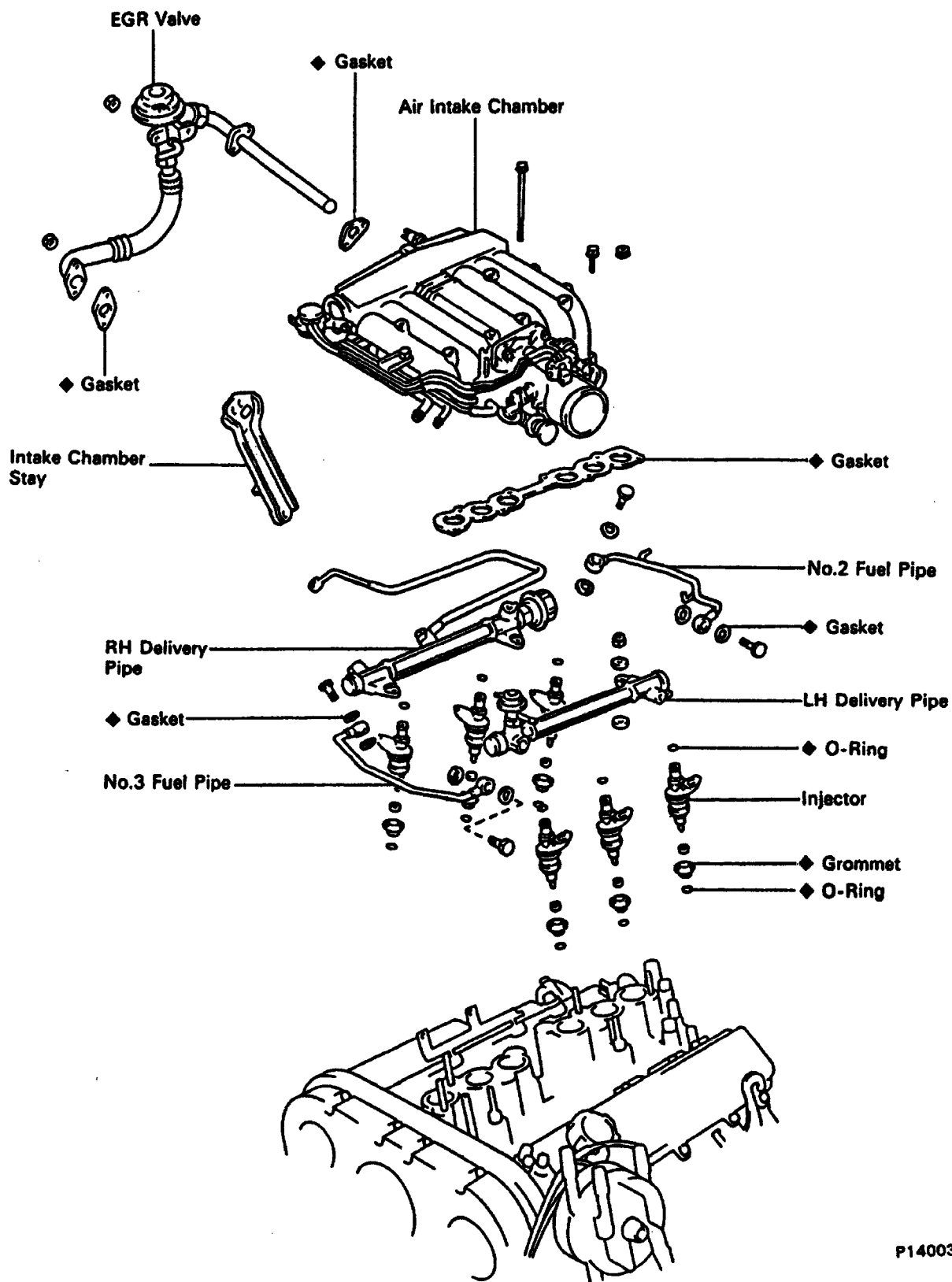


INJECTOR

COMPONENTS FOR REMOVAL AND INSTALLATION



P14003

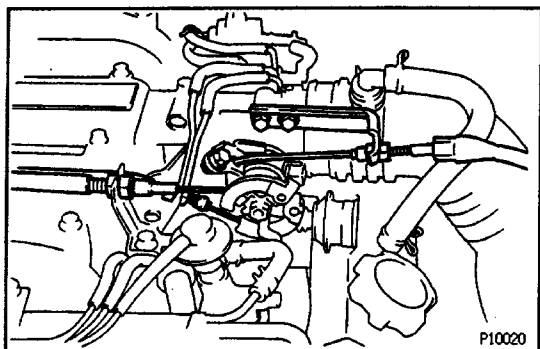
◆ Non-reusable part

Z14079

INJECTORS REMOVAL

(See Components for Removal and Installation)

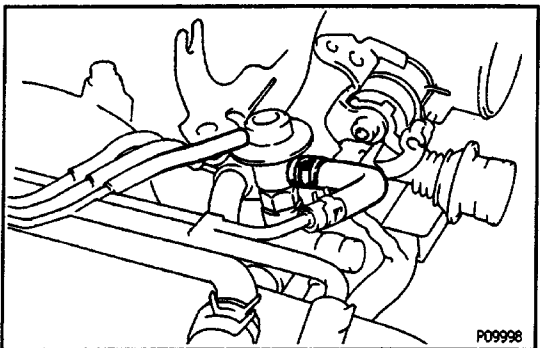
1. DRAIN ENGINE COOLANT



2. DISCONNECT THESE CABLES:

- (a) w/ Cruise control:
Actuator cable with bracket
- (b) Accelerator cable
- (c) A/T:
Throttle cable

3. DISCONNECT AIR CLEANER HOSE



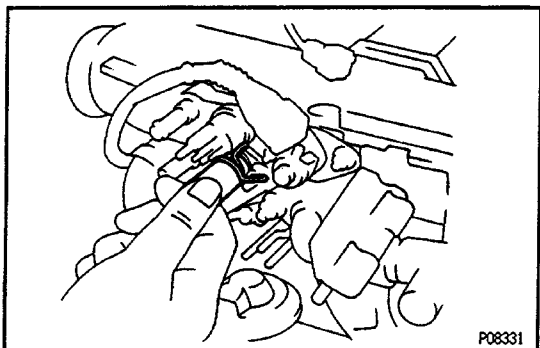
4. DISCONNECT VACUUM SENSING HOSE

5. DISCONNECT FUEL RETURN HOSE

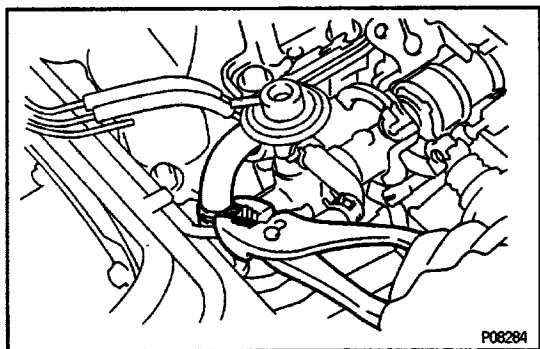
- (a) Place a suitable container or shop towel under the fuel pressure regulator.
- (b) Disconnect the fuel return hose from the fuel pressure regulator.

6. REMOVE AIR INTAKE CHAMBER

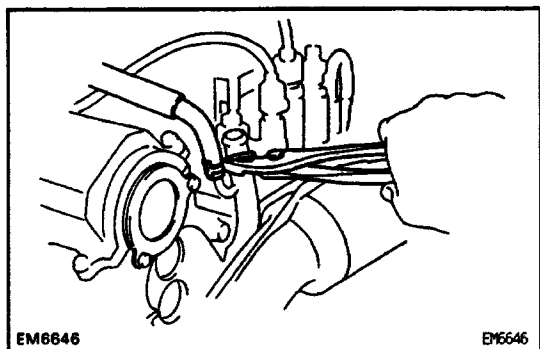
- (a) Disconnect the throttle position sensor connector.
- (b) Disconnect the canister vacuum hose from the throttle body.



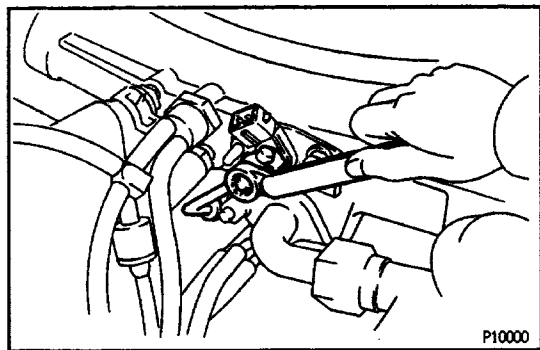
- (c) Disconnect the PCV hose from the union.



- (d) Disconnect the No.4 water bypass hose from the union of the intake manifold.

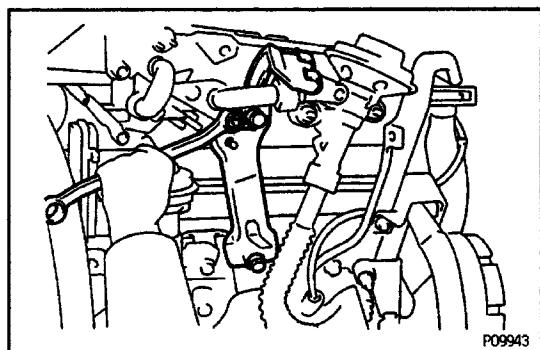


- (e) Disconnect the No.5 water bypass hose from the water bypass pipe.

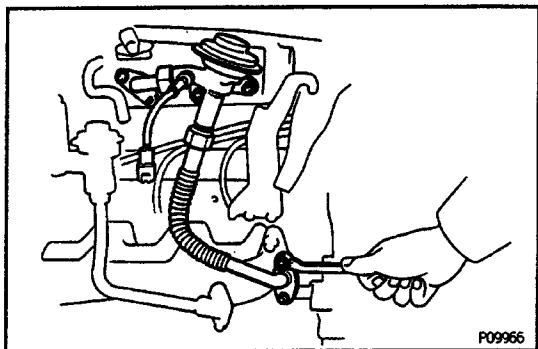


- (f) Disconnect the cold start injector connector.
(g) Disconnect the vacuum hose from the gas filter.
(h) Remove the union bolt, 2 gaskets and cold start injector tube.

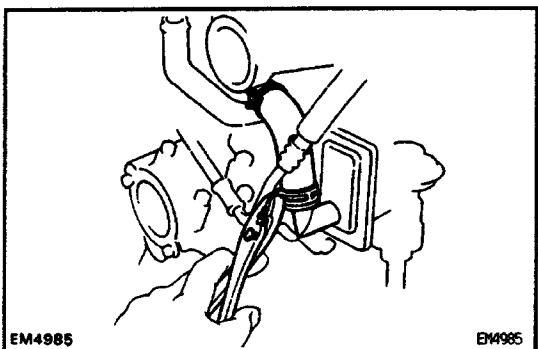
- (i) Disconnect the EGR gas temperature connector.
(j) Disconnect the EGR vacuum hoses from the air pipe and EGR vacuum modulator.



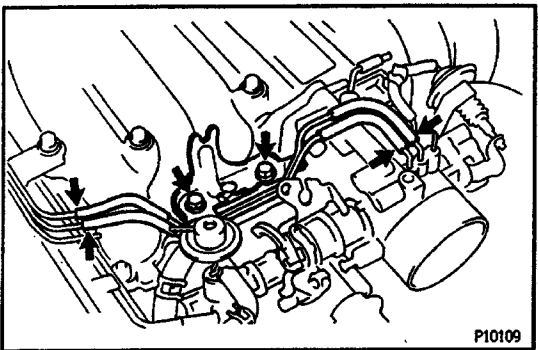
- (k) Remove the nut, 2 bolts, intake chamber stay and throttle cable bracket.



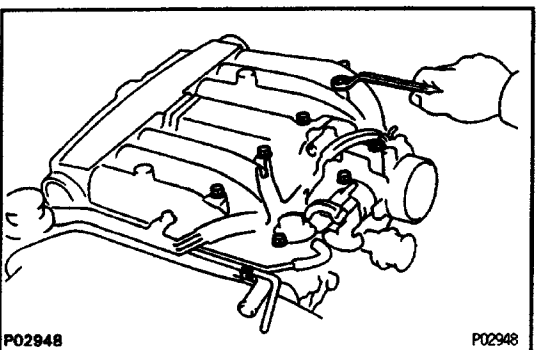
- (l) Remove the 5 nuts, EGR valve with the pipes and 2 gaskets.



- (m) Disconnect the No.1 air hose from the PAIR reed valve.



- (n) Disconnect the 4 vacuum hoses from air pipes.
(o) Remove the 2 bolts and accelerator cable bracket.



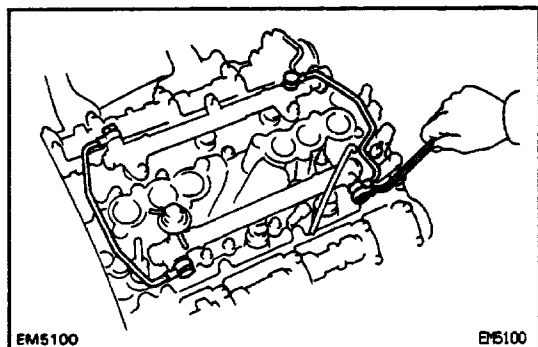
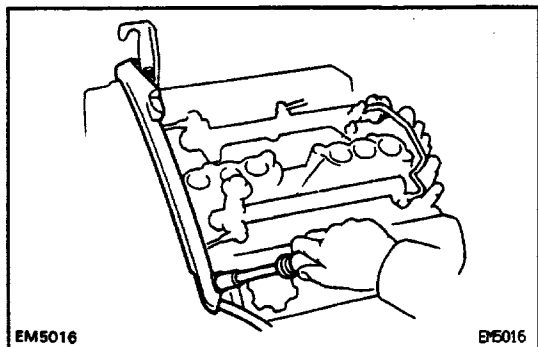
- (p) Remove the 6 bolts, 2 nuts, intake chamber and gasket.

7. REMOVE ENGINE WIRE

- (a) Disconnect these connectors:

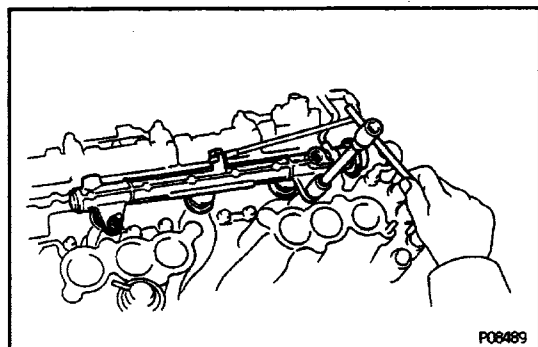
- Knock sensor connector
- Cold start injector time switch connector
- Engine coolant temperature sensor connector
- Engine coolant temperature sender gauge connector
- RH ground strap from No.3 camshaft bearing cap
- Injector connectors

(b) Remove 2 bolts and engine wire.



8. REMOVE NO.2 AND NO-3 FUEL PIPES

Remove the 4 union bolts, No.2, No.3 fuel pipes and 8 gaskets.



9. REMOVE DELIVERY PIPES AND INJECTORS

(a) Remove the 4 nuts holding the delivery pipes to the intake manifold.

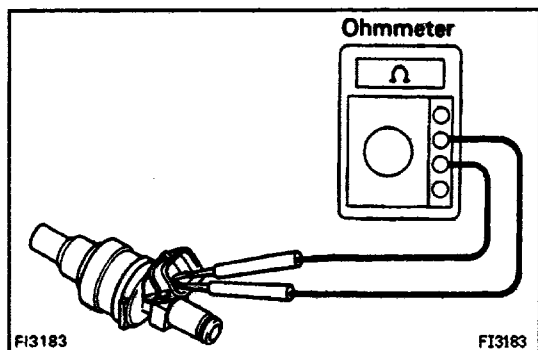
(b) Remove the the 2 delivery pipes and 6 injectors assemblies.

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

(c) Remove the 4 insulators, 10 spacers and 4 O-rings from the cylinder head.

(d) Pull out the 6 injectors from the delivery pipes.

(e) Remove the O -ring and grommet from each injector.



INJECTORS INSPECTION

1. MEASURE RESISTANCE OF INJECTOR

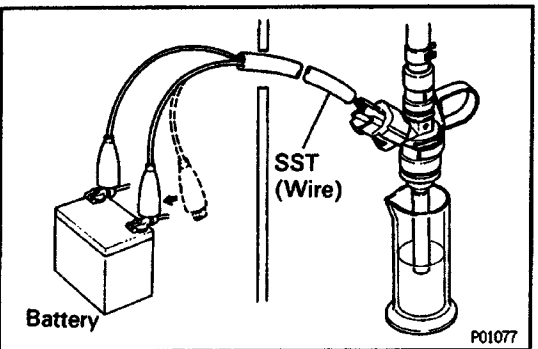
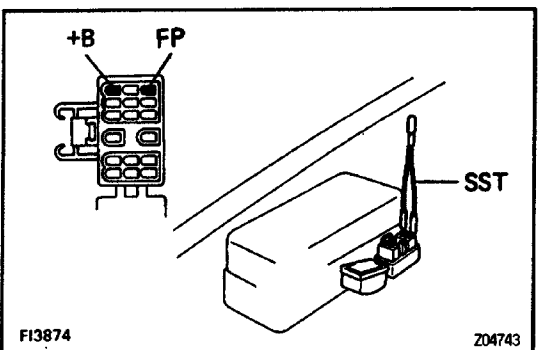
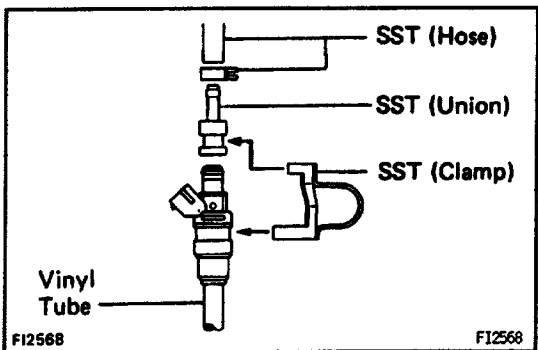
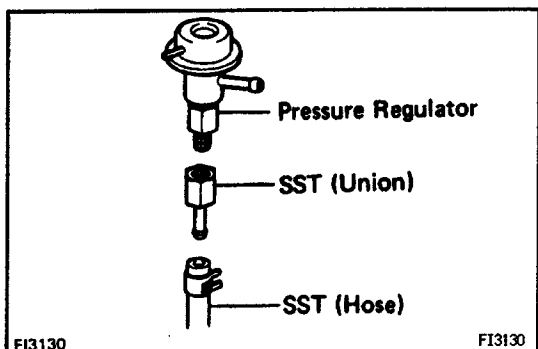
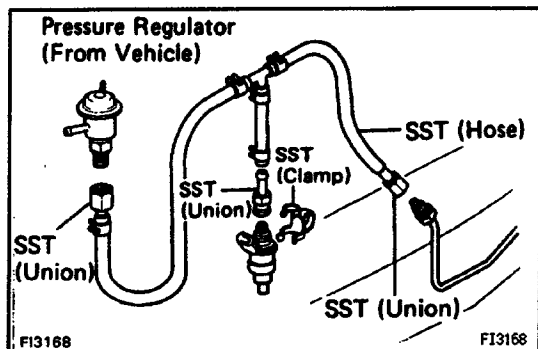
Using an ohmmeter, check the resistance of both terminals.

Resistance:

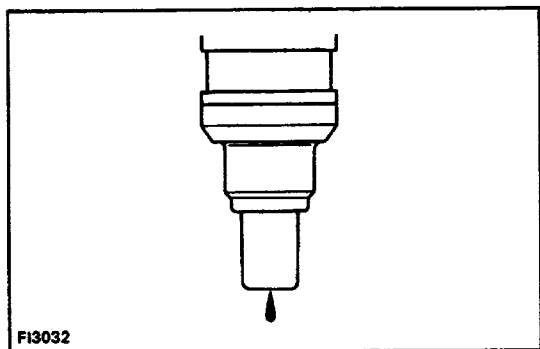
13.4-14.2Ω

2. TEST INJECTION OF INJECTOR

CAUTION: Keep injectors clear of sparks during the test.



- (a) Disconnect the No. 1 fuel hose from the fuel tube.
- (b) Connect SST (hose and union) to the fuel tube.
SST 09268-41045 (09268-52010)
- (c) Remove the fuel pressure regulator.
- (d) Connect SST (hose) to the fuel pressure regulator with SST (union).
SST 09268-41045 (09268-52010)
- (e) Install SST (union) to the injector and hold the injector and union with SST (clamp).
SST 09268-41045
- (f) Put the injector into the graduated cylinder.
HINT: Install a suitable vinyl tube onto the injector to prevent gasoline from splashing out.
- (g) Connect the negative (-) terminal cable to the battery.
- (h) Turn the ignition switch ON.
HINT: Do not start the engine.
- (i) Using SST, connect terminals FP and +B of the DLC1.
SST 09843-18020
HINT: Fuel pump will operate.
- (j) Connect SST (wire) to the injector and battery for 15 seconds and measure the injection volume with a graduated cylinder. Test each injector 2 or 3 times.
SST 09842 - 30070
Volume:
45 - 55 cm²(2.7 - 3.4 cu in.) / 15 sec.
Difference between each injector:
6 cm² (0.4 cu in.) or less
If not within specified volume, replace the injector.



3. CHECK LEAKAGE

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

SST 09842-30070

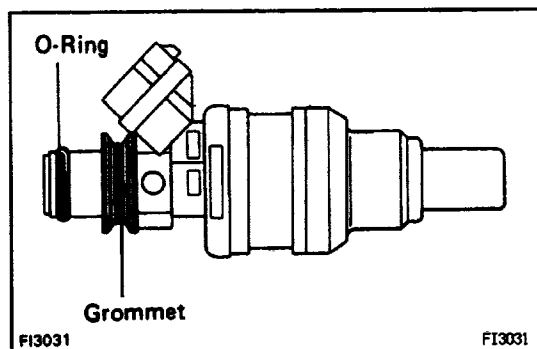
Fuel drop:

One drop or less per minute

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

- (c) Remove SST.

SST 09268-41045 and 09843-18020

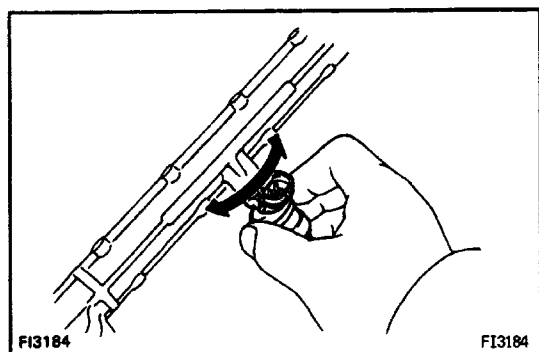


INJECTORS INSTALLATION

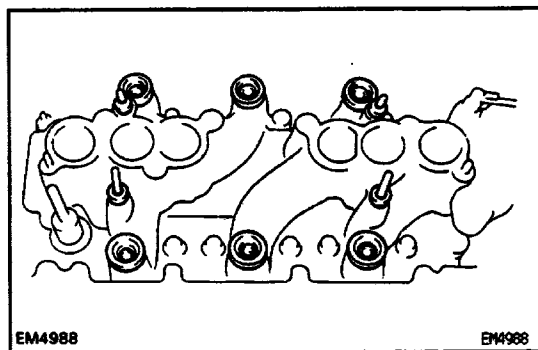
(See Components for Removal end Installation)

1. INSTALL INJECTORS AND DELIVERY PIPES

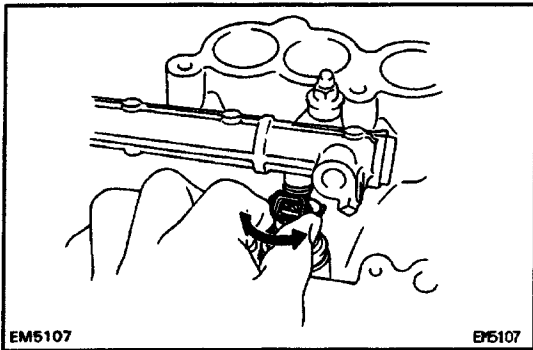
- (a) Install a new grommet to the injector.
- (b) Apply a light coat of gasoline to a new O-ring, and install it to the injector.



- (c) While turning the injector clockwise and counter-clockwise, push it to the delivery pipe. Install the 6 injectors.
- (d) Position the injector connector outward.

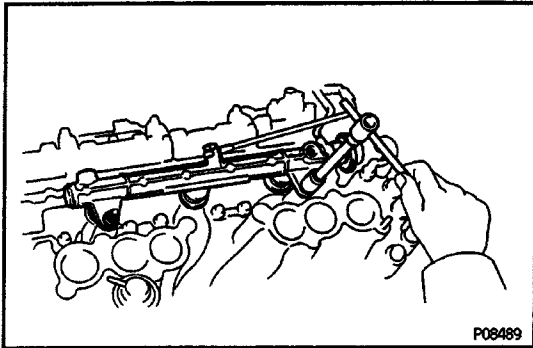


- (e) Install a O-ring to the spacer.
- (f) Place the 6 spacers and insulators into the injector holes.
- (g) Place the 4 spacers on the stud bolts.



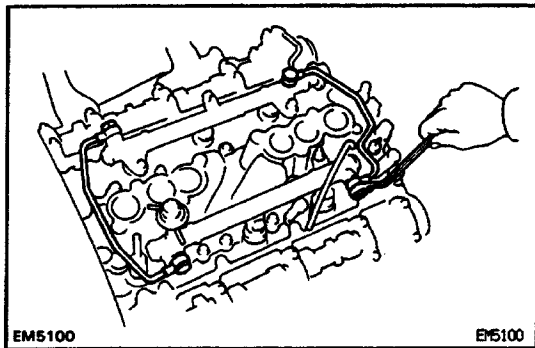
- (h) Place the 2 delivery pipes together with the 6 injectors in position on the intake manifold.
- (i) Temporarily install the 4 spacers and nuts.
 - o) Check that the injectors rotate smoothly.

HINT: If injectors do not rotate smoothly, the probable cause is incorrect installation of O-rings. Replace the O-rings.
- (k) Position the injector connector upward.



- (l) Tighten the 4 nuts holding the delivery pipes to the intake manifold.

Torque: 13 N-m (130 kgf-cm, 9 ft-lbf)
- (m) Install the No. 1 fuel pipe to the No.3 bearing cap with the bolt.

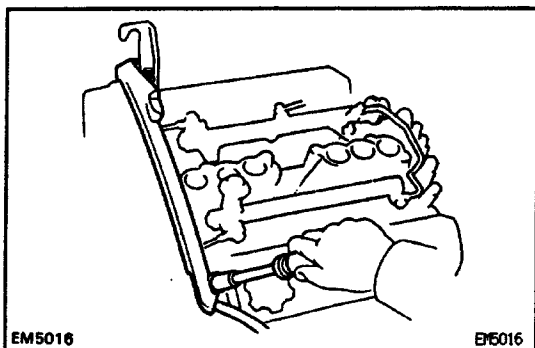


2. INSTALL NO.2 AND NO-3 FUEL PIPES

- (a) Install the No.2 fuel pipe with 4 new gaskets and 2 union bolts.

Torque: 34 N-m (350 kgf-cm, 25 ft-lbf)
- (b) Install the No-3 fuel pipe with 4 new gaskets and 2 union bolts.

Torque: 34 N-m (350 kgf-cm, 25 ft-lbf)



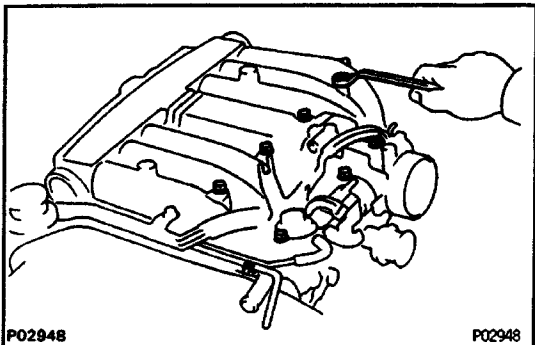
3. INSTALL ENGINE WIRE

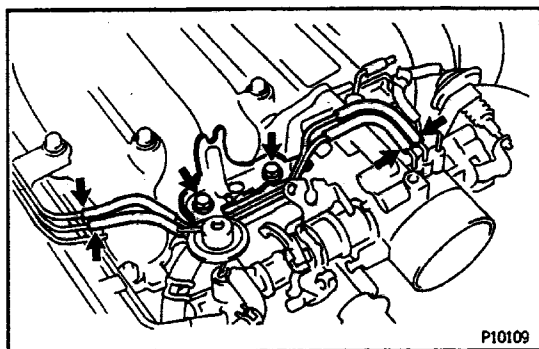
- (a) Install the engine wire with the 2 bolts.
- (b) Connect these connectors:
 - Injector connectors
 - RH ground strap
 - Engine coolant temperature sender gauge connector
 - Engine coolant temperature sensor connector
 - Cold start injector time switch connector
 - Knock sensor connector

4. INSTALL AIR INTAKE CHAMBER

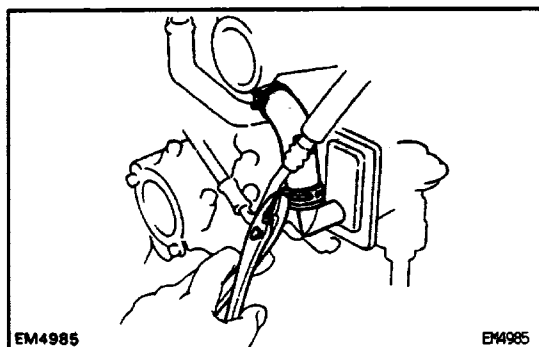
- (a) Position a new gasket on the intake manifold.
- (b) Install the intake chamber with the 6 bolts and 2 nuts.

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

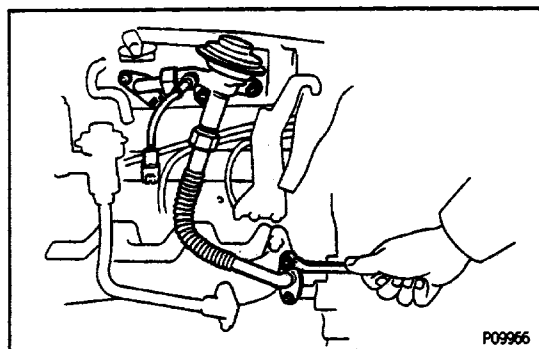




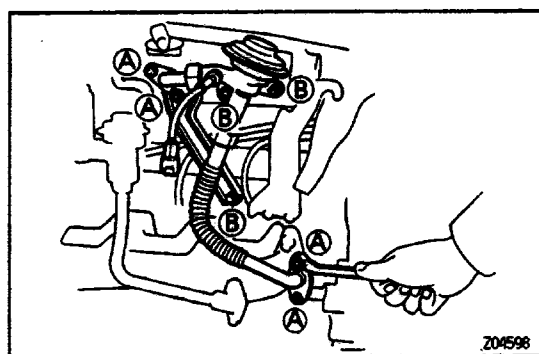
- (c) Install the accelerator cable bracket with the 2 bolts.
- (d) Connect the 4 vacuum hoses to the air pipes.



- (e) Connect the No.1 air hose to the reed valve.



- (f) Position 2 new gaskets to the intake chamber and RH exhaust manifold.
- (g) Install the EGR valve with the pipes to the intake chamber and RH exhaust manifold.

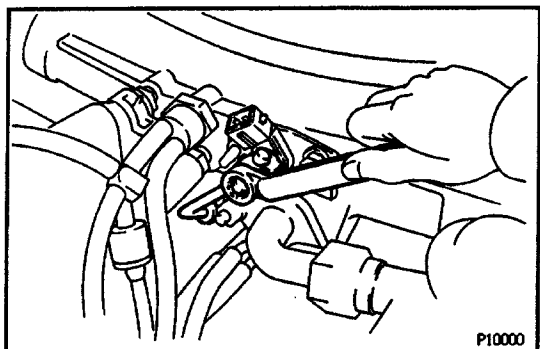


- (h) Install the air intake chamber stay and throttle cable bracket. Install and torque the 6 nuts and 2 bolts.

Torque:

- (A) 29 N-m (300 kgf-cm, 22 ft-lbf)
- (B) 18 N-m (185 kgf-cm, 13 ft-lbf)

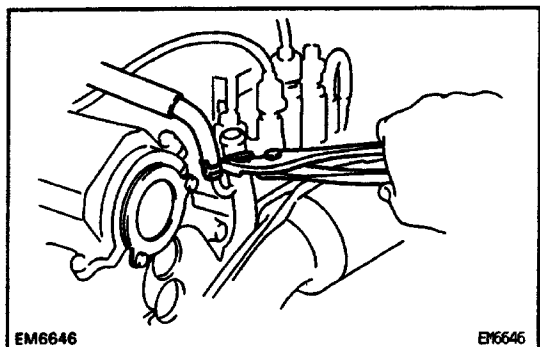
- (i) Connect the EGR hoses to the air pipe and EGR vacuum modulator.
- (j) Connect the EGR gas temperature sensor connector.
- (k) Connect the vacuum hose to the gas filter.



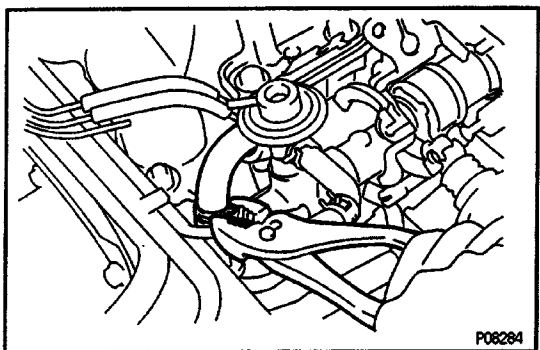
- (l) Connect the cold start injector tube with a new gasket and the union bolt.

Torque: 15 N-m (150 kgf-cm, 13 ft-lbf)

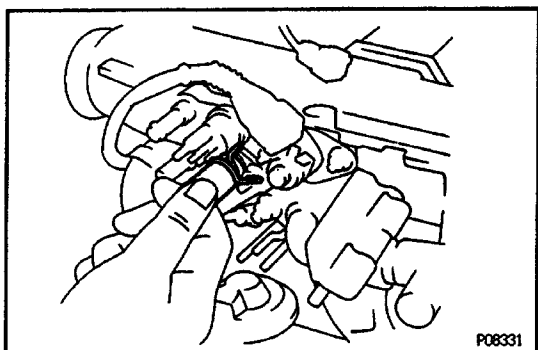
- (m) Connect the cold start injector connector:



- (n) Install the No. 5 water bypass hose to the water bypass pipe.

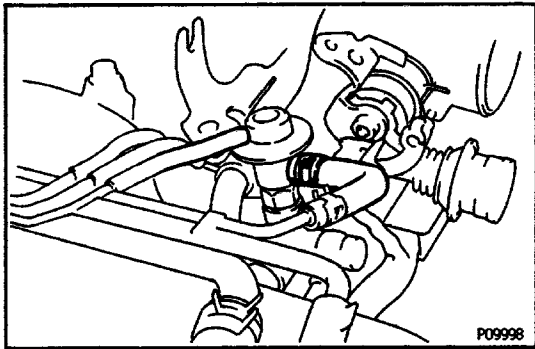


- (o) Connect the No.4 water bypass hose to the union of the intake manifold.

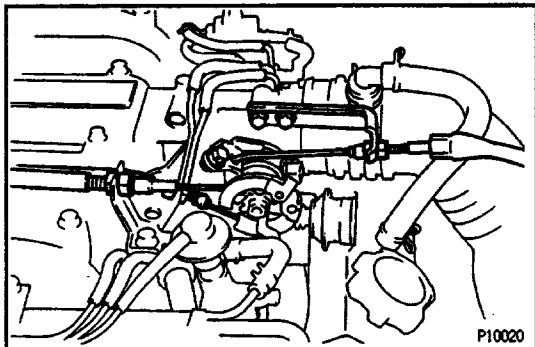


- (p) Connect the PCV hose to the union.

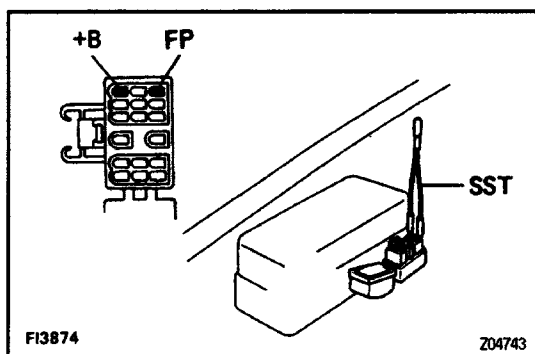
- (q) Connect the canister vacuum hose to the throttle body.
(r) Connect the throttle position sensor connector.



- 5. CONNECT FUEL RETURN HOSE
- 6. CONNECT VACUUM SENSING HOSE
- 7. CONNECT AIR CLEANER HOSE

**6. CONNECT THESE CABLES:**

- (a) A/T:
 - Throttle cable
- (b) Accelerator cable
- (c) w/ Cruise control:
 - Actuator cable with bracket

9. REFILL WITH ENGINE COOLANT**10. CHECK FOR FUEL LEAKAGE**

- (a) With the ignition switch ON, use SST to connect terminals FP and +B of the DLC1.
 - SST 09843-18020
- (b) Check for fuel leakage.
- (c) Remove SST from the DLC1.