

## INTAKE MANIFOLD > REMOVAL

for Preparation [Click here](#)

### 1. DISCHARGE FUEL SYSTEM PRESSURE

#### CAUTION:

- Do not disconnect any part of the fuel system until you have discharged the fuel system pressure.
- After discharging the fuel pressure, place a cloth or equivalent over fittings as you separate them to reduce the risk of fuel spray on yourself or in the engine compartment.

- Disconnect the 2 fuel pump ECU connectors.
- Connect the cable to the negative (-) battery terminal.
- Start the engine. After the engine has stopped on its own, turn the engine switch off.

#### HINT:

DTC P0171/0174 (system too lean) may be stored.

- Crank the engine again, and then check that the engine does not start.
- Loosen the fuel tank cap, and then discharge the pressure in the fuel tank completely.
- Disconnect the cable from the negative (-) battery terminal.

#### NOTICE:

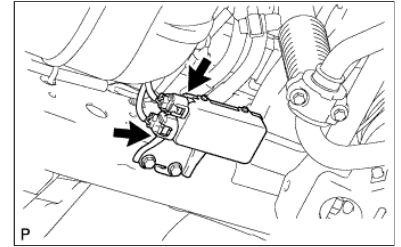
- w/ Navigation System (for HDD):  
After the engine switch is turned off, the display and navigation module display (HDD navigation system) records various types of memory and settings. As a result, after turning the engine switch off, be sure to wait for the time specified in the following table before disconnecting the cable from the negative (-) battery terminal.

#### Waiting Time before Disconnecting Cable from Negative (-) Battery Terminal:

Condition	Waiting Time
Vehicle enrolled in G-BOOK system	6 minutes
Vehicle not enrolled in G-BOOK system	1 minute

- When disconnecting the cable, some systems need to be initialized after the cable is reconnected ([Click here](#)).

- Connect the 2 fuel pump ECU connectors.



### 2. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

#### NOTICE:

- w/ Navigation System (for HDD):  
After the engine switch is turned off, the display and navigation module display (HDD navigation system) records various types of memory and settings. As a result, after turning the engine switch off, be sure to wait for the time specified in the following table before disconnecting the cable from the negative (-) battery terminal.

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Condition	Waiting Time
Vehicle enrolled in G-BOOK system	6 minutes
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- When disconnecting the cable, some systems need to be initialized after the cable is reconnected ([Click here](#)).

### 3. REMOVE EGR VALVE ASSEMBLY

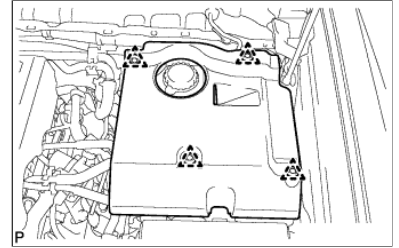
- Remove the EGR valve ([Click here](#)).

### 4. REMOVE COWL TOP VENTILATOR LOUVER SUB-ASSEMBLY

- Remove the cowl top ventilator louver ([Click here](#)).

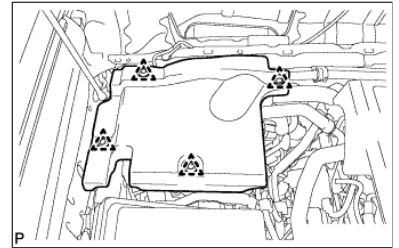
#### 5. REMOVE ENGINE ROOM SIDE COVER LH

- a. Remove the 4 clips and engine room side cover LH.



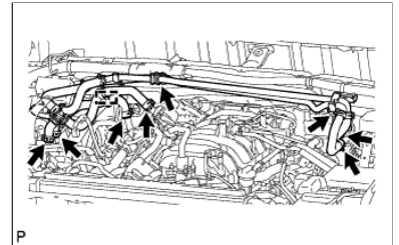
#### 6. REMOVE ENGINE ROOM SIDE COVER

- a. Remove the 4 clips and engine room side cover.



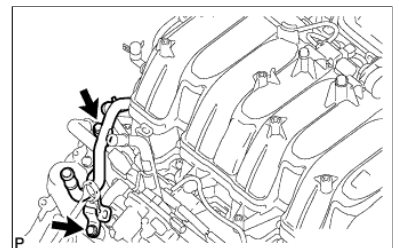
#### 7. REMOVE WATER PIPE AND HOSE SUB-ASSEMBLY

- a. Detach the clamp.
- b. Disconnect the 6 water hoses and remove the 2 nuts and the water pipe and hose.



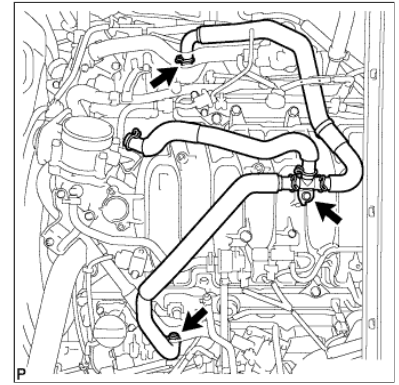
#### 8. DISCONNECT NO. 4 WATER BY-PASS PIPE

- a. Remove the 2 bolts and disconnect the No. 4 water by-pass pipe.



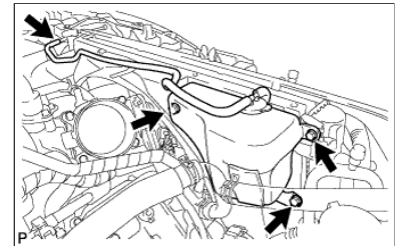
#### 9. REMOVE VENTILATION HOSE ASSEMBLY

- a. Disconnect the ventilation hose from the ventilation pipe of the cylinder head cover LH and RH.
- b. Remove the bolt and ventilation hose.



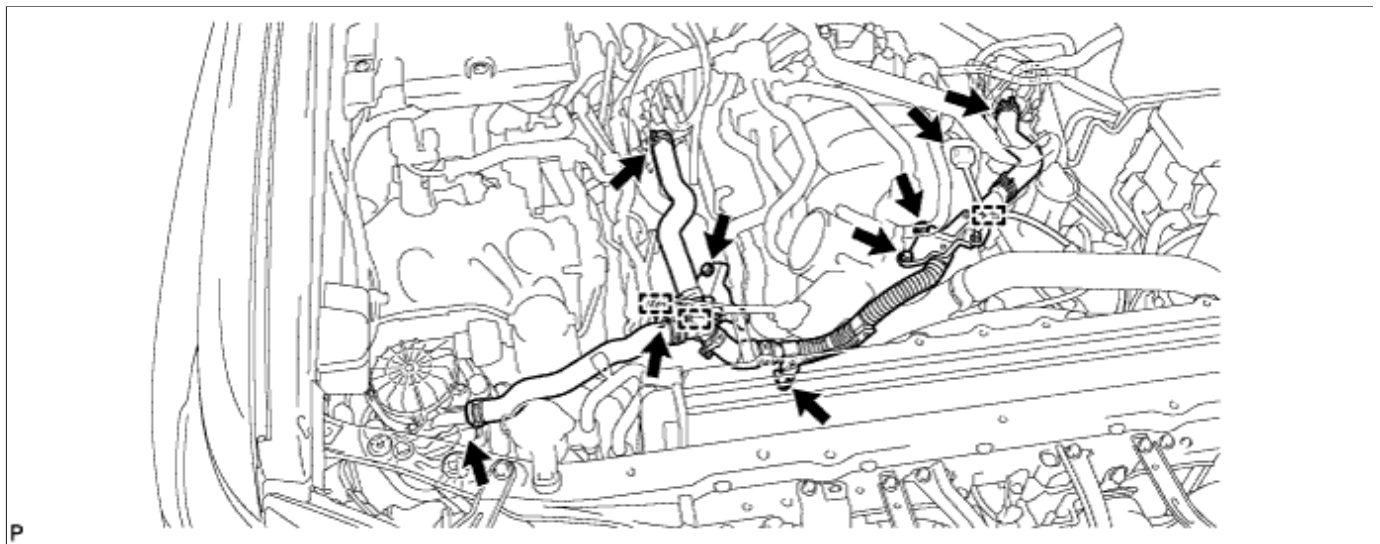
**10. REMOVE RADIATOR RESERVOIR ASSEMBLY**

- a. Disconnect the radiator reservoir hose from the radiator.
- b. Remove the 3 bolts and radiator reservoir.



**11. REMOVE AIR TUBE SUB-ASSEMBLY**

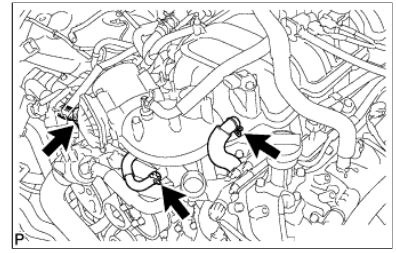
- a. Disconnect the manifold absolute pressure sensor connector and detach the clamp.



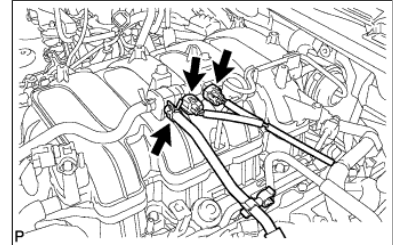
- b. Detach the 2 wire harness clamps from the air tube bracket.
- c. Disconnect the No. 2 air injection system hose from the air switching valve LH.
- d. Disconnect the No. 1 air injection system hose from the air switching valve RH.
- e. Disconnect the air hose from the air pump.
- f. Remove the 5 bolts and air tube.

**12. REMOVE INTAKE MANIFOLD**

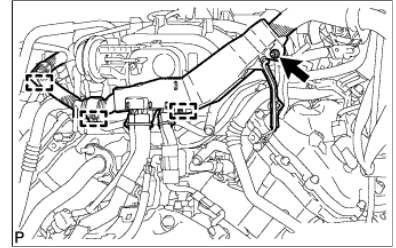
- a. Disconnect the No. 4 water by-pass hose.
- b. Disconnect the throttle body connector.
- c. Disconnect the PCV valve hose.



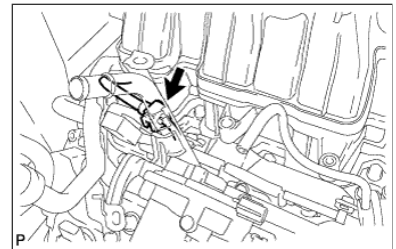
- d. Disconnect the purge VSV connector.
- e. Disconnect the purge line hose from the purge VSV.
- f. Disconnect the vacuum switching valve connector (for ACIS).



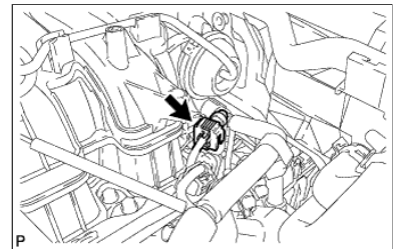
- g. Remove the nut and disconnect the wire harness from the wire harness bracket.
- h. Detach the 3 wire harness clamps from the 3 wire harness brackets.



- i. Disconnect the fuel tube from the fuel delivery pipe ([Click here](#)).



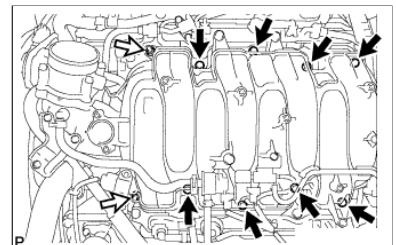
- j. Disconnect the fuel tube from the No. 2 fuel delivery pipe ([Click here](#)).



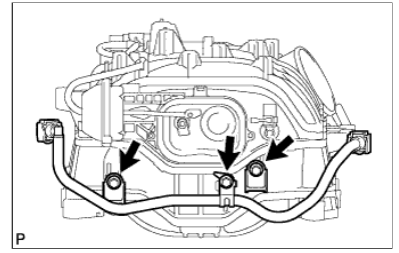
- k. Remove the 2 nuts, 8 bolts, intake manifold and 2 gaskets.

**Text in Illustration**

	Bolt
	Nut

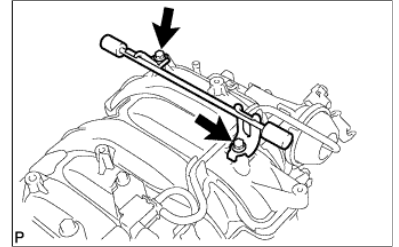


- a. Remove the bolt and fuel tube from the intake manifold.
- b. Remove the 2 bolts and 2 wire harness brackets.



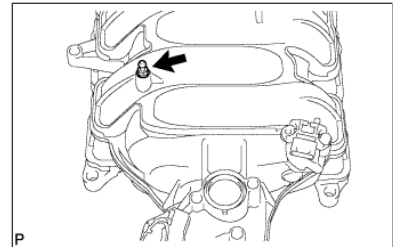
**14. REMOVE V-BANK COVER BRACKET**

- a. Remove the 2 bolts and bracket.



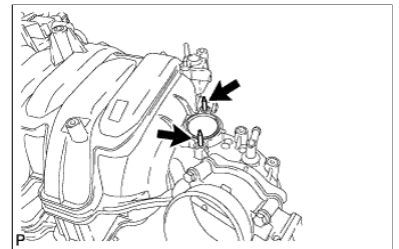
**15. REMOVE V-BANK COVER PIN**

- a. Remove the V-bank cover pin from the intake manifold.



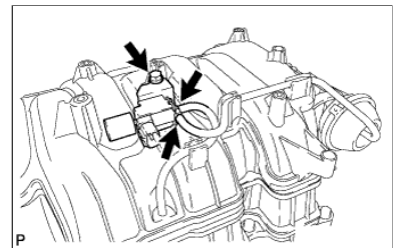
**16. REMOVE STUD BOLT**

- a. Using an E5 "TORX" socket wrench, remove the 2 stud bolts.



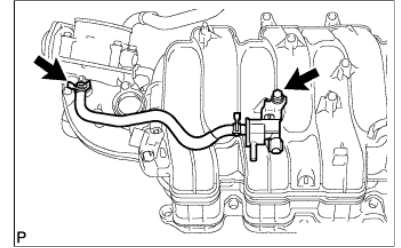
**17. REMOVE VACUUM SWITCHING VALVE ASSEMBLY (for ACIS)**

- a. Disconnect the 2 vacuum hoses from the vacuum switching valve.
- b. Remove the bolt and vacuum switching valve.



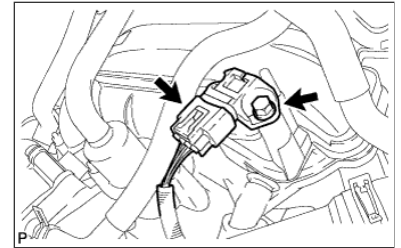
## 18. REMOVE PURGE VSV

- a. Disconnect the purge line hose from the intake manifold.
- b. Remove the bolt and purge VSV.



## 19. REMOVE MANIFOLD ABSOLUTE PRESSURE SENSOR

- a. Disconnect the manifold absolute pressure sensor connector.
- b. Remove the bolt and manifold absolute pressure sensor.
- c. Remove the O-ring from the manifold absolute pressure sensor.



## 20. REMOVE THROTTLE BODY ASSEMBLY

- a. Remove the 4 bolts, throttle body and gasket.

