1974-79 FUEL SYSTEMS
Nikki 2-Barrel Carburetors

1979 Mazda 626

DESCRIPTION

Carburetor is a Nikki 2-barrel downdraft type. It is equipped with an electric automatic choke, fuel cut solenoid valve, an anti-afterburn valve for deceleration control and a throttle positioner system for air conditioned models. A double venturi provides for high air flow velocity at the venturi under all operating conditions, resulting in more efficient atomization of fuel for smooth combustion.

ADJUSTMENTS

IDLE SPEED & MIXTURE

See appropriate TUNE-UP PROCEDURES article.

COLD (FAST) IDLE RPM

See appropriate TUNE-UP PROCEDURES article.

AUTOMATIC CHOKE SETTING

1) Before starting engine, fully depress accelerator pedal to ensure choke valve closes properly. Push choke valve with finger to check for binding. Be sure thermostat cover index mark is set at center of choke housing index mark.

2) Warm engine and check that choke valve is fully open. Tighten all attaching screws after aligning index marks. *See Fig. 1.* DO NOT set thermostat cover index mark at any position except center of choke housing index mark.

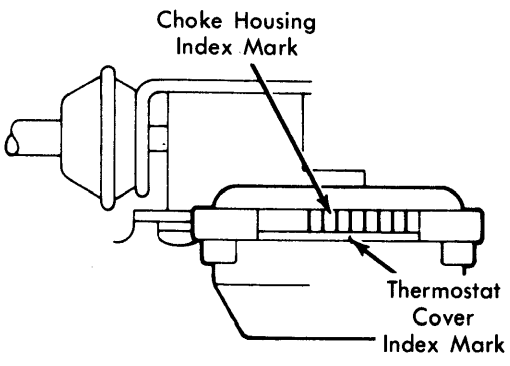

Fig. 1: Automatic Choke Setting

FLOAT LEVEL

Remove air horn from carburetor. Invert air horn on stand and allow float to lower by its own weight. Measure clearance between float and air horn bowl. If clearance is not .433" (11 mm), bend float seat slip to obtain proper clearance. *See Fig. 2.*

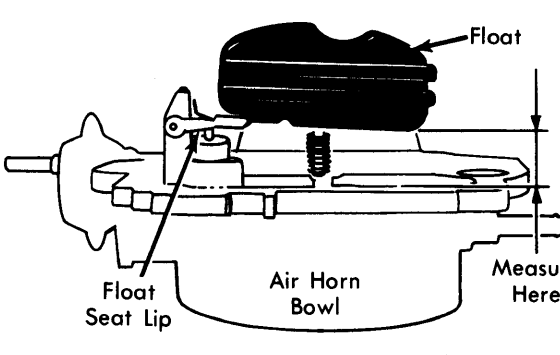

Fig. 2: Float Level Adjustment

FLOAT DROP

Adjust float level and turn air horn over to its normal position. Make adjustment without gasket on air horn. Allow float to lower by its own weight. *See Fig 3.* Measure distance between bottom of float and air horn bowl. If clearance is not 1.811" (46 mm), bend float stopper to obtain proper clearance.

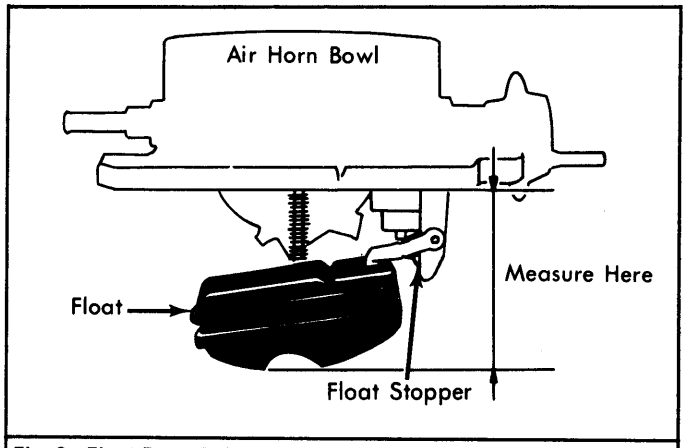

Fig. 3: Float Drop Adjustment

THROTTLE VALVE OPENING ANGLE

Close choke valve fully. Check that fast idle lever is on high (1st) position of fast idle cam. *See Fig. 4.* Adjust throttle valve opening angle or clearance by turning fast idle adjusting screw. Turn screw clockwise to make angle larger, counterclockwise to make angle smaller. Clearance should be .035-.043" (.9-1.1 mm).

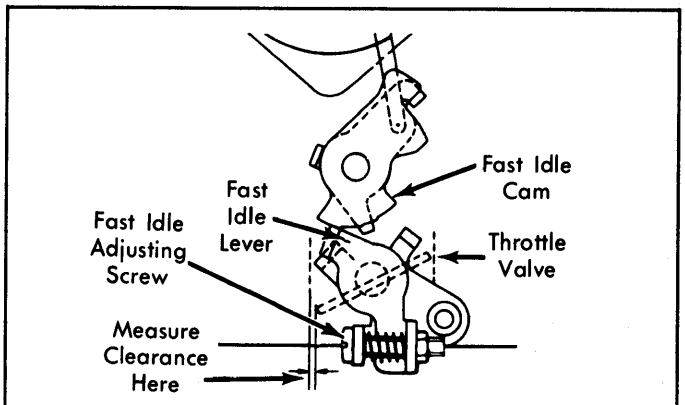

Fig. 4: Throttle Valve Opening Angle Adjustment

CHOKE VALVE OPENING ANGLE

1) Check throttle valve opening clearance. Then place fast idle lever on 2nd step of fast idle cam. *See Fig. 5.* Adjust choke valve opening angle or clearance by bending starting arm.

2) If large adjustment is necessary, bend choke rod. Choke valve opening angle should be 8-12 degrees and clearance should be .024-.038" (.60-.95 mm), with a preferred clearance of .030" (.75 mm).

CHOKE DIAPHRAGM

1) Apply approximately 15.7 in. Hg vacuum from the choke diaphragm vacuum tube. Fast idle lever should be on high step of cam. Press choke valve slightly, and check choke valve opening angle or clearance.

2) Opening angle should be 11-15 degrees and clearance should be .035-.049" (.90-1.25 mm) with a preferred clearance of .041" (1.05 mm). If not within specifications, bend choke lever. *See Fig. 6.*

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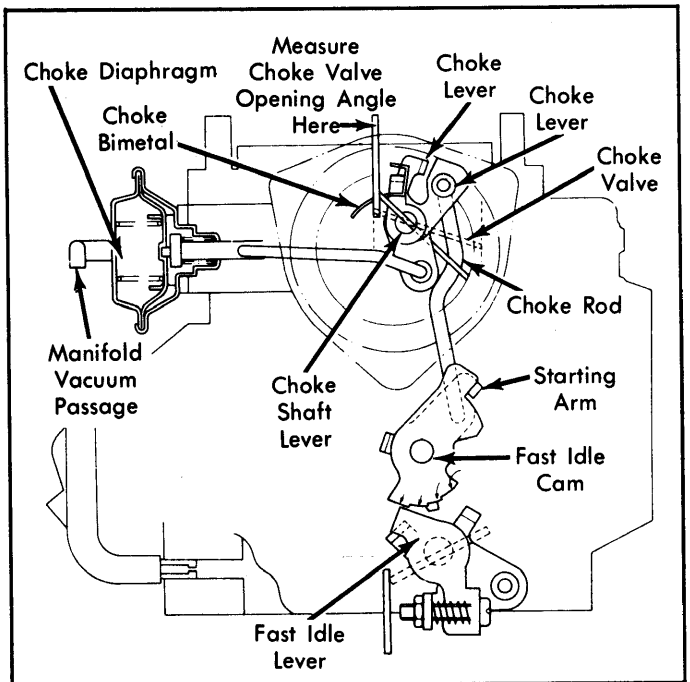

Fig. 5: Choke Valve Opening Angle Adjustment

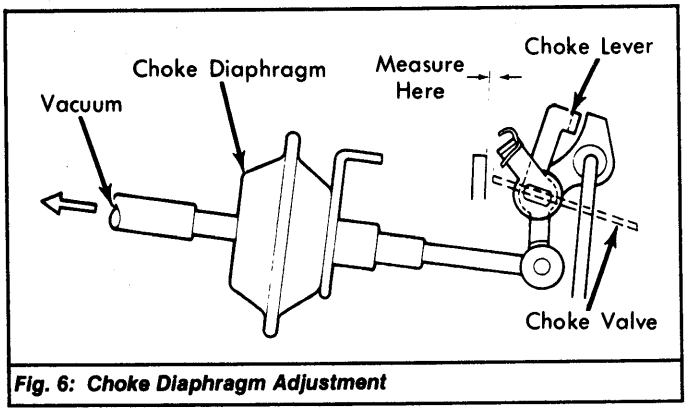

Fig. 6: Choke Diaphragm Adjustment

CHOKE UNLOADER

Close choke valve fully and then open primary throttle valve fully. Measure choke valve opening angle or clearance. Opening angle should be 27-33 degrees with a clearance of .102-.134" (2.6-3.4 mm). If not within specifications, adjust by bending tab. *See Fig. 7.*

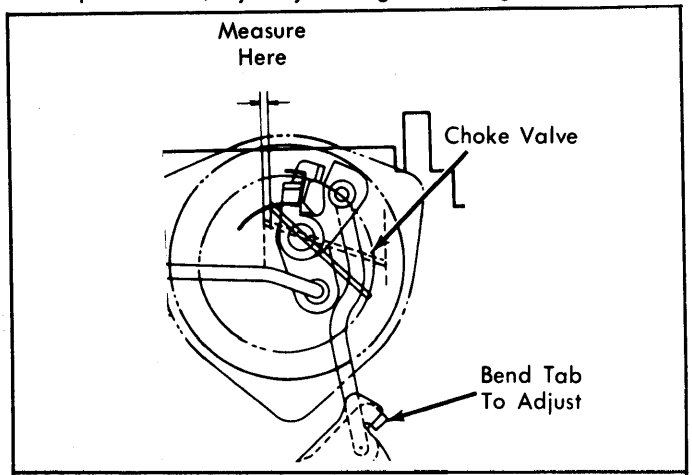

Fig. 7: Choke Unloader Adjustment

SECONDARY THROTTLE VALVE OPENING ANGLE

The secondary valve should begin to open when primary throttle valve opens 52 degrees and should be fully open when primary valve fully opens. Check clearance of primary throttle valve and wall of throttle bore as secondary throttle valve begins to open. *See Fig. 8.* If clearance is incorrect, bend connecting rod to obtain .226" (6.75 mm) clearance.

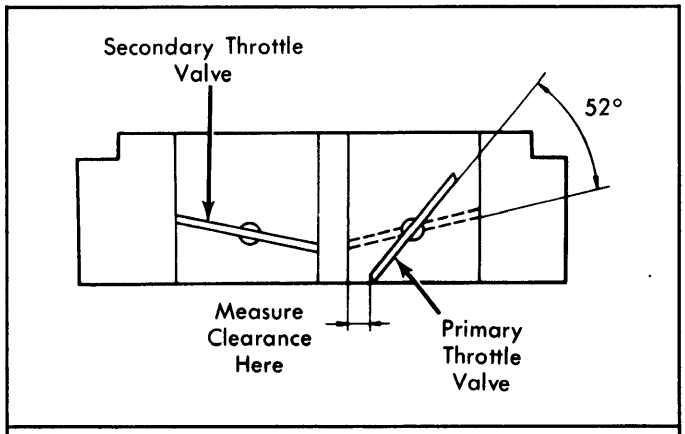

Fig. 8: Secondary Throttle Valve Opening Clearance Adjustment

ACCELERATOR PEDAL HEIGHT

1) Accelerator pedal should be 1.5-1.9" (40-50 mm) lower than brake pedal. Turn linkage rod "A" to obtain correct adjustment. *See Fig. 9.* Cable free play at carburetor should be .04-.12" (1-3 mm).

2) If free play is not to specifications, adjust nut "B" on cylinder head cover. As final check, press accelerator pedal all the way to floor and check that throttle valves are wide open. If necessary, adjust stopper bolt "C".

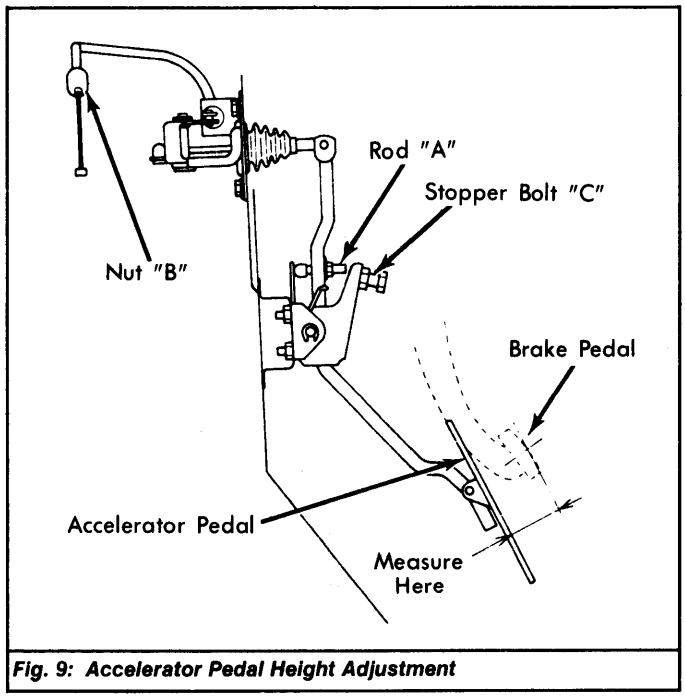

Fig. 9: Accelerator Pedal Height Adjustment

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THROTTLE OPENER

A/C Equipped Models Only - 1) Connect tachometer to engine. Warm up and run engine at idle speed. Stop engine and remove air cleaner. Disconnect vacuum sensing tube (servo diaphragm to 3-way solenoid valve) at servo diaphragm. *See Fig. 10.*

2) Connect servo diaphragm directly to intake manifold vacuum supply. Disconnect vacuum sensing tube (carburetor to 1st stage valve) at EGR valve. Disconnect sensing tube (carburetor to distributor) at distributor.

3) Start engine and increase speed to 2000 RPM. Turn A/C system on. Decrease engine speed and check for 1150-1200 RPM. If speed is incorrect, turn throttle opener adjusting screw in or out to achieve 1200 RPM setting.

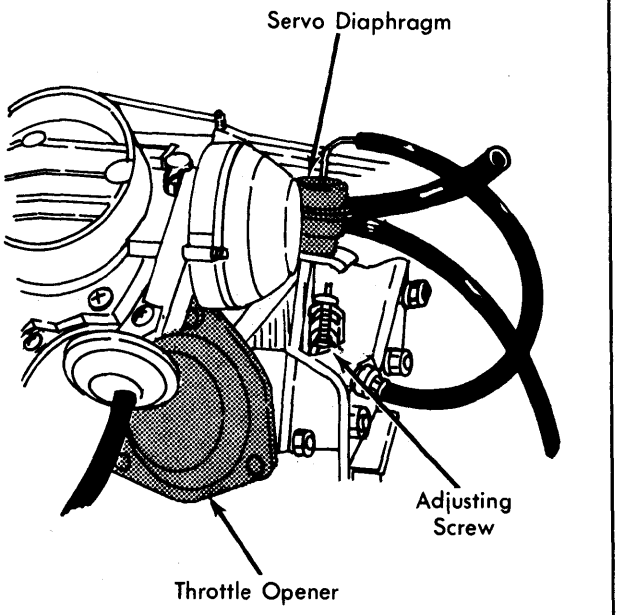


Fig. 10: Throttle Opener Adjustment

OVERHAUL

DISASSEMBLY

1) Remove carburetor and cover intake manifold port with clean shop towel. When disassembling automatic choke and air horn, remove vacuum tube, throttle return spring, accelerator pump connecting rod and arm. Remove choke rod, air horn, automatic choke and gasket. Remove fuel inlet fitting.

2) Remove accelerator pump plunger assembly from main body. Remove retaining clip and turn main body over. Remove strainer and accelerator pump inlet check ball. Remove check valve plug and washer. Remove accelerator pump outlet check ball and spring. Remove slow fuel cut solenoid valve and gasket.

3) Disconnect throttle link and vacuum diaphragm connecting rod. Remove vacuum diaphragm and main body from throttle body. One bolt attaching main body is inside the throttle body.

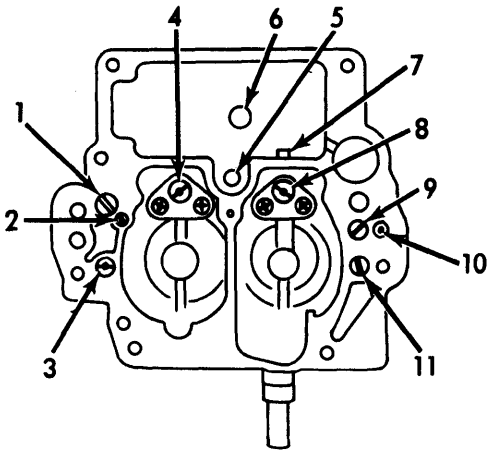
4) Remove air bleeds and jets. *See Fig. 11.* Note size of jets and air bleeds for reassembly reference. Remove throttle hanger, but do not remove throttle valve and shaft, venturi, and choke valve and shaft. Remove float and collar and needle valve assembly.

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. Use care not to mix primary and secondary barrel parts. Before attaching air horn, check float level and float drop and adjust as necessary. After carburetor is assembled, make other adjustments as necessary.



1. Step jet
2. Primary step air bleed
3. Secondary step air bleed
4. Secondary main air bleed
5. Power valve
6. Secondary main jet
7. Primary main jet
8. Primary main air bleed
9. Slow jet
10. Primary slow air bleed
11. Secondary slow air bleed

Fig. 11: Jets & Air Bleed Locations

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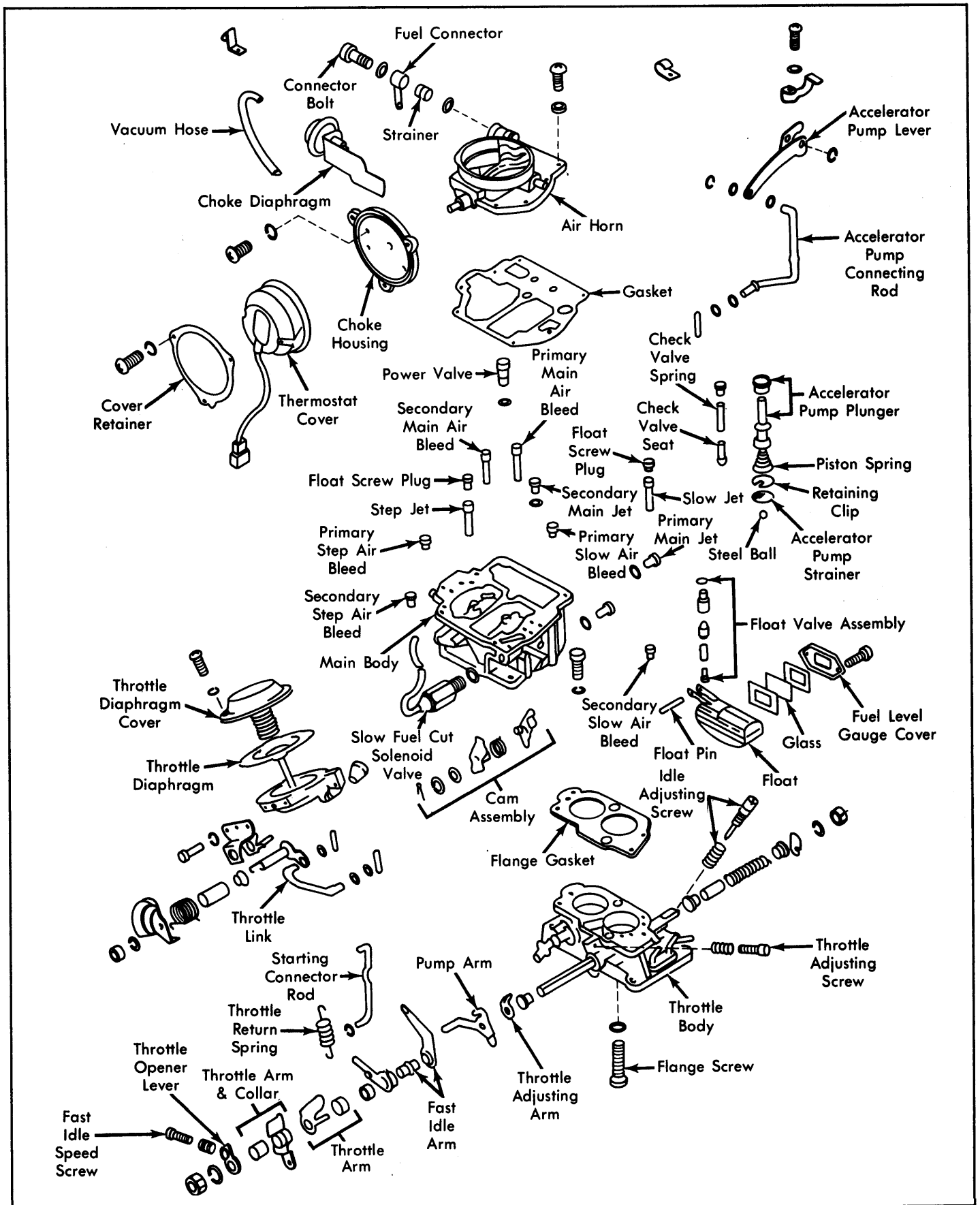

Fig. 12: Exploded View of Nikki 2-Barrel Carburetor (Mazda 626)