

Service Manual, Chassis Body
350 SL & 450 SL/SLC
Starting 1972, Series 107



service

MERCEDES-BENZ OF NORTH AMERICA, INC.

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350 SL & 450 SL/SLC
Starting 1972, Series 107



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MERCEDES-BENZ OF NORTH AMERICA, INC.

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Conrad For my question

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This Service Manual contains a description of all important assembly, adjustment and inspection jobs. Pertinent data, dimensions, and tolerances, as well as special tools for various individual operations are listed in separate tables.

The entire contents of this Service Manual are arranged by Groups. The Group Index serves to locate any particular group. Each Group is preceded by a comprehensive listing of its contents.

Mercedes-Benz of North America, Inc., recommends that repairs to, and maintenance of, Mercedes-Benz automobiles be performed only by Mercedes-Benz trained personnel at authorized Mercedes-Benz repair stations.

The information contained in this special publication is ordinarily issued by Mercedes-Benz of North America, Inc., in conjunction with supplementary service literature and special tools supplied only to its authorized dealers. The various repair and maintenance procedures outlined herein are procedures to be used by trained Mercedes-Benz service and repair station personnel. Supplementary service literature will not be provided with this publication. Further supplements, however, may be contained in future printings of this Service Manual.

Mercedes-Benz of North America, Inc., assumes no liability for any damage to person or property occasioned by the utilization of this publication to effect maintenance or repair work on Mercedes-Benz automobiles.

Mercedes-Benz of North America, Inc.
Technical Publications

This manual applies to the following passenger cars, starting 1972

Model	Chassis Type	Engine Type	USA Model Year	
			From	To
350 SL	107.044	M 117.982	1972	1973
450 SL	107.044	M 117.982	1973	1975
450 SLC	107.024	M 117.982	1973	1975
450 SL	107.044	M 117.985	1976	
450 SLC	107.024	M 117.985	1976	

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Engine, Mechanical	Refer to
Engine, Combustion System	Service Manual
Fuel Tank, Exhaust System	Engines,
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A Instructions for Use of Service Manuals

MODEL IDENTIFICATION

In most sections of this manual, the individual models are identified by the chassis type instead of the model sales designation. The chassis type designations are the first six digits of the vehicle's serial number. A serial number tag is attached on all late model vehicles on the left windshield post, on older vehicles on the cross member above the radiator.

For example, sales designation model 450SL is chassis type 107.044.

In some instances, only the first three digits (107) will be referred to. In this case, this section applies to all vehicles of this particular chassis type.

Owners who have cars designated 350SL, please note that the vehicle chassis type designation should be checked; it should be 107.044, the same as for the 450SL.

The explanation for this is that during the first year of importation, the 450SL carried the name plate 350SL for certain reasons. The U.S. version of these vehicles, however, is identical in its various components and equipment to the 450SL.

TO USE THIS MANUAL:

Check Group Index to locate job. Group number is listed in upper corner of each page in the group.

Check group contents listing to find chapter and section of exact job description required. Chapter and/or section numbers, succeeded by page numbers within this section, are listed in lower outer corner of page. Section designation is printed next to group on top of page.

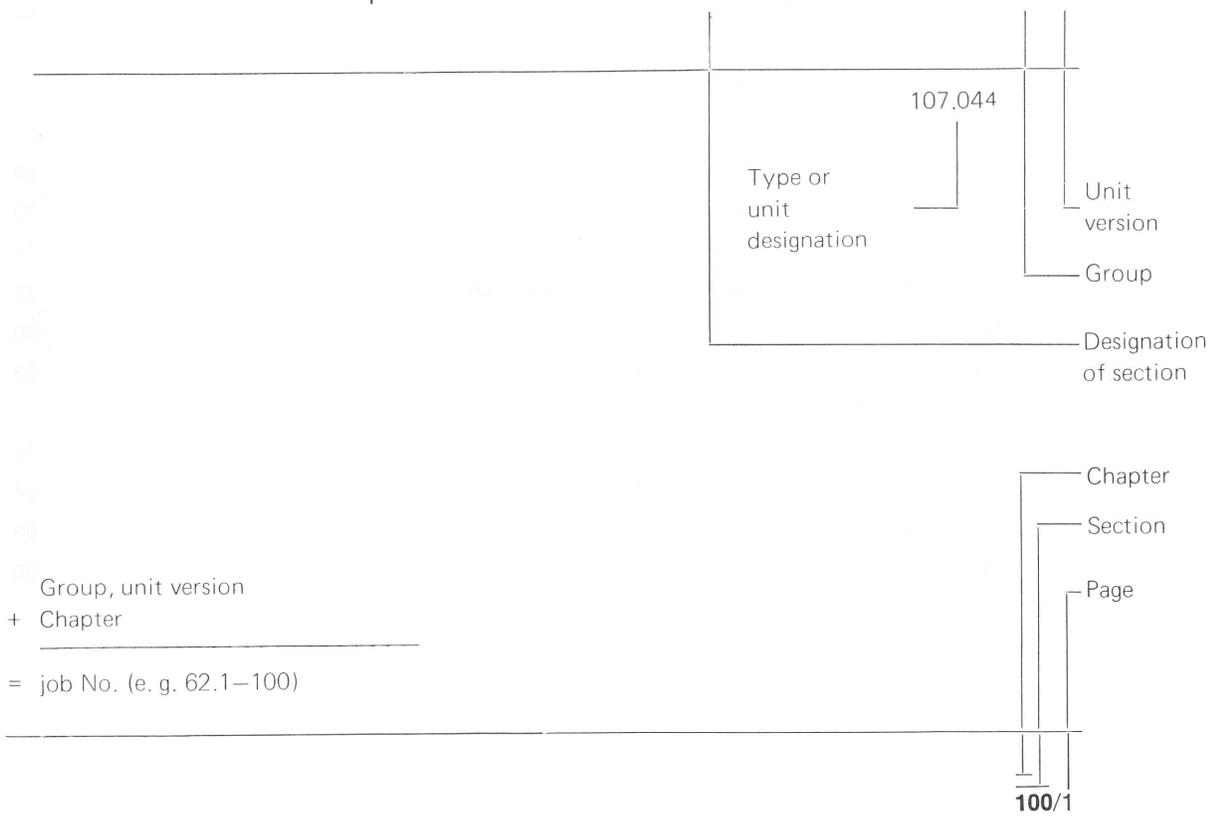
Unit Version 0 in the various Groups is *general* information applicable to the pertinent unit.

Unit Version with a *different numeral* is *specific* information for the title vehicle.

Depending on the unit installed in the vehicle, the numeral for the unit version may vary in the different groups.

Replacement of Front End without Front Wall

62.1



Data, adjusting values, processing dimensions, tightening torques and tools are shown at the beginning of each Section to eliminate the need of references concerning data contained in text.

All the dimensions are in millimeters (mm), provided no other unit of measure is used.

Up to final conversion to „International System of Measuring Units“ the Unit Volumes are showing the pertinent data first in new units, and the former units in brackets behind.

The indicated part numbers are serving exclusively for identification and better differentiation of individual versions. When ordering spare parts, the part numbers must be taken from the spare parts literature on principle.

Explanations concerning Supplements

Supplements consist of „Revisions“ and „Extensions“.

Revisions

Each page subject to a modification, correction or addition carries on its bottom corner the serial number of the supplement, the remark „Revision“, the date and the title of the service manual.

In addition, the first revised page of a Section shows a short reference concerning the reason for such changes.

Extensions

This note identifies newly added sections. The note „Extension“ is also printed on each righthand page bottom corner, including the number of the supplement, the date and the title of the service manual.



Technical Data Model 107

Job No.
010



Model

Sales designation	350 SL, 450 SL	450 SLC
Model designation	107.044	107.024
Engine model	M 117	
Engine designation	117.982 (up to end of 1975 production) 117.985 (starting with 1976 production)	

Design Features

Automatic transmission	Standard
Floor shift	Standard
Limited slip differential	Optional (Not available after June, 1973)
Dual circuit brake system with booster, disc brakes front and rear	Standard
Power steering	Standard

Engine

Engine designation	117.982 (up to end of 1975 production) 117.985 (starting with 1976 production)	
Operation	Up to end of 1975 Production: Four-stroke gasoline injection electronically controlled. From 1976 Production: Four-stroke, gasoline engine, mechanical (CIS) fuel injection with air flow sensor.	
Number of cylinders	8	
Arrangement of cylinders	V-form 90°	
Bore/stroke	mm (in.)	92/85 (3.62/3.35)
Total piston displacement	cc (cu. in.)	4520 (275.8)
Compression ratio	ϵ	8.0:1
Firing order	1-5-4-8-6-3-7-2	
Max. speed	rpm	5,800
Crankshaft bearings	5 Multi-layer main bearings with steel-backed shells	
Connecting rod bearing	Multi-layer bearings with steel-backed shells	
Valve arrangement	Overhead	
Camshaft arrangement	Overhead camshafts, 1 for each cylinder bank	
Oil cooling	Air oil cooler ¹⁾	
Cooling	Water circulation pump, thermostat with bypass line, fan with visco fan coupling, finned tube radiator	
Lubrication	Forced oil circulation by gear pump	
Oil filter	Main flow filter	
Air filter	Dry air damper filter with paper cartridge	

¹⁾ The air oil cooler has been eliminated since early 1974 production.



B Technical Data

Model	350 SL, 450 SL (107.044)	450 SLC (107.024)
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Dimensions

Length	mm (in.)	4370 (172.0) ³⁾	4740 (186.6) ³⁾
Width	mm (in.)	1790 (70.5)	
Height, driving condition	mm (in.)	1300 (51.2) roadster top 1290 (50.8) Coupe top	1330 (52.4)
Wheelbase	mm (in.)	2460 (96.9)	2820 (111.0)
Track	front	mm (in.)	1452 (57.2)
	rear	mm (in.)	1440 (56.7)
Wheel lock	inside		40°
	outside		34°
Turning circle minimum	m (ft.)	10.34 (33.9) (10.48-34.4)	11.55 (37.9) (11.68-38.3)
Ground clearance, in design position ¹⁾	mm (in.)	136 (5.4) *(131-5.2)	

Performance Data and Operating Conditions

Rear axle ratio =		3.07		
Maximum speed in individual gears, timed			FEDERAL	CALIFORNIA
1. gear	km/h (mph)	95 (60)	*95 (60)	*95 (60)
2. gear	km/h (mph)	155 (96)	155 (96)	155 (96)
3. gear	km/h (mph)	200 (124)	195 (121)	190 (118)
Gradeability	1. gear (slip limit)	%	43	41
	2. gear	%	43	*30
	3. gear	%	28	13.5
Acceleration 0–100 km/h (0–62 mph) Load: 2 persons	sec. ± 7 % ²⁾	10.6	*11.1	
Engine speed at 100 km/h (62 mph) in direct gear	rpm	3175	2785	
Coolant	normal operating temperature	70°C–95°C (158°F–203°F)		
	maximum temperature	115°C (238°F)		
Fuel		Regular (RON 91)		

*Represents later model cars.

1) Design position: Vehicle loaded with 65 kg on each front seat and 65 kg on center of rear bench.

2) Includes tolerances in engine output and tires. Accelerate with kickdown.

3) 1974 vehicles with energy absorbing bumpers are approximately 250 mm (10") longer.

Model	350 SL, 450 SL (107.044)	450 SLC (107.024)
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Weights

Curb weight, Model Year 1972	kg (lbs.)	1701 (3751)	2140 (4730)
Model Year 1973	kg (lbs.)	1683 (3710)	1708 (3765)
Model Year 1974	kg (lbs.)	1691 (3730)	1715 (3780)
Model Year 1975	kg (lbs.)	1715 (3820)	1733 (3820)
Admissible axle weight front/rear ¹⁾	kg (lbs.)	1015/1090 (2238/2400)	1040/1090 (2300/2400)

1) According to MVSS 109/110

Electrical System

Battery	Voltage	V	12
	Capacity	Ah	66 (88 Ah as of Model Year 1975)

Filling Capacities

Fuel tank/reserve	fuel	approx. ltr.	90/13 (24/3.5 US gallons)
Cooling system including heater	water	approx. ltr.	15 (32 US pts.)
Total filling quantity	max./min.	ltr.	8.5/6.5 (approx. 18/14 US pts.) with oil cooler 8.3/6.3 (approx. 17/13 US pts.) without oil cooler
Crankcase (without oil filter and oil cooler)	max./min.	ltr.	7.5/5.5 (16/12 US pts.)
Oil filter	engine oil	ltr.	0.75 (appr. 1.5 US pts.)
Oil cooler	engine oil	ltr.	0.4 (approx. 0.8 US pts.) ⁴⁾
Water pump			Maintenance-free
Automatic transmission W 3 A 040	ATF	(liters)	8.9 ²⁾ (appr. 19 US pts.)
Rear axle, hypoid gear oil SAE 90		ltr.	1.3 (appr. 2.7 US pts.)
Powering steering ATF		ltr.	1.4 (appr. 3 US pts.)
Front wheel hub, roller bearing grease (per hub)		grams	70
Brake system		approx. ltr.	0.5 (appr. 1 US pt.)
Brake fluid			

2) For initial filling only, refill capacity approximately 7.9 liters (17 pts.).

3) Rear axle with limited slip differential — use special oil — refer to fuels/lubricants manual.

4) The air cooler has been eliminated since early 1974 production.

