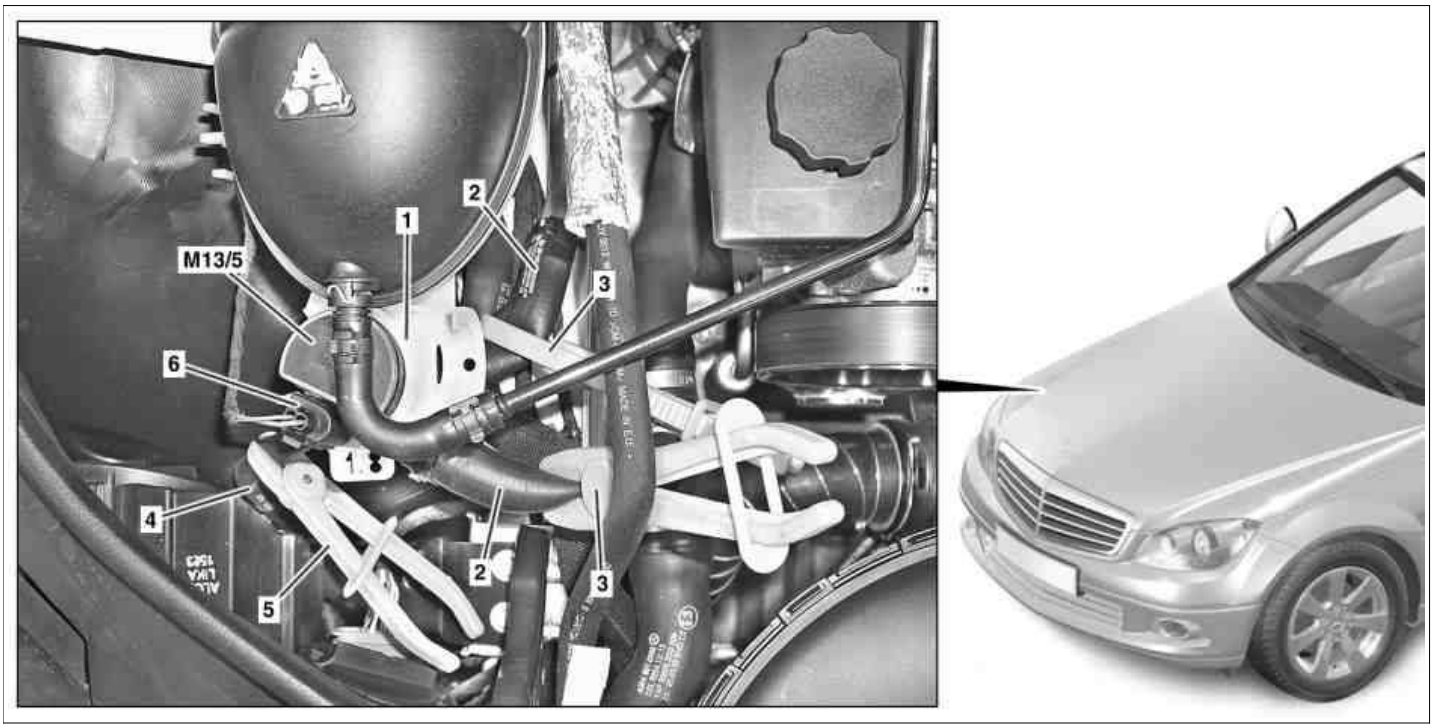
**Model 204.0/2 with engine 271, 272, 274, 276, 642, 646, 651**
**Model 204.3 with engine 271, 274, 276, 651**
**Model 204.9 with engine 272, 274, 276, 642, 651**
**Model 207 with engine 272, 273, 274, 276, 642, 651**
**Model 212 with engine 157, 272, 273, 274, 276, 642, 651**
**Model 218 with engine 157, 274, 276, 642, 651**

## Modification notes

| | | | |
|---|---|---|---|
| 30.03.2016 | Release overpressure from cooling system, added. | Operation step 2 | |
| 30.03.2016 | Close off cap on coolant expansion reservoir, added. | Operation step 3 | |




P83.25-2276-09

**Shown on MODEL 204.0 with CODE 875 (Heated windshield washer system)**

| | | | | | |
|---|---|---|---|---|---|
| *1* | *Bracket* | *4* | *Hot water hose (only with code 875 (Heated windshield washer system))* | *M13/5* | *Coolant circulation pump* |
| *2* | *Heater hose* | *5* | *Pinch cock* | | |
| *3* | *Pinch cock* | *6* | *Electrical connector* | | |

| | | | |
|---|---|---|---|
| ⚠ 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 |
| | Notes on coolant level | | AH20.00-P-1142-01CW |
| | **Remove/install** | | |
| 1 | Carefully open cap on coolant expansion reservoir | | |

| | | | |
|---|---|---|---|
| 2 | Release overpressure from cooling system | | |
| 3 | Close off cap on coolant expansion reservoir | | |
| 4 | Clamp off hot water hoses (2) using pinch-off pliers (3) | | |
| 5 | Clamp off hot water hose (4) using pinch-off pliers (5) | Model 204.0/2 with engine 271, 272, 274, 276, 642, 646, 651<br>with code 875 (Heated windscreen washer system)<br>Model 204.3 with engine 271, 274, 276, 651<br>with code 875 (Heated windscreen washer system)<br>Model 204.9 with engine 272, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 207 with engine 272, 273, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 212 with engine 157, 272, 273, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 218 with engine 157, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system) | |
| 6 | Release clamps from hot water hoses (2) and retract | Hose clamp pliers | *003589033700 |
| 7 | Slacken clamp at hot water hose (4) and pull back | Model 204.0/2 with engine 271, 272, 274, 276, 642, 646, 651<br>with code 875 (Heated windscreen washer system)<br>Model 204.3 with engine 271, 274, 276, 651<br>with code 875 (Heated windscreen washer system)<br>Model 204.9 with engine 272, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 207 with engine 272, 273, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 212 with engine 157, 272, 273, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 218 with engine 157, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Hose clamp pliers | *003589033700 |
| 8 | Release and disconnect electrical connector (6) | | |
| 9 | Take out coolant circulation pump (M13/5) far enough out of bracket (1) for heater hoses (2, 4) to be pulled off | | |
| 10 | Disconnect heater hoses (2) from coolant circulation pump (M13/5) | | |

| | | | |
|---|---|---|---|
| 11 | Detach heater hose (4) from coolant circulation pump (M13/5) | Model 204.0/2 with engine 271, 272, 274, 276, 642, 646, 651<br>with code 875 (Heated windscreen washer system)<br>Model 204.3 with engine 271, 274, 276, 651<br>with code 875 (Heated windscreen washer system)<br>Model 204.9 with engine 272, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 207 with engine 272, 273, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 212 with engine 157, 272, 273, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system)<br>Model 218 with engine 157, 274, 276, 642, 651<br>with code 875 (Heated windscreen washer system) | |
| 12 | Remove coolant circulation pump (M13/5) | | |
| 13 | Install in the reverse order | | |
| 14 | Pour in coolant and bleed cooling circuit | Model 204.0/2 with engine 271, 272, 274, 276, 642, 651<br>Model 204.3 with engine 271, 274, 276, 651<br>Model 204.9 with engine 272, 274, 276, 642, 651<br>Model 207 with engine 272, 273, 274, 276, 642, 651<br>Model 212 with engine 157, 272, 273, 274, 276, 642, 651<br>Model 218 with engine 157, 274, 276, 642, 651 | AR20.00-P-1142-04A |
| | | Model 204.0/2 with engine 646<br>Reuse clean coolant only. | AR20.00-P-1142-04AK |
| | | Model 204 with engine 646<br>Model 204, 207, 212 (except 212.098/298) with engine 651<br>Model 212.098/298 with engine 651<br>Model 218 with engine 651Cooling system | *BF20.00-P-1001-02AA |
| | | Model 204 with engine 642<br>Model 207.323/423 with engine 642<br>Model 207.326/426 with engine 642<br>Model 212 with engine 642<br>Model 218 with engine 642Cooling system | *BF20.00-P-1001-02W |
| | | Model 204 with engine 276<br>Model 207 (except 207.365/465) with engine 276.8<br>Model 207 with engine 276.9<br>Model 207.365/465 with engine 276.8<br>Model 212 (except 212.095/195) with engine 276.9<br>Model 212 with engine 276.8<br>Model 212.095/195 with engine 276.9<br>Model 218 with engine 276Cooling system | *BF20.00-P-1001-02BA |
| | | Model 204 with engine 274<br>Model 207 with engine 274<br>Model 212 (except 212.035) with engine 274<br>Model 212.035 with engine 274<br>Model 218 with engine 274Cooling system | *BF20.00-P-1001-02CA |
| | | Model 212 with engine 157<br>Model 218 with engine 157Cooling system | *BF20.00-P-1001-02FA |
| | | Model 204 with engine 272<br>Model 207, 212 with engine 272<br>Model 207, 212 with engine 273Cooling system | *BF20.00-P-1001-02U |
| | | Model 204 with engine 271.8Cooling system | *BF20.00-P-1001-02P |

| | | | |
|---|---|---|---|
| | | Model 204.0/2 with engine 271, 272, 274, 276, 642, 651<br>Model 204.3 with engine 271, 274, 276, 651<br>Model 204.9 with engine 272, 274, 276, 642, 651<br>Model 207 with engine 272, 273, 274, 276, 642, 651<br>Model 212 with engine 157, 272, 273, 274, 276, 642, 651<br>Model 218 with engine 157, 274, 276, 642, 651<br>Electric vacuum pump | *285589022100 |
| | | Model 204.0/2 with engine 271, 272, 274, 276, 642, 651<br>Model 204.3 with engine 271, 274, 276, 651<br>Model 204.9 with engine 272, 274, 276, 642, 651<br>Model 207 with engine 272, 273, 274, 276, 642, 651<br>Model 212 with engine 157, 272, 273, 274, 276, 642, 651<br>Model 218 with engine 157, 274, 276, 642, 651<br>NTKL Adaption | *285589012100 |
| | | Model 204.0/2 with engine 271, 272, 274, 276, 642, 646, 651<br>Model 204.3 with engine 271, 274, 276, 651<br>Model 204.9 with engine 272, 274, 276, 642, 651<br>Model 207 with engine 272, 273, 274, 276, 642, 651<br>Model 212 with engine 157, 272, 273, 274, 276, 642, 651<br>Model 218 with engine 157, 274, 276, 642, 651<br>Cooler vacuum filling device | *285589002100 |
| | | Model 204.0/2 with engine 271, 272, 274, 276, 642, 646, 651<br>Model 204.3 with engine 271, 274, 276, 651<br>Model 204.9 with engine 272, 274, 276, 642, 651<br>Model 207 with engine 272, 273, 274, 276, 642, 651<br>Model 212 with engine 157, 272, 273, 274, 276, 642, 651<br>Model 218 with engine 157, 274, 276, 642, 651<br>Test cap | *210589009100 |
| 15 | Carry out visual inspection for leaks in area of coolant circulation pump (M13/5) | | |

**Cooling system**

| Number | Designation | | | | Engine 646 in model 204 | Engine 651 in model 204, 207, 212 (except 212.098/298) |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02AA | Cooling system | Workshop replacement amount | Main circuit | Liter | ≈6,0 | ≈10,0 |
| | | | Low temperature circuit | Liter | - | - |
| | | Antifreeze/water | Down to -37°C | % | 50/50 | 50/50 |
| | | | -38°C and below | % | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-00A | BB00.40-P-0326-00A |

**Cooling system**

| Number | Designation | Engine 651 in model 212.098/298 | Engine 651 in model 218 |
|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02AA | Cooling system | Workshop replacement amount | Main circuit | Liter | ≈10,0 | ≈10,4 |
| | | | Low temperature circuit | Liter | ≈1,0 | - |
| | | Antifreeze/water | Down to -37°C | % | 50/50 | 50/50 |
| | | | -38°C and below | % | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-00A | BB00.40-P-0326-00A |

**Cooling system**

| Number | Designation | | | | Engine 276 in model 204 | Engine 276.8 in model 207 (except 207.365/465) |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02BA | Cooling system | Workshop replacement amount | Main circuit | l | ≈9,0 | ≈10,3 |
| | | | Low-temperature circuit | l | - | - |
| | | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-00A | BB00.40-P-0326-00A |

**Cooling system**

| Number | Designation | | | | Engine 276.8 in model 207.365/465 | Engine 276.9 in model 207 |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02BA | Cooling system | Workshop replacement amount | Main circuit | l | ≈10,3 | ≈9,6 |
| | | | Low-temperature circuit | l | ≈1,9 | - |
| | | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-00A | BB00.40-P-0326-00A |

**Cooling system**

| Number | Designation | | | | Engine 276.8 in model 212 | Engine 276.9 in model 212 (except 212.095/195) |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02BA | Cooling system | Workshop replacement amount | Main circuit | l | ≈10,3 | ≈9,6 |
| | | | Low-temperature circuit | l | ≈1,9 | - |
| | | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-00A | BB00.40-P-0326-00A |

**Cooling system**

| Number | Designation | | | | Engine 276.9 in model 212.095/195 | Engine 276 in model 218 |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02BA | Cooling system | Workshop replacement amount | Main circuit | l | ≈8,4 | ≈9,6 |
| | | | Low-temperature circuit | l | ≈2,7 | - |
| | | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-00A | BB00.40-P-0326-00A |

**Cooling system**

| Number | Designation | | | | Engine 274 in model 204 | Engine 274 in model 207 |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02CA | Cooling system | Workshop replacement amount | Main circuit | l | ≈8,5 | ≈8,5 |
| | | | Low-temperature circuit | l | - | - |
| | | Antifreeze/water | Down to -37°C | % | 50/50 | 50/50 |
| | | | -38°C and below | % | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-00A | BB00.40-P-0326-00A |

**Cooling system**

| Number | Designation | | | | Engine 274 in model 212 (except 212.035) | Engine 274 in model 212.035 |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02CA | Cooling system | Workshop replacement amount | Main circuit | l | ≈8,5 | ≈8,5 |
| | | | Low-temperature circuit | l | - | ≈2,0 |
| | | Antifreeze/water | Down to -37°C | % | 50/50 | 50/50 |
| | | | -38°C and below | % | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-00A | BB00.40-P-0326-00A |

**Cooling system**

| Number | Designation | | | | Engine 274 in model 218 |
|---|---|---|---|---|---|
| BF20.00-P-1001-02CA | Cooling system | Workshop replacement amount | Main circuit | l | ≈8,5 |
| | | | Low-temperature circuit | l | - |
| | | Antifreeze/water | Down to -37°C | % | 50/50 |
| | | | -38°C and below | % | 55/45 |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0310-01A |
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0325-06A |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | Specifications for Operating Fluids, sheet | | BB00.40-P-0326-06A | |

**Cooling system**

| Number | Designation | | | | Engine 157 in model 212 | Engine 157 in model 218 |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02FA | Cooling system | Workshop change quantity | Main circuit | Liter | ≈ 8 | ≈ 8,5 |
| | | | Low-temperature circuit | Liter | ≈ 2 | ≈ 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 |

**Cooling system**

| Number | Designation | | | | Engine 271.8 in model 204, 207, 212 |
|---|---|---|---|---|---|
| BF20.00-P-1001-02P | Cooling system | Workshop replacement quantity | | Liter | ≈7,5 |
| | | 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 |

**Cooling system**

| Number | Designation | | | | Engine 272 in model 204 | Engine 272 in model 207, 212 |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02U | Cooling system | Workshop replacement amount | Main circuit | Liter | ≈ 5,0 | ≈ 7,0 |
| | | | Low temperature circuit | Liter | - | - |
| | | 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-0325-00A | BB00.40-P-0325-00A |
| | | | Specifications for Operating Fluids, Sheet | | - | - |

**Cooling system**

| Number | Designation | | | | Engine 273 in model 207, 212 |
|---|---|---|---|---|---|
| BF20.00-P-1001-02U | Cooling system | Workshop replacement amount | Main circuit | Liter | ≈ 7,0 |
| | | | Low temperature circuit | Liter | - |
| | | 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 | | - |

**Cooling system**

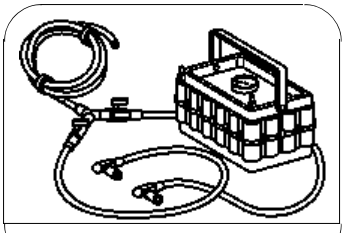
| Number | Designation | | | | Engine 642 in model 204 | Engine 642 in model 207.323/423 |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02W | Cooling system | Workshop replacement amount | Main circuit | l | ≈12,0 | ≈12,3 |
| | | | Low-temperature circuit | l | - | - |
| | | Antifreeze/water | Down to -37°C | % | 50/50 | 50/50 |
| | | | -38°C and below | % | 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 642 in model 207.326/426 | Engine 642 in model 212 |
|---|---|---|---|---|---|---|
| BF20.00-P-1001-02W | Cooling system | Workshop replacement amount | Main circuit | l | ≈10,8 | ≈10,8 |
| | | | Low-temperature circuit | l | - | - |
| | | Antifreeze/water | Down to -37°C | % | 50/50 | 50/50 |
| | | | -38°C and below | % | 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 |

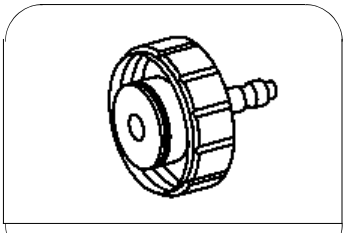
**Cooling system**

| Number | Designation | | | | Engine 642 in model 218 |
|---|---|---|---|---|---|
| BF20.00-P-1001-02W | Cooling system | Workshop replacement amount | Main circuit | l | ≈10,8 |
| | | | Low-temperature circuit | l | - |
| | | Antifreeze/water | Down to -37°C | % | 50/50 |
| | | | -38°C and below | % | 55/45 |
| | | | Sheet | | BB00.40-P-0310-01A |
| | | | Sheet | | BB00.40-P-0325-00A |
| | | | Sheet | | BB00.40-P-0326-00A |



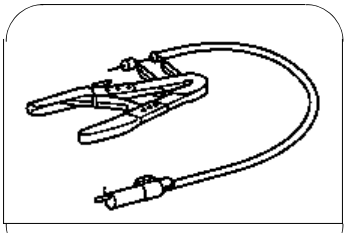
285 589 01 21 00

NTKL Adaption



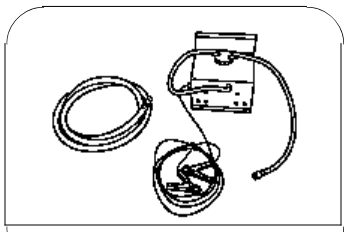
210 589 00 91 00

Test cap



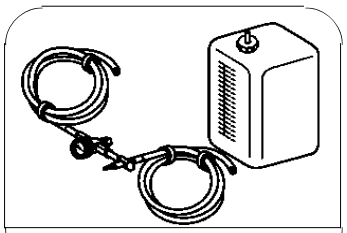
003 589 03 37 00

Hose clamp pliers



285 589 02 21 00

Electric vacuum pump



285 589 00 21 00

Cooler vacuum filling device