

Bilstein 48-217170

Bilstein B16 (PSS10) Performance Suspension System Instruction Manual

Model: 48-217170

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Bilstein B16 (PSS10) Performance Suspension System. Please read these instructions thoroughly before proceeding with installation or adjustment. Incorrect installation or adjustment can lead to vehicle damage or personal injury. Professional installation is highly recommended.

2. PRODUCT OVERVIEW

The Bilstein B16 (PSS10) suspension kit is designed to enhance vehicle performance and handling. It features ride height adjustability and 10-stage manually adjustable dampers. These dampers adjust both rebound and compression simultaneously, providing optimized handling across various conditions. The kit includes monotube performance dampers with springs specifically tuned for the application. The zinc-coated, threaded body design allows for flexible ride height adjustments while offering protection against environmental elements. This system is manufactured in Germany and incorporates technology developed and tested on the Nürburgring.

Key Features:

- 10-stage adjustable damping for sporty handling on road or track.
- Ride height adjustability up to 50 mm, allowing for individual customization with technical certification.
- Optimized lowering to reduce wheel gap without technical issues.
- Improved stability for enhanced performance and comfort, suitable for long-distance travel.
- Fine-tuned through extensive driving tests to meet diverse road challenges.

3. WHAT'S IN THE BOX

The Bilstein B16 (PSS10) Performance Suspension System (48-217170) typically includes the following components:

- Front Coilover Assemblies (Dampers with Springs)
- Rear Shock Absorbers
- Rear Springs
- Adjustment Tools (Spanner Wrenches)
- Associated Hardware (e.g., collars, bump stops)



Figure 3.1: Bilstein B16 (PSS10) adjustment tools and collars. These tools are used for adjusting the ride height of the suspension system.



Figure 3.2: Bilstein B16 (PSS10) front coilover assembly. This image shows a complete front strut with spring, ready for installation.



Figure 3.3: Bilstein B16 (PSS10) rear shock absorber and spring. This image displays the components for the rear suspension setup.

4. SETUP AND INSTALLATION

Installation of the Bilstein B16 (PSS10) system requires specialized tools and automotive knowledge. It is strongly

recommended that installation be performed by a qualified automotive technician. This system is designed for specific vehicle applications:

- **Vehicle Compatibility:** 2012-2013 BMW 328i (2.0L & 3.0L) and 335i (3.0L) models.

General Installation Notes:

1. Ensure the vehicle is securely supported on a lift or jack stands.
2. Remove existing suspension components according to the vehicle manufacturer's service manual.
3. Install the Bilstein B16 (PSS10) components, ensuring all bolts are torqued to specifications.
4. Adjust ride height as desired (refer to Section 5.2).
5. After installation, a professional wheel alignment is mandatory to ensure proper vehicle handling and tire wear.

5. OPERATING INSTRUCTIONS

5.1. Damping Adjustment

The Bilstein B16 (PSS10) system features 10-stage damping adjustment. This allows for fine-tuning of both rebound and compression characteristics simultaneously. The adjustment knob is typically located at the bottom of the shock absorber body (for front coilovers) or at the top (for rear shocks, depending on application). Turning the knob will cycle through the 10 settings, from softest to firmest.

- **Setting 1:** Softest damping, suitable for comfortable street driving.
- **Setting 10:** Firmest damping, ideal for aggressive track use or highly dynamic driving.
- Adjust both front and rear dampers to the same setting or a balanced combination for optimal performance.
- Always adjust dampers when the vehicle is stationary and safe to access the adjustment knobs.

5.2. Ride Height Adjustment

The threaded body design of the Bilstein B16 (PSS10) allows for precise ride height adjustment. This adjustment is made by rotating the spring perch collars on the threaded body of the shock absorber. Use the provided spanner wrenches for this procedure.

- **To Lower:** Rotate the spring perch collars downwards on the threaded body.
- **To Raise:** Rotate the spring perch collars upwards on the threaded body.
- Ensure both sides of the vehicle (front or rear axle) are adjusted equally to maintain balance.
- After any ride height adjustment, it is crucial to have a professional wheel alignment performed.
- Do not exceed the maximum or minimum ride height settings specified by Bilstein to prevent damage or unsafe driving conditions.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and performance of your Bilstein B16 (PSS10) suspension system.

- **Regular Inspection:** Periodically inspect all suspension components for signs of wear, damage, or corrosion. Check for loose bolts, cracked bushings, or leaking dampers.
- **Cleaning:** Keep the threaded bodies and adjustment collars clean from dirt, salt, and debris. Use mild soap and water, then rinse thoroughly. Avoid harsh chemicals that could damage finishes or seals.
- **Torque Checks:** After initial installation and periodically thereafter, verify that all mounting bolts are torqued to the vehicle manufacturer's specifications.

7. TROUBLESHOOTING

If you experience issues with your suspension system, consider the following:

- **Unusual Noises:** Check for loose mounting hardware, worn bushings, or components rubbing against each other.
- **Uneven Ride Height:** Verify that the ride height adjustments are identical on both sides of an axle. Ensure no components are binding. A post-installation alignment is critical.
- **Poor Handling:** Re-check damping settings. Ensure they are appropriate for your driving conditions. Verify tire pressure and wheel alignment.
- **Leaking Dampers:** A small amount of oil residue is normal, but significant leakage indicates a seal failure. Contact Bilstein support or a qualified technician.

For persistent issues, consult a professional automotive technician or contact Bilstein customer support.

8. SPECIFICATIONS

Specification	Detail
Brand	Bilstein
Model Number	48-217170
Auto Part Position	Front, Rear
Vehicle Service Type	Car
Compatible Vehicle Type	BMW 328i (2.0L & 3.0L), 335i (3.0L) 2012-2013
Damping Adjustment	10-stage (Rebound & Compression)
Ride Height Adjustment	Up to 50 mm lowering
Manufacturer	Bilstein
GTIN / UPC	651860696959

9. WARRANTY AND SUPPORT

This Bilstein B16 (PSS10) Performance Suspension System is covered by a manufacturer's warranty. For specific warranty terms and conditions, please refer to the documentation included with your product or visit the official Bilstein website.

For technical support, installation assistance, or warranty claims, please contact Bilstein customer service directly. Ensure you have your product model number (48-217170) and proof of purchase available when contacting support.