Engine 133 in model 117, 156, 176 270, 651 in model 117 **Engine** with code M005 (4MATIC)

Engine 270, 651 in model 156

with code M005 (4MATIC)

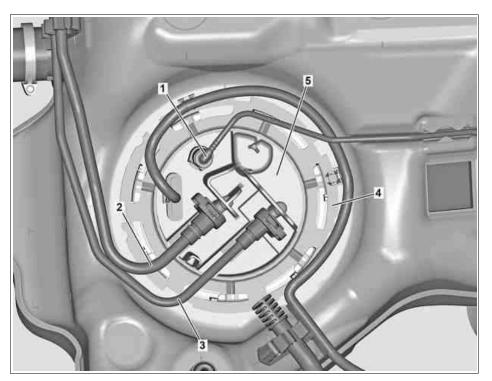
Engine 270, 651 in model 176

with code M005 (4MATIC)

Engine 270, 651 in model 246

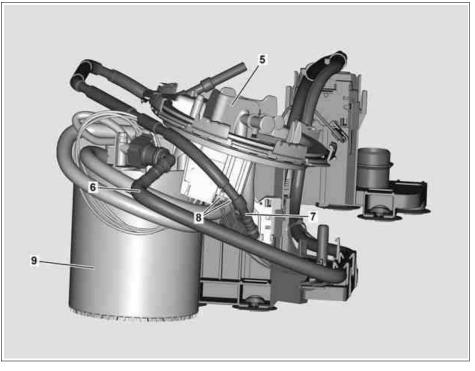
with code M005 (4MATIC)

- Fuel line
- 2 Fuel line
- Fuel line 3
- Locking ring
- Fuel pump top section

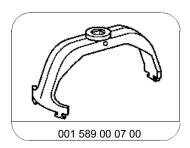


P47.20-2568-06

- 5 Fuel pump top section
- 6 Fuel line
- 7 Fuel line
- 8 Electrical connections
- Fuel pump bottom section



XX	Remove/install		
1	Remove fuel tank	Engine 270 in model 117, 156, 176, 246 with code M005 (4MATIC)	AR47.10-P-4100NKB
		Engine 651 in model 117, 156, 176, 246 with code M005 (4MATIC)	
		Engine 133 in model 117, 156, 176	AR47.10-P-4100MTA
2	Detach fuel line (1) on fuel pump top section (5)		
3	Detach fuel line (2) on fuel pump top section (5)		
4	Detach fuel line (3) on fuel pump top section (5)		
5	Turn lock ring (4) with claw wrench counterclockwise and remove lock ring (4)	S Claw-type wrench	*001589000700
6	Raise fuel pump top section (5)		
7	Release and disconnect electrical connections (8)		
8	Detach fuel line (7) on fuel pump top section (9)		
9	Detach fuel line (6) on fuel pump top section (9)		
10	Remove fuel pump top section (5) and fuel pump bottom section (9) from fuel tank	i Installation: Replace sealing ring on fuel pump top section (5).	
11	Install in the reverse order		

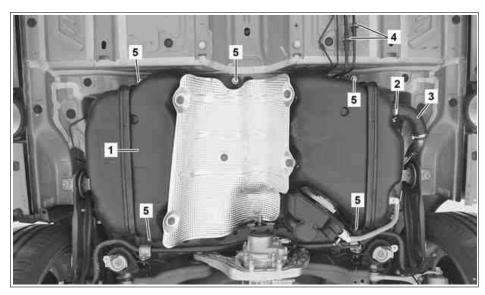


Claw-type wrench

AR47.10-P-4100MTA Remove/install fuel tank 12.8.15

Model 117, 156, 176 with engine 133

- 1 Fuel tank
- 2 Clip
- 3 Hose
- 4 Fuel lines
- 5 Screw



P47.10-2720-05

	Risk of explosion caused by fuel igniting, risk of poisoning caused by inhaling and swallowing fuel as well as risk of injury to eyes and skin caused by contactwith fuel.	No fires, sparks, open flames or smoking. Pour fuels into suitable and appropriately marked containers only. Wear protective clothing when handling fuel.	AS47.00-Z-0001-01A
\mathbb{X}	Remove/install		
1	Drain fuel tank (1)		AR47.10-P-4001NKB
2	Remove propeller shaft	Model 117, 156, 176 with engine 133 with code M005 (4MATIC)	
			AR41.10-P-0050MTA
3	Remove side underfloor paneling		AR61.30-P-1001NKB
4	Unfasten mounts from filler pipe for filler neck at body		AR47.10-P-7541NKB
		i The filler neck remains in the vehicle.	
5	Open clamp (2) and detach hose (3) for filler neck from fuel tank (1)	i Seal connections.	
		S Plug	*168589009100
6	Disconnect fuel lines (4)	i Seal connections using suitable stop plugs.	
		Record plug	*129589009100
7	Support fuel tank (1) using a lifting platform and secure		
⊯≅ws	000 588 03 62 00 Lifting platform		WS01.00-P-0091A
8	Remove screw/bolts (5)	Nm Bolt, tensioning strap for fuel tank to body	*BA47.10-P-1002-01I
		Nm Bolt, fuel tank to body	*BA47.10-P-1001-01I
9	Lower fuel tank (1) and detach electrical connections at fuel pump	i Helper required.	
10	Remove fuel tank		
11	Install in the reverse order		
	Risk of accident from vehicle starting off by itself when engine running. Risk of injury (bruises and burns) resulting from working on the engine while it is being started or when it is running.	Secure vehicle to prevent it from starting off by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
12	Conduct engine test run and check fuel tank (1) for leaktightness		

Number	Designation		Model 117	Model 156
BA47.10-P-1001-01I	Bolt, fuel tank to body	Nm	23	23

Nm Fuel tank

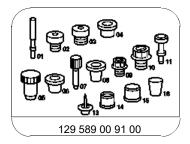
Number	Designation		Model 176, 246
BA47.10-P-1001-01I	Bolt, fuel tank to body	Nm	23

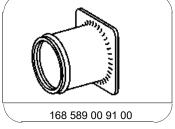
Nm Fuel tank

Number	Designation		Model 117	Model 156
BA47.10-P-1002-01I	Bolt, tensioning strap for fuel tank to body	Nm	23	23

Nm Fuel tank

Number	Designation		Model 176, 246
BA47.10-P-1002-01I	Bolt, tensioning strap for fuel tank to body	Nm	23





Record plug

Plug

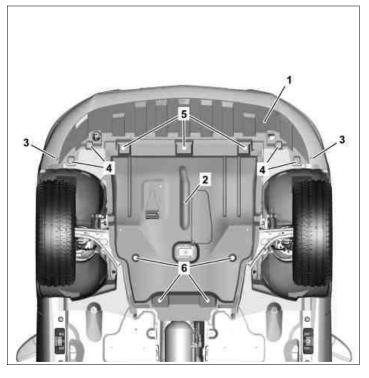
Model 117 with engine 133, 270

Model 156

Model 176 with engine 133, 270 Model 242 with engine 270, 780 Model 246 with engine 270

Shown on MODEL 246 with ENGINE 270 without CODE 550 (trailer hitch)

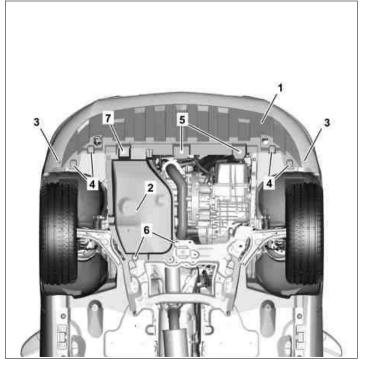
- 1 Front engine compartment paneling
- 2 Rear engine compartment paneling
- 3 Expansion rivet
- 4 Bolts
- 5 Bolts
- 6 Bolts



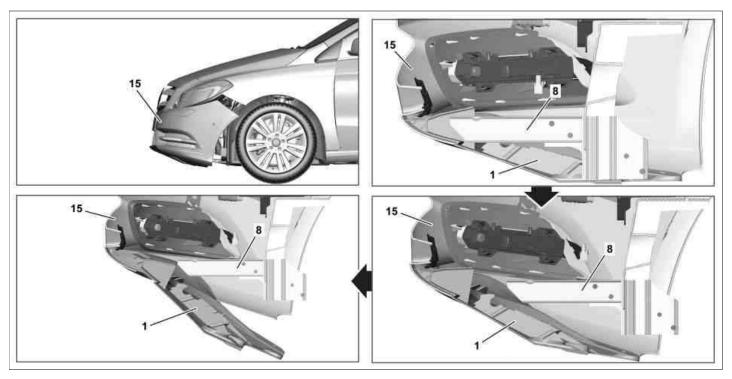
P61.20-2069-12

Shown on MODEL 246 with ENGINE 270 without CODE 550 (trailer hitch)

- 1 Front engine compartment paneling
- 2 Rear engine compartment paneling
- 3 Expansion rivet
- 4 Bolts
- 5 Bolts
- 6 Bolts
- 7 Screw



P61.20-2070-12

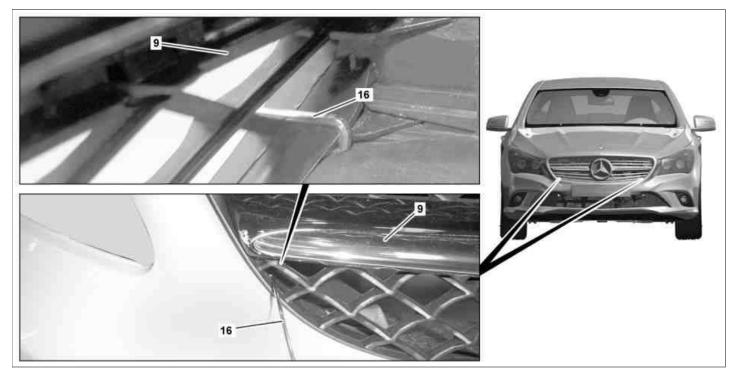


P61.20-2071-09

Bumper (15) and front engine compartment paneling (1) in section, shown on MODEL 246

- 1 Front engine compartment paneling
- 8 Bottom longitudinal member

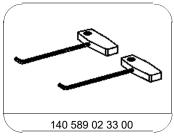
15 Bumper



P61.20-2075-09

⚠ Warning	Risk of injury due to fan starting unexpectedly	Do not reach into the rotation or hazard area of the fan. Wear closed and close-fitting work clothes.Model 242 with engine 780	AS20.40-Z-0001-01A
XX	Remove/install		
<u> </u>	Raise vehicle with vehicle lift		AR00.60-P-1000AK
·	Remove front engine compartment paneling		
2	Remove bumper (15)	Model 117, 176 with engine 133, 270 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 156 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 242 with engine 270, 780 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 246 with engine 270 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 156 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 156 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 117, 176 with engine 133, 270 with code 772 (AMG styling package - front	AR88.20-P-2000NKX AR88.20-P-2000NKB
		spoiler, side skirts and rear apron) Model 242 with engine 270, 780 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 246 with engine 270 with code 772 (AMG styling package - front spoiler, side skirts and rear apron)	
3	Loosen bumper (15) from fender	Model 156 except code 772 (AMG styling package - front spoiler, side skirts and rear apron)	AR88.20-P-2000NKX
		Model 117, 176 with engine 133, 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 242 with engine 270, 780 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 246 with engine 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) i The front engine compartment paneling (1) encloses the lower longitudinal member (8) and	AR88.20-P-2000NKB
4.1	Remove expansion rivets (3)	cannot be moved out toward the rear. Model 117, 176 with engine 133, 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 156 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 242 with engine 270, 780	
		except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 246 with engine 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron)	
4.2	Drill out expansion rivets (3)	Model 117, 176 with engine 133, 270 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 156 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 242 with engine 270, 780 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 246 with engine 270 with code 772 (AMG styling package - front spoiler, side skirts and rear apron) i Commercially available devices/tools	

5	Unscrew bolts (4, 5, 7)	Model 117, 176 with engine 133, 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 156 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 242 with engine 270, 780 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 246 with engine 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) i Bolt (7) on vehicles with CODE 550 (Trailer hitch).	
6	Pull radiator grille (9) with extraction hook (16) out of brackets	Model 117, 176 with engine 133, 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 156 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 242 with engine 270, 780 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 246 with engine 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) Model 246 with engine 270 except code 772 (AMG styling package - front spoiler, side skirts and rear apron) S Extraction hook	*140589023300
7	Pull bumper (15) toward front in lower area and pivot out front engine compartment paneling (1) downward	Model 117, 176 with engine 133, 270	
	Remove rear engine compartment paneling (2)		
8	Unscrew bolts (5, 6) or bolts (6, 7) and remove rear engine compartment paneling (2)	Bolts (5, 6) on vehicles without CODE 550 (Trailer hitch). Bolts (6, 7) with CODE 550 (Trailer hitch).	
9	Install in the reverse order		



Extraction hook

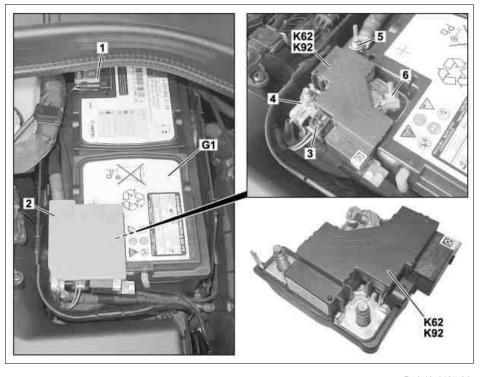
Model 117, 156, 176, 246

with code 4U7 (Start/stop voltage dip protector)

Model 242 with engine 270

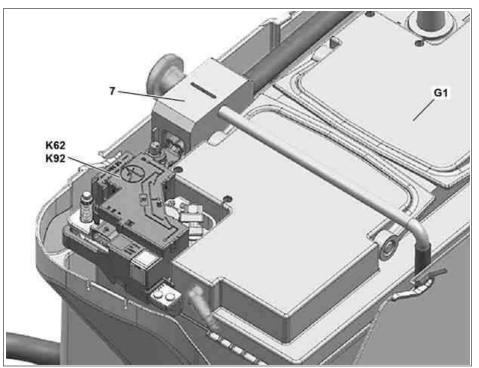
with code 4U7 (Start/stop voltage dip protector)

- 1 Ground cable
- 2 Cover
- 3 Electrical connector
- 4 Nut
- 5 Nut
- 6 Battery clamp
- G1 On-board electrical system battery
- K92 Starter front-end relay



P54.10-4187-06

- 7 Counterholder
- G1 On-board electrical system battery
- K92 Starter front-end relay



P54.10-4680-06

	Risk of fire/risk of explosion due to short circuit and escaping oxyhydrogen gas. Risk of (burn) injury caused by caustic burns to eyes, skin and mucous membranes from battery electrolyte/mist, short circuit and arcing. Risk of poisoning caused by swallowing battery electrolyte or absorption of lead through the skin or body orifices. Risk of death due to voltage U >= 30 V AC and U >= 60 V DC.	No fires, sparks, open flames, or smoking. Wear acid-resistant gloves, clothing, and glasses. Pour battery acid only into suitable and appropriately marked containers.	AS54.10-Z-0001-01A AH54.00-P-0001-01A
	components due to electrostatic discharge		711104.001 0001 0171
	Notes on battery		AH54.10-P-0001-01A
XX	Remove/install		
1	Disconnect ground line (1) of on-board electrica system battery (G1)		AR54.10-P-0003NKB
2	Remove cover (2)		
3	Release and disconnect electrical connection (3)		
4	Unfasten battery clamp (6) from on-board electrical system battery (G1), while doing so, do not remove front-end relay (K92) from battery terminal	To avoid damage to the housing of the onboard electrical system battery (G1) and the front-end relay (K92).	
		Nm Starter series relay to positive terminal	*BA54.10-P-1010-01I
5	Unscrew nut (4), remove line and place to one side	When unscrewing or tightening, the frontend relay (K92) may turn far enough until it makes contact with the battery housing. Mm Nut, positive line/starter wiring harness to starter series relay	*BA54.10-P-1009-01I
6	Attach counterholder (7) and unscrew nut (5), remove line and place to one side	When unscrewing or tightening, the frontend relay (K92) may turn far enough until it makes contact with the battery housing. Nm Nut, positive line/starter wiring harness to starter series relay Counterholder	*BA54.10-P-1009-01I *246589004000
7	Remove front-end relay (K92)	The battery clamp (6) and starter series relay (K92) are a single component and they cannot be replaced individually.	24000004000
8	Install in the reverse order		

Nm Battery

Number	Designation		Model 117	Model 156
BA54.10-P-1009-01I	Nut, positive line/starter wiring harness to starter series relay	Nm	16	16

Nm Battery

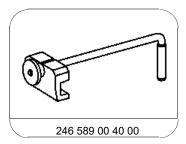
Number	Designation		Model 176, 246	Model 242
BA54.10-P-1009-01I	Nut, positive line/starter wiring harness to starter series relay	٧m	16	16

Nm Battery

Number	Designation		Model 117	Model 156
BA54.10-P-1010-01I	Starter series relay to positive terminal N	lm	5,5	5,5

Nm Battery

Number	Designation		Model 176, 246	Model 242
BA54.10-P-1010-01I	Starter series relay to positive terminal	Nm	5,5	5,5



Counterholder

Engine 133 in model 117, 156, 176

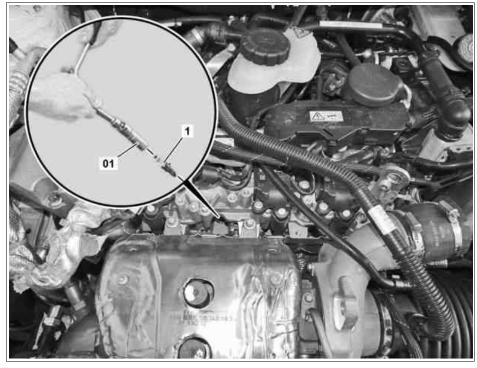
Modification notes

11.03.2015	Information on spark plug connector grease and reference to WSM film added.		
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Shown in model 176

01 Spark plug wrench

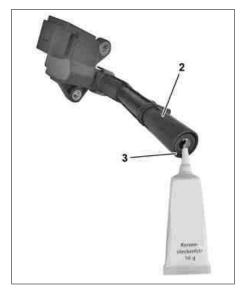
Spark plug



P15.10-2498-06

Shown on ignition coil in engine 157.980

- 2 3 Spark plug connector
- Rubber lip



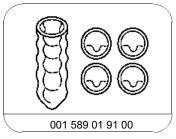
P15.10-2579-02

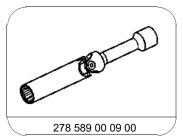
	Wear protective gloves, protective clothing and safety glasses, if necessary.	AS00.00-Z-0002-01A
,	Do not touch damaged or defective live component parts and lines or non-insulated	AS00.00-Z-0035-01A
voltage (AC) or U >= 60 V direct voltage (DC)	electrical connections and lines.	

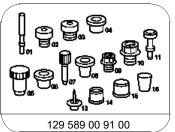
	Information on avoiding damage when replacing spark plugs		AH15.10-P-0002-02A
	Preparatory tasks		
1	As a supplement to the following description, the method can also be called up as a WSM film.	i WIS Service Media wsm://01 201500 34	
33	Remove		
2 ⊯FAR	Remove ignition coils		AR15.12-P-2003MT
rit.	Clean		
3	Blow out any dirt residue in the spark-plug recesses using compressed air	Record plug	*129589009100
		Set of protective covers	*001589019100
X	Remove		
1	Remove spark plugs (1) using spark plug wrench (01) from cylinder heads	Spark plug wrench	*278589000900
V	Clean		
5	Vacuum out spark plug holes using vacuum cleaner attachment	Detach the metal insert at the end of the hose! Damage can otherwise occur. Adapter	*270589006800
X	Install	,	
3	Screw new spark plugs (1) using spark plug wrench (01) into cylinder heads	Spark plug to cylinder head Spark plug wrench	*BA15.10-P-1001-01E *278589000900
4	Observe	Spark plug wrench	21000000000
<u>∢</u>	Check	If the constraint of the const	
<i>l</i>	Check spark plug connector (2), ignition coils and ignition lines for damage, deformation and crack formation	If there are complaints:	
		Rectify problem subject to separate repair order.	
X	Install		
8	Grease rubber lips (3) of spark plug connectors (2) using spark plug connector grease before installation	Spark plug connector grease	*BR00.45-Z-1102-06A
9	Install ignition coils		
¥ AR			AR15.12-P-2003MT

Nm Spark plugs

Number	Designation		Engine 133.980
BA15.10-P-1001-01E	Spark plug to cylinder head	Nm	22









Set of protective covers

Spark plug wrench

Record plug

Repair materials

Number	Designation	Order number
BR00.45-Z-1102-06A	Spark plug connector grease	A 002 989 80 51

BB00.40-P-0231-01A Specified gear oils (cars, cross-country vehicles) - survey	Should be usedCan be used	
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Model all (4xWD, CAR, smart)

smart sheets 235.10/.71 to 235.73							
Major assembly		Sheet No. 235					
		.10	.71	.72	.73		
	SAE grade	75W-85		75W-90	75W		
Automated manual transmission 717.4 in model 450, 452			•				
Automated manual transmission 717.4 in model 451, 454				•			
DCT (Twinamic) 700.410/411 in model 453					•		
Manual transmission 700.120/121/122/123 in model 453		•					

Passenger car, sheets 235.0 to 235.74									
Major assembly		Sheet No. 235							
		.0	.7	.15	.61	.62	.63	.64	.74
	SAE grade	75W-90, 80W-90, 85W-90, 90		75W-8 5	75W-140	75W-85			75W-8 5
Differential with limited slip			•						
Rear axle models 117, 118, 156, 176, 177, 246, 247 4MATIC (4×4)						•			
Rear axle model 163									•
Rear axle model 164 with rear wheel drive (4 \times 2), rear axle with different lock models 164, 199	ntial			•					
Rear axle model 251 with rear wheel drive (4×2)					•				
Rear axle (standard differential)		0	•						
Rear axle with AMG differential lock model 171.473, models 172.466/475, models 203.076/276, models 204.077/277/377, models 205.086/087/286/287/386/387/486/487, models 209.376/377/476/477, models 211.076/077/276/277, models 212.074/075/076/077/092/274/275/276/277/292, models 213.088/089/288/289, models 218.374/375/376/392/974/975/976/992, models 219.376/377 with transmission 722.6/9, models 230.470/472/474 with code 471 / P30, model 230.479, models 231.474/479, models 251.021/026/054/056/077/126/154/156/177, model 290 with HAG228 and engine 177, model 290 with HAG215 and engine 256				_	•				
Rear axle MFA2 rear axle differential in model 177, 247				•					
Rear axle TWIN rear axle differential for gear set model 177 and 118 wi 139	th engine	9					•		
Rear axle TWIN rear axle differential for coupling model 177 and 118 wi	ith engin	e						•	
Front axle 4MATIC (except models 166,167, 205, 207, 212, 213, 217, 2 238, 253, 257, 292)	18, 222,	0							•

Passenger car, Sheets 235.0 through 235.10						
Major assembly			Sheet No. 235			
			.3	.10		
	SAE grade	75W-90, 80W-90, 85W-90, 90	75W	75W-85		
Manual steering	·	•				
Manual transmission 716.2				•		
Manual transmission as of transmission sequence number 7 340 241 (717.4 and 716.6)				•		
Manual transmission SG 150/180 (716.5)				•		
Manual transmission NMT 270, 370/400			•			
Manual transmission 700.7 (Citan)				•		

Passenger car sheets 239.71/.72			
Major assembly		Sheet No. 2	239
		.71	.72
	SAE grade	75W-85	
Rear axle (normal differential) with light alloy housing model 166, 167, 172, 205, 213, 217, 222, 238, 253, 257, 292		•	
Front axle differential (normal differential) model 166, 167, 205, 207, 212, 213, 217, 218, 222, 238, 253, 257, 292			•

Cross-country vehicle axles, Sheet 235.31								
Major assembly								
		.31						
	SAE grade	75W-85						
Differential model 463.272/273/276/277 (AMG G 63)	,	•						

Cross-country vehicle, Sheets 235.0 to 235.61										
Major assembly	Sheet No	Sheet No. 235								
	.0	.1	.8	.10	.11	.61				
SAE	75W-90 80W-9	· · · ·								
	85W-90,	90 Hot zones 85W-90, 90	75W-90	75W-85	75W-90	75W-140				
Axles (except model463.270/271)	•									
Rear axle with AMG differential lock model 463.243/246/270/271/272/273/274/275						•				
Hub reduction gear (portals) models 463.234/255 with code ZQ0 (G 500 4x42) hub reduction gear (portals) model 463.274 with code LQ0 (G 650 landaulet)			•							
Hub reduction gear (portals) model 461.339 with code ZD4 (vehicle for non civilian use)						•				
Manual transmission as of transmission sequence number 7 340 2	41			•						
Transfer case (except VG 150E)		•								
Transfer case VG 150E					•					

Passenger car and off-road vehicle, sheets 236.2/.3						
Major assembly	Sheet No.	236				
	.2	.3				
Manual steering L 075 Z		•				
Manual steering (cross-country vehicle)		•				
Manual transmission (cross-country vehicle)	•					
Manual transmission 717.4, sheet 236.6 not for GL76/30-5, GL275E up to transmission sequence number 7 340240	•					
Power steering		•				
Power steering (cross-country vehicle)		•				

Passenger car and off-road vehicle, sheets 236.1 to 236.81												
Major assembly			Sheet No. 236									
	.1	.7	.8	.9	.10	.12	.14	.15	.17	.81		
7-speed automatic transmission 722.9 except code A89							•					
7-speed automatic transmission 722.9 with code A89								•				
7-speed automatic transmission HYBRID 724.2								•				
9-speed automatic transmission 725.0/1 4MATIC									•			
MB 4- and 5-speed automatic transmission without slipping lockup clutch (torque converter lockup clutch) (722.3/4/5) sheet 236.8 only for arctic climate	•	•	0	•	•	0				•		
MB 5-speed automatic transmission with regulated torque converter lockup clutch (KÜB) for vehicles with rear wheel drive (722.6))						•					

MB 5-speed automatic transmission with regulated torque converter lockup clutch (KÜB)			•			
for vehicles with front wheel drive (722.7)						i

Passenger car and off-road vehicle, sheets 236.6 to 236.15, 239.41							
Major assembly S		t No. 2	239				
	.10	.12	.13	.15	.41		
Transfer case (4MATIC), model 124	•						
Transfer case (4MATIC), model 163, 210	•						
Transfer case (4MATIC), model 164, 166, 251 Transfer case (4MATIC), model 470, 471 with engine 699 Transfer case without torque-on-demand (4MATIC) model 167		•					
Transfer case (4MATIC), model 203, 211, 220			•				
Transfer case in models 205, 213, 217, 218, 222, 238, 253, 257, 290 with transmission 725.0; transfer case in model 257 with transmission 725.1				•			
Transfer case with torque-on-demand (4MATIC) model 167, transfer case (4MATIC) in model 463 as of mode year 2019					•		

Passenger car and off-road vehicle, sheets 236.6 to 236.26, 239.21								
Major assembly	Ş	Sheet	t No. 2	36		239		
		21	.22	.25	.26	.21		
7-DCT 300 Getrag transmission 700.4 in model 118, 177, 247						•		
7G -DCT transmission 724 in model 117, 156, 176, 177, 242, 246, 247		•						
8F-DCT transmission 724.1 in models 118, 177, 247			•					
GL-5 gear set, transmission 700.400/401/402 in model 190, 197					•			
Hydraulic circuit, transmission 700.400/401/402 in model 190, 197				•				

Passenger car and off-road vehicle, sheets 236.6 to 236.41								
Major assembly		Sheet No. 236						
	.20	.21	.24	.41				
Transmission drive system M 780.990 in model 242		•						
Transmission drive system M 780.998 in model 293			•					
Transmission 722.55 in model 164 (hybrid)				•				
MB F-CVT transmission 722.8	•							
ZF transmission 716.7 in model 172, 205, 213, 238, 253			•					

Notes:

Approval

 \bigcirc Can only be used in exceptional cases or under certain operating conditions/in certain applications.

AR20.00-P-1142MTA Drain/pour in coolant 09.06.2016

Engine 133 in model 117, 156, 176

Modification notes

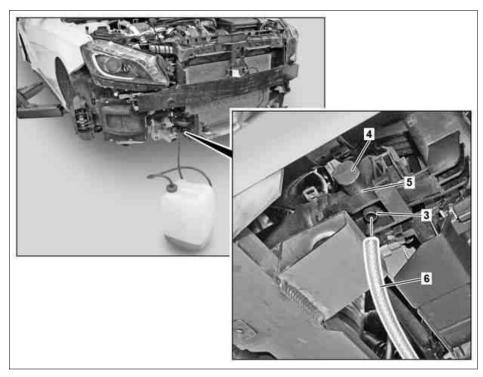
26.09.2014 Mischungsverhältnis Kühlmittel BF20.00-P-1001-04A

- 1 Cap
- 2 Coolant expansion reservoir



P20.00-2483-06

- 3 Drain fitting
- 4 Drain screw
- 5 Radiator
- 6 Drain hose

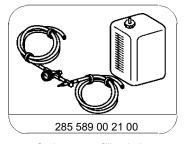


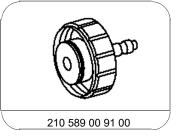
P20.00-2484-06

	Risk of injury to skin and eyes suffering scalding from contact with hot coolantspray. Risk of poisoning from swallowing coolant.	Do not open cooling system unless coolant temperature is below 90 °C. Open cap slowly and release the pressure. Do not pour coolant into beverage containers. Wear protective gloves, protective clothing and safety glasses.	AS20.00-Z-0001-01A
(1)	Notes on coolant		AH20.00-N-2080-01A
X	Remove		
1	Remove lower engine compartment paneling		AR61.20-P-1105NKB
2	Remove bumper	Engine 133 in model 156 Engine 133 in model 117, 176	AR88.20-P-2000NKX AR88.20-P-2000NKB
_	Drain off		
3	Unscrew cap (1) on coolant expansion reservoir (2)		
4	Push drain hose (6) onto RH drain fitting (3) on cooler (5)		
5	Open drain screw (4) at radiator (5) and drain coolant	i Observe regulations to dispose of coolant.	
	Pour in		
6	Tighten drain screw (4) on cooler (5) and detach drain hose (6) from drain fitting (3a)		
7 i	Fill cooling system and bleed cooling system Notes on coolant level		AR20.00-P-1142-04A AH20.00-P-1142-01CW
		Coolant mixing ratio	*BF20.00-P-1001-04A
		─────────────────────────────────────	*210589009100
		S Cooler vacuum filling device	*285589002100
4	Check	_	
8	Check cooling system for leaktightness		AR20.00-P-1010MTA
	Risk of accident from vehicle starting off by itself when engine running. Risk of injury (bruises and burns) resulting from working on the engine while it is being started or when it is running.	Secure vehicle to prevent it from starting off by itself. Wear closed and snug-fitting work clothes. Do not touch hot or rotating parts.	AS00.00-Z-0005-01A
9	Carry out engine test run and check the cooling system for proper operation and leaktightness		
X	Install		
10	Install bumper	Engine 133 in model 117, 176	AR88.20-P-2000NKB
		Engine 133 in model 156	AR88.20-P-2000NKX
11	Install lower engine compartment paneling		AR61.20-P-1105NKB

Coolant mixing ratio

Number	Designation				Engine all
BF20.00-P-1001-04A	Coolant mixing ratio	Antifreeze/water	Up to -37°C	%	50/50
			As of -38 °C	%	55/45
			Sheet		BB00.40-P-0310-01A
			Sheet		BB00.40-P-0325-00A
			Sheet		BB00.40-P-0326-00A





Cooler vacuum filling device

Test cap