

## COOLANT (2AZ-FE) REPLACEMENT

16032-08

### 1. DRAIN ENGINE COOLANT

- (a) 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.**

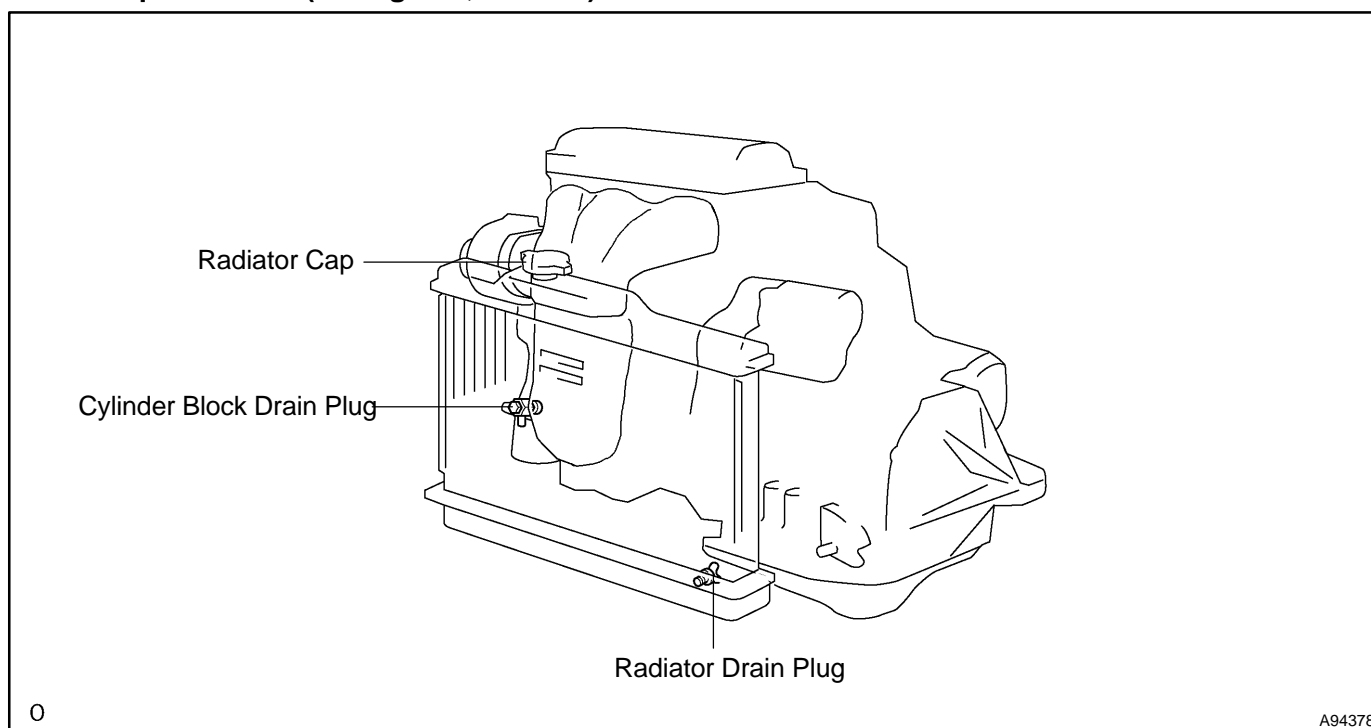
- (b) Drain engine coolant by loosening the radiator drain plug and the engine's cylinder block drain cock plug.

#### HINT:

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

- (c) Tighten the cylinder block drain cock plug.

**Torque: 25 N·m (255 kgf·cm, 18 ft·lbf)**



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### 2. ADD ENGINE COOLANT

- (a) Tighten the radiator drain plug.  
(b) Add engine coolant into the radiator until it overflows.

#### Capacity:

Item		Specified Condition
w/ Heater (front only)	Standard	6.3 liters (6.7 US qts, 5.5 Imp. qts)
	Towing	7.1 liters (7.5 US qts, 6.2 Imp. qts)
w/ Heater (front and rear)	Standard	7.7 liters (8.1 US qts, 6.8 Imp. qts)
	Towing	8.5 liters (9.0 US qts, 7.5 Imp. qts)

#### 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.
- 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:****Do not use plain water alone.**

- (c) Pour coolant into the radiator reservoir tank until the coolant reaches the full line.
- (d) Install the radiator cap.
- (e) Start the engine and run the engine for 10 seconds.
- (f) Remove the radiator cap after 10 seconds. Pour coolant if the coolant level is lower.
- (g) Repeat steps (d) to (f) until the coolant level remains the same from steps (d) to (f).

**HINT:**

Perform the procedures above before the engine warms up. A warmed up engine causes the thermostat valve to open, and the air inside the engine circulates between the radiator and the engine.

- (h) Install the radiator cap.
- (i) Warm up the engine until the thermostat valve begins to open.

**HINT:**

As the engine warms up, press the radiator inlet and outlet hoses several times by hand.

- (j) Stop the engine and wait until the coolant cools down to the ambient temperature. If the coolant is below the full line, add coolant.
- (k) Install the radiator cap and check the radiator reservoir tank coolant level. If it is below the full line, add coolant.

**3. 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<sup>2</sup>, 17.1 psi) and check leakage.