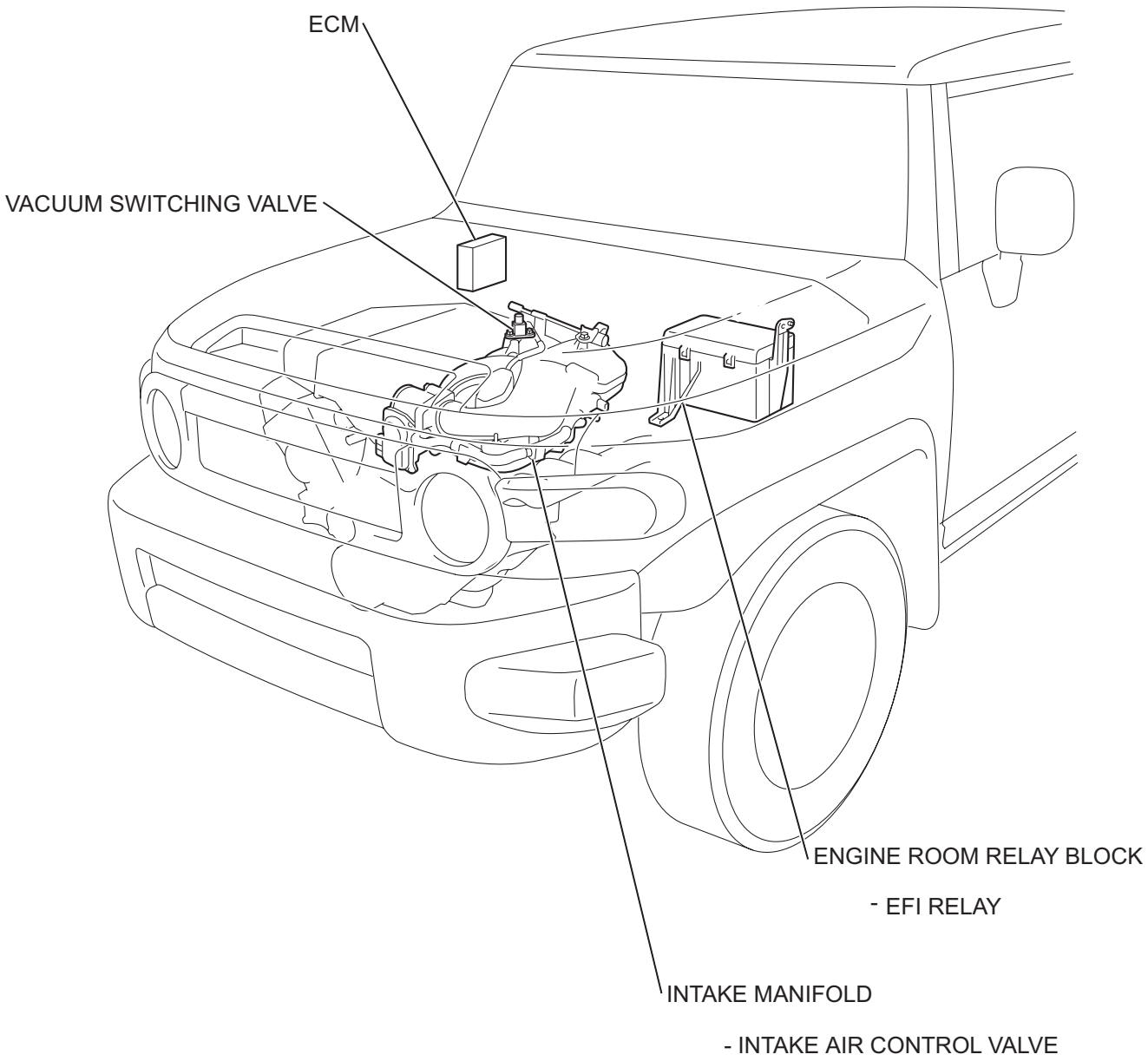
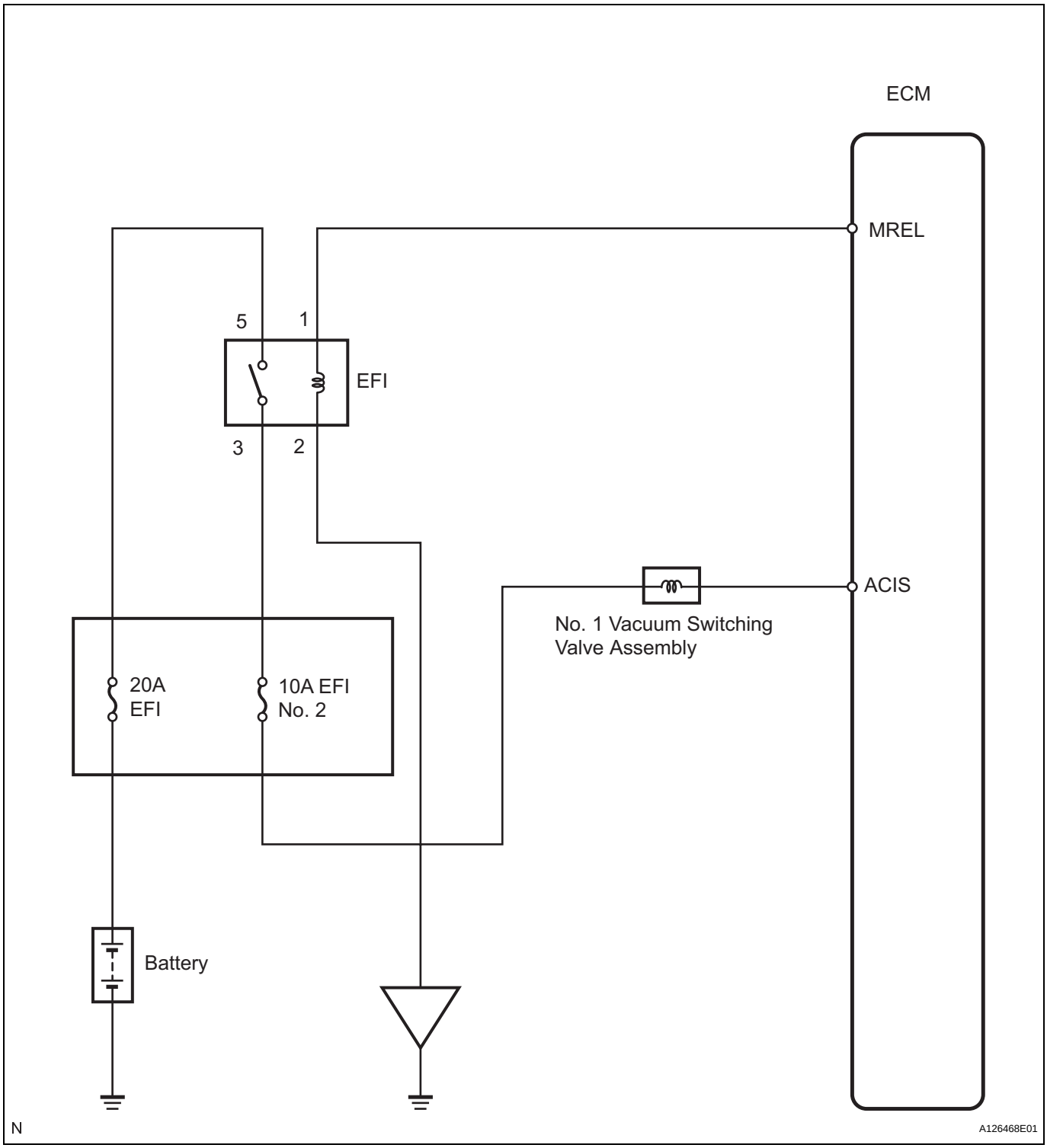
INTAKE SYSTEM

PARTS LOCATION

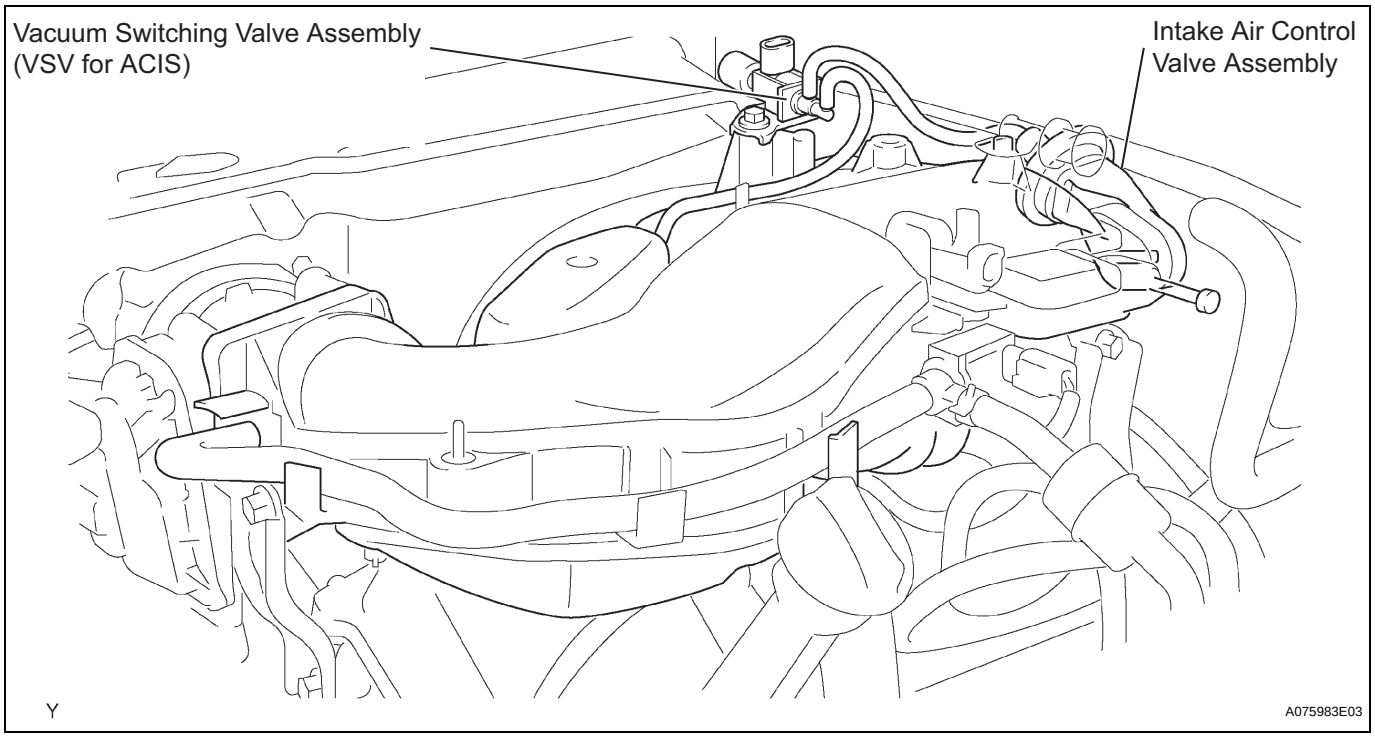


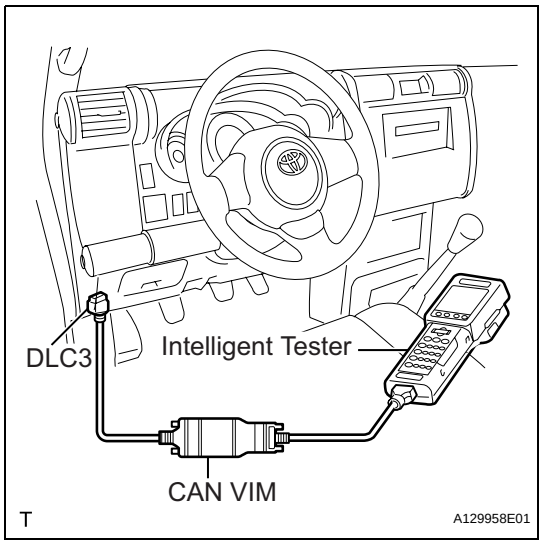
SYSTEM DIAGRAM



ON-VEHICLE INSPECTION

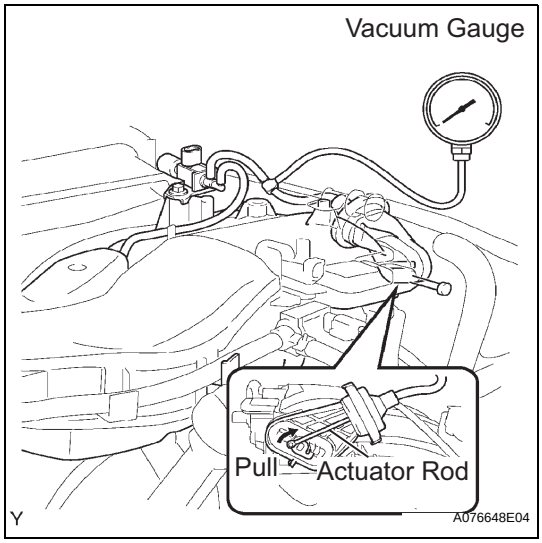
1. INSPECT INTAKE AIR CONTROL FUNCTION





(a) Remove the V-bank cover.
(b) Warm up the engine.
(c) Turn the ignition switch OFF.
(d) Connect the intelligent tester to the DLC3.
(e) Start the engine and allow it to idle.
(f) Turn the intelligent tester ON.
(g) Select the following menu items: DIAGNOSIS / ENHANCED OBD II / ACTIVE TEST / INTAKE CTL VSV1 / ON.
    (1) Check that the intake air control valve is pulled out.
    If the intake air control valve does not operate, replace the VSV for ACIS or intake air surge tank.
(h) Select the following menu items: DIAGNOSIS / ENHANCED OBD II / ACTIVE TEST / INTAKE CTL VSV1 / OFF.
    (1) Check that the intake air control valve is returned to its original position.
    If the intake air control valve does not operate, replace the VSV for ACIS or intake air surge tank.

(i) Select the following menu items: DIAGNOSIS / ENHANCED OBD II / DATA LIST / ENGINE SPD, THROTTLE POS, INTAKE CTL VSV1, and INTAKE CTL VSV2.
   (1) When depressing the accelerator pedal to the 60 % accelerator opening angle and running the engine at a speed of 2,200 to 4,100 rpm, check that the VSV for ACIS is ON.
   If the intake air control valve does not operate, replace the VSV for ACIS.
   (2) Under the conditions described in step (1), or while the engine is idling, release the accelerator pedal and check that the VSV for ACIS is OFF.
   If the intake air control valve does not operate, replace the VSV for ACIS.

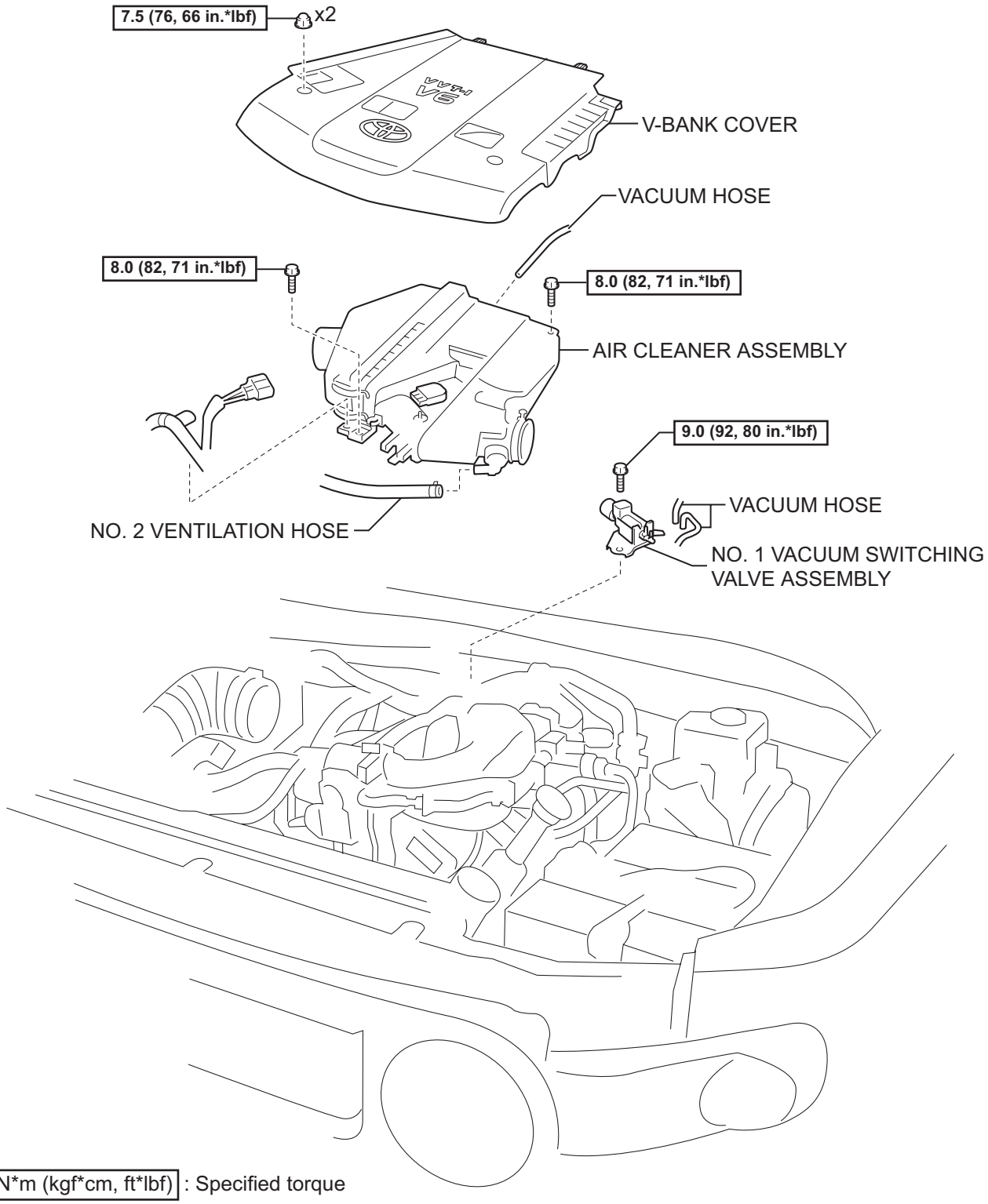


2. INSPECT INTAKE AIR CONTROL VALVE

(a) Remove the V-bank cover (See page ES-428).
(b) Using a 3-way connector, connect a vacuum gauge to the actuator hose.
(c) Start the engine.
(d) While the engine is idling, check that the vacuum gauge needle momentarily fluctuates up to approximately 39.9 kPa (300 mmHg, 11.8 in.Hg). (The actuator rod is pulled out.)
If the intake air control valve does not operate, replace the intake air surge tank.
(e) Rapidly depress the accelerator pedal to the fully open position and check that the vacuum gauge needle points to 0 kPa (0 mmHg, 0 in.Hg). (The actuator rod is returned to its original position.)
If the intake air control valve does not operate, replace the intake air surge tank.

VACUUM SWITCHING VALVE

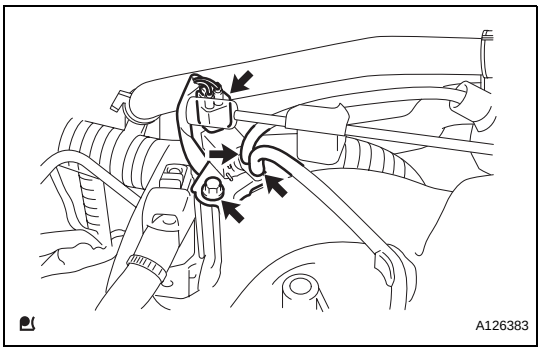
COMPONENTS



IT

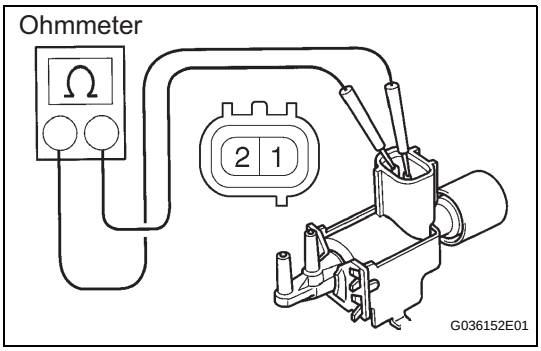
REMOVAL

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **REMOVE V-BANK COVER (See page ES-428)**
3. **REMOVE AIR CLEANER ASSEMBLY (See page ES-429)**
4. **REMOVE NO. 1 VACUUM SWITCHING VALVE ASSEMBLY**
   (a) Disconnect the connector.
   (b) Disconnect the 2 vacuum hoses.
   (c) Remove the bolt and No. 1 vacuum switching valve from the intake air surge tank.



INSPECTION

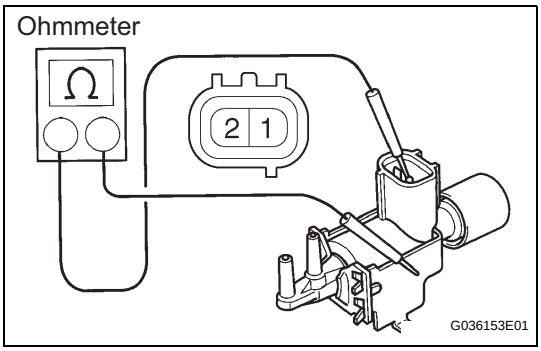
1. **INSPECT NO. 1 VACUUM SWITCHING VALVE ASSEMBLY**
   (a) Check the resistance.
      (1) Using an ohmmeter, measure the resistance between the terminals.
      Standard resistance



Tester Connection	Specified Condition
1 - 2	33 to 39Ω at 20°C (68°F)

If the result is not as specified, replace the vacuum switching valve No. 1.

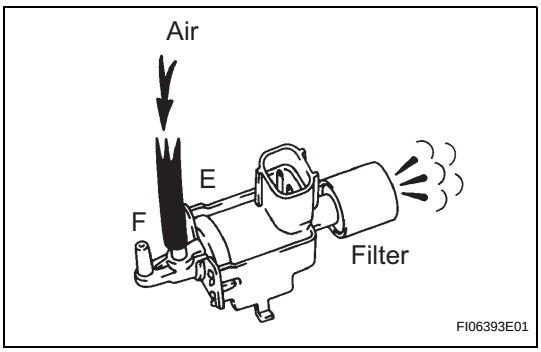
   (b) Check the vacuum switching valve No. 1 for ground.
      (1) Using an ohmmeter, measure the resistance between each terminal and the body.
      Standard resistance

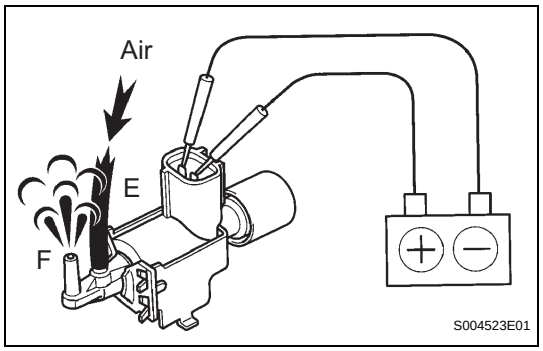


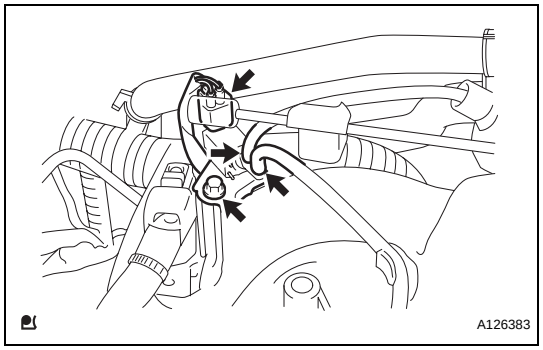
Tester Connection	Specified Condition
1 - Body	10 kΩ or higher
2 - Body	10 kΩ or higher

If the result is not as specified, replace the vacuum switching valve No. 1.

   (c) Check the operation.
      (1) Check that air does not flow from port E to port F.
      If the operation is not as specified, replace the vacuum switching valve No. 1.







(2) Apply battery voltage across the terminals.
(3) Check that air flows from port E to port F.
If the operation is not as specified, replace the vacuum switching valve No. 1.

INSTALLATION

1. **INSTALL NO. 1 VACUUM SWITCHING VALVE ASSEMBLY**
   (a) Install the No. 1 vacuum switching valve with the bolt onto the intake air surge tank.
   Torque: 9.0 N*m (92 kgf*cm, 80 in.*lbf)
   (b) Connect the 2 vacuum hoses.
   (c) Connect the connector.
2. **INSTALL AIR CLEANER ASSEMBLY (See page ES-431)**
3. **CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**
   Torque: 3.9 N*m (40 kgf*cm, 35 in.*lbf)
4. **INSTALL V-BANK COVER (See page ES-431)**