

Hella 1EL 009 925-521

Hella 1EL 009 925-521 Bi-Xenon Headlamp User Manual

Model: 1EL 009 925-521

1. INTRODUCTION

This manual provides comprehensive instructions for the Hella 1EL 009 925-521 Bi-Xenon Headlamp. This headlamp is specifically designed for right-hand drive vehicles, compatible with Audi A6 Avant (4F5, C6) models. It details the product's features, installation guidelines, operational aspects, and maintenance procedures to ensure optimal performance and safety.

2. PRODUCT FEATURES

The Hella 1EL 009 925-521 Bi-Xenon Headlamp incorporates advanced lighting technology and specific design elements:

- **Vehicle Compatibility:** Designed for Audi A6 Avant (4F5, C6) models. Users should verify exact vehicle application.
- **Light Type:** Bi-Xenon technology for both low and high beam functions.
- **Lamp Types:** Utilizes D3S (Xenon), H7 (Halogen), and PY21W (Indicator) bulbs. Note: The D3S gas discharge lamp is not included and must be acquired separately. H7 and PY21W bulbs are included.
- **Lighting Functions:** Provides five distinct lighting functions: flashing light, parking light, low beam, high beam, and LED daytime running light.
- **Drive Side:** Engineered for right-hand drive vehicles.
- **Country Models:** Suitable for Europe and China market vehicles.
- **Components:** Includes a servo motor for automatic headlamp range adjustment.
- **Dynamic Curve Light:** This headlamp is intended for vehicles *without* dynamic curve lighting systems.

3. SETUP AND INSTALLATION

Installation of automotive headlamps requires technical knowledge and should ideally be performed by a qualified professional. Incorrect installation can affect vehicle safety and lighting performance.

1. **Preparation:** Ensure the vehicle's ignition is off and the battery is disconnected before beginning installation. Refer to your vehicle's service manual for specific instructions on headlamp removal and installation.

2. **Compatibility Check:** Confirm that the headlamp's OEM part numbers (e.g., 4F0 941 004 BP, 4F0 941 030 BP) match your vehicle's requirements.
3. **Bulb Installation:** If not already present, install the D3S gas discharge lamp into the designated Bi-Xenon projector. Ensure H7 and PY21W bulbs are correctly seated.
4. **Mounting:** Carefully position the new headlamp into the vehicle's headlamp housing. Secure it using the appropriate fasteners as per the vehicle manufacturer's guidelines.
5. **Electrical Connections:** Connect all electrical plugs to the corresponding sockets on the headlamp. Ensure connections are secure and free from corrosion.
6. **Final Checks:** Reconnect the vehicle battery. Test all lighting functions (low beam, high beam, parking light, flashing light, daytime running light) to ensure proper operation.
7. **Beam Adjustment:** After installation, it is crucial to have the headlamp beam pattern professionally adjusted to comply with local regulations and ensure optimal road illumination without dazzling oncoming traffic. The integrated servo motor assists with automatic range adjustment, but initial alignment is critical.



Figure 3.1: Front view of the Hella 1EL 009 925-521 Bi-Xenon Headlamp, showing the projector lens, reflector, and LED daytime running light strip.



Figure 3.2: Rear view of the Hella 1EL 009 925-521 Bi-Xenon Headlamp, illustrating the housing and electrical connection points.

4. OPERATING INSTRUCTIONS

The Hella Bi-Xenon Headlamp operates in conjunction with your vehicle's existing lighting control system. Refer to your vehicle's owner's manual for specific instructions on activating and controlling the various lighting functions.

- **Low Beam/High Beam:** The Bi-Xenon projector provides both low and high beam illumination. Switching between these functions is controlled by your vehicle's stalk switch.
- **Daytime Running Lights (DRL):** The integrated LED DRLs activate automatically with the vehicle's ignition, depending on your vehicle's configuration.
- **Parking Light:** Activated via your vehicle's light switch, providing static illumination when parked.
- **Flashing Light:** The turn signal function is controlled by your vehicle's indicator stalk.
- **Automatic Range Adjustment:** The integrated servo motor automatically adjusts the headlamp's vertical aim based on vehicle load, maintaining optimal beam height.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Hella headlamp.

- **Cleaning:** Clean the headlamp lens regularly with a soft cloth and mild automotive glass cleaner. Avoid abrasive materials or harsh chemicals that could scratch or damage the lens.
- **Bulb Replacement:**
 - **D3S Xenon Bulb:** Xenon bulbs have a long lifespan but will eventually dim or fail. Replacement should be performed by a qualified technician due to high voltage components. Always use genuine Hella or equivalent quality D3S bulbs.
 - **H7 Halogen Bulb:** The H7 bulb for supplementary lighting (if applicable) can be replaced by following your vehicle's service manual instructions.
 - **PY21W Indicator Bulb:** The PY21W turn signal bulb can be replaced as per your vehicle's service manual.
- **Inspection:** Periodically check for any signs of moisture ingress, cracks in the housing or lens, or loose connections. Address any issues promptly to prevent further damage.

6. TROUBLESHOOTING

If you experience issues with your Hella Bi-Xenon Headlamp, consider the following common troubleshooting steps:

- **Light Not Functioning:**
 - Check vehicle fuses related to lighting.
 - Inspect electrical connections at the headlamp for looseness or corrosion.
 - If a specific bulb (D3S, H7, PY21W) is out, consider bulb replacement.
- **Incorrect Beam Pattern/Aim:**
 - Ensure the headlamp is securely mounted.
 - Verify that the automatic range adjustment servo motor is functioning correctly.
 - Professional beam adjustment may be required.
- **Moisture Inside Headlamp:**
 - Small amounts of condensation can occur and usually dissipate.
 - Persistent or excessive moisture indicates a seal failure. Inspect the housing for cracks or damage and consider professional repair or replacement.

For complex issues or if troubleshooting steps do not resolve the problem, it is recommended to consult a qualified automotive technician or contact Hella customer support.







7. SPECIFICATIONS

| Attribute | Detail |
|--------------------------------|--|
| Brand | Hella |
| Model Number | 1EL 009 925-521 |
| Manufacturer Part Number | 1EL 009 925-521 |
| OEM Part Numbers | 4F0 941 004 BP; 4F0 941 004 CP; 4F0 941 030 BP; 4F0 941 030 CP; 4F0 941 030 EP; 4F0 941 030 FK |
| Product Dimensions (L x W x H) | 74 x 38.5 x 34.5 cm |
| Item Weight | 100 g |
| Position | Front Right |
| Bulb Type | Bi-Xenon (D3S), Halogen (H7), Indicator (PY21W), LED (DRL) |
| Voltage | 12 Volts |
| Wattage | 12 watts (for specific components, overall system wattage may vary) |
| Special Features | Long light, Integrated servo motor for range adjustment, LED Daytime Running Light |
| Vehicle Service Type | Car (Audi A6 Avant (4F5, C6)) |
| Drive Configuration | Right-Hand Drive |

8. WARRANTY AND SUPPORT

For information regarding the warranty period and terms for your Hella 1EL 009 925-521 Bi-Xenon Headlamp, please refer to the documentation provided at the time of purchase or contact your authorized Hella dealer or distributor. Hella provides technical support for its products; contact details can typically be found on the official Hella website or through your product supplier.

For further assistance, please visit the official Hella website or contact their customer service department.

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