

## AISAN 2-BARREL — TOYOTA 3T-C ENGINE

Corolla

### DESCRIPTION

Carburetor is a 2-barrel, downdraft design and is equipped with automatic choke, which is heated by an electrically operated bimetal 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 features include diaphragms which open secondaries at high speed and full throttle operation, mixture control (Man. Trans. only), throttle positioner, choke opener, choke breaker, deceleration fuel cut, hot idle compensation, and high altitude compensation (Federal) devices.

### CARBURETOR IDENTIFICATION

Application	Part No.
Man. Trans.	
4 Speed	
W/High Altitude Comp. ....	21100-28200
W/O High Altitude Comp. ....	21100-28190
5 Speed	
W/High Altitude Comp. ....	21100-28220
W/O High Altitude Comp. ....	21100-28210
Auto. Trans.	
W/High Altitude Comp. ....	21100-28200
W/O High Altitude Comp. ....	21100-28190

### ADJUSTMENTS

**NOTE:** For all on-vehicle adjustments not covered in this article, see appropriate TUNE-UP SERVICE PROCEDURES article.

**NOTE:** It is recommended that Toyota carburetor adjusting kits 09240-00014 and 09240-00020 be used to make the following adjustments.

#### FLOAT LEVEL

Hold air horn upside-down. Measure gap between float tip and air horn gasket surface (gasket removed). Bend float until gap is correct. See Fig. 1 and 2.

Fig. 1: Float Level Measurement Points

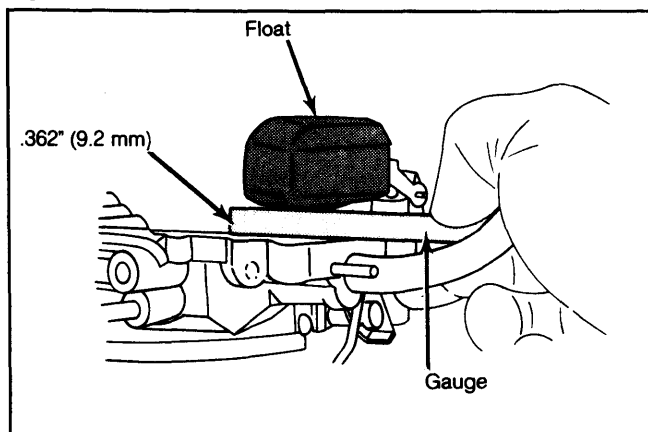
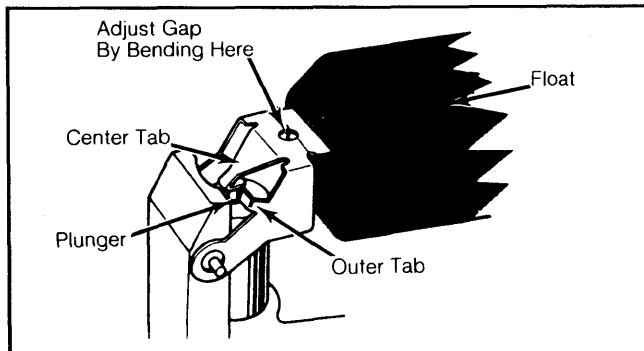


Fig. 2: Float Level Adjustment



Adjust gap by inserting tool in hole.

#### FLOAT DROP

Lift up float. Measure gap between needle valve and float lip. Bend float outer tab until gap is correct. See Fig. 3 and 4. After adjustment, ensure plunger moves smoothly.

Fig. 3: Float Drop Measurement Points

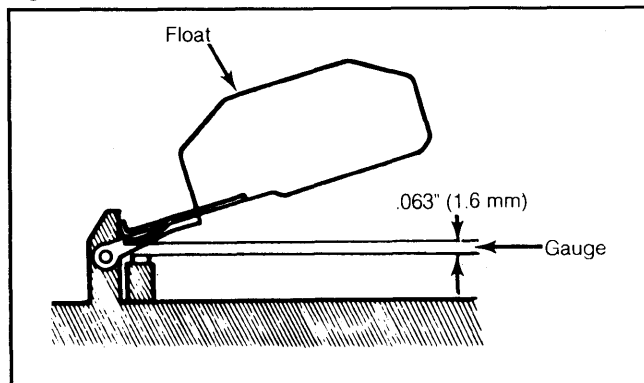
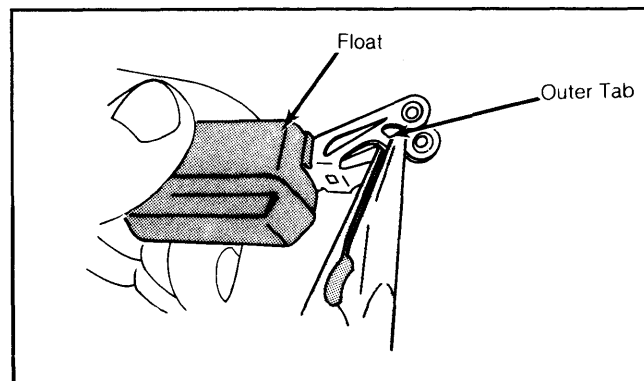


Fig. 4: Float Drop Adjustment



Bend tab as shown to adjust.

#### ACCELERATOR PUMP STROKE

1) Place a straight edge on top of air horn and measure full travel of pump plunger. Make measurement at boot end.

2) Adjust travel distance to .197\"/>

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### PRIMARY & SECONDARY THROTTLE VALVES

When primary throttle valve is fully opened (90°), secondary throttle valve should also be completely open (80°). If adjustment is necessary, bend throttle shaft link.

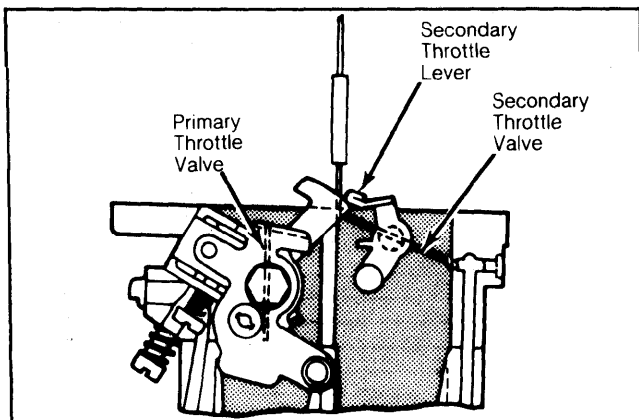
### FAST IDLE (BENCH ADJUSTMENT)

Position throttle shaft lever to high (1st) step of fast idle cam. With choke valve fully closed, check angle between throttle valve and throttle bore with angle gauge. Adjust angle to 25° by turning fast idle adjusting screw.

### SECONDARY THROTTLE OPENING ANGLE (KICK-UP)

Fully open primary throttle valve. Bend secondary throttle lever to obtain .0059" (.15 mm) clearance between secondary throttle valve and bore. See Fig. 5.

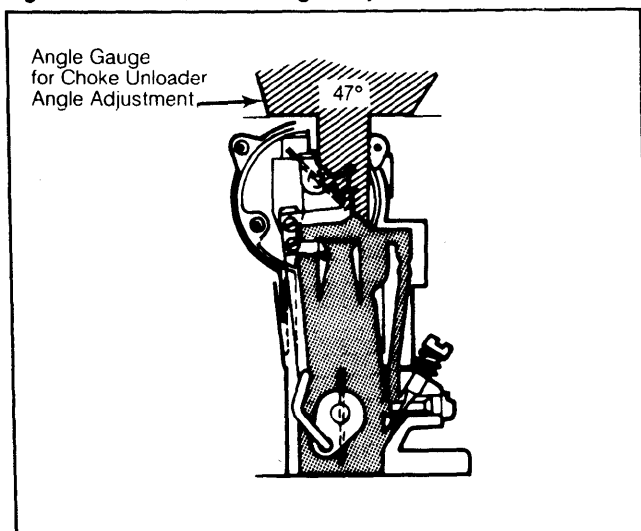
**Fig. 5: Carburetor Kick-Up Adjustment**



### CHOKE UNLOADER

Insert angle gauge. With primary throttle valve fully open, adjust angle of choke valve to 47° from fully closed position. Bend fast idle lever to obtain correct angle. See Fig. 6.

**Fig. 6: Choke Unloader Angle Adjustment**



### CHOKE OPENER

Fully close choke valve by turning coil housing. Connect hose to opener diaphragm and apply vacuum. With vacuum applied, adjust choke angle to 85° (between choke valve and bore) by bending relief tang.

### CHOKE BREAKER

Connect hoses to both breaker vacuum diaphragms and apply vacuum. With vacuum applied, check that first choke angle is 38° and second choke angle is 55°. If not, adjust by bending relief lever tang.

### SECONDARY TOUCH ANGLE

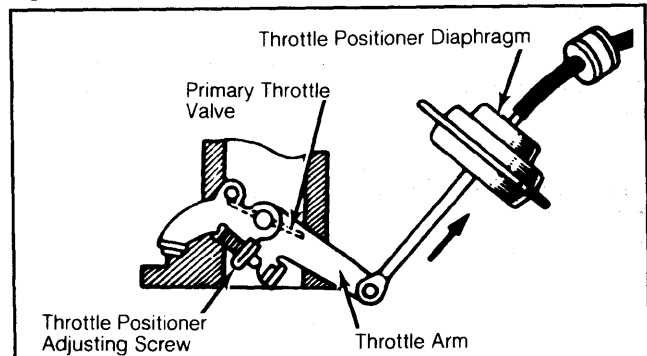
Check primary throttle valve opening angle at the same time secondary throttle valve starts to open. Adjust angle to 57° by bending 1st kick lever.

### THROTTLE POSITIONER

1) Warm engine to normal operating temperature. Check and adjust idle speed if required. Disconnect and plug vacuum hose from throttle positioner diaphragm. Throttle positioner should now be set.

2) With throttle positioner activated, engine speed should be 1400 RPM. If not, correct by turning throttle positioner adjusting screw. See Fig. 7.

**Fig. 7: Throttle Positioner Adjustment**



## OVERHAUL

### DISASSEMBLY

**NOTE:** It is recommended that Toyota carburetor driver kit 09860-11011 be used during carburetor overhaul.

#### Air Horn

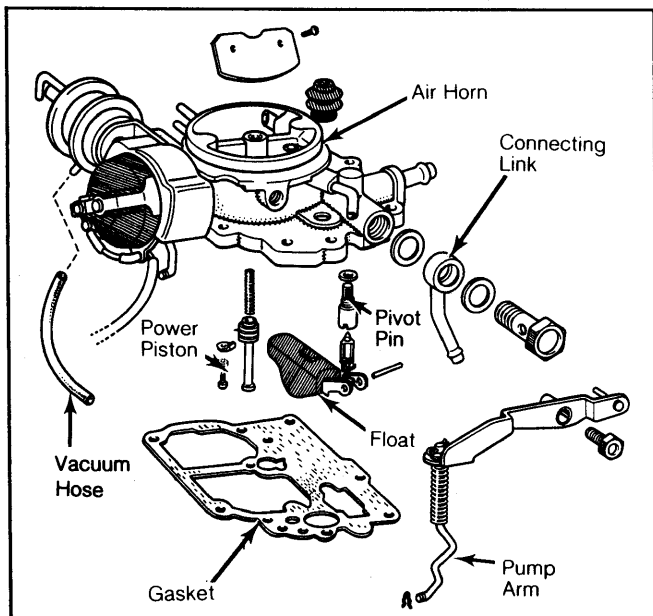
1) Remove pump arm pivot screw and pump arm with connecting rod. Remove lower connecting link. Disconnect and remove both choke breaker vacuum hoses.

2) Remove upper connecting link and 8 air horn connecting screws. Lift air horn and gasket from carburetor body. See Fig. 8.

3) Remove float pivot pin and float. Remove air horn gasket. Remove needle valve, spring and plunger with gasket and seat. Pull out pump plunger. Remove boot, power piston retainer, piston and spring.

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**Fig. 8: Exploded View of Air Horn Assembly**

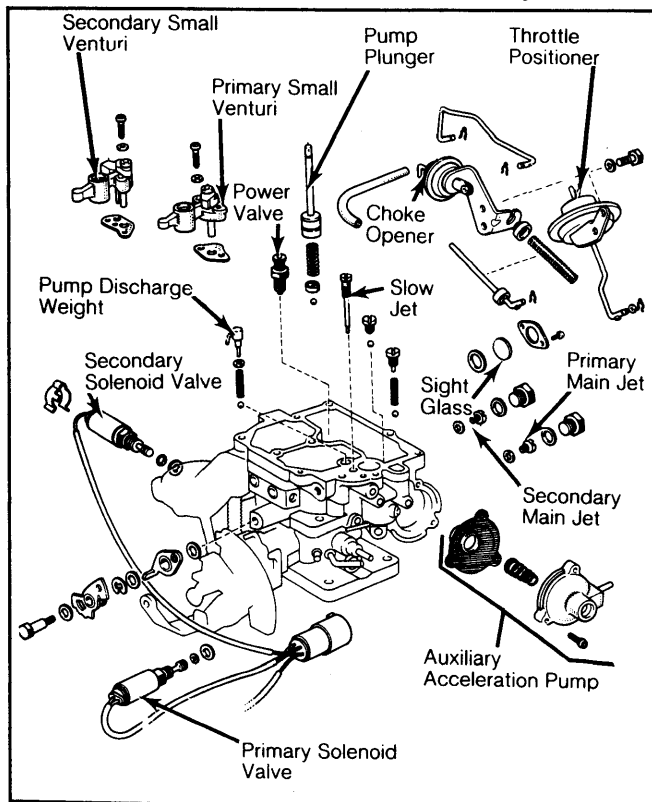


### Main Body

1) Remove venturis and gaskets. Lift out pump discharge weight, "O" ring, spring and ball. Lift out pump damping spring.

2) Using tweezers, take out retainer and ball. Remove slow jet and power valve. Remove auxiliary acceleration pump inlet and outlet plugs, spring and balls. See Fig. 9.

**Fig. 9: Exploded View of Carburetor Main Body**



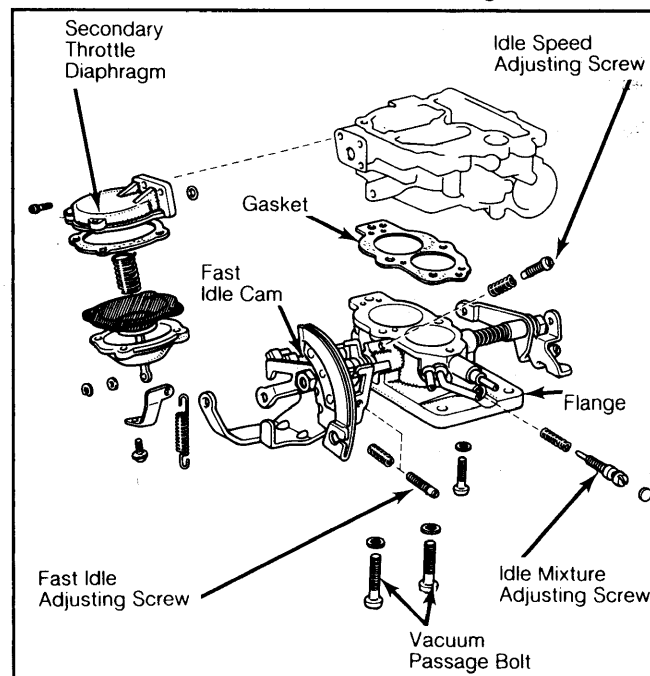
3) Remove pump housing, diaphragm, spring and gasket. Disconnect throttle positioner and choke opener links. Remove throttle positioner and choke opener.

4) Remove main jet plugs and main jets. Remove sight glass retainer, sight glass and "O" ring. Remove primary and secondary solenoid valves.

### Flange Parts

Remove rear spring. Disconnect secondary throttle diaphragm link and remove diaphragm and gasket. Remove fast idle cam. Loosen 2 flange bolts and 2 vacuum passage bolts. Remove flange from carburetor body. See Fig. 10.

**Fig. 10: Exploded View of Carburetor Flange Parts**



### CLEANING & INSPECTION

Clean all parts in carburetor cleaner and blow dry. Do not attempt to clean jets or other passages with wire or other metal objects. Inspect all parts for wear or damage and replace necessary parts.

### REASSEMBLY

Use all new gaskets, reverse disassembly procedure and note the following:

1) When assembling flange parts, ensure vacuum passage bolts are installed in correct position. Ensure AAP and pump valves, springs and check balls are properly installed in appropriate orifices.

2) When installing pump discharge weight and outlet valve assembly, ensure all components are installed in correct order. After installing power piston retaining clip and screw, check power piston for smooth operation.

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### CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level In. (mm)	Float Drop In. (mm)	Fast Idle Opening Angle	Choke Breaker Angle	Accel. Pump Stroke In. (mm)	Throttle Positioner Angle
Corolla	.362 (9.2)	.063 (1.6)	25°	38° <sup>1</sup>	.197 (5.0)	16°

<sup>1</sup> — Set second angle to 55°.