

Job No.

Instructions for use of service manual	00 – 005
Engine and vehicle identification	- 010
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Technical data	- 020

Complete Service Manual coverage for late model year Mercedes-Benz vehicles requires four individual manuals:

- Service Manual, Engine
- Service Manual, Chassis and Body
- Service Manual, Automatic Climate Control
- Electrical Troubleshooting Manual

Throughout these manuals, the vehicles are identified by their chassis and engine numbers. These numbers are made up of the first six digits of the respective serial number. For the actual location of chassis and engine numbers, see page 00-015/1. In cases where the repair instructions apply to all versions, only the first three digits of the respective number are referenced.

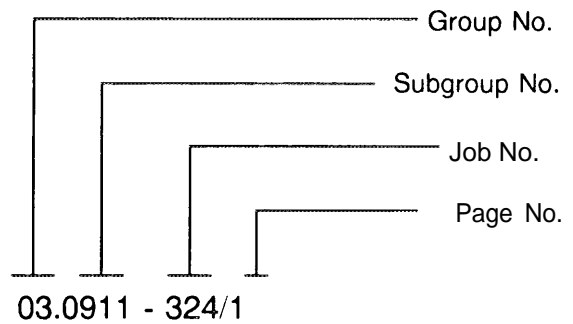
For example, chassis 124 applies to all 124 models. However, chassis 124.051 would apply only to model 300CE with engine 104.

Location of specific repair instructions

First locate the Group No. in the Group Index. Individual groups are separated by an easily visible dividing page, which is followed by the job index page. The exact job required is found in the job index. The initial page of a typical job description appears as follows:

03-324 Replacement of front crankshaft radial seal

Job Title appears on same line as Group No.



Technical data, tightening torques and tools are listed at the beginning of each job.

All dimensions are in metric units unless otherwise indicated. Any part numbers given are only used for identification and differentiation between individual components, and are not intended for ordering purposes.

Special Instructions

- ⚠ Warning** Appears throughout service instructions indicating the possibility of personal injury if procedures are not followed.
- Caution!** Indicates possible equipment or vehicle damage if procedures are not followed.
- Note** Provides helpful information for the described procedure.
- Installation note** Provides detailed information during assembly.

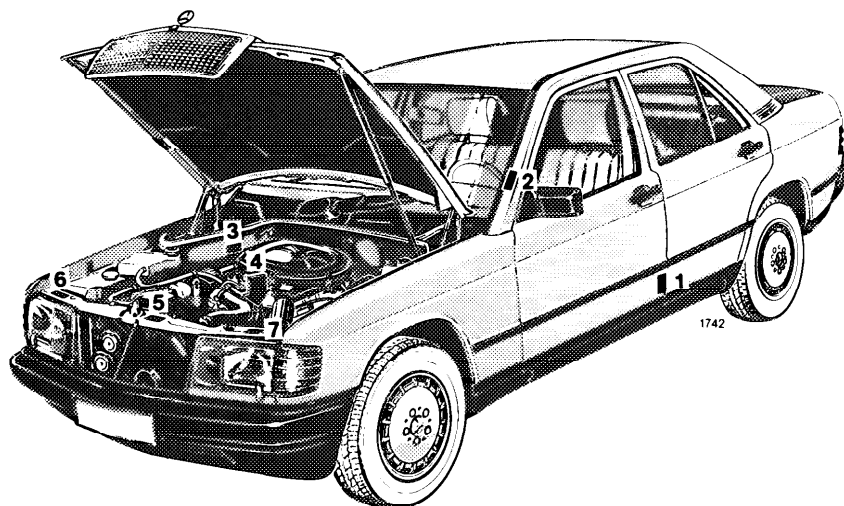
This manual applies to the following passenger cars, starting model year 1984.

Gasoline engines

Model Year	Model	Sales Designation	Engine
1984	201.024	190 E 2.3	102.961
1985	201.024	190 E 2.3	102.985
1986	201.024	190 E 2.3	102.985
1987	201.028	190 E 2.3	102.985
1988	201.028	190 E 2.3	102.985
1989	-	-	-
1990	-	-	-
1991	201.028	190 E 2.3	102.985
1992	201.028	190 E 2.3	102.985
1993	201.028	190 E 2.3	102.985

Model 201

When ordering spare parts, please specify chassis and engine numbers.



- Certification Tag (left door pillar)
- 2 Identification Tag (left window post)
- 3 Vehicle Identification No.
- 4 Engine No.
- 5 Body No. and Paintwork No.
- 6 Informatron Tag
California version
Vacuum line routing for emission control system
- 7 Emission Control Tag
- 8 Emission Control Tag
Catalyst Information
(from model year 1964 up to 1966)

Gasoline engines

Model	20 1.024	201.024	201.028
Sales designation	190 E 2.3 (Model year 1984)	190 E 2.3 (Model years 1985 - 86)	190 E 2.3 (Model years 1987-8, 1991-3)
Engine	102.961	102.985	102.985
Operation	4-stroke spark ignition, mechanically/electronically controlled continuous fuel injection system with airflow sensor (CIS-E)	4-stroke spark ignition, mechanically/electronically controlled continuous fuel injection system with airflow sensor (CIS-E)	4-stroke spark ignition, mechanically/electronically controlled continuous fuel injection system with airflow sensor (CIS-E)
Aspiration	Normal	Normal	Normal
Number of cylinders	4	4	4
Cylinder arrangement	In-line 15° inclination	In-line 15° inclination	In-line 15° inclination
Bore, stroke mm	95/80.25	95.5/80.25	95.5/80.25
Total effective piston displacement cc	2299	2299	2299
Compression ratio	8.0 : 1	8.0 : 1	9.0 : 1
Firing order	1-3-4-2	1-3-4-2	1-3-4-2
Maximum speed rpm	5700 ± 50	6200 ± 50	6200 ± 50
Engine output (SAE)kW/rpm net bhp/rpm	84/5000 113/5000	90/5000 120/5000	97/5100 130/5100
Maximum torque Nm/rpm net lb-ft./rpm	181/3500 133/3500	184/3500 136/3500	198/3500 146/3500
Crankshaft bearings	5(multi-component, anti-friction bearings)	5(multi-component, anti-friction bearings)	5 (multi-component, anti-friction bearings)
Valve arrangement	Overhead, 2 per cylinder	Overhead, 2 per cylinder	Overhead, 2 per cylinder
Camshaft arrangement	1 overhead camshaft	1 overhead camshaft	1 overhead camshaft
Oil cooling	-	-	-
Cooling	Coolant circulation pump, thermostat with bypass line, fan with electromagnetic clutch, finned tube radiator	Coolant circulation pump, thermostat with bypass line, fan with electromagnetic clutch, finned tube radiator	Coolant circulation pump, thermostat with bypass line, fan with electromagnetic clutch, finned tube radiator
Lubrication	Pressure lubrication via gear type pump	Pressure lubrication via gear type pump	Pressure lubrication via gear type pump
Oil filter	Full flow filter	Full flow filter	Full flow filter
Air filter	Dry air filter with paper cartridge	Dry air filter with paper cartridge	Dry air filter with paper cartridge

Filling capacities

Model	201.024	201.024	201.028
Sales designation	190 E 2.3 (Model Year 1984)	190 E 2.3 (Model Years 1985 - 6)	190 E 2.3 (Model Years 1987-8, 1991-3)
Engine	102.961	102.985	102.985
Fuel tank/reserve approx. l	55/7.5	55/7.5	55/7.0 (6.0 l reserve from 1991)
During initial oil filling approx. l	5.0	5.0	5.0
During oil and filter change approx. l	4.5	4.8	4.5
Marks on dipstick max./min. approx. l	4.3/2.8	4.3/2.8	4.3/2.8
Cooling system with heater approx. l	8.5	8.5	8.5

Electrical system

Model	201.024	201.024	201.028
Sales designation	190 E 2.3	190 E 2.3	190 E 2.3
Engine	102.961	102.985	102.985
Battery Voltage Capacity	12 V 55 Ah	12 V 55 Ah	12 V 62 Ah
Starter Bosch	12 V 1.5 kW	12 V 1.5 kW	12 V 1.4 kW
Alternator	14 V 65 A	14 V 70 A	14 V 70 A