

## Mercedes-Benz W210 & W211 Series

# Mercedes-Benz E-Class Petrol Workshop Manual (W210 & W211 Series, 2000-2006)

Owners Edition by Brooklands Books Ltd.

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## 1. INTRODUCTION

This manual provides comprehensive workshop information for Mercedes-Benz E-Class petrol models, specifically covering the W210 and W211 series manufactured between 2000 and 2006. It is designed to assist owners and technicians with routine maintenance, service procedures, and repair tasks. The content focuses on petrol engine variants and associated vehicle systems.

For optimal vehicle performance and safety, it is crucial to follow all instructions carefully and use appropriate tools and safety equipment. Always refer to official Mercedes-Benz documentation for the most up-to-date service bulletins and technical specifications.

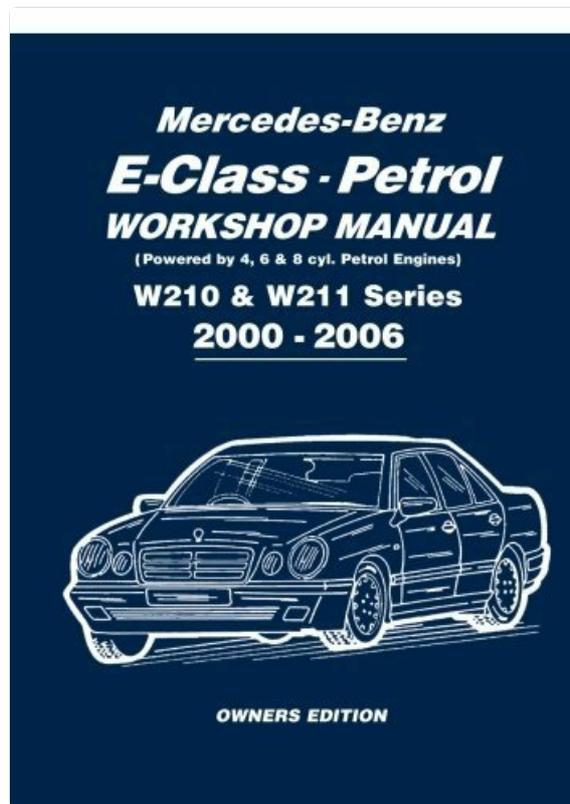


Figure 1.1: Cover of the Mercedes-Benz E-Class Petrol Workshop Manual. This image displays the front cover of the manual, featuring the title and vehicle models covered.

## 2. PREPARATION FOR SERVICE

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Before commencing any service or repair work, proper preparation is essential to ensure safety and efficiency.

### 2.1 Safety Precautions

- Always wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the vehicle is parked on a level surface, the parking brake is engaged, and the wheels are chocked.
- Disconnect the battery's negative terminal before working on electrical components.
- Allow the engine and exhaust system to cool down before working on them to prevent burns.
- When lifting the vehicle, use approved jack stands to support it securely. Never rely solely on a jack.
- Be aware of hazardous fluids (engine oil, coolant, brake fluid) and dispose of them responsibly.

### 2.2 Required Tools and Equipment

A basic set of automotive tools is necessary for most procedures. Specific tasks may require specialized tools, which will be noted in relevant sections.

- Socket and wrench sets (metric)
- Screwdriver set
- Torque wrench
- Oil drain pan and funnel
- Jack and jack stands
- Multimeter for electrical diagnostics

## 2.3 Vehicle Identification

Locate the Vehicle Identification Number (VIN) and engine code to ensure you are referencing the correct specifications for your specific model. The VIN is typically found on the dashboard (visible through the windshield) and on the driver's side door jamb.

## 3. ROUTINE MAINTENANCE PROCEDURES

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Regular maintenance is crucial for the longevity and reliable operation of your Mercedes-Benz E-Class. This section outlines common service tasks.

### 3.1 Engine Oil and Filter Change

1. Warm up the engine to operating temperature, then shut it off.
2. Place a drain pan under the oil drain plug.
3. Remove the drain plug and allow the oil to drain completely.
4. Replace the drain plug with a new washer and tighten to specified torque.
5. Remove the old oil filter and install a new one, ensuring the O-ring is properly seated and lubricated.
6. Refill the engine with the specified type and quantity of new engine oil.
7. Start the engine, check for leaks, and verify the oil level after a few minutes.

### 3.2 Air Filter Replacement

The engine air filter should be inspected regularly and replaced as needed, typically every 15,000 to 30,000 miles, or more frequently in dusty conditions. Refer to your vehicle's service schedule for exact intervals.

- Locate the air filter housing, usually near the engine.
- Unclip or unscrew the housing cover.
- Remove the old air filter.
- Clean the inside of the air filter housing.
- Insert the new air filter, ensuring it fits correctly.
- Secure the housing cover.

### 3.3 Spark Plug Inspection and Replacement

Spark plugs are vital for engine combustion. Inspect them for wear, fouling, or damage at recommended intervals. Replacement intervals vary by engine type and spark plug material (e.g., copper, platinum, iridium).

- Allow the engine to cool completely.
- Remove ignition coils or spark plug wires.
- Use a spark plug socket to carefully remove each spark plug.
- Inspect the old plugs for signs of wear or engine issues.
- Gap new spark plugs to the manufacturer's specification (if applicable).
- Install new spark plugs, tightening to the specified torque.
- Reinstall ignition coils or spark plug wires.

## 4. TROUBLESHOOTING COMMON ISSUES

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This section provides guidance on diagnosing and resolving common problems encountered with Mercedes-Benz E-Class W210 and W211 petrol models.

## 4.1 Engine Cranks but Does Not Start

- **Battery:** Check battery terminals for corrosion and ensure a full charge. Test battery voltage.
- **Fuel System:** Verify there is sufficient fuel in the tank. Listen for the fuel pump priming when the ignition is turned on. Check fuel pressure if possible.
- **Ignition System:** Inspect spark plugs and ignition coils for proper function.
- **Immobilizer:** Ensure the correct key is being used and the immobilizer system is not active.

## 4.2 Warning Lights Illuminated

If a warning light illuminates on the instrument cluster, consult your vehicle's owner's manual for immediate interpretation. For more detailed diagnostics, a diagnostic scanner (OBD-II reader) can retrieve fault codes.

- **Check Engine Light (CEL):** Indicates an issue with the engine or emissions system. Scan for diagnostic trouble codes (DTCs).
- **ABS/ESP Light:** Points to a problem with the Anti-lock Braking System or Electronic Stability Program. Professional diagnosis is recommended.
- **SRS (Airbag) Light:** Indicates a fault in the Supplemental Restraint System. This requires immediate professional attention.

## 4.3 Brake Noise

- **Squealing:** Often indicates worn brake pads or glazed rotors. Inspect pads for wear indicators.
- **Grinding:** Suggests severely worn brake pads, where the metal backing plate is contacting the rotor. This requires immediate attention.
- **Pulsation/Vibration:** May indicate warped brake rotors.

# 5. TECHNICAL SPECIFICATIONS (GENERAL)

This section provides general technical specifications relevant to the Mercedes-Benz E-Class W210 and W211 petrol models. Always refer to your specific vehicle's owner's manual or official service data for precise figures, as specifications can vary by year, engine variant, and region.

## 5.1 Fluid Capacities (Approximate)

Fluid Type	Capacity (Approx.)	Specification
Engine Oil	7.5 - 8.5 Liters	Mercedes-Benz Approved (e.g., MB 229.5)
Coolant	9.0 - 10.0 Liters	Mercedes-Benz Approved Antifreeze/Coolant
Brake Fluid	~1.0 Liter	DOT 4 Plus
Power Steering Fluid	~1.0 Liter	Mercedes-Benz Approved (e.g., MB 236.3)

*Note: Always check your vehicle's specific owner's manual for exact fluid capacities and specifications.*

## 5.2 Torque Specifications (Example)

- Wheel Lug Bolts: 110-130 Nm (81-96 lb-ft)
- Engine Oil Drain Plug: 30 Nm (22 lb-ft)

- Spark Plugs: 20-25 Nm (15-18 lb-ft)

*Warning: Torque specifications are critical for safety and proper function. Always use a calibrated torque wrench and refer to the specific section in this manual or official service data for precise values for each component.*

## 6. WARRANTY AND SUPPORT

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This workshop manual is a reference guide for vehicle maintenance and repair. It does not come with a product warranty in the traditional sense, as its value lies in the information provided.

For warranty information pertaining to your Mercedes-Benz E-Class vehicle, please consult your vehicle's original warranty documentation provided by Mercedes-Benz at the time of purchase. Any repairs or modifications performed using this manual should be done in accordance with manufacturer guidelines to avoid voiding existing vehicle warranties.

For professional assistance, complex diagnostics, or repairs beyond the scope of this manual, it is recommended to contact an authorized Mercedes-Benz service center or a certified automotive technician.

- **Official Mercedes-Benz Website:** [www.mbusa.com](http://www.mbusa.com) (or your regional Mercedes-Benz website)
- **Authorized Dealership Locator:** Use the official website to find a service center near you.