1974-79 FUEL SYSTEMS
Zenith INAT 2-Barrel Carburetors

BMW: 1974 3.0L 6-Cylinder

DESCRIPTION

Carburetor is 2-barrel, downdraft design consisting of primary and secondary stages. Primary stage is operational for idle, low speed and light load. Secondary stage is operational for high speed and heavy load and is controlled by vacuum operated diaphragm. Carburetor has piston type accelerator pump, automatic choke, and dashpot.

ADJUSTMENTS

IDLE SPEED & MIXTURE

See appropriate TUNE-UP PROCEDURES article.

COLD (FAST) IDLE RPM

See appropriate TUNE-UP PROCEDURES article.

FLOAT LEVEL

Float level adjustment is accomplished by means of thickness of washer under needle. Washer should be replaced if its thickness is not exactly .04" (1.0 mm).

DASHPOT

With idle speed and CO% level properly set, disconnect vacuum hose to dashpot. Actuate throttle to obtain about 2500 RPM. Allow idle RPM to gradually decrease until throttle contacts set screw. Idle speed at this point should be 1650-1750 RPM. If necessary, loosen clamp and turn dashpot until proper speed is obtained.

AUTOMATIC CHOKE

1) Remove choke cover, leaving electrical and water connections intact. Close choke valve by hand. Loosen toggle joint screw. *See Fig. 1.* Fast idle adjusting screw should be on high step of fast idle cam.
2) Retighten toggle joint on tie rod to obtain a clearance of .059" (1.5 mm). Move clamp up against toggle joint so there is no play in its movement and tighten clamp.

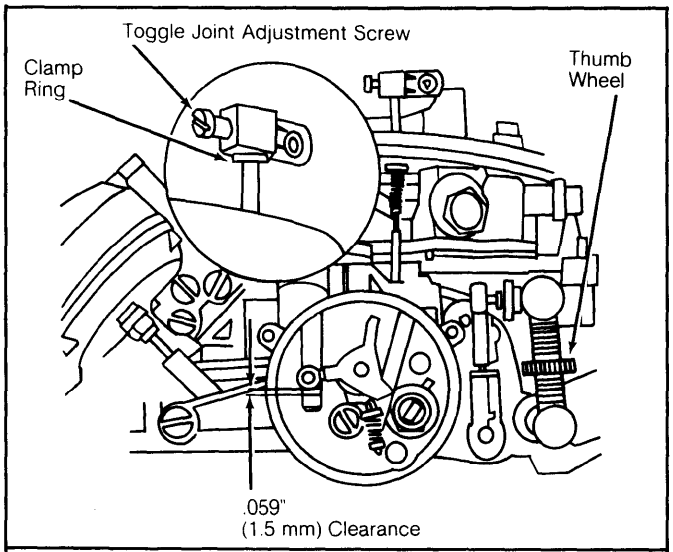

Fig. 1: Automatic Choke Adjustment

VACUUM BREAK DIAPHRAGM

With fast idle adjusting screw on high step of fast idle cam, push follower against tie rod. While holding follower in this position, set choke valve opening to .118" (3.0 mm). Use adjustment screw to obtain proper clearance.

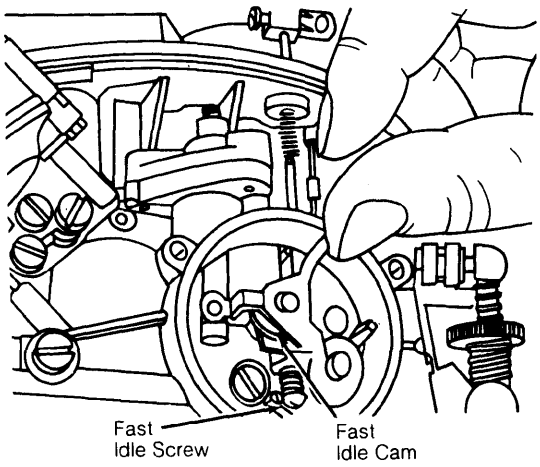

Fig. 2: Vacuum Break Diaphragm Adjustment

OVERHAUL

DISASSEMBLY

1) Carburetor may be disassembled while still on engine using the following procedure. Remove center air cleaner stud. Remove attaching bolts, loosen tie rod lock screw, and lift off carburetor cover.
2) Remove idle jet and remove mixture block. Clean main jets, pump intake valve, pump, and float chamber. Remove and clean air compensating jets, choke tubes, and accelerator pump piston.
3) To replace entire choke housing, drain cooling system. Remove sealing washer, pull off cables, and water hoses. Remove choke housing. When replacing choke housing be sure to line up notch on housing with notch on carburetor.

CLEANING & INSPECTION

Wash parts in carburetor cleaner (solvent). DO NOT soak any components containing rubber, leather, or plastic. Soak components long enough to thoroughly clean all surfaces and passages of foreign matter. Remove any residue after cleaning components in solvent. Blow out all fuel passages dry with compressed air. Inspect all parts for wear or damage and replace as necessary.

REASSEMBLY

To reassemble, reverse disassembly procedure. *See Fig. 3.* Air compensating jets and choke tubes, due to their different size, must go back exactly as removed.

CARBURETOR SPECIFICATIONS

Application	Specification
Float Level Setting	[1]
Choke	
Butterfly Opening	.118" (3 mm)
Heater Filament	14.6V/.45A
Setting	Index
Primary Circuit	
Main Jet	x115
Air Correction Jet	80
Venturi	24
Mixture Tube	6s
Secondary Circuit	
Main Jet	x140
Air Correction Jet	100
Venturi	30
Mixture Tube	4n
Idling Jet	42.5
Fuel Jet Thermo Start Valve	60
Accelerator Pump	Piston
Volume Injected Per Stroke	.6-.9 cc

[1] - Float level is determined by thickness of washer under needle valve.

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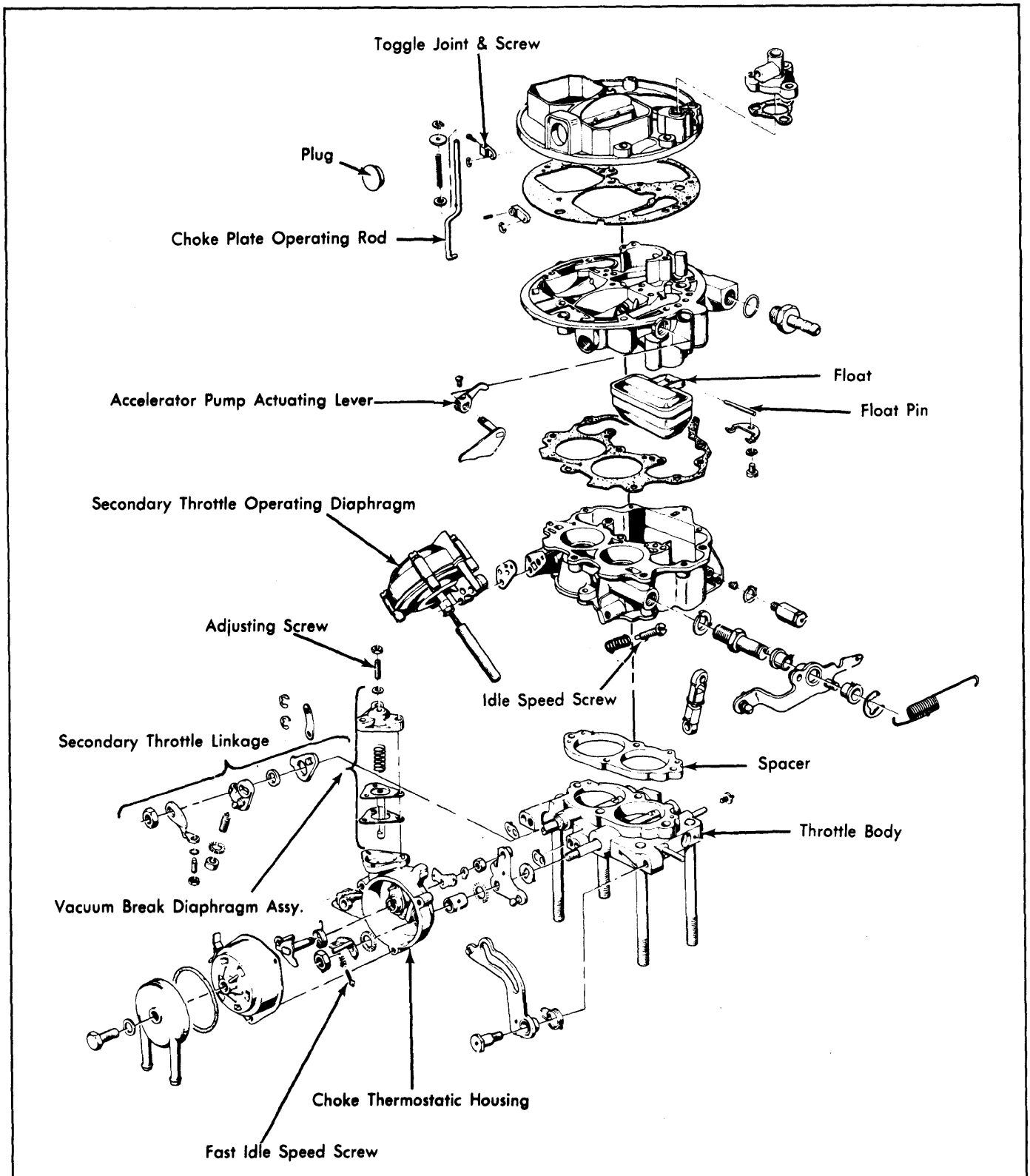

Fig. 3: Exploded View Of Zenith INAT 2-Barrel Carburetor