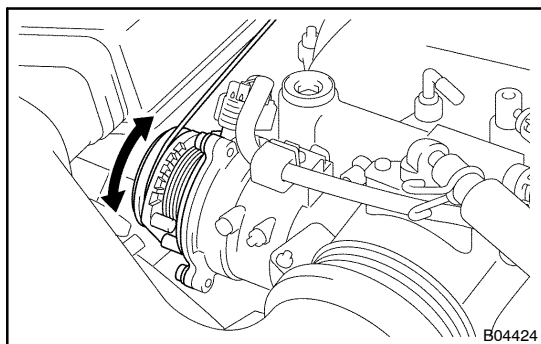




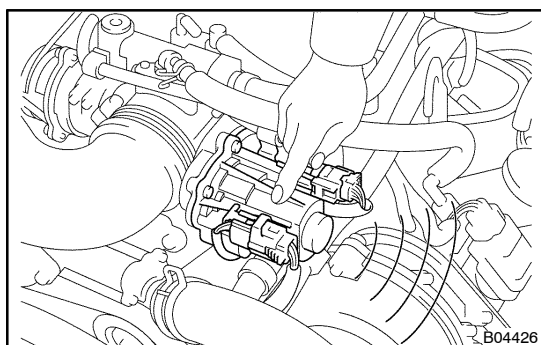
## THROTTLE BODY ON-VEHICLE INSPECTION

SF0P3-05

### 1. REMOVE V-BANK COVER

### 2. INSPECT SYSTEM OPERATION

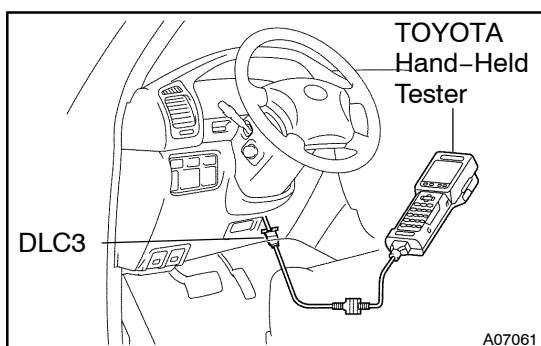
- (a) Check that the throttle linkage moves smoothly.



- (b) Inspect the throttle control motor for operating sound.

- (1) Turn the ignition switch ON.
- (2) When turning the accelerator pedal position sensor lever, check the running sound of the motor. Also, check that there is no friction sound.

If operation is not as specified, check the throttle control motor (See step 3), wiring and ECM.



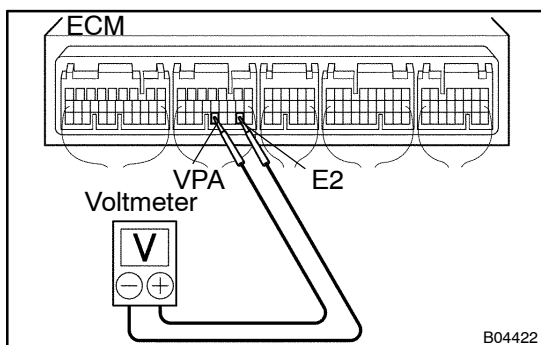
- (c) Inspect the accelerator pedal position sensor.

- (1) Connect the TOYOTA hand-held tester to the DLC3.
- (2) Check that the MIL does not light up.
- (3) When turning the accelerator pedal position sensor lever to the full-open position, check that the throttle valve opening percentage (THROTTLE POS) of the CURRENT DATA shows the standard value.

**Standard throttle valve opening percentage:**

**60 % or more**

If operation is not as specified, check that the accelerator pedal position sensor (See step 5), wiring and ECM.



If you have no TOYOTA hand-held tester, measure voltage between terminals VPA and E2 of the ECM connector.

- (d) Inspect the air assist system.

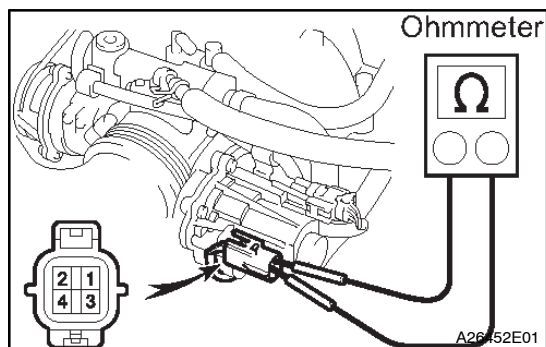
- (1) Start the engine and check that the MIL does not light up.
- (2) Allow the engine to warm up to normal operating temperature.
- (3) Turn the A/C compressor ON to OFF, and check the idle speed.

**Idle speed (Transmission in neutral): 700 ± 50 rpm**

**NOTICE:**

**Perform inspection under condition without electrical load.**

- (e) After checking the above (b) to (d), perform the driving test and check that there is no sense of incongruity.

**3. INSPECT THROTTLE CONTROL MOTOR**

- (a) Disconnect the throttle control motor connector.  
 (b) Using an ohmmeter, measure the motor resistance between terminal 1 (M-) and 2 (M+).

**Motor resistance:  $0.3 - 100 \Omega$  at  $20^\circ\text{C}$  ( $68^\circ\text{F}$ )**

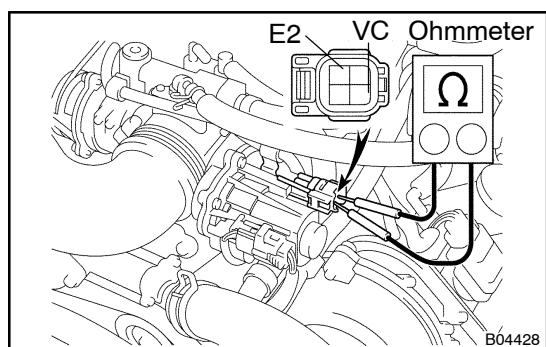
If the resistance is not as specified, replace the throttle control motor (See page [SF-40](#)).

- (c) Using an ohmmeter, measure the clutch resistance between terminal 3 (CL+) and 4 (CL-).

**Clutch resistance:  $4.2 - 5.2 \Omega$  at  $20^\circ\text{C}$  ( $68^\circ\text{F}$ )**

If the resistance is not as specified, replace the throttle control motor (See page [SF-40](#)).

- (d) Reconnect the throttle control motor connector.

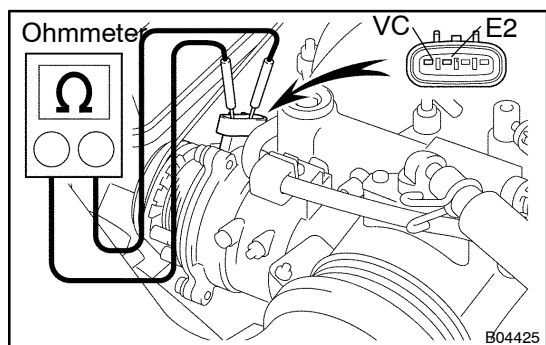
**4. INSPECT THROTTLE POSITION SENSOR**

- (a) Disconnect the throttle position sensor connector.  
 (b) Using an ohmmeter, measure the resistance between terminals VC and E2.

**Resistance:  $1.25 - 2.35 \text{ k}\Omega$  at  $20^\circ\text{C}$  ( $68^\circ\text{F}$ )**

If the resistance is not as specified, replace the throttle position sensor (See page [SF-40](#)).

- (c) Reconnect the throttle position sensor connector.

**5. INSPECT ACCELERATOR PEDAL POSITION SENSOR**

- (a) Disconnect the pedal position sensor connector.  
 (b) Using an ohmmeter, measure the resistance between terminals VC and E2.

**Resistance:  $1.64 - 3.28 \text{ k}\Omega$  at  $20^\circ\text{C}$  ( $68^\circ\text{F}$ )**

If the resistance is not as specified, replace the accelerator pedal position sensor (See page [SF-40](#)).

- (c) Reconnect the pedal position sensor connector.

**6. REINSTALL V-BANK COVER**