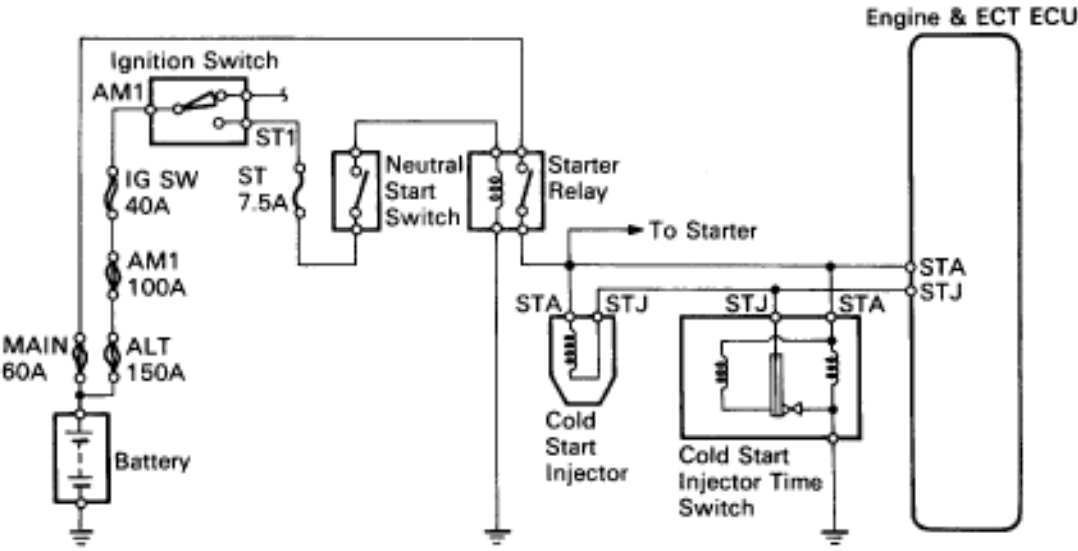
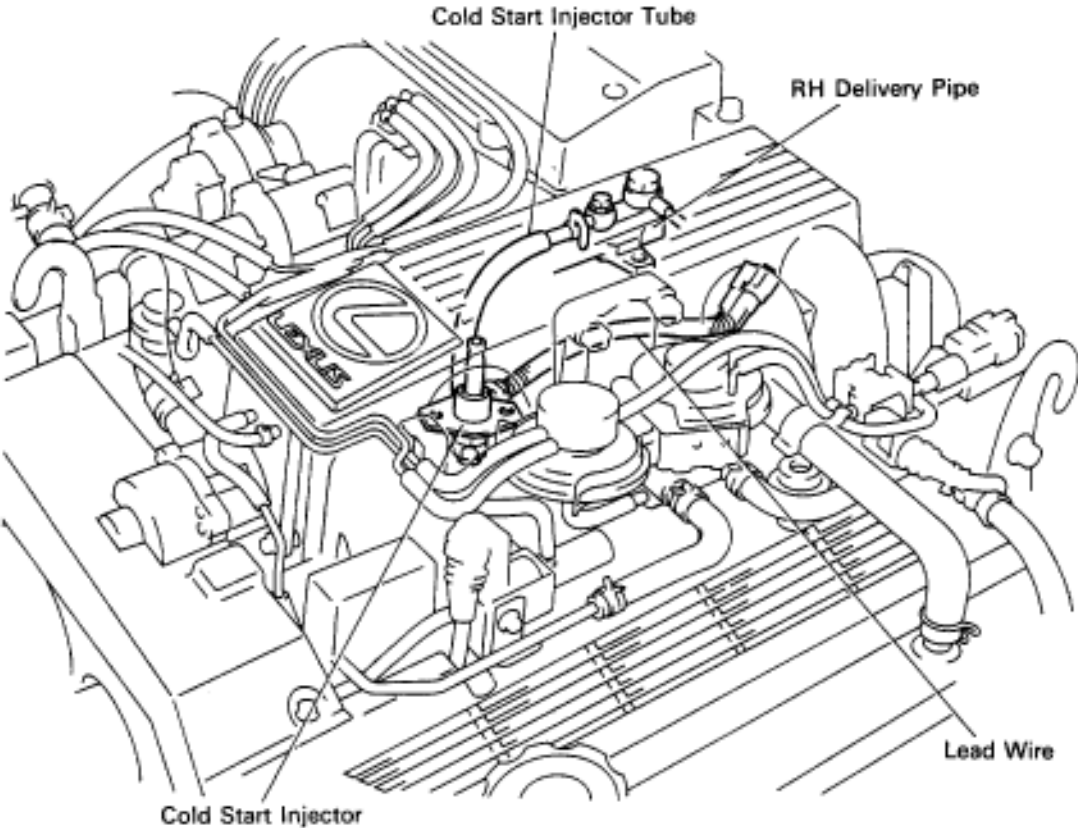
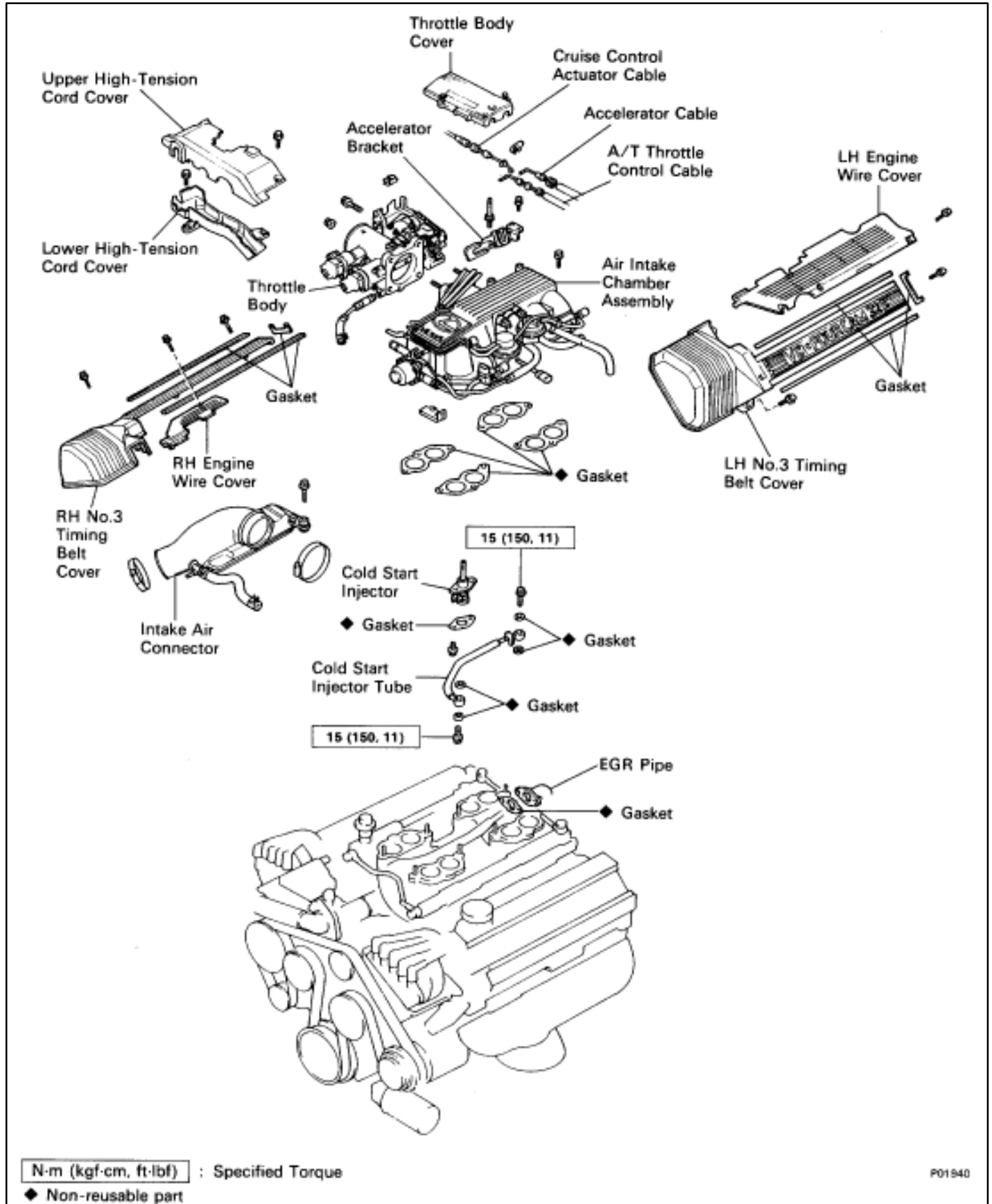
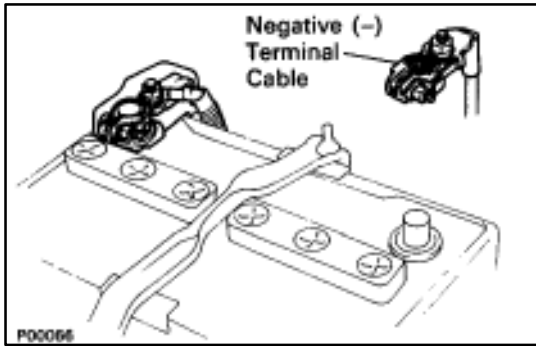


# Cold Start Injector



# COMPONENTS FOR REMOVAL AND INSTALLATION





## REMOVAL OF COLD START INJECTOR

(See Components on page [FI-26](#))

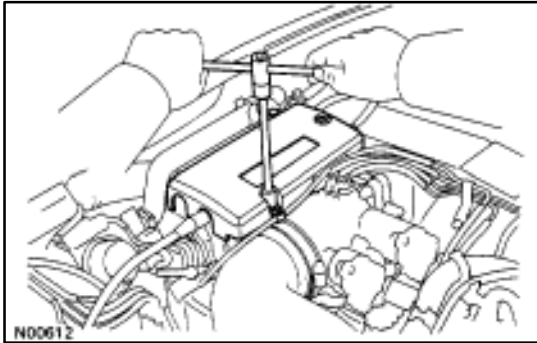
### 1. DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY

**CAUTION:** Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.

### 2. DRAIN ENGINE COOLANT (See page [CO-6](#))

### 3. REMOVE THROTTLE BODY COVER

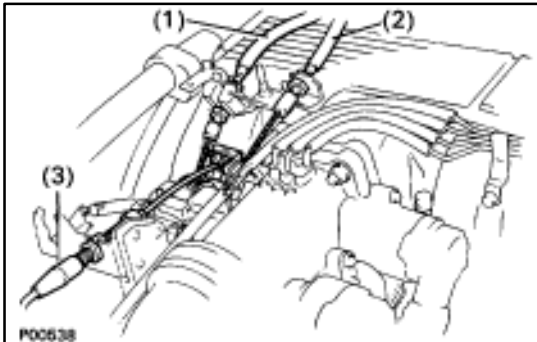
- Remove the mounting cap nut.
- Loosen the two bolts, and remove the throttle body cover.



### 4. DISCONNECT CONTROL CABLES FROM THROTTLE BODY

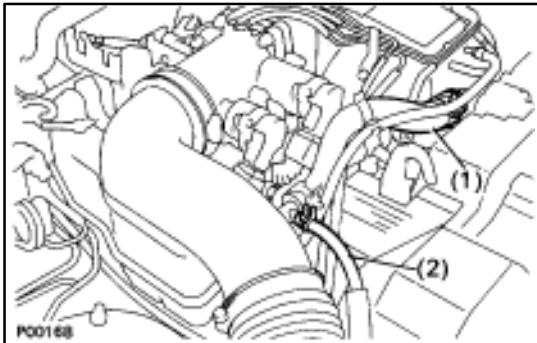
Disconnect the following cables:

- Accelerator cable
- A/T throttle control cable
- (w/ Cruise Control System)  
Cruise control actuator cable

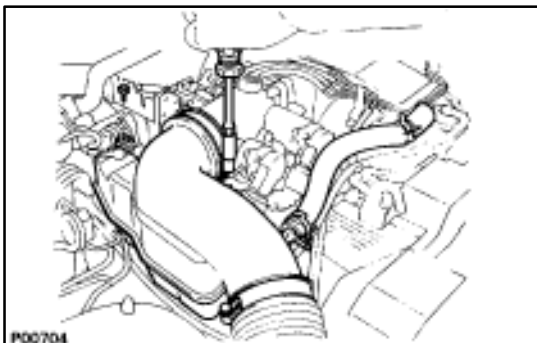


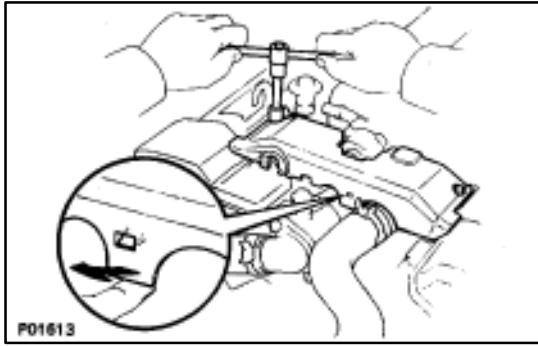
### 5. REMOVE INTAKE AIR CONNECTOR

- Disconnect the following hoses:
  - Air hose from ISC valve
  - Air hose (from PS air control valve) from intake air connector

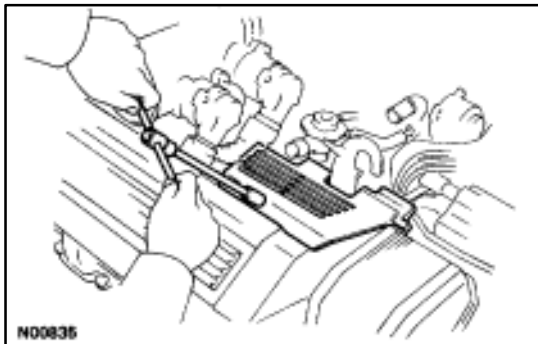


- Remove the bolt holding the intake air connector to the cylinder head cover.
- Loosen the two hose clamps.
- Disconnect the intake air connector from the throttle body and air cleaner hose, and remove the intake air connector.

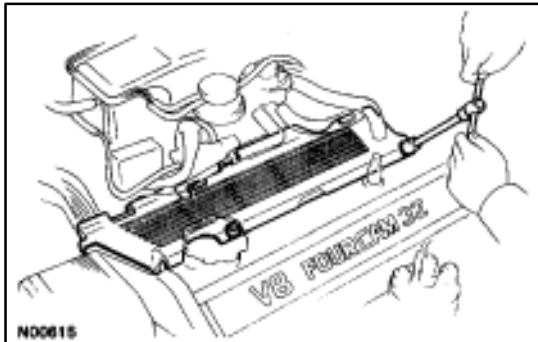


**6. REMOVE UPPER HIGH-TENSION CORD COVER**

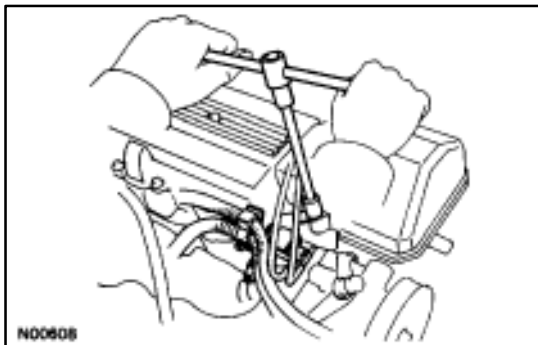
- (a) Remove the two mounting bolts.
- (b) Disconnect the front side claw groove of the cord cover from the claw of the lower cover, and remove the cord cover.

**7. REMOVE RH ENGINE WIRE COVER**

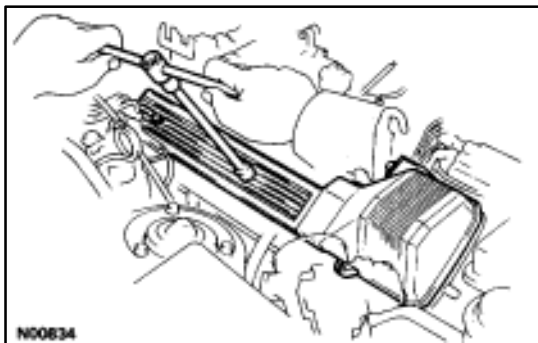
Remove the bolt and wire cover.

**8. REMOVE LH ENGINE WIRE COVER**

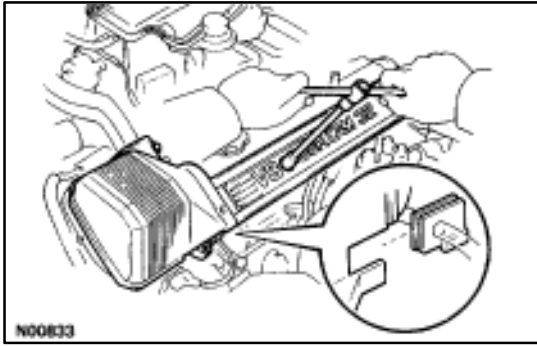
Remove the two bolts and wire cover.

**9. REMOVE VSV FOR EVAP SYSTEM**

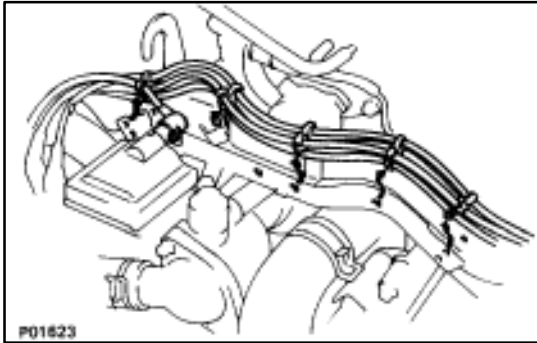
Remove the two bolts, and disconnect the VSV from cylinder head and timing belt cover.

**10. REMOVE RH NO.3 TIMING BELT COVER**

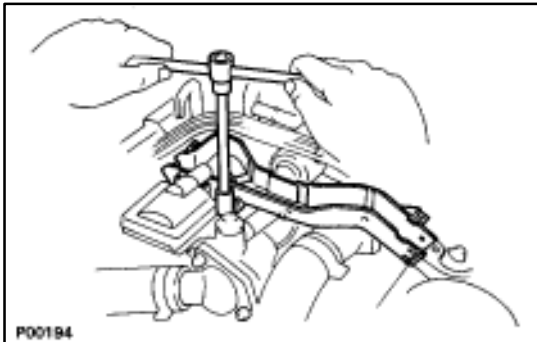
Remove the three bolts and timing belt cover.

**11. REMOVE LH NO.3 TIMING BELT COVER**

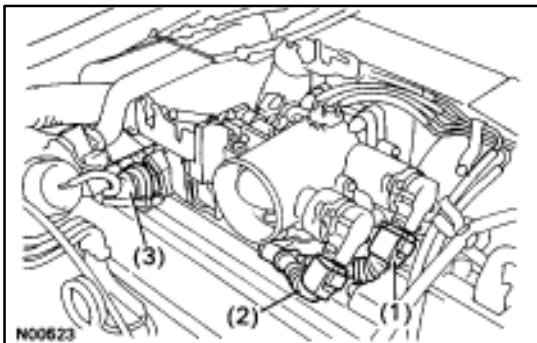
- (a) Remove the four mounting bolts.
- (b) Disconnect the cord grommet from the timing belt cover, and remove the timing belt cover.
- (c) Remove the cord grommet from the high-tension cord.

**12. REMOVE LOWER HIGH-TENSION CORD COVER**

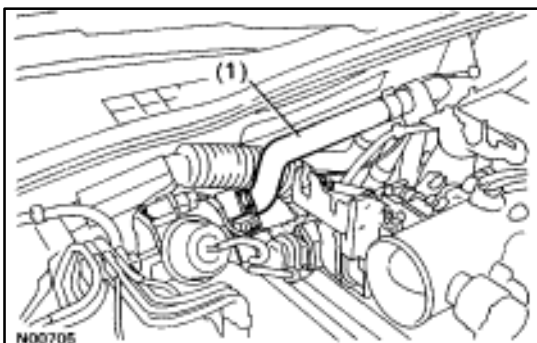
- (a) Disconnect the high-tension cord from the RH ignition coil.
- (b) Disconnect the high-tension cords from the high-tension cord cover.



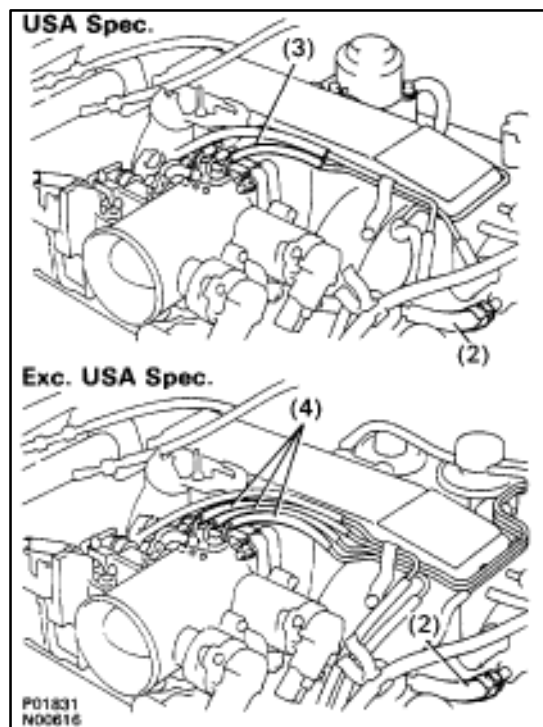
- (c) Remove the bolt and cord cover.

**13. REMOVE THROTTLE BODY**

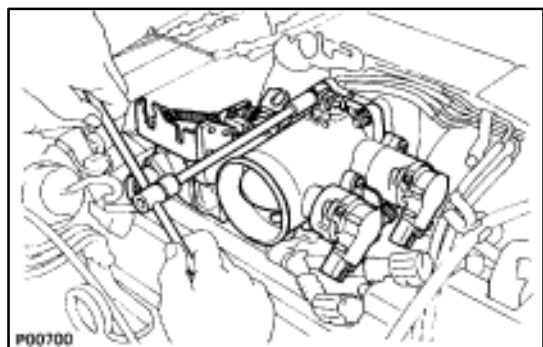
- (a) Disconnect the following connectors:
  - (1) Throttle position sensor connector
  - (2) (w/ TRAC)  
Sub-throttle position sensor connector
  - (3) (w/ TRAC)  
Sub-throttle actuator connector



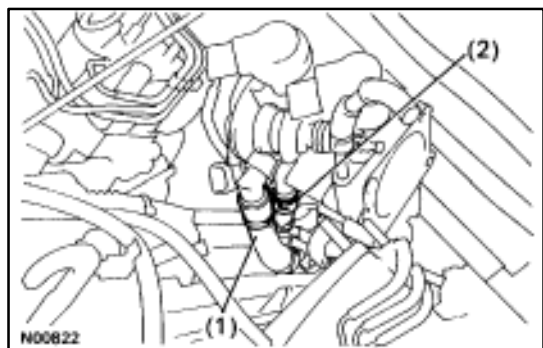
- (b) Disconnect the following hoses:
  - (1) Heater water hose from heater water valve



- (2) Water by-pass hose from ISC valve
- (3) (USA Spec.)  
Vacuum hose
- (4) (Exc. USA Spec.)  
Three vacuum hoses



- (c) Remove the two bolts and two nuts, disconnect the throttle body from the air intake chamber.

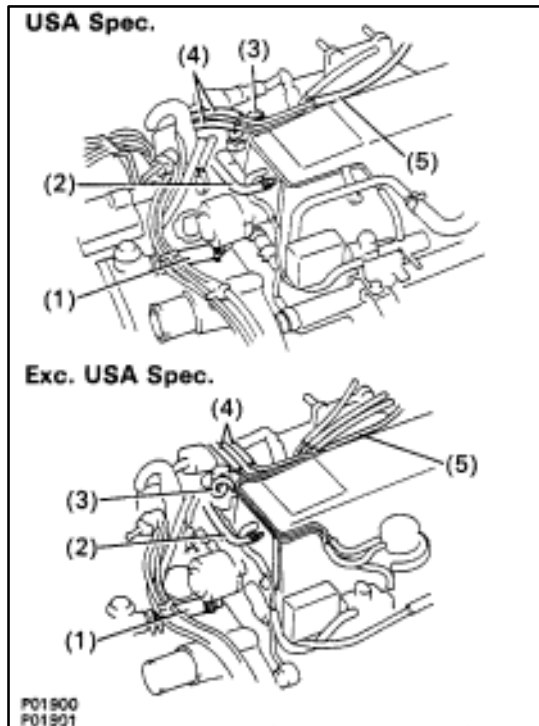


- (d) Disconnect the following hoses, and remove the throttle body:
  - (1) PCV hose from throttle body
  - (2) Water by-pass hose from throttle body
- (e) Remove the throttle body gasket.

#### 14. DISCONNECT CONNECTORS

Disconnect the following connectors:

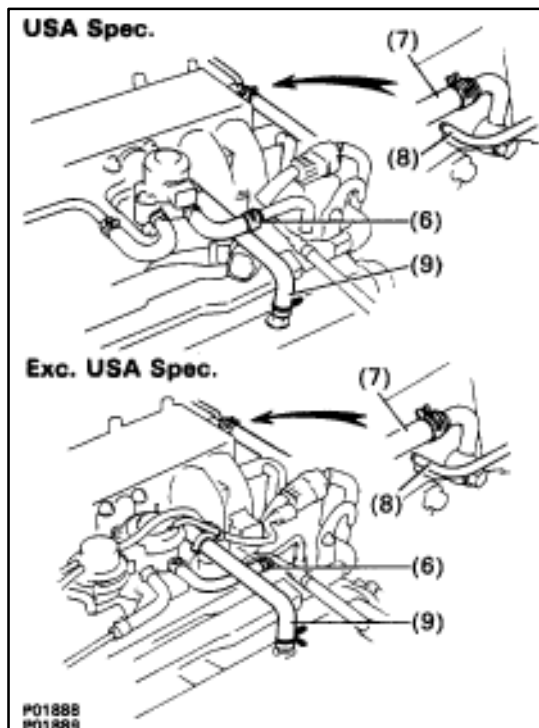
- Cold start injector connector
- ISC valve connector
- (USA Spec.)  
EGR valve connector for EGR system
- (Exc. USA Spec.)  
VSV connector for EGR
- VSV connector for fuel pressure control system



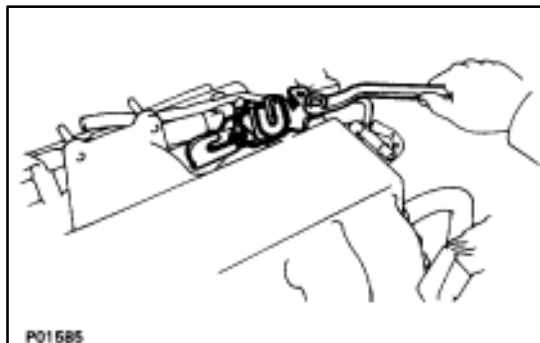
## 15. DISCONNECT HOSES

Disconnect the following hoses:

- (1) Water by-pass hose (from water inlet housing) from ISC valve
- (2) Vacuum hose (from PS air control valve) from air intake chamber
- (3) Vacuum sensing hose (from fuel pressure regulator) from vacuum pipe
- (4) Two vacuum hoses (from VSV for EVAP system) from vacuum pipe
- (5) Vacuum hose (from charcoal canister) from vacuum pipe

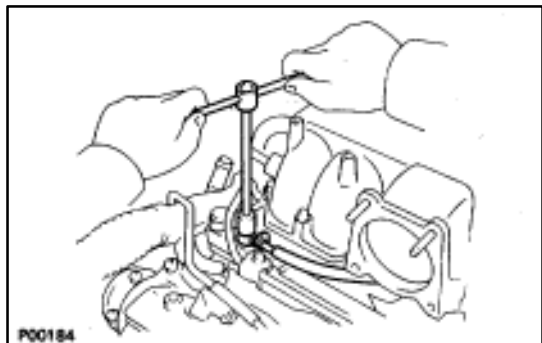


- (6) Water by-pass hose (from EGR valve) from water by-pass pipe
- (7) Vacuum hose (from brake booster) from air intake chamber
- (8) Vacuum hose (from VSV for heater water valve) from air intake chamber
- (9) PCV hose from LH cylinder head cover

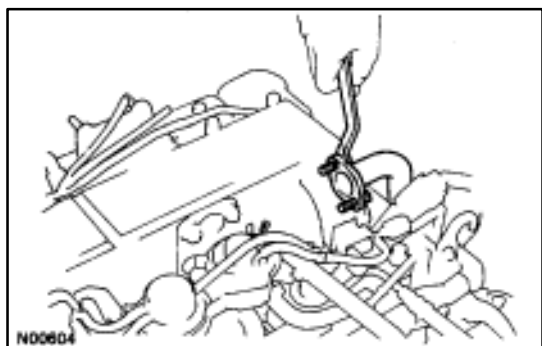


## 16. REMOVE AIR INTAKE CHAMBER

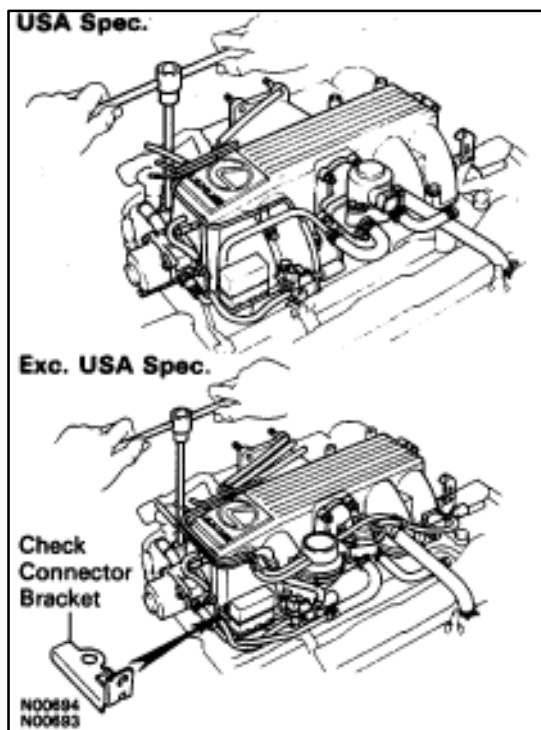
- (a) Remove the bolt, stud bolt and accelerator bracket.



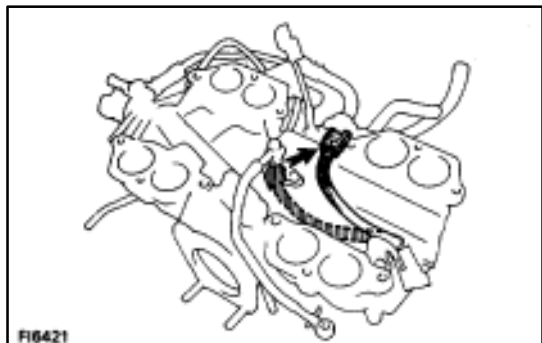
- (b) Remove the union bolt and two gaskets, and disconnect the cold start injector tube from the RH delivery pipe.



- (c) Remove the two bolts and gasket, and disconnect the EGR pipe from the air intake chamber.



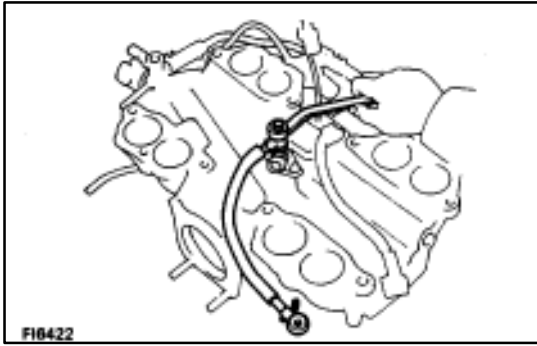
- (d) Remove the four bolts, eight nuts and A/T throttle cable bracket.
- (e) (USA Spec.)  
Disconnect the check ("DIAGNOSIS") connector bracket from the air intake chamber.
- (f) (Exc. USA Spec.)  
Remove the connector bracket from the check (DIAGNOSIS) connector
- (g) Remove the air intake chamber assembly and four gaskets.



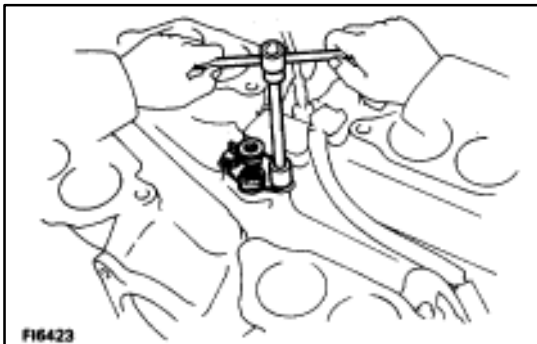
## 17. REMOVE COLD START INJECTOR FROM AIR INTAKE CHAMBER

- (a) Disconnect the cold start injector connector.

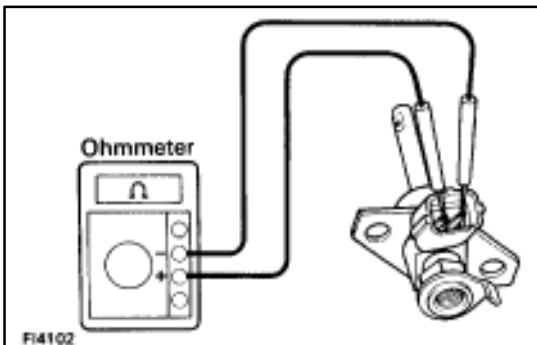




- (b) Remove the union bolt, two gasket, and cold start injector tube.



- (c) Remove the two bolts, cold start injector and gasket.



## INSPECTION OF COLD START INJECTOR

### 1. INSPECT RESISTANCE OF COLD START INJECTOR

- (a) Disconnect the cold start injector connector.  
 (b) Using an ohmmeter, measure the resistance between the terminals.

**Resistance: 2–4  $\Omega$**

If the resistance is not as specified, replace the cold start injector.

- (c) Reconnect the cold start injector connector.

### 2. INSPECT INJECTION OF COLD START INJECTOR

**CAUTION: Keep clear of sparks during the test.**

- (a) Install SST (two unions) to the injector and delivery pipe with four new gaskets and the union bolts.

SST 09268–41045 (09268–41080)

**Torque: 180 kg–cm (13 ft–lb, 18 N·m)**

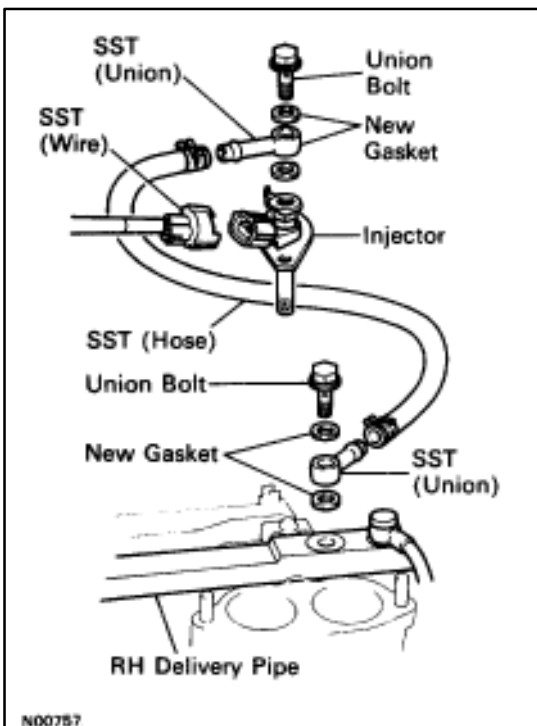
- (b) Connect SST (hose) to the unions.

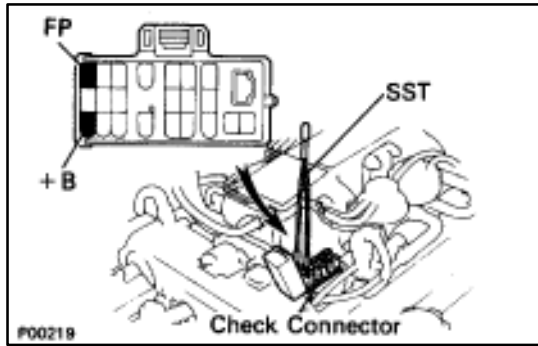
SST 09268–41045

- (c) Connect SST (wire) to the injector.

SST 09842–30055

- (d) Put a container under the injector.





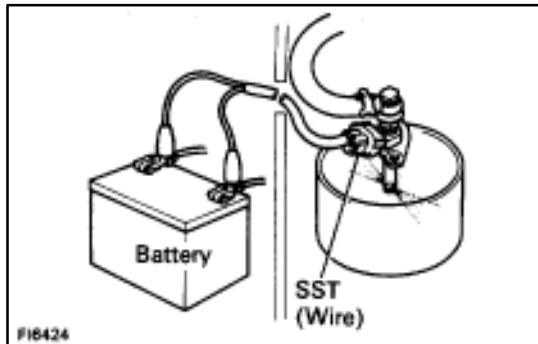
- (e) Using SST, connect terminals +B and FP of the check ("DIAGNOSIS") connector.

SST 09843-18020

- (f) Reconnect the cable to the negative (–) terminal of the battery.

- (g) Turn the ignition switch ON.

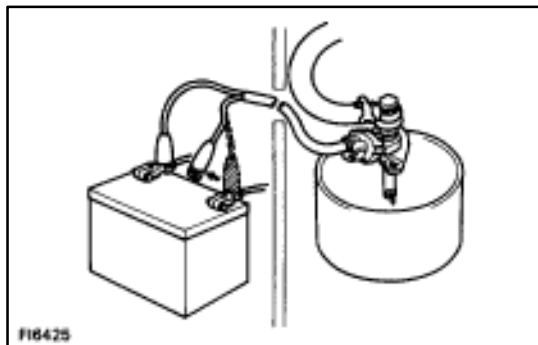
**NOTICE: Do not start the engine.**



- (h) Connect the test probes of the SST (wire) to the battery, and check that the fuel spray is as shown.

SST 09842-30055

**NOTICE: Perform this check within the shortest possible time.**



### 3. INSPECT LEAKAGE

- (a) In the condition above, disconnect the test probes of SST (wire) from the battery and check fuel leakage from the injector.

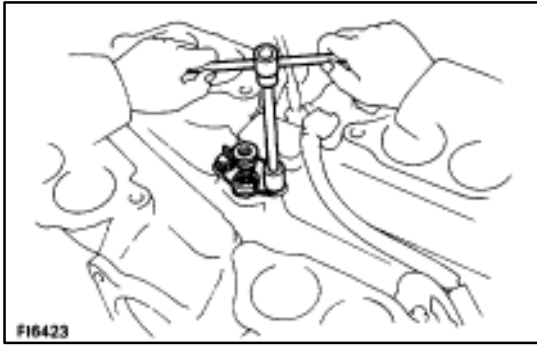
SST 09842-30055

**Fuel drop: One drop or less per minute**

- (b) Disconnect the cable from the negative (–) terminal of the battery.

- (c) Remove SST.

SST 09268-41045, 09842-30050 and 09843-18020



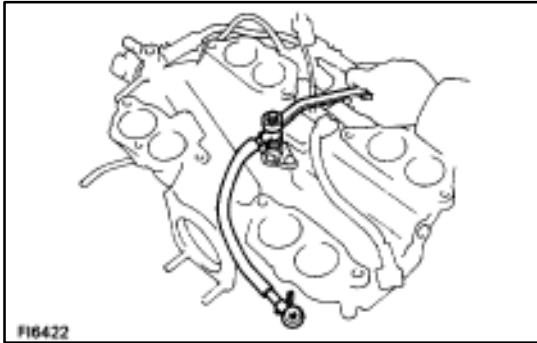
## INSTALLATION OF COLD START INJECTOR

(See Components on page [FI-26](#))

### 1. INSTALL COLD START INJECTOR

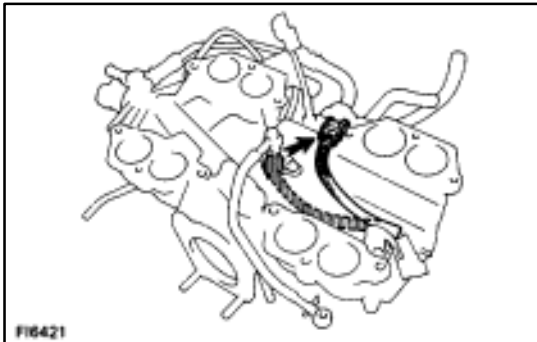
- (a) Install a new gasket and the injector with the two bolts.

**Torque: 7.8 N·m (80 kgf·cm, 69 in·lbf)**

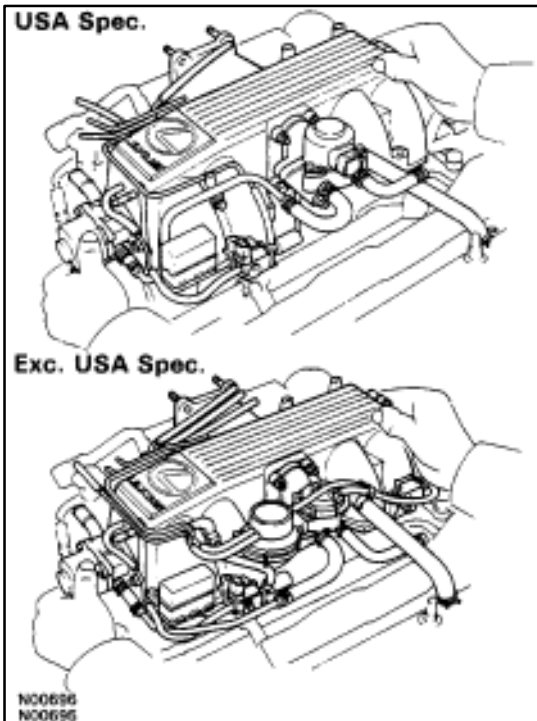


- (b) Install the cold start injector tube with a new gasket and the union bolt.

**Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)**

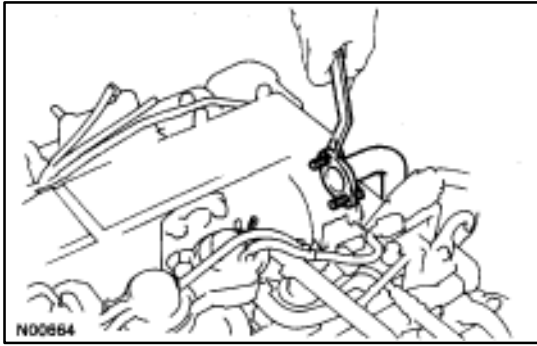


- (c) Connect the cold start injector connector.

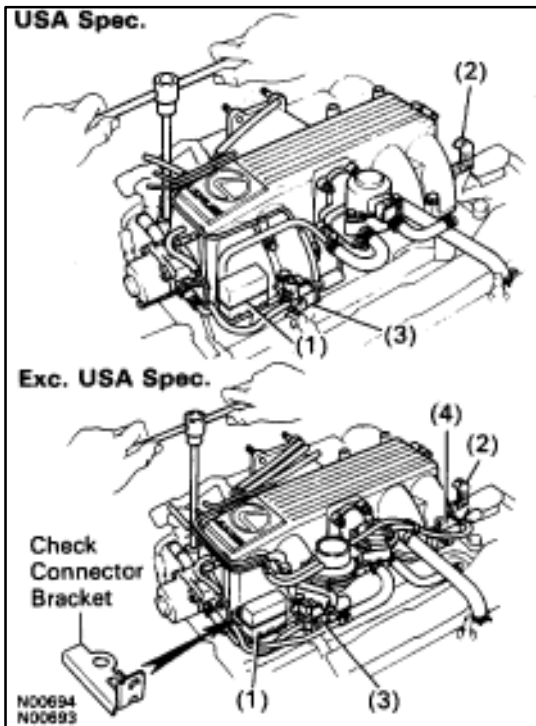


### 2. INSTALL AIR INTAKE CHAMBER

- (a) Place four new gaskets and the air intake chamber on the intake manifold.



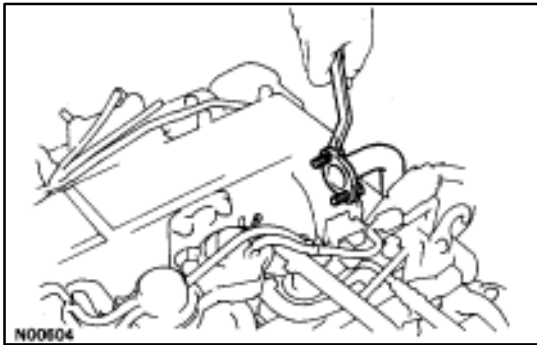
- (b) Temporarily install a new gasket and the EGR pipe to air intake chamber with the two bolt.



- (c) (Exc. USA Spec.)  
Install the connector bracket to check ("DIAGNOSIS") connector.
- (d) Install the air intake chamber and following parts with the four bolts and eight nuts:
- (1) Check ("DIAGNOSIS") connector
  - (2) A/T throttle cable bracket
  - (3) VSV for fuel pressure control system
  - (4) VSV for EGR system

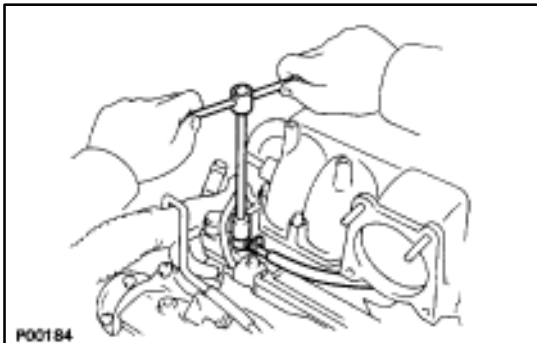
**Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)**

**HINT:** Use bolts 40 mm (1.57 in.) of length.



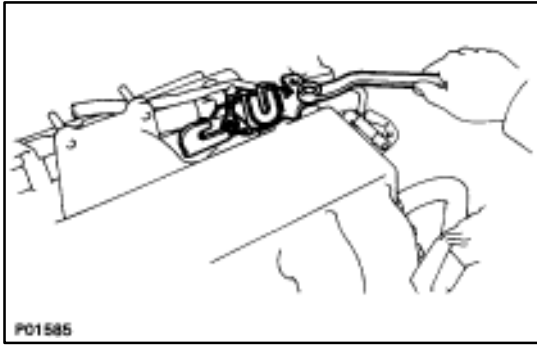
- (e) Tighten the bolt holding the EGR pipe to the air intake chamber.

**Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)**

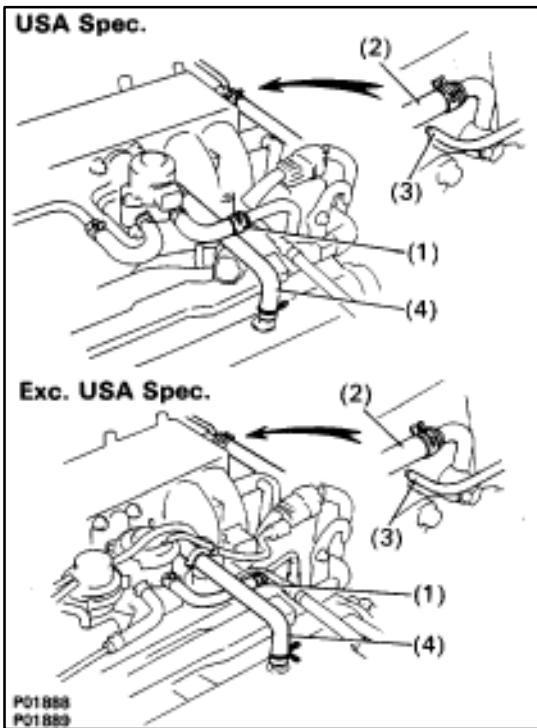


- (f) Connect the cold start injector tube to the RH delivery pipe with two new gaskets and union bolt.

**Torque: 15 N·m (150 kgf·cm, 11 ft·lbf)**



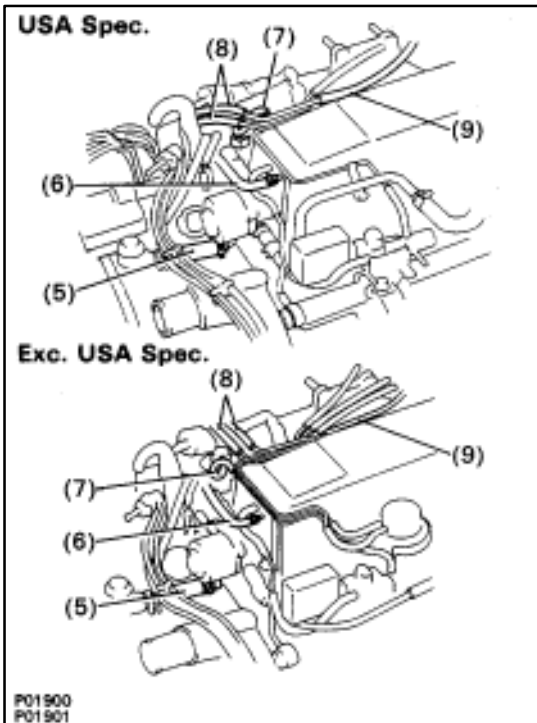
- (g) Install the accelerator bracket with the bolt and stud bolt.



### 3. CONNECT HOSES

Connect the following hoses:

- (1) Water by-pass hose (from EGR valve) to water by-pass pipe
- (2) Vacuum hose (from brake booster) to air intake chamber
- (3) Vacuum hose (from VSV for heater water valve) to air intake chamber
- (4) PCV hose to LH cylinder head cover



- (5) Water by-pass hose (from water inlet housing) to ISC valve
- (6) Vacuum hose (from PS air control valve) to air intake chamber
- (7) Vacuum sensing hose (from fuel pressure regulator) to vacuum pipe
- (8) Two vacuum hoses (from VSV for EVAP system) to vacuum pipe
- (9) Vacuum hose (from charcoal canister) to vacuum pipe

#### 4. CONNECT CONNECTORS

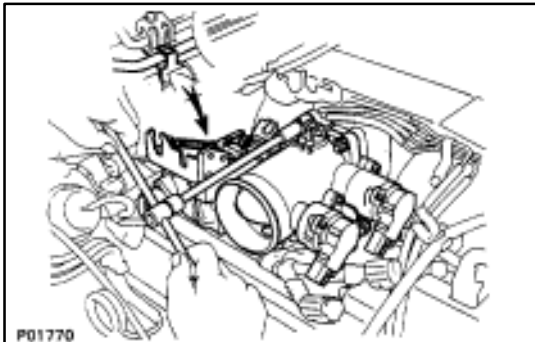
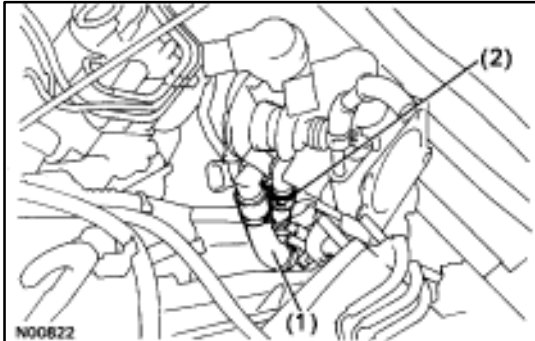
Connect the following connectors:

- Cold start injector connector
- ISC valve connector
- (USA Spec.)  
EGR valve connector
- (Exc. USA Spec.)  
VSV connector for EGR system
- SV connector for fuel pressure control system

#### 5. INSTALL THROTTLE BODY

(a) Connect the following hoses:

- (1) PCV hose to throttle body
- (2) Water by-pass hose to throttle body

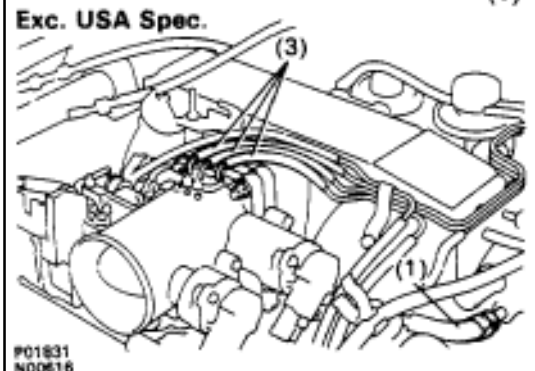
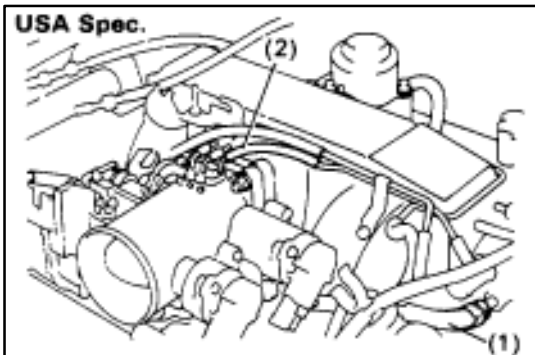


(b) Install a new gasket and throttle body with the two bolts and two nuts.

**Torque: 18 N·m (185 kgf·cm, 13 ft·lbf)**

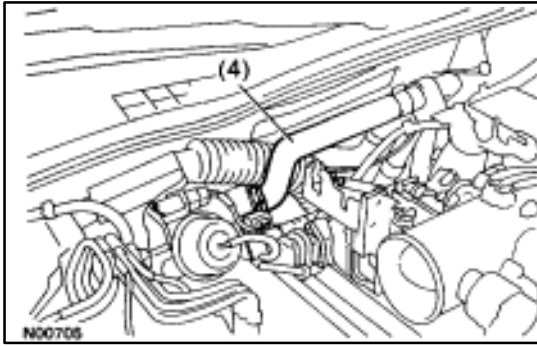
**HINT:** Use bolts 40 mm (1.57 in.) in length.

(c) Install the water by-pass pipe (from rear water bypass joint) to the clamp on the engine wire cover.

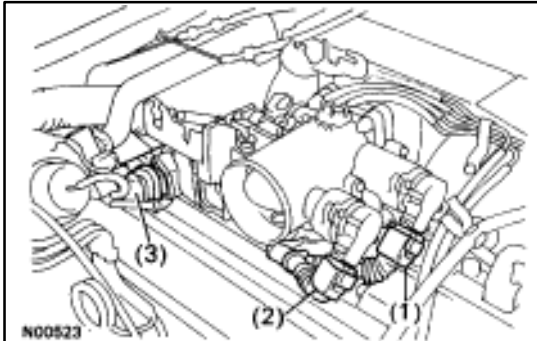


(d) Connect the following hoses:

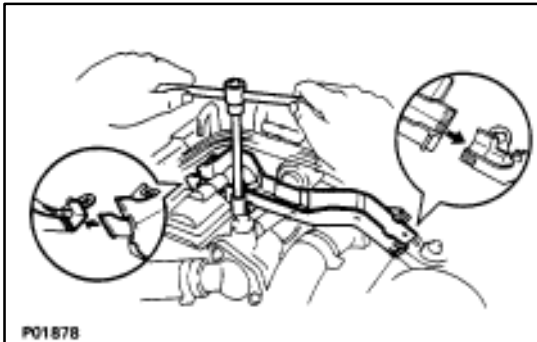
- (1) Water by-pass hose to the ISC valve
- (2) (USA Spec.)  
Vacuum hose to throttle body
- (3) (Exc. USA Spec.)  
Three vacuum hoses to throttle body



(4) Heater water hose to heater water valve

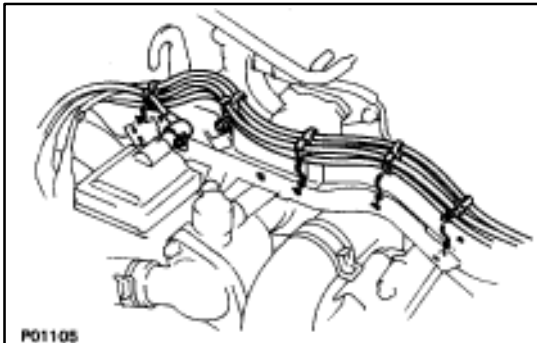


- (e) Connect the following connectors:
- (1) Throttle position sensor connector
  - (2) (w/ TRAC)  
Sub-throttle position sensor connector
  - (3) (w/ TRAC)  
Sub-throttle actuator connector

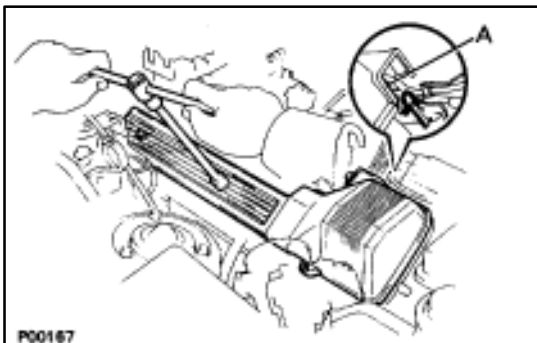


## 5. INSTALL LOWER HIGH-TENSION CORD COVER

- (a) Connect the end portions of the high-tension cord to the cord clamps
- (b) Install the high-tension cord cover with the bolt.

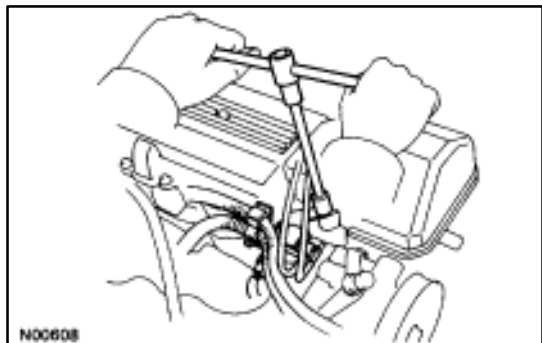


- (c) Install the clamps on the high-tension cords to the high-tension cord cover.
- (d) Connect the high-tension cord to the RH ignition coil.



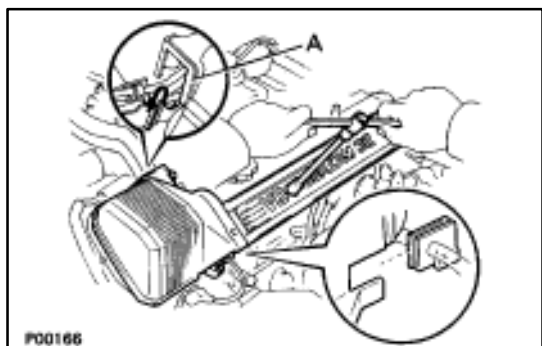
## 7. INSTALL RH NO.3 TIMING BELT COVER

- (a) Install the three gaskets to the timing belt cover.
- (b) Fit portion A of the timing belt cover, matching it with the lower high-tension cord cover.
- (c) Install the timing belt cover with the three bolts.



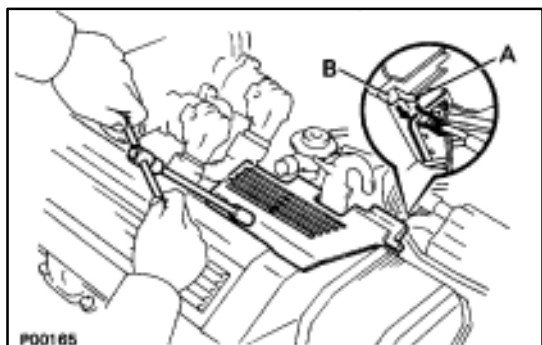
## 8. INSTALL VSV FOR EVAP SYSTEM

Install the VSV with the two bolts.



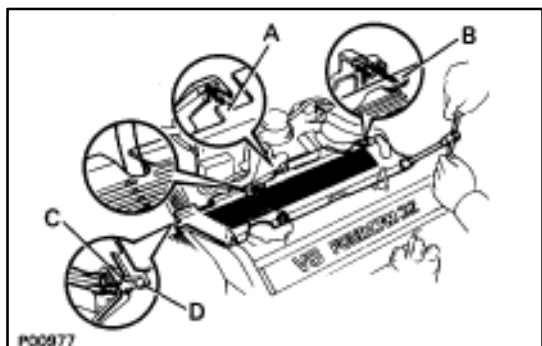
## 9. INSTALL LH NO.3 TIMING BELT COVER

- (a) Install the three gaskets to the timing belt cover.
- (b) Install the cord grommet to the high-tension cord.
- (c) Install the cord grommet to the timing belt cover.
- (d) Fit portion A of the timing belt cover, matching it with the lower high-tension cord cover.
- (e) Install the timing belt cover with the four bolts.



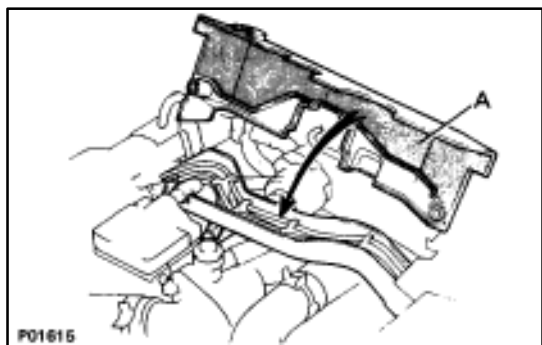
## 10. INSTALL RH ENGINE WIRE COVER

- (a) Fit portions A and B of the engine wire cover, matching them with the lower high-tension cord cover and No.3 timing belt cover.
- (d) Install the engine wire cover with the bolt.



## 11. INSTALL LH ENGINE WIRE COVER

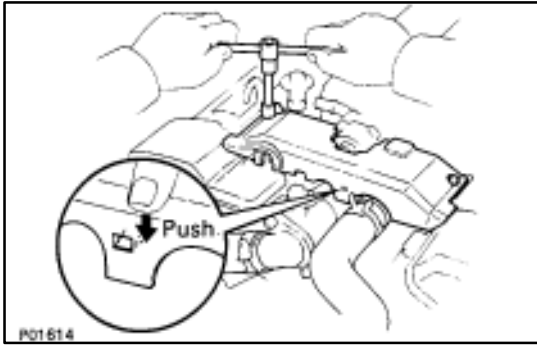
- (a) Connect portions A and B engine wire cover to the wire brackets.
- (b) Set the VSV (for fuel pressure control system) wire in original position.
- (c) Fit portions C and D of the engine wire cover, matching them with the lower high-tension cord cover and No.3 timing belt cover.
- (d) Install the engine wire cover with the two bolts.



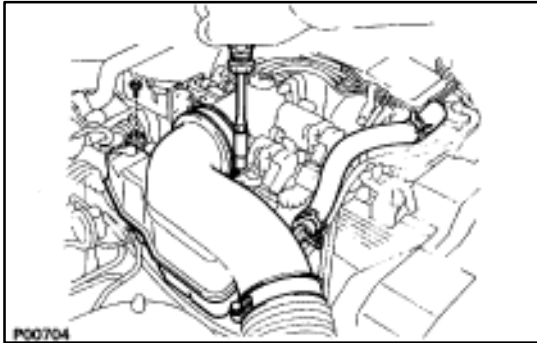
## 12. INSTALL UPPER HIGH-TENSION CORD COVER

- (a) Fit portion A of the upper high-tension cover, matching it with the top of the lower high-tension cord cover.



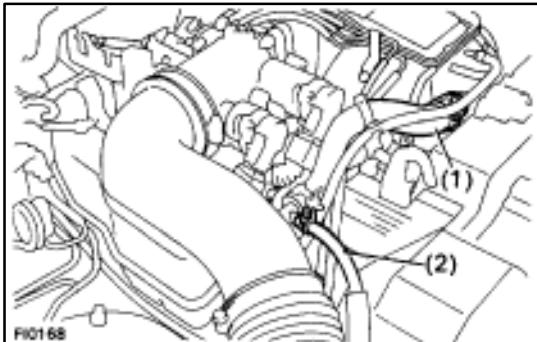


- (b) Push the front side of the high-tension cord cover, and connect the front side claw groove of the upper high-tension cord cover to the claw of the lower high-tension cord cover.
- (c) Install the upper high-tension cord cover with the two bolts.

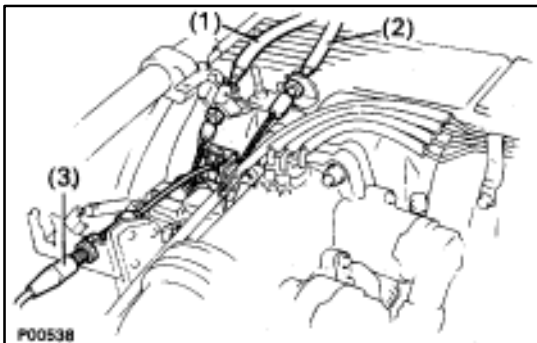


### 13. INSTALL INTAKE AIR CONNECTOR

- (a) Connect the end portions of the intake air connector to the throttle body and air cleaner hose.
- (b) Tighten the two hose clamps.
- (c) Install the bolt holding the intake air connector to the cylinder head cover.



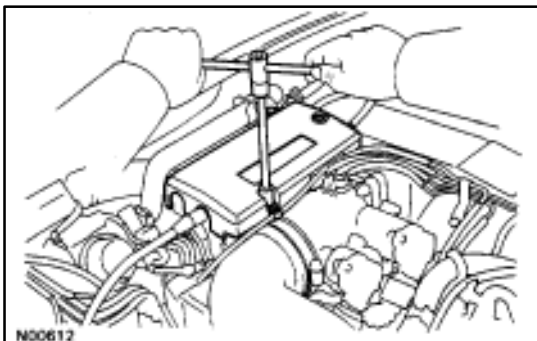
- (d) Connect the following hoses:
  - (1) Air hose to ISC valve
  - (2) Air hose (from PS air control valve) to intake air connector



### 14. CONNECT CONTROL CABLES TO THROTTLE BODY

Connect the following cables:

- (1) Accelerator cable
- (2) A/T throttle control cable
- (3) (w/ Cruise Control System)  
Cruise control actuator cable



### 15. INSTALL THROTTLE BODY COVER

Install the throttle body cover and hose clamp with the two bolts and cap nut.

### 16. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY

### 17. FILL WITH ENGINE COOLANT (See page [CO-7](#))

### 18. CHECK FOR FUEL LEAKS (See page [FI-16](#))