DATSUN

All Models

DESCRIPTION

System consists of a fuel tank with positive sealing filler cap, carbon canister with purge control valve, check valve and canister purge, vacuum signal and vapor vent lines. Also, a vapor-liquid separator is installed on 200SX (Hatchback) and 810 (Station Wagon) models.

OPERATION

Fuel vapors from the sealed fuel tank are led into the carbon canister. Canister is filled with activated charcoal to absorb the fuel vapors when the engine is stopped or idling. As throttle valve opens and vehicle speed increases, vacuum opens the purge control valve and fuel vapors are sucked from canister into intake manifold.

TESTING

Fuel Tank & Vapor Vent Line – Check all hoses and fuel tank filler cap. Disconnect vapor hose connecting carbon canister to fuel tank. Connect a "T" fitting, manometer and shut-off valve to end of vent line. Supply air pressure to shut-off valve until manometer indicates 15.75 in. (400 mm) water. Close shut-off valve. Fuel tank and hoses should hold this pressure within .98 in. (25 mm) water for 2½ minutes. If pressure does not hold, repair or replace components as necessary.

Purge Control Valve – Disconnect vapor hose from carbon canister at "T". Draw vacuum on vapor hose, there should be no leak. If valve does leak, remove purge valve and check for a damaged or cracked diaphragm, replace as necessary.

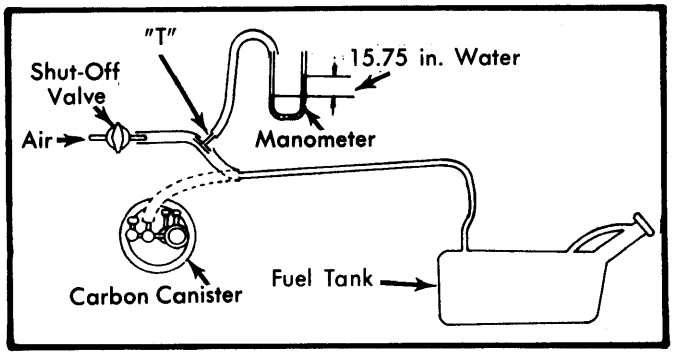

Fig. 1 Testing Fuel Tank and Vapor Hoses

Check Valve (280ZX) – 1) Remove valve. Draw air through port "A" of valve *(See Fig. 2)*. Apply at least 1.46 in. (37 mm) Hg. A constant air flow should be felt. No air should be felt below this point.

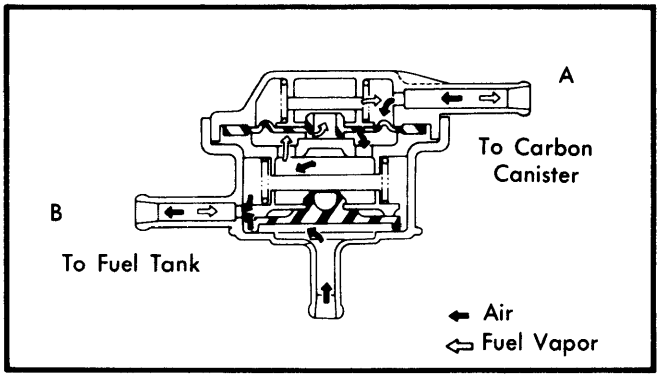

Fig. 2 Check Valve With Vacuum Relief Valve (280ZX)

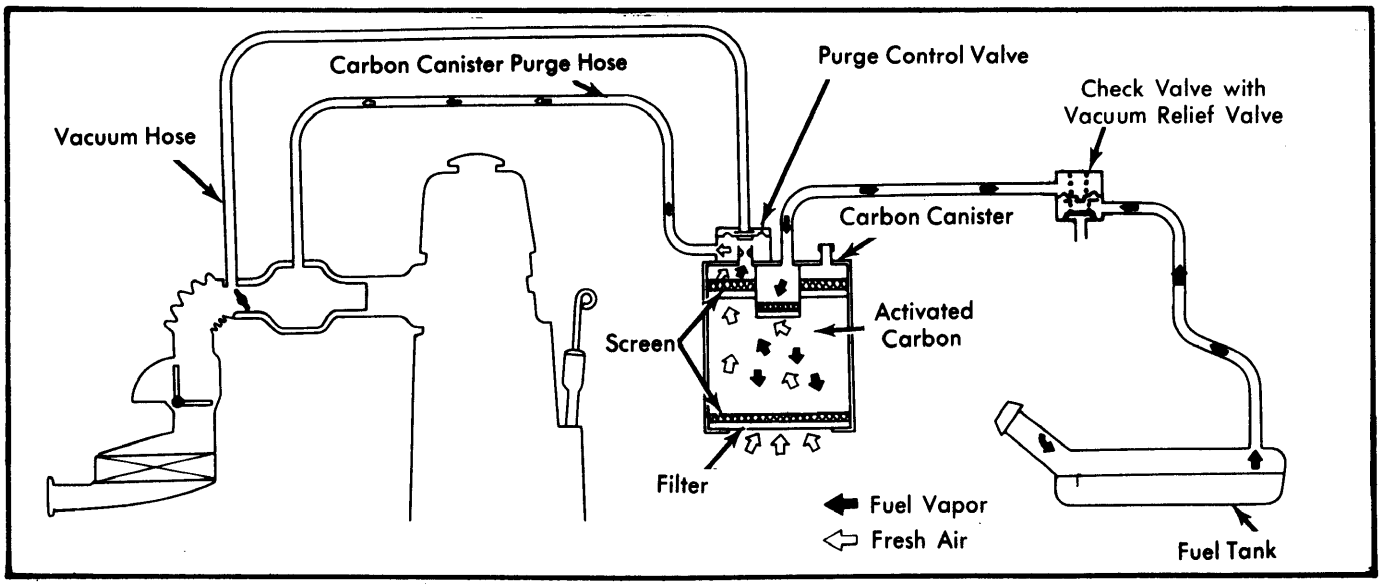

Fig. 3 Typical Datsun Fuel Evaporation System

DATSUN (Cont.)

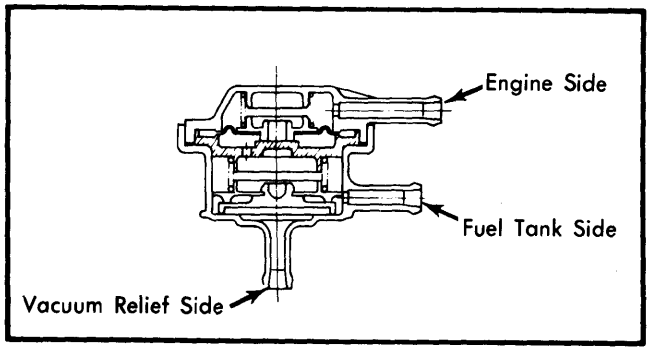

Fig. 4 Check Valve With Vacuum Relief Valve (310)

2) Draw air through port "B" of valve. Apply at least .59 in. (15 mm) Hg. A constant air flow should be felt. No air should be felt below this point.

3) Continue drawing air through port "B" and seal port "A" with finger. Apply at least 1.38 in. (35 mm) Hg. A constant air flow should be felt. No air flow should be felt below this point. If any of the preceding tests fail, replace valve.

Check Valve (310) – Remove luggage compartment board, disconnect vapor line from check valve and remove check valve. Blow through valve at fuel tank inlet side. There should be significant resistance. Repeat on engine inlet side of valve. Air should flow freely through valve. Replace valve if it fails this test.

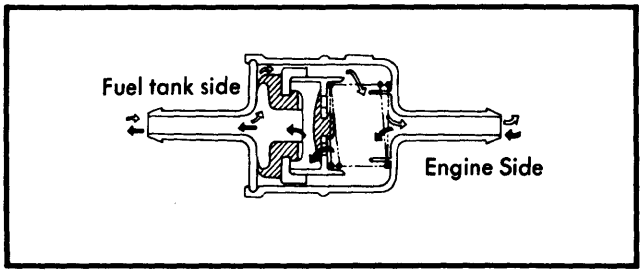

Fig. 5 Check Valve (Except 280ZX & 310)

MAINTENANCE

Check Valve (All Other Models) – Disconnect hoses and blow through valve at fuel tank inlet side. There should be significant resistance. Repeat on engine inlet side of valve. Air should flow freely through valve. Replace valve if it fails this test.

Inspect vapor hoses and purge hoses every 30,000 miles or 24 months. Replace carbon canister every 30,000 miles or 24 months.