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|---|---|---|
| **Last Modified:** 03-12-2013 | 6.4 F | **Doc ID:** NM1000000004HDQ |
| **Model Year:** 2013 | **Model:** RAV4 | **Prod Date Range:** [12/2012 - ] |
| **Title:** 2AR-FE COOLING: COOLING SYSTEM: GENERAL; 2013 MY RAV4 [12/2012 - ] | | |

# GENERAL

## 1. OUTLINE

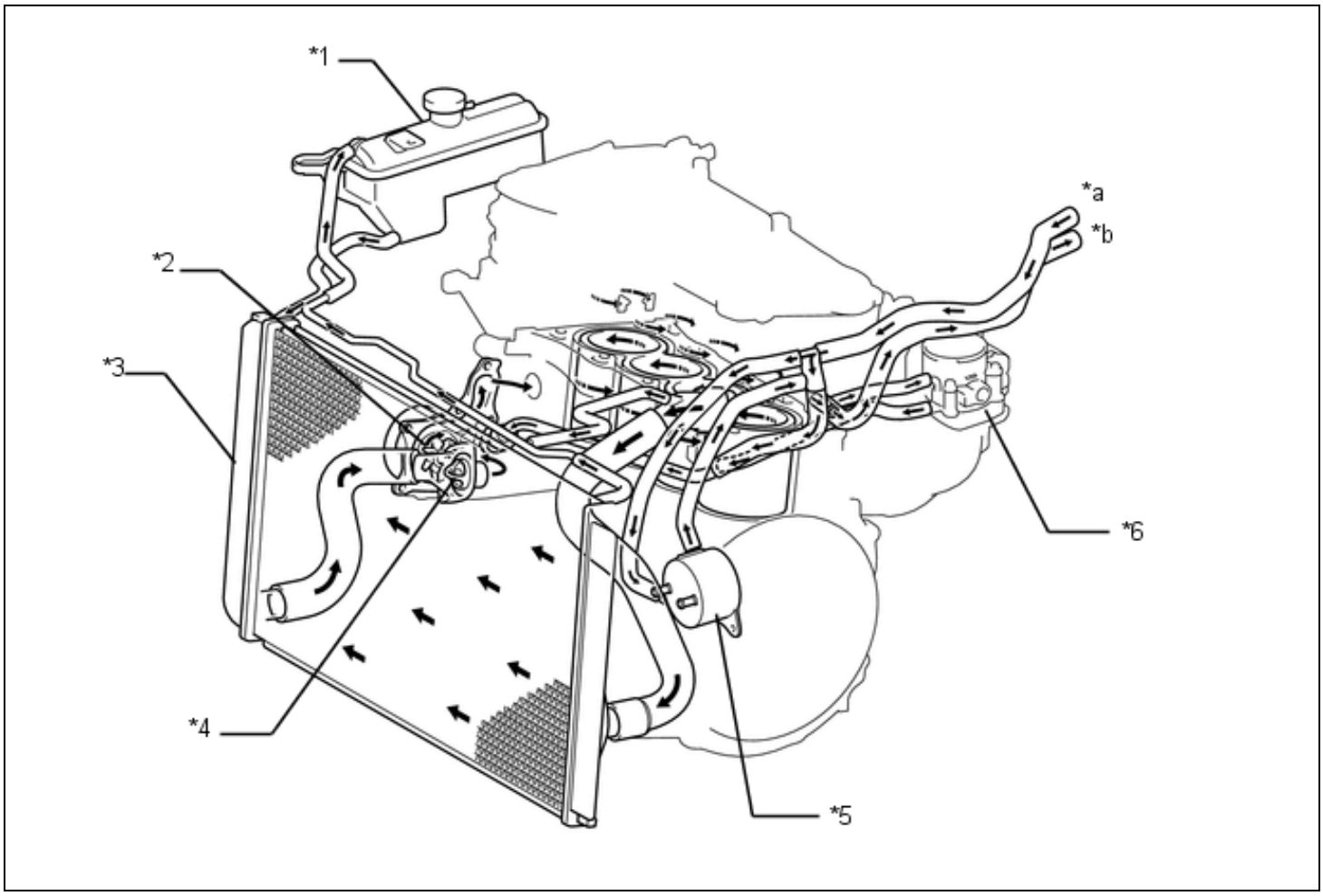
(a) The cooling system is a pressurized, forced-circulation type.

(b) A thermostat with a bypass valve is located in the water inlet housing to maintain a suitable temperature in the cooling system.

(c) The flow of the water makes a U-turn in the cylinder block to ensure a smooth flow. In addition, a bypass passage is enclosed in the cylinder head and the cylinder block.

(d) Warm water from the cylinder head is sent to the throttle body assembly to prevent freeze-up.

(e) Toyota Genuine Super Long Life Coolant (SLLC) is used.




| | | | |
|---|---|---|---|
| *1 | Reservoir Tank | *2 | Water Pump |
| *3 | Radiator | *4 | Thermostat |
| *5 | ATF Warmer | *6 | Throttle Body Assembly |
| *a | From Heater Core | *b | To Heater Core |

## 2. SPECIFICATION

(a) Engine Coolant

(1) Toyota Genuine SLLC is used. The maintenance intervals are as shown in the table below:

| | | | |
|---|---|---|---|
| Engine Coolant | Type | | Toyota Genuine Super Long Life Coolant (SLLC) or similar high quality ethylene glycol based non-silicate, non-amine, non-nitrite and non-borate coolant with longlife hybrid organic acid technology (coolant with long-life hybrid organic acid technology is a combination of low phosphates and organic acids). Do not use plain water alone. |
| | Color | | Pink |
| | Maintenance Intervals | First Time | 100000 miles (160000 km) |
| | | Subsequent | Every 50000 miles (80000 km) |

**HINT:**

SLLC is pre-mixed (50% coolant and 50% deionized water). Therefore, no dilution is needed when SLLC in the vehicle is added or replaced.

(b) Thermostat

| | |
|---|---|
| Thermostat Opening Temperature | 80 °C to 84 °C (176 °F to 183 °F) |