1974-79 FUEL SYSTEMS
Aisan 2-Barrel Carburetors

Corolla (2T-C Engine)

CARBURETOR APPLICATION

1977 CARBURETOR APPLICATIONS

Application	Part No. W/Man. Trans.	Part No. W/Auto. Trans.
Federal	21100-26510	21100-26520
Calif.	21100-26393	21100-26393
High Alt.	21100-26600	21100-26600

1978-79 CARBURETOR APPLICATIONS

Application	Part No.
Federal	21100-26800
California	21100-26395
High Altitude	21100-26602

DESCRIPTION

Carburetor is equipped with automatic choke which is heated by an electrically operated bimetallic heating coil. A piston type accelerator pump is incorporated into the primary barrel and an auxiliary accelerator pump system aids in cold engine acceleration.

Other equipment includes diaphragms which open secondaries at high speed and full throttle operation. Some models are equipped with throttle positioners, as well as mixture control systems. Other features include choke breaker, choke opener, deceleration fuel cut-off, and high altitude compensation devices.

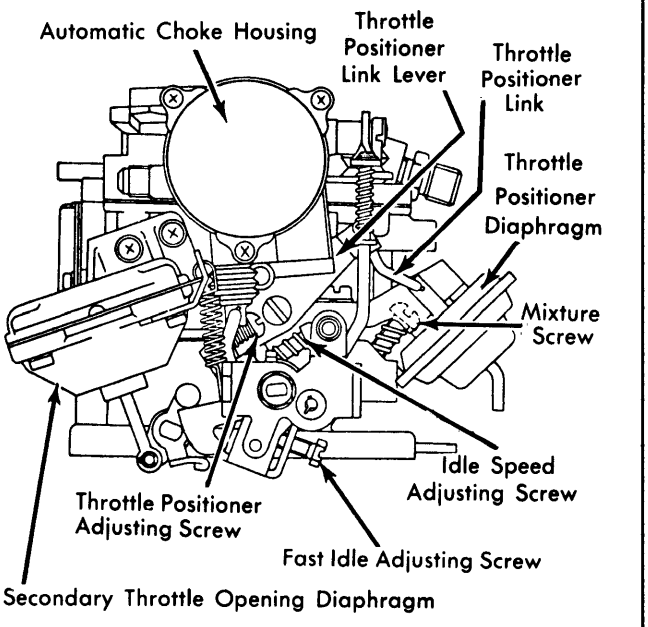

Fig. 1: Assembled View of Aisan 2-Barrel Carburetor

ADJUSTMENTS

IDLE SPEED & MIXTURE

See appropriate TUNE-UP SERVICE PROCEDURES article.

COLD (FAST) IDLE RPM

See appropriate TUNE-UP SERVICE PROCEDURES article for on-vehicle adjustment. For bench adjustment, close choke valve. Check for .043" (1.10 mm) clearance between throttle valve and throttle bore with a wire gauge. *See Fig. 8.* Turn fast idle screw until correct clearance is obtained.

FLOAT LEVEL

Hold air horn upside-down. Allow float to hang by its own weight. Measure gap between float lip and air horn gasket surface. Bend float lip (top lever) until gap is .138" (3.5 mm) on 1974-75 models, .256" (6.5 mm) on 1976-79 models. *See Fig. 2 and 3.*

NOTE: When top and bottom lever positions are properly adjusted, float will maintain specified fuel level at fuel bowl sight glass when engine is running.

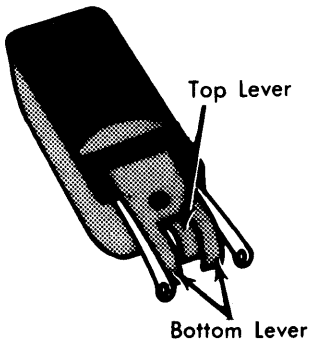

Fig. 2: Carburetor Float Levers

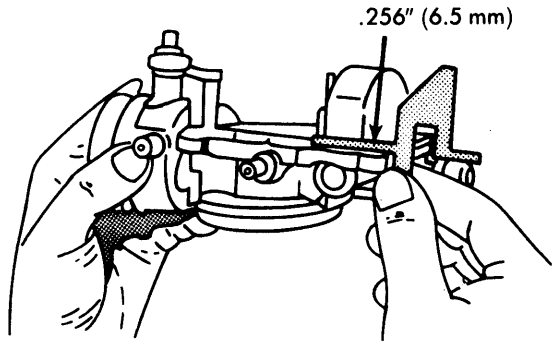

Fig. 3: Float Level Adjustment

FLOAT DROP

Lift up float. Measure gap between needle valve and float lip. Gap should be .047" (1.20 mm). Bend float tang (bottom lever) until gap is correct. *See Fig. 2 and 4.*

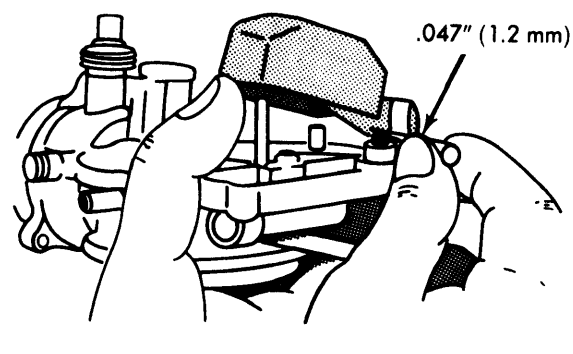

Fig. 4: Float Drop Adjustment

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Aisan 2-Barrel Carburetors (Cont.)

THROTTLE VALVE

Open primary throttle valve, then open secondary throttle valve. Make sure valves are perpendicular to flange surface when fully opened. Bend throttle lever stopper(s) until proper opening is obtained. After adjustment, check that linkage does not bind.

CHOKE UNLOADER

Insert angle gauge. Adjust angle of choke valve so it will be 47 degrees from fully closed position when primary throttle valve is fully open. Bend fast idle cam follower or choke shaft lip to obtain a 47 degree angle. *See Fig. 5.*

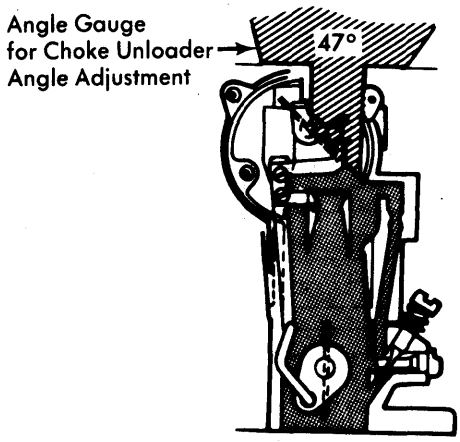

Fig. 5: Choke Unloader Adjustment

SECONDARY THROTTLE OPENING ANGLE

Bend secondary throttle lever to obtain .008" (.2 mm) clearance between secondary throttle valve and body when primary throttle valve opening is between 64 degrees (from bore) and fully open. *See Fig. 6.*

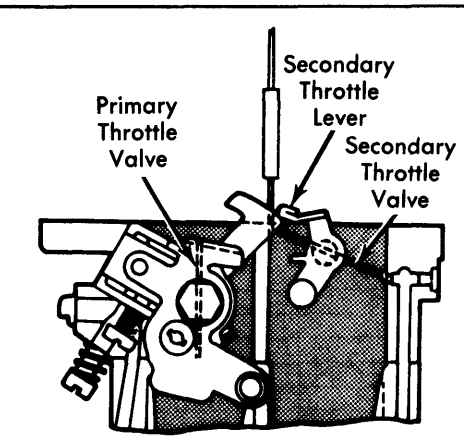

Fig. 6: Secondary Throttle Opening Angle Adjustment

THROTTLE POSITIONER

1974-77 Models - 1) Hold choke valve open. Open and release throttle lever to trap throttle lever in fast idle position. Check that adjustment screw at point "A" is within .08" (2.0 mm) of outside edge of stop. Depress diaphragm by hand and check that clearance at point "B" is .02" (.5 mm).
2) Disconnect vacuum hose to throttle positioner and start engine. Turn throttle positioner adjustment screw until fast idle is 1400 RPM. Check operation by reconnecting diaphragm and noting if engine returns to idle RPM.

1978-79 California & High Altitude Models - 1) To operate properly, the throttle positioner diaphragm, spring, and vacuum hose must be in good condition. Check links and levers for freedom of movement.
2) Primary throttle valve angle should be 15-16 degrees when throttle positioner rod contacts throttle lever tab. This should provide setting speeds of 1300-1500 RPM (1100-1300 RPM for automatic transmisison equipped models). If adjustment is required, turn adjusting screw. *See Fig. 7.*

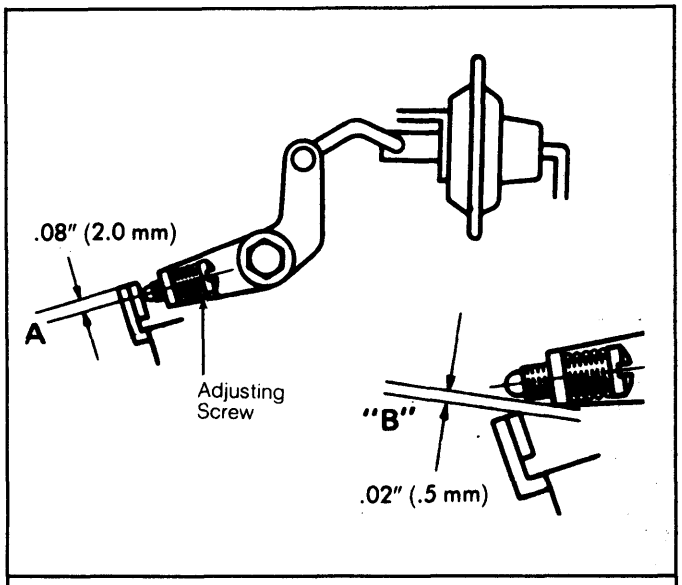

Fig. 7: Throttle Positioner Adjustment

AUTOMATIC CHOKE

1) With choke valve fully opened, turn coil housing counterclockwise. Check if choke valve closes. Set coil housing scale to center line of thermostat case.
2) Turn coil housing and adjust engine starting mixture to conform with vehicle operating conditions. When mixture for starting is too rich, turn clockwise, when too lean, turn counterclockwise. One graduation of scale on thermostat case is equal to 9°F change.

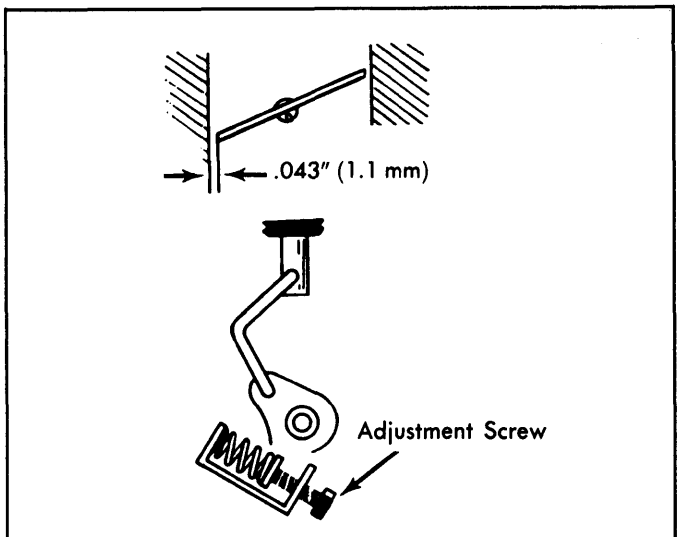

Fig. 8: Fast Idle (Bench) Adjustment

ACCELERATOR PUMP

Place a straightedge on top of air horn. Measure full travel of pump plunger at boot end. Travel distance should be .197" (5.0 mm). *See Fig. 9.* Bend accelerator pump actuating rod at existing bend to obtain correct travel.

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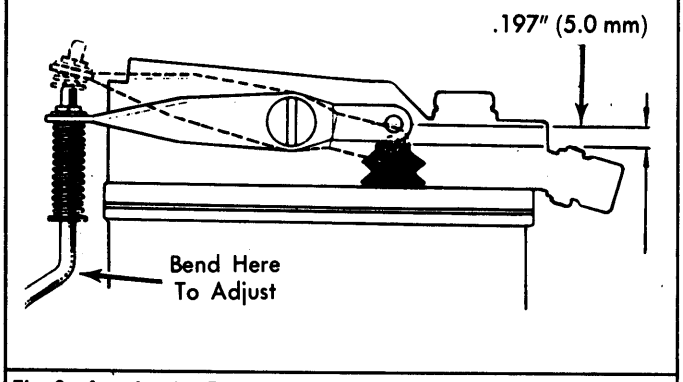

Fig. 9: Accelerator Pump Adjustment

OVERHAUL

DISASSEMBLY

1) To disassemble air horn, loosen air horn arm screw. Remove pump lever together with connecting rod. Remove throttle positioner connecting link and loosen 6 bolts. Remove air horn from body of carburetor.

2) Remove float lever pin and float. Remove needle valve, spring, push pin, and seat. Remove power piston, spring, and pump plunger. Remove plug, gasket and strainer.

3) To disassemble automatic choke, remove coil housing, gasket and housing plate. Remove cam float and sliding rod. If necessary, file off peened part of valve screw and remove choke valve. Remove connector set screw and take out choke shaft and vacuum piston. Remove thermostat case.

4) To disassemble main body, remove gasket, stopper, dischage weight, and ball. Remove back spring and diaphragm from diaphragm lever. Remove 4 flange screws and separate flange from body. Remove solenoid valve.

5) Remove check ball retainer and steel ball. Remove slow jet by loosening 4 screws and removing second venturi, and then first small venturi. Remove power valve with wrench. Remove plugs and take out secondary main jet and primary main jet.

6) If necessary, remove cover, gasket, and thermostatic valve. Remove level gauge clamp, level gauge glass, and gasket. Remove diaphragm housing and take out housing, diaphragm, spring, and gasket.

NOTE: It is important to mark the relative positions of housing, and spring bracket and diaphragm.

7) To disassemble throttle valve assembly, remove idle adjustment screw. If necessary, file off peened part of valve set screws and take off the throttle valves.

8) Remove secondary throttle shaft and remove throttle lever. Remove idle adjusting lever with throttle shaft arm attached. Remove retainer ring and take out primary throttle shaft.

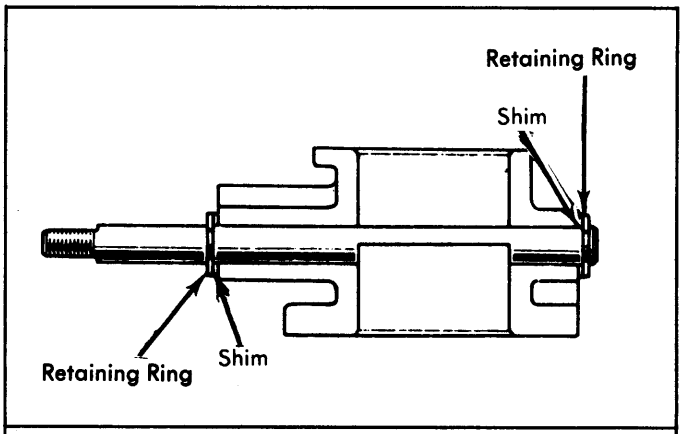

Fig. 10: Primary Throttle Valve Adjustments

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

1) To reassemble, reverse disassembly procedure. When assembling accelerator pump, install smaller of two steel balls at bottom of pump plunger orifice.

2) When installing primary throttle valve, center throttle shaft in bore using shims on shaft. *See Fig. 10.* Centering is correct when shaft notch is adjusted to bore center. Peen new set screw into place.

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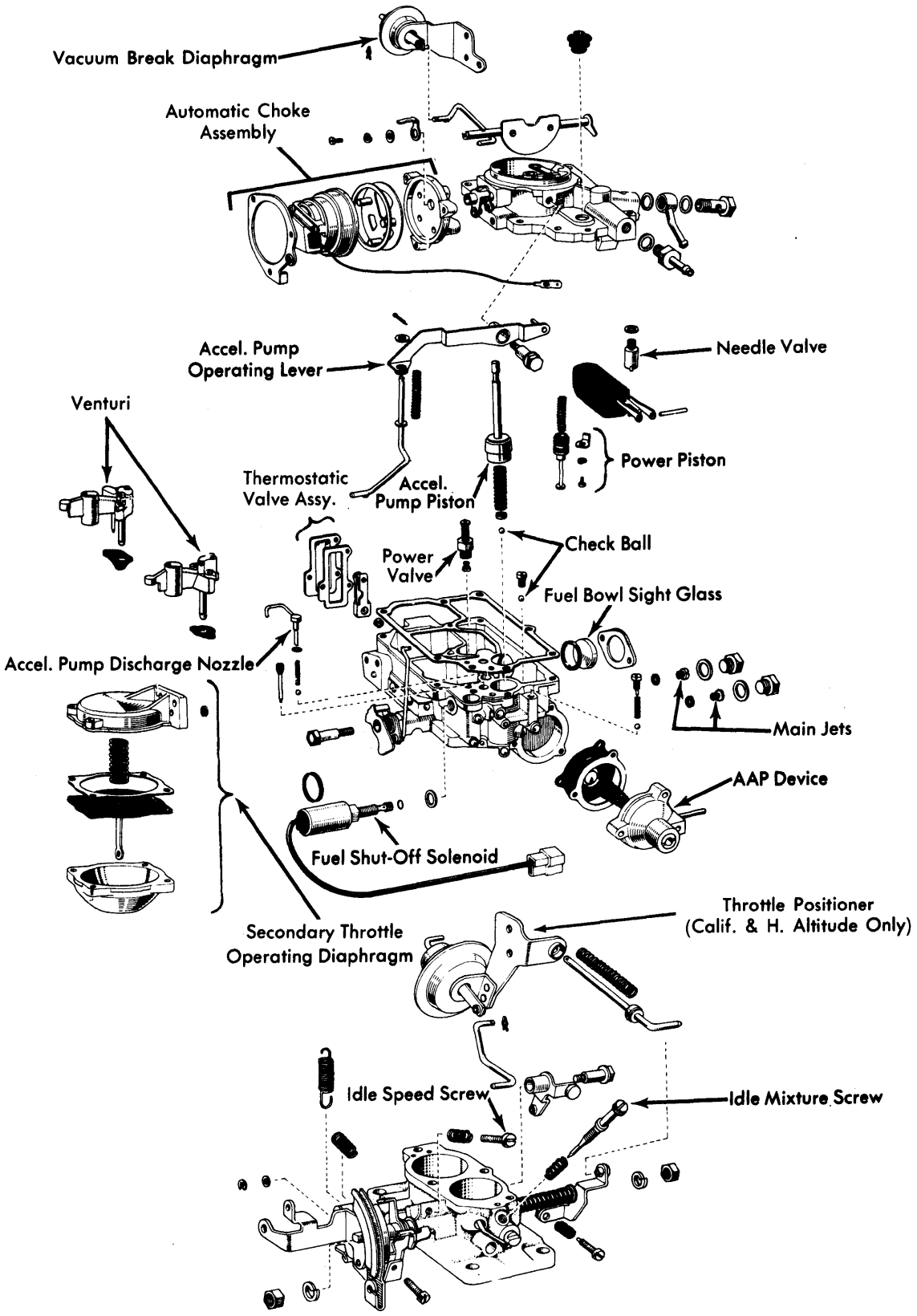

Fig. 11: Exploded View of Aisan 2-Barrel Carburetor (Toyota 2T-C Engine)

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1974-79 FUEL SYSTEMS
Aisan 2-Barrel Carburetors (Cont.)

1976 CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Idle Speed (Engine RPM)		Float Level Setting	Float Drop	Fast Idle Opening Angle	Choke Pulling Angle	Accel. Pump Stroke	Throttle Positioner
	Hot	Fast	In. (mm)	In. (mm)	In. (mm)		In. (mm)	In. (mm)
Corolla	850①	2600-2800	.138 (3.5)	.047 (1.2)	.043 (1.1)	47°	.20 (5)	.....

① — Man. Trans. in "N". Auto. Trans. in "D" 650.

1977 CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Idle Speed (Engine RPM)		Float Level Setting	Float Drop	Fast Idle Opening Angle	Choke Pulling Angle	Accel. Pump Stroke	Throttle Positioner
	Hot	Fast	In. (mm)	In. (mm)	In. (mm)		In. (mm)	In. (mm)
Corolla	930①	2200-2600②	.236 (6.0)	.047 (1.2)	.043 (1.1)	47°	.197 (5)	16° M/T 15° A/T

① — Federal; Calif. & High Alt. is 910 RPM

② — Federal; Calif. & High Alt. is 2800-3200 RPM

1978-79 CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Idle Speed (Engine RPM)		Float Level Setting	Float Drop	Fast Idle Opening Clearance	Choke Unloader Angle	Accel. Pump Stroke	Throttle Positioner
	Hot	Fast	In. (mm)	In. (mm)	In. (mm)		In. (mm)	In. (mm)
Corolla	800-900①	3000-3400②	.256 (6.5)	.047 (1.2)	.043 (1.1)	47°	.197 (5)	16° M/T 15° A/T

① — Federal mixture speed — 920 RPM, California mixture speed — 910 RPM.

② — Federal. California & High Altitude is 2800-3200 RPM.

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