

# COOLING SYSTEM

## PERIODIC MAINTENANCE SERVICES

### 11. Cooling System

#### A: INSPECTION

1) Check the radiator for leakage, filling it with coolant and attach the radiator cap tester (A) to filler neck. Then apply a pressure. Check the following points:

##### **Non-turbo model**

**157 kPa (1.6 kg/cm<sup>2</sup>, 23 psi)**

##### **Turbo model**

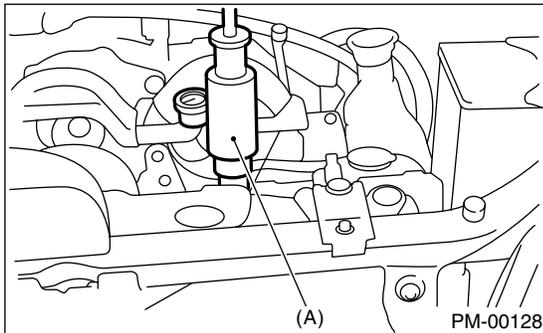
**122 kPa (1.2 kg/cm<sup>2</sup>, 18 psi)**

- Each portion of radiator for leakage
- Hose joints and other connections for leakage

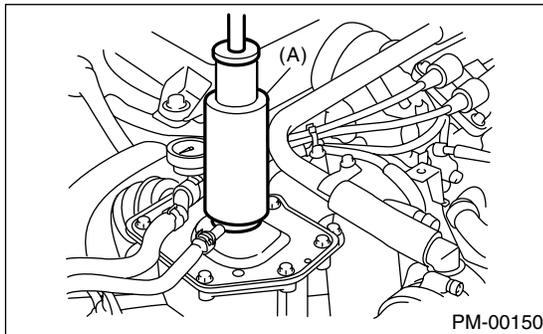
##### NOTE:

- For turbo model, be sure to install the tester to filler tank side.
- When attaching or detaching tester and when operating tester, use special care not to deform radiator filler neck.

##### NON-TURBO MODEL



##### TURBO MODEL



- When performing this check, be sure to keep the engine stationary and fill the radiator with coolant.
- Wipe off check points before applying pressure.
- Use care not to spill coolant when detaching the tester from radiator.
- Do not remove the radiator side cap. (Turbo model)

2) Check the radiator cap valve open pressure using radiator cap tester.

##### NOTE:

Rust or dirt on the cap may prevent the valve from functioning normally: be sure to clean the cap before testing.

Raise the pressure until the needle of gauge stops and see if the pressure can be retained for 5 to 6 seconds. The radiator cap is normal if a pressure above the service limit value has been maintained for this period.

##### **Radiator cap valve open pressure**

##### **Non-turbo model**

###### **Standard value:**

**93 — 123 kPa (0.95 — 1.25 kg/cm<sup>2</sup>, 14 — 18 psi)**

###### **Service limit:**

**83 kPa (0.85 kg/cm<sup>2</sup>, 12 psi)**

##### **Turbo model**

###### **Filler tank side:**

###### **Standard value:**

**93 — 123 kPa (0.95 — 1.25 kg/cm<sup>2</sup>, 14 — 18 psi)**

###### **Service limit:**

**83 kPa (0.85 kg/cm<sup>2</sup>, 12 psi)**

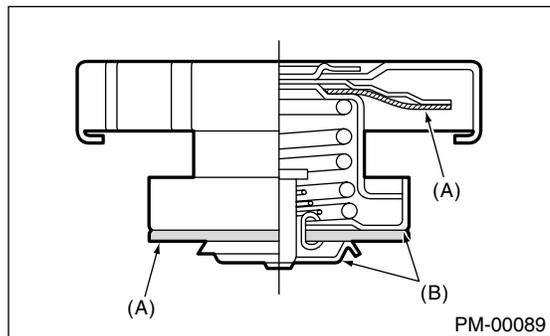
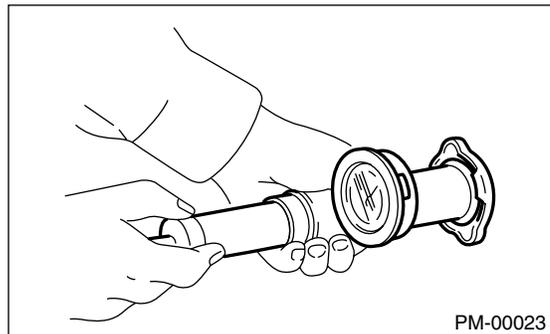
###### **Radiator side:**

###### **Standard value:**

**122 — 152 kPa (1.24 — 1.55 kg/cm<sup>2</sup>, 18 — 22 psi)**

###### **Service limit:**

**112 kPa (1.14 kg/cm<sup>2</sup>, 16 psi)**



(A) Deformation

(B) Deformation, damage, rust

3) Start the engine, and then check it does not overheat or it is cooled excessively. If it overheats or it is cooled excessively, check the cooling system.

Non-turbo model

<Ref. to CO(H4SO)-14, Water Pump.>

<Ref. to CO(H4SO)-17, Thermostat.>

<Ref. to CO(H4SO)-18, Radiator.>

<Ref. to CO(H4SO)-21, Radiator Cap.>

Turbo model

<Ref. to CO(H4DOTC)-19, Water Pump.>

<Ref. to CO(H4DOTC)-21, Thermostat.>

<Ref. to CO(H4DOTC)-22, Radiator.>

<Ref. to CO(H4DOTC)-26, Radiator Cap.>

4) Check the electric fan operates using Subaru Select Monitor, when the coolant temperature exceeds 95°C (203°F). If not operate, check the electric fan system.

Non-turbo model

<Ref. to CO(H4SO)-6, Radiator Main Fan System.>

<Ref. to CO(H4SO)-9, Radiator Sub Fan System.>

Turbo model

<Ref. to CO(H4DOTC)-7, Radiator Main Fan System.>

<Ref. to CO(H4DOTC)-12, Radiator Sub Fan System.>