COMPONENT LAYOUT AND SCHEMATIC DRAWING for Federal

Fig. 4-1

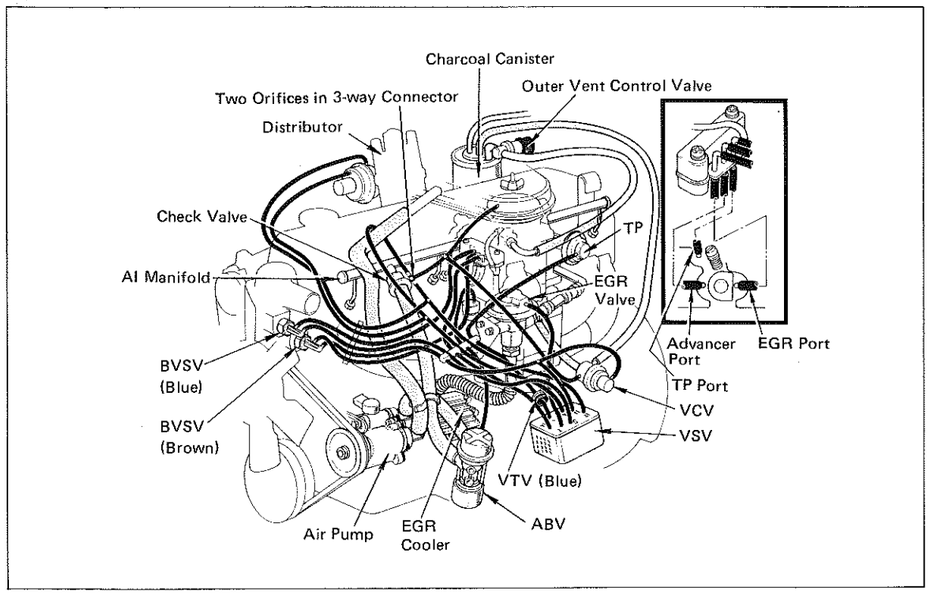
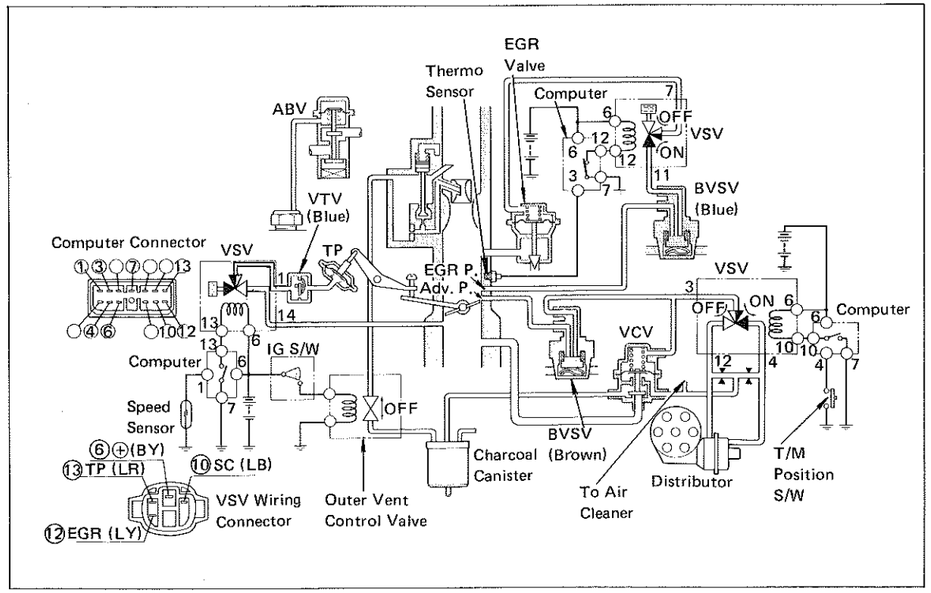


Fig. 4-2



COMPONENT LAYOUT AND SCHEMATIC DRAWING for California

Fig. 4-3

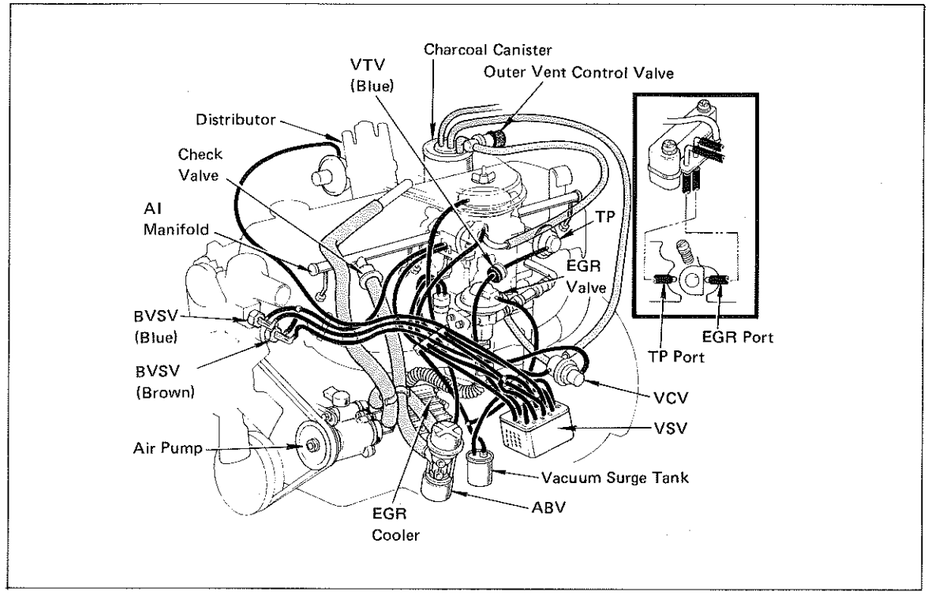
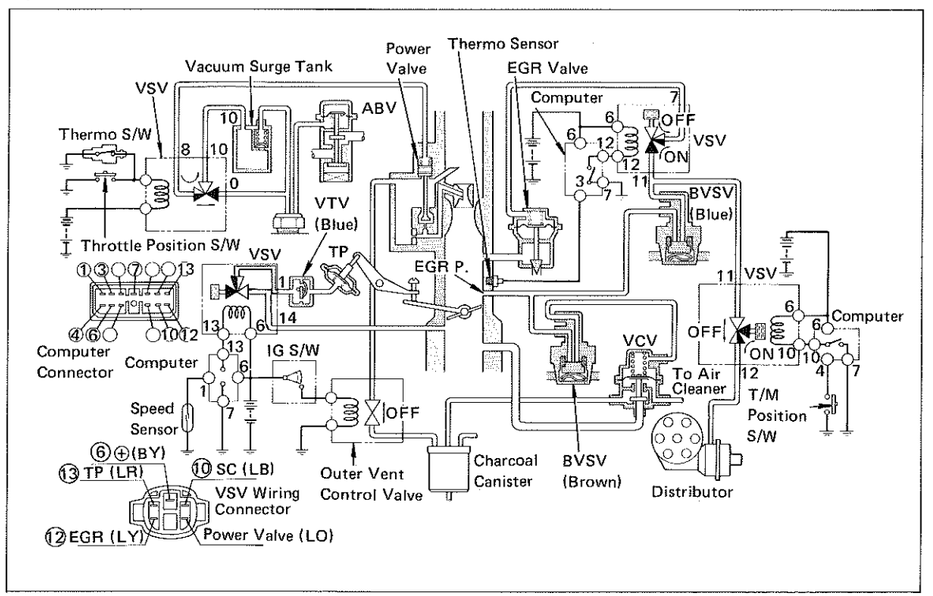


Fig. 4-4



COMPONENT LAYOUT AND SCHEMATIC DRAWING for High Altitude Spec.

Fig. 4-5

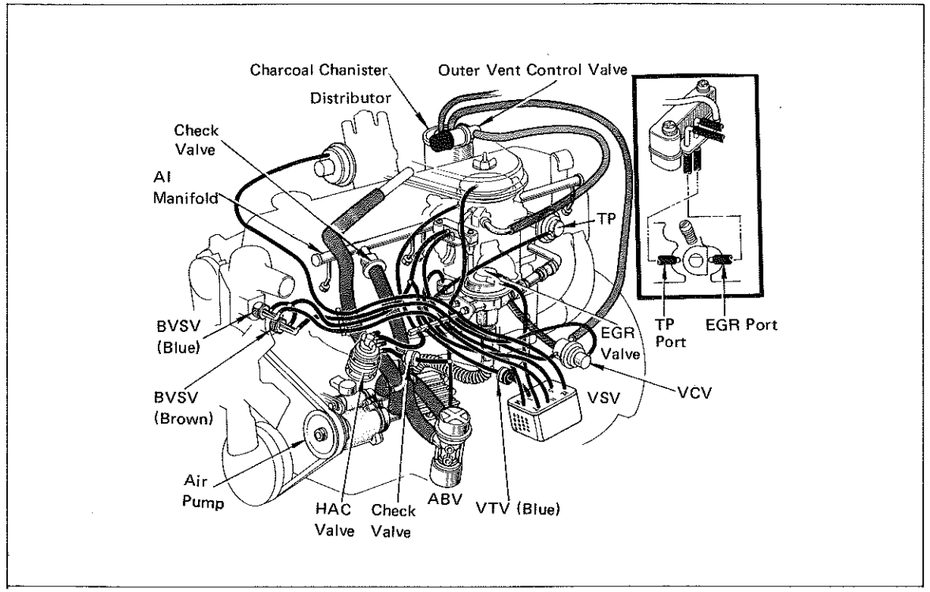
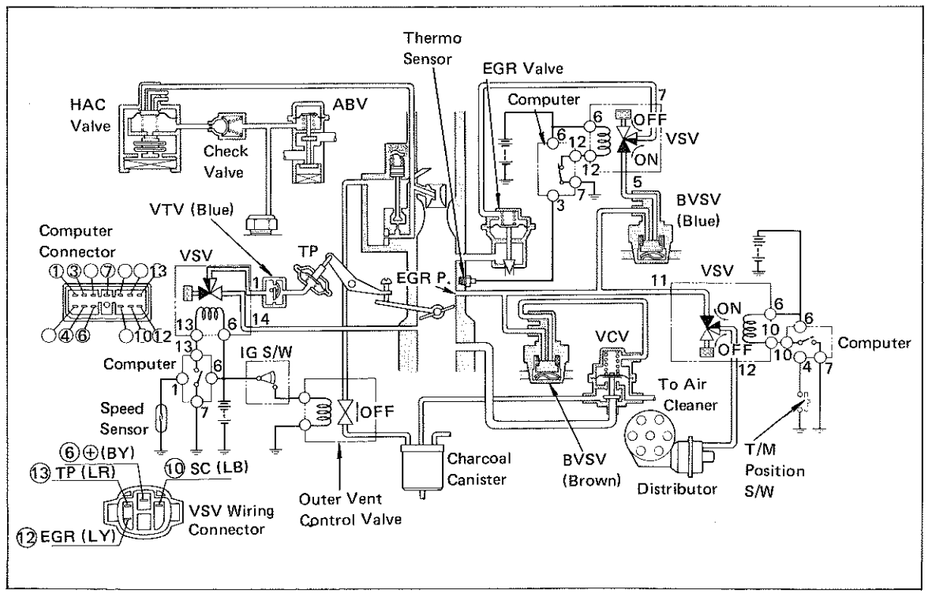


Fig. 4-6



POSITIVE CRANKCASE VENTILATION(PCV)SYSTEM

OPERATION

Fig. 4-7

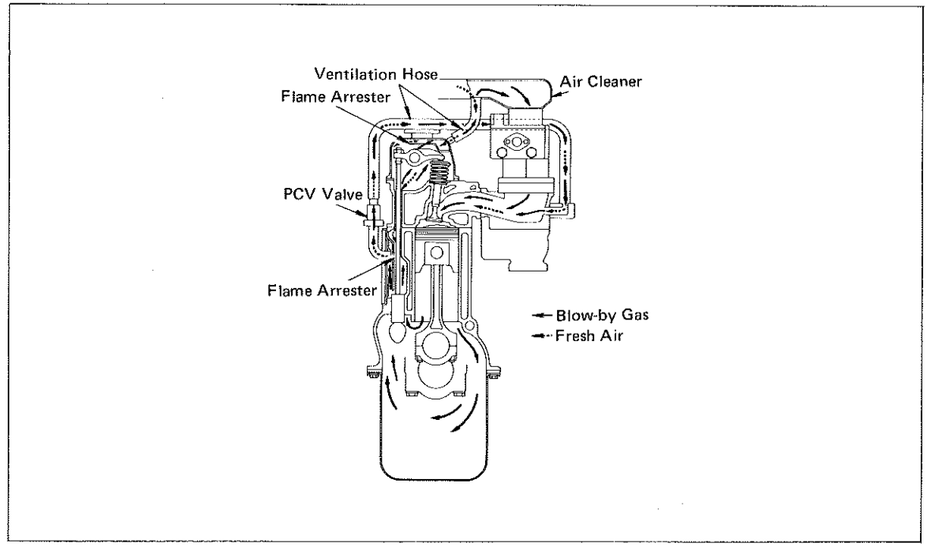
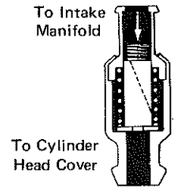


Fig. 4-8

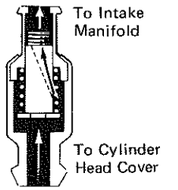
To reduce HC emissions, crankcase blowby gas (HC) is routed through the PCV valve to intake the manifold for combustion in the cylinders.

Engine not Running or in Case of Backfire



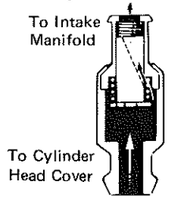
- PCV VALVE IS CLOSED

Normal Operation



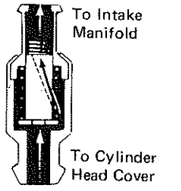
- PCV VALVE IS OPEN.
- VACUUM PASSAGE IS LARGE.

Idling or Decelerating



- PCV VALVE IS OPEN.
- VACUUM PASSAGE IS SMALL.

Acceleration or High Load



- PCV VALVE IS FULLY OPEN.

Fig. 4-9

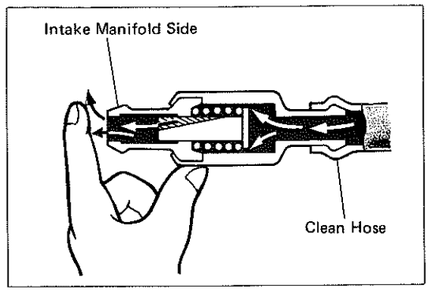


Fig. 4-10

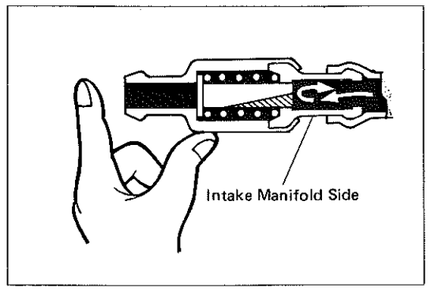
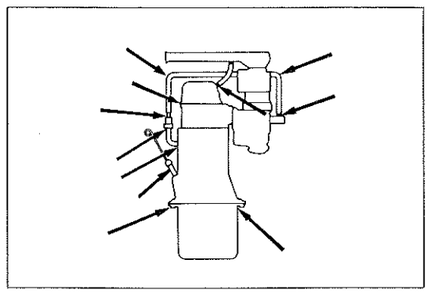


Fig. 4-11



INSPECTION

1. Inspect PCV valve.

(1) Remove PCV valve and hose.

(2) Blow from cylinder-head side :
Air SHOULD PASS THROUGH.
Attach a clean piece of hose for these checks.
– Caution –
Do not suck air through valve. Petroleum substances inside valve are harmful.

(3) Blow from intake-manifold side :
Air should pass through with difficulty.
If the PCV fails either check, replace it.

2. Inspect PCV hoses and connections.

Visually inspect hoses, connections and gaskets.
Look for cracks, leaks, or damage.

FUEL EVAPORATIVE EMISSION CONTROL (EVAP) SYSTEM

Fig. 4-12 Hardtop and Soft-top

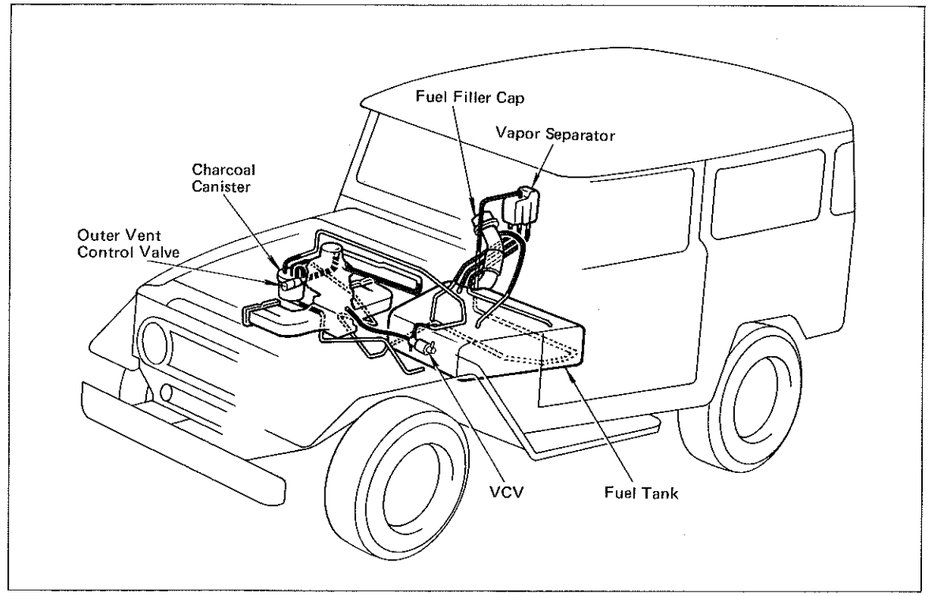
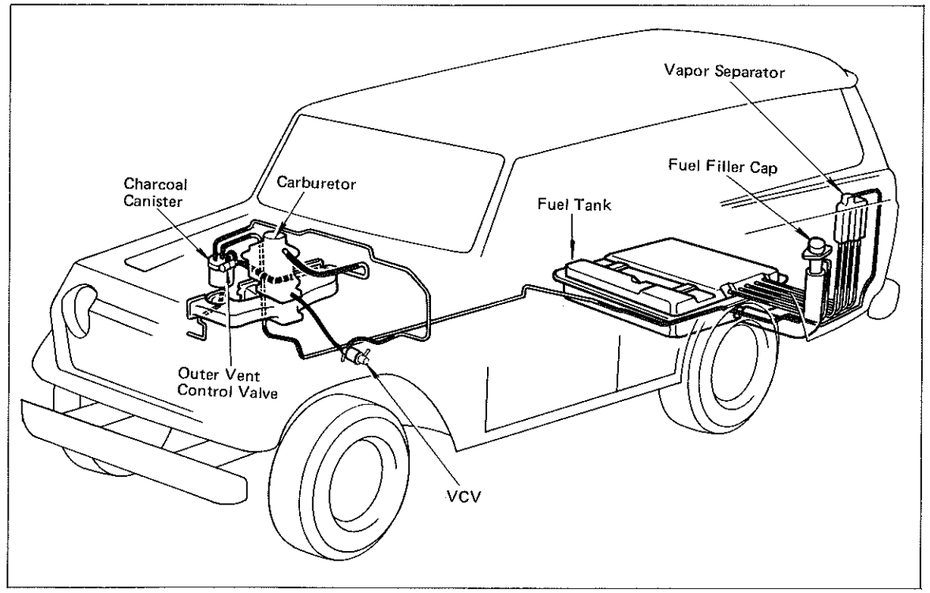
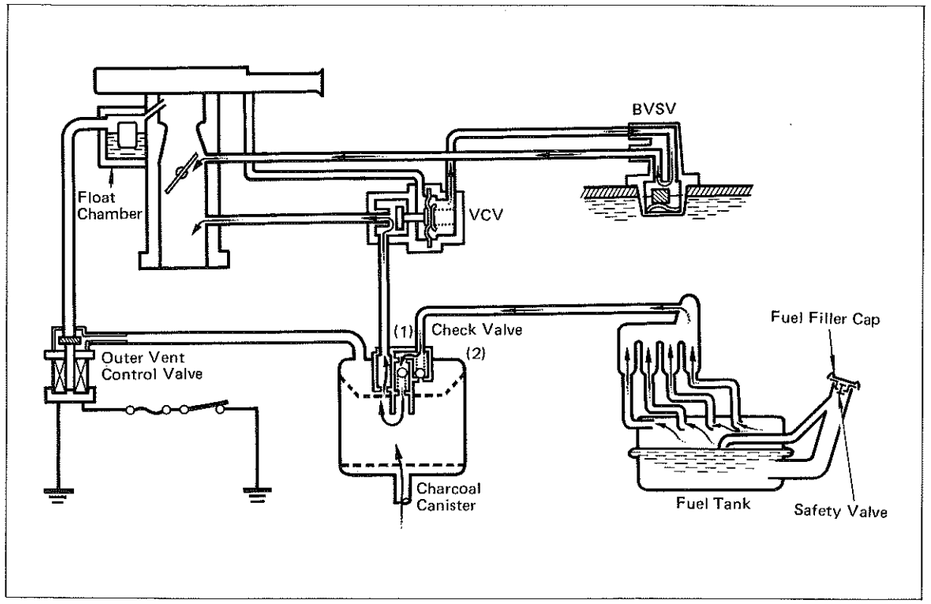


Fig. 4-13 Station Wagon



OPERATION

Fig. 4-14



To reduce HC emissions, evaporated fuel from fuel tank and float chamber is routed through the charcoal canister to the carburetor for combustion in the cylinders.

IG S/W	Coolant Temp.	Vacuum at VCV(S)	Outer Vent Control Valve	BVSV	VCV	Check Valve (1)	Check Valve (2)	Safety Valve in Cap	Evaporated Fuel (HC)
OFF	–	–	OPEN	–	–	–	–	–	HC from tank and float chamber is absorbed in the canister.
ON	Below 140°F (60°C)	–	CLOSED	CLOSED	–	–	–	–	HC from tank is absorbed in the canister
	Above 165.2°F (74°C)	Below 2.3 in.Hg (54 mmHg)		OPEN	CLOSED	–	–	–	
		Above 2.76 in.Hg (70 mmHg)			OPEN	–	–	–	HC from canister is led into carburetor.
High Pressure in Tank		–	–	–	–	OPEN	CLOSED	CLOSED	HC from tank is absorbed in the canister.
High Vacuum in Tank		–	–	–	–	CLOSED	OPEN	OPEN	Air is led into tha tank

Fig. 4-15

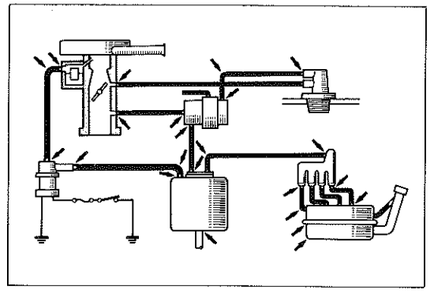


Fig. 4-16

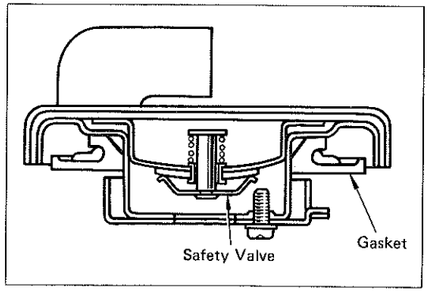


Fig. 4-17

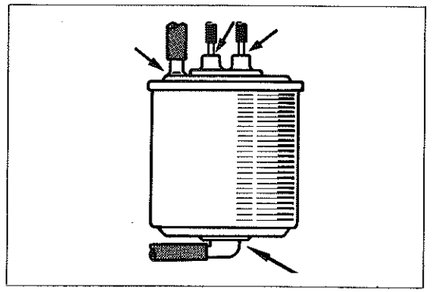
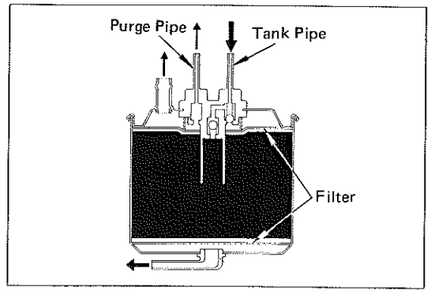


Fig. 4-18



INSPECTION

1. Inspect fuel vapor lines, fuel tank and tank cap.

(1) Visually inspect lines and connections.
Look for loose connections, sharp bends, and damage.

(2) Visually inspect fuel tank.
Look for deformation, cracks, and fuel leakage.

(3) Visually inspect fuel tank cap.
a. Look for deformed or damaged gasket.
b. Look for stuck safety valve.

2. Inspect charcoal canister.

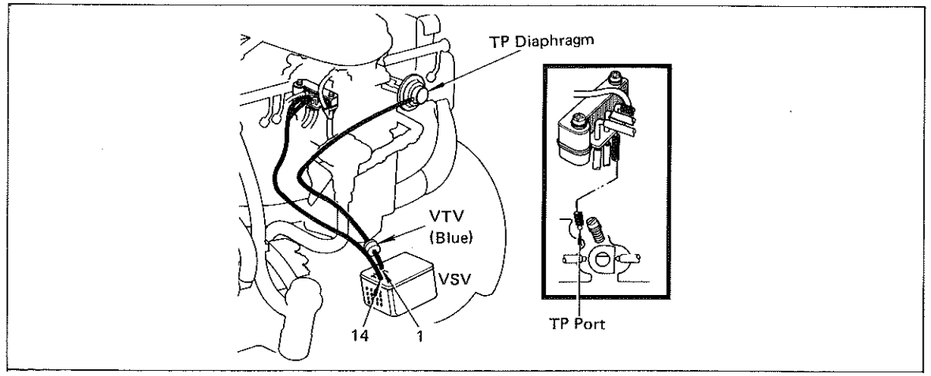
(1) Disconnect hoses to the charcoal canister.
Note location for correct reinstallation.

(2) Visually inspect charcoal canister case.
Look for cracks, and damage.

(3) Check for clogged filter and stuck check valve with compressed air.
a. When air is blown into the tank pipe, air should flow, without resistance, from the other pipes.
b. When air is blown into the purge pipe, air should flow, without resistance, from the other pipes.

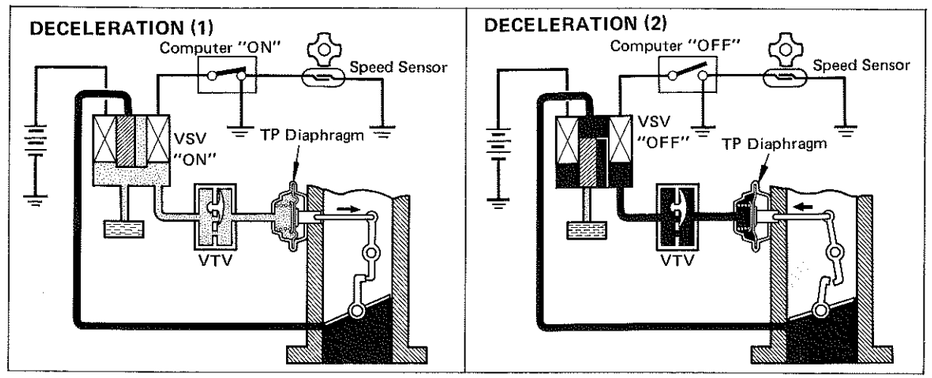
THROTTLE POSITIONER (TP) SYSTEM

Fig. 4-26



OPERATION

Fig. 4-27



To reduce HC and CO emission, the throttle positioner opens the throttle valve slightly more than at idle when decelerating. This causes the air-fuel mixture to burn completely.

Vehicle Speed	Computer	VSV	Throttle Positioner	Throttle Valve
Medium or High Speeds Above 25 mph (40 km/h)	ON	ON	Since atmospheric pressure acts on TP diaphragm, TP is set.	Medium or High Speed Position
Deceleration (1) Above 14 mph (22 km/h)				Throttle valve is held in a position that is slightly more opened than at idle.
Deceleration (2) Below 14 mph (22 km/h)	OFF	OFF	TP is released by intake manifold vacuum	Throttle valve is returned to the idle position.

Fig. 4-28

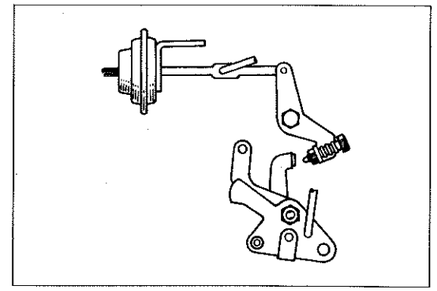


Fig. 4-29

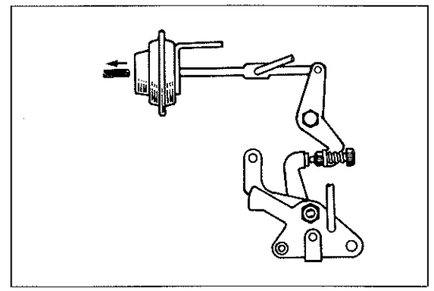


Fig. 4-30

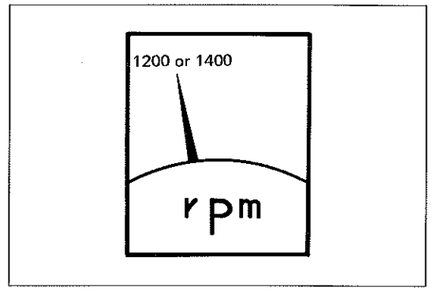
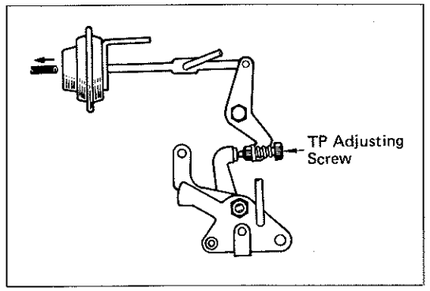


Fig. 4-31



INSPECTION

1. Inspect throttle positioner.

(1) Warm up the engine.

(2) Check and adjust the idle speed.

(3) Check operation of the throttle positioner.
a. Check the throttle positioner to see that it is released at idle.

b. Disconnect the vacuum sensing hose from the TP diaphragm.
c. Check the throttle positioner to see that it is set.

(4) Check TP setting speed.
a. With the TP set, check the engine speed.

TP Setting Speed :
1200 rpm — Federal
1400 rpm — Calif.

b. If not at specified speed, make adjustment with TP adjusting screw.

(5) Check the VTV.
a. Reconnect the vacuum hose.
b. Check to see that the throttle positioner is released after a few seconds.