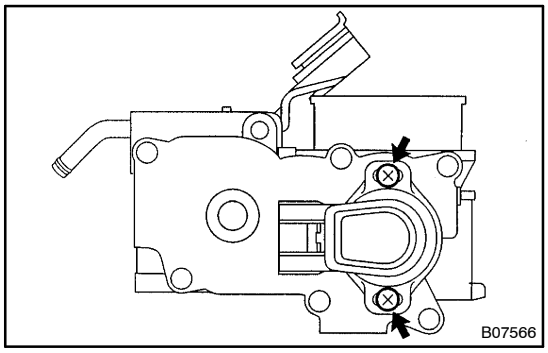
SF11Z–01

REPLACEMENT

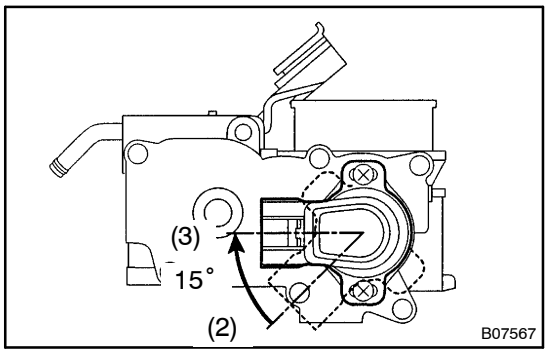
NOTICE:

- **To prevent deterioration, do not shock the throttle position sensor and accelerator pedal position sensor.**
- **Mixing of the foreign objects may cause the gear locking, so thoroughly check that there is no stuck of any foreign objects and clean up if any.**



1. REPLACE THROTTLE POSITION SENSOR

(a) Remove the 2 set screws and throttle position sensor.

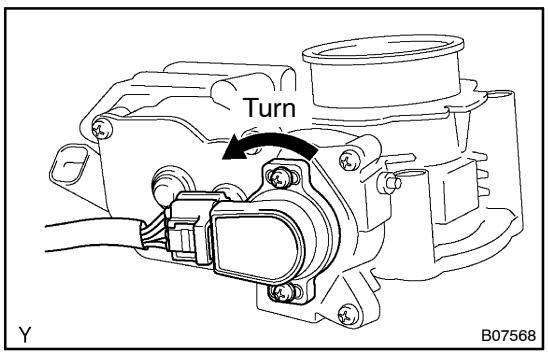


(b) Reinstall the throttle position sensor.

(1) Check that the throttle valve is under the condition of the opener opening angle (about 4°).

(2) Install the sensor to the place where is at 15° rotated to the right from the specified installation position.

(3) Gradually turn sensor counterclockwise until it touches the throttle valve shaft and temporarily torque the 2 set screws.



(c) Adjust the throttle position sensor.

(1) Connect the throttle position sensor connector.

NOTICE:

At this time, do not connect the throttle control motor connector.

(2) Connect the hand–held tester to the DLC3.

(3) Turn the ignition switch ON.

NOTICE:

After turning the ignition switch ON, do not depress the accelerator pedal.

(4) While reading the value of the throttle valve opening percentage (THROTTLE POS) of the CURRENT DATA, turn the throttle position sensor slowly to left and set the sensor at the center value of the standard value, and then torque the screws.

Torque: 2.0 N·m (20 kgf·cm, 17 in.·lbf)

Standard throttle valve opening percentage:

15.2 ± 0.8 %

NOTICE:

At the time of tightening the screw, as the sensor itself tends to turn causing to slanting, check that it is within the standard value after having finished the torque.

(5) Fully close the throttle valve with a screwdriver and check that the value of the throttle valve opening percentage (THROTTLE POS) of the CURRENT DATA stays with the standard value.

Standard throttle valve opening percentage:

10 – 14 %

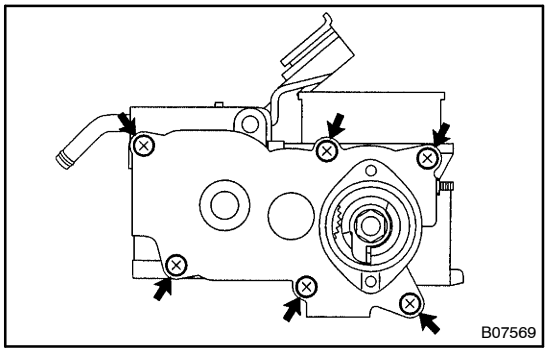
If the throttle valve opening percentage is not as specified, repeat steps (4) through (5).

(6) Paint the sensor set screws.

(7) Turn the ignition switch OFF.

(8) Disconnect the hand–held tester the DLC3.

(9) Disconnect the throttle position sensor connector.



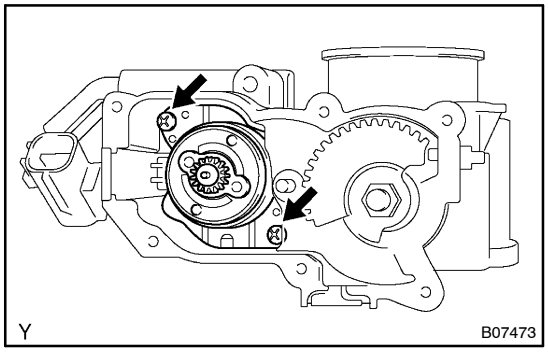
2. REPLACE THROTTLE CONTROL MOTOR

(a) Remove the throttle position sensor. (See step 1)

(b) Remove the throttle control motor.

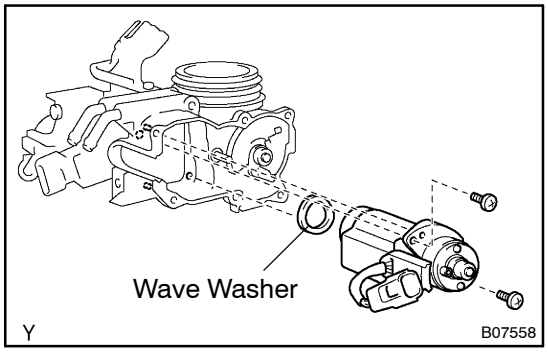
(1) Remove the 6 screws and cover.

(2) Remove washer, middle gear and washer.



(3) Disconnect the throttle control motor connector from the connector bracket.

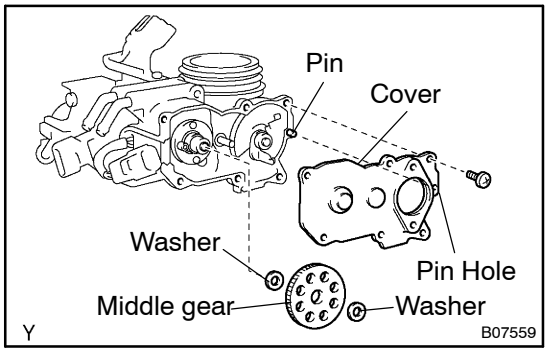
(4) Remove the 2 screws, throttle control motor and wave washer from the throttle body.



(c) Reinstall a new throttle control motor.
  (1) Insert the wave washer into the throttle body.
  (2) Align the pin holes of the throttle control motor with the positioning pins of the throttle body.
  (3) Attach the grommet to the throttle control motor cover.
  (4) Reconnect the connector to the bracket.
  (5) Install the throttle control motor with the 2 screws.

Torque: 3.4 N·m (35 kgf·cm, 30 in.·lbf)

  (6) Apply the grease thinly on the whole surface of the gear teeth.



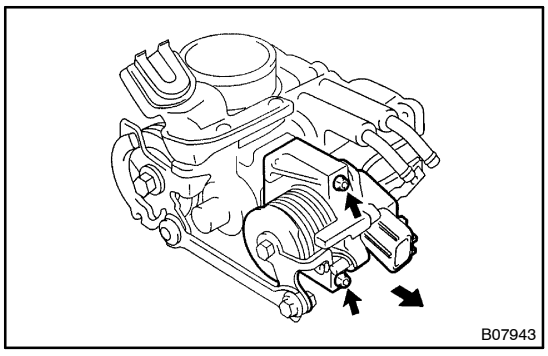
  (7) Install the washer middle gear and washer.

NOTICE:

Do not apply the grease other than specified because grease has been already applied to the component to be replaced.

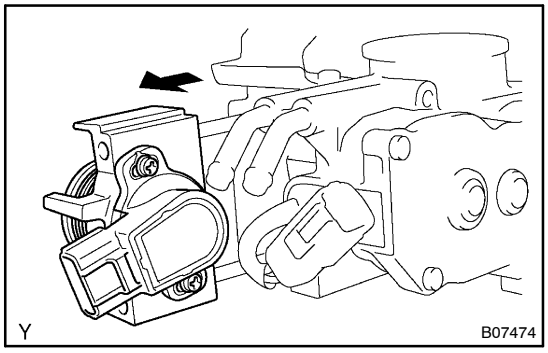
  (8) Install the washer as shown in the illustration.
  (9) Align the pin hole of the cover with the positioning pin of the throttle body.
  (10) Install the cover with the 6 screws.

(d) Reinstall and adjust the throttle position sensor. (See step 1)

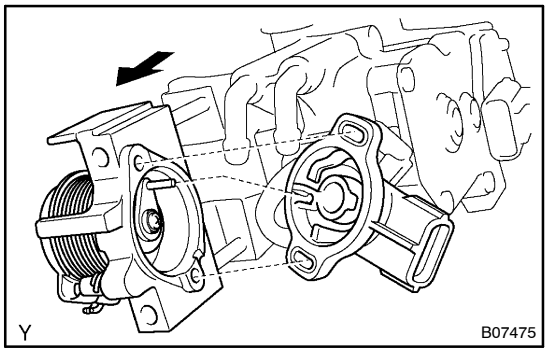


3. REPLACE ACCELERATOR PEDAL POSITION SENSOR

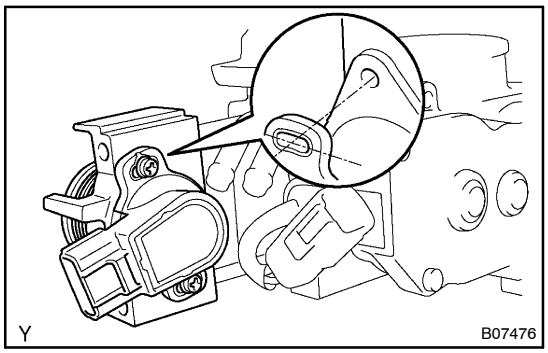
(a) Remove the accelerator pedal position sensor.
  (1) Remove the 2 nuts holding the accelerator pedal position housing to the throttle body.



(2) Slide the accelerator pedal position housing.
(3) Remove the 2 screws and accelerator pedal position sensor.



(b) Reinstall the accelerator pedal position sensor.
(1) Align the pin groove of the accelerator pedal position sensor with the pin of the lever pin of the housing.



(2) Align the flange center of the sensor with the that of the bolt hole of the housing.
(3) Install the accelerator pedal position sensor with the 2 screws.

Torque: 2.0 N·m (20 kgf·cm, 17 in.·lbf)

(4) Install the accelerator pedal position housing with the 2 nuts.

Torque: 5.4 N·m (55 kgf·cm, 48 in.·lbf)

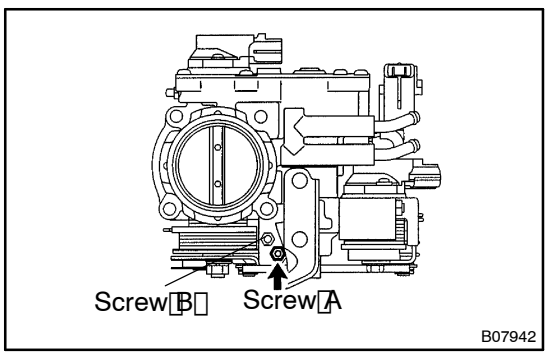
(c) Inspect and adjust the accelerator pedal position sensor.
(1) Connect the accelerator pedal position sensor connector.
(2) Connect the hand–held tester to the DLC3.
(3) Turn the ignition switch ON.

NOTICE:
After turning the ignition switch ON, do not depress the accelerator pedal.

(4) Check that the ACCEL POS#1 (VPA) voltage of the CURRENT DATA shows the standard value.

Standard accelerator pedal position voltage:
0.3 – 0.9 V

(5) Loosen the nut, and adjust the voltage with the screw A.



NOTICE:
Do not turn screw B.

4. AFTER INSTALL THROTTLE BODY, INSPECT SYSTEM OPERATION (See page FI–32)