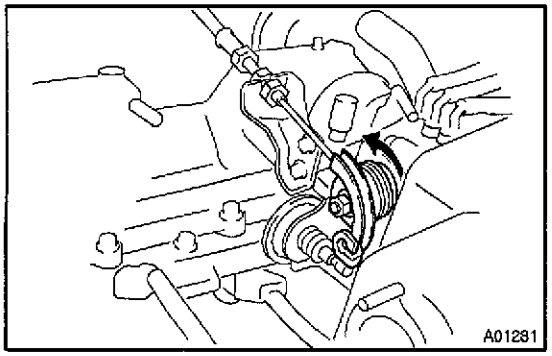


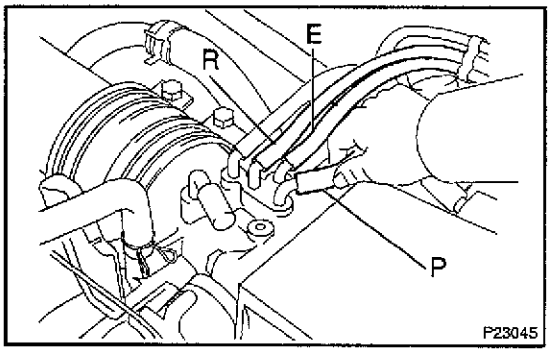
THROTTLE BODY (2RZ–FE, 3RZ–FE)

ON–VEHICLE INSPECTION

F01C-01

1. INSPECT THROTTLE BODY

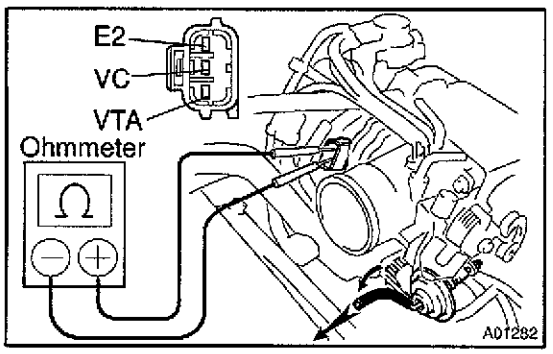
(a) Check that the throttle linkage moves smoothly.



(b) Check the vacuum at each port.
  (1) Start the engine.
  (2) Check the vacuum with your finger.

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

*: 2RZ–FE

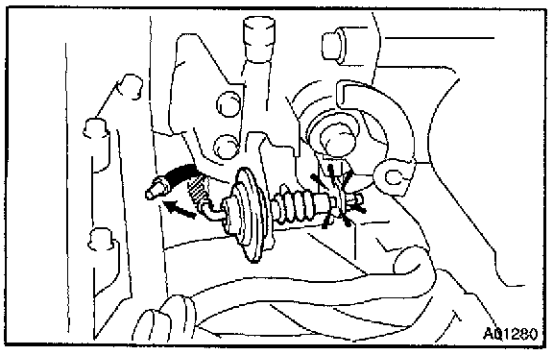


2. INSPECT THROTTLE POSITION SENSOR

(a) Disconnect the sensor connector.
(b) Apply vacuum to the throttle opener.
(c) Using an ohmmeter, measure the resistance between each terminal.

Throttle valve condition	Between terminals	Resistance
Fully closed	VTA – E2	0.2 – 5.7 kΩ
Fully open	VTA – E2	2.0 – 10.2 kΩ
–	VC – E2	2.5 – 5.9 kΩ

(d) Connect the sensor connector.



3. INSPECT THROTTLE OPENER

(a) Warm up engine
Allow the engine to warm up to normal operating temperature.
(b) Check idle speed
Idle speed: 650 – 750 rpm
(c) Disconnect the vacuum hose from the throttle opener, and plug the hose end.

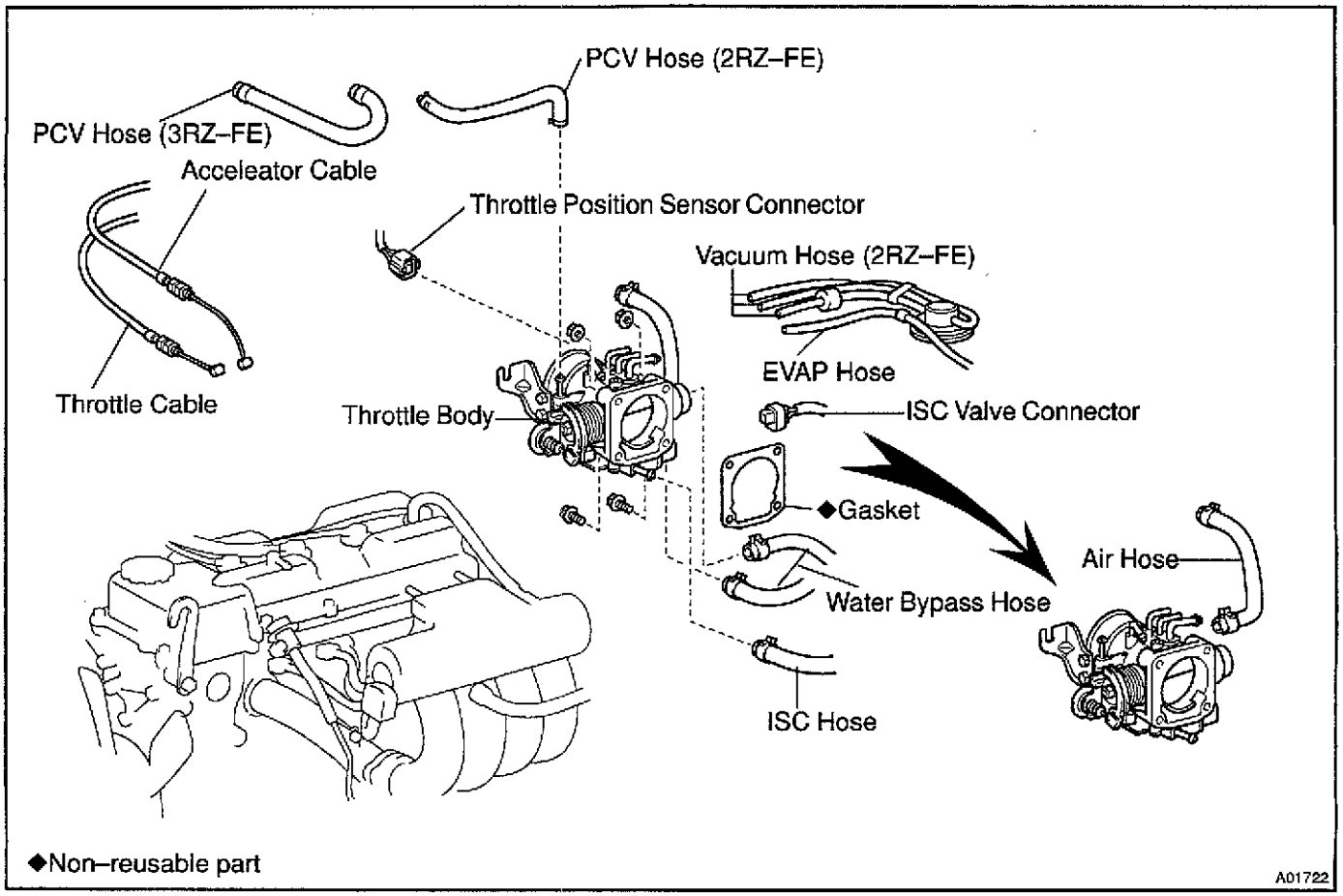
(d) Check the throttle opener setting speed.
Throttle opener setting speed: 1,200 – 1,500 rpm

If the throttle opener setting is not as specified, replace the throttle body.

(e) Stop the engine.
(f) Connect the vacuum hose to the throttle opener.
(g) Start the engine, and check that the idle speed returns to the correct speed.
(h) Disconnect hand–held tester or OBDII scan tool.

FI01D–01

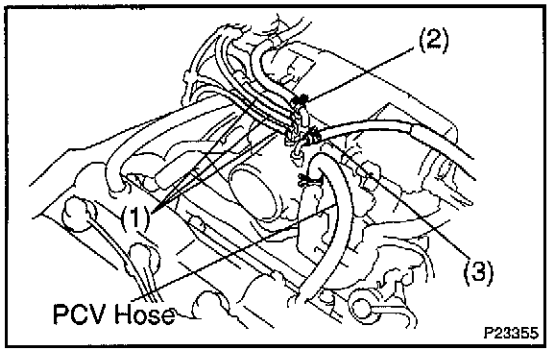
COMPONENTS



FI01E-01

REMOVAL

1. **DRAIN ENGINE COOLANT**
2. **(M/T)**
   DISCONNECT ACCELERATOR CABLE FROM THROTTLE BODY
3. **(A/T)**
   DISCONNECT ACCELERATOR AND THROTTLE CABLES FROM THROTTLE BODY

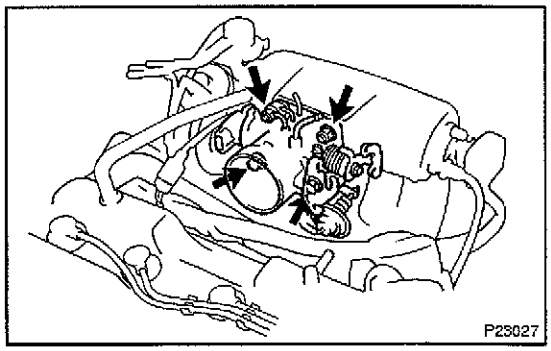


4. **REMOVE PCV HOSE**
5. **REMOVE THROTTLE BODY**

(a) Disconnect these hoses:
   (1) 2RZ–FE:
   Vacuum hose for EGR
   (2) EVAP hose
   (3) Air hose for PS idle–up

(b) Disconnect the throttle position sensor connector.

(c) Disconnect the ISC valve connector.

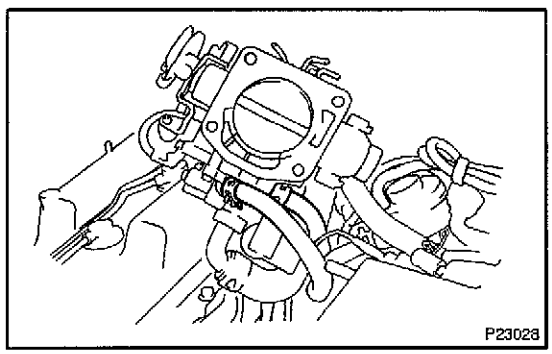


(d) Remove the 2 bolts, 2 nuts, and disconnect the throttle body form the air intake chamber.
Torque: 20 N·m (200 kgf·cm, 14 ft·lbf)

(e) Remove the throttle body gasket.

HINT:

At the time of assembly, please refer to the following items.
Install the throttle body with the new gasket.

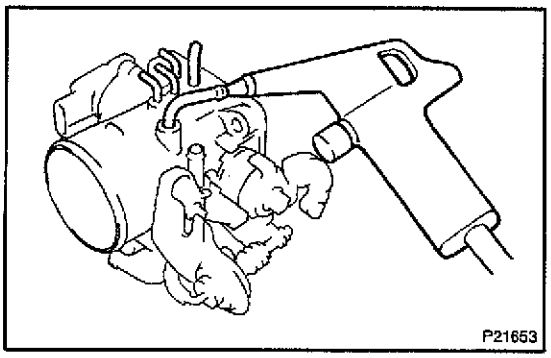


(f) Disconnect the 2 water bypass hoses from the throttle body, and remove the throttle body.

6. **REMOVE AIR HOSE FROM ISC VALVE**

FI01F-01

INSPECTION



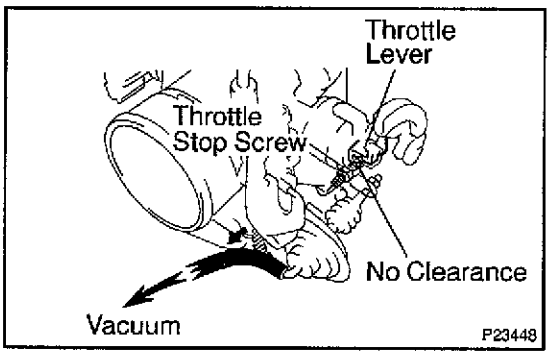
1. CLEAN THROTTLE BODY

(a) Using a soft brush and carburetor cleaner, clean the cast parts.

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

NOTICE:

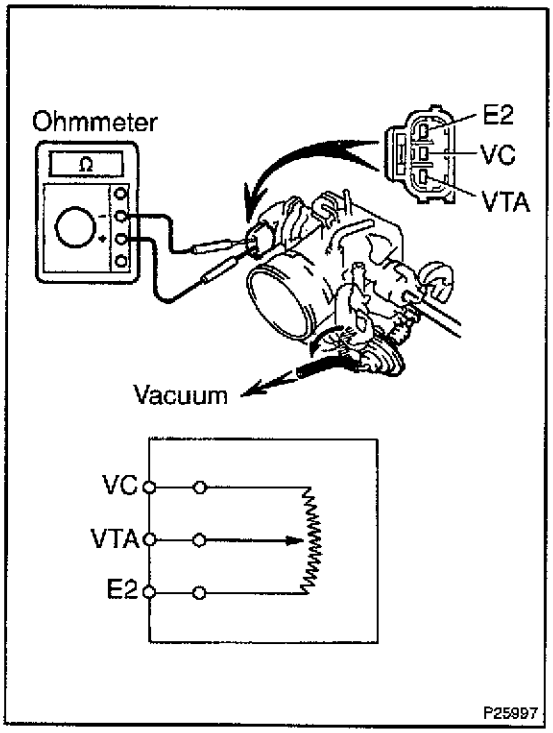
To prevent deterioration, do not clean the throttle position sensor and ISC valve.



2. INSPECT THROTTLE VALVE

(a) Apply vacuum to the throttle opener.

(b) Check that there is no clearance between the throttle stop screw and throttle lever when the closed throttle position.



3. INSPECT THROTTLE POSITION SENSOR

(a) Apply vacuum to the throttle opener.

(b) Insert a thickness gauge between the throttle stop screw and stop lever.

(c) Using an ohmmeter, measure the resistance between each terminal.

Clearance between lever and stop screw	Between terminals	Resistance
0 mm (0 in.)	VTA – E2	0.2 – 5.7 kΩ
Throttle valve fully open	VTA – E2	2.0 – 10.2 kΩ
–	VC – E2	2.5 – 5.9 kΩ

FI01G–01

INSTALLATION

Installation is in the reverse order of removal.
(See page FI–42)