



00 General, technical data

	Job No.
Instructions for use of service manual	00-005
Engine and vehicle identification	010
Vehicle identification number location	015
Technical data	020

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

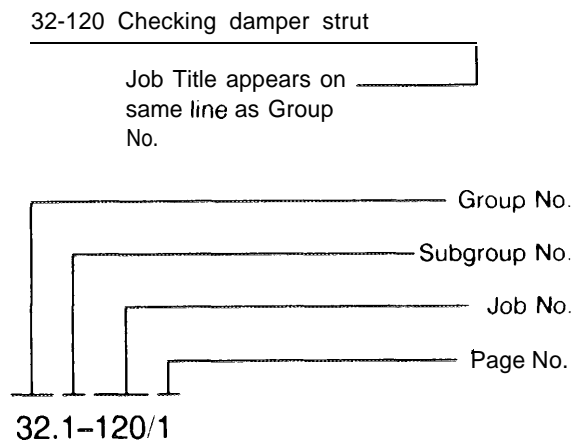
- Service Manual, Engine
- Service Manual, **Transmission**
- Service Manual, Chassis and body
- Service Manual, Heating and air conditioning

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 case where the repair instructions apply to all versions, only the first three digits of the respective number are referenced.

For example, chassis 201 applies to all 201 models. However, chassis 201.024 would only apply to model 190 E-2.3.

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. Then check the job index for the exact job required. The first page of a typical job description looks like this:



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

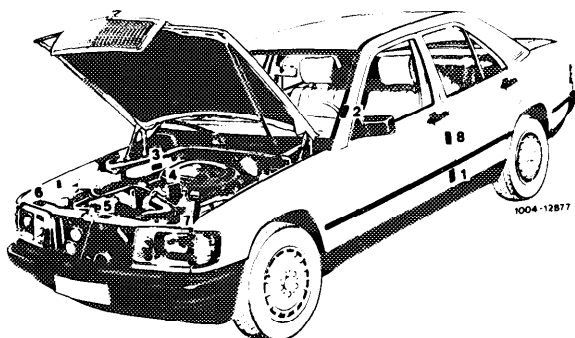
All dimensions are in metric units, unless otherwise Indicated. Any part numbers given are only used for identification and easier differentiation between individual components, and are not intended for ordering purposes,

00-010 Engine and vehicle identification

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

Model	Engine	USA Model Year		Chassis
		From	To	
190 E 2.3	102.961/985	1984	1986	201.024
190 E 2.3	102.985	1987	1988	201.028
190 E 2.3-16	102.983	1986	1987	201.034
190 E 2.6	103.942	1987		201.029
190 D 2.2	601.921	1984	1985	201.122
190 D 2.5	602.911	1986		201.126
190 D 2.5 TURBO	602.961	1987	1987	201.128

00-015 Vehicle identification number locations



1. Certification Tag (left door pillar)
2. Identification Tag (left window post)
3. Chassis No.
4. Engine No.
5. Body No. and Paint work No.
6. Information Tag
California version
Vacuum line routing for emission control system
7. Emission Control Tag
8. Emission Control Tag Catalyst
Information

00-020 Technical data

Otto engines

Model	201.024	201.024	201.034	201.028	201.029
Sales designation	190 E 2.3	190 E 2.3	190 E 2.3-16V	190 E 2.3	190 E 2.6
Engine	102.961	102.985	102.983	102.985	103.942
Operation	4-cycle, electronic/mechanical gasoline injection system with airflow sensor (CIS-E)				
Number of cylinders	4				6
Cylinder arrangement	In-line, 15° inclination				
Bore/stroke mm	95.5/80.25				82.9/80.25
Total effective piston displacement cc	2299				2599
Compression ratio	8.0		9.7	9.0	9.2
Firing order	1-3-4-2				1-5-3-6-2-4
Maximum speed rpm	5700 ± 50	6200 ± 50	6800 ± 50	6200 ± 50	6550 ± 50
Engine output (SAE) kW/rpm	84/5000	90/5000	125/5800	97/5100	118/5800
net bhp/rpm	113/5000	120/5000	167/5800	130/5100	158/5800
Maximum torque					
Nm/rpm	181/3500	184/3500	220/4750	198/3500	220/4600
net lb-ft./rpm	133/3500	136/3500	162/4750	146/3500	162/4650
Crankshaft bearings	5 (multi-component friction bearings)				7
Valve arrangement	Overhead				
Camshaft arrangement	SOHC		DOHC	SOHC	
Oil cooling,	Oil to air cooler				
Cooling	Coolant circulating pump, thermostat with bypass line, fan with electromagnetic clutch, finned tube radiator		Coolant circulating pump, thermostat with bypass line, fan with visco fan clutch, finned tube radiator	Coolant circulating pump, thermostat with bypass line, fan with electromagnetic clutch, finned tube radiator	Coolant circulating pump, thermostat with bypass line, fan with visco fan clutch, finned tube radiator
Lubrication	Forced feed lubrication via gear-type pump				
Oil filter	Main flow filter				
Air cleaner	Dry air cleaner with paper cartridge				

00-020 Technical data

Diesel engines

Model	201.122	201.126	201.128
Sales designation	190 D 2.2	190 D 2.5	190 D 2.5 Turbo
Engine	601.921	602.911	602.961
Operation	4 cycle diesel, MB prechamber design		
Number of cylinders	4	5	
Cylinder arrangement	In-line, 15° inclination		
Bore/stroke mm	87.0/92.4	87.0/84.0	
Total effective piston displacement cc	2197	2497	
Compression ratio	22.0:1	22.0:1	
Firing order	1-3-4-2	1-2-4-5-3	
Maximum speed rpm	4900-5100	5000-5300	
Engine output kW/rpm	54/4200	69/4600	92/4600
SAE net bhp/rpm	72/4200	93/4600	123/4600
Maximum torque Nm/rpm	130/2800	165/2800	228/2400
SAE net lbf-ft/rpm	96/2800	122/2800	168/2400
Crankshaft bearings	5	6	
Valve arrangement	Overhead	Overhead	
Camshaft arrangement	1 overhead camshaft	1 overhead camshaft	
Oil cooler	-	-	Oil-to-air cooler
Cooling	Coolant circulating pump, thermostat with bypass line, finned tube radiator, fan with electromagnetic clutch	Coolant circulating pump, thermostat with bypass line, finned tube radiator, fan with viscofan clutch	
Lubrication	Pressure lubrication via gear type pump		
Oil filter	Combined full flow and bypass filter	Full flow filter	Combined full flow and bypass filter
Air cleaner	Dry air cleaner with paper cartridge		

00-020 Technical data

Model	201.024	201.028	201.029	201.034	201.122	201.126	201.128
Sales designation	190 E 2.3	190 E 2.3	190 E 2.6	190 E 2.3-16	190 D 2.2	190 D 2.5	190 D 2.5 Turbo
Engine	102.961 /985	102.985	103.942	102.983	601.921	602.911	602.961

Dimensions

Vehicle length mm	4445	4445	4448	4430	4445	4445	4448
Vehicle width mm	1678	1678	1678	1706	1678	1678	1678
Vehicle height curb weight condition mm	1350	1390	1390	1361	1390	1390	1390
Wheelbase mm	2665						
Front track mm	1428	1437	1437	1446	1428	1437	1437
Rear track mm	1415	1418	1418	1429	1415	1418	1418
Turning circle min. diameter m	10.6	10.7	10.7	10.6	10.6	10.6	10.7
Vehicle weight, empty kg	1205 (MY 1984) 1210 (MY 1985)	1260	1285	1375	1200 (MY 1984) 1225 (MY 1985)	1295	1365
Permissible total weight kg	1685 (MY 1984) 1705 (MY 1985)	1750	1765	1765	1680 (MY 1984) 1725 (MY 1985)	1785	1850
Permissible axle load, front kg	790 (MY 1984) 805 (MY 1985)	825	835	835	785 (MY 1984) 815 (MY 1985)	860	915
Permissible axle load, rear kg	895 (MY 1984) 900 (MY 1985)	925	930	930	895 (MY 1984) 910 (MY 1985)	925	935

00-020 Technical data

Model	201.024	20 1.028	201.029	20 1.034	201.122	201.126	201.128
Sales designation	190 E 2.3	190 E 2.3	190 E 2.6	190 E 2.3-16	190 D 2.2	190 D 2.5	190 D 2.5 Turbo
Engine	102.96 1 102.985	102.985	103 942	102.983	601.921	602.91 1	602.961

Electrical system

Battery							
Voltage	12 v	12 v	12 V	12 v	12 v	12 v	12 v
Capacity	55 Ah	62 Ah	62 Ah	62 Ah	72 Ah	62 Ah	92 Ah
Starter Bosch	GF 12V 1.5 kW	12 v 1.4 kW	12 V 1.7 kW	DW 12 V 1.5 kW	EV 12V 2.2 kW	EV 12 V 2.2 kW	DW 12 V 2.2 kW
Alternator	14 V 70 A'	14 V 70A	14 v 80A	14 V 70A	14 V.70A*	14 V.70A	14 V.70A

Filling capacities

Fuel tank/reserve approx. l	55/7.5	55/7.0	55/7.0	70/8.5	55/7.5	55/7.0	55/7.0
Engine oil initial filling approx. l	5.0	5.0	6.5	5.5	7.3	8.0	8.2
During oil and filter change approx. l	4.5	4.5	6.0	5.0	6.5	7.0	7.5
Marks on dipstick max./min. approx. l	4.3/2.8	4.3/2.8	5.7/3.7	4.8/2.8	5.0/3.0	5.5/3.5	6.0/4.0
Oil cooler approx. l				0.2		-	0.7
Cooling system with heater approx. l	8.5	8.5	9.0	8.0	8.5	8.0	9.0
Brake system approx. l	0.35						
Manual transmission ATF approx. l	1.5			1.6	1.5		-
Automatic transmission approx. l Initial filling/oil change approx. l	6.6/5.9	7.1/6.0	7.1/6.0	7.1/6.0	6.6/5.9	6.6/5.5	7.1/6.0
Rear axle hypoid gear oil SAE 90 approx. l	0.7	1.1			0.7		1.1
Limited slip oil 00 589 0904 approx. l	-	-	-	1.2	-	-	-
Power steering	1.0						