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› Mazda BP4K-67-SH1E ABS Wheel Speed Sensor Wire Harness User Manual

## Mazda BP4K-67-SH1E

# Mazda BP4K-67-SH1E ABS Wheel Speed Sensor Wire Harness User Manual

Model: BP4K-67-SH1E

## INTRODUCTION

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This manual provides essential information for the installation, operation, and maintenance of the Mazda BP4K-67-SH1E ABS Wheel Speed Sensor Wire Harness. This genuine OEM part is designed to ensure proper function of your vehicle's Anti-lock Braking System (ABS) by accurately transmitting wheel speed data.



Image: The Mazda BP4K-67-SH1E ABS Wheel Speed Sensor Wire Harness, showing its connectors and cable length.

## WHAT'S IN THE BOX

The package for the Mazda BP4K-67-SH1E ABS Wheel Speed Sensor Wire Harness typically includes:

- One (1) Mazda BP4K-67-SH1E ABS Wheel Speed Sensor Wire Harness

## SETUP AND INSTALLATION

Installation of the ABS wheel speed sensor wire harness requires basic automotive knowledge and tools. If you are unsure about any step, it is recommended to consult a qualified automotive technician.

### Before You Begin:

- Ensure the vehicle is parked on a level surface and the parking brake is engaged.
- Disconnect the negative terminal of the vehicle's battery to prevent electrical shorts.
- Identify the specific wheel where the harness needs replacement.
- Gather necessary tools, which may include wrenches, sockets, screwdrivers, and wire cutters/strippers if splicing is required (though typically not for OEM harnesses).

### Installation Steps:

1. **Locate the Existing Harness:** Identify the old ABS wheel speed sensor wire harness connected to the wheel speed sensor and the vehicle's main wiring.
2. **Disconnect the Old Harness:** Carefully disconnect the electrical connectors at both ends of the old harness.

This may involve pressing release tabs or unscrewing retaining bolts.

3. **Remove Mounting Clips:** Detach any clips or fasteners securing the old harness to the vehicle's chassis or suspension components.
4. **Install New Harness:** Route the new Mazda BP4K-67-SH1E harness exactly as the old one was routed. Ensure it is not pinched or stretched.
5. **Secure Mounting Clips:** Reattach all mounting clips and fasteners to secure the new harness in place. This prevents damage from vibration or contact with moving parts.
6. **Connect Electrical Connectors:** Firmly connect the new harness to the wheel speed sensor and the vehicle's main wiring. Ensure connections are secure and click into place if applicable.
7. **Reconnect Battery:** Reconnect the negative terminal of the vehicle's battery.
8. **Test System:** Start the vehicle and check for any ABS warning lights. A test drive may be necessary to confirm proper operation of the ABS system.

## OPERATING PRINCIPLES

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The ABS Wheel Speed Sensor Wire Harness is a critical component of your vehicle's Anti-lock Braking System. It serves as the electrical conduit between the wheel speed sensor (which monitors the rotational speed of each wheel) and the vehicle's ABS control module.

- **Sensor Signal Transmission:** The harness transmits the electrical signals generated by the wheel speed sensor to the ABS control module. These signals represent the rotational speed of the wheel.
- **ABS Functionality:** The ABS control module uses this speed data to detect if a wheel is about to lock up during braking. If a lock-up is detected, the ABS system rapidly modulates brake pressure to that wheel, preventing skidding and maintaining steering control.
- **Traction Control/Stability Control:** In vehicles equipped with traction control and electronic stability control, the wheel speed sensor data transmitted via this harness is also crucial for the proper functioning of these systems, helping to prevent wheel spin and maintain vehicle stability.

## MAINTENANCE

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The Mazda BP4K-67-SH1E ABS Wheel Speed Sensor Wire Harness is designed for durability and typically requires minimal maintenance. However, periodic inspection can help ensure its longevity and proper function.

- **Visual Inspection:** During routine vehicle maintenance (e.g., tire rotations, brake inspections), visually inspect the harness for any signs of damage, such as fraying, cuts, cracks in the insulation, or corrosion on the connectors.
- **Secure Mounting:** Ensure that the harness remains securely fastened by its clips and mounts. Loose harnesses can rub against moving parts or the road, leading to damage.
- **Cleanliness:** Keep the harness and its connectors free from excessive dirt, debris, or corrosive substances.
- **Avoid Stress:** Do not pull on the harness or use it to support other components.

## TROUBLESHOOTING

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If you experience issues with your vehicle's ABS system after installing or while using the harness, consider the following common troubleshooting steps:

- **ABS Warning Light:** If the ABS warning light remains on after installation, first recheck all connections to ensure they are fully seated and secure.

- **Sensor Malfunction:** A faulty wheel speed sensor itself, rather than the harness, could be the cause. Diagnostic trouble codes (DTCs) read with an OBD-II scanner can pinpoint the exact issue.
- **Wiring Damage:** Inspect the entire length of the harness for any visible damage, such as cuts, pinches, or signs of rodent damage.
- **Corroded Connectors:** Check the pins within the connectors for corrosion or bending. Clean any corrosion with an electrical contact cleaner.
- **Incorrect Part:** Verify that the installed harness is indeed the correct part number (BP4K-67-SH1E) for your specific vehicle model and year.
- **Professional Diagnosis:** If basic troubleshooting does not resolve the issue, it is advisable to seek professional diagnosis from a certified mechanic.

## SPECIFICATIONS

Feature	Detail
Brand	Mazda
Model Number	BP4K-67-SH1E
Part Type	ABS Wheel Speed Sensor Wire Harness
Material	Acrylonitrile Butadiene Styrene
Item Weight	1.6 ounces (0.045 kilograms)
Product Dimensions (L x W x H)	10.24 x 6.3 x 4 inches (25.4 x 14.478 x 6.604 cm)
Fit Type	Vehicle Specific
OEM Part Number	BP4K-67-SH1E

## WARRANTY AND SUPPORT

As a genuine OEM Mazda part, the BP4K-67-SH1E ABS Wheel Speed Sensor Wire Harness is typically covered by Mazda's standard parts warranty. Warranty terms and conditions may vary based on your region and the point of purchase.

For specific warranty information, claims, or technical support, please contact your authorized Mazda dealership or visit the official Mazda automotive parts website. When contacting support, have your vehicle's VIN (Vehicle Identification Number) and the part number (BP4K-67-SH1E) readily available.

You can find more information and support resources on the official Mazda website: [www.mazdausa.com](http://www.mazdausa.com)