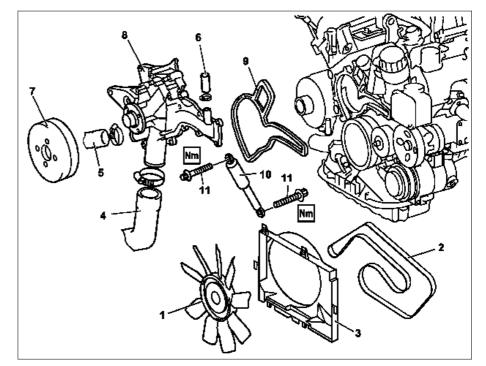
AR20.10-P-1271B Remove/install coolant pump ENGINES 112.945 in MODEL 463.209 /232 /233 /244 /245 /250 ENGINES 112 in MODEL 129, 163, 170, 202, 203, 208, 209, 210, 220 ENGINES 113.962 in MODELS 463.206 /240 /241 /247 /248 /249 /254 ENGINES 113 in MODEL 129, 163, 202, 203, 208, 209, 210, 220 ENGINES 113.982 in MODEL 463.243 /246 ENGINES 113,989 in MODEL 171,473

#### Shown on engine 112

- 1 Viscous fan
- Poly-V-belt 2
- З Fan shroud
- Coolant hose 4
- 5 Coolant hose
- 6 Coolant hose to oil-water heat exchanger
- 7 Coolant pump belt pulley
- 8 Coolant pump
- 9 Coolant pump gasket
- 10 Shock absorber
- 11 Bolts



P20.10-0242-06

#### **Modification notes**

916/917/920/921/922/923/940/941/942/ 943/944/945/946/947/949/953/954/ 955/960/961/970/972/973/975	16.12.03	Value changed from 10 Nm to 9 Nm	engine 112.910/911/912/913/914/915/ 916/917/920/921/922/923/940/941/942/ 943/944/945/946/947/949/953/954/	*BA20.10-P-1002-01M
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XX	Remove/install		
⚠ Danger!	<b>Risk of death</b> caused by vehicle slipping or toppling off the lifting platform.	Align vehicle between columns of lifting platform and position four support plates at the lifting platform support points specified by vehicle manufacturer.	AS00.00-Z-0010-01A
1	Lift/jack up vehicle	Models 129, 170, 202, 208, 210, 220	
		Model 163	AR00.60-P-1000GH
		Model 171	AR00.60-P-1000V
		Model 203, 209	AR00.60-P-1000P
		Model 463	AR00.60-P-1000G
⚠ Danger!	Risk of injury caused by fingers being	Keep body parts and limbs well clear of	AS00.00-Z-0011-01A
	<b>pinched or crushed</b> when removing, installing or aligning hoods, doors, trunk lids, liftgates or sliding roof	moving parts.	
2	Open engine hood	Model 129	
		Model 163.154 /172 up to VIN A145272 Model 163.154 /172 up to VIN X708318	AR88.40-P-1000GH
		Model 163.154 /172 from VIN A145273 Model 163.154 /172 from VIN X708319 Model 163.157/ 174/ 175	AR88.40-P-1000GI
		Model 170	AR88.40-P-1000G
		Model 170	AR88.40-P-1000G
		Model 202	AR88.40-P-1000V
		Model 202 Model 203	AR88.40-P-1000P
		Model 208 / 210	AR88.40-P-1000F
		Model 209	AR88.40-P-1000Q
		Model 220	AR88.40-P-1000M
		Model 463	AR88.40-P-1000GG
3.1	Unclip cover on front side of engine	i Only model 220.	

© Daimler AG, 11/21/11, G/01/10 / ar20.10-p-1271b / Remove/install coolant pump Page 1/6 ENGINES 112.945 in MODEL 463.209 /232 /233 /244 /245 /250 ENGINES 112 in MODEL 129, 163, 170, 202, 203, 208, 209, 210, 220 ENGINES 113.962 in MODELS 463.206 /240 /241 /247 /248 .

4.1	Remove engine cover or air filter	i All except models 170.466, 171.473, 203.065 /265, 203.076 /276, 209.376 /476 from 24.4.04.	
5.1	Partially remove air filter housing	Engine 112.960 in model 170.466	AR09.10-P-1150SVK
		Engine 112.961 in model 203.065/ 265	
		Engine 113.987 in model 209.376 /476 as of 24.4.04	AR09.10-P-1150AC
		Engine 113.988 in model 203.076 /276 Engine 113.989 in model 171.473	
.1	Remove viscous fan (1)	All except models 163.174 /175, 170,	AR20.40-P-5660C
		171.473, 203, 208.365 /465, 209, 220 i Right-hand thread!	
	Demous fee abread (0)		
.1	Remove fan shroud (3)	<b>i</b> On vehicles fitted with suction fan, separate the plug connection of the suction fan before removing the fan shroud (3).	
		Model 171.473 with engine 113.989	AR20.40-P-6800VT
		Model 463 with engine 112.945, 113.962	AR20.40-P-6800V
		/982	An20.40-F-0000V
		Model 220 with engine 112, 113	AR20.40-P-6800AB
.1	Remove electric fan	Model 163 with engines 113.965/ 981	AR20.40-P-5000GH
		Model 170 with engine 112.947 /960	AR20.40-P-5000SV
		Model 171.473 with engine 113.989	AR20.40-P-5000V
		Model 203.076 /276	AR20.40-P-5000AC
		Model 203.070/270 Model 203 with engines 112.912 /916 /946	AR20.40-P-5000PV
		/953 /961 Model 209 with engines 112.912 /955,	
		113.968 /987.	
		Model 208.365 / 465	
Danger!	<b>Risk of injury</b> to skin and eyes caused by scalding from contact with hot coolant spray	Do not open cooling system unless coolant temperature is below 90 °C. Open cap slowly	AS20.00-Z-0001-01A
	Risk of poisoning caused by swallowing	and release the pressure. Do not pour	
	coolant.	coolant into beverage containers.	
		Wear protective gloves, protective clothing and safety glasses.	
	Drain coolant at radiator	i Model 163: For draining coolant, detach	
		bottom coolant line at radiator or at coolant	
		pump.	
		Installation: On model 163 replace	
		radiator connection of hose clamps to	
		coolant hose, otherwise this can cause a damage to the bolt/thread.	
			  *BA20.20-P-1004-01A
		Nm Hose clamp	DA20.20-F-1004-01A
		i Collect coolant	
		i Disposal of coolants: observe legal	
		regulations or local wastewater requirements!	
		Refer to Environmental Protection Catalog issued by MBVD/PWU for locations in	
		Germany.	
		Model 129, 163, 202, 208, 210, 220 with	AR20.00-P-1142HA
		engine 112 Model 220, 210, 208, 202, 163, 129 with	
		engine 113 Model 463.206 /240 /241 /247 /248 /249	
		/254 with engine 113.962 Model 463.209 /232 /233 /244 /245 /250	
		with engine 112.945.	
		Model 463.243 /246 with engine 113.982	
		Model 170.465 with engine 112.947 Model 170.466 with engine 112.960	AR20.00-P-1142SV
			1
		5	AR20.00-P-1142PV
		Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912	AR20.00-P-1142PV
		Model 171.473 with engine 113.989	AR20.00-P-1142PV
		Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912 Model 203.064 /264 /764 with engine 112.946 Model 203.065 /265 with engine 112.961	AR20.00-P-1142PV
		Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912 Model 203.064 /264 /764 with engine 112.946 Model 203.065 /265 with engine 112.961 Model 203.076 /276 with engine 113.988	AR20.00-P-1142PV
		Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912 Model 203.064 /264 /764 with engine 112.946 Model 203.065 /265 with engine 112.961 Model 203.076 /276 with engine 113.988 Model 203.081 /281 with engine 112.916	AR20.00-P-1142PV
		Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912 Model 203.064 /264 /764 with engine 112.946 Model 203.065 /265 with engine 112.961 Model 203.076 /276 with engine 113.988	AR20.00-P-1142PV
		Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912 Model 203.064 /264 /764 with engine 112.946 Model 203.065 /265 with engine 112.961 Model 203.076 /276 with engine 113.988 Model 203.081 /281 with engine 112.916 Model 203.084 /284 with engine 112.953 Model 209.365 /465 with engine 112.955	AR20.00-P-1142PV
		Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912 Model 203.064 /264 /764 with engine 112.946 Model 203.065 /265 with engine 112.961 Model 203.076 /276 with engine 113.988 Model 203.081 /281 with engine 112.916 Model 203.084 /284 with engine 112.953 Model 209.361 /461 with engine 112.912 Model 209.365 /465 with engine 112.955 Model 209.375 /475 with engine 113.968	AR20.00-P-1142PV
	Remove poly-V belt (2)	Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912 Model 203.064 /264 /764 with engine 112.946 Model 203.065 /265 with engine 112.961 Model 203.076 /276 with engine 113.988 Model 203.081 /281 with engine 112.916 Model 203.084 /284 with engine 112.953 Model 209.365 /465 with engine 112.955	AR20.00-P-1142PV

1			
		Model 463.209 /232 /233 /244 /245 /250 with engine 112.945. Model 463.206 /240 /241 /247 /248 /249	AR13.22-P-1202B
		/254 with engine 113.962 Model 463.243 /246 with engine 113.982 Model 129, 163 with engine 112 Model 129, 202, 208.370 /470, 210 with	
		engine 113 Model 163 with engine 113 except 113.965 /981	
		Model 202, 208, 210, 220 with engine 112 Model 220 with engine 113 except 220.074 /174	AR13.22-P-1202BA
		Model 163.174 with engine 113.981 Model 163.175 with engine 113.965 Model 208.374 /474 with engine 113	
		Model 220.074 / 174	AR13.22-P-1202R
		Model 170.465 with engine 112.947	AR13.22-P-1202SV
		Model 170.466 with engine 112.960 Model 203.065 /265 with engine 112.961	AR13.22-P-1202SVK
		Model 171.473 with engine 113.989 Model 203.061 /261 with engine 112.912 Model 203.064 /264 /764 with engine	AR13.22-P-1202PV
		112.946 Model 203.076 /276 with engine 113.988 Model 203.081 /281 with engine 112.916 Model 203.084 /284 with engine 112.953	
		Model 209.361 /461 with engine 112.912 Model 209.365 /465 with engine 112.955 Model 209.375 /475 with engine 113.968 Model 209.376 /476 with engine 113.987	
11.1	Remove shock absorber (10)	Model 210, 203, 209, 202, 170, 129 with	
12	Remove poly-V-belt tensioning device	manual transmission Model 463.209 /232 /233 /244 /245 /250 with engine 112.945.	AR13.25-P-3200B
		Model 463.206 /240 /241 /247 /248 /249 /254 with engine 113.962	
		Model 463.243 /246 with engine 113.982	
		Model 129, 163 with engine 112 Model 129, 202, 208, 210 with engine 113	
		Model 163 with engine 113 except 113.965	
		/981 Model 163.174 with engine 113.981 Model 163.175 with engine 113.965	AR13.25-P-3200BA
		Model 170, 202, 203, 208, 209, 210, 220 with engine 112 Model 171.473 with engine 113.989 Model 203, 209, 220 with engine 113	
13	Disconnect coolant hose (4, 5)	i Check condition of coolant hoses and hose clamps, replace if necessary.	
14.1	Disconnect coolant hose (6) at oil-water heat exchanger	i All except model 171.473.	
		i Check condition of coolant hose and hose clamp; replace if necessary.	
15.1	Remove bolts from oil lines on oil filter	<b>i</b> Only model 171.473.	
		Mm Bolt of oil line to oil filter housing	*BA18.20-P-1003-01D
16.1	Remove bolts from oil lines brackets and lay oil lines with brackets to one side	i Only model 171.473. M Bolt, oil line bracket	*BA18.20-P-1004-01D
17.1	Remove bracket with switchover valve and	i Only model 171.473.	
18	pressure sensor and place to one side Take off belt pulley of coolant pump (7)		
		L Engine 112:↓ Mm Belt pulley on coolant pump	*BA20.10-P-1002-01M
		<b>i</b> Engine 113, except 113.987 /988 /989	
		/991: ↓	
		Ment pulley on coolant pump	*BA20.10-P-1002-01C
		L Engines 113.987 /988 /989 /991: ↓	*BA20.10-P-1002-01L
		Belt pulley on coolant pump i Engine 113.989:↓	DA20.10-F-1002-01L
		S Counterholder	1*113589004000
19	Remove coolant pump (8)	Counterholder	*113589004000
19	Remove coolant pump (8)	<b>i</b> Installation: Replace gasket of coolant pump (9).	*113589004000
19	Remove coolant pump (8)	i Installation: Replace gasket of coolant	*113589004000 *BA20.10-P-1001-01M

		Engine 113 except 113.987 /988 /989 /991: ↓ Mm Self-tapping screw for coolant pump to timing case I Engines 113.987 /988 /989 /991: ↓	*BA20.10-P-1001-01C
		Im   Bolt, coolant pump to timing case     I   Engine 112, 113: ↓	*BA20.10-P-1001-01L
		Mm Alternator screw	*BA15.40-P-1003-01A
		S External torx set	*001589760900
20	Install in the reverse order		
21	Inspecting cooling system for leaks	<b>i</b> All except models 170, 171.473, 203, 209, 220.074 /174	AR20.00-P-1010HA
		Model 170, 171.473, 203, 209	AR20.00-P-1010P
		Model 220.074 / 174	AR20.00-P-1010RVK

#### Nm Alternator

Number	Designation		Engine 112.91/92/94/ 953/954/955/ 96/97 except 112.976, engine 113.94/96/98	Engine 113.991 in model 215, 220
BA15.40-P-1003-01A	Alternator bolt	Nm	42	-

### Nm Oil filter

Number	Designation		Engine 113.989
BA18.20-P-1003-01D	Bolt, oil line to oil filter housing	Nm	9
BA18.20-P-1004-01D	Bolt for oil line bracket	Nm	-

### Nm Coolant pump, coolant thermostat

Number	Designation				Engine 112.910/911/912 /913/914/915/ 916/917/920/ 921/922/923/ 940/941/942/ 943/944/945/ 946/947/949/ 953/954/955/ 960/961/970/ 972/973/975
BA20.10-P-1001-01M	Self-tapping bolt, connecting coolant pump to timing case	Thread not pre- tapped	M6	Nm	14
		Thread not pre- tapped	M8	Nm	35
		Thread pre- tapped	M6	Nm	10

		Thread pre- tapped	M8	Nm	25
BA20.10-P-1002-01M	Belt pulley on coolant pump			Nm	9

# Nm Coolant pump, coolant thermostat

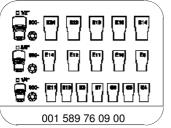
Number	Designation				Engine 113.940/941/ 942/943/944/ 945/946/948/ 960/961/962/ 963/965/966/ 967/968/969/ 980/981/982/ 984/986/992 993/995
BA20.10-P-1001-01C	Self-tapping bolt, connecting coolant pump to timing case	Thread not pre- tapped	M6	Nm	14
		Thread not pre- tapped	M8	Nm	35
		Thread pre-tapped	M6	Nm	10
		Thread pre-tapped	M8	Nm	25
BA20.10-P-1002-01C	Belt pulley on coolant pump			Nm	10

# Nm Coolant pump, coolant thermostat

Number	Designation			Engine 113.987/988/ 990/991	Engine 113.989
BA20.10-P-1001-01L	Bolt, coolant pump to timing case	M6	Nm	14	14
		M8	Nm	20	20
BA20.10-P-1002-01L	Belt pulley on coolant pump		Nm	9	9

## Nm Radiator, coolant hoses

Number	Designation		Engine 112.942/ 970, 113.942/ 965/981
BA20.20-P-1004-01A	Hose clamp	Nm	3



External Torx set

