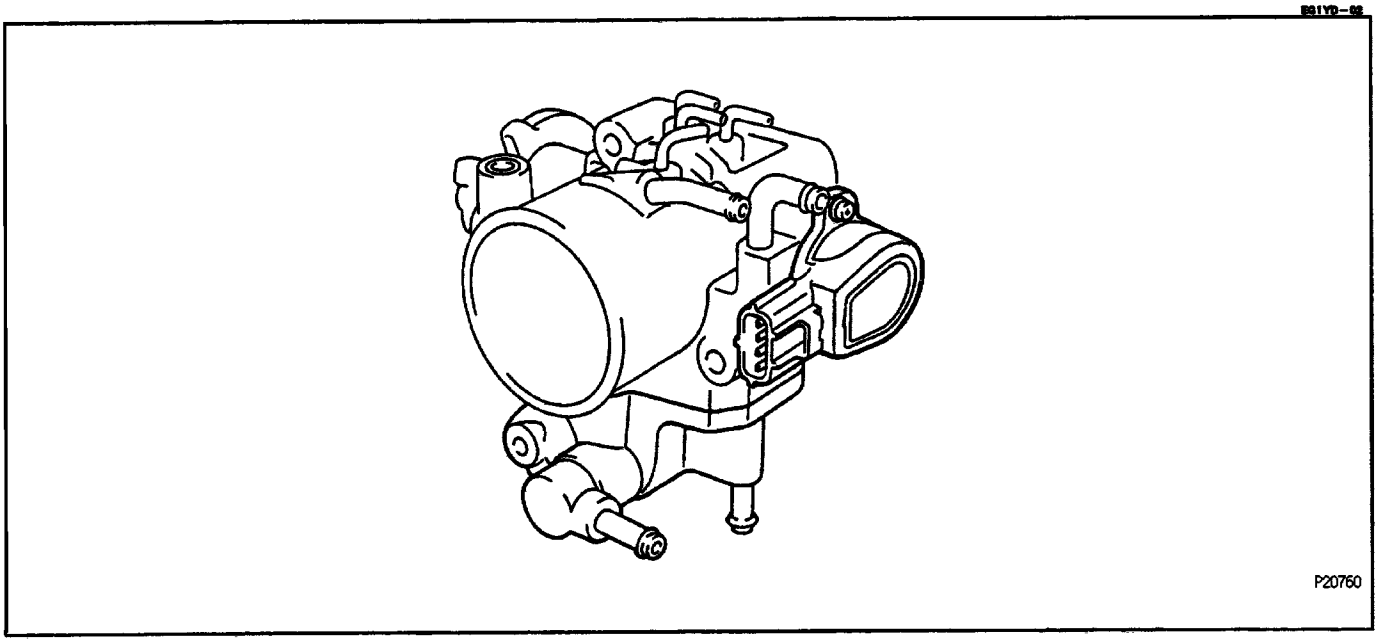
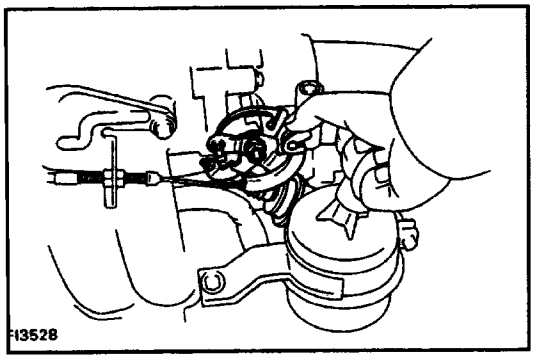
# THROTTLE BODY

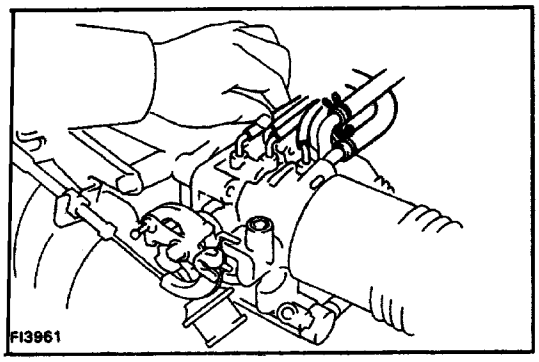



## ON –VEHICLE INSPECTION

### 1. INSPECT THROTTLE BODY

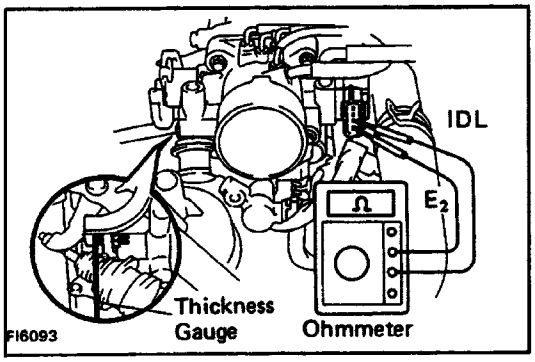
(a) Check that the throttle linkage moves smoothly.




(b) Check the vacuum at each port.

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

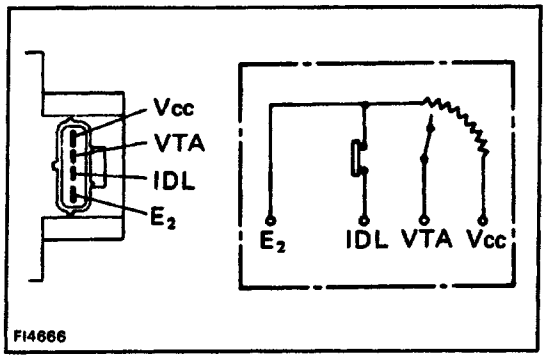
| Port name | At idle | At 3,500 rpm |
|---|---|---|
| **E** | **No vacuum** | **Vacuum** |
| **R** | **No vacuum** | **Vacuum** |
| **P** | **No vacuum** | **Vacuum** |




### 2. INSPECT 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 | Between terminals | Resistance |
|---|---|---|
| 0 mm (0 in.) | VTA – $E_2$ | 0.47 – 6.1 kΩ |
| 0.57 mm (0.0224 in.) | IDL – $E_2$ | 2.3 kΩ or less |
| 0.85 mm (0.0335 in.) | IDL – $E_2$ | Infinity |
| Throttle valve fully open | VTA – $E_2$ | 3.1 – 12.1 kΩ |
| – | Vcc – $E_2$ | 3.9 – 9.0 kΩ |

**3 M/T:**

**INSPECT DASH POT (DP)**

**A. Warm up engine**

Allow the engine to warm up to normal operating temperature.

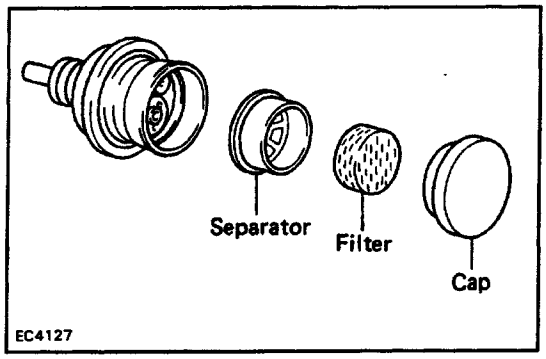
**B. Check idle speed and adjust, if necessary**

**(See step 15 in maintenance operations in Maintenance)**

**Idle speed:**

**750 rpm**

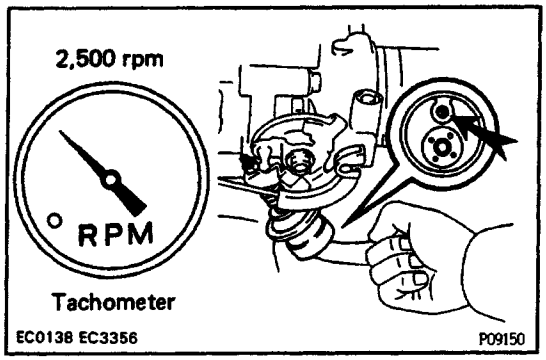
**C. Remove cap, filter, and separator from DP**




**D. Check and adjust dash pot (DP) setting speed**

(a) Maintain engine speed at 2,500 rpm.

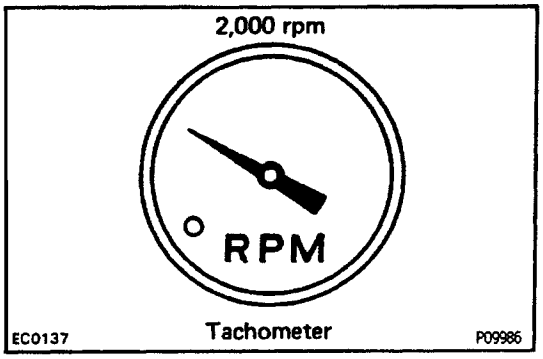
(b) Plug the VTV hole with your finger.

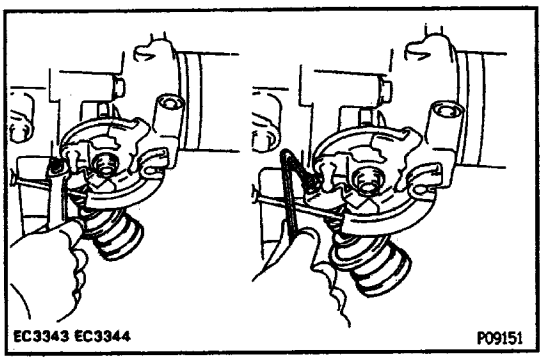



(c) Release the throttle valve.

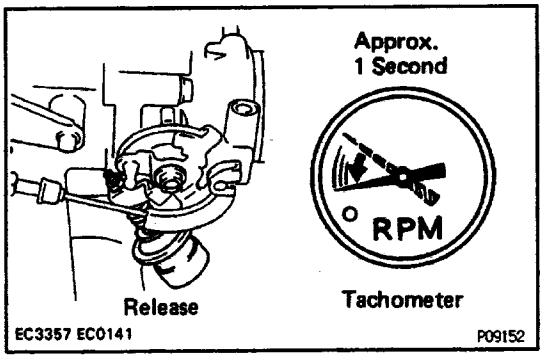
(d) Check the DP is set.

**DP setting speed: 2,000 rpm**






(e) If not as specified, adjust with the DP adjusting screw.




**E. Check operation of VTV**

(a) Set the DP setting speed in the same procedure as above (a) to (c).

(b) Remove your finger from the hole and check that the engine returns to idle speed in approx. 1 second.

**F. Reinstall DP separator, filter and cap**

HINT: Install the filter with the coarser surface facing the atmospheric side (outward).

**4. A/T:**

**INSPECT THROTTLE OPENER**

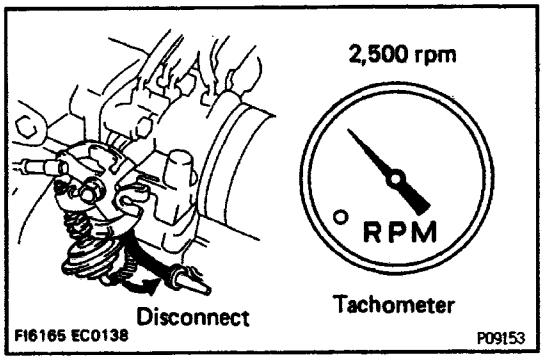
**A. Warm up engine**

Allow the engine to warm up to normal operating temperature.

**B. Check idles speed**

**Idle speed:**

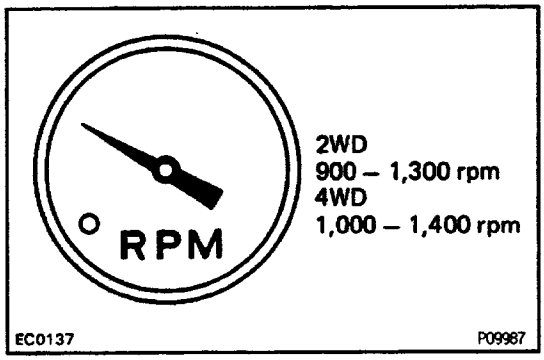
**750 ± 50 rpm**




**C. Check and adjust throttle opener setting speed**

(a) Disconnect the vacuum hose from the throttle opener, and plug the hose end.

(b) Maintain the engine at 2,500 rpm.

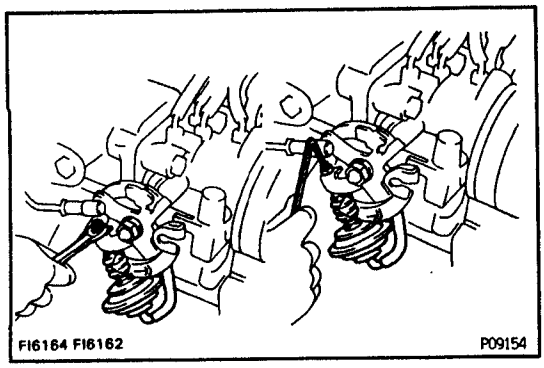



(c) Release the throttle valve.

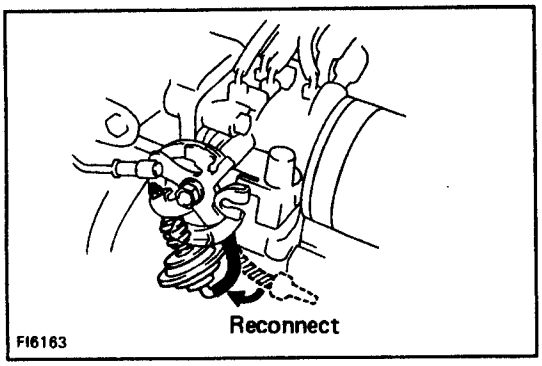
(d) Check that the throttle opener is set.

**Throttle opener setting speed:**

**900 – 1,300 rpm**




(e) If not as specified, adjust with the throttle opener adjusting screw.



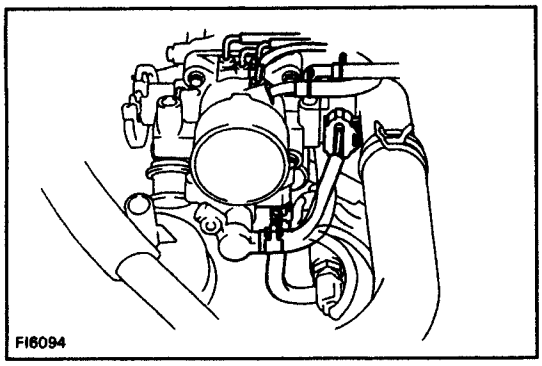

(f) Reconnect the vacuum hose to the throttle opener.

## THROTTLE BODY REMOVAL

**1. REMOVE INTAKE AIR CONNECTOR**

**2. DRAIN COOLANT**

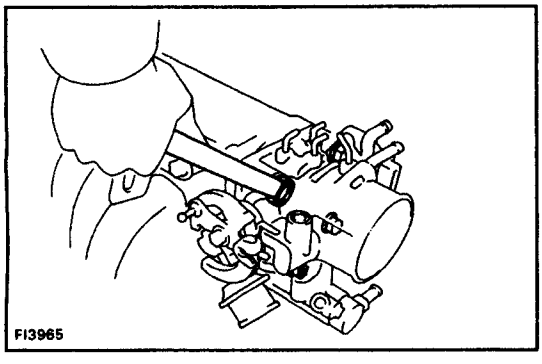
**3. DISCONNECT ACCELERATOR CABLE**




**4. DISCONNECT FOLLOWING HOSES:**

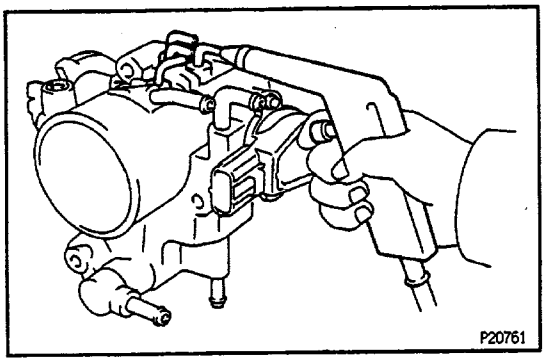
(a) w/ A/C:
A/C idle up hose.
(b) PCV hose
(c) No. 2 and No. 3 water bypass hoses.
(d) Label and disconnect the emission control hoses.

**5. DISCONNECT THROTTLE SENSOR CONNECTOR**




**6. REMOVE THROTTLE BODY**

Remove the 3 bolts and but, and remove the throttle body and gasket.



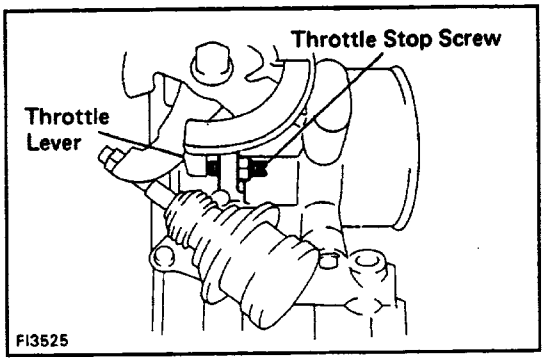

# THROTTLE BODY INSPECTION

## 1. CLEAN THROTTLE BODY BEFORE INSPECTION

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

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

**NOTICE: To prevent deterioration, do not clean the throttle position sensor.**

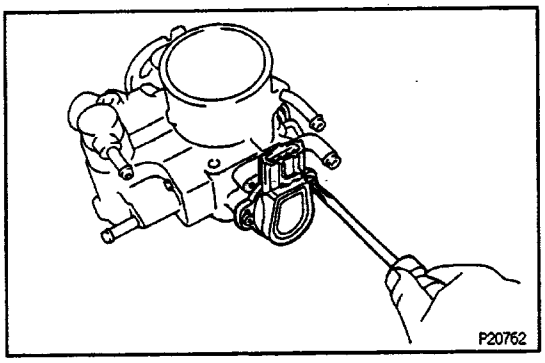



## 2. CHECK THROTTLE VALVE

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

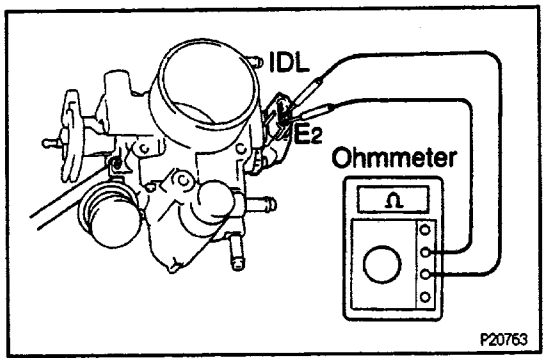
## 3. CHECK THROTTLE POSITION SENSOR

**(See step 2 on page** EG1–182**)**

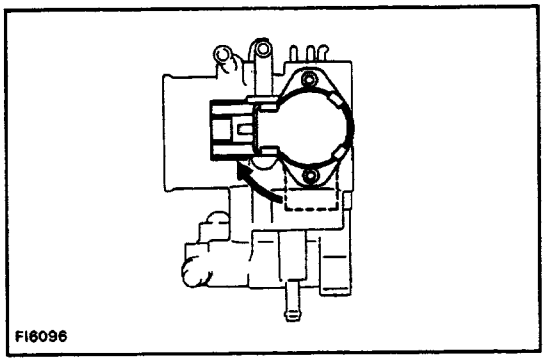



## 4. IF NECESSARY, ADJUST THROTTLE POSITION SENSOR

(a) Loosen the 2 screws of the sensor.



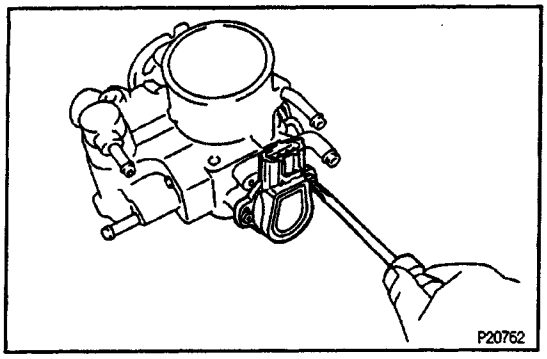

(b) Insert a thickness gauge (0.70 mm or 0.0276 in.) between the throttle stop screw and lever, and connect the ohmmeter to terminals IDL and Ez.




(c) Gradually turn the sensor clockwise until the ohmmeter deflects, and secure the sensor with the 2 screws

(d) Using a thickness gauge, recheck the continuity be. tween terminals IDL and Et.

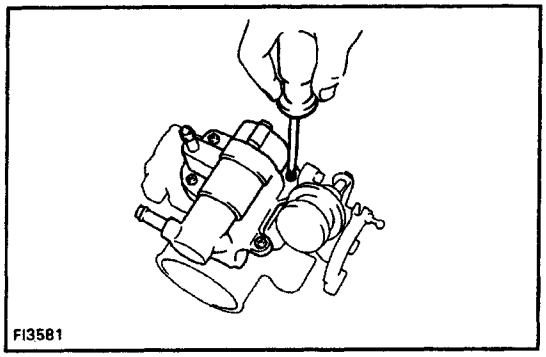
| Clearance between lever and stop screw | Continuity (IDLE – E2) |
|---|---|
| **0.57 mm (0.0224 in.)** | Continuity |
| **0.85 mm (0.0335 in.)** | No continuity |




# THROTTLE BODY DISASSEMBLY

**1. REMOVE THROTTLE POSITION SENSOR**

Remove the 2 screws and sensor.




**2. REMOVE AUXILIARY AIR VALVE**

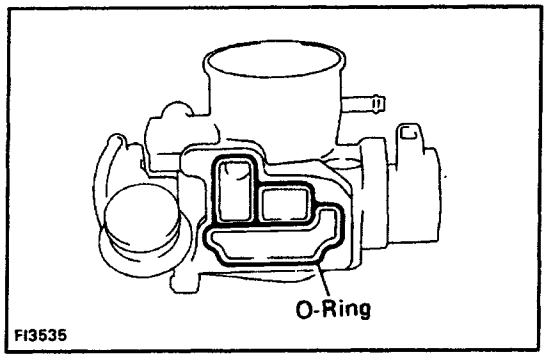
Remove the 4 screws, air valve and O–ring.

**3. M/T:**

**REMOVE DASH POT**

**4. A/T:**

**REMOVE THROTTLE OPENER**




# THROTTLE BODY ASSEMBLY

**1. M/T:**

**INSTALL DASH POT**

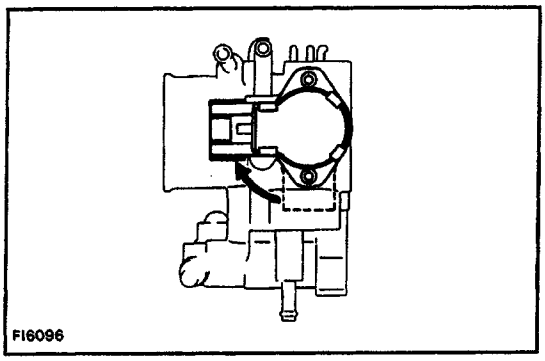
**2. A/T:**

**INSTALL THROTTLE OPENER**

**3. INSTALL AIR VALVE**

(a) Place a new O–ring on the throttle body.

(b) install the air valve with the 4 screws.




**4. INSTALL THROTTLE POSITION SENSOR**

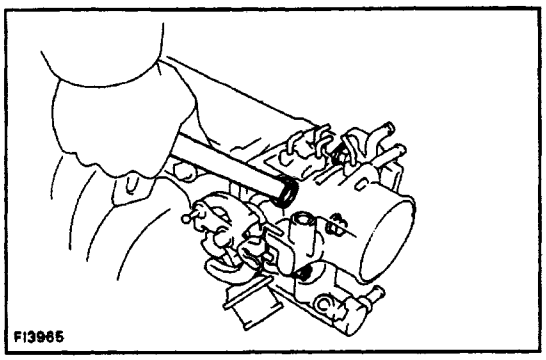
(a) Check that the throttle valve is fully closed.

(b) Place the sensor on the throttle body as shown in the illustration.

(c) Turn the sensor clockwise, and temporarily install the 2 screws.

**5. ADJUST THROTTLE POSITION SENSOR**

**(See step 4 throttle body inspection)**

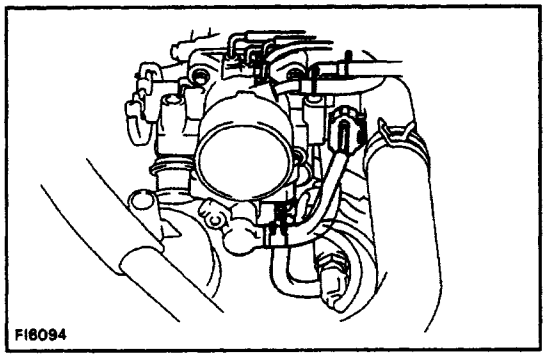



# THROTTLE BODY INSTALLATION

**1. INSTALL THROTTLE BODY**

Using a new gasket, install the throttle body, 3 bolts and nut.

**Torque: 19 N–m (195 kgf–cm, 14 ft–lbf)**




**2. CONNECT THROTTLE SENSOR CONNECTOR**

**3. CONNECT THESE HOSES:**

(a) Emission control hoses

(b) No. 2 and No. 3 water bypass hoses

(c) PCV hose

(d) w/ A/C:

A/C idle up hose

**4. CONNECT ACCELERATOR CABLE**

**5. INSTALL AIR INTAKE CONNECTOR**

**6. FILL WITH COOLANT**