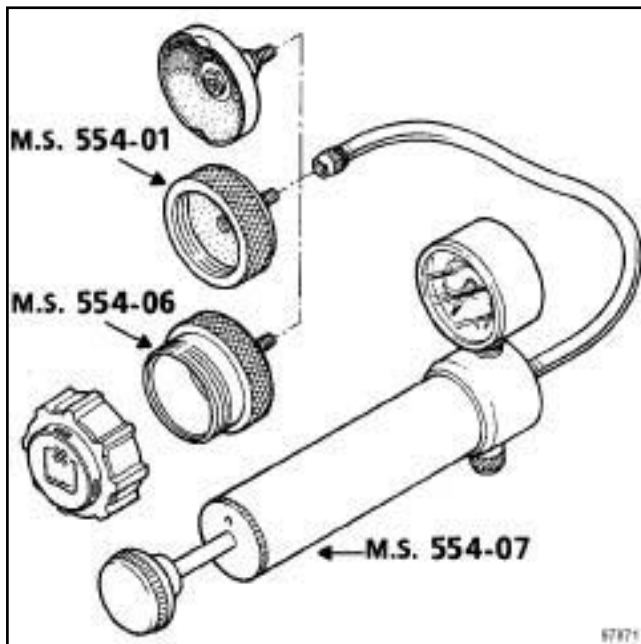


1 - Checking the expansion bottle cap valve



97871

- ☐ Fit onto the tester (**Ms. 554-07**), the adapter (**Ms. 554-06**).
- ☐ Fit the expansion bottle cap to the adapter (**Ms. 554-06**).

Note:

The pressure should not drop; if it does, look for the leak.

- ☐ Pump with the (**Ms. 554-07**), the pressure should stabilise at the expansion bottle cap valve rating with a test tolerance of ± 0.1 bar.

2 - Checking the sealing of the cooling circuit

- ☐ Replace the expansion bottle cap with the adapter (**Ms. 554-01**).
- ☐ Connect on the adapter (**Ms. 554-01**) the tool (**Ms. 554-07**).
- ☐ Pump with the (**Ms. 554-07**) to put the cooling circuit under pressure.
- ☐ Stop pumping at **0.1 bar** below the valve rating for the expansion bottle cap valve with.

Note:

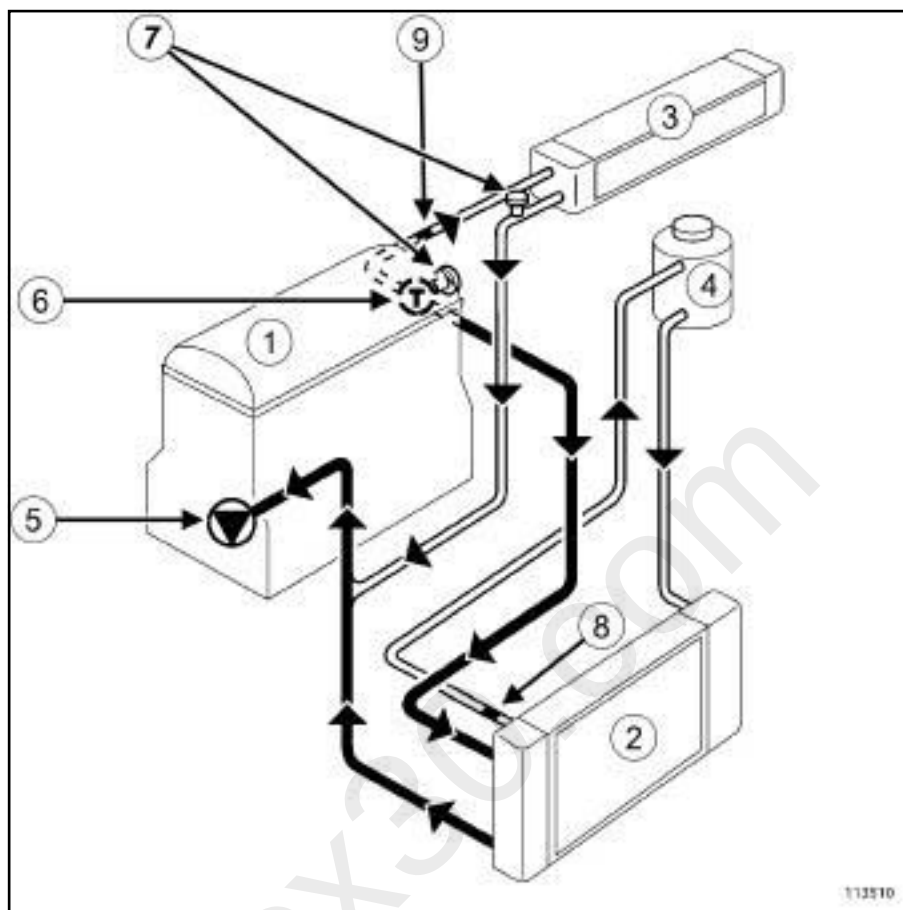
The pressure should not drop; if it does, look for the leak.

- ☐ Gradually unscrew the union of the (**Ms. 554-07**) to decompress the cooling system then remove the adapter (**Ms. 554-01**) and refit the expansion bottle cap.

Engine cooling system: Operating diagram

D4F

D4F, and 740 or 742 or 764



113510

- (1) Engine
- (2) Cooling radiator
- (3) heater matrix
- (4) Expansion bottle
- (5) Water pump
- (6) Thermostat
- (7) Bleed screws
- (8) 5 mm restriction
- (9) 10 mm restriction

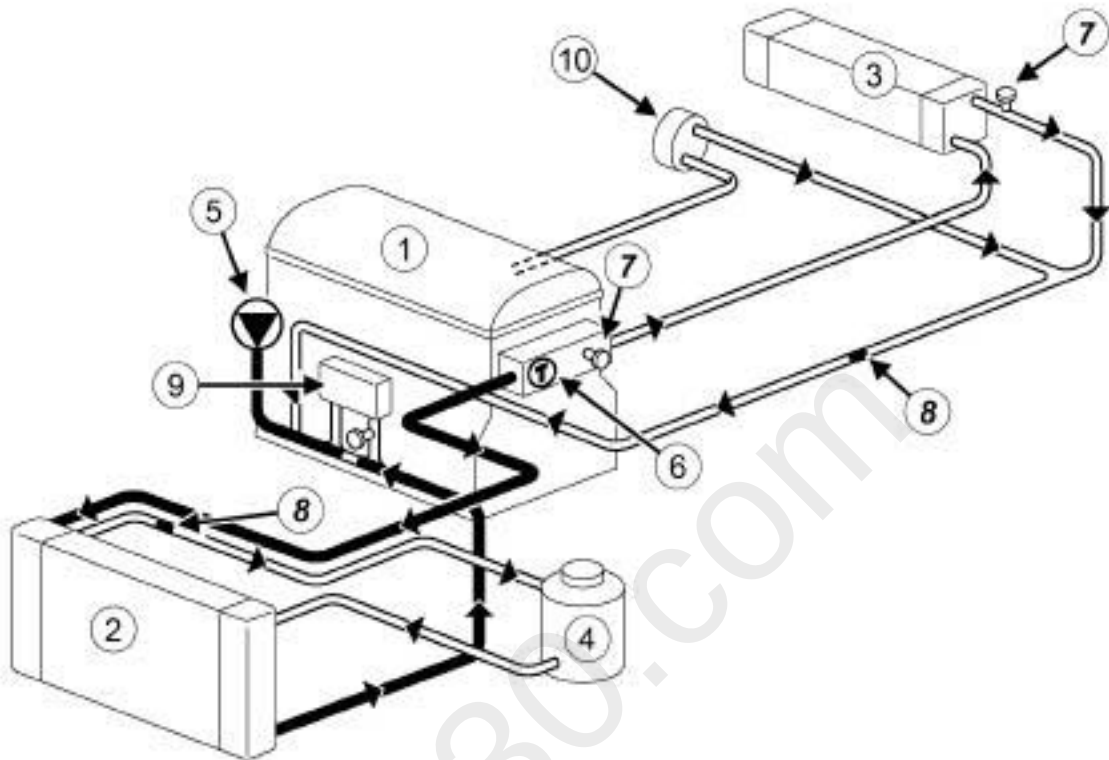
Note:

The rating of the expansion bottle degassing valve is **1.4 bar**.

Engine cooling system: Operating diagram

D4F

D4F, and 784



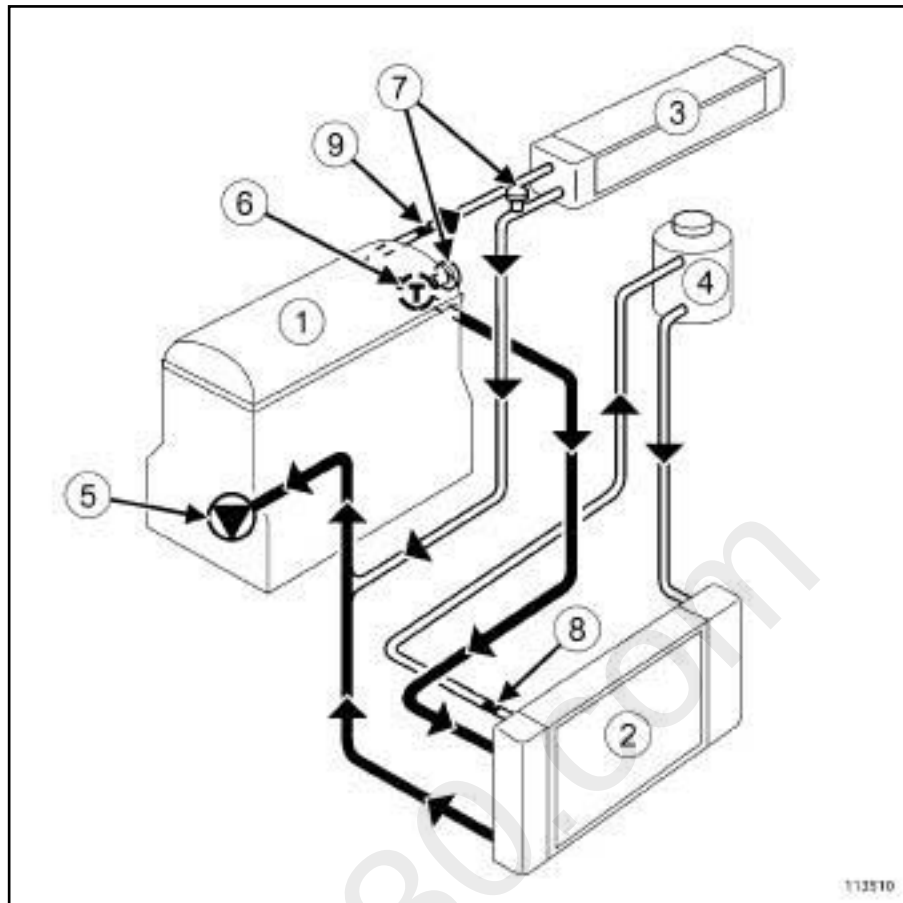
121810

121810

- | | |
|------|-------------------------|
| (1) | Engine |
| (2) | Cooling radiator |
| (3) | Heater matrix |
| (4) | Expansion bottle |
| (5) | Water pump |
| (6) | Thermostat |
| (7) | Bleed screws |
| (8) | Choke |
| (9) | Coolant-oil intercooler |
| (10) | Turbocharger |

Engine cooling system: Operating diagram

K4M, and 800



113510

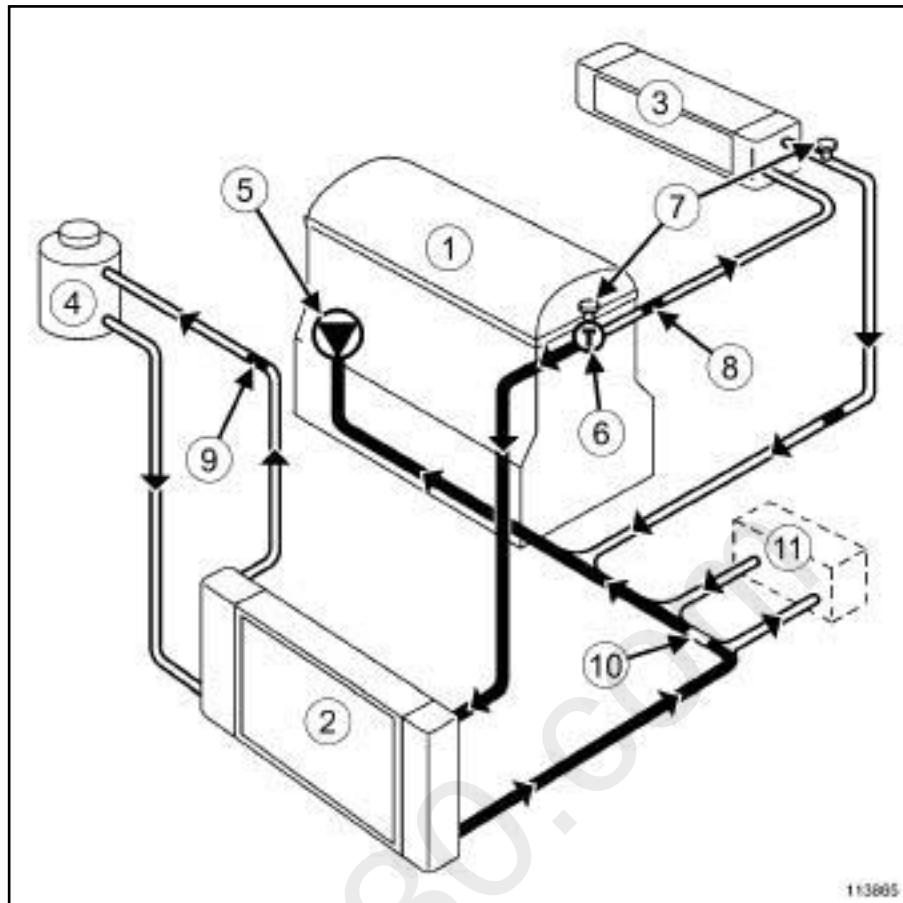
- | | |
|-----|-------------------|
| (1) | Engine |
| (2) | Cooling radiator |
| (3) | Heater radiator |
| (4) | Expansion bottle |
| (5) | Water pump |
| (6) | Thermostat |
| (7) | Bleed screws |
| (8) | 5 mm restriction |
| (9) | 10 mm restriction |

Note:

The expansion bottle degassing valve rating is **1.4 bar**.

Engine cooling system: Operating diagram

K4M, and 801



113865

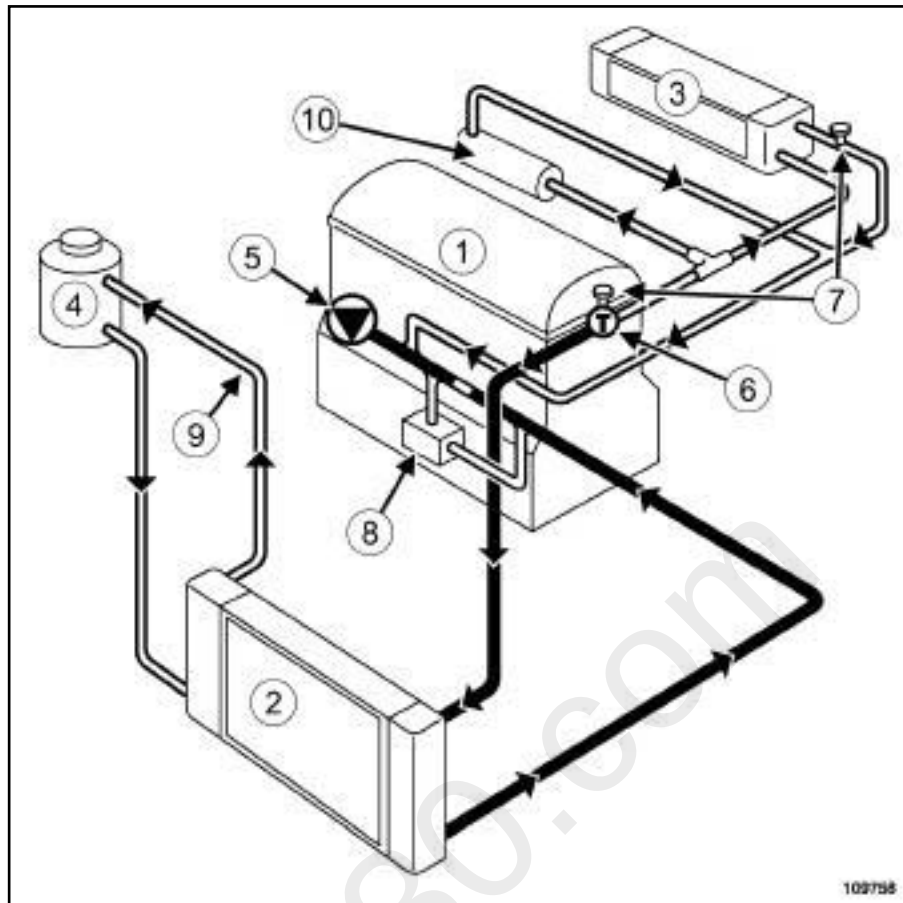
- (1) Engine
- (2) Cooling radiator
- (3) Heater radiator
- (4) Expansion bottle
- (5) Water pump
- (6) Thermostat
- (7) Bleed screws
- (8) 11 mm restriction
- (9) 5 mm restriction
- (10) 10 mm restriction
- (11) Oil-water intercooler for automatic gearbox (if fitted to the vehicle)

Note:

The expansion bottle degassing valve rating is **1.4 bar**.

Engine cooling system: Operating diagram

K9K, and 764 or 766 or 768

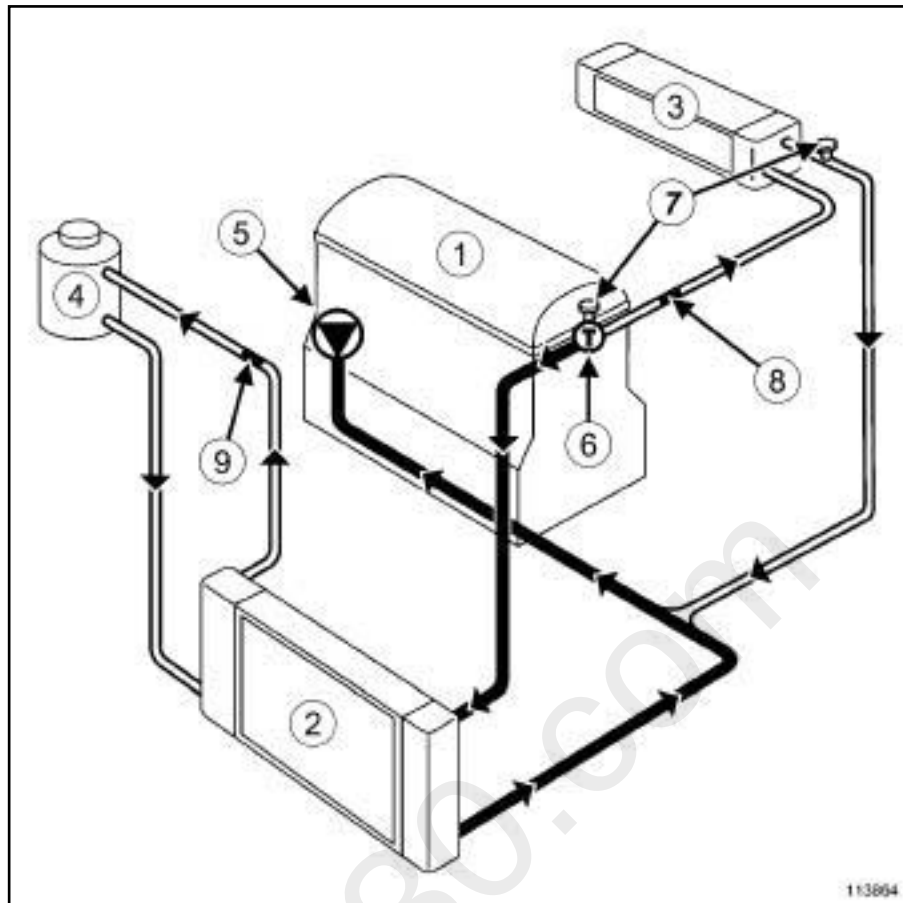


109758

- | | |
|------|--------------------------|
| (1) | Engine |
| (2) | Cooling radiator |
| (3) | Heater radiator |
| (4) | Expansion bottle |
| (5) | Coolant pump |
| (6) | Thermostat |
| (7) | Bleed screws |
| (8) | Water-oil heat exchanger |
| (9) | 5 mm choke |
| (10) | EGR |

Engine cooling system: Operating diagram

K4J



113864

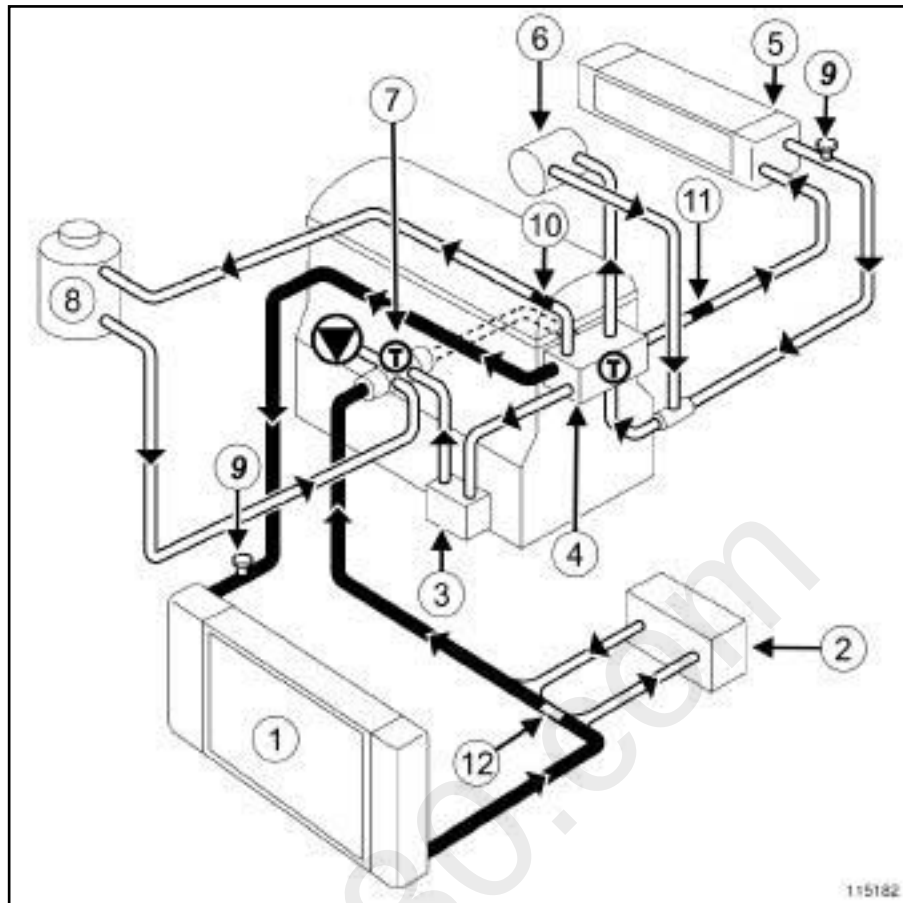
- (1) Engine
- (2) Cooling radiator
- (3) Heater radiator
- (4) Expansion bottle
- (5) Water pump
- (6) Thermostat
- (7) Bleed screws
- (8) 11 mm restriction
- (9) 5 mm restriction

Note:

The expansion bottle degassing valve rating is **1.4 bar**.

Engine cooling system: Operating diagram

M4R

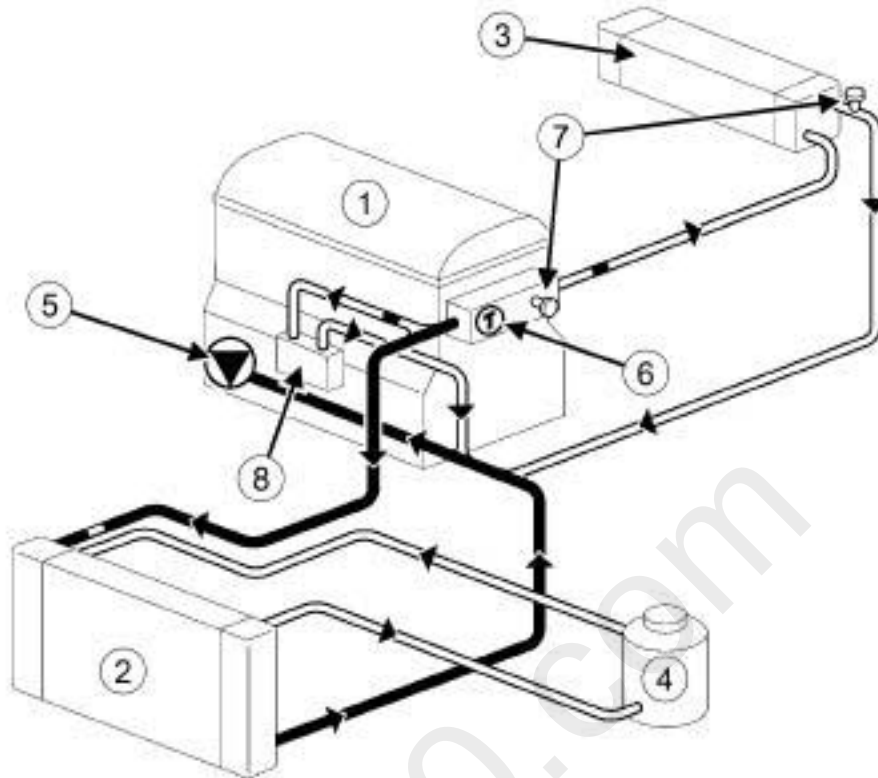


115182

- | | |
|------|---|
| (1) | Radiator |
| (2) | Automatic transmission oil coolant heat exchanger |
| (3) | Engine oil coolant heat exchanger |
| (4) | Cylinder head thermostat |
| (5) | Heater matrix |
| (6) | Motorised throttle valve |
| (7) | Cylinder block thermostat |
| (8) | Expansion bottle |
| (9) | Bleed screws |
| (10) | 3 mm restriction |
| (11) | 11 mm restriction |
| (12) | 10 mm restriction |

Engine cooling system: Operating diagram

F4R



116681

116881

- | | |
|-----|-------------------|
| (1) | Engine |
| (2) | Cooling radiator |
| (3) | Heater radiator |
| (4) | Expansion bottle |
| (5) | Coolant pump |
| (6) | thermostat |
| (7) | Bleed screw |
| (8) | Engine oil cooler |

Note:

The rating of the expansion bottle degassing valve is **1.4 bar**.