WEBER 32 DMTR 2-BARREL

Fiat 128R (1972)

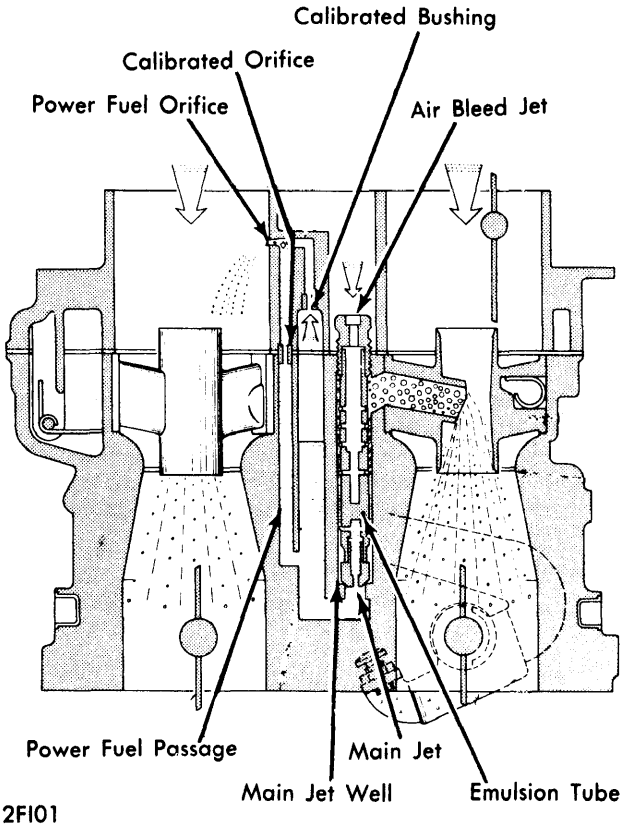
DESCRIPTION

Carburetor is two barrel downdraft design. Carburetor incorporates a diaphragm type accelerator pump, a crankcase ventilation device, carbon monoxide idling control device, and excess fuel recycling device from carburetor to fuel tank.

OPERATION

NORMAL RUNNING

Fuel from float chamber flows through main jet into emulsion tube where it mixes with air from air bleed jet. This mixture is ejected into venturi through spray outlet. Crankcase ventilation device is in normal operating position A (see illustration) and blow-by gas from crankcase is drawn into bottom of carburetor bore below throttle valve.

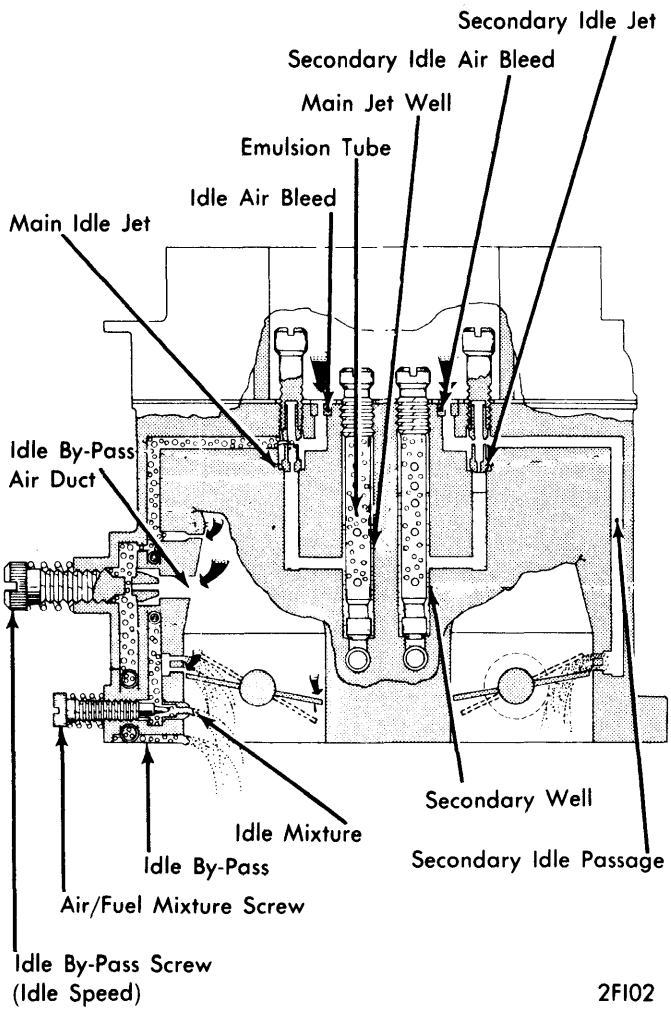


2FI01

NORMAL RUNNING

IDLING & PROGRESSION

At idle fuel passes from float chamber, through main jet, and through main idle jet; where it is emulsified with air from idle air calibrated jet. This mixture is regulated by idle adjusting screw (idle speed) and idle mixture adjusting screw (air/fuel mixture screw). As throttle valve is opening (past idle position) additional air/fuel mixture is introduced by idle transfer orifices. This enriches mixture for smooth progression between idle and normal running. As throttle opens wider, the increased vacuum causes fuel flow, through main jet, into emulsion tube where it is mixed with air from air bleed jet and ejected into primary venturi.



2FI02

IDLE & PROGRESSION

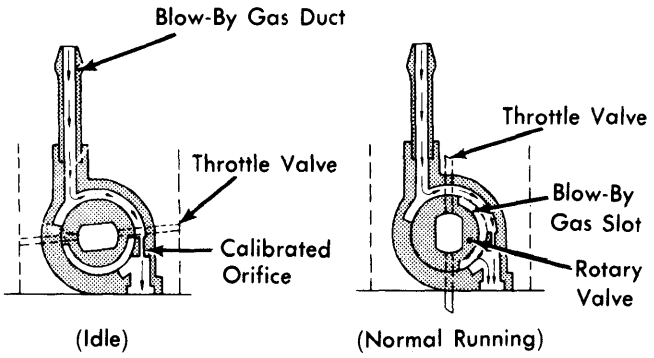
ACCELERATOR PUMP

Diaphragm type with ball check valve. Fuel from float chamber is drawn into pumpwell through ball check valve. On sudden acceleration, this fuel is forced into carburetor bore via nozzle. This enriches mixture sufficiently to provide smooth acceleration.

CRANKCASE VENTILATION DEVICE

This device consists of a rotating valve interconnected with throttle shaft. At idle, blow-by gas from crankcase is drawn into carburetor through a calibrated orifice. In normal running, valve is rotated to open position and blow-by gases are drawn into carburetor at a much faster rate than at idle. Blow-by gases do not interfere with air/fuel mixture because these gases are introduced below throttle shaft. See illustration for operation.

WEBER 32 DMTR 2-BARREL (Cont.)

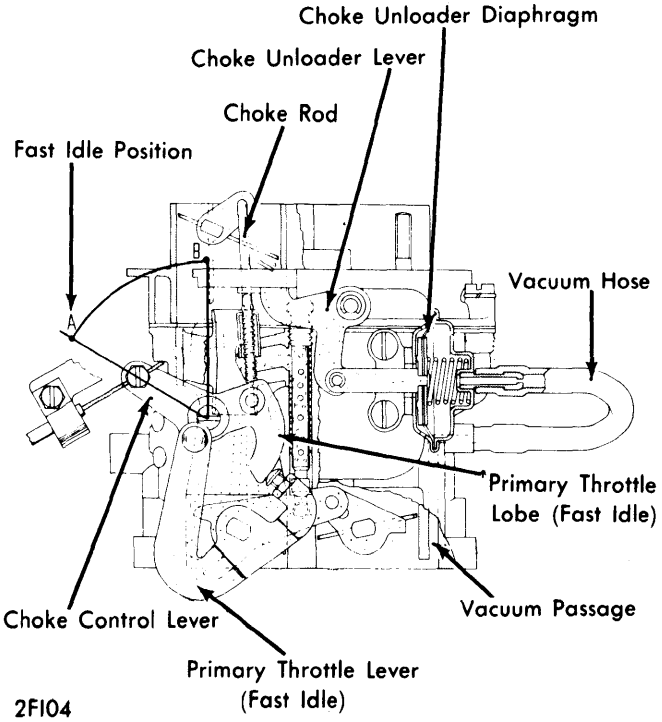


2FI03

CRANKCASE VENTILATION DEVICE

CHOKE UNLOADER

A diaphragm device for partial release of choke butterfly valve is used to prevent excessive choking. It is operated both by vacuum and a mechanical lever and spring. When choke is operated, butterfly valve is closed to restrict air flow and provide a richer air/fuel mixture for cold starting. As soon as engine fires, vacuum partly opens butterfly valve against action of calibrated spring. Vacuum downstream from throttle valve activates diaphragm device which further weakens mixture and engine will progress smoothly to normal running.



2FI04

CHOKE

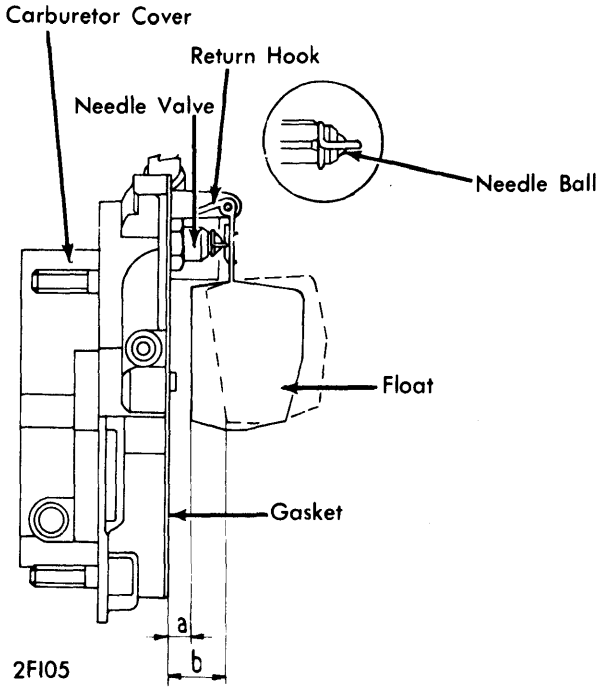
ADJUSTMENTS

FLOAT LEVEL

1) Remove carburetor body cover and make sure that needle valve is tight. Hold cover vertical so that weight of float does not lower ball in needle valve (see illustration).

2) With float arm just touching ball, float should be specified clearance from cover (with gasket in place). If clearance is not correct, bend float arms to obtain correct clearance.

3) Check to make sure that float travel is to specification, if not, adjust as necessary.



2FI05

FLOAT LEVEL ADJUSTMENT

IDLE

With engine at normal operating temperature, adjust idle speed screw to obtain specified idle RPM. Adjust air/fuel mixture screw to obtain highest idle RPM and readjust idle speed screw to obtain correct idle RPM. *NOTE — Do not attempt to adjust throttle opening adjusting screw as it is set and locked at factory.*

CARBURETOR SPECIFICATIONS

DESCRIPTION	32 DMTR	32 DMTR 20
Barrel Diameter	1.259" (32 mm)	1.259" (32 mm)
Venturi	.866" (22 mm)	.866" (22 mm)
Main Jet		
Primary Barrel	.041" (1.05 mm)	.043" (1.1 mm)
Secondary Barrel	.045" (1.15 mm)	.045" (1.15 mm)
Idle Jet		
Primary Barrel	.019" (.5 mm)	.019" (.5 mm)
Secondary Barrel	.027" (.7 mm)	.027" (.7 mm)
Main Air Metering Jet		
Primary Barrel	.076" (1.9 mm)	.082" (2.1 mm)
Secondary Barrel	.078" (2.0 mm)	.074" (1.9 mm)
Idle Air Metering Jet		
Primary Barrel	.039" (1.0 mm)	.043" (1.1 mm)
Secondary Barrel	.027" (.7 mm)	.027" (.7 mm)
Pump Jet	.015" (.4 mm)	.015" (.4 mm)
Needle Valve Seat	.059" (1.5 mm)	.059" (1.5 mm)
Float Level ①	.236" (6 mm)	.236" 6 mm)

① — Distance from cover face in vertical position with gasket in place.