe (3), Wire probe (5) and crocodile clip (8) can then be plugged into the socket at the other end of the extension lead.
- 3.2. BASIC OPERATION. (See Fig.2)** When the rocker switch (11) is moved forwards to the single bar position the probe will be connected directly to the RED clamp (6). When the rocker switch (11) is moved backwards to the double bar position the probe will be connected directly to the BLACK clamp (2). The Auxiliary ground lead (9) is connected directly to the black clamp (7).
- 3.3. QUICK SELF TEST. (See Fig.2)** Unroll the unit's cable. Attach the red clamp to the positive terminal of the vehicle's battery. Attach the black clamp to the negative terminal of the vehicle's battery.
- 3.3.1.** Press and hold down the rocker switch (11) in the forward, single bar position. The LED indicator should light RED.
- 3.3.2.** Press and hold down the rocker switch (11) in the backwards, double bar position. The LED indicator should light GREEN.
- 3.3.3.** The unit is now ready to use. If the LED indicator did not light, the cause may be that the clamp connections are poor or the unit is damaged.

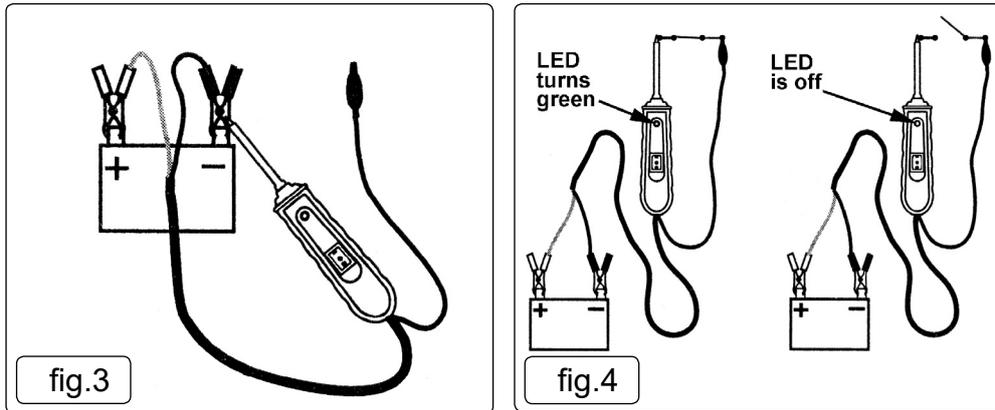


**3.4. POLARITY TESTING. (See Fig.3)**

Contacting the tip of the probe to a positive (+) circuit will light the LED indicator RED. Contacting the tip of the probe to a negative (-) circuit will light the LED indicator GREEN. Contacting the tip of the probe to an open circuit will be indicated by the fact that the LED indicator is off.

**3.5. CONTINUITY TESTING. (See Fig.4)**

By using the probe tip together with the auxiliary ground lead, continuity can be tested on wires and components which are disconnected from the vehicle's electrical system.



3.5.1. When continuity is present, the LED indicator will light GREEN. **NOTE: DO NOT press the power switch.**

**3.6. FOLLOWING AND LOCATING SHORT CIRCUITS:** In most cases a short circuit causes a fuse to blow or a circuit breaker to trip and this is the best place to begin the fault tracing process.

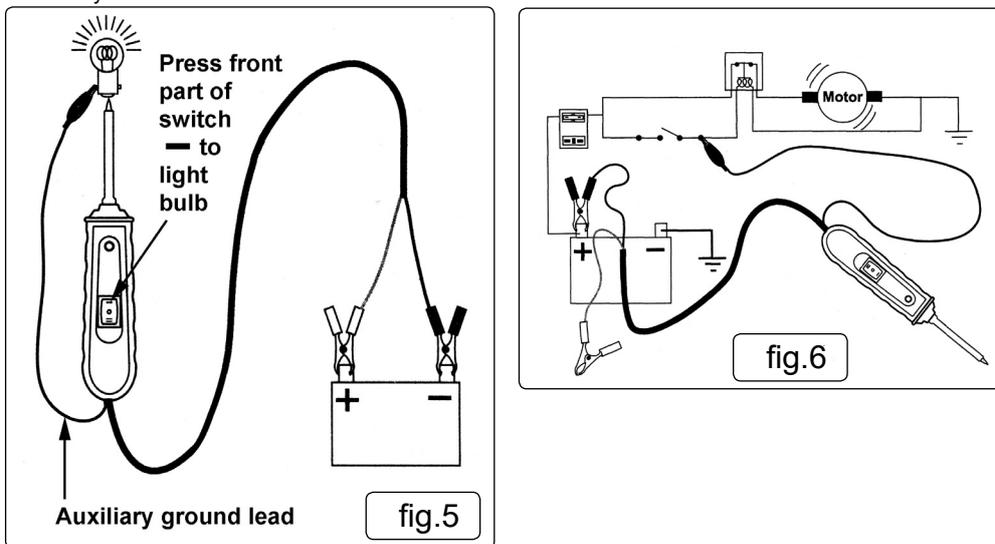
3.6.1. Remove the blown fuse from the fuse box. Hold the probe tip against each of the contacts in the fuse box in turn whilst moving the power switch to the forward, single bar position. The side which causes the LED indicator to turn off or causes the unit to sound is the shorted circuit.

3.6.2. Note this wire's identification code or colour. Follow the wire as far as you can along the wiring harness.

3.6.3. Locate the colour coded wire in the harness and expose it.

3.6.4. Probe through the insulation of the wire with the probe tip and move the power switch to the forward, single bar position to energise the wire. If the LED indicator turns off or the unit sounds you have identified the shorted wire.

3.6.5. Continue testing the wire at each connector in the harness. The wire which causes the LED indicator to turn off or causes the unit to sound will lead you to the shorted area. Inspect the harness for signs of chafing or burnt out wiring and replace or repair as necessary.



**3.7. ACTIVATING COMPONENTS REMOVED FROM THE VEHICLES ELECTRICAL SYSTEM. (Such as fuel pumps, starter solenoids, magnetic clutches, blower motors, cooling fans, lights etc.) See Fig.5.**

By using the probe tip together with the auxiliary ground lead, components can be activated, thereby testing their function.

3.7.1. Connect the auxiliary ground lead's clip to the negative terminal of the component to be tested. Contact the probe to the positive terminal of the component. The LED indicator should light GREEN indicating continuity through the component.

3.7.2. Whilst keeping an eye on the green illuminated LED, quickly rock the power switch forwards to the single bar position and release it. If the green indicator changes instantly from GREEN to RED, you may proceed with further activation.

3.7.3. If the green indicator went off at that instant or if the unit sounds, the unit has been overloaded. This could happen for the following reasons.

- a) Where the tip of the tester has contacted is a direct ground or a negative voltage.
- b) The component is short circuited.
- c) The component requires a high amperage (e.g. a starter motor).

**NOTE:** When the unit sounds, a circuit breaker within the unit will trip. This breaker will reset automatically within 3 to 5 seconds.

**3.8. POWER LEAD FEATURE (SEE FIG.6).**

**WARNING!** Haphazardly applying voltage to certain circuits can cause damage to a vehicles electronic components. Therefore it is strongly advised to use the correct wiring diagram and diagnosing procedure whilst performing tests.

3.8.1. The black clamp and the auxiliary ground lead are connected through the unit. By leaving the red clip disconnected from the vehicles battery, the unit can be used as a long power lead.

3.8.2. Be careful to avoid short circuits and overloading when using this power lead function. In this configuration the leads are not protected by the units circuit breaker.

**3.9. ACTIVATING COMPONENTS WITH A POSITIVE(+) VOLTAGE WITHIN THE VEHICLE'S ELECTRICAL SYSTEM (See Fig.7).**

3.9.1. Contact the probe tip to the positive terminal of the component, the LED indicator should light GREEN. Whilst keeping an eye on the green indicator, quickly rock the power switch forwards to the single bar position and release it. If the green indicator changes instantly from GREEN to RED, you may proceed with further activation.

3.9.2. If the green indicator went off at that instant or if the unit sounds, the unit has been overloaded. This could happen for the following reasons.

- a) Where the tip of the tester has contacted is a direct ground or a negative voltage.
- b) The component is short circuited.
- c) The component requires a high amperage (e.g. a starter motor).

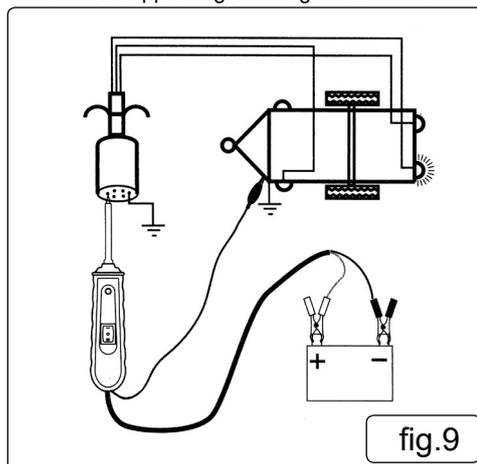
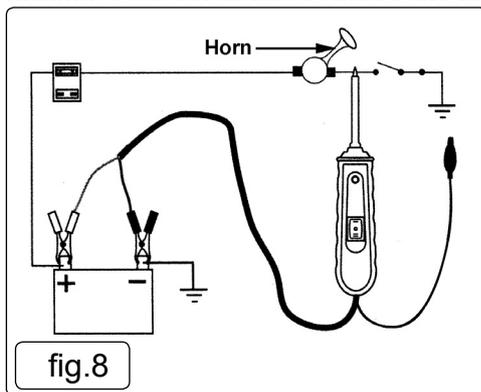
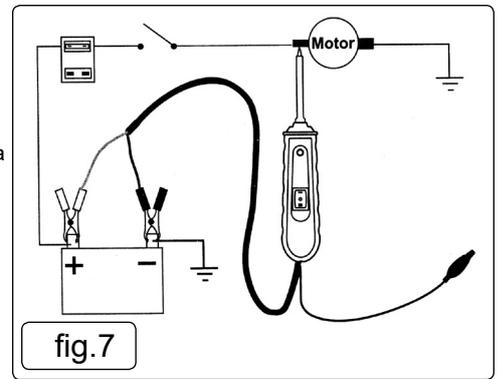
**3.10. ACTIVATING COMPONENTS WITH A NEGATIVE(-) VOLTAGE WITHIN THE VEHICLE'S ELECTRICAL SYSTEM (See Fig.8).**

3.10.1. Contact the probe tip to the negative terminal of the component, the LED indicator should light RED. Whilst keeping an eye on the red indicator, quickly rock the power switch backwards to the double bar position and release it. If the red indicator changes instantly from RED to GREEN, you may proceed with further activation.

3.10.2. If the red indicator went off at that instant or if the unit sounds, the unit has been overloaded. This could happen for the following reasons.

- a) Where the tip of the tester has contacted is a direct positive voltage.
- b) The component is short circuited.
- c) The component requires a high amperage (e.g. a starter motor).

**WARNING!** With this function a vehicle's fuse can be blown or tripped if grounding the contact is in series with it.



**3.11. TESTING TRAILER LAMPS AND CONNECTIONS**

3.11.1. Connect the unit to a battery of the correct voltage.

3.11.2. Attach the auxiliary ground lead to the trailer ground.

3.11.3. Probe the contacts of the towing electrical connector whilst rocking the power switch to the forward single bar position. This lets you check the function and orientation of the trailer lights. (See Fig.9).



**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.



**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.

Sealey Group, Kempson Way, Suffolk Business Park, Bury St Edmunds, Suffolk. IP32 7AR

01284 757500

01284 703534

sales@sealey.co.uk

www.sealey.co.uk