



Manuals.plus /

› BC Racing /

› BC Racing BR Series Coilovers Instruction Manual for BMW 3 Series E90/E92 AWD (2006-2011)

## BC Racing I-59E-BR

# BC Racing BR Series Coilovers Instruction Manual

Model: I-59E-BR | Compatible with 2006-2011 BMW 3 Series E90/E92 AWD

## 1. INTRODUCTION

This manual provides essential information for the proper installation, adjustment, and maintenance of your BC Racing BR Series Coilovers. These coilovers are engineered to enhance vehicle handling and provide adjustable ride height and damping for specific vehicle applications. Please read this manual thoroughly before attempting any installation or adjustment.

## 2. SAFETY INFORMATION

**WARNING:** Installation of suspension components requires specialized tools and knowledge. Improper installation can lead to serious injury, vehicle damage, or loss of vehicle control. It is strongly recommended that installation be performed by a qualified professional technician.

- Always use appropriate safety equipment, including eye protection and gloves.
- Ensure the vehicle is securely supported on jack stands or a lift before working underneath it.
- Do not modify any components of the coilover system.
- Refer to your vehicle's service manual for specific torque specifications and procedures.

## 3. PRODUCT OVERVIEW AND FEATURES

The BC Racing BR Series Coilovers are designed for street use with capabilities for occasional track duty. Key features include:

- **Mono-Tube Shock Design:** Provides consistent damping performance.
- **30 Levels of Damping Adjustment:** Allows simultaneous adjustment of compression and rebound.
- **Independent Ride Height Adjustment:** Ride height can be adjusted without affecting shock stroke or spring preload.
- **Front Camber Plates:** Standard on applicable kits for precise alignment.
- **Patented Concave Lower Locking Ring:** Ensures secure ride height settings.

- **Fully Rebuildable:** All parts are available for purchase for long-term serviceability.

## 4. COMPONENTS INCLUDED

---

Your BC Racing BR Series Coilover kit includes the following main components:

- Front Coilover Assemblies (2)
- Rear Coilover Assemblies (2)
- Adjustment Wrenches (2)
- Damping Adjustment Knobs/Extenders (as applicable)



*Image 1: Complete BC Racing BR Series Coilover kit, showing front and rear coilover assemblies, springs, and adjustment wrenches.*

## 5. SETUP AND INSTALLATION

---

Professional installation is highly recommended. The following is a general guide and should not replace vehicle-specific service manual instructions.

1. **Prepare Vehicle:** Safely lift the vehicle and secure it on jack stands. Remove wheels.
2. **Remove OEM Suspension:** Carefully disconnect and remove the factory shock absorbers, springs, and associated components.
3. **Install Coilovers:** Install the BC Racing coilover assemblies. Ensure all mounting points are correctly aligned and hardware is tightened to manufacturer specifications.
4. **Initial Adjustments:** Set initial ride height and damping settings as desired (refer to Section 6).
5. **Reassemble:** Reinstall wheels and lower the vehicle.
6. **Alignment:** A professional wheel alignment is mandatory after suspension component installation to ensure proper vehicle handling and tire wear.

## 6. OPERATING AND ADJUSTMENT

---

## 6.1 Damping Adjustment

The coilovers feature 30 clicks of damping adjustment, simultaneously affecting both compression and rebound. The adjustment knob is typically located at the top of the shock shaft (for front coilovers) or at the bottom/top of the rear shocks, depending on the vehicle application.

- Turn the knob clockwise for firmer damping (less body roll, sharper response).
- Turn the knob counter-clockwise for softer damping (more comfortable ride).
- Start with a middle setting (e.g., 15 clicks from full soft) and adjust incrementally to find your preferred ride quality.

## 6.2 Ride Height Adjustment

Ride height is adjusted independently of spring preload and shock stroke. This is achieved by rotating the lower mount of the coilover body.

1. Loosen the lower locking ring using the provided adjustment wrenches.
2. Rotate the entire shock body (or lower mount) to raise or lower the vehicle.
3. Once the desired height is achieved, securely tighten the lower locking ring against the lower mount.
4. Ensure both sides of the vehicle are adjusted to the same height for even stance.

## 7. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your coilovers.

- **Regular Cleaning:** Keep coilovers clean from dirt, salt, and debris, especially the threads, to prevent corrosion and ensure smooth adjustment.
- **Inspection:** Periodically inspect for any signs of leaks, damage, or loose components.
- **Torque Checks:** Verify that all mounting bolts and locking rings are tightened to the correct specifications at regular intervals (e.g., every 5,000 miles or after track use).
- **Dust Boots:** Ensure dust boots are intact to protect the shock shaft from contaminants.

## 8. TROUBLESHOOTING

Symptom	Possible Cause	Solution
Unusual noises (clunking, squeaking)	Loose mounting bolts, worn bushings, spring bind, improper installation.	Inspect all mounting points, check torque, lubricate spring seats if necessary, re-verify installation.
Uneven ride height	Incorrect ride height adjustment, uneven spring preload.	Re-measure and adjust ride height on both sides. Ensure spring preload is consistent.
Poor ride quality (too harsh/soft)	Incorrect damping settings, incorrect spring rates for application.	Adjust damping settings. If issues persist, consult with BC Racing or a professional for spring rate assessment.
Oil leakage from shock	Damaged seal, internal component failure.	Contact BC Racing for warranty claim or rebuild service.

## 9. SPECIFICATIONS

Feature	Specification
Model Number	I-59E-BR
Damping Adjustment	30 Levels (Compression & Rebound)
Shock Design	Mono-Tube
Ride Height Adjustment	Independent of Shock Stroke & Spring Preload
Front Camber Plates	Standard on Applicable Kits
Material	Aluminum
Vehicle Service Type	Car
Automotive Fit Type	Vehicle Specific Fit (2006-2011 BMW 3 Series E90/E92 AWD)
Item Weight	45 pounds (approximate shipping weight)

## 10. WARRANTY INFORMATION

---

BC Racing offers a **1-year limited warranty** against manufacturer defects from the date of purchase. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for any warranty claims. The warranty does not cover damage due to improper installation, misuse, abuse, or normal wear and tear.

## 11. SUPPORT

---

For technical assistance, parts inquiries, or warranty claims, please contact BC Racing directly or your authorized dealer. Provide your model number (I-59E-BR) and proof of purchase when seeking support.