

## THERMOSTAT

### REMOVAL OF THERMOSTAT (4A-FE)

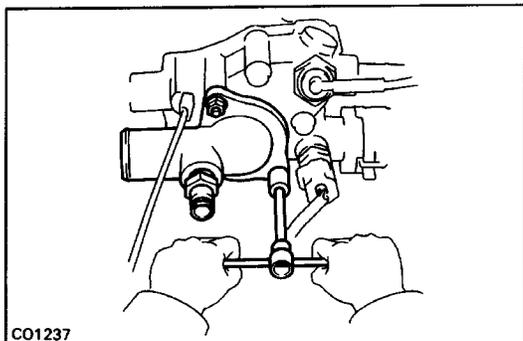
#### 1. DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY

**CAUTION:** Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.

#### 2. DRAIN ENGINE COOLANT (See page CO-6)

#### 3. DISCONNECT ENGINE COOLANT TEMPERATURE SWITCH CONNECTOR

#### 4. DISCONNECT LOWER RADIATOR HOSE



CO1237

#### 5. REMOVE WATER INLET AND THERMOSTAT

- (a) Remove the two nuts and water inlet from the water pump.
- (b) Remove the thermostat.
- (c) Remove the gasket from the thermostat.

### REMOVAL OF THERMOSTAT (3S-GTE and 5S-FE)

#### 1. DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY

**CAUTION:** Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.

#### 2. DRAIN ENGINE COOLANT (See page CO-6)

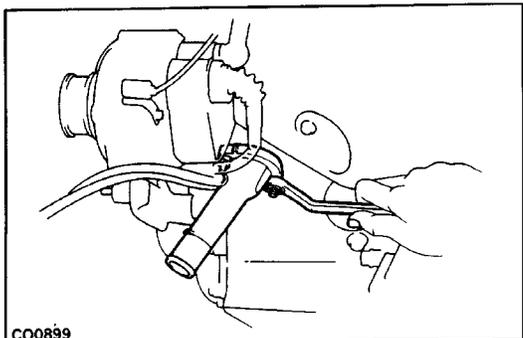
#### 3. (3S-GTE)

REMOVE GENERATOR (See page CH-7)

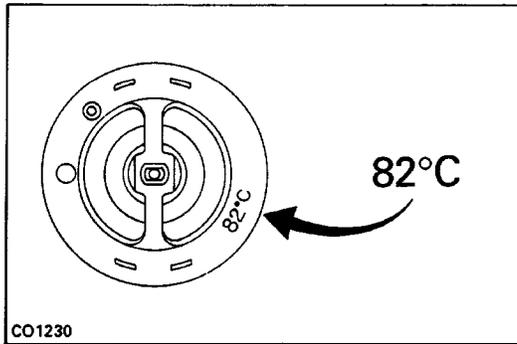
#### 4. DISCONNECT LOWER RADIATOR HOSE

#### 5. REMOVE WATER INLET AND THERMOSTAT

- (a) Remove the two nuts and water inlet from the water pump.
- (b) Remove the thermostat.
- (c) Remove the gasket from the thermostat.



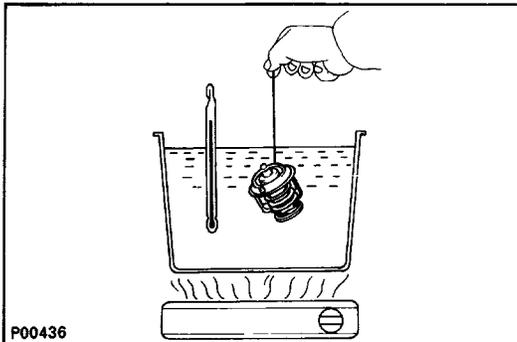
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## INSPECTION OF THERMOSTAT

### INSPECT THERMOSTAT

HINT: The thermostat is numbered with the valve opening temperature.



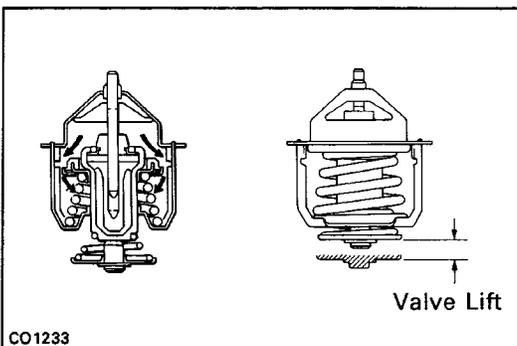
(a) Immerse the thermostat in water and gradually heat the water—.

(b) Check the valve opening temperature.

**Valve opening temperature:**

**80 – 84°C (176 – 183°F)**

If the valve opening temperature is not as specified, replace the thermostat.



(c) Check the valve lift.

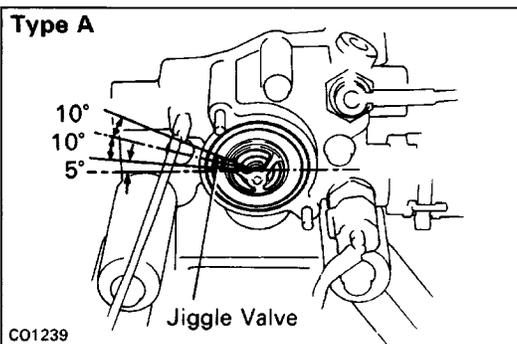
**Valve lift:**

**8 mm (0.31 in.) or more at 95°C (203°F)**

If the valve lift is less than specification, replace the thermostat.

(d) Check that the valve spring is tight when the thermostat is fully closed.

If necessary, replace the thermostat.



## INSTALLATION OF THERMOSTAT (4A-FE)

### 1. PLACE THERMOSTAT IN WATER PUMP

(a) Install a new gasket to the thermostat.

(b) (Type A)

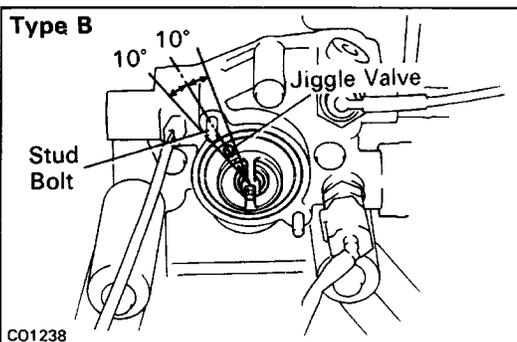
Set the jiggle valve of the thermostat in angle position, and insert the thermostat in the water inlet housing.

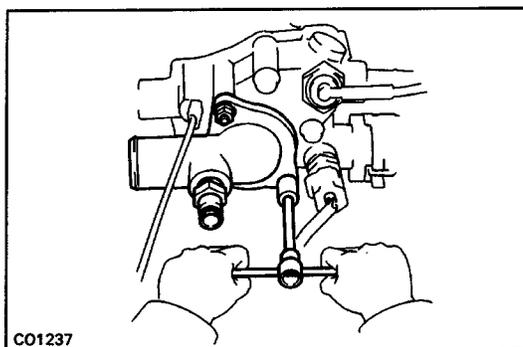
HINT: The jiggle valve may be set within 10° of either side of the prescribed position.

(b) (Type B)

Align the jiggle valve of the thermostat with the upper side of the stud bolt, and insert the thermostat in the water pump.

HINT: The jiggle valve may be set within 10° of either side of the prescribed position.





## 2. INSTALL WATER INLET

Install the water inlet with the two nuts.

**Torque: 9.3 N-m (95 kgf-cm, 82in.-lbf)**

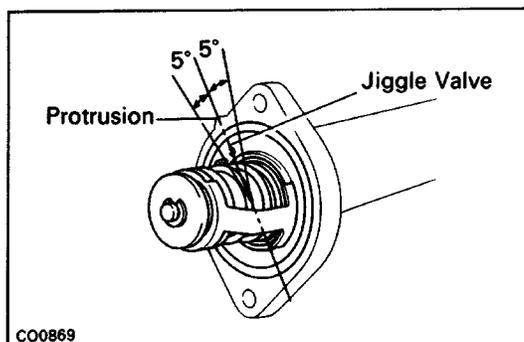
## 3. CONNECT ENGINE COOLANT TEMPERATURE SWITCH CONNECTOR

## 4. CONNECT LOWER RADIATOR HOSE

## 5. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY

## 6. FILL WITH ENGINE COOLANT (See page CO-6)

## 7. START ENGINE AND CHECK FOR LEAKS



## INSTALLATION OF THERMOSTAT (3S-GTE and 5S-FE)

### 1. PLACE THERMOSTAT IN WATER PUMP

(a) Install a new gasket to the thermostat.

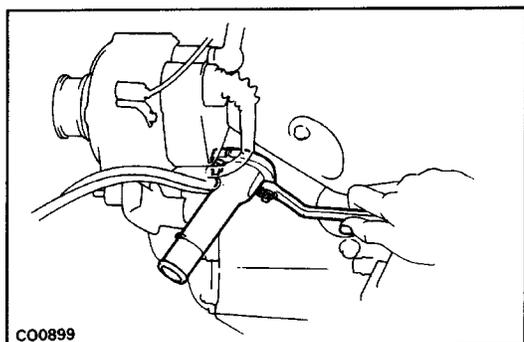
(b) Align the jiggle valve of the thermostat with the upper side of the stud bolt, and insert the thermostat in the water pump.

HINT: The jiggle valve may be set within 5° of either side of the prescribed position.

### 2. INSTALL WATER INLET

Install the water inlet with the two nuts.

**Torque: 8.8 N-m (90 kgf-cm, 78 in.-lbf)**



### 3. (3S-GTE)

**INSTALL GENERATOR (See page CH-23)**

### 4. CONNECT LOWER RADIATOR HOSE

### 5. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY

### 6. FILL WITH ENGINE COOLANT (See page CO-6)

### 7. START ENGINE AND CHECK FOR LEAKS