1982 Aisan Carburetors

AISAN 2-BARREL — TOYOTA 22R ENGINE

Celica, Corona, Pickup

DESCRIPTION

Carburetor is a 2-barrel downdraft design with primary and secondary venturi. An automatic choke containing a bimetal spring heated by coolant provides proper air/fuel mixture control during engine warm-up. Secondary throttle valve is actuated by a vacuum diaphragm unit with a kick-up (open) lever. Secondary valve begins to open when primary throttle valve opening exceeds 50°.

A thermostatic valve provides air flow under secondary throttle valve when ambient air temperature is high to maintain proper combustion. Other features include a choke opener, an auxiliary accelerator pump, a secondary slow circuit fuel cut system, a fast idle cam breaker, a deceleration fuel cut system, and a solenoid valve.

CARBURETOR IDENTIFICATION

Application	Carburetor No.
Celica & Corona	
Man. Trans.	21100-35070
Auto. Trans.	21100-35151
Pickup	
2-WD	
California	21100-35070
Federal	21100-35161
4-WD	21100-35171

ADJUSTMENTS

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

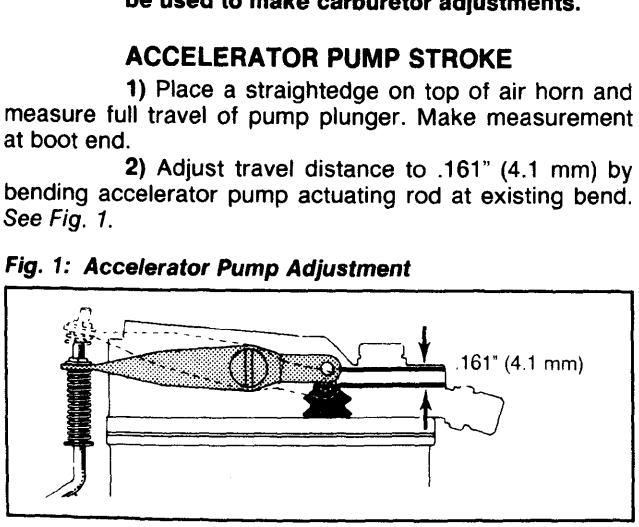
NOTE: Manufacturer recommends that Toyota carburetor adjustment kit (Part No. 09240-00014) be used to make carburetor adjustments.

ACCELERATOR PUMP STROKE

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

2) Adjust travel distance to .161" (4.1 mm) by bending accelerator pump actuating rod at existing bend. *See Fig. 1.*

Fig. 1: Accelerator Pump Adjustment

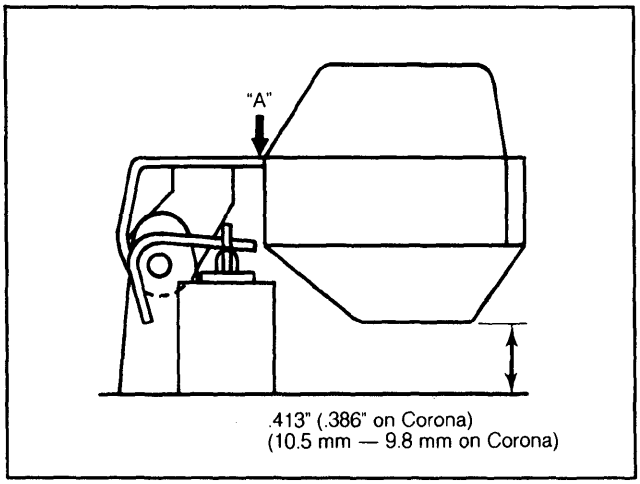


Adjust by bending accelerator pump actuating rod at existing bend.

FLOAT LEVEL

Allow float to hang down by its own weight. Adjust clearance between float top and air horn (gasket removed) to .413" (10.5 mm) on Celica and Pickup models or .386" (9.8 mm) on Corona models by bending float tab at "A". *See Fig. 2.*

Fig. 2: Float Level Adjustment

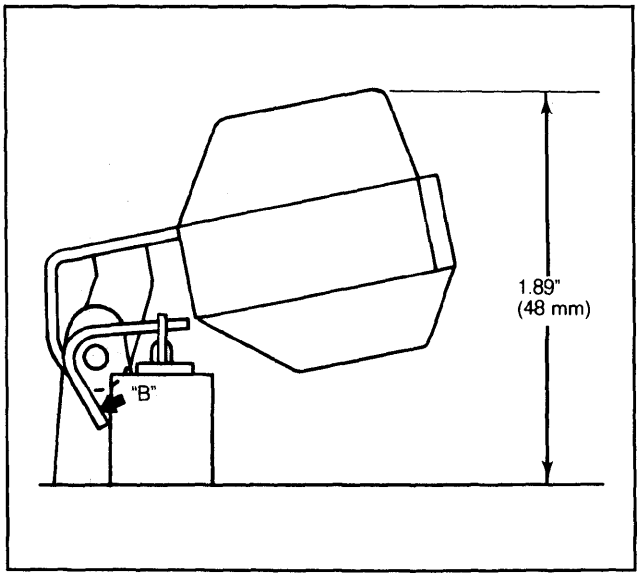


Adjust by bending float tab at "A".

FLOAT DROP

Lift up float and adjust clearance between needle valve plunger and float lip to 1.89" (48 mm) by bending float tab at "B". *See Fig. 3.*

Fig. 3: Float Drop Adjustment



Adjust by bending float tab at "B".

UNLOADER

Fully open primary throttle valve. Insert angle gauge. Adjust choke valve angle to 45° by bending first throttle arm at "A". *See Fig. 4.*

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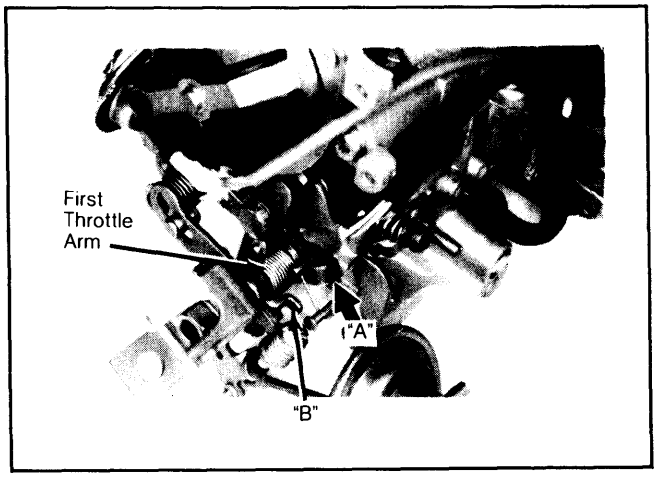
Fig. 4: Choke Unloader & Throttle Valve Adjustment



PRIMARY & SECONDARY THROTTLE VALVES

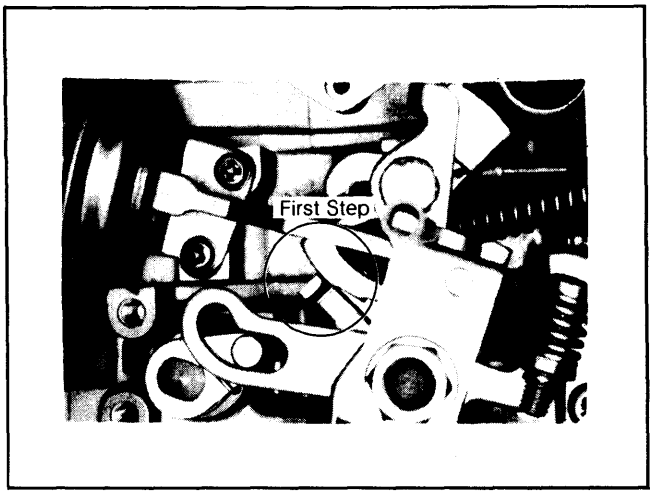
1) Fully open primary throttle valve. Insert angle gauge. Adjust primary throttle valve gauge to 90° (fully open) by bending first throttle arm at "A". *See Fig. 4.*

2) With primary throttle valve fully open, open secondary throttle valve. Insert angle gauge. Adjust secondary throttle valve angle to 90° (fully open) by bending first throttle arm at "B". *See Fig. 4.*

FAST IDLE (BENCH ADJUSTMENT)

Set throttle shaft lever to first step of fast idle cam. *See Fig. 5.* Fully close choke valve. Insert angle gauge. Adjust primary throttle valve angle to 24° by turning fast idle adjusting screw.

Fig. 5: Fast Idle Cam First Step Location

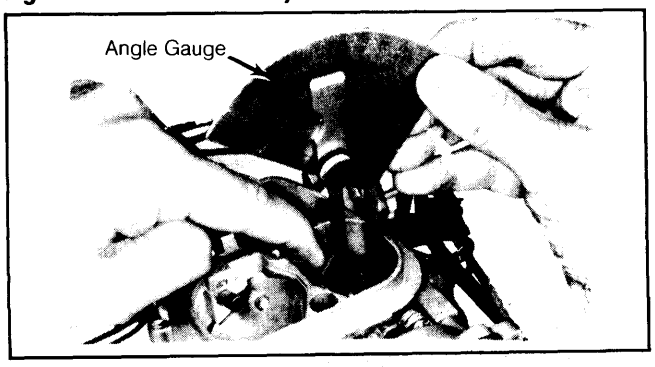


Bend relief lever to adjust.

CHOKE BREAKER

Apply vacuum to choke breaker diaphragm. Close choke valve by hand. Insert angle gauge. Adjust choke valve opening angle to 38° by bending relief lever. *See Fig. 6.*

Fig. 6: Choke Breaker Adjustment



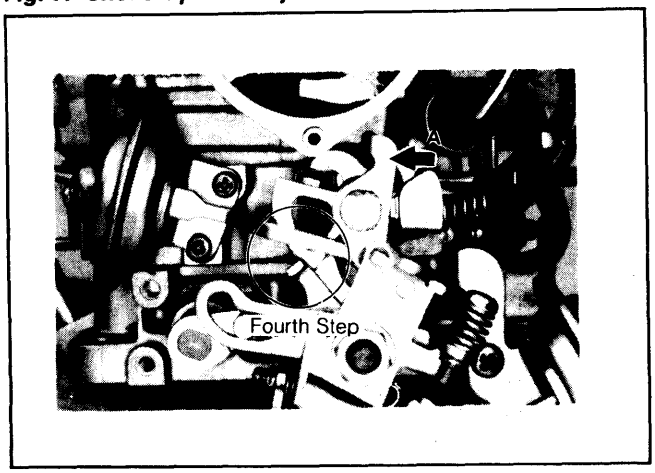
Bend relief lever to adjust.

CHOKE OPENER

1) Apply vacuum to choke opener diaphragm. Check that fast idle cam is released to fourth step. If not, adjust by bending choke opener lever at "A". *See Fig. 7.*

2) Close choke valve. Set fast idle lever to first step. *See Fig. 5.* Check that there is about .04" (1 mm) clearance between choke opener lever and fast idle cam.

Fig. 7: Choke Opener Adjustment



Adjust by bending choke opener lever at "A".

THROTTLE POSITIONER

Apply vacuum to diaphragm. Insert angle gauge. Adjust throttle valve opening angle to 16° by turning throttle positioner adjusting screw.

OVERHAUL

DISASSEMBLY

Air Horn

1) Remove metering needle, fast idle link, air horn screws, mixture control valve support and outer vent control valve. *See Fig. 8*

2) Remove air horn from carburetor body. Loosen solenoid valve and remove by rotating carburetor body counterclockwise. Take care not to bend or distort solenoid valve lead wires.

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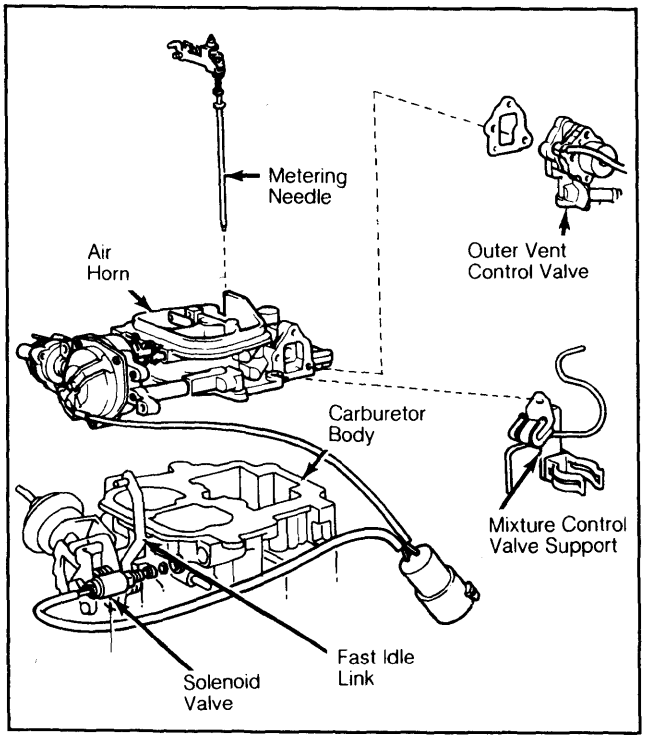
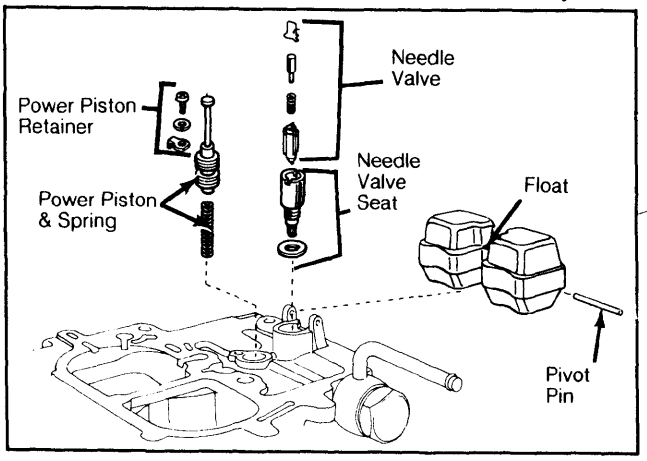
Fig. 8: Exploded View of Carburetor Air Horn



Float Assembly

Remove pivot pin and float. Remove needle valve and seat. Remove power piston retainer, piston and spring. *See Fig. 9.*

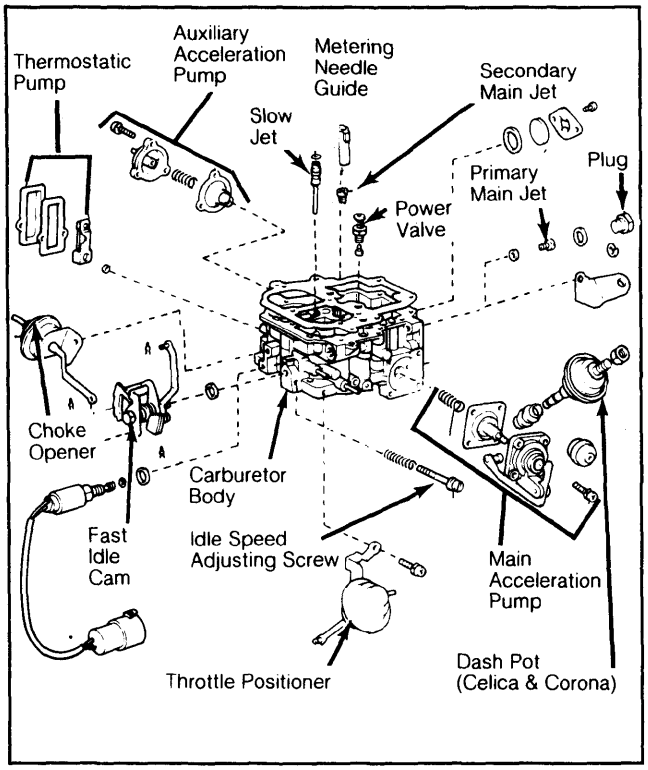
Fig. 9: Exploded View of Carburetor Float Assembly



Main Body

1) Remove slow jet, power valve, metering needle guide and secondary main jet. Remove plug and primary main jet. Remove main and auxiliary acceleration pumps. *See Fig. 10.*

Fig. 10: Exploded View of Carburetor Main Body



2) Remove thermostatic valve and throttle positioner. Remove fast idle cam, choke opener, and idle speed adjusting screw. On Celica and Corona models with automatic transmission, remove dashpot.

CLEANING & INSPECTION

CAUTION: Do not immerse synthetic components (gaskets, plastics, rubber) or thermostat and diaphragm valves in carburetor cleaner.

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

Reassemble carburetor components by reversing disassembly procedure. Make sure to install new gaskets where required. Check for smooth operation of all valves and linkage.

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level In. (mm)	Float Drop In. (mm)	Choke Opener In. (mm)	Choke Breaker Angle	Accel. Pump Stroke In. (mm)	Throttle Positioner Angle
22R Engine	.413 [1] (10.5)	1.89 (48)	.04 (1.0)	38°	.161 (4.1)	16°

[1] — Set Corona models to .386" (9.8 mm).