1982 Carter Carburetors

CARTER THERMO-QUAD 4-BARREL

CARBURETOR APPLICATION

CHRYSLER CORP. (CARTER) CARBURETOR NO.[1]

Application	Man. Trans.	Auto. Trans.
5.2L V8		
Federal	9342	9342
Calif.	9375	9375
5.9L V8		
Federal	9379	9379
Calif.	9376	9376

[1] — Carburetor numbers are preceded by the letters "TQ", and followed by the letter "S".

CARBURETOR IDENTIFICATION

Carburetor identification number is stamped on left rear foot of throttle body on vertical surface near bolt hole.

DESCRIPTION

Thermo-Quad carburetors have 3 main parts; the air horn, main body, and throttle body. Air horn houses choke valve, air valve for secondaries, fuel inlet system (2 floats, inlet needles and seats), and accelerator pump system.

Also housed in air horn are primary boost venturis, vacuum controlled step-up piston and metering rods, and high and low speed fuel metering system (secondary jets, fuel discharge nozzles, and air bleeds).

Main body houses primary jets and is constructed of phenolic resin for cooler fuel temperatures. Throttle body houses throttle valves and linkage.

All Thermo-Quad carburetors installed on vehicles equipped with an EGR system have a venturi vacuum port on the side of the carburetor. This is the only vacuum port located in the main body. All other vacuum pick-up points are located in the throttle body.

ADJUSTMENT

NOTE: For all on-vehicle adjustments, see TUNE-UP SERVICE PROCEDURES.

Thermo-Quad carburetors have unique features which require extra caution during adjustment. The vacuum kick diaphragm provides 2 separate functions. It provides for vacuum kick and also controls the secondary air valve.

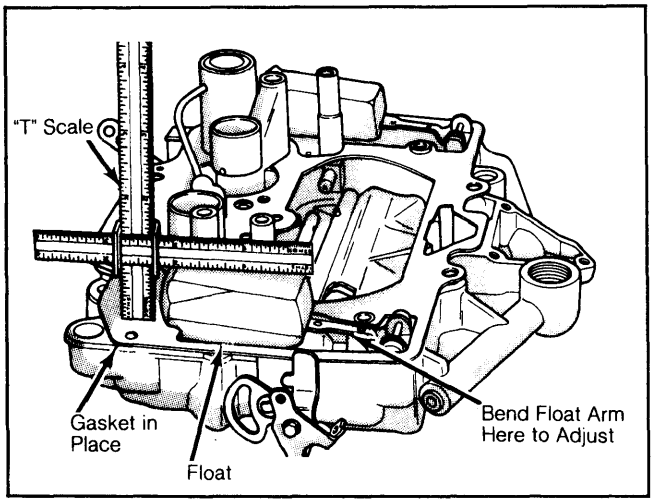
Because of the separate nature of these functions, separate but interrelated adjustments are necessary. These adjustments must be performed in proper sequence.

NOTE: All carburetors incorporate tamper-proof choke, choke pull-off, and air/fuel mixture adjusting screws. Adjustments are to be performed only after a major overhaul, or if carburetor has received component damage.

FLOAT LEVEL (BENCH ADJUSTMENT)

1) Turn air horn upside-down. Place air horn gasket in position on air horn. Make sure floats are against seated needle valve. *See Fig. 1.*

Fig. 1: Adjusting Float Level



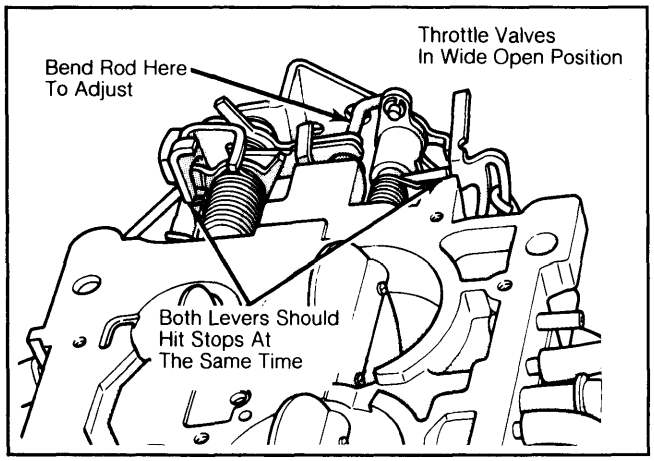
Do not allow lip of float lever to press against needle.

2) Measure float level specified clearance from bottom side of float to gasket surface. To adjust, bend float lever. Do not allow lip of float lever to press against needle when adjusting. This will damage needle and cause carburetor flooding and incorrect float level.

SECONDARY THROTTLE LINKAGE

1) Hold fast idle lever in curb idle position. Turn carburetor upside-down. Open throttle valves wide open. *See Fig. 2.*

Fig. 2: Adjusting Secondary Throttle Linkage



Primary and secondary levers both touch stops at same time.

2) Primary and secondary levers should both contact stops at the same time. To adjust, bend secondary throttle operating rod at point shown in illustration. Check linkage for interference and smooth movement after bending linkage rod.

SECONDARY AIR VALVE ALIGNMENT

1) Observe carburetor from directly above. *See Fig. 3.*

2) With air valve in closed position, gap between air valve and air horn wall must be at its maximum and parallel with air horn gasket.

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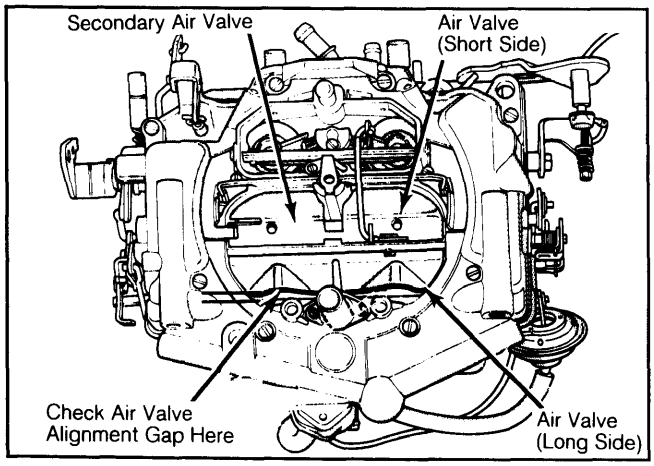
Fig. 3: Checking Secondary Air Valve Alignment

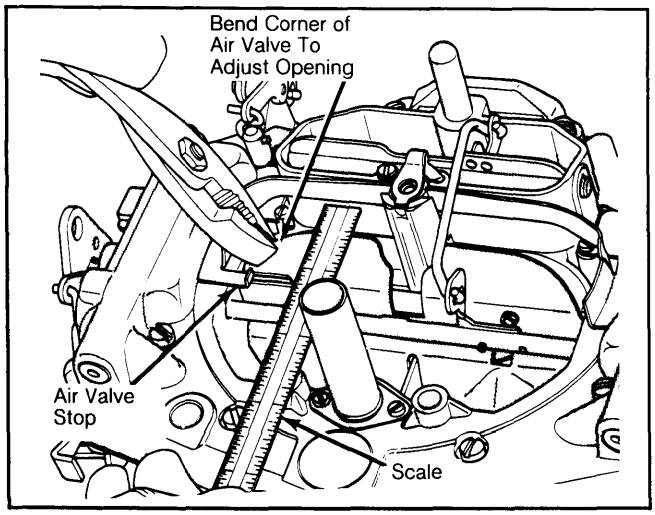


Secondary air valve closed during measurement.

SECONDARY AIR VALVE OPENING

1) Hold secondary air valve wide open. Measure specified gap between raised edge (short side) of air valve and air horn wall. *See Fig. 4.*

Fig. 4: Adjusting Secondary Air Valve Opening



Corner of air valve is notched to aid in adjustment.

2) To adjust, bend short side of air valve with pliers until specified gap is obtained. Corner of air valve is notched to aid in adjustment.

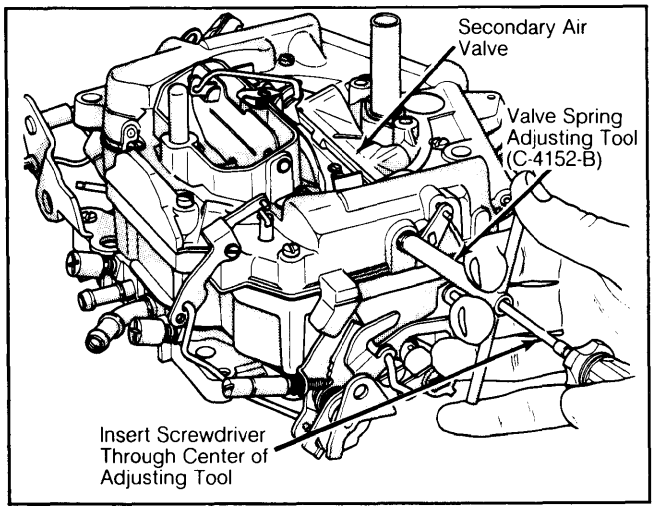
SECONDARY AIR VALVE SPRING TENSION

CAUTION: When performing this adjustment, hold air valve adjustment plug with screwdriver when loosening lock plug. If not, spring may snap out of position. This would require taking the carburetor apart to get the spring out.

1) Loosen air valve lock plug. Turn air valve adjustment plug clockwise. This allows air valve to move to wide open position. *See Fig. 5.*

2) Insert a long slender screwdriver through center of special valve spring adjustment tool (C-4152-B or equivalent).

Fig. 5: Adjusting Secondary Air Valve Spring Tension



Hold air valve adjustment plug with screwdriver when loosening lock plug.

3) With adjusting tool positioned on air valve lock plug, turn adjustment plug counterclockwise until air valve lightly touches stop.

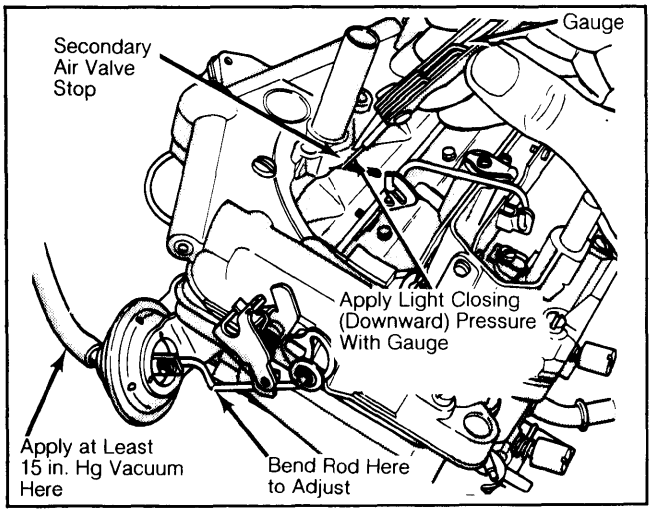
4) Lightly press air valve against stop with finger. Now turn adjustment plug additional amount of specified turn(s) counterclockwise. Hold adjustment plug with screwdriver and tighten lock plug with adjusting tool.

CHOKE DIAPHRAGM CONNECTOR ROD ADJUSTMENT

NOTE: If choke diaphragm connector rod adjustment is changed, vacuum kick adjustment must also be reset.

1) Remove tamper-proof choke cover by drilling out blind rivets with 1/8" drill. Make sure diaphragm is securely mounted to carburetor. Using an outside vacuum source, apply at least 15 in. Hg of vacuum to diaphragm. Make sure diaphragm stem is fully seated. *See Fig. 6.*

Fig. 6: Adjusting Choke Diaphragm Connector Rod



If adjustment is changed, vacuum kick adjustment must be reset.

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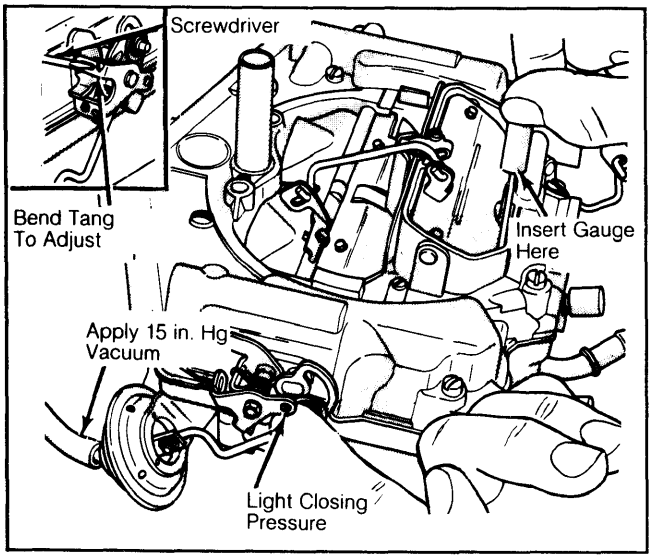
2) Apply light opening (downward pressure) on secondary air valve. Measure specified clearance between air valve and stop. To adjust, bend connector rod at point shown in illustration.

CHOKE VACUUM KICK

1) Open throttle and close choke. Now close throttle to trap fast idle cam at closed choke position. Disconnect vacuum hose from choke diaphragm. *See Fig. 7.*

Fig. 7: Adjusting Choke Vacuum Kick



The vacuum kick adjustment tang must be at stop for proper adjustment.

2) Apply an outside vacuum source of at least 15 in. Hg to choke diaphragm. Apply enough closing force on choke control lever to move vacuum kick adjustment tang against stop without distorting linkage.

NOTE: A weak torsion spring will easily be deflected. Vacuum kick adjustment tang must be at stop for proper adjustment.

3) Measure choke vacuum kick specified clearance between lower edge of choke valve and air horn wall at throttle lever side. Measurement can be checked using a specified drill or pin gauge. Make sure clearance does not change as drill or pin gauge is inserted or removed.

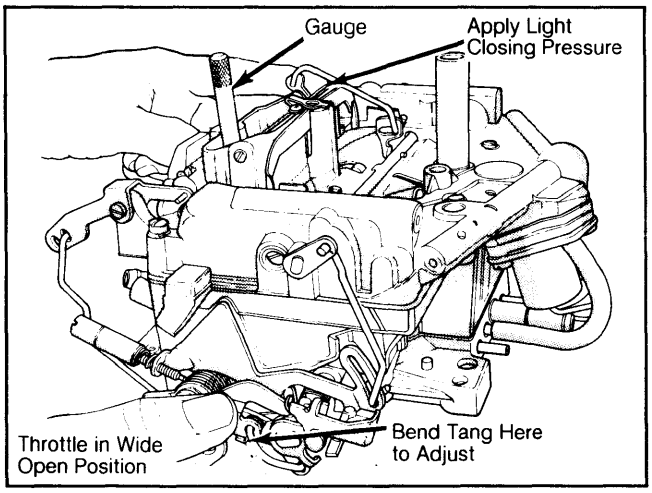
4) To adjust, insert screwdriver in slot in vacuum kick tang and twist. Do not adjust diaphragm rod. Check all linkage for freedom of movement. Reconnect vacuum hose to diaphragm.

FAST IDLE CAM POSITION

NOTE: If fast idle cam position adjustment is changed, choke unloader and secondary throttle lockout adjustments must also be reset.

1) Place fast idle speed adjusting screw on 2nd highest step of fast idle cam. Move choke valve toward closed position using light pressure on fast idle control lever. *See Fig. 8.*

Fig. 8: Adjusting Fast Idle Cam Position



Fast idle speed adjusting screw on 2nd highest step of fast idle cam.

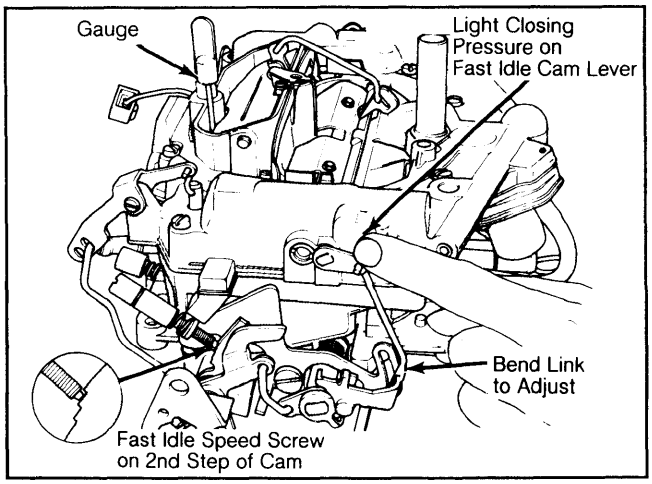
2) Measure clearance by inserting specified drill or pin gauge between bottom of choke valve and air horn wall at throttle lever side. Make sure clearance does not change as drill or pin gauge is inserted or removed.

3) To adjust, bend fast idle cam connector rod at point shown until correct valve opening is obtained.

CHOKE UNLOADER

1) Hold throttle valves wide open. Apply light closing pressure on fast idle control lever to close choke valve. *See Fig. 9.*

Fig. 9: Adjusting Choke Unloader



Throttle valves in wide open position.

2) Measure specified clearance between lower edge of choke valve and air horn wall at throttle lever side. Measurement can be checked using specified drill or pin gauge. Make sure clearance does not change as drill or pin gauge is inserted or removed.

3) To adjust, bend tang on fast idle lever until specified clearance is obtained.

SECONDARY THROTTLE LOCKOUT

1) Move fast idle control lever to open choke position. Measure specified clearance between lockout

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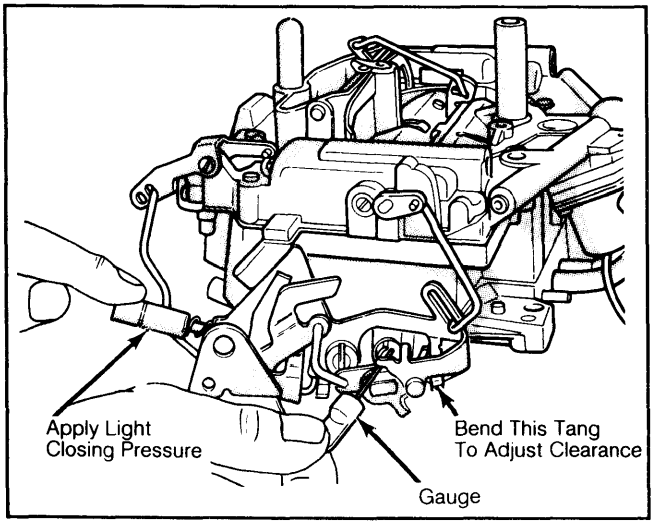
lever and stop. Clearance can be checked using specified drill or pin gauge. *See Fig. 10.*

Fig. 10: Adjusting Secondary Throttle Lockout



Measure between lockout lever and stop.

2) To adjust, bend tang on lower end of fast idle control lever until specified clearance is obtained.

ACCELERATOR PUMP STROKE

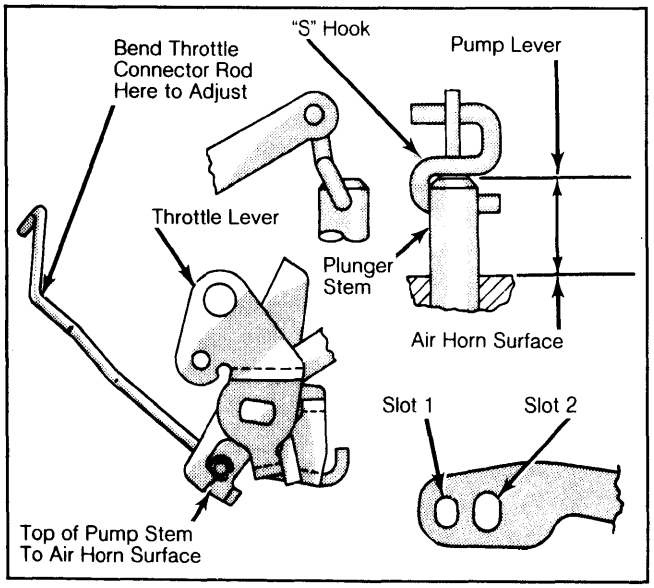
NOTE: Accelerator pump stroke is determined by measurement of accelerator pump plunger height above air horn surface AT CURB IDLE.

1) Be sure throttle connector rod is in specified hole of pump arm.

2) Use a scale to measure height of accelerator pump plunger stem (from stem top to air horn surface) at curb idle.

3) Adjust plunger height by bending throttle connector rod. *See Fig. 11.*

Fig. 11: Adjusting Accelerator Pump Stroke



Adjustment is made at curb idle.

OVERHAUL

DISASSEMBLY

1) Place carburetor on a repair stand to protect throttle valves. Remove idle enrichment valve assembly.

2) Remove rod retainers that hold throttle connector rod to accelerator pump arm and throttle lever. Remove connector rod from carburetor.

3) Remove accelerator pump arm screw. Disengage pump arm from "S" link and remove pump arm. Leave "S" link connected to pump rod.

4) Remove choke countershaft fast idle lever attaching screw while holding lever. Remove lever from countershaft. Swing fast idle connector rod in an arc to disengage it from fast idle operating lever.

5) Remove retainers and washers holding choke diaphragm connecter rod to vacuum diaphragm and air valve lever. Remove retainer holding rod to choke countershaft. Disengage rod and swing rod in an arc to disengage choke shaft lever assembly.

6) Remove step-up piston cover plate and metering rod cover plate. Remove step-up piston and link assembly with step-up rods. Remove step-up piston spring.

7) Remove discharge pump nozzle housing and gasket. Invert carburetor and remove discharge check needle. Needle should drop out when carburetor is inverted.

8) Remove 10 air horn (bowl cover) screws. Two of these screws are located between choke valve and air horn wall. Remove air horn with floats. Separate float bowl from throttle body.

Bowl Cover

1) Remove float lever pins and lift out float assembly. Mark floats so they can be installed in original locations.

2) Remove 2 needle valves from seats, marking them for reassembly in original location. Using a wide blade screwdriver, remove needle valve seats. Mark seats for reassembly in original location.

3) Remove secondary metering jets. Remove plastic accelerator pump passage tube. Remove bowl cover gasket.

4) Remove pump rod "S" link. Carefully remove accelerator pump plunger assembly by tapping lightly on upper end of plunger shaft. Care must be taken not to damage plunger shaft hole in cover. Catch intake check seat, plunger and spring.

NOTE: Always install a new check seat and plunger when carburetor is reassembled.

5) If equipped, note position of bowl vent actuating lever. Remove retainer clip from lever. Remove lever from bowl vent operating arm. Remove seal from arm. Remove fuel inlet fitting and gasket.

Throttle Body

1) Remove step-up actuating lever. Remove choke diaphragm and bracket assembly with hose. Do not place this assembly in carburetor cleaning solvent.

NOTE: The carburetor vacuum fitting contains a small vacuum passage restriction. Clean with compressed air only.

2) Carefully remove idle limiter caps. Remove idle mixture screws and springs. Be sure to count number

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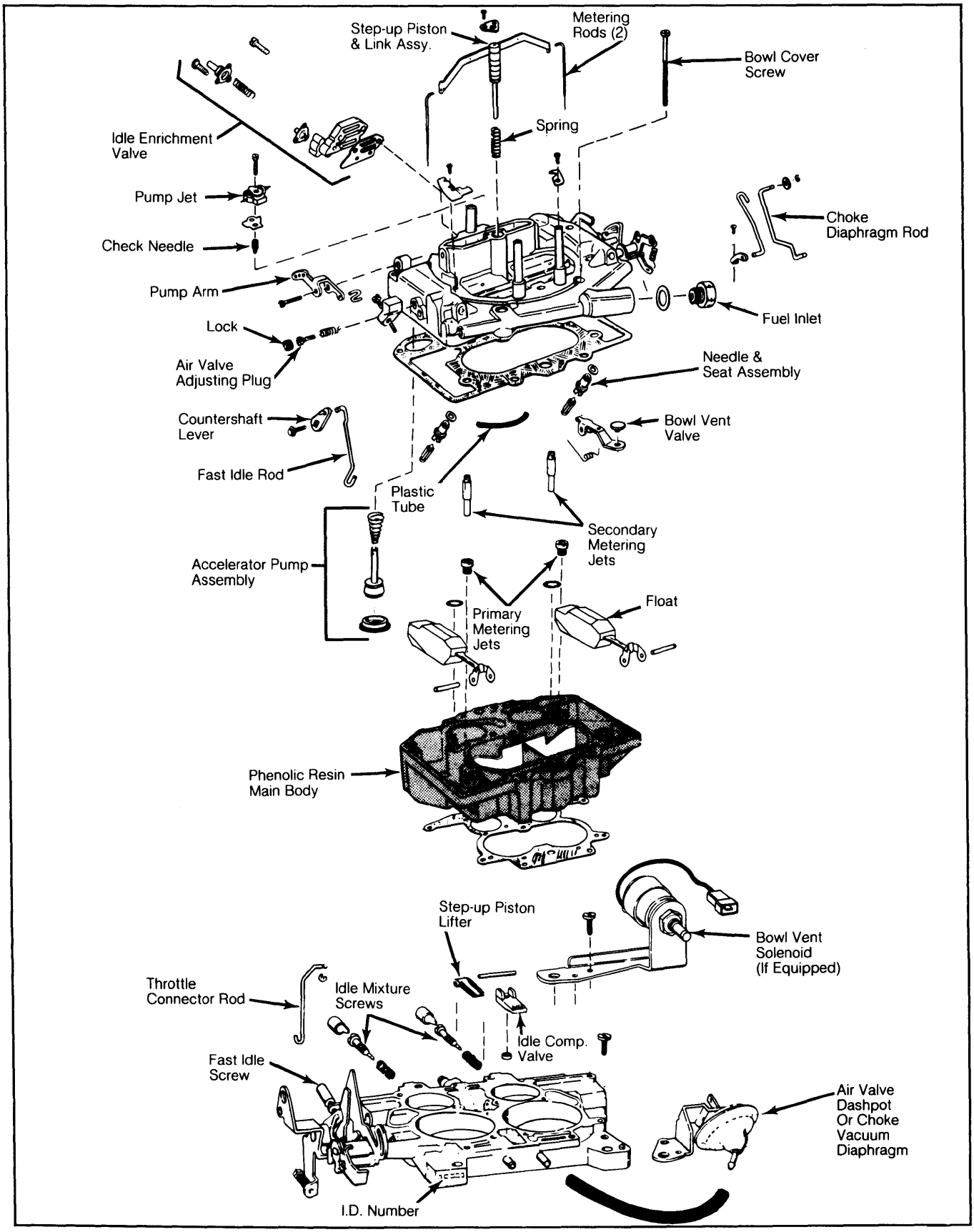
Fig. 12 Exploded View of Carter Thermo-Quad 4-Barrel Carburetor



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of turns it takes to seat screws so they may be installed in their original positions.

NOTE: Manufacturer does not recommend removal of throttle shafts or valves unless absolutely necessary. These parts are precisely adjusted at factory. The slightest misalignment upon reassembly would adversely affect carburetor operation between curb idle and about 30 mph.

Main Body

1) Remove and discard primary "O" ring seals. Remove primary metering jets.

2) It is not necessary to remove baffle plate from main body.

NOTE: No further disassembly is recommended. Do not leave main body in carburetor solvent for a prolonged period of time.

CLEANING & INSPECTION

- Do not soak choke diaphragm or plastic parts in solvent. Do not leave main body in solvent for too long a time.
- Rinse parts with HOT water after using solvent. Blow dry with compressed air.
- Do not use wire, drill or any hard parts to clean passages.
- Be sure gasket holes match up and all parts are clean and ready for installation.

REASSEMBLY

To reassemble carburetor, reverse disassembly procedures, using new gaskets and seals. Make sure gaskets fit correctly and that all holes are punched through and correctly located. Also, note the following:

1) Install pump discharge check needle with point toward base of carburetor.

2) Install upper pump plunger spring in cylinder with large end first. Lubricate and install plunger, pushing stem through hole in casting. Install "S" link with lower open end toward choke valve.

3) Install pump arm and screw before installing pump intake check valve assembly. Install 10 bowl cover screws and tighten to 35 INCH lbs. (4 N.m).

CARBURETOR ADJUSTMENT SPECIFICATIONS

Application	Float Level Setting	Secondary Air Valve		Choke Diaphragm Rod Setting	Choke Vacuum Kick	Fast Idle Cam Setting	Choke Unloader Setting	Secondary Throttle Lockout	Accel. Pump Hole	Accel. Pump Stroke
		Opening Setting	Spring Tension [1]							
TQ-9342-S	29/32"	27/64"	2½	.040"	.130"	.100"	.310"	.060"	#1	.340"
TQ-9375-S	29/32"	7/16"	2	.040"	.130"	.100"	.310"	.060"	#1	.340"
TQ-9376-S	29/32"	7/16"	2	.040"	.130"	.100"	.310"	.060"	#1	.340"
TQ-9379-S	29/32"	7/16"	2	.040"	.130"	.100"	.310"	.060"	#1	.340"

[1] — Specification is number of turns CCW after air valve contacts stop.