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› DNA MOTORING HL-HAY-010-BK Headlight Instruction Manual for Kenworth T680 (2013-2021)

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For Kenworth T680 (2013-2021)

1. PRODUCT OVERVIEW

The DNA MOTORING HL-HAY-010-BK headlights are designed to enhance visibility and safety for Kenworth T680 models from 2013 to 2021. These headlights feature advanced LED technology, providing superior illumination compared to standard halogen lamps. They are engineered for direct replacement, ensuring compatibility with your vehicle's existing wiring harness.



Figure 1: DNA MOTORING HL-HAY-010-BK Headlight Assembly.

Key Features:

- **Compatibility:** Specifically designed for Kenworth T680 models (2013-2021). Replaces OEM Part Numbers: P54-6103-10000, P54-6103-11000.
- **DOT/SAE Approved:** Manufactured to meet or exceed safety and quality standards for various outdoor conditions.
- **Full LED Lighting:** Features Sequential Chase LED Turn Signals, Barrel Style LED High Beams, Projector LED Low Beams, and LED Halo Rings. Includes Amber Side Marker Lights.
- **High Performance:** Low Beam provides 2,500 Lumens at 1.13 Amps (12V DC Input). High Beam provides 1,700 Lumens at 1.42 Amps (12V DC Input).
- **Easy Installation:** Designed for direct connection into the existing wiring harness. Sold as a pair (driver and passenger side).



Figure 2: Detailed view of headlight components including clear lens, dual LED halo running lights, amber reflector, LED side marker light, gatling style LED high beam, LED projector low beam, sequential LED chase amber signal light, and black housing.

2. INSTALLATION GUIDE

Proper installation is crucial for the performance and longevity of your new headlights. While these headlights are designed for easy connection, professional installation is recommended to ensure correct alignment and electrical connections. Always refer to your vehicle's service manual for specific instructions on removing and installing headlights for your Kenworth T680.

Pre-Installation Checklist:

- Ensure the vehicle is parked on a level surface with the engine off and parking brake engaged.
- Disconnect the vehicle's battery to prevent electrical shorts.
- Gather necessary tools: basic hand tools (wrenches, screwdrivers), wire cutters/strippers (if custom wiring is needed), and safety glasses.

- Inspect the new headlights for any damage prior to installation.



Figure 3: Example of wiring harness connection and typical tools required for installation.

Installation Steps:

1. **Access Headlight Assembly:** Depending on your Kenworth T680 model, you may need to remove the grille or other trim pieces to access the headlight mounting bolts.
2. **Disconnect Wiring:** Carefully disconnect the electrical connectors from the existing headlight assembly.
3. **Remove Old Headlights:** Unbolt and remove the old headlight units from the vehicle.
4. **Install New Headlights:** Position the new DNA MOTORING headlight assemblies into place. Secure them with the appropriate mounting bolts. Do not overtighten.
5. **Connect Wiring:** Connect the new headlight wiring harness to the vehicle's existing electrical connectors. Ensure all connections are secure.
6. **Test Functionality:** Before reassembling any removed trim, reconnect the vehicle battery and test all headlight functions: low beam, high beam, halo rings, sequential turn signals, and side markers.

7. **Adjust Aim (if necessary):** If your vehicle's aiming mechanism allows, adjust the headlight beam pattern for optimal road illumination without blinding oncoming traffic.
8. **Final Assembly:** Reinstall any removed grille or trim pieces.

3. OPERATING YOUR HEADLIGHTS

Your DNA MOTORING LED headlights offer multiple lighting functions for various driving conditions. Familiarize yourself with your vehicle's light controls to utilize these features effectively.

Lighting Functions:

- **Low Beam:** Provides standard illumination for general driving, designed to light the road ahead without causing glare to other drivers.
- **High Beam:** Offers maximum illumination for driving in dark conditions where no oncoming traffic is present.
- **LED Halo Rings (Running Lights):** These rings illuminate when your vehicle's running lights are active, providing a distinct visual signature.
- **Sequential Chase LED Turn Signals:** When activated, the amber LEDs illuminate in a sequential pattern, clearly indicating your turning intentions.
- **Amber Side Marker Light:** Enhances side visibility of your vehicle, especially during turns or lane changes.



Figure 4: Top image shows full white LED halo running lights. Bottom image shows full LED high and low beams activated.



Figure 5: Detailed view of the illuminated dual LED halo rings.



Figure 6: Sequential amber LED turn signals in operation.

4. MAINTENANCE AND CARE

To ensure optimal performance and extend the lifespan of your DNA MOTORING LED headlights, follow these maintenance guidelines:

- **Regular Cleaning:** Clean the headlight lenses regularly with a soft cloth and mild soap and water. Avoid abrasive cleaners or harsh chemicals, as these can damage the polycarbonate lens material.
- **Inspect for Damage:** Periodically check the headlight assemblies for any signs of cracks, moisture intrusion, or loose connections. Address any issues promptly.
- **Avoid High-Pressure Washing:** When washing your vehicle, avoid directing high-pressure water streams directly at the headlight seals, as this can compromise their water resistance.
- **Bulb Replacement:** These are full LED units, meaning individual bulbs are not designed for user replacement. If an LED component fails, the entire assembly may need servicing or replacement.

5. TROUBLESHOOTING

This section addresses common issues you might encounter with your LED headlights.

Issue	Possible Cause	Solution
Headlight not illuminating	Loose electrical connection, blown fuse, faulty wiring, LED failure.	Check all wiring connections. Inspect vehicle fuses. Consult a professional for wiring or LED component diagnosis.
Flickering or intermittent operation	Loose connection, voltage fluctuation, incompatible electrical system, faulty LED driver.	Ensure all connections are tight. Verify vehicle's electrical system stability. Professional diagnosis may be required.
High beam indicator issue (e.g., light out notification when not out)	Vehicle's computer (CAN bus system) detecting incorrect resistance for LED lights.	This may require a load resistor or CAN bus decoder to be installed to simulate the resistance of original halogen bulbs. Consult a professional auto electrician.
Moisture inside the lens	Compromised seal, condensation.	Small amounts of condensation may dissipate naturally. If persistent or excessive, inspect seals for damage. Contact support if seals are faulty.
Improper beam pattern/alignment	Incorrect installation, aiming screws not adjusted.	Ensure headlights are securely mounted. Adjust aiming screws as per vehicle specifications. Professional alignment is recommended.

6. PRODUCT SPECIFICATIONS

Feature	Detail
Brand	DNA MOTORING
Model Number	HL-HAY-010-BK
Compatible Vehicle	Kenworth T680 (2013-2021)
Replaces Part Numbers	P54-6103-10000, P54-6103-11000
Light Source Type	LED
Low Beam Output	2,500 Lumens, 1.13 Amps, 12V DC Input
High Beam Output	1,700 Lumens, 1.42 Amps, 12V DC Input
Voltage	12 Volts
Wattage	13.56 watts
Lens Material	Polycarbonate
Lens Color	Clear
Housing Color	Black

Feature	Detail
Included Components	1 Pair of Headlights (Driver and Passenger Side)
Certifications	DOT/SAE Approved

7. WARRANTY AND CUSTOMER SUPPORT

For warranty information regarding your DNA MOTORING HL-HAY-010-BK headlights, please contact the seller directly. Warranty terms and conditions may vary.

For additional support, technical assistance, or to inquire about other DNA MOTORING products, please visit the official DNA MOTORING store or contact their customer service department.

DNA MOTORING Store: [Visit the DNA MOTORING Store on Amazon](#)

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Question

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

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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