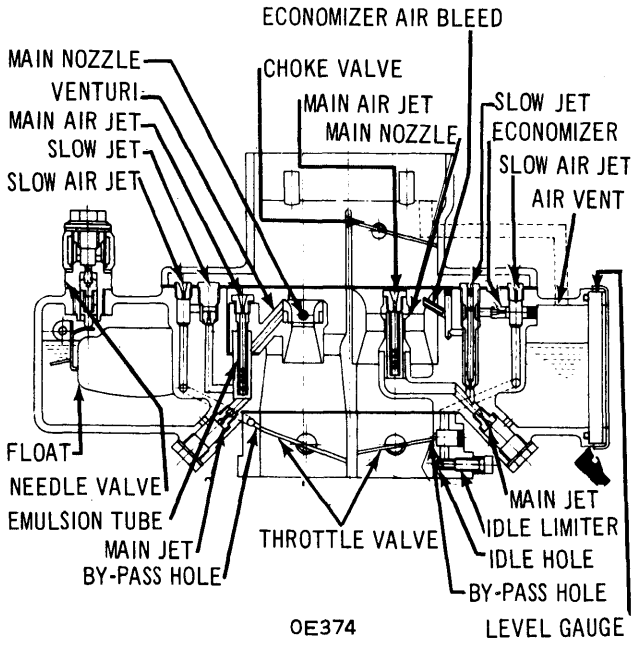
HITACHI DAF 328 2-BARREL

Datsun 510 Sedan (1968-71)
Datsun 521 Pickup (1968-71)

DESCRIPTION

Carburetor is of two barrel downdraft design. The primary system is utilized for slow and normal running and the secondary system supplies fuel for full load running. A piston type accelerating pump provides extra fuel at sudden acceleration. A slow economizer mechanism provides good transition between the slow speed and main system. On cars equipped with automatic transmissions, a dash pot is incorporated into the carburetor.



HITACHI DAF 328 SECTIONAL VIEW

OPERATION

Primary Main System

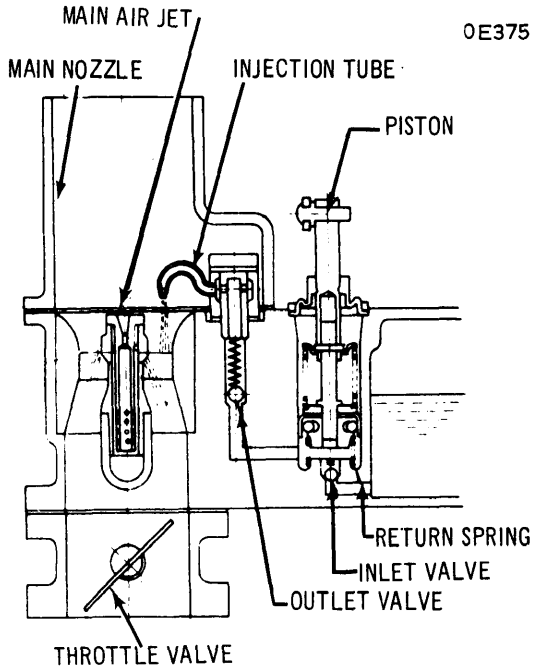
When fuel from the float bowl flows through the main jet it mixes with air from the main air bleed and passes through the emulsion tube and then into the venturi through the main nozzle. The main nozzle provides thorough atomization of the fuel.

Idling And Slow System

When at idle or low speed, the throttle valve is open only a small amount. Vacuum, downstream of the fuel system, acts on the slow speed system. Fuel from the slow jet, and air from the economizer bleed, are mixed in the emulsion hole. Further mixing occurs when air comes through the slow economizer air bleed. The atomized mixture is supplied to the engine by the idle hole and by-pass hole.

Accelerating Pump

When the primary throttle is closed, the accelerating piston allows fuel to flow from the float bowl into the space under the piston. When the throttle is opened, the piston opens an outlet valve and forces the fuel out through the injector. This provides the richer mixture necessary for smooth, rapid acceleration.



ACCELERATION PUMP SECTIONAL VIEW

Secondary Main System

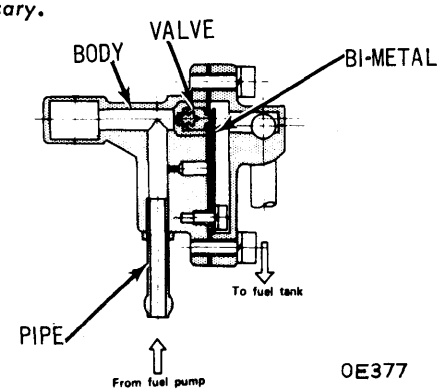
Fuel from the main jet, and air from the main air bleed and emulsion tube, is pulled into the venturi, atomized and supplied to the engine.

Primary/Secondary Step System

The secondary throttle is linked to a diaphragm activated by venturi vacuum. Vacuum jets, located at each of the venturis, provide enough combined vacuum to actuate the diaphragm. The diaphragm is pulled against spring force and causes the secondary throttle valve to open. Linkage between the primary and secondary throttles allows the secondary throttle to open at approximately 59° of primary throttle opening.

Fuel Return System

System consists of a bi-metal valve, body and pipe. When high engine compartment temperatures are encountered, the bi-metal causes the valve to open. This returns most of the fuel to the fuel tank, helping to prevent vapor lock and percolation of fuel. *NOTE – Do not dismantle device unless necessary.*



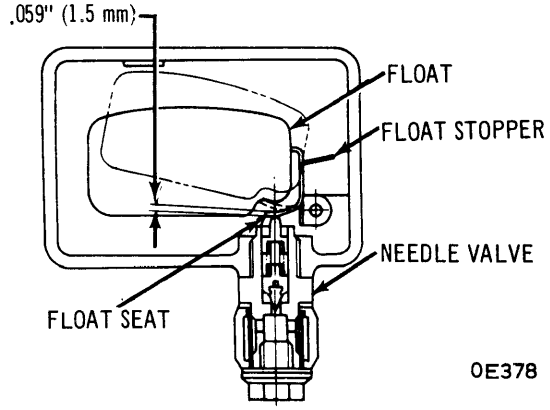
FUEL RETURN SYSTEM

HITACHI DAF 328 2-BARREL (Cont.)

ADJUSTMENT

Fuel Level Adjustment

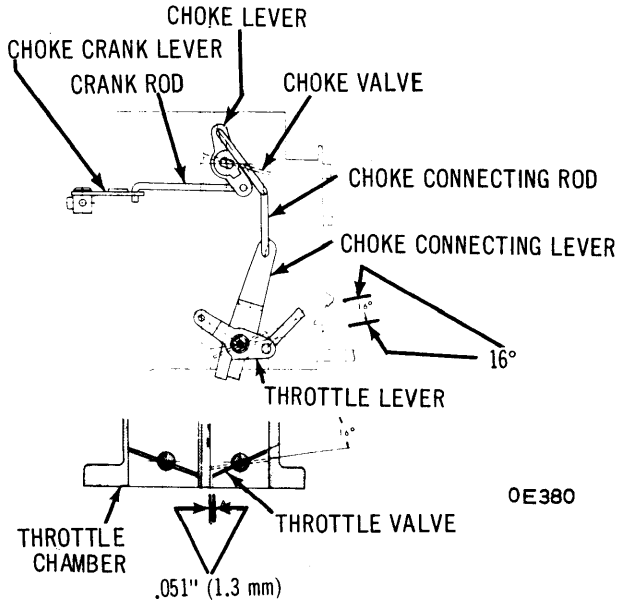
Check that fuel level matches line on level gauge of carburetor. If float level not correct, remove float chamber cover. Bend float seat to provide .059" (1.5 mm) clearance between valve stem and float seat with the float fully lifted up (see illustration).



FUEL LEVEL ADJUSTMENT

Bench Fast Idle Adjustment

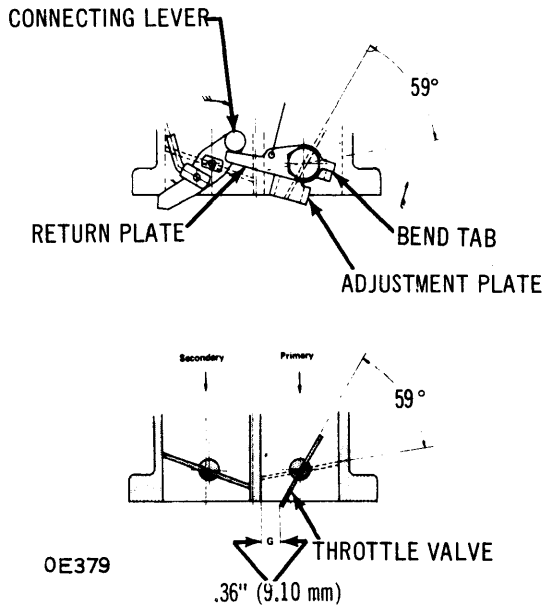
With choke valve fully closed, check that throttle valve opens so that there is a clearance of .051" (1.3 mm) between throttle valve and wall of carburetor. If clearance is not as specified, bend choke connecting rod.



BENCH FAST IDLE ADJUSTMENT

Primary/Secondary Throttle Valve Linkage

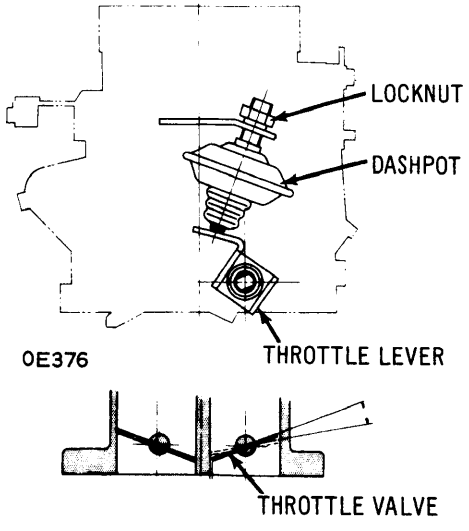
Linkage is properly adjusted if, with secondary throttle closed, the clearance between the primary throttle valve and the wall of the carburetor is .36" (9.10 mm). Adjust by bending tab at primary side of throttle valve linkage (see illustration).



PRIMARY/SECONDARY LINKAGE

Dashpot Adjustment (Automatic Transmission)

With engine at normal operating temperature, throttle lever should contact dashpot stem at 1800-2000 RPM. To adjust, loosen dashpot locknut, and rotate dashpot so that contact is made at the correct RPM.



DASHPOT (AUTO. TRANS.)

Slow Idle Adjustment

Turn idle adjustment screw out three turns from fully closed position. Screw in throttle screw two or three turns and start engine. With engine at normal operating temperature, screw out throttle screw until engine starts to run unevenly and engine speed begins to drop. Screw in throttle screw until engine runs smoothly at highest speed. Adjust throttle screw to drop engine speed and repeat above operations until engine idles smoothly at 500 RPM. *NOTE – Do not screw idle screw down tight, damage to the tip may result.*

HITACHI DAF 328 2-BARREL (Cont.)

OVERHAUL

Disassembly

1) Remove main jets, idle jets, and needle valve of both primary and secondary systems. These are accessible from outside the carburetor.

2) Remove choke chamber by detaching connecting rod, pump connecting rod, return spring, stop pin and four set screws.

3) Remove main air bleeds of primary and secondary sysstems, and check emulsion tubes. Remove accelerator pump piston, being careful not to lose the return spring and inlet valve at the lower part of the piston.

4) Remove throttle chamber by detaching rod linking diaphragm with secondary throttle valve. Four set screws must be removed.

Reassembly

To reassemble, reverse disassembly procedure, replacing gaskets as necessary.

Diaphragm Disassembly

Remove three set screws that hold diaphragm chamber, remove three set screws that attach the diaphragm chamber cover. To reassemble, reverse procedure. taking care that the edge of the diaphragm will not be turned up.

Cleaning And Inspection

Clean all parts in a suitable cleaner and blow all passages and castings dry with compressed air. *NOTE – Do not use drills, wires or other such instruments to clean jets or passages.* Inspect all parts for wear and replace as necessary.

►*JET REPLACEMENT NOTES:* The numbers stamped on jets indicate the diameter. Main and idle jets with larger numbers provide richer mixture, and the smaller numbers lean the mixture. Large numbers on the air jets, yield a lean mixture while smaller numbers cause a richer mixture.

CARBURETOR SPECIFICATIONS

Venturi Diameter	
Primary	.94" (24 mm)
Secondary	1.10 x .35" (28 x 9 mm)
Main Jet	
Primary	#115
Secondary	#155
Main Air Jet	
Primary	#240
Secondary	#120
Idle Jet	
Primary	#48
Secondary	#180
Idle Air Jet	
Primary	#180
Secondary	#100
Economizer	.071" (1.8 mm)
Economizer Air Bleed	.071" (1.8 mm)
Bench Fast Idle	.051" (1.3 mm)
Float seat-to-Valve Stem	.059" (1.5 mm)
Slow Idle Speed	500 RPM