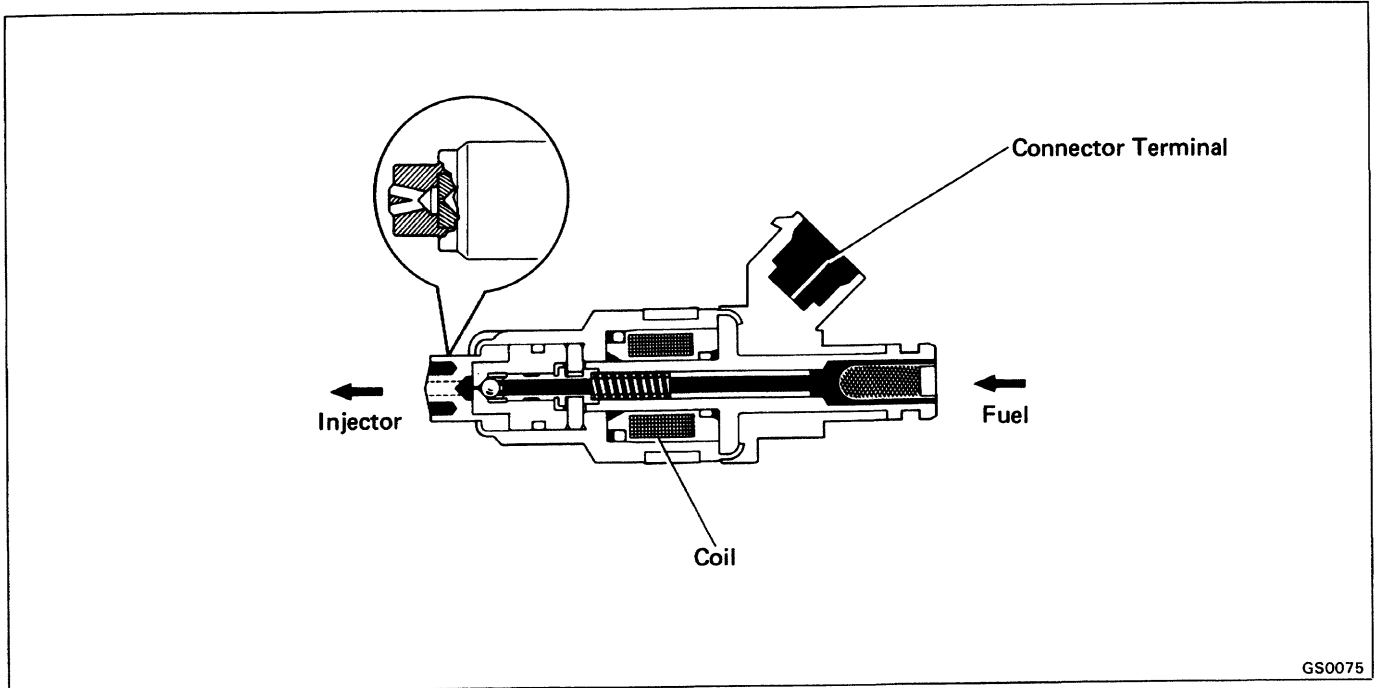


# Injectors



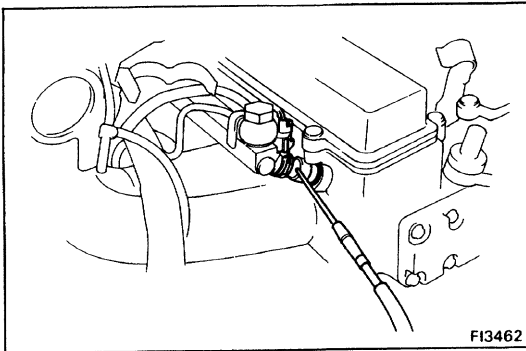
GS0075

## ON-VEHICLE INSPECTION

### 1. INSPECT INJECTOR OPERATION

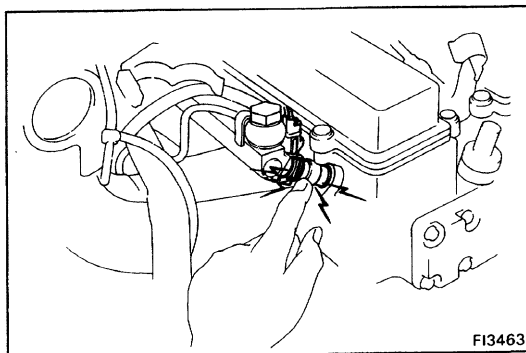
Check operation sound from each injector.

- (a) With the engine running or cranking, use a sound scope to check that there is normal operating noise in proportion to engine rpm.



F13462

- (b) If you have no sound scope, you can check the injector transmission operation with your finger. If no sound or an unusual sound is heard, check the wiring connector, injector or injection signal from the ECU.



F13463

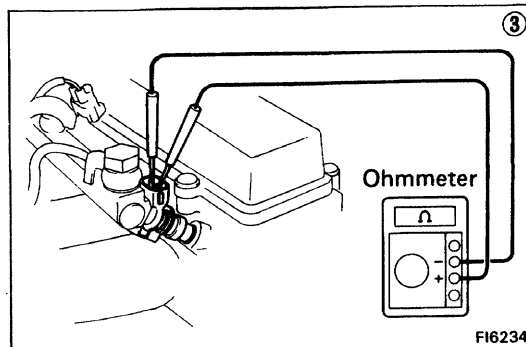
### 2. INSPECT INJECTOR RESISTANCE

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

**Resistance: Approx. 13.8  $\Omega$**

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

- (c) Reconnect the injector connector.



F16234

## REMOVAL OF INJECTORS

1. DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY

2. REMOVE THROTTLE BODY (See page FI-70)

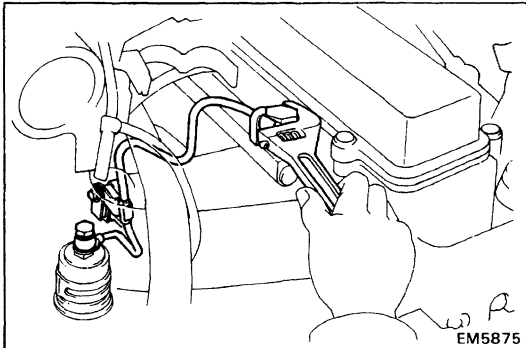
3. REMOVE ISC VALVE (See page FI-73)

4. DISCONNECT INJECTOR CONNECTORS

5. DISCONNECT COLD START INJECTOR TUBE FROM DELIVERY PIPE (See page FI-54)

6. REMOVE NO. 1 FUEL PIPE

- (a) Disconnect the EGR VSV connector.
- (b) Remove the union bolt and two gaskets from the delivery pipe.
- (c) Remove the union bolt and two gaskets from the fuel filter.
- (d) Remove the clamp bolt and No.1 fuel pipe with VSV.



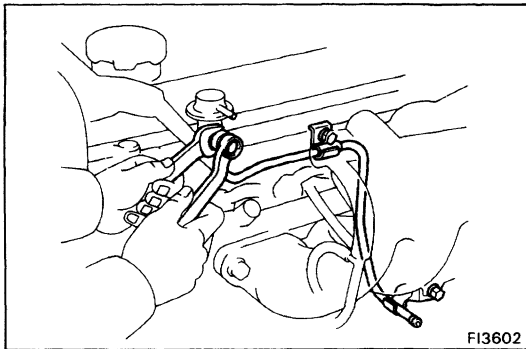
EM5875

7. DISCONNECT NO.3 PCV HOSE

8. DISCONNECT VACUUM SENSING HOSE

9. REMOVE NO.2 FUEL PIPE

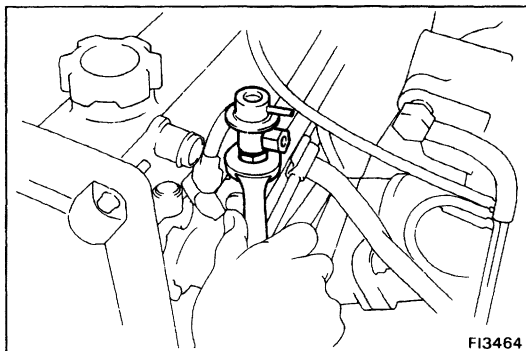
- (a) Disconnect the fuel hose from the No.2 fuel pipe.
- (b) Remove the union bolt and two gaskets from the pressure regulator.
- (c) Remove the clamp bolts and No. 2 fuel pipe.



FI3602

10. REMOVE PRESSURE REGULATOR

Loosen the lock nut and remove the pressure regulator.



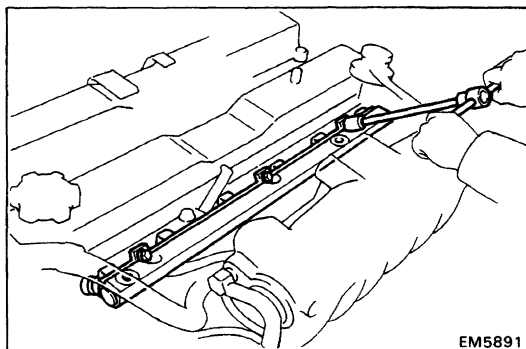
FI3464

11. REMOVE DELIVERY PIPE WITH INJECTORS

- (a) Remove the three bolts and delivery pipe together with the six injectors.

**NOTICE:** Be careful not to drop the injectors when removing the delivery pipe.

- (b) Pull out the six injectors from the delivery pipes.
- (c) Remove the six insulators and three spacers from the cylinder head.

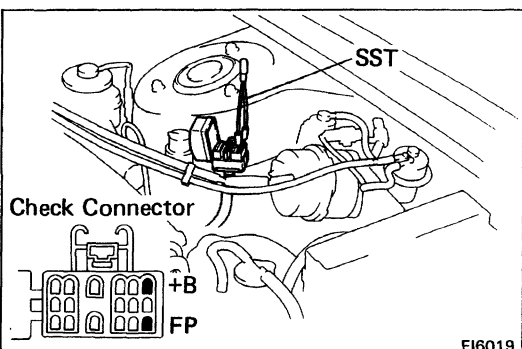
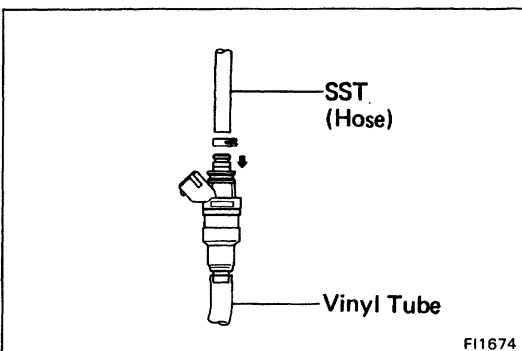
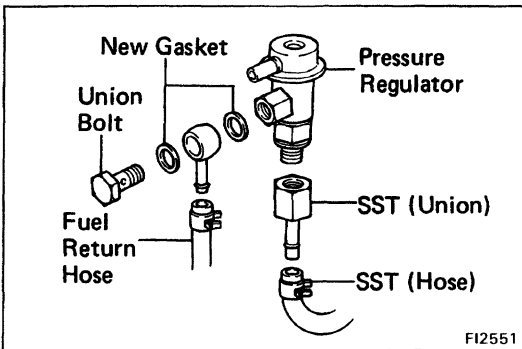
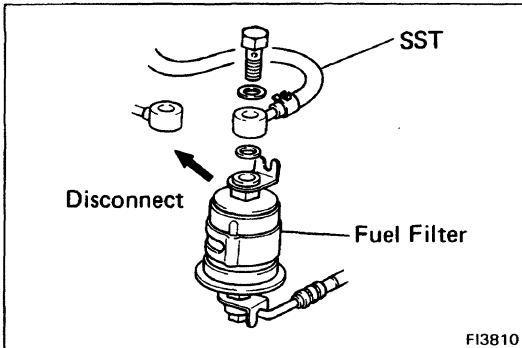
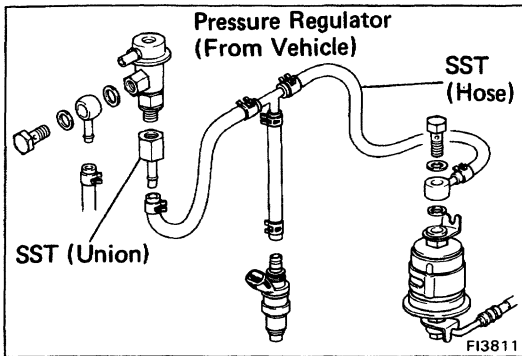


EM5891

# INSPECTION OF INJECTORS

## 1. INSPECT INJECTOR INJECTION

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

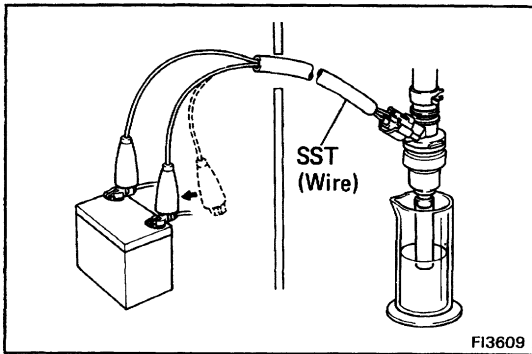


- (a) Disconnect the No.1 fuel pipe from the fuel filter outlet.
- (b) Connect SST (union and hose) to the fuel filter outlet with new gaskets and the union bolt.  
SST 09268-41045 (90405-09015)  
HINT: Use the vehicle's fuel filter.

- (c) Remove the pressure regulator. (See page FI-57)
- (d) Connect the fuel return hose and SST (hose) to the pressure regulator with SST (union), new gaskets and union bolt.  
SST 09268-41045 (90405-41080)
- (e) Connect SST (hose) to the pressure regulator with SST (union).  
SST 09268-41045 (09268-52010)

- (f) Connect SST (hose) to the injector.  
SST 09268-41045
- (g) Put the injector into the graduated cylinder.  
HINT: Install a suitable vinyl hose onto the injector to prevent gasoline from splashing out.
- (h) Reconnect the battery negative (-) cable.
- (i) Turn the ignition switch ON.  
HINT: Do not start the engine.

- (j) Using SST, connect terminals + B and FP of the check connector.  
SST 09843-18020



F13609

- (k) Connect SST (wire) to the injector and battery for 15 seconds, and measure the injection volume with a graduated cylinder.

Test each injector two or three times.

SST 09842-30070

**Volume: 69 – 85 cc (4.2 – 5.2 cu in.) per 15 sec.**

**Difference between each injector:**

**9 cc (0.5 cu in.) or less**

If the injection volume is not as specified, replace the injector.

**2. INSPECT LEAKAGE**

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

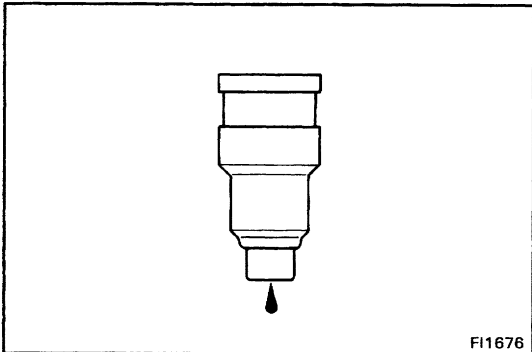
SST 09842-30070

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

- (b) Disconnect the battery negative (-) cable.

- (c) Remove SST.

SST 09268-41045 (09268-52010, 90405-09015) and 09843-18020

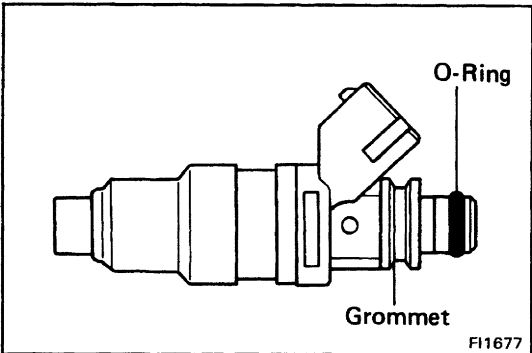


F11676

**INSTALLATION OF INJECTORS**

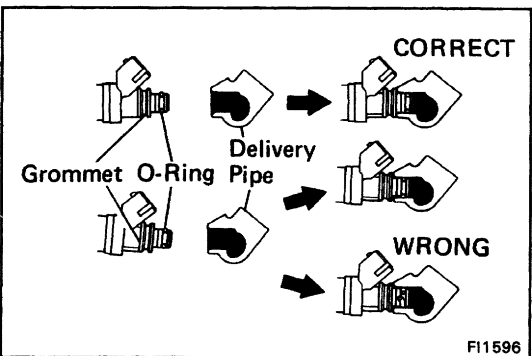
**1. INSTALL INJECTORS AND DELIVERY PIPE**

- (a) Install a new grommet to the injector.
- (b) Apply a light coat of gasoline to a new O-ring and install it to the injector.



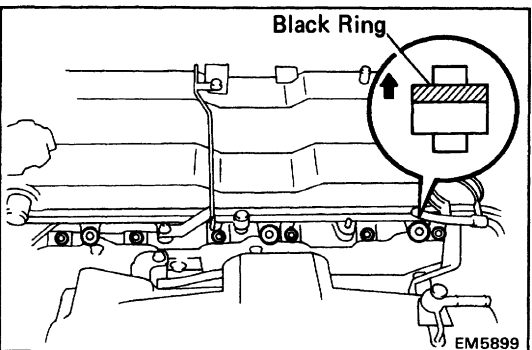
F11677

- (c) While turning the injector left and right, install it to the delivery pipes. Install the six injectors.

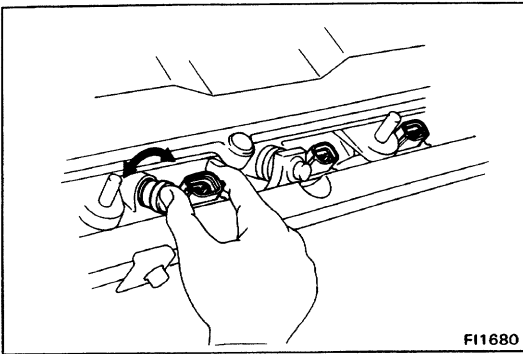


F11596

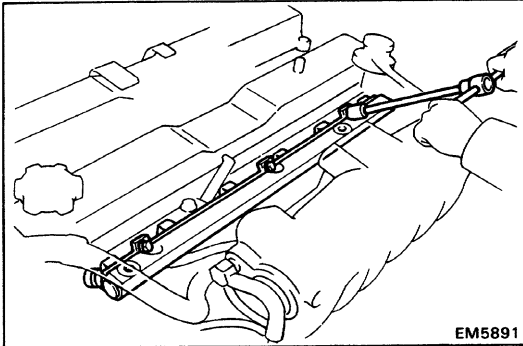
- (d) Place the six insulators in position on the cylinder head.
- (e) Install the black rings on the upper portion of each of the three spacers. Then install the spacers on the delivery pipe mounting hole of the cylinder head.



EM5899

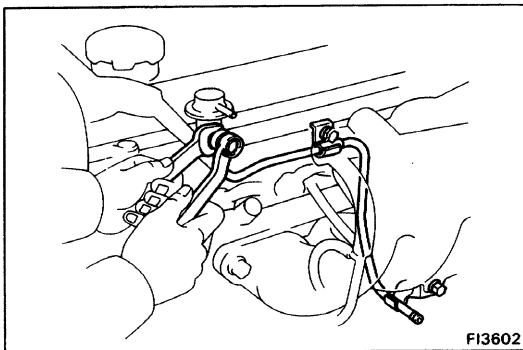


- (f) Place the injectors together with the delivery pipe in position on the cylinder head.
- (g) Check that the injectors rotate smoothly.  
HINT: If injectors do not rotate smoothly, the probable cause is incorrect installation of O-rings. Replace the O-rings.
- (h) Position the injector connector upward.



- (i) Install and torque the three bolts.  
**Torque: 180 kg-cm (13 ft-lb, 18 N -m)**

### 3. INSTALL PRESSURE REGULATOR (See page [FI-58](#))

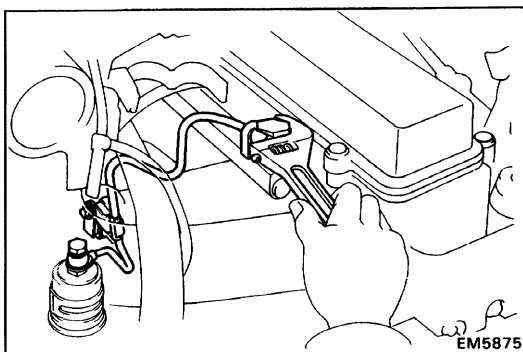


### 4. INSTALL NO.2 FUEL PIPE

- (a) Install the No.2 fuel pipe with the two clamp bolts.
- (b) Connect the pipe with the union and new gaskets.  
Torque the union bolt.  
**Torque: 250 kg-cm (18 ft-lb, 25 N-m)**
- (c) Connect the fuel return hose.

### 5. CONNECT NO.3 PCV HOSE

### 6. CONNECT VACUUM SENSING HOSE



### 7. INSTALL NO.1 FUEL PIPE

- (a) Install the No. 1 fuel pipe with VSV with the clamp bolt.
- (b) Connect the pipe to the fuel filter with the union bolt and new gaskets. Torque the union bolt.  
**Torque: 300 kg-cm (22ft-lb, 29 N-m)**
- (c) Connect the pipe to the delivery pipe with the union bolt and new gaskets. Torque the union bolt.  
**Torque: 320 kg-cm (23 ft-lb, 31 N-m)**

### 8. CONNECT COLD START INJECTOR TUBE TO DELIVERY PIPE (See page [FI-56](#))

### 9. CONNECT INJECTOR CONNECTORS

### 10. INSTALL ISC VALVE (See page [FI-74](#))

### 11. INSTALL THROTTLE BODY (See page [FI-72](#))

### 12. FILL WITH COOLANT (See page [CO-5](#))

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