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smart sheets 235.10/.71 to 235.73									
Major assembly					Sheet No. 235				
					.10	.71	.72	.73	
					SAE-grade	75W-75		75W-90	75W
1.	Automated manual transmission 717.4 in model 450, 452						●		
2.	Automated manual transmission 717.4 in model 451, 454							●	
3.	DCT (Twinamic) 700.410/411 in model 453								●
4.	Manual transmission 700.120/121/122/123/124 in model 453					●			
5.	Electric drive in model 451.390/392/490/492 with motor 780.993 and model 453.091/391/491 with motor 780.997							●	

Notes:

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Passenger car axles, sheets 235.0 to 235.75

Major assembly		Sheet No. 235									
		.0	.7	.15	.61	.62	.63	.64	.66	.74	.75
	SAE-grade	75W-90, 80W-90, 85W-90, 90	75W- -85	75W- 85	75W- 140	75W- 85	75W- 80	75W- 70	75W- 90	75W- 85	75W- 85
1.	Differential with limited slip		•								
2.	Rear axle models 163									•	
3.	Rear axle models 164 with rear wheel drive (4×2), rear axle with differential lock models 164, 199			•							
4.	Rear axle models 167 with engine 177, 256 with code M016, model 251 with rear wheel drive (4×2)				•						
5.	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 213.089/289 with engine M177, models 214.062/063/064/262/263/264/ with engine M256, /078/080/278/280 with engine M139, /082/084/282/284/ with engine M177 models 218.374/375/376/392/974/975/976/992, models 219.376/377 with transmission 722.6/9, models 223.182 with engine M117 and rear axle differential 228, models 230.470/472/474 with code 471 / P30, models 230.479, models 231.474/479, models 251.021/026/054/056/077/126/154/156/177, models 253.388/389 mit Motor 177 models 254.378/380 with engine M139, /678/680 with engine M177, model 290 with rear axle differential 228 and engine 177 model 290 with rear axle differential 215 and engine 256 model 232 with rear axle differential 215 or 228 model 192 with rear axle differential 215 or 228				•						
6.	Rear axle 4MATIC(4x4) model 117, 156, 176, 246					•					
7.	Rear axle 4MATIC(4x4) models 118, 177, 247			•							
8.	Rear axle TWIN- rear axle differential for gear sets, models 177, 118, 247 with engine 139 (AMG)						•				
9.	Rear axle TWIN- rear axle for clutch, models 177, 118, 247 with engine 139 (AMG)							•			
10.	Front axle 4MATIC (except models 166, 167, 205, 207, 212, 213, 217, 218, 222, 238, 253, 257, 292, 293, 294, 295, 296, 297, 298, 520, 530, 540, 570, 571, 580, 581, 590, 591, 592)	○								•	
11.	Rear axle AAM 700.3 in models 204, 205, 212, 213, 253 China								•		
12.	Front axle differential (normal differential) models 203, 204, 205, 207, 209, 211, 212, 213, 217, 218, 222, 238, 253, 257		•								
13.	Front axle differential (normal) differential models 166, 167		○ ¹⁾								•
14.	Rear axle /front axle (standard differential, not listed in lines 1-13 and in table "Passenger car axles sheets 239.71/72/73/74" except models 293, 294, 295, 296, 297, 298, 520, 530, 540, 570, 571, 580, 581, 590, 591, 592)	○	•								

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¹⁾ Use only if no product from Sheet 235.75 is available

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Passenger cars axle, sheets 239.71/.72/.73

Major assembly		Sheet No. 239			
		.71	.72	.73	.74
	SAE-grade	75W-85	75W-85	75W-85	
1.	Rear axle (normal differential) with light alloy housing models 166, 167, 172, 204, 205, 206, 212, 213, 214, 217, 222, 223, 236, 238, 253, 254, 257, 292	•			
2.	Front axle differential (normal differential) with light alloy housing models 192 206, 214, 223, 232, 236, 254, 292 (including their AMG derivatives)		•		
3.	Rear axle ZF 700.390 with light alloy housing models 206, 214, 254, China			•	
4.	Rear axle in model 178, 248				•

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VAN axle, sheet 235.7/.8/.9/.20/.23/.31/.33

Major assembly		Sheet No. 235						
		.7	.8	.9	.20	.23	.31	.33
	SAE-grade	75W-85	75W-90 80W-90,	75W-90 80W-90,	80W-90	80W-90	75W-85	75W-85
			Hot zones 85W-90, 90	Hot zones 85W-90, 90	Hot zones 85W-90 90	Hot zones 85W-90 90		
1.	Front axle differential model 907 Code A4M, ZG1, ZG3		•	•				
2.	Front axle differential models 470, 447		•	•				
3.	Rear axle differential model 470		•	•				
4.	Rear axle differential model 447						•	•
5.	Rear axle differential model 639 up to 06.30.2014		•	•	○	○		
6.	Rear axle differential model 639 after 07.01.2014	•						
7.	Hypoid differential D741.161/421/422/423/453/454/455		○	○			•	•
8.	Hypoid differential D741.160		•	•	○ 1.)	○ 1.)		
9.	All hypoid differential (except the major assemblies, line 1.-8.)		•	•	•	•		

1.) Reduced service interval

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Off-road vehicle axle, hub reduction gear (portals) sheets 235.0 to 235.61

Major assembly		Sheet No. 235							
		.0	.8	.9	.20	.23	.31	.33	.61
	SAE-grade	75W-90, 80W-90 85W-90, 90	75W-90	75W-90	80W-90	80W-90	75W-85	75W-85	75W-140
1.	Front axle differential model 461,				•	•			
2.	Rear axle differential model 461				•	•			
3.	Front axle differential models 463.200/260/261/272/273/276/277/280 (AMG G 63)						•	•	○ ^{1.)}
4.	Rear axle differential models 463.200/243/246//260/261/270/271 272/273/274/275/276/277/280 (AMG G 63)						•	•	○ ^{1.)}
5.	Front axle differential models 463,464, 465				○ ^{2.)}	○ ^{2.)}	•	•	
6.	Rear axle differential models 463, 464, 465				○ ^{2.)}	○ ^{2.)}	•	•	
7.	Hub reduction gear (portals) model 463.234/255 wit code ZQ0 (G 500 4x4 ²) Hub reduction gear (portals) model 463.274 with code LQ0 (G 650 Landaulet)		•	•					
8.	Hub reduction gear (portals) model 461.339 with code ZD4 (vehicle for non civilian use)								•
9.	Hub reduction gear (portals) models 463.276/280 (MOPF SOMO 4x4 ²) with code P94		•	•			•	•	
10.	All axles (except the major assemblies, line 1.-9.)	•							

1.) Only required in warm countries

2.) Optional used if 235.31/.33 is not available

Notes:

• Approval

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

Passenger car, off-road vehicle manual transmission, front-manual transmission, sheets 235.3/.10, 236.2/.24, 239.31

Major assembly		Sheet No. 235		Sheet No. 236		Sheet No. 239
		.3	.10	.2	.24	.31
	SAE-grade	75W	75W-80			75W-85
1.	Manual transmission 716.2		•	•		
2.	Manual transmission as of transmission sequence number 7 340 241 (717.4 and 716.6)	•	•			
3.	Manual transmission MT 150/180 (716.5)		•			•
4.	Manual transmission NMT 270, 370/400	•				
5.	Manual transmission as of transmission sequence number 7 340 241 (Off-road vehicle)	•	•			
6.	Manual transmission (Off-road vehicle model 460, 461)			•		
7.	Manual transmission 717.4 up to transmission sequence number 7 340 240			•		
8.	Front-Manual transmission 711.6/.63/.634/.640/. 641/.642/.645					•
9.	Manual transmission 711.653/.654/.655/.656/.670	•				
10.	ZF-Transmission 716.7 in model 172, 205, 213, 238, 253				•	
11.	Manual transmission 716.4/.424 in model 209	•	•			

Notes:

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Vans transmission, sheets 235.3 to 235.17, 236.2 239.22

Major assembly		Sheet No. 235					236	239
		.1	.3	.10	.14	.17	.2	.22
	SAE-grade	80W		75W-80	80W	75W		
1.	Manual transmission 700.710/720 in model 415 (Citan)			•		•		
2.	Manual transmission 700.720/721 in model 420 (Citan)					•		
3.	DCT 700.740 in 415 (Citan), DCT 700.800 in model 420 (Citan)							•
4.	Model 447 with engine 622 with transmission 700.730					•		
5.	Models 447, 639, 900, 903 with transmission 711.612, 906 with transmission 711.68 (TSG 360), Model 906 with transmission 710.51, model 907 with transmission 700.79, 711.685 (TSG 480), Model 910 with transmission 700.76 (FSG 360 u. FSG 400)		•	•				
6.	Model 639 with transmission 712.61	•			•			
7.	Manual transmission 712.21/621 model 668, 670						•	
8.	Van Transmission G16/28/20/32/33		•					
9.	Light vans, heavy vans not listed in lines 1-6			•				

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Passenger car, off-road vehicle automatic transmission, sheets 236.1 to 236.81

Major assembly	Sheet No. 236										
	.1	.7	.8	.9	.10	.12	.14	.15	.17	.18	.81
1. 7-speed automatic transmission 722.9 except code A89							•				
2. 7-speed automatic transmission 722.9 with code A89								•			
3. 7-speed automatic transmission HYBRID 724.2								•			
4. 9-speed automatic transmission 725.0/.1, 4MATIC									• ¹⁾		
5. 9-speed automatic transmission 725.1, 4MATIC										• ²⁾	
6. MB 4- und 5-speed automatic transmission without slipping lockup clutch (torque converter lockup clutch (KÜB), 722.3/4 Sheet 236.8 only for arctic climate	•	•	○	•	•	○					•
7. MB 5-speed automatic transmission with slipping lockup clutch (torque converter lockup clutch, KÜB) for vehicles with rear wheel drive (722.6)							•				
8. MB 5-speed automatic transmission with slipping lockup clutch (torque converter lockup clutch, KÜB) for vehicles with front wheel drive (722.7)					•						

Notes:

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1) Preferably use Sheet 236.18 for assemblies 725.1

2) Not available in China. Use Sheet 236.17 in China.

Passenger car, off-road vehicle transmission, sheets 236.20 to 236.41, 239.21/22

Major assembly	Sheet No. 236									239
	.20	.21	.22	.25	.26	.27	.41	.21	.22	
1. 7-DCT 300 Getrag transmission 700.422 in models 118, 177, 247.0								•	•	
2. 7-DCT 300 Getrag transmission 700.423 in models 118, 177, 247									•	
3. 7G-DCT transmission 724.0 in models 117, 118 with code M260 or M005, 156, 176, 177, 242, 246, 247		•								
4. 8F-DCT transmission 724.1 in models 118, 177, 247			•							
5. GL-5 Hydraulic circuit (gear Set), transmission 700.400/401/402 in Models 190, 197					•		•			
6. Hydraulic circuit SLS, transmission 700.400/401/402 in models 190, 197				•						
7. Transmission 722.55 in model 164 (HYBRID)							•			
8. MB F-CVT-transmission 722.8	•									
9. 8F-eDCT transmission 724.3 in models 178, 248						•				

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VAN automatic transmission, sheets 236.1 to 236.93

Major assembly	Sheet No. 236											
	.1	.7	.8	.9	.11	.14	.15	.17	.18	.81	.82	.93
1. MB-Automatic transmission , except 722.6/9	•	•	•							•		
2. Automatic transmission 722.6						•						
3. Automatic transmission 722.9 in model 447 448, 907							•					
4. Automatic transmission 725.0, 725.1 in model 447, 448, 907								• ²⁾				
5. Automatic transmission 725.1 in model 447, 448, 907									• ³⁾			
6. ZF FAG gear box 700.750 in model 910											•	
7. MB-automatic transmission W 4 B 035 ^{1.)}		•										
8. Voith/ZF automatic transmission	•	•	•	•						•		•
9. ZF 4 HP 20					•							

1.) Only install W 4 B 035 as of major assembly end no. 00 57 33 and/or modified valve body assembly.
ATFs acc. to sheets 236.1, 236.8, and 236.81 may not be used in W 4 B 035.

2) Preferably use Sheet 236.17 for assembly 725.0

3) Not available in China. Use Sheet 236.17 in China.

Notes:

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Passenger car, vans, off-road vehicle transfer case, sheets 235.1 to 235.21, 236.10 to 236.17, 239.41

Major assembly	Sheet No. 235				236					239
	.1	.11	.14	.21	.10	.12	.13	.15	.17	.41
1. Transfer case (4MATIC), model 124					•					
2. Transfer case (4MATIC), model 163, 210					•					
Transfer case (4MATIC), model 164, 166, 251										
Transfer case (4MATIC), model 470, 471 with engine 699										
3. Transfer case without Torque-on-Demand (4MATIC) model 167 with engine OM654 (type 654.9), M264						•				
Transfer case Model 638 with code ZG2 four-wheel drive										
4. Transfer case (4MATIC), models 203, 211, 220							•			
Transfer case in models 205, 213, 217, 218, 222, 223, 232, 238, 253, 257, 290 with transmission 725.0;										
5. transfer case in models 206, 213, 214, 223, 236, 238, 254, 257 with transmission 725.1								•	•	
transfer case in model 447 with transmission 725.0 engine OM654										
6. Transfer case FT46 (4MATIC) in model 463 as of model year 2019										•
Transfer case (4MATIC), model 470, 471 with engine 642										
7. Transfer case with Torque-on-Demand (4MATIC) model 167 with engine M176, M177, M178, M254 (type 254.8), M256, M274, M274, OM654(type 654.9 hybrid), OM654(type 654.8, 654.7), OM656										•
8. Transfer case in model 906, 907 with ZG1/ZG3						•				
9. Transfer case in model 907 with A4M										•
10. Transfer case Off-road vehicle (except VG 150 E) nr. 750.650/.651/.652/.653	•		•							
Transfer case Off-road vehicle VG 150 E, nr. 750.654/.655/.656/.657/.658		•		•						

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Passenger car, Off-road vehicle manual steering, power steering¹⁾, sheets 235.0, 236.3

Major assembly		Sheet No. 235	236
		.0	.3
	SAE-grade	75W-90, 80W-90, 85W-90, 90	
1.	Manual steering	•	
2.	Manual steering L 075 Z		•
3.	Manual steering (Off-road vehicle)		•
4.	Power steering		•
5.	Power steering (Off-road vehicle model 461)		•

Notes:

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- 1) For further steering oils, see the overview of hydraulic oils on sheet 340.1

Vans steering, power steering, hydrostatic fan drive, hydraulic lowering system, sheets 236.1 to 236.7

Major assembly		Sheet No. 236		
		.2	.3	.7
1.	Power steering models 638, 639, 901, 902, 903, 904, 905, 906, 907, 909		•	
2.	MB-power steering	•	•	•
3.	ZF-power steering/Robert Bosch power steering		•	•
4.	HEMA-steering, Shibao-steering		•	•
5.	Hydrostat fan drive for additional cooler	•	•	
6.	Hydrostatic fan drive		•	•
7.	Hydraulic lowering system in model 905.613	•		

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Passenger car, off-road vehicle with electric drive or electric axle, sheets 235.65, 236.21/24, 237.11/.12/.20

Major assembly		Sheet							
		No. 235	236				237		
		.65	.21	.23	.24	.11	.12	.13	.20
1.	Transmission drive system M 780.30/60 in model 294, 295, 296, 297					•			
2.	Transmission drive system M 780.20/50 in model 243, 253, 293				•				
3.	Transmission drive system M 780.990 in model 242		•						
4.	Transmission drive system M 780.998 in model 293				•				
5.	AMG drive system in models 192, 206, 223, 232, 236, 254, 290	•							
6.	Drive system 780.9950 (front and rear) in off-road vehicle model 465, Drive system 780.30 module 1.6V5 (code EMF+ AY1) in model 520, 540						•		
7.	Drive system 780.62 model 174,244, 297, 520, 540								•
8.	Front axle drive system 780.610 and 780.301 model 174, 244 Drive system 780.30 module 1.6V4/V4,1 (code EME+AY1, EME+AY2) in model 520, 540			•					
9.	Drive system 5099.00 and 5099.010 in model 174, 520, 540, 590, 591							•	

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Vans with electric drive system or electric axle, sheet 235.17, 236.24, 237.15

Major assembly	Sheet No. 235	236	237
	.17	.24	.15
1. Transmission drive system M 780.703 im Models 910		•	
2. Transmission drive system M 780.701/702 im Models 447		•	
3. Transmission drive system M 790.690 in model 420 (eCitan)	•		
4. Transmission drive system M 780.668 in model 907 (eSprinter)		•	
5. Transmission drive system M 780.6310, M 780.6310 in model 449, 446			•

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