

Engine 157, 278 in model 217, 222

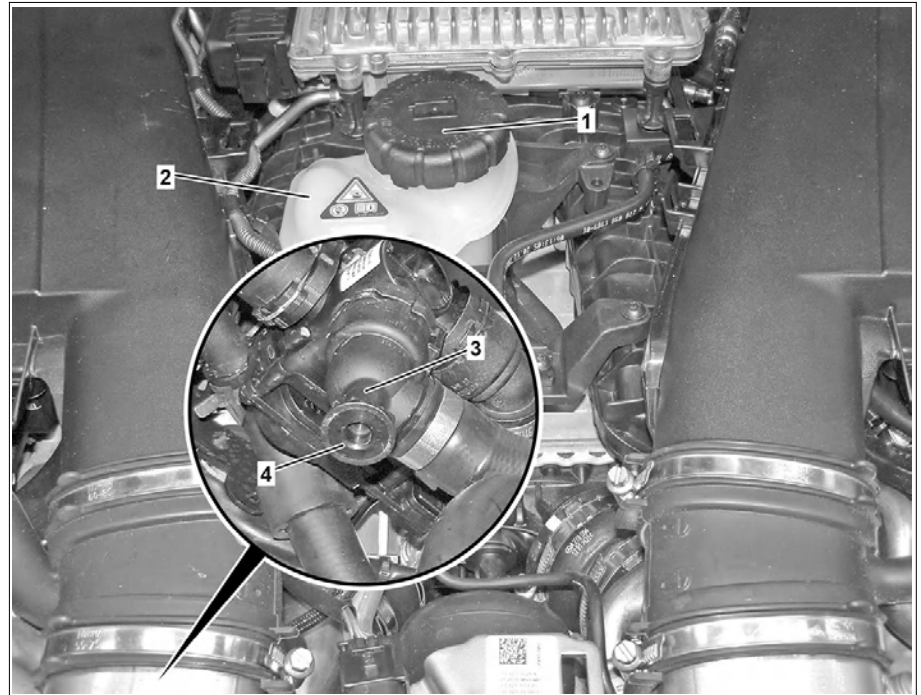
Engine 276 in model 217, 222

Modification notes

13.08.2015	Kühlanlage	Motor 157 im Typ 217	BF20.00-P-1001-02FA
13.08.2015	Kühlanlage	Motor 157 im Typ 222	BF20.00-P-1001-02FA
22.02.2017	Kühlanlage	Motor 276 im Typ 222.163	BF20.00-P-1001-02BA

Shown on engine 278

- 1 Cap
- 2 Low-temperature circuit coolant expansion reservoir
- 3 Drain fittings
- 4 Drain stop plug



P20.30-2492-06

Warning	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
	Notes on coolant		AH20.00-N-2080-01A
	Remove		
1	Remove upper center engine cover		
2	Unscrew cap (1) on low-temperature circuit coolant expansion reservoir (2)		
3	Remove front and center lower engine compartment paneling		AR61.20-P-1105LF
	Drain off		
4	Remove drain stop plug (4) from drain fitting (3) and drain off coolant	Collect coolant in a suitable container.	
	Pour in		
5	Close off drain stop plug (4)		
6	Pour in coolant and bleed cooling system	Use clean coolant. Engine 276 in model 217 Engine 276 in model 222Cooling system Engine 278 in model 217 Engine 278 in model 222Cooling system Engine 157 in model 217 Engine 157 in model 222Cooling system Cooler vacuum filling device NTKL Adaption Electric vacuum pump	AR20.00-P-1142-04A *BF20.00-P-1001-02BA *BF20.00-P-1001-02EA *BF20.00-P-1001-02FA *285589002100 *285589012100 *285589022100

		Test cap	*210589009100
	Check		
7	Check low-temperature circuit for leaktightness		
Warning	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
8	Screw cap (1) onto low-temperature circuit coolant expansion reservoir (2)		
	Install		
9	Install front and center engine compartment paneling		AR61.20-P-1105LF
10	Install upper engine cover		

Cooling system

Number	Designation				Engine 276 in model 217	Engine 276 in model 222 (except 222.163/173)
BF20.00-P-1001-02BA	Cooling system	Workshop replacement amount	Main circuit	l	≈ 12,3	≈ 12,3
			Low-temperature circuit	l	≈ 3,2	≈ 3,2
		Antifreeze/water	Up to -37°C	%	50/50	50/50
			As of -38 °C	%	55/45	55/45
			Specifications for Operating Fluids, sheet		BB00.40-P-0310-01A	BB00.40-P-0310-01A
		Specifications for Operating Fluids, sheet		BB00.40-P-0325-06A	BB00.40-P-0325-00A	
		Specifications for Operating Fluids, sheet		BB00.40-P-0326-06A	BB00.40-P-0326-00A	

Cooling system

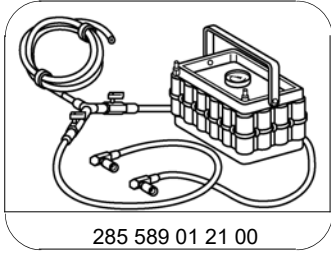
Number	Designation				Engine 276 in model 222.163/173
BF20.00-P-1001-02BA	Cooling system	Workshop replacement amount	Main circuit	l	≈ 12,6
			Low-temperature circuit	l	≈ 3,5
		Antifreeze/water	Up to -37°C	%	50/50
			As of -38 °C	%	55/45
			Specifications for Operating Fluids, sheet		BB00.40-P-0310-01A
		Specifications for Operating Fluids, sheet		BB00.40-P-0325-00A	
		Specifications for Operating Fluids, sheet		BB00.40-P-0326-00A	

Cooling system

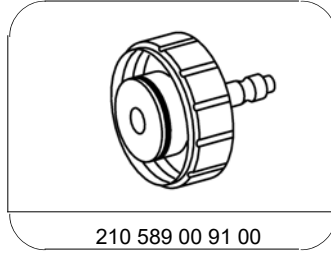
Number	Designation				Engine 278 in model 217	Engine 278 in model 222
BF20.00-P-1001-02EA	Cooling system	Workshop replacement quantity	Main circuit	Liter	≈ 12,1	≈ 12,1
			Low temperature circuit	Liter	≈ 3,6	≈ 3,6
		Antifreeze/water	Up to -37°C	%	50/50	50/50
			As of -38 °C	%	55/45	55/45
			Sheet		BB00.40-P-0310-01A	BB00.40-P-0310-01A
		Sheet		BB00.40-P-0325-00A	BB00.40-P-0325-00A	
		Sheet		BB00.40-P-0326-00A	BB00.40-P-0326-00A	

Cooling system

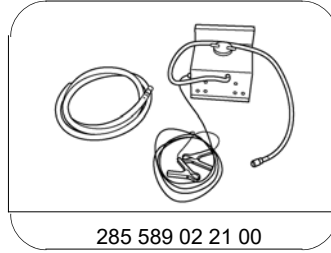
Number	Designation				Engine 157 in model 217	Engine 157 in model 222
BF20.00-P-1001-02FA	Cooling system	Workshop change quantity	Main circuit	Liter	≈ 9	≈ 9
			Low-temperature circuit	Liter	≈ 2,5	≈ 2,5
		Antifreeze/water	Up to -37 °C	%	50/50	50/50
			As of -38 °C	%	55/45	55/45
		Sheet			BB00.40-P-0310-01A	BB00.40-P-0310-01A
		Sheet			BB00.40-P-0325-00A	BB00.40-P-0325-00A
		Sheet			BB00.40-P-0326-00A	BB00.40-P-0326-00A



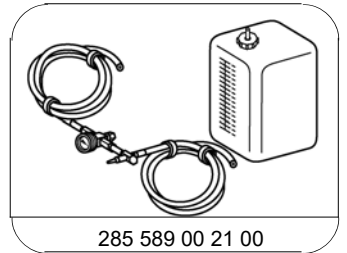
NTKL Adaption



Test cap



Electric vacuum pump



Cooler vacuum filling device