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› ES Electronic Specialties 143 Automotive Test Lead Kit User Manual

ES 143

ES Electronic Specialties 143 Automotive Test Lead Kit User Manual

Model: 143

INTRODUCTION

This manual provides essential instructions for the safe and effective use of your ES Electronic Specialties 143 Automotive Test Lead Kit. This kit is designed to facilitate various electrical diagnostic tasks in automotive applications, offering a versatile set of leads and probes for accurate measurements.

PRODUCT OVERVIEW

The ES 143 Automotive Test Lead Kit includes a comprehensive selection of components for electrical testing:

- One set of interconnect leads, 64 inches in length.
- Standard test probes for general measurements.
- Flexible silicon back probe pins for accessing difficult-to-reach connectors without damage.
- Shielded alligator clips for secure connections to terminals.
- Large crocodile clips for robust connections to grounds and battery terminals.
- Deluxe roll-up storage pouch for organization and portability.



An image showing the complete ES Electronic Specialties 143 Automotive Test Lead Kit. It includes red and black interconnect leads, various interchangeable test probes, flexible back probing pins, shielded alligator clips, and large crocodile clips, all designed for automotive electrical testing.

SETUP

1. **Inspect Components:** Before each use, visually inspect all leads, probes, and clips for any signs of damage, such as frayed wires, cracked insulation, or bent probe tips. Do not use damaged components.
2. **Connect Leads:** Insert the banana plug ends of the interconnect leads (red for positive, black for negative) into the corresponding input jacks of your multimeter or diagnostic tool. Ensure a secure connection.
3. **Attach Probes/Clips:** Select the appropriate probe or clip for your testing application and securely attach it to the other end of the interconnect lead. The kit provides standard test probes, back probing pins, shielded alligator clips, and large crocodile clips.

OPERATING INSTRUCTIONS

Always refer to your multimeter's instruction manual for specific operation details and safety warnings. The following instructions are general guidelines for using the test lead kit components:

Using Standard Test Probes

- Connect the test probes to the interconnect leads.
- Carefully touch the probe tips to the test points on the circuit or component. Ensure stable contact for accurate readings.

Using Flexible Silicon Back Probe Pins

- Attach the back probe pins to the interconnect leads.
- Gently slide the thin, sharp tip of the back probe into the rear of an automotive connector to make contact with the terminal without damaging the wire insulation or connector housing. This allows for live circuit measurements while the component is connected and operating.

Using Alligator and Crocodile Clips

- Connect the desired clips (shielded alligator or large crocodile) to the interconnect leads.
- Use alligator clips for smaller terminals and shielded connections.
- Use large crocodile clips for larger terminals, battery posts, or chassis grounds to establish a secure, hands-free connection.

MAINTENANCE

- **Cleaning:** After each use, wipe down all leads and probes with a clean, dry cloth to remove dirt, grease, or contaminants. For stubborn grime, a slightly damp cloth with mild soap can be used, ensuring all components are completely dry before storage.
- **Storage:** Store the test lead kit in the provided deluxe roll-up storage pouch. This protects the components from damage and keeps them organized. Avoid storing in extreme temperatures or direct sunlight.
- **Inspection:** Regularly inspect the leads and probes for wear and tear. Replace any damaged components immediately to ensure safety and accurate measurements.

TROUBLESHOOTING

If you encounter issues while using the test lead kit, consider the following:

- **No Reading/Intermittent Reading:**
 - Ensure all connections (multimeter to leads, leads to probes/clips) are secure and fully inserted.
 - Check for continuity in the leads and probes using your multimeter's continuity function. Replace if open circuit is detected.
 - Verify proper contact with the test point. Clean any corrosion or dirt from the test points.
- **Inaccurate Readings:**
 - Confirm your multimeter is set to the correct function and range for the measurement.
 - Ensure the probes are making good, stable contact.
 - Check for damaged insulation or exposed wires that could cause short circuits or incorrect readings.

SPECIFICATIONS

Brand	ES (Electronic Specialties)
Model Number	143
Lead Length	64 inches (approximately 1.6 meters)
Item Weight	4 ounces (approximately 113 grams)
Product Dimensions	5 x 3 x 8 inches (packaging)

Measurement Type	Multimeter accessories
Included Components	Interconnect leads, test probes, back probe pins, shielded alligator clips, large crocodile clips, storage pouch.

SAFETY INFORMATION

When working with electrical systems, always prioritize safety. Failure to follow safety precautions can result in injury or damage to equipment.

- **Personal Protective Equipment (PPE):** Always wear appropriate PPE, including safety glasses and insulated gloves, when performing electrical tests.
- **De-energize Circuits:** Whenever possible, de-energize the circuit or component before connecting or disconnecting test leads.
- **Voltage Limits:** Do not exceed the voltage or current ratings of your multimeter or the test leads.
- **Insulation Integrity:** Ensure that all test leads and probes have intact insulation. Do not use leads with exposed wires or damaged insulation.
- **Avoid Contact:** Avoid touching live circuits or exposed metal parts with your hands or body.
- **Proper Connections:** Always make sure connections are secure to prevent accidental disconnections and potential arcing.
- **Automotive Battery Safety:** When working with automotive batteries, be aware of potential hazards such as acid, explosive gases, and high current.

WARRANTY AND SUPPORT

For warranty information or technical support regarding your ES Electronic Specialties 143 Automotive Test Lead Kit, please contact Electronic Specialties directly. Refer to the product packaging or the official Electronic Specialties website for current contact details and warranty terms.

ASK A QUESTION ABOUT THIS MANUAL

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Question

Example: How do I reset this device or fix this error?

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