KC 643

KC HiLiTES 643 Pro Sport 6-inch LED Light Set Instruction Manual

Model: 643

1. Introduction

The KC HiLiTES 643 Pro Sport 6-inch LED Light Set is designed for high-performance off-road illumination. This system features durable LED lights housed in a compact, impact-resistant Polymax casing, suitable for various vehicles including Jeeps, trucks, and SUVs. This manual provides essential information for the proper installation, operation, and maintenance of your KC HiLiTES 643 Pro Sport LED lights.

Key Features:

- **Power Output:** 20W per light, utilizing 2 x CREE XML2-T6 10W LEDs, totaling 40W for the pair.
- **Lumen Output:** 2,104 raw lumens per light, available in both spot and spread beam patterns.
- **Color Temperature:** 5000K for a clear, white light output.
- **Gravity Reflective Diode (GRD) Technology:** Patented technology for controlled and long-range light beams.
- **Durable Construction:** Impact-resistant Polymax housing.

2. Safety Information

Read all instructions carefully before installation and operation. Failure to follow these instructions may result in property damage, personal injury, or improper operation of the product.

- Always disconnect the vehicle's battery before beginning any electrical work.
- Ensure all wiring connections are secure and properly insulated to prevent short circuits.

- Mount lights securely to prevent vibration and detachment during vehicle operation.
- Do not look directly into the LED lights when they are illuminated, as this can cause eye strain or damage.
- Verify local regulations regarding auxiliary lighting before use on public roads. These lights are typically for off-road use only.

3. Package Contents

Verify that all components are present before beginning installation:

- (2) KC Pro-Sport Gravity LED Lights (6-inch)
- (1) Wiring Harness
- (1) Switch Kit
- Mounting Hardware (bolts, washers, nuts)
- Instruction Sheet

4. Setup and Installation

Proper installation is crucial for the performance and longevity of your KC HiLiTES LED lights. If you are not comfortable with electrical wiring or vehicle modifications, it is recommended to seek professional assistance.

4.1 Mounting the Lights

1. **Choose Mounting Location:** Select a sturdy mounting point on your vehicle, such as a bumper, light bar, or roof rack, that can support the weight of the lights and withstand vehicle vibrations.
2. **Secure Mounting:** Use the provided mounting hardware to securely attach each light. Ensure the lights are aimed correctly before fully tightening all bolts.



Figure 1: KC HiLiTES 643 Pro Sport LED lights installed on the front bumper of a blue truck, viewed from an angle. This image illustrates a typical mounting configuration.

4.2 Wiring Instructions

The included wiring harness simplifies the electrical connection. Follow the instructions provided with the harness for specific wiring details. General steps include:

1. **Connect Lights:** Attach the light connectors to the corresponding connectors on the wiring harness.
2. **Power Connection:** Connect the positive (+) wire from the harness to the vehicle's battery positive terminal (or a fused accessory power source) and the negative (-) wire to a suitable ground point on the vehicle chassis.
3. **Switch Installation:** Install the switch in a convenient location within the vehicle's cabin. Connect the switch wires to the harness as directed.
4. **Fuse Protection:** Ensure the wiring harness includes an inline fuse for circuit protection. Verify the fuse rating matches the product specifications (1.63A draw per light, so total 3.26A for the pair, a 5A or 10A fuse is typically appropriate).



Figure 2: Front view of a blue truck with KC HiLiTES 643 Pro Sport LED lights mounted on the bumper. This image shows the

lights from a direct front perspective.

5. Operating Instructions

Once installed, operating your KC HiLiTES 643 Pro Sport LED lights is straightforward:

- **Power On/Off:** Use the installed switch to turn the lights on or off.
- **Beam Patterns:** The lights are available in spot (focused) or spread (wider) beam patterns. The chosen pattern will determine the light distribution.
- **Aiming:** For optimal performance, adjust the aim of the lights to suit your driving conditions. Typically, off-road lights are aimed to illuminate areas beyond the reach of standard headlights or to provide wider peripheral vision.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your LED lights.

- **Cleaning:** Clean the lenses regularly with a soft cloth and mild soap and water to remove dirt, mud, and debris. Avoid abrasive cleaners that could scratch the lens.
- **Inspection:** Periodically check all mounting hardware for tightness. Inspect wiring for any signs of wear, fraying, or corrosion. Ensure all connections remain secure.
- **Housing:** The Polymax housing is designed to be durable, but inspect it for any cracks or damage after off-road excursions.

7. Troubleshooting

If you encounter issues with your KC HiLiTES LED lights, refer to the following common troubleshooting steps:

- **Lights Not Turning On:**
  - Check the fuse in the wiring harness. Replace if blown.
  - Verify all electrical connections (power, ground, switch) are secure and free of corrosion.
  - Ensure the vehicle's battery has sufficient charge.
  - Test the switch for proper functionality.
- **Dim or Flickering Lights:**
  - Check for loose or corroded wiring connections, especially ground connections.
  - Ensure the vehicle's charging system is operating correctly.
- **Moisture Inside Lens:**
  - Small amounts of condensation can occur due to temperature changes. If excessive, check for cracks in the housing or improper sealing. Contact support if the issue persists.

8. Specifications

Model Number	643

Brand	KC HiLiTES
Light Type	LED
Power per Light	20W (2 x CREE XML2-T6 10W LED)
Raw Lumens per Light	2,104
Color Temperature	5000K
Voltage	9 Volts (DC) (Operating range typically 9-32V)
Amp Draw	1.63A per light
Housing Material	Polymax (Plastic)
Dimensions (L x W x H)	29.5 x 16.5 x 23.5 cm (11.6 x 6.5 x 9.25 inches)
Item Weight	7.45 Pounds (approx. 3.38 kg)
GTIN / UPC	084709006433

9. Warranty Information

KC HiLiTES offers a 23-year warranty on the 643 Pro Sport LED Light Set. This warranty covers defects in materials and workmanship under normal use. For specific terms, conditions, and claim procedures, please refer to the official KC HiLiTES website or contact their customer support directly.

10. Support and Contact

For further assistance, technical support, or to inquire about replacement parts, please visit the official KC HiLiTES website or contact their customer service department. Always provide your product model number (643) when seeking support.

Official Website: www.kchilites.com (Example link, actual link may vary)

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