# COOLANT (3MZ–FE)

16098–02

## REPLACEMENT

**1. REPLACE ENGINE COOLANT**

(a) When replacing TOYOTA LLC with TOYOTA SLLC, follow steps (b) (1) to (4) and step (8) below.

(b) When replacing the coolant of a vehicle using the LLC of a company other than TOYOTA, or if the vehicle's coolant replacement history is unknown, follow the steps (b) (1) to (8) below.

(1) Remove the radiator cap.

**CAUTION:**

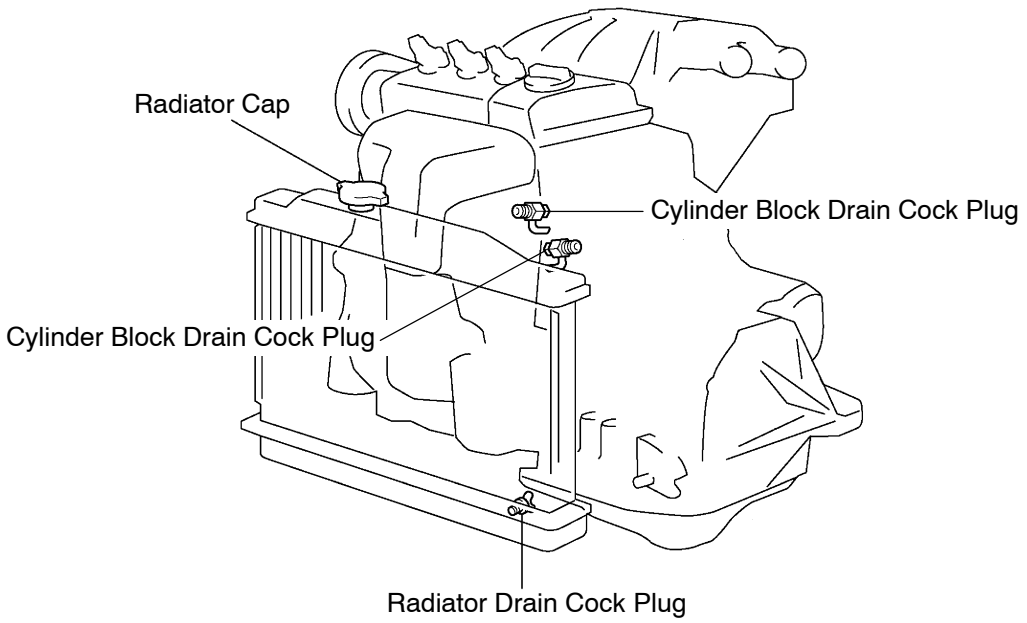
**Do not remove the radiator cap while the engine and radiator are still hot. Pressurized, hot engine coolant and steam may be released and cause serious burns.**

(2) Drain as much of the LLC as possible from the radiator drain cock plug, cylinder block drain cock plugs and reservoir tank drain.

HINT:

Engine coolant inside the radiator is drained from the drain hole located on the bottom of the engine under cover.

**Torque: 13 N·m (133 kgf·cm, 10 ft·lbf)**




(3) Tighten all plugs and fill the radiator with TOYOTA SLLC.

**Capacity:**

| Item | Specified Condition |
|---|---|
| w/ Heater (front only) | 10.1 liters (10.7 US qts, 8.9 Imp. qts) |
| w/ Rear heater (front and rear) | 11.4 liters (12.0 US qts, 10.0 Imp. qts) |

**NOTICE:**

**Be sure that at least 45% of the coolant is replaced.**

HINT:

- Use of improper coolants may damage the engine cooling system.

- Only use "TOYOTA Super Long Life Coolant" or similar high quality ethylene glycol based non–silicate, non–amine, non–nitrite, and non–borate coolant with long–life hybrid organic acid technology. (Coolant with long–life hybrid organic acid technology consists of the combination of low phosphates and organic acids.)
- New TOYOTA vehicles are filled with TOYOTA Super Long Life Coolant (color is pink, premixed ethylene–glycol concentration is approximately 50% and freezing temperature is –35°C (–95°F)).
- Observe the coolant level inside the radiator by pressing the inlet and outlet radiator hoses several times by hand. If the coolant level goes down, add the coolant.

**NOTICE:**

**Never use water as a substitute for engine coolant.**

(4) Warm up the engine until the thermostat opens. While the thermostat is open, circulate the SLLC for several minutes. For vehicles equipped with a heater valve, turn the heater on before performing this step.

HINT:

- As the engine warms up, press the inlet and outlet radiator hoses several times by hand.
- Stop the engine and wait until the coolant cools down to ambient temperature.

(5) Drain as much of the LLC as possible from the radiator drain cock plug, cylinder block drain cock plug, and reservoir tank drain.

(6) Tighten all plugs and fill the radiator with TOYOTA SLLC.

(7) Perform step (4) and visually check the LLC while it is circulating. If the conclusion is that the LLC requires more flushing, repeat steps (2) through (6).

(8) Check the coolant level inside the radiator. If the coolant level is low, add SLLC to the radiator until the coolant level is equal to the coolant level in the reservoir tank.

**2. CHECK FOR ENGINE COOLANT LEAKS**

(a) Fill the radiator with coolant and attach a radiator cap tester.

(b) Pump it to 118 kPa (1.2 kgf/$cm^2$, 17.1 psi) and check leakage.