WEBER 30 DIC-1 2-BARREL

Fiat
850 Coupe & Roadster (1968-71)
850 Roadster (1972-73)

DESCRIPTION

Dual throat carburetor of downdraft design. The carburetor is equipped with a butterfly type choke valve for cold starting. It also incorporates a "Super Feeder Device" for providing additional fuel at wide open throttle, high speed operation. A diaphragm type accelerator pump provides the immediate enrichment needed at acceleration.

OPERATION

NORMAL RUNNING

Fuel from the float chamber, controlled by the main jets, flows through ducts to a well. Fuel in the wells mixes with air from bleed jets. The air enters well through holes in the emulsion tube. The mixture goes through discharge tubes and into the venturi system of the carburetion zone.

SUPER FEEDER

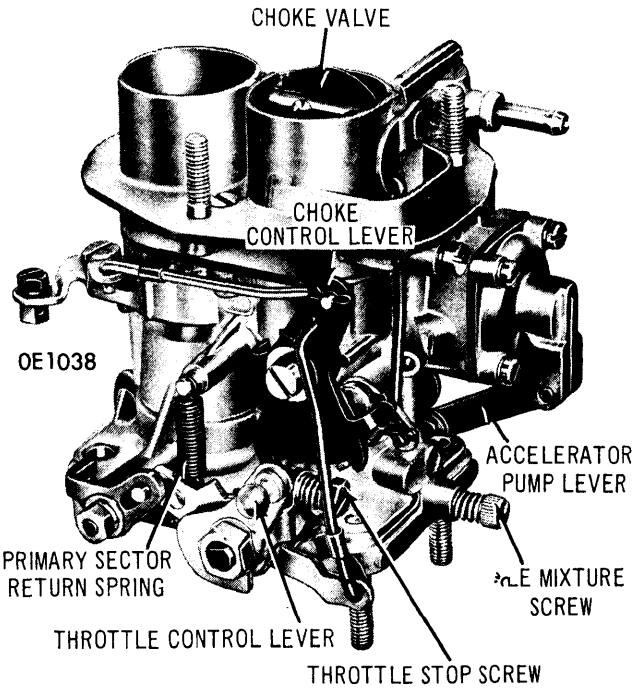
This device is incorporated on the secondary throat only. Fuel from the float bowl is metered by a calibrated bushing and blends with air from a calibrated orifice. During high speed wide open throttle operation, the mixture is drawn into the secondary throat through a special "Super Feeder Nozzle".

DIFFERENTIAL THROTTLE OPENING

When throttle control lever is actuated, the primary throttle opens and the secondary throttle remains closed. A lug on the primary shaft subsequently abuts against a lug at the idler lever. This causes the secondary throttle shaft to rotate so that both throttles are at wide open throttle simultaneously.

IDLING SYSTEM

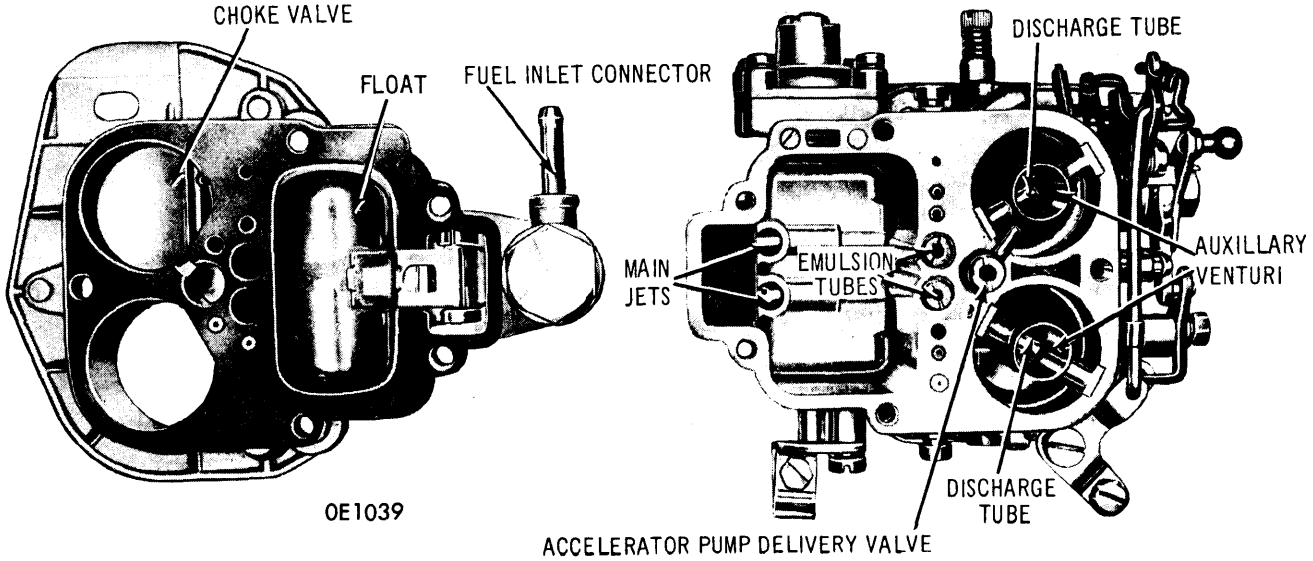
Fuel from the primary well passes to the idle jet where it blends with air from the calibrated bushing. It then proceeds through the idle feed passages to the orifice. At the orifice a tapered screw is provided for adjustment of the mixture. The mixture enters the primary throat downstream of the throttle valve. Mixture is also conveyed to a port right at the throttle valve. This provides an extra amount of mixture for even acceleration from idle speed. When secondary throttle opens, the fuel flows from the secondary well to the idle jet where it blends with air from the calibrated bushing and goes through passages to the secondary throat idle transfer orifices.



WEBER 30 DIC 1 CARBURETOR

ACCELERATOR PUMP

When throttles are closed, lever is released and spring pressure on the diaphragm causes fuel to be drawn from float chamber through ball valve. When throttles are opened at acceleration, the combined action of the cam and lever of the accelerator pump causes the diaphragm to inject fuel into the primary throat of the carburetor.



CARBURETOR COVER AND BODY

WEBER 30 DIC-1 2-BARREL (Cont.)

CHOKE & STARTING DEVICE

The butterfly type choke valve is controlled by a knob inside vehicle. When knob is pulled out, it causes valves to block air from the primary throat. The discharge tubes, because of the increased effect of engine vacuum, deliver a richer mixture than normal. This allows for quick starting of the engine. When the engine has started, the additional vacuum causes the throttle valve to open against spring pressure. This is a mixture quality that will allow engine to run properly, even though cold. When engine begins to reach operating temperature, choke should be gradually disengaged, allowing the choke butterfly valves to return to the open position.

ADJUSTMENT

FLOAT LEVEL ADJUSTMENT

Remove carburetor cover and float assembly and hold in vertical position so that float arm does not press in on needle ball. With float arm just lightly touching ball, measure distance from cover mating surface (gasket left in place) to float. Distance should be .236 in. (6 mm). If distance not correct, adjust position of float arm.

IDLE ADJUSTMENT

1) Make sure that engine is at normal operating temperature before attempting adjustment of idle. Then adjust throttle stop screw so that engine runs smoothly and without faltering.

2) Adjust mixture screw to give the highest regular engine idle RPM. Close stop screw to best idle speed. Repeat procedure until best idle at 850 RPM is achieved.

WEBER 30 DIC 1 ADJUSTMENT SPECIFICATIONS

Throat Bore	1.181 in. (30 mm)
Primary Throat	
Primary Venturi	.827 in. (21 mm)
Main Jet	.045 in. (1.15 mm)
Idle Jet	.018 in. (.45 mm)
Air Bleed Jet	.073 in. (1.85 mm)
Secondary Throat	
Primary Venturi	.905 in. (23 mm)
Main Jet	.045 in. (1.15 mm)
Idle Jet	.020 in. (.50 mm)
Air Bleed Jet	.073 in. (1.85 mm)
Accelerator Pump Jet	.016 in. (40 mm)
Needle Valve	.059 in. (1.50 mm)
Super Feeder	.043 in. (1.10 mm)