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## HKS 4502-RA002

# HKS 4502-RA002 Speed Limit Defencer Instruction Manual

Model: 4502-RA002

## INTRODUCTION

The HKS 4502-RA002 Speed Limit Defencer is an electronic device designed to eliminate a vehicle's factory-set speed limiter. This device allows the vehicle to reach its full potential speed without electronic restriction. It is engineered for performance and reliability. Please read this manual thoroughly before installation and operation to ensure proper use and to prevent damage to the product or your vehicle.



Image: The HKS 4502-RA002 Speed Limit Defencer unit. This compact electronic module is designed for integration into a vehicle's

## SETUP AND INSTALLATION

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Installation of the HKS 4502-RA002 Speed Limit Defencer requires technical knowledge of automotive electrical systems. **Professional installation by a qualified technician is highly recommended.** Incorrect installation can lead to vehicle damage or malfunction.

### General Installation Guidelines:

1. **Safety First:** Disconnect the vehicle's battery before beginning any electrical work to prevent short circuits or damage.
2. **Identify Wiring:** Locate the vehicle's speed sensor wiring harness. Consult your vehicle's service manual for specific wire identification.
3. **Connect Defencer:** Carefully splice the defencer unit into the identified speed sensor wiring according to the detailed wiring diagram provided with the product packaging. Ensure all connections are secure and properly insulated.
4. **Mounting:** Securely mount the HKS 4502-RA002 unit in a dry, protected area within the vehicle's cabin or engine bay, away from excessive heat, moisture, and vibration.
5. **Reconnect Battery:** Once all connections are verified and the unit is mounted, reconnect the vehicle's battery.
6. **Initial Test:** Start the vehicle and perform a test drive in a safe, controlled environment to confirm proper operation and that no warning lights are illuminated.

*Note: Specific wiring instructions and diagrams are included with the physical product. Always refer to those for precise installation details for your vehicle model.*

## OPERATING INSTRUCTIONS

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The HKS 4502-RA002 Speed Limit Defencer operates automatically once correctly installed. It is designed to seamlessly integrate with your vehicle's electronic control unit (ECU) to bypass the factory speed limiter without requiring any manual intervention from the driver.

- Upon vehicle ignition, the defencer activates.
- It continuously monitors vehicle speed signals.
- When the vehicle approaches the original factory speed limit, the defencer intervenes to prevent the ECU from engaging the limiter.
- No indicator lights or user controls are typically associated with the defencer's operation, as its function is passive and automatic.

Ensure that you are aware of and comply with all local traffic laws and speed regulations. The removal of a factory speed limiter does not exempt the driver from legal responsibilities regarding safe vehicle operation.

## MAINTENANCE

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The HKS 4502-RA002 Speed Limit Defencer is a low-maintenance electronic device. Regular maintenance is generally not required beyond ensuring its physical integrity and connections.

- **Periodic Inspection:** Annually, or during other vehicle maintenance, visually inspect the defencer unit and its wiring connections. Ensure that all connections remain secure and free from corrosion or damage.
- **Cleaning:** If the unit is mounted in an accessible area, gently wipe it with a dry, soft cloth to remove dust or

debris. Do not use liquid cleaners directly on the unit.

- **Environmental Protection:** Ensure the unit remains protected from direct exposure to water, extreme temperatures, and excessive vibration.

## TROUBLESHOOTING

If you experience issues with your HKS 4502-RA002 Speed Limit Defencer, refer to the following troubleshooting steps:

Problem	Possible Cause	Solution
Speed limiter still active.	<ul style="list-style-type: none"><li>• Incorrect wiring connection.</li><li>• Loose connection.</li><li>• Faulty unit.</li></ul>	<ul style="list-style-type: none"><li>• Review the installation instructions and wiring diagram carefully.</li><li>• Check all connections for tightness and proper insulation.</li><li>• If issues persist after verifying installation, contact HKS support or your installer.</li></ul>
Check Engine Light (CEL) or other warning lights illuminated.	<ul style="list-style-type: none"><li>• Improper wiring or signal interference.</li><li>• Vehicle's ECU detecting an anomaly.</li></ul>	<ul style="list-style-type: none"><li>• Immediately stop driving and consult a qualified mechanic.</li><li>• Verify all wiring connections.</li><li>• Consider temporarily disconnecting the defencer to see if the warning light clears.</li></ul>
No apparent change in vehicle performance.	<ul style="list-style-type: none"><li>• Vehicle may not have a speed limiter or it's set very high.</li><li>• Defencer not functioning.</li></ul>	<ul style="list-style-type: none"><li>• Confirm your vehicle model has a factory speed limiter that the HKS unit is designed to bypass.</li><li>• Verify installation and connections.</li></ul>

For complex issues or if troubleshooting steps do not resolve the problem, it is recommended to seek assistance from a professional automotive technician or contact HKS customer support.

## SPECIFICATIONS

- **Model:** HKS 4502-RA002
- **Type:** Speed Limit Defencer (Type 1 specification)
- **Function:** Electronic device designed to eliminate a vehicle's factory speed limiter.
- **Item Weight:** 6.4 ounces (approx. 181 grams)
- **Product Dimensions:** 5.7 x 4.4 x 2.2 inches (approx. 14.5 x 11.2 x 5.6 cm)
- **Manufacturer:** HKS
- **ASIN:** B000EVP2O4

## WARRANTY AND SUPPORT

For specific warranty information regarding your HKS 4502-RA002 Speed Limit Defencer, please refer to the warranty card included with your product packaging or consult the authorized HKS dealer from whom you purchased the device. Warranty terms and conditions may vary by region and retailer.

For technical support, installation assistance, or further inquiries, please contact HKS customer service through their official website or the contact information provided in your product documentation. Always provide your product model number (4502-RA002) when seeking support.

*Disclaimer: HKS is not responsible for any damage or injury caused by improper installation, misuse, or operation of this product. The user assumes all risks associated with the modification of vehicle speed limiting systems.*