1974-79 FUEL SYSTEMS
Aisan 2-Barrel Carburetors

Land Cruiser (F & 2F Engines)

CARBURETOR IDENTIFICATION

1977 CARBURETOR IDENTIFICATION

Application	Carburetor No.
Federal	21100-61022
California	
Station Wagon	21100-61063
Hardtop	21100-61073
High Altitude	21100-61100

1978-79 CARBURETOR IDENTIFICATION

Application	Carburetor No.
Federal	21100-61024
California	
Station Wagon	21100-61064
Hardtop	21100-61074
High Altitude	21100-61091

DESCRIPTION

Carburetor is a 2-barrel, downdraft type. It is equipped with a vacuum operated choke breaker. Choke design improves cold engine operation. A secondary slow port helps fuel mixing at start of secondary valve opening.

Improvement of operation is noticed during low speed load. A carburetor throttle positioner prevents throttle from completely closing during deceleration. A throttle stop solenoid is also used to prevent dieseling during engine shut-down.

ADJUSTMENTS

IDLE SPEED & MIXTURE

See appropriate TUNE-UP PROCEDURES article.

COLD (FAST) IDLE RPM

See appropriate TUNE-UP PROCEDURES article for on vehicle adjustment. For bench adjustment, fully close choke valve. Check clearance between throttle bore and primary throttle valve. *See Fig. 1.* On 1975-79 models, adjust fast idle screw until clearance is .051" (1.3 mm). On 1974 models, adjust clearance to .037-.046" (.94-1.17 mm).

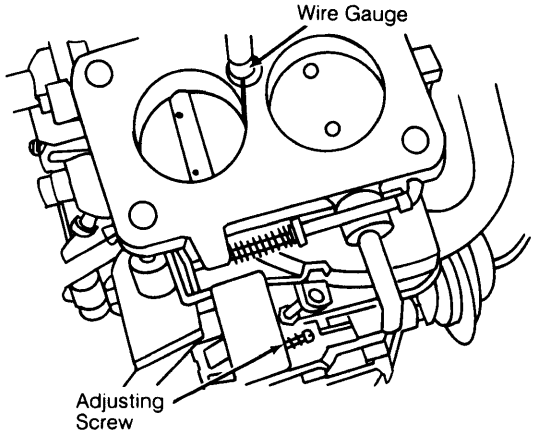

Fig. 1: Fast Idle Adjustment

THROTTLE POSITIONER

Remove carburetor and turn it upside-down. Place throttle positioner adjustment screw against tab on throttle lever. Check clearance between throttle bore and primary valve. Turn throttle positioner adjustment screw until a .031" (.8 mm) clearance is obtained. *See Fig. 2.*

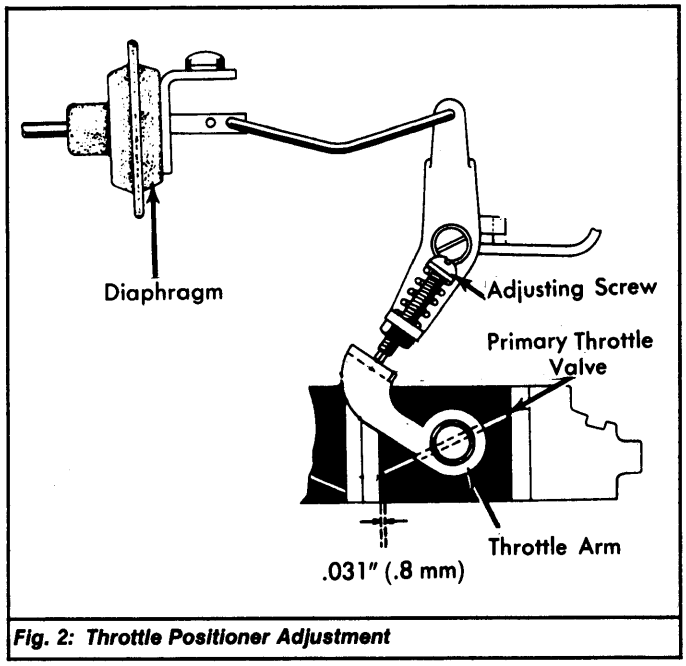

Fig. 2: Throttle Positioner Adjustment

FLOAT LEVEL

Turn air horn assembly upside-down. Measure clearance between upper surface of float and gasket surface of air horn. On 1974 models, float level should be .161" (4.1 mm). On 1975-79 models, bend center float tab until float level is .275"-.295" (7.0-7.5 mm). *See Fig. 3.*

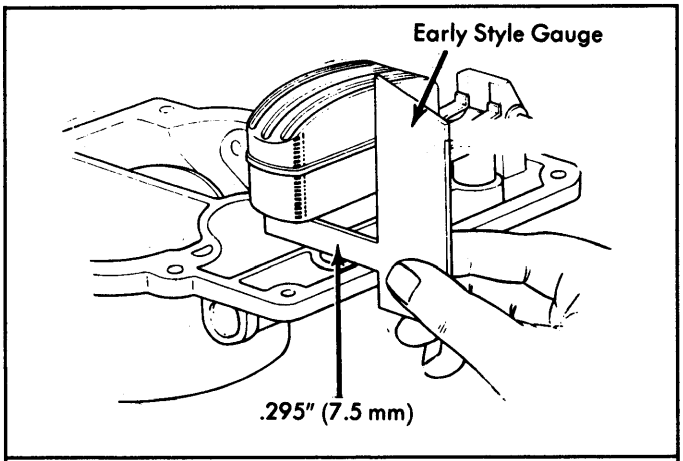

Fig. 3: Float Level Adjustment

FLOAT DROP

Turn air horn assembly upside-down. Measure clearance between needle push pin and float tab. Clearance should be .040-.043" (1.0-1.1 mm). *See Fig. 4.* Bend both outside float tabs until correct clearance is obtained.

PRIMARY & SECONDARY THROTTLE VALVES

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.

ACCELERATOR PUMP

Accelerator pump stroke should be .374" (9.5 mm) at boot end of accelerator pump lever. Bend accelerator pump link to obtain right setting.

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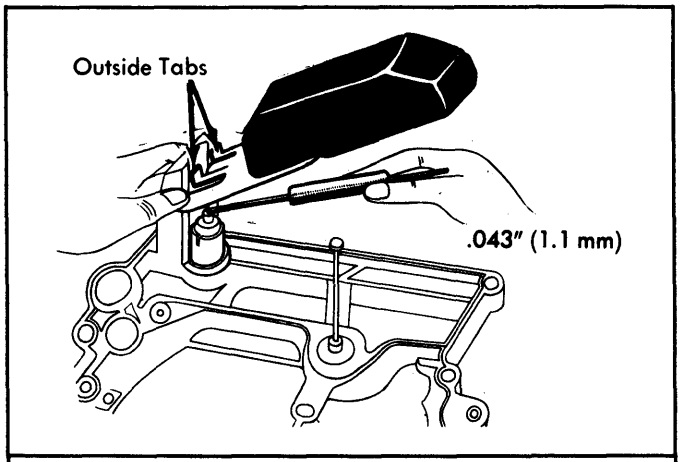

Fig. 4: Float Drop Adjustment

DAMPER VALVE STOP LEVER

1974 Models - When secondary throttle valve just starts to open, adjust area "A" of throttle arm so the clearance between stop lever and arm is .016-.027" (.41-.69 mm). *See Fig. 5.*

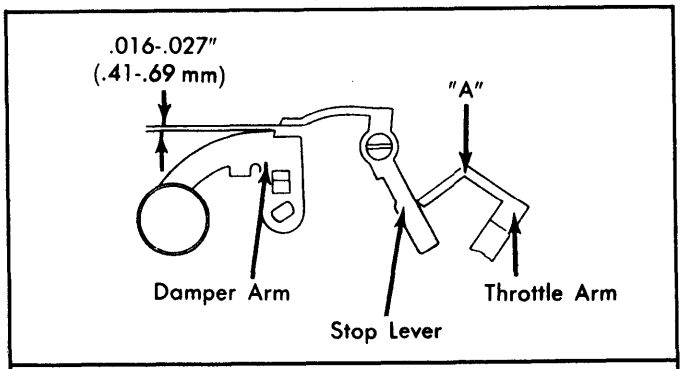

Fig. 5: Damper Valve Stop Lever Adjustment

CHOKE VACUUM BREAK

Push choke vacuum break diaphragm rod to open choke valve. Choke valve angle should be 38 degrees. *See Fig. 6.* To adjust, bend choke vacuum break diaphragm rod. Release diaphragm rod and check operation.

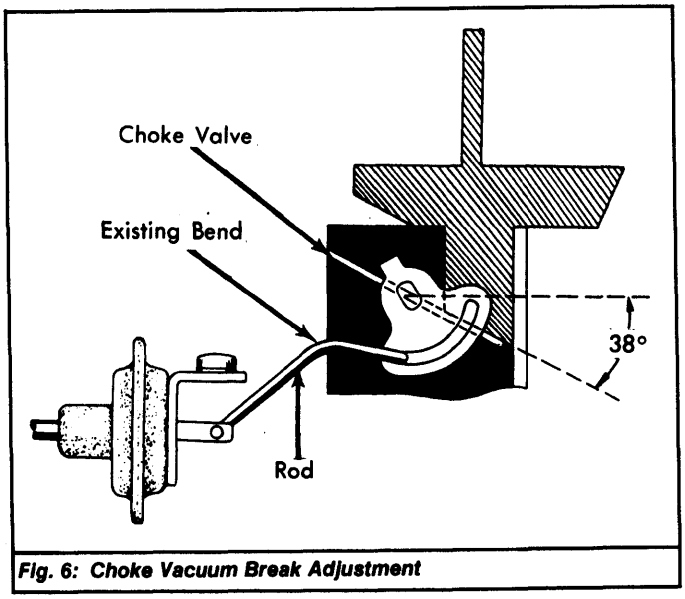

Fig. 6: Choke Vacuum Break Adjustment

CHOKE RELOADER

1974 Models - **1)** With choke valve fully closed, bend tang on fast idle lever to adjust gap between fast idle lever and high speed arm to .020-.039" (.5-1.0 mm). *See Fig. 7.*

2) With choke valve at a 40 degree angle, high speed valve should rotate smoothly from fully closed to fully open position. With choke valve at a 50 degree angle, high speed valve should only move about 20 degrees in either direction.

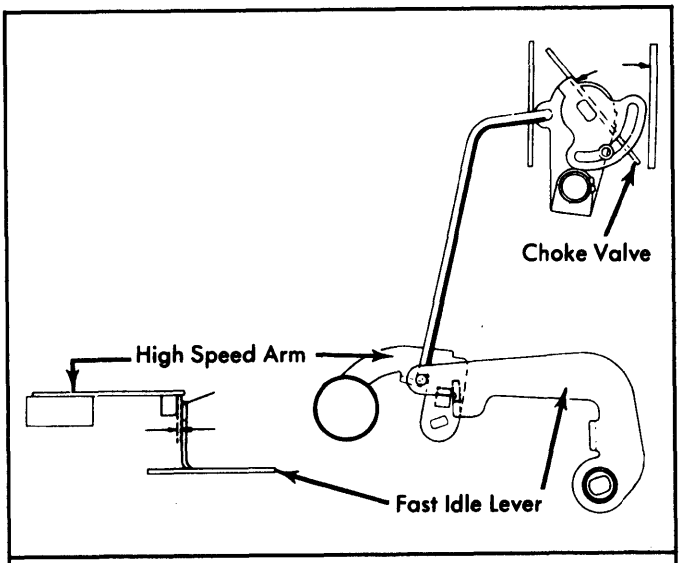

Fig. 7: Choke Reloader Adjustment

SECONDARY THROTTLE OPENING

Remove carburetor and turn it upside-down. Open primary throttle valve all the way. Check angle between secondary throttle bore wall and secondary throttle valve with angle gauge. *See Fig. 8.* Bend secondary throttle lever to obtain right clearance. Clearance is correct when opening angle is 25-28 degrees from bore.

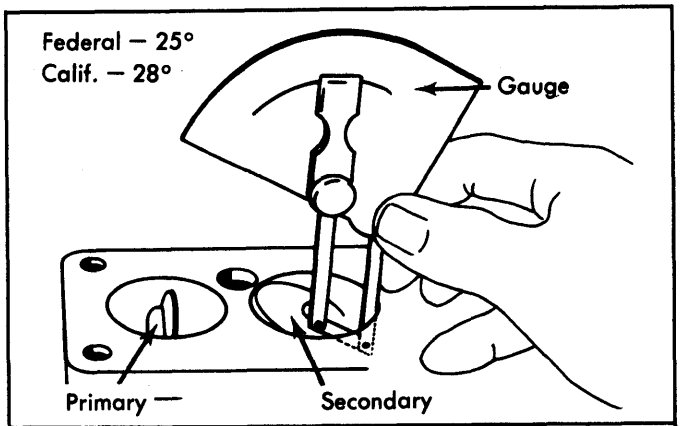

Fig. 8: Secondary Throttle Opening Adjustment

OVERHAUL

DISASSEMBLY

1) Remove pump arm and pump connecting link. Remove choke and fast idle connecting links. *See Figs. 9 and 10.* Remove throttle positioner assembly. Remove air horn screws and carefully remove air horn assembly.

2) To disassemble air horn, remove float and needle assembly. Remove fuel inlet fitting and shut-off solenoid. Remove power piston assembly and accelerator pump piston assembly.

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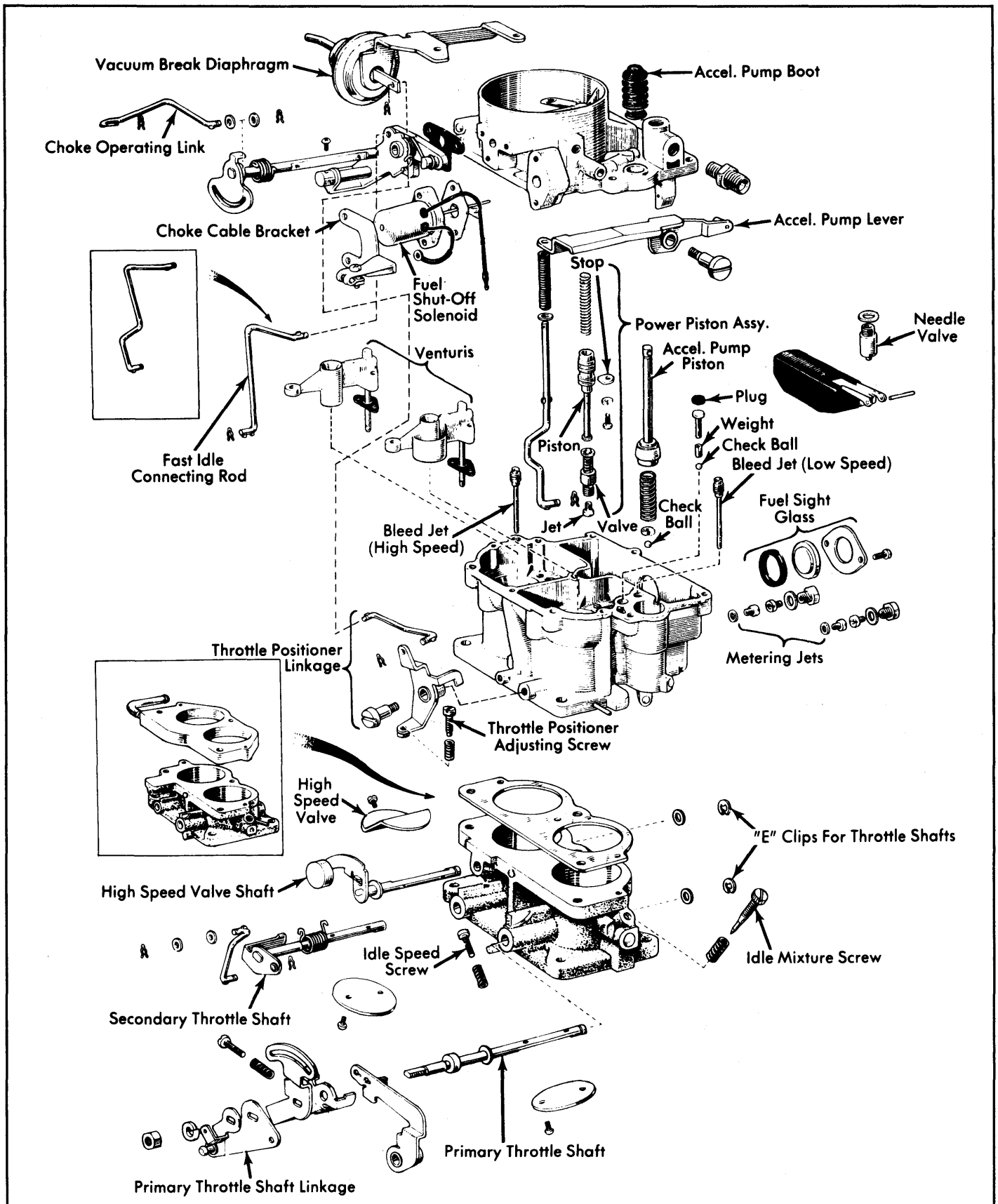

Fig. 9: Exploded View of Aisan 2-Barrel Carburetor (Toyota F Engine)

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Aisan 2-Barrel Carburetors (Cont.)

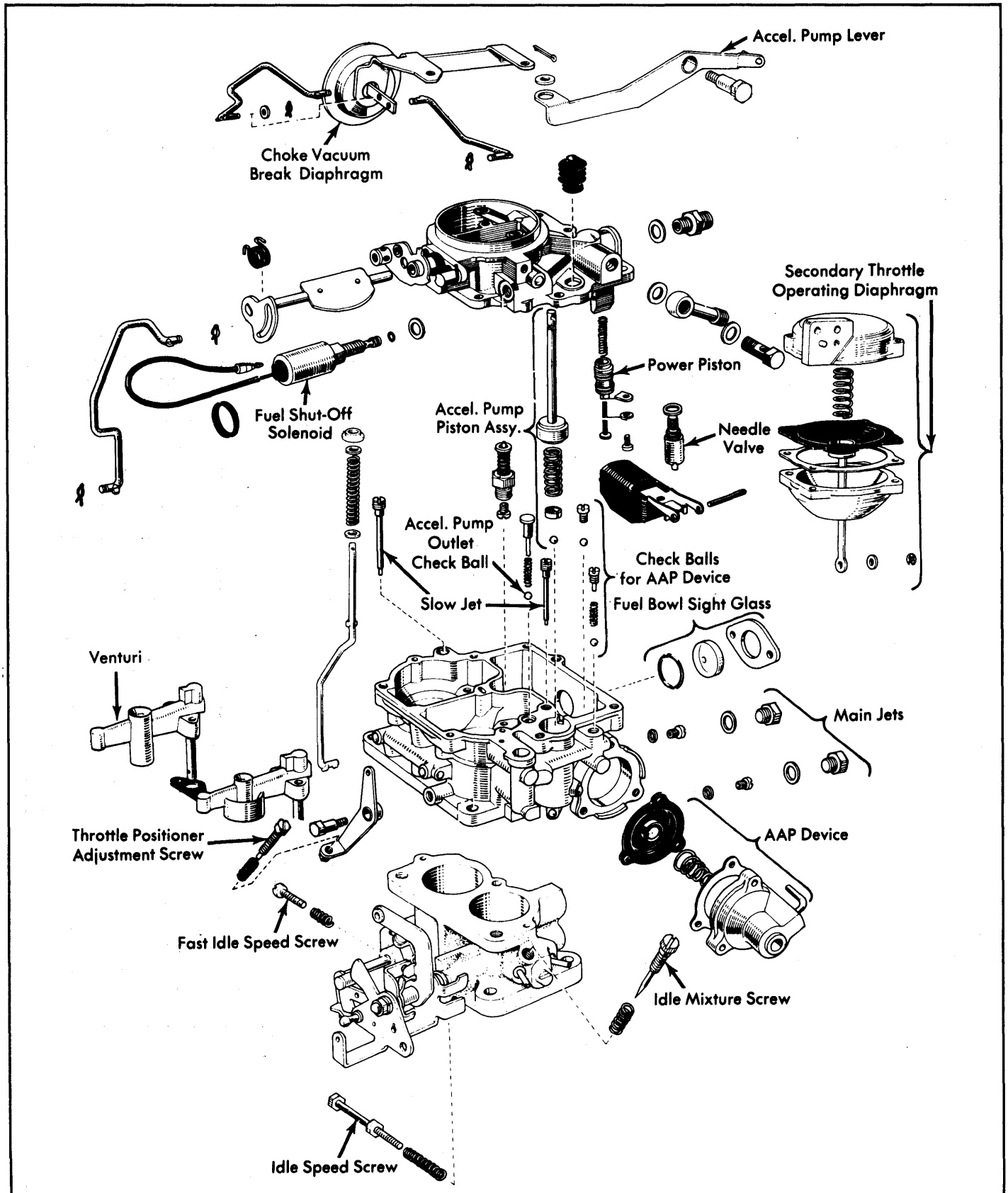

Fig. 10: Exploded View of Aisan 2-Barrel Carburetor (Toyota 2F Engine)

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Aisan 2-Barrel Carburetors (Cont.)

3) From main body, remove both venturi. Remove pump outlet check ball and spring, pump dampening spring, and inlet check ball. Remove slow metering jet, AAP device, and check balls.
4) Remove power valve, main jet and secondary operating diaphragm. Remove throttle body from main body. Remove only those parts from throttle body which are necessary to proper cleaning and inspection.

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. Peen over choke valve screws. Make sure power piston operates smoothly after installing screw. Make sure that needle valve, spring and plunger are properly installed and in correct order. Float drop and level must be correctly adjusted.
2) Make sure that longer (larger) jet is installed on secondary side. Make sure brass colored main jet is installed in primary side. Take care not to damage pump plunger leather when installing air horn.
3) When installing AAP device, smaller check ball should be placed in pump inlet (outside of fuel bowl) and larger should be placed inside fuel bowl in pump outlet. Spring should be placed with its small end away from diaphragm or toward the cover.

1974 CARBURETOR ADJUSTMENT SPECIFICATIONS

Carb No.	Idle Speed (Engine RPM)		Float Level Setting	Float Drop	Secondary Air Valve	Choke Pulling Angle	Accel. Pump Stroke	Damper Valve Stop Lever
	Hot	Fast	In. (mm)	In. (mm)	In. (mm)		In. (mm)	In. (mm)
All Models	650	.....	.16" (4.1)	.040" (1.0)	.040 (1.0)	38°	.31" (8.0)	.016-.027" (.4-.7)

1975-76 CARBURETOR ADJUSTMENT SPECIFICATIONS

Carb No.	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)
All Models	650	.....	.295" (7.5)	.043" (1.1)	.051" (1.3)	38°	.374" (9.5)	.031" (8.0)

1977 CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Idle Speed (Engine RPM)		Float Level Setting	Float Drop	Fast Idle Opening	Choke Pulling Angle	Accel. Pump Stroke	Throttle Positioner
	Hot	Fast	In. (mm)	In. (mm)	In. (mm)		In. (mm)	In. (mm)
Land Cruiser	600-700	1600-2000	.275" (7.0)	.043" (1.1)	.051" (1.3)	38°	.374" (9.5)	.031" (.8)

1978-79 CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Idle Speed (Engine RPM)		Float Level Setting	Float Drop	Fast Idle Opening Clearance	Choke Breaker Angle	Accel. Pump Stroke	Throttle Positioner
	Hot	Fast	In. (mm)	In. (mm)	In. (mm)		In. (mm)	In. (mm)
Land Cruiser	600-700	1600-2000	.295 (7.5)	.043" (1.1)	.051" (1.3)	38°	.374" (9.5)	.031" (.8)