NIKKI 2-BARREL – MAZDA B2000

Mazda B2000

DESCRIPTION

Carburetor is a 2-barrel, downdraft type, 2-stage design with an electric automatic choke. The primary stage includes a curb idle system, accelerator pump system, idle transfer system, main metering system and power enrichment system. The secondary stage includes an idle transfer system and main metering system.

For deceleration control, Federal vehicles make use of an anti-afterburn valve and throttle positioner system; California vehicles, an air bypass valve and throttle positioner system.

ADJUSTMENTS

HOT (SLOW) IDLE RPM

See appropriate TUNE-UP SERVICE PROCEDURES article.

IDLE MIXTURE

See appropriate TUNE-UP SERVICE PROCEDURES article.

COLD (FAST) IDLE RPM

See appropriate TUNE-UP SERVICE PROCEDURES article.

AUTOMATIC CHOKE SETTING

Align index mark on thermostat cover with center of choke housing index mark. *See Fig. 1.* Tighten attaching screws.

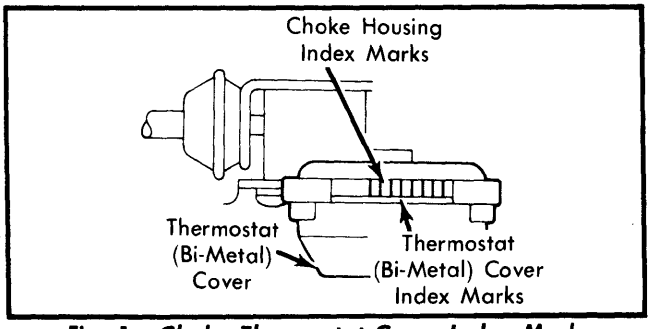

Fig. 1 Choke Thermostat Cover Index Marks

FLOAT LEVEL ADJUSTMENT

1) With engine running, check fuel level in fuel bowl sight glass. If fuel level is not to specified mark on sight glass, remove carburetor from vehicle. Remove fuel bowl cover and sight glass.

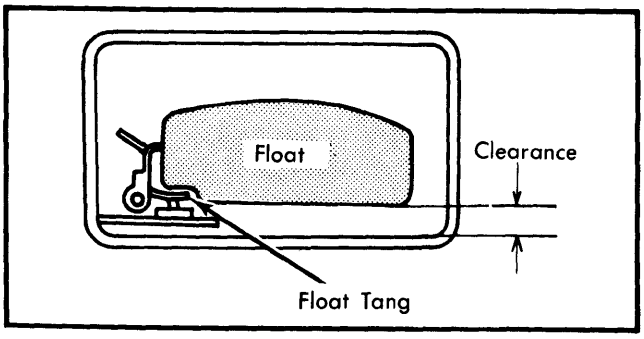

Fig. 2 Checking Float Level Ajustment

2) Invert carburetor on stand and allow float to lower by its own weight. Measure clearance as shown in *Fig. 2.* Clearance should be .335" (8.5 mm). To adjust clearance, bend float tang until proper clearance is obtained.

FLOAT DROP ADJUSTMENT

1) Turn carburetor to its normal position (not inverted). Allow float to lower by its own weight. Measure clearance between bottom of bowl and float. *See Fig. 3.* Clearance should be .039" (1 mm). If not, bend float stopper until proper clearance is obtained.

2) Install fuel bowl sight glass and install carburetor on engine. Operate engine and make sure fuel level is at specified mark in sight glass.

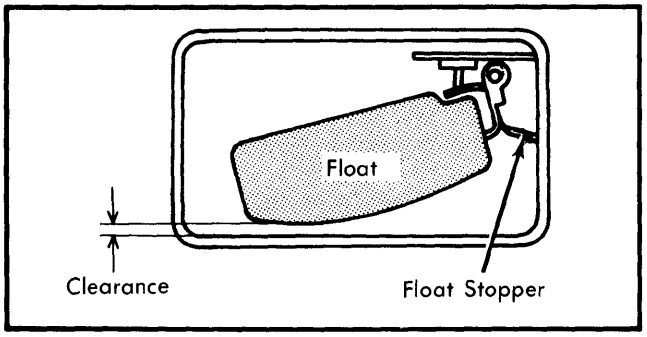

Fig. 3 Checking Float Drop Adjustment

CHOKE LINKAGE ADJUSTMENT (FAST IDLE OPENING ANGLE)

Fully close choke valve. Place fast idle screw on high (1st) step of fast idle cam. Measure throttle valve opening clearance between throttle bore wall and lower edge of throttle plate. Clearance should be .051-.059" (1.2-1.5 mm). Adjust clearance by turning adjusting screw. *See Fig. 4.*

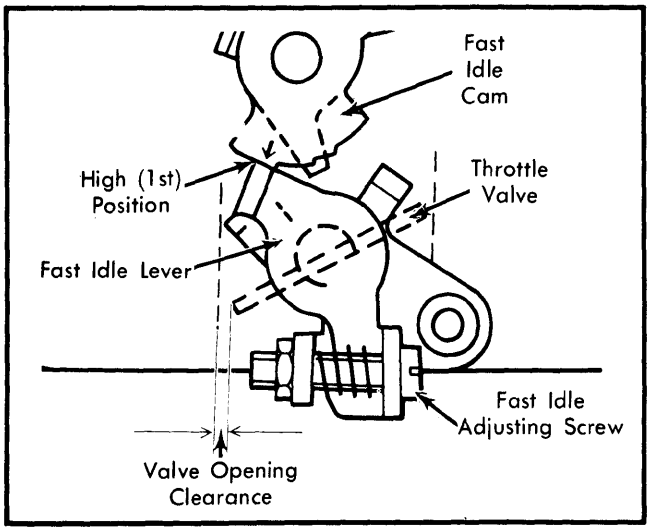

Fig. 4 Adjusting Choke Linkage (Fast Idle Opening Angle)

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CHOKE VALVE OPENING ANGLE

Place fast idle screw on 2nd step of fast idle cam. Measure clearance between choke valve bore and upper edge of valve. Clearance should be .016-.028" (.40-.70 mm) on Federal models and .024-.035" (.60-.90 mm) on California models. Adjust clearance by bending starting arm. *See Fig. 5.*

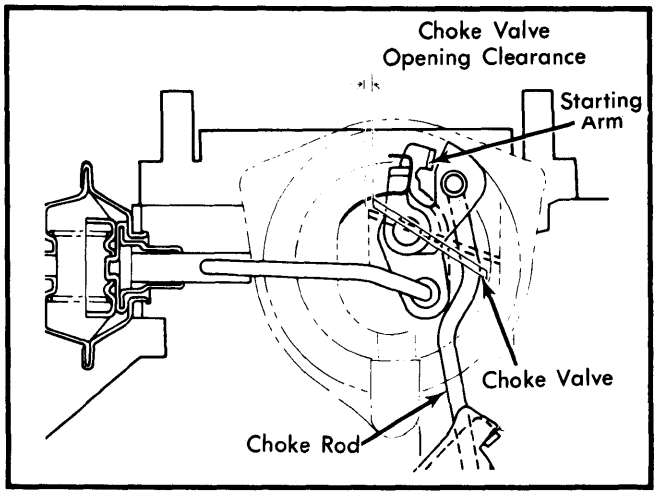

Fig. 5 Adjusting Choke Valve Opening Angle

CHOKE UNLOADER ADJUSTMENT

Close choke valve fully and then open primary valve fully. Measure choke valve clearance between air horn and choke valve. *See Fig. 6.* Clearance should be .079-.099" (2.0-2.5 mm). To adjust clearance, bend throttle adjusting arm.

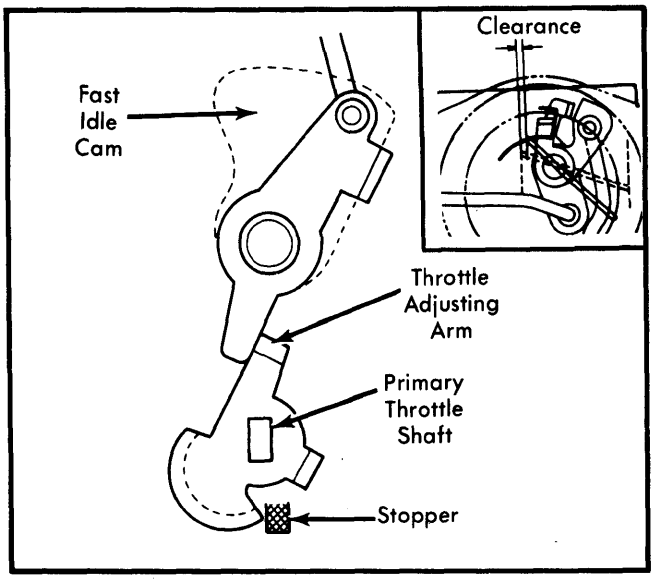

Fig. 6 Adjusting Choke Unloader

CHOKE DIAPHRAGM ADJUSTMENT

Apply approximately 15.7 in. Hg vacuum to choke diaphragm. Press choke valve slightly to closed position and measure clearance between choke valve and air horn. Adjust clearance to .047-.067" (1.2-1.7 mm) on Federal models and .065-.085" (1.65-2.15 mm) on California models.

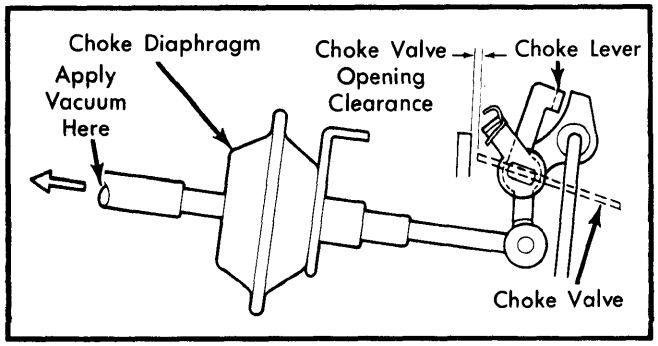

Fig. 7 Adjusting Choke Diaphragm

ACCELERATOR PEDAL HEIGHT ADJUSTMENT

Check accelerator pedal position. Pedal should be 1.57-1.97" (40-50 mm) lower than brake pedal. Throttle valves should be wide open when accelerator pedal is against the floor. To adjust pedal height, loosen lock nuts on longer linkage rod *("A" in Fig. 8).* Rotate rods in sockets until proper height is obtained and tighten lock nuts.

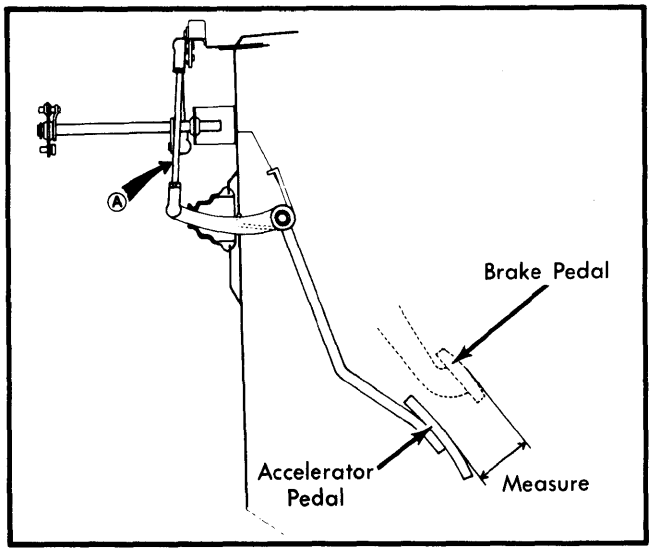

Fig. 8 Accelerator Pedal Height Adjustment

OVERHAUL

DISASSEMBLY

1) Remove carburetor and cover intake manifold port with clean shop towel to prevent dust and dirt from entering. Disconnect accelerator pump rod from lever and remove lever from main body.

2) Remove throttle return spring. Disconnect choke diaphragm-to-main body vacuum hose at main body. Spread clips and remove solenoid valve and choke heater leads. Remove choke rod retaining clip and remove choke rod. Remove air horn retaining screws. Separate air horn from main body and discard gasket.

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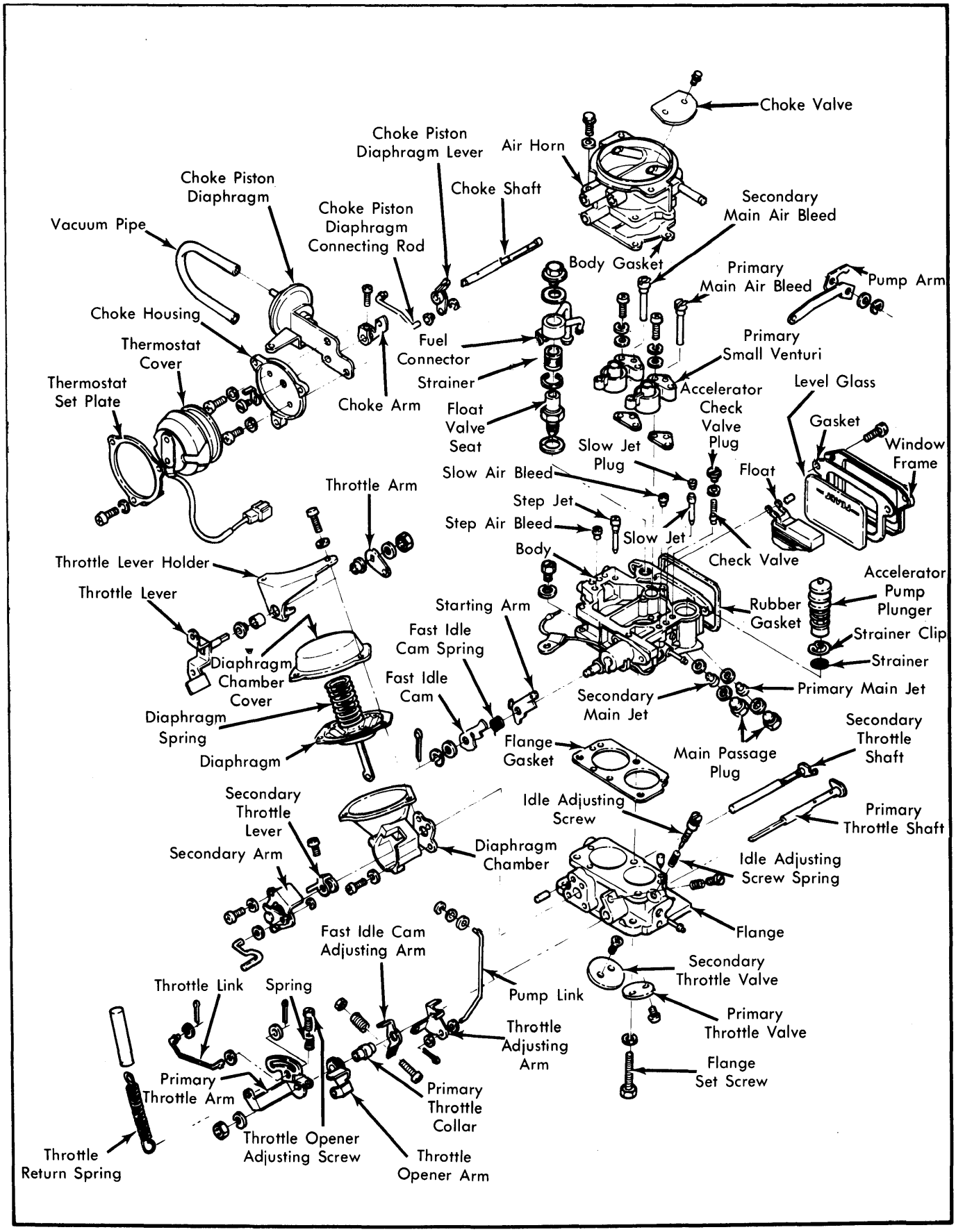

Fig. 9 Exploded View of Nikki 2-Bbl. Carburetor

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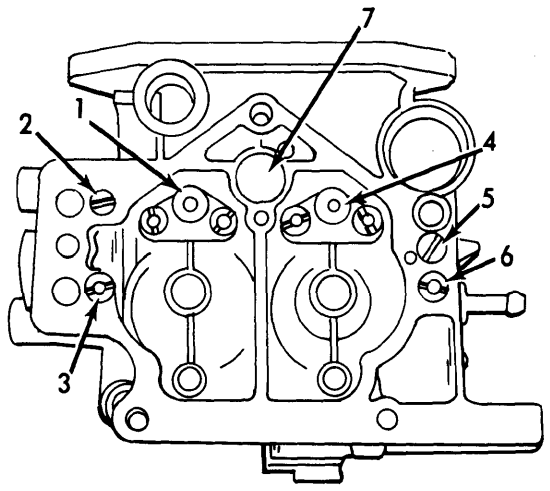
3) Remove choke cover retaining screws and remove choke cover. Mark position of choke thermostat cover index mark on choke housing and remove thermostat cover. Remove fuel inlet fitting from main body. Remove fuel inlet fitting, filter and packing. Remove accelerator pump piston assembly from main body.

4) Remove inlet check ball retainer clip. Invert carburetor and remove strainer and inlet check ball. Remove pump check valve retainer. Invert carburetor and remove check valve. Remove main body attaching bolts (1 bolt on bottom of throttle body). Separate throttle body from main body.

5) Remove fuel inlet bolt and washers from main body. Remove needle valve, spring and valve stem. Remove fuel bowl sight glass cover screws, cover, gasket, glass and rubber gasket. Remove float pin and float. Remove diaphragm cover retaining screws, diaphragm cover and spring.



1. Secondary Main Air Bleed
2. Secondary Slow Jet
3. Secondary Slow Air Bleed
4. Primary Main Air Bleed
5. Primary Slow Jet
6. Primary Slow Air Bleed
7. Power Valve

Fig. 10 Removing and Installing Jets and Air Bleeds

6) Remove screw and bolt attaching secondary arm to main body, then remove throttle lever assembly. Remove clip securing diaphragm rod to secondary throttle shaft. Remove secondary throttle shaft retaining screw and throttle lever. Remove diaphragm body. Using power valve remover (490118870A), remove power valve.

7) Remove primary jet plugs, gaskets and main jets. Remove idle jets and all air bleeds from main body. See *Fig. 10*. Using a hacksaw, cut through mixture limiter shell .47" (12 mm) from shell end. Remove and discard mixture screw, spring and shell.

CLEANING & INSPECTION

1) Thoroughly clean all parts in clean solvent and dry with compressed air. Use care when blowing out passages in carburetor. Inspect air horn, main body and throttle body for cracks and breakage.

2) Inspect choke and throttle shafts for wear. Examine all jets and air bleeds. Never use wire to eliminate clogged condition. Inspect pump piston cup and replace if worn. Check accelerating pump valves for proper operation.

3) Examine power valve operation and check float needle and float. Inspect mixture adjusting screw for burrs or ridges. Check diaphragm and solenoid operation. Check for clogs at fuel return orifice. Discard and use all new gaskets when assembling carburetor.

REASSEMBLY

To assemble, reverse disassembly procedure. Be careful not to mistake primary and secondary parts. When installing thermostat cover on automatic choke housing, hook choke arm to bi-metal spring. Check correct operation of choke valve by turning thermostat cover. Then align index mark on cover with center mark on choke housing and tighten screws. Install new mixture screw and limiter shell.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Idle Speed (Engine RPM)		Float Level Setting In. (mm)	Float Drop Setting In. (mm)	Choke Linkage (Off Car) In. (mm)	Accelerator Cable Free Play	Choke Valve Opening In. (mm)
	Hot	Fast					
B2000	650	①	.335 (8.5)	.039 (1.0)	.051-.059 (1.2-1.5)	.....	②.016-.028 (.40-.70)

① – Manufacturer does not supply fast idle speed. See Choke Linkage (Fast Idle Opening Angle).
② – Calif. models – .024-.035" (.60-.90 mm).