ZENITH INAT TYPE 2-BARREL

BMW 3 Liter Engine (1969-72)
Mercedes Benz 250 (1968-72)
Mercedes Benz 280 (1968-71)

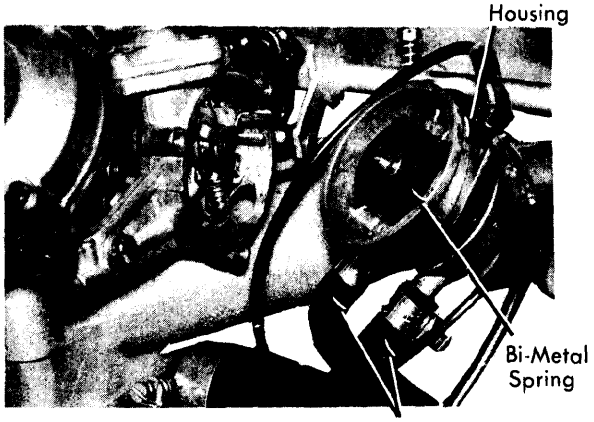
DESCRIPTION

Zenith INAT is a two barrel downdraft type. Each carburetor has its own water cooled and heated automatic choke, a butterfly type choke valve, and dashpot control. Exhaust emission control is an integral part of carburetor, with primaries jetted smaller than secondaries for a leaner mixture.

ADJUSTMENT

SYNCHRONIZING ADJUSTMENT

Carefully screw both idle mixture screws all the way in, and then out 1 1/2 — 2 turns. Disconnect tie rods on rear of carburetor. Start engine, run at 900 RPM. Using a suitable balance tool, synchronize position of throttle butterflies, using idle speed screws. If necessary, readjust idle to 900 RPM. Repeat adjustment procedure until engine idle is smooth. Last setting should always be carried out with mixture screws. Adjust length of tie rod with thumb wheel until engine speed does not change when linkage is reattached. Check synchronization at 1700 RPM, if necessary readjust tie rod.



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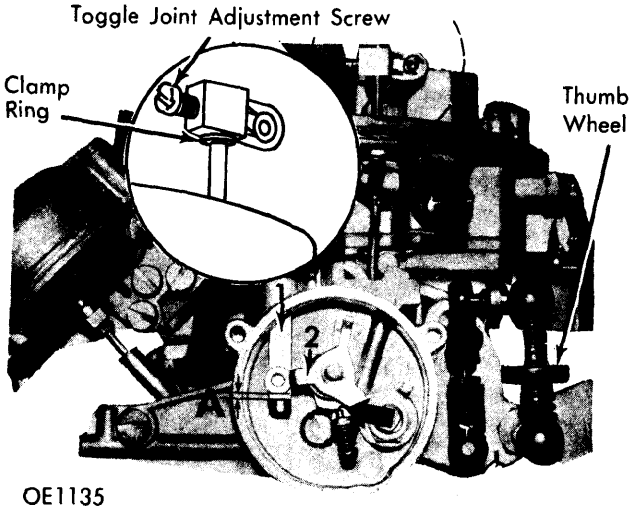
CHOKE COVER REMOVAL

AUTOMATIC CHOKE ADJUSTMENT

Remove choke cover leaving electrical and water connections intact. Close choke valve by hand. Loosen toggle joint screw (see illustration). Adjusting screw should be on high step of setting plate. Retighten toggle joint on tie rod (1), for clearance at "A" of .059". This clearance is between (1) and (2), (see illustration) Move clamp up against toggle joint so there is no play in its movement. With adjusting screw on high step of setting plate, push follower against tie rod and while holding in this position and using a suitable gauge, set choke valve opening to .118". Use adjustment screw (3) to obtain proper clearance.



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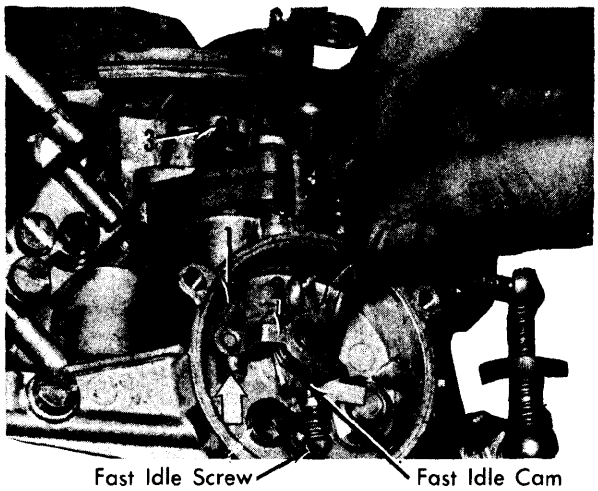
FOLLOWER ADJUSTMENT



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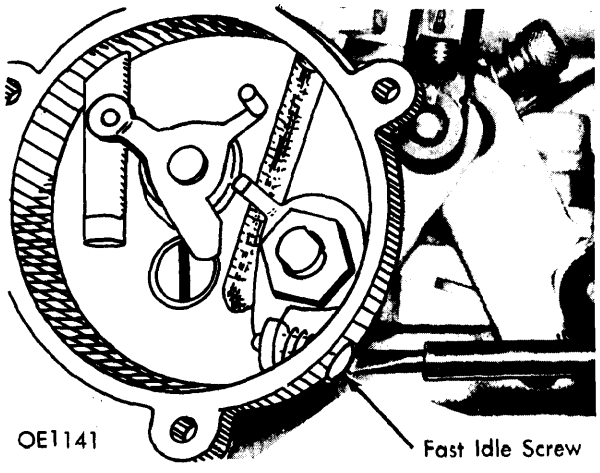
CHOKE BUTTERFLY VALVE ADJUSTMENT

FAST IDLE SPEED

With engine at operating temperature, air filter removed, choke cover removed, and carburetors synchronized, disconnect tie rod at rear. Lift accelerator linkage of rear carburetor approximately 1/8". Close choke butterfly valve by hand until there is a gap of 3/32. This will set choke stop on low step of cam. Release choke butterfly valve and start engine without depressing accelerator pedal. Fast idle should be 1400 RPM. Shut off engine to make correction. Push accelerator linkage to full throttle position, this will bring fast idle adjusting screw to an accesible position. One turn of adjusting screw equals 300 RPM. Repeat these procedures until idle speed is 1400 RPM. Set front carburetor in same sequence. After setting front carburetor, attach tie rod and set both chokes on low step. Release choke valves, start engine without accelerator and fast idle should (with both carburetors) be 1800-2000 RPM.



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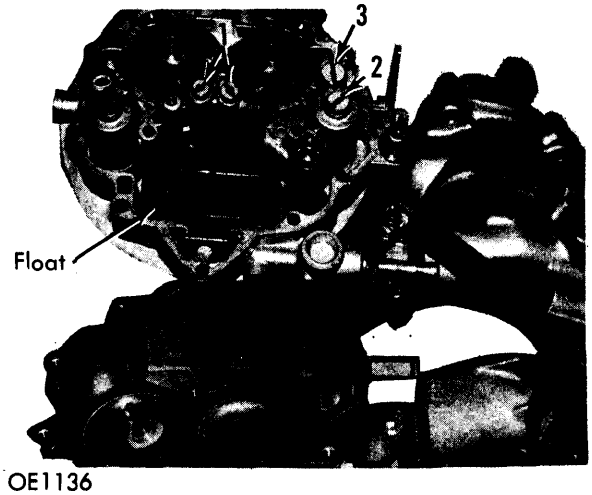
FAST IDLE ADJUSTMENT

ZENITH INAT TYPE 2-BARREL (Cont.)

FLOAT LEVEL

Float level should be adjusted to 8/10". This adjustment is accomplished by means of thickness of washer under needle. This washer should be .04", and should be changed if measurement is not exactly .04".



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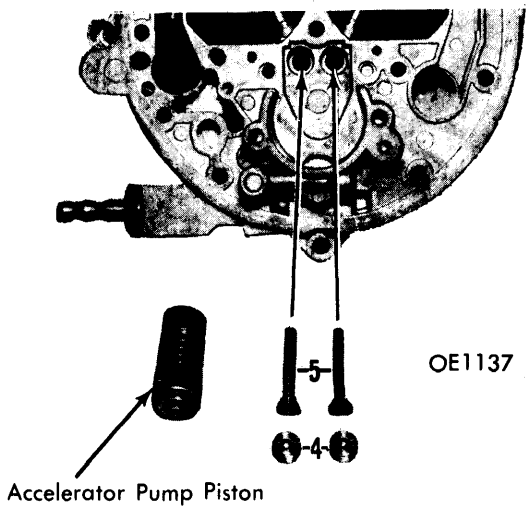
CARBURETOR COVER COMPONENTS

OVERHAUL

Removal of carburetor is not necessary for minor overhaul and cleaning. Proceed as follows for on car overhaul. Remove center air cleaner stud, attaching bolts loosen tie rod lock screw and lift off carburetor cover. Remove idle jet and remove mixture block. Clean main jets (1), pump intake valve (2), pump pressure (3), and float chamber. Remove and and clean air compensating jets (4), choke tubes (5), and accelerator pump piston. Air compensating jets and choke tubes, due to their different size, must go back exactly as removed. To replace entire choke housing, drain cooling system, remove sealing washer, pull off cables and water hoses and remove choke housing. When replacing choke housing be sure to line up notch on housing with notch on carburetor.



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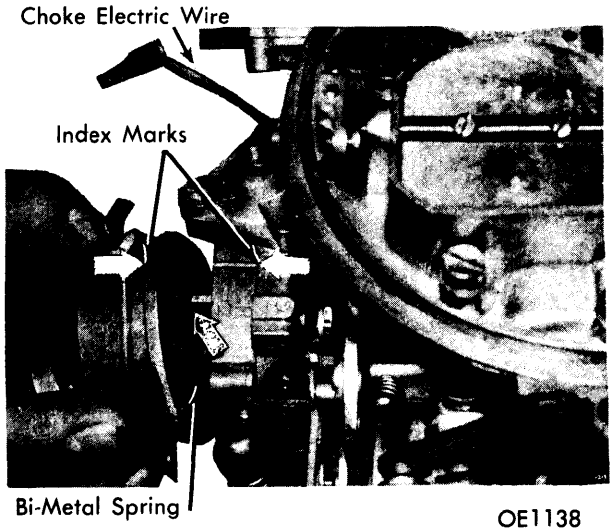
ACCELERATOR PUMP & CHOKE TUBES



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CHOKE COVER INSTALLATION

CARBURETOR SPECIFICATIONS

Application	Specification
Idle	900-950 RPM
Fast Idle	1800-2000 RPM
CO Level	1-1.5%
Float Level Setting	①
Float Valve Gasket	.04" (1.0 mm)
Float Weight	.3 oz. (8.5 g)
Choke	Index
Butterfly Opening	.118" (3 mm)
Heater Filament	14.6V/.45A
Thermo Start Valve	20 ohm
Idling Cutoff Valve	.13A/12V
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 gasket under needle valve.