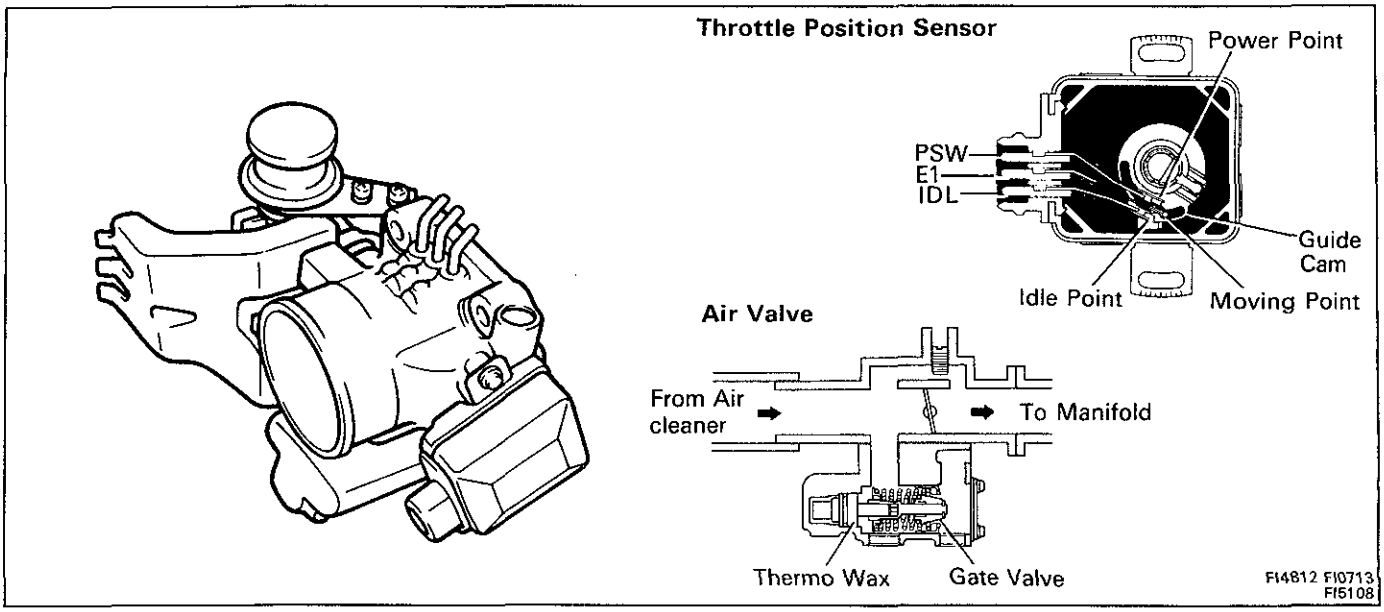
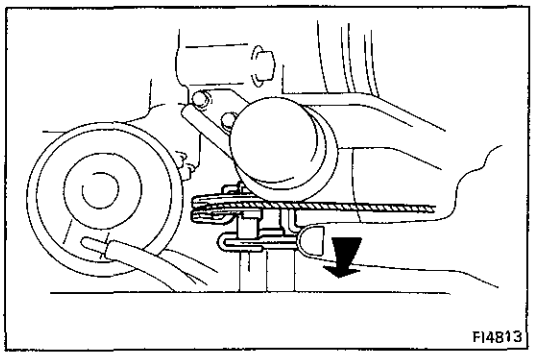
AIR INDUCTION SYSTEM

Throttle Body

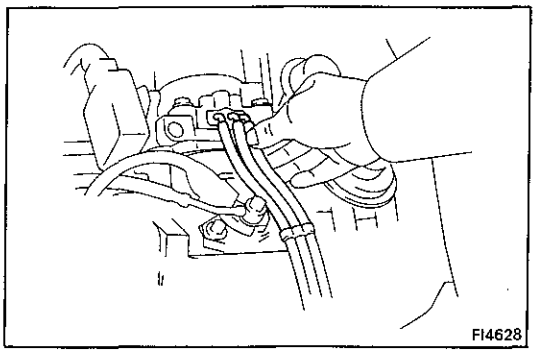




ON-VEHICLE INSPECTION

1. CHECK THROTTLE BODY

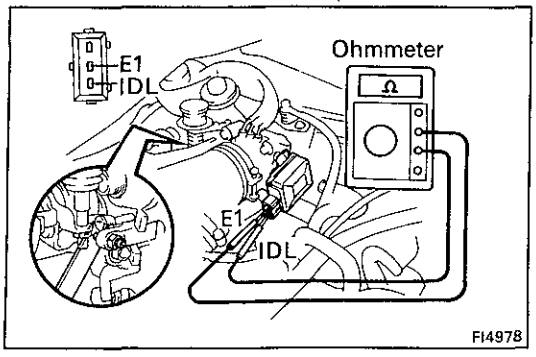
(a) Check that the throttle linkage moves smoothly.



(b) Check the vacuum at each port.

- Start the engine.
- Check the vacuum with your finger.

Port name	At idling	At 3,500 rpm
E	Vacuum	Vacuum
R	No vacuum	Vacuum
P	No vacuum	Vacuum

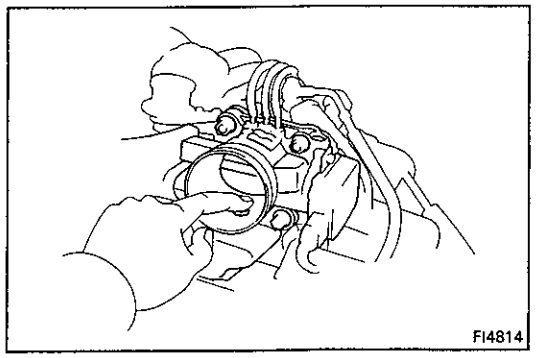


2. CHECK THROTTLE POSITION SENSOR

Check the resistance between the terminals.

- Unplug the connector from the sensor.
- Insert a thickness gauge between the throttle stop screw and stop lever.
- Using an ohmmeter, check the resistance between each terminal.

Clearance between lever and stop screw	Continuity between terminals		
	IDL – E1	PSW – E1	IDL – PSW
0.30 mm (0.012 in.)	Continuity	No continuity	No continuity
0.40 mm (0.016 in.)	No continuity	No continuity	No continuity
Throttle valve fully opened position	No continuity	Continuity	No continuity



3. INSPECT AIR VALVE OPERATION

Check the engine rpm by closing the air valve port on the throttle body.

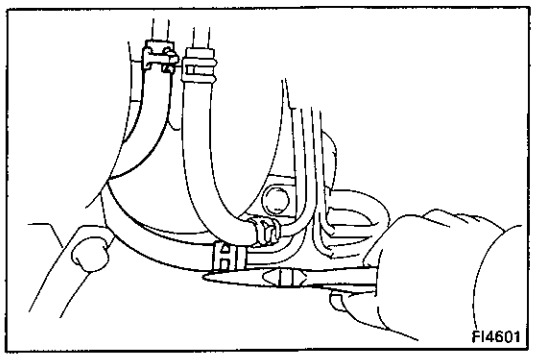
At low temp. (Coolant temp.: below 80°C (176°F))

When the port is closed, the engine rpm should drop.

After warm-up

When the port is closed, check that the engine rpm does not drop more than 100 rpm.

If operation is not as specified, replace the throttle body.



REMOVAL OF THROTTLE BODY

1. DRAIN COOLANT FROM THROTTLE BODY

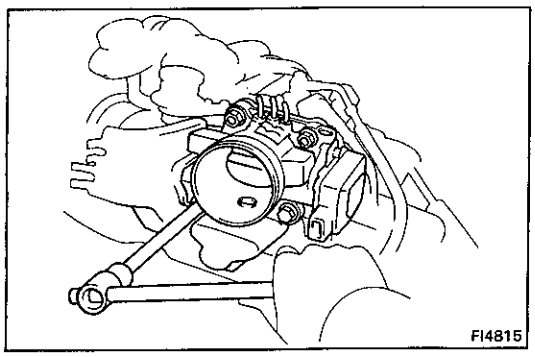
2. DISCONNECT TWO WATER HOSES FROM NO.2 WATER PIPE AND NO.2 WATER BY-PASS PIPE

3. DISCONNECT THROTTLE POSITION SENSOR CONNECTOR

4. DISCONNECT VACUUM HOSES

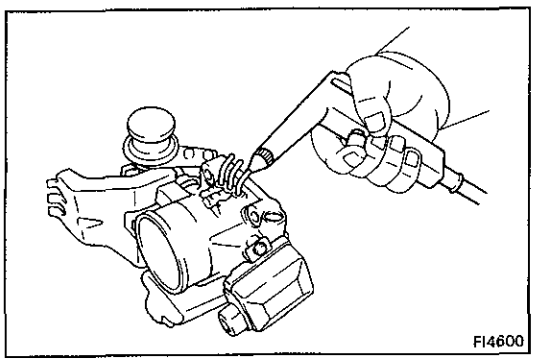
5. (A/T)
THROTTLE CABLE

6. DISCONNECT ACCELERATOR CABLE AND BRACKET



7. REMOVE THROTTLE BODY

Remove the two bolts, two nuts, and remove the throttle body and the gasket.



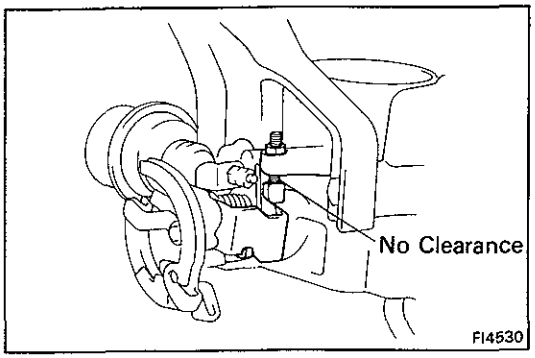
INSPECTION OF THROTTLE BODY

1. CLEAN THROTTLE BODY BEFORE INSPECTION

(a) Wash and clean the cast parts with a soft brush and carburetor cleaner.

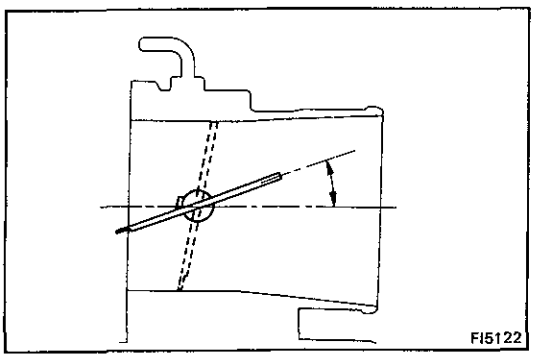
(b) Using compressed air, below all passages and apertures in the throttle body.

NOTICE: To prevent deterioration, do not clean the throttle position sensor and dash pot.



2. CHECK THROTTLE VALVE

Check that there is no clearance between the throttle stop screw and throttle lever when the throttle valve is fully closed.

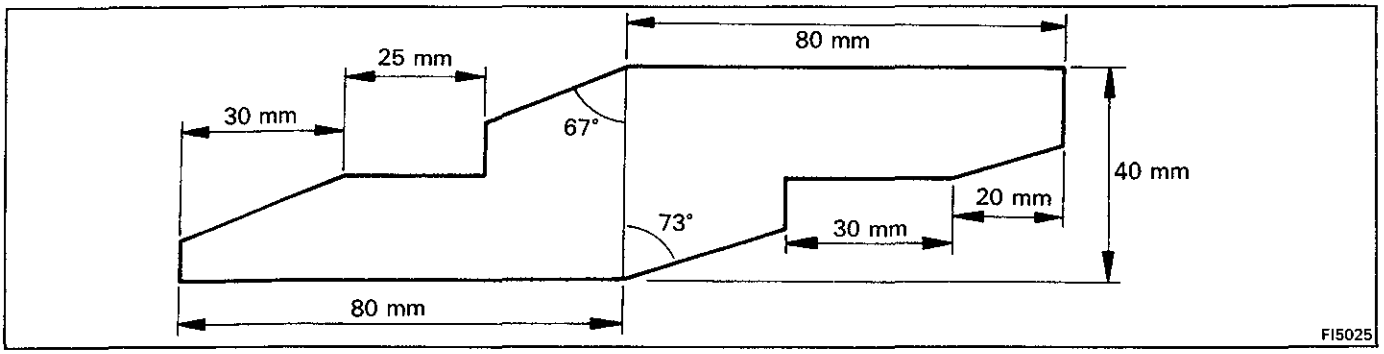


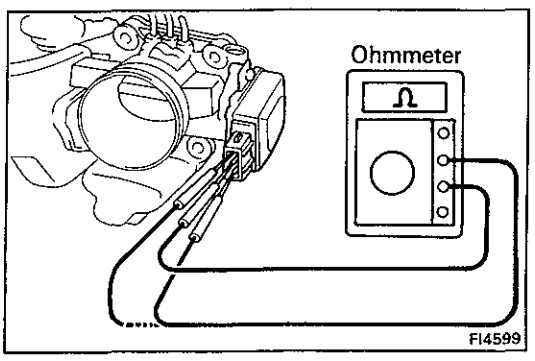
3. CHECK THROTTLE POSITION SENSOR

(a) Make an angle gauge as shown in the figure.

(b) Set throttle valve opening angle to the specifications below from the vertical position (incl. throttle valve fully closed angle 10°).

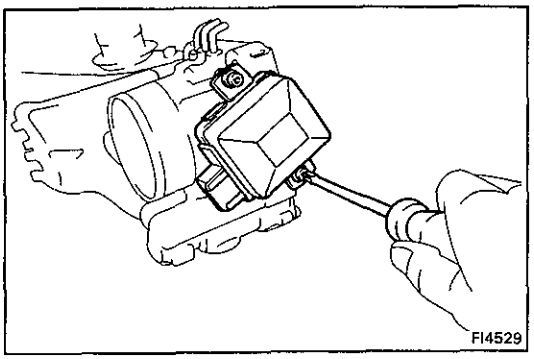
Throttle valve opening angle: 67° or 73°





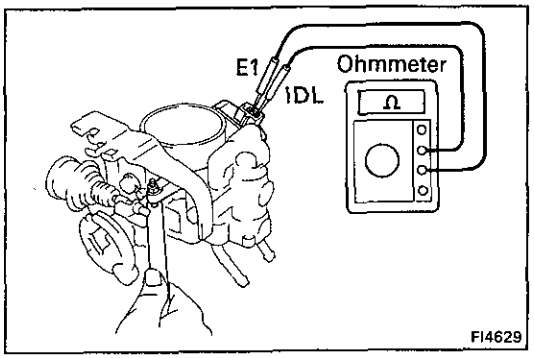
(c) Using an ohmmeter, check the continuity between each terminal.

Throttle valve opening angle	Continuity		
	IDL – E2	PSW – E2	IDL – PSW
67° from vertical	No continuity	No continuity	No continuity
73° from vertical	No continuity	Continuity	No continuity
Less than 11.5° from vertical	Continuity	No continuity	No continuity



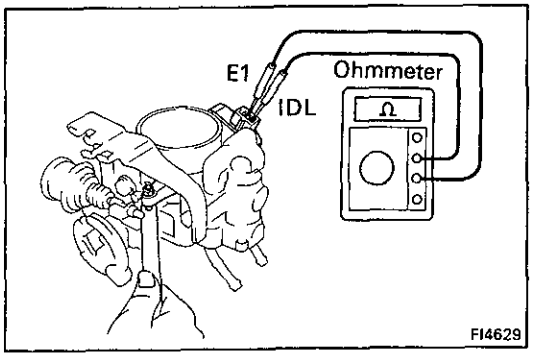
4. **IF NECESSARY, ADJUST THROTTLE POSITION SENSOR**

(a) Loosen two screws of the sensor.



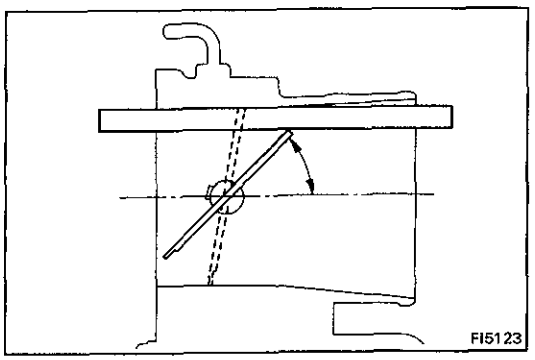
(b) Insert a thickness gauge (0.35 mm / 0.0138 in.) between the throttle stop screw and lever, and connect the ohmmeter to terminals IDL and E1.

(c) Gradually turn the sensor clockwise until the ohmmeter deflects, and secure the sensor with two screws.



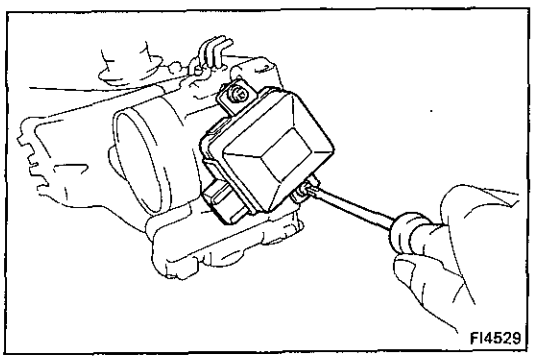
(d) Using a thickness gauge, recheck the continuity between terminals IDL and E1.

Clearance between lever and stop screw	Continuity IDL – E1
0.30 mm (0.0118 in.)	Continuity
0.40 mm (0.0157 in.)	No continuity

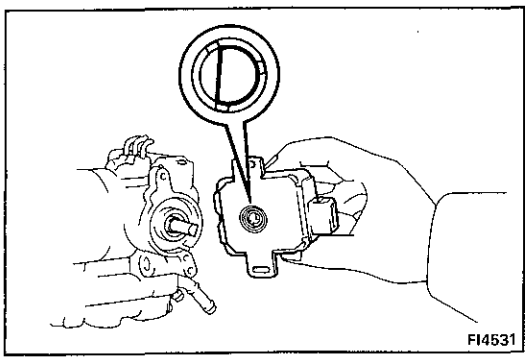


5. **IF NECESSARY, REPLACE THROTTLE POSITION SENSOR**

(a) Hold the throttle valve opening angle at approx. 45°.

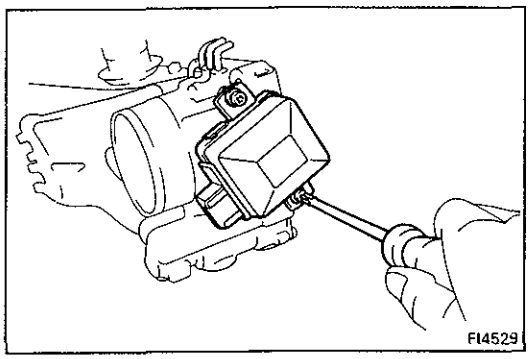


(b) Remove the two screws and throttle position sensor.



(c) Place the throttle position sensor over the throttle valve shaft as shown in the figure.

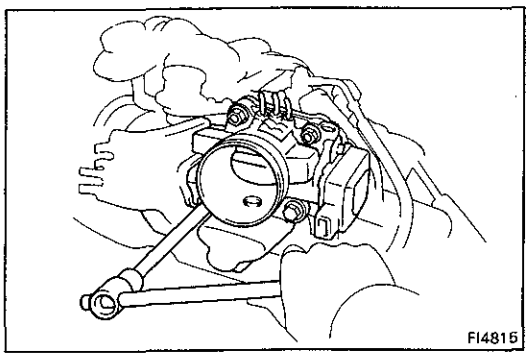
HINT:
- Do not turn the throttle position sensor when it is installed.
- Do not open the position sensor cover.



(d) Temporarily install the two screws.

(e) Remove the pole.

(f) Adjust the throttle position sensor. (See step 4 on page FI-62)



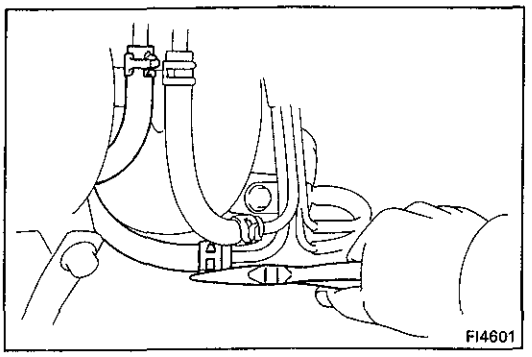
INSTALLATION OF THROTTLE BODY

1. **INSTALL THROTTLE BODY**

(a) Place a new gasket on the intake manifold.

(b) Install the throttle body with two nuts and two bolts.

Torque: 200 kg-cm (13 ft-lb, 20 N·m)



2. **CONNECT WATER HOSES TO NO.2 FUEL HOSE AND NO.2 AIR PIPE**

3. **CONNECT ACCELERATOR CABLE BRACKET AND CABLE**

4. **(A/T)**
CONNECT THROTTLE CABLE

5. **CONNECT VACUUM HOSES**

6. **CONNECT THROTTLE POSITION SENSOR CONNECTOR**

7. **CONNECT AIR CLEANER HOSE**

8. **REFILL WITH COOLANT**