

11. Engine Coolant

A: REPLACEMENT

1. REPLACEMENT OF ENGINE COOLANT

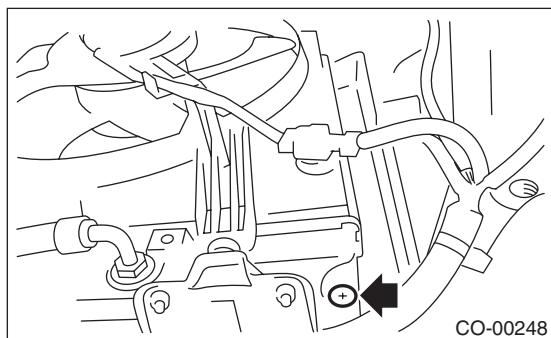
WARNING:

The radiator is of the pressurized type. Do not attempt to open the radiator cap immediately after the engine has been stopped.

CAUTION:

If the engine coolant is spilt over exhaust pipe, wipe it off with cloth to avoid emitting smoke or causing a fire.

- 1) Lift the vehicle.
- 2) Remove the under cover.
- 3) Place a container under drain pipe.
- 4) Remove the drain plug to drain engine coolant into container.



- 5) For quick draining, open the radiator cap.

NOTE:

- For turbo model, be sure to open the radiator cap on the filler tank side.
- Be careful not to spill coolant on the floor.

- 6) Drain the coolant from reservoir tank.
- 7) Tighten the radiator drain plug securely after draining coolant.
- 8) Pour cooling system conditioner through the filler neck.

Cooling system protective agent:

Cooling system conditioner
(part No. SOA635071)

- 9) Pour the engine coolant into the radiator (or the coolant filler tank on turbo models) up to the filler neck position.
- 10) Fill engine coolant into the reservoir tank up to "FULL" level.

Recommended engine coolant:

Refer to "RM" section. <Ref. to RM-4, COOLANT, RECOMMENDED MATERIALS, Recommended Materials.>

Coolant capacity (fill up to "FULL" level):

2.5 L non-turbo model

MT model

Approx. 6.4 ℥ (6.8 US qt, 5.61 Imp qt)

AT model

Approx. 6.3 ℥ (6.7 US qt, 5.5 Imp qt)

2.5 L turbo model

MT model

Approx. 7.2 ℥ (7.6 US qt, 6.3 Imp qt)

AT model

Approx. 7.3 ℥ (7.7 US qt, 6.4 Imp qt)

3.0 L model

Approx. 7.2 ℥ (7.6 US qt, 6.3 Imp qt)

11) Close the radiator cap (or the coolant filler tank cap on turbo models), and start the engine. Race 5 to 6 times at 3,000 rpm or less, then stop the engine. (Complete this operation within 40 seconds.)

12) Wait for one minute after the engine stops, then open the radiator cap (or the coolant filler tank cap on turbo models). If the engine coolant level drops, add engine coolant into the radiator (or the coolant filler tank on turbo models) up to the filler neck position.

13) Perform the procedures 11) and 12) again.

14) Install the radiator cap (or the coolant filler tank cap on turbo models) and reservoir tank cap properly.

15) Start the engine and operate the heater at maximum hot position and the blower speed setting to "LO".

16) Run the engine at 2,000 rpm or less until radiator fan starts and stops.

NOTE:

- Be careful with the engine coolant temperature gauge to prevent overheating.

- If the radiator hose becomes harden with the pressure of engine coolant, air bleeding operation seems to be almost completed.

17) Stop the engine and wait until the engine coolant temperature lowers to 30°C (86°F) or less.

18) Open the radiator cap (or the coolant filler tank cap on turbo models). If the engine coolant level drops, add engine coolant into the coolant filler tank up to the filler neck position and the reservoir tank to "FULL" level.

19) Install the radiator cap (or the coolant filler tank cap on turbo models) and reservoir tank cap properly.

20) Set the heater setting to maximum hot position and the blower speed setting to "LO" and start the engine. Perform racing at 3,000 rpm or less. If the flowing sound is heard from heater core, repeat the procedures from step 16).

Engine Coolant

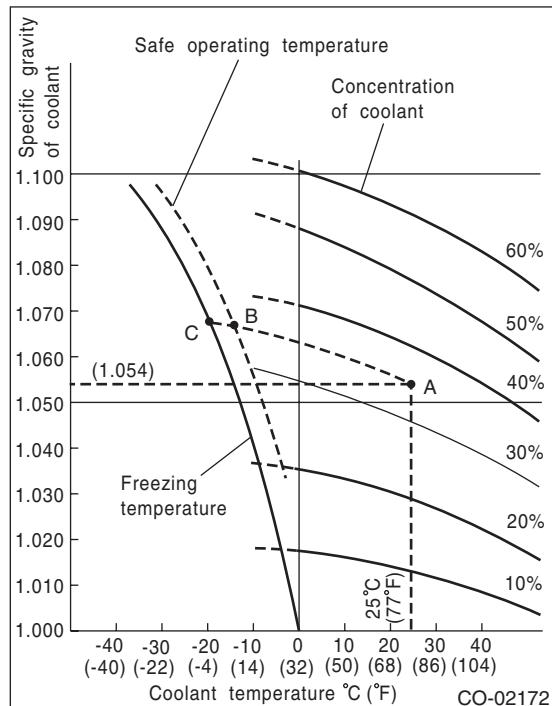
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2. RELATIONSHIP OF SUBARU COOLANT CONCENTRATION AND FREEZING TEMPERATURE

The concentration and safe operating temperature of SUBARU coolant is shown in the diagram. Measuring the temperature and specific gravity of the coolant will provide this information.

[Example]

If the coolant temperature is 25°C (77°F) and its specific gravity is 1.054, the concentration is 35% (point A), the safe operating temperature is -14°C (7°F) (point B), and the freezing temperature is -20°C (-4°F) (point C).



3. PROCEDURE TO ADJUST THE CONCENTRATION OF THE COOLANT

To adjust the concentration of coolant according to temperature, find the proper fluid concentration in the above diagram and replace the necessary amount of coolant with an undiluted solution of SUBARU Genuine Coolant (concentration 50%).

The amount of engine coolant that should be replaced can be determined using the diagram.

[Example]

Assume that the engine coolant concentration must be increased from 25% to 40%. Find point A, where the 25% line of engine coolant concentration intersects with the 40% curve of the necessary engine coolant concentration, and read the scale on the vertical axis of the graph at height A. The quantity of coolant to be drained is 2.1 ℥ (2.2 US qt, 1.8 Imp qt). Drain 2.1 ℥ (2.2 US qt, 1.8 Imp qt) of coolant from the cooling system and add 2.1 ℥ (2.2 US qt, 1.8 Imp qt) of the undiluted solution of SUBARU coolant.

If a coolant concentration of 50% is needed, drain all the coolant and refill with the undiluted solution only.

