



BMW 3 Series (E46) Service Manual: 1999-2005 M3, 323i, 325i, 325xi, 328i, 330i, 330xi, Sedan, Coupe, Convertible, Sport Wagon

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1434 pages, 1703 b/w photos, illustrations and diagrams

The **BMW 3 Series (E46) Service Manual: 1999-2005** is a comprehensive source of service information and specifications for BMW 3 Series from 1999 to 2005. The aim throughout this manual has been simplicity, clarity and completeness, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual will help you understand, care for and repair your E46 3 Series.

This BMW manual supersedes our previous 1999-2001 E46 manual (Bentley Stock No. B301, ISBN 0-8376-0302-X).

Technical highlights:

- Procedures for everything from oil change service to interpreting the Malfunction Indicator Light (MIL). This manual tells you what to do and when to do it.
- Engine and cylinder head service, including valve clearance adjustment on the S54 engine.
- Information for specific driveability problems, including explanation of engine management systems and BMW OBD II Diagnostic Trouble Codes (DTCs).
- Theory of operation and repair information for Siemens MS 42.0, MS 43.0, MS 45.1 and MS S54 engine management, resonance/turbulence intake manifold and Double VANOS (Variable Camshaft Timing).
- Drivetrain maintenance, troubleshooting, adjustment and repair of self-adjusting clutch (SAC), gearshift linkage, driveshaft, drive axles and, wheel drive system.
- Manual, sequential manual (SMG), and automatic transmission removal, installation, seal replacement and external service.
- System description and repair information for Antilock Brakes (ABS), Automatic Stability Control (ASC) and Dynamic Stability Control (DSC).
- Heating and air conditioning repair (IHKA and IHKR), including component replacement.
- Body adjustments and repairs, including sunroof, convertible top and tailgate.
- Wiring schematics, including power distribution and ground locations.
- Dedicated electrical component guide specifying relay, control module and ground locations with detailed illustrations and photos.



Maintenance and service, including checking and adjusting valve clearance on the S54 M3 engine 130 Fuel Injection



Descriptions of electronic troubleshooting principles and procedures. On-Board Diagnostics

BMW E46 models and engines

- 323i/Ci**
(M52 TU, 2.5 liter engine)
- 328i/Ci**
(M52 TU, 2.8 liter engine)
- 325i/Ci/xi**
(M54 / M56, 2.5 liter engine)
- 330i/Cis/xi**
(M54, 3.0 liter engine)
- M3**
(S54, 3.2 liter Motorsport engine)