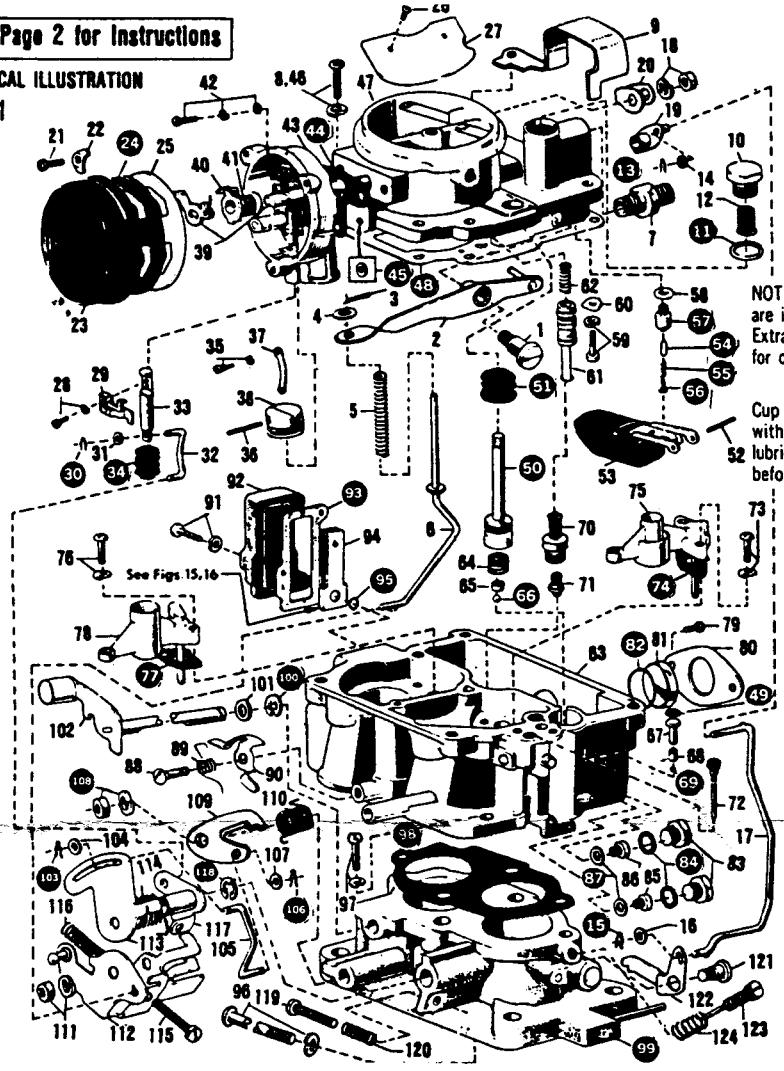
FUEL SYSTEM
SERVICE INSTRUCTION WORKSHEET

TO REPAIR CARBURETOR—Toyota (Aisan) Equipped 2 Barrel Engine 2T, 2TC, 8 R-C Series

☞ PARTS LIST SHOWN DOES NOT REFLECT THE CONTENTS OF THE KIT.

See Page 2 for Instructions

TYPICAL ILLUSTRATION
FIG. 1



NOTES: 1. Circled parts are included in most kits. Extra parts are included for other kits.

2. Pump Piston Cup (50) must be coated with a light film of lubricating oil then flared before installation.

PARTS LIST

1	Shoulder Screw
2	Pump Lever
3	Connecting Rod Cotter Pin
4	Connecting Rod Washer
5	Connecting Rod Spring
6	Pump Connecting Rod
7	Fuel Inlet Fitting
8	Airhorn Screw & Lockwasher (1) (For Removal of 9)
9	Choke Lever Guard
10	Fuel Plug
11	Fuel Plug Gasket
12	Fuel Strainer
13	Choke Re-loader Rod Retainer Clip (Upper)
14	Choke Re-loader Rod Washer (Upper)
15	Choke Re-loader Rod Retainer Clip (Lower)
16	Choke Re-loader Rod Washer (Lower)
17	Choke Re-loader Rod
18	Choke Shaft Nut & Lockwasher (Re-loader)
19	Choke Shaft Fork Lever (Re-loader)
20	Choke Shaft Stopper (Re-loader)
21	Choke Cover Hold-Down Screw (3)
22	Choke Cover Retainer (3)
23	Choke Cover & Thermostat Assy.
24	Choke Cover Gasket
25	Insulator Plate
26	Choke Valve Plate Mtg. Screws (2)

27	Choke Valve Plate
28	Cam Follower Mtg. Screw & Lockwasher (2)
29	Cam Follower
30	Link Retainer Clip (Upper)
31	Link Washer (Upper)
32	Choke Connecting Link
33	Choke Pull Rod
34	Choke Rod Rubber Boot
35	Piston Connecting Rod Mtg. Screw & Lockwasher
36	Choke Piston Pin
37	Piston Connecting Rod
38	Choke Piston
39	Choke Shaft & Lever Assy.
40	Fast Idle Cam
41	Choke Regulator Spring
42	Choke Body Mtg. Screw, Washer & Lockwasher (2)
43	Choke Body
44	Choke Body to Airhorn Gasket (Some Models)
45	Choke Body to Airhorn Seal (Some Models)
46	Airhorn Screw & Lockwasher (5) (See 8)
47	Airhorn
48	Airhorn Gasket
49	Pump Discharge Seal
50	Pump Piston Assy.
51	Pump Piston Dust Boot

52	Float Hinge Pin
53	Float
54	Needle Valve
55	Cushion Spring
56	Pivot Pin
57	Seat
58	Seat Gasket
59	Power Valve Piston Mtg. Screw & Lockwasher
60	Power Valve Piston Retainer
61	Power Valve Piston
62	Power Valve Spring
63	Main Body
64	Pump Piston Return Spring
65	Ball Check Lock Ring
66	Ball Check
67	Pump Discharge Stop
68	Pump Discharge Weight
69	Pump Discharge Ball
70	Power Valve
71	Power Valve Jet
72	Low Speed Jet
73	Primary Venturi Mtg. Screw w/Lockwasher (2)
74	Primary Venturi Mtg. Gasket
75	Primary Venturi
76	Secondary Venturi Mtg. Screw w/Lock-washer (2)
77	Secondary Venturi Mtg. Gasket
78	Secondary Venturi
79	Window Gauge Holder Mtg. Screw (2)
80	Window Gauge Holder
81	Window Gauge
82	Window Gauge Gasket
83	Primary & Secondary Access Plug (2)
84	Plug Gasket (2)
85	Primary Jet
86	Secondary Jet
87	Jet Gasket (2)
88	Stopper Lever Shoulder Screw
89	Stopper Lever Spring
90	Stopper Lever
91	Idle Compensator Cover Screw & Lock-washer (3)
92	Idle Compensator Cover
93	Idle Compensator Cover Gasket
94	Idle Compensator Assembly
95	Idle Compensator Assembly Mtg. "O" Ring
96	Throttle Flange Mtg. Screw & Lockwasher (1 Long)
97	Throttle Flange Mtg. Screw & Lockwasher (2 Short)
98	Main Body to Throttle Flange Gasket
99	Throttle Flange Assy.
100	Air Valve Shaft & Lever Assy. "E" Lock Ring
101	Air Valve Shaft & Levery Assy. Shim
102	Air Valve Shaft & Lever Assy.
103	Throttle Link Retainer Clip (Upper)
104	Throttle Link Retainer Washer (Upper)
105	Throttle Connecting Link
106	Throttle Link Retainer Clip (Lower)
107	Throttle Link Retainer Washer (Lower)
108	Secondary Shaft Nut & Lockwasher
109	Secondary Shaft Lever
110	Secondary Shaft Return Spring
111	Primary Shaft Nut & Lockwasher
112	Primary Lever
113	Primary to Secondary Slotted Arm
114	Primary Shaft Spring
115	Fast Idle Adjusting Screw
116	Fast Idle Adjusting Spring
117	Primary Shaft Fast Idle Lever
118	Primary Shaft "E" Lock Ring (2)
119	Idle Speed Adjusting Screw
120	Idle Speed Adjusting Spring
121	Choke Re-loader Lever Shoulder Screw
122	Choke Re-loader Lever
123	Idle Mixture Adjusting Screw
124	Idle Mixture Adjusting Spring

HOW TO USE THIS INSTRUCTION SHEET

1. This worksheet has been designed to simplify your use of the REPAIR Kit to tune-up a carburetor. It is set up so that you can follow each step by checking it off as you perform it. If you are interrupted any time during your work, you will know where you are when you get back to it.

2. The steps of disassembly are shown in numerical order. Parts are illustrated (Fig. 1) and are identified to make it easy to find. Thus, the first part to be removed is at the top of this list and can be found in the exploded drawing by its number designation. To reassemble proceed from the bottom of the list and check off operations in the right hand column.

3. The items contained in this kit are sufficient to replace the most frequently worn parts in the carburetor. The list of parts shown in parts list DOES NOT reflect the contents of the kit.

4. This instruction sheet is applicable to all carburetors of this type. Since the illustration (Exploded View) is typical and minor variations occur between the different models, procedures will be essentially as described and differences will be easily recognized. This kit may contain extra parts which are applicable to other carburetors in this group. Substitute identical replacement parts for original worn parts found on carburetor.

5. Cover manifold hole while the carburetor is off to prevent dust and dirt from entering.

6. Soak throttle body, air horn assembly and carburetor body in carburetor cleaner for about ten minutes. Remove carbon and all loose particles using a stiff bristle brush.

7. CAUTION: Do not use any abrasives to clean carburetor parts. Items made of rubber, leather, nylon or plastic are not to be soaked in carburetor cleaner.

8. Put small parts in strainer and allow to soak in a carburetor cleaner. Dry and place on paper towel.

9. Remove parts from solvent, blow out all passages and jets with air gun.

I. DISASSEMBLY

Perform the following disassembly procedures as outlined below using the Exploded View (Fig. 1) and parts list as a guide. Disassemble only to the extent necessary to permit thorough cleaning and inspection of parts.

A. Air Horn Assembly

1. Detach pump lever assembly from air horn (47) by removing shoulder screw (1), at the same time separate pin-end of pump lever (2) from pump piston assembly (50).

2. Remove the following parts as a unit: Cotter pin (3), washer (4), spring (5) and connecting rod (6). Then rotate rod (6) so as to disengage from slotted hole of primary lever (112) and remove.

3. Detach choke re-loader rod (17) by removing retainer clips (13, 15) and washers (14, 16). Then place carburetor in a suitable holding device and remove fuel fitting (7).

4. Next, loosen all air horn screws (8, 46) lightly, then lift off choke lever guard (9) by removing one screw (8). **NOTE:** Re-tighten remaining five screws (46) lightly until otherwise noted.

5. From top of air horn (47) remove fuel plug (10), gasket (11), carefully pull out strainer (12) and check condition of mesh before undertaking re-assembly.

6. On opposite end of choke shaft and lever assembly (39), mark position of fork lever (19) and choke shaft stopper (20), then slide off by first removing shaft nut and lockwasher (18).

7. Before removing choke assembly, first note position of index mark on choke cover (23) with corresponding line graduation on choke body (43). Next, loosen and remove three hold-down screws (21) and retainers (22) and carefully slide off hooked-end of choke cover assembly (23) from lever arm of choke shaft and lever assembly (39).

NOTE: Lever arm is positioned left of hooked-end of choke cover assembly (23). Now, lift off gasket (24) and insulating plate (25).

8. To remove choke valve plate (27) first, trace outline of choke shaft (39) on choke plate (exact position required for re-assembly). Next, cover carburetor throat just below choke valve plate (27) with cloth to prevent filings or grit from entering. Then file or grind ends of screws (26) to remove staking. Now, rest shaft on firm support and using a close fitting screwdriver apply firm pressure to remove screws (26). **CAUTION:** Avoid bending choke shaft and lever assembly (39).

9. From remaining choke assembly detach cam follower (29) from choke pull rod (33) by removing screws and lockwashers (28). Now, slide off pull rod (33) plus attaching parts from choke body (43) as an assembly. Separate as follows: Pry off rubber boot (34) and remove retainer clip (30), washer (31) and connecting link (32). Next, detach choke piston assembly from choke shaft and lever assembly (39) by removing screw and lockwasher (35). Then dismantle piston assembly by removing piston pin (36) separating choke piston (38) from connecting rod (37). Now, carefully slide out as a unit the following items: Choke shaft and lever assembly (39), fast idle cam (40) and regulator spring (41). Further disassembly of unit is not required. However, if replacement is needed, be sure to mark location of bent tab ends of regulator spring (41) on choke shaft and lever assembly (39). To remove: Pry off spring ends (41) from choke shaft and lever assembly and slide out from fast idle cam (40). Now, expand inside diameter of spring (41) and carefully slide over fast idle cam (40). In the next step, separate choke body (43) and gasket (45 or 44) from air horn assembly (47) by removing two screws, lockwashers and washers (42).

10. Detach air horn assembly (47) from main body (63) by removing five remaining screws and lockwashers (46). Using a mallet, gently tap carburetor at parting surfaces to separate castings. Now, remove air horn (47), pump piston (50) and dust boot (51) as a unit by carefully lifting straight up. Next, peel off gasket (48), pump discharge seal (49) and retain for matching purposes. From the dust boot (51), slide out pump piston (50), then dislodge and retract dust boot (51) from air horn (47).

11. With airn horn (47) placed in an inverted position, slide out hinge pin (52) and release float (53). Now, turn casting right side up allowing needle valve (54), spring (55) and pin (56) to fall into cupped hand. Again invert casting and using a wide bladed screwdriver, unscrew inlet seat (57) and remove along with gasket (58).

12. Remove power valve piston (61) and spring (62) by removing screw, lockwasher (59) and retainer (60).

B. Main Body

1. From the main body (63) retrieve pump piston return spring (64), ball check lock ring (65) and ball check (66).

2. Next, invert casting allowing pump discharge stop (67), weight (68) and ball (69) to fall into cupped hand.

3. Position casting right side up, insert a long thin-walled socket type tool and remove power valve (70) and jet (71) as a unit. Then separate jet (71) from power valve (70). Next, reach in from top surface of main body (63) and remove low speed jet (72), primary and secondary venturi mounting screws (73, 76), gaskets (74, 77) and primary and secondary venturis (75, 78).

4. Dismantle window fuel gauge as follows: Remove two screws (79) and lift off window holder (80), window gauge (81) and gasket (82).

5. Remove primary and secondary access plugs (83) and gaskets (84) from outside casting. Next, insert a close fitting screwdriver or jet removal tool into plug openings and carefully remove primary and secondary jets (85, 86) along with gaskets (87) from inside float chamber.

CAUTION: Do not interchange primary and secondary jets (85, 86).

6. Detach stopper lever (90) by unhooking both ends of spring (89) and remove along with shoulder screw (88).

NOTE: Mark exact location of spring (89).

7. From side of main body (63) detach hot idle compensator by removing three cover screws, lockwashers (91), cover (92) and gasket (93). Lift out hot idle compensator assembly (94) and "O" ring (95).

NOTE: Do not dismantle hot idle compensator assembly unless replacement parts are available.

8. If replacements are available, disassemble (refer to Figs. 15,16) as follows: Mark position of screw (for re-assembly) then remove along with retainer. Lift off bimetallic assembly, shims, push-on nut with valve disc attached. Next, split push-on nut using cutting pliers and carefully pry off from valve disc stem. Separate valve disc from bimetallic assembly.

9. Detach main body (63) from throttle flange assembly (99) by removing two short screws with lockwashers (97) and one long screw with lockwasher (96). Then gently tap carburetor at parting surface to separate castings. Carefully lift main body (63) from throttle flange assembly (99). Next, peel off gasket (98) and retain for matching purposes only.

C. Throttle Flange Assembly

1. Remove air valve shaft and lever assembly (102) from throttle flange assembly (99) only if replacements are required. To proceed, refer to choke valve plate removal procedures as outlined in paragraph A.8. Then, remove screws releasing air valve plate from air valve shaft and lever assembly (102). Next, pry off "E" lock ring (100) and slide out air valve shaft and lever assembly (102) together with shim (101) from main body (63). Remove shim (101) from air valve shaft and lever assembly (102).

2. Detach throttle connecting link (105) by removing retainer clips (106, 103) and washers (107, 104).

3. The following items are to be removed only if replacements are required:

(a) Remove secondary shaft nut and lockwasher (108) and mark position of secondary shaft lever (109) with relation to secondary shaft. Next, disengage return spring (110) from secondary shaft lever (109) and throttle flange casting, (note position) then slide secondary shaft lever and return spring from secondary shaft.

(b) Dismantle primary throttle linkage by first removing nut and lockwasher (111). Then mark position of following items prior to removal: slotted arm (113), shaft spring (114), fast idle screw (115), spring (116) and fast idle lever (117). Disassemble by unhooking both ends of shaft spring (114). Disassemble by unhooking both ends of shaft spring (114), then remove fast idle screw (115) and

spring (116). Now, carefully slide off entire assembly from primary throttle shaft including "E" lock ring.

(c) For valve plate removal (if required) of primary and/or secondary throttle shaft, follow procedures as outlined in paragraph A.8.

4. Proceed with disassembly by removing shoulder screw (121) releasing choke re-loader lever (122).

5. To remove idle mixture screw (123) first, mark screw position then turn in clockwise counting number of turns until screw bottoms lightly. Record number of turns. Then, turn counter clockwise and remove with spring (124). Also mark position of idle speed screw (119) and remove along with spring (120).

II. CLEANING & INSPECTION

Follow cleaning instructions as outlined on Page 2 of this instruction sheet. Inspect all castings for damaged or burred mating surfaces, cracks, warpage and stripped screw thread holes. Badly damaged screws must be replaced. New screws (considered as general hardware) are available at most hardware supply dealers. Check throttle valve and choke shafts for looseness or binding. Replace all parts with applicable new items found in kit.

III. RE-ASSEMBLY

Reverse the numerical sequence to re-assemble carburetor using index callout numbers as a guide for proper location and position of parts as shown in Exploded View (Fig. 1).

Note following instructions:

1. Before installing choke valve plate Fig. 1, callout (1) on to choke shaft and lever assembly (39), a coating of LOCKTITE BLUE must be applied to threads of valve plate screws (26) then re-assembled. **CAUTION:** Do not attempt re-assembly with damaged or burred screw threads.

2. Do not interchange main and secondary jets. Orifice of secondary jet (86) is larger.

3. Be sure to correctly install choke shaft and lever assembly (39) into choke body (43). Refer to Fig. 14 for details.

4. For detail installation of choke cover to choke shaft and lever assembly see Fig. 17.

ADJUSTMENTS

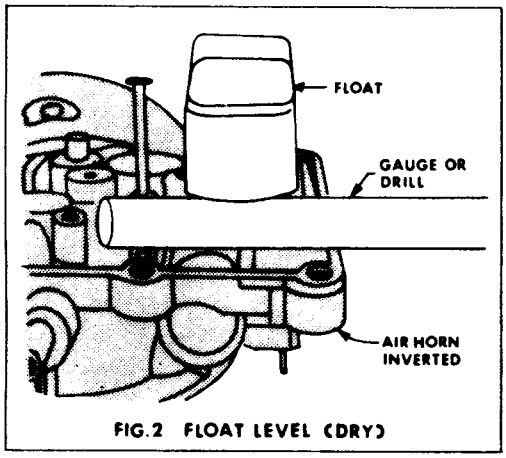


FIG.2 FLOAT LEVEL (DRY)

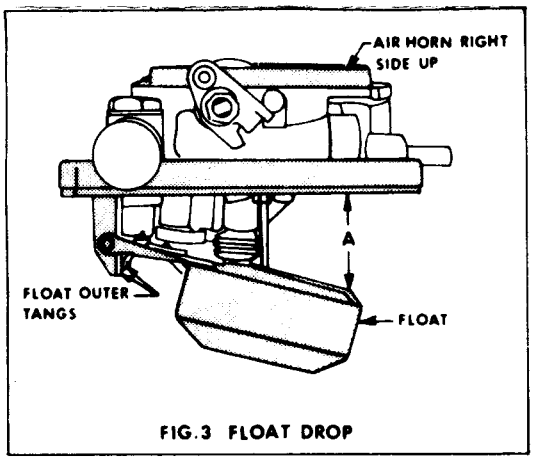


FIG.3 FLOAT DROP

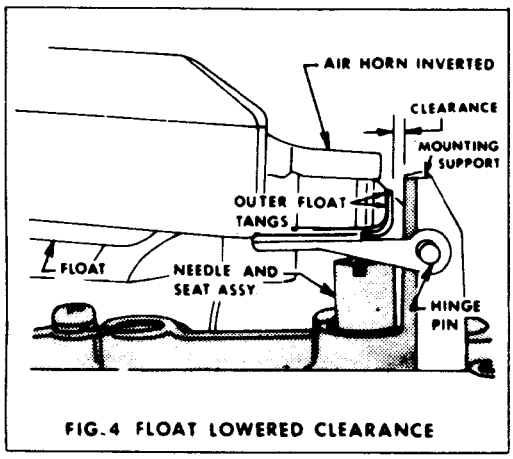


FIG.4 FLOAT LOWERED CLEARANCE

FIG. 2 FLOAT LEVEL (DRY)

Invert air horn without gasket. Be sure float center tang is slightly touching spring loaded fuel inlet needle. Next, measure distance (See Specification Chart) using gauge or drill between parting surface of air horn and end of float to obtain specified clearance. To adjust, bend float center tang as required (See Fig. 13 Float Assembly Detail)

CAUTION: When bending float center tang, never allow needle to be compressed into its seat as damage or a false setting may result.

FIG. 3 FLOAT DROP

Position air horn right side up permitting float assembly to hang free. Measure distance "A" (See Specification Chart) between parting surface of air horn and top of float. To adjust, bend both outer float tangs equally as required (See Fig. 13 Float Assembly Detail).

NOTE: Use either Fig. 3 or 4 for measuring float distance; depending upon carburetor selected and availability of data in Specification Chart.

FIG. 4 FLOAT LOWERED CLEARANCE

Invert airn horn without gasket. Be sure center float tang is slightly touching spring loaded fuel inlet needle. Next, measure clearance (See Specification Chart) between outer float tangs and mounting support as shown. To adjust, bend both outer float tangs same amount. **NOTE:** Be sure correct clearance is maintained for both tangs.

NOTE: Use either Fig. 3 or 4 for measuring float distance; depending upon carburetor selected and availability of data in Specification Chart.

FIG. 5 FLOAT LEVEL (WET)

With carburetor installed, run engine to operating temperature. Recheck float level setting by peering through sight glass and observing that fuel level is within marked tolerance range. If adjustment is needed, remove air horn and bend center float level tang as required (See Fig. 13 Float Assembly Detail).

FIG. 6 AIR VALVE CLEARANCE

Measure clearance between air valve and secondary throttle bore. Clearance must be as specified (See Specification Chart) when air valve is moved toward closed position. To adjust, loosen screws and position valve plate until desired clearance is obtained. **NOTE:** Valve plate must be checked for freedom of operation before staking screws.

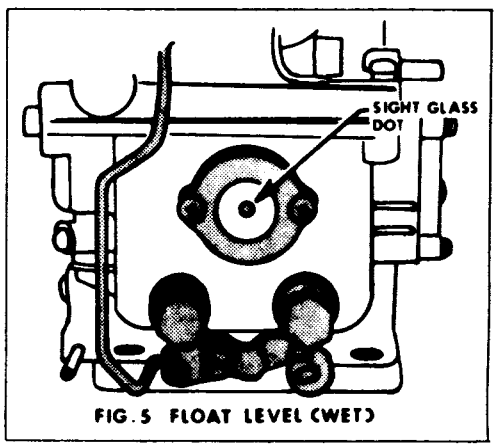


FIG.5 FLOAT LEVEL (WET)

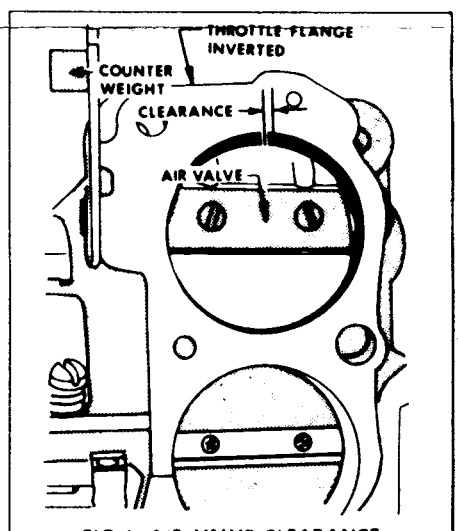


FIG.6 AIR VALVE CLEARANCE

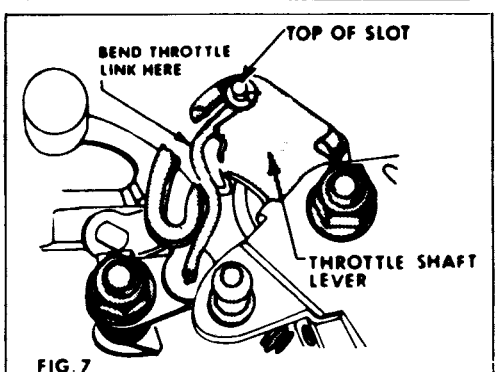


FIG. 7
SECONDARY OPENING, PRIMARY SETTING

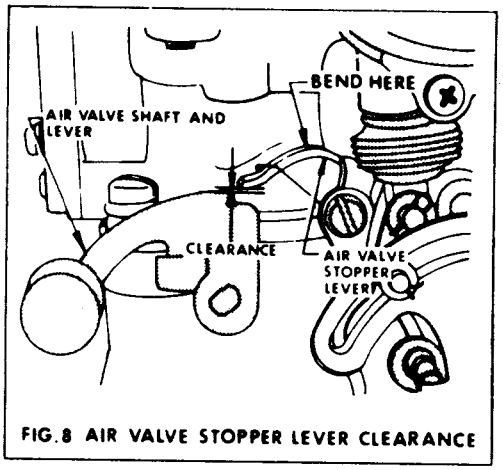


FIG. 8 AIR VALVE STOPPER LEVER CLEARANCE

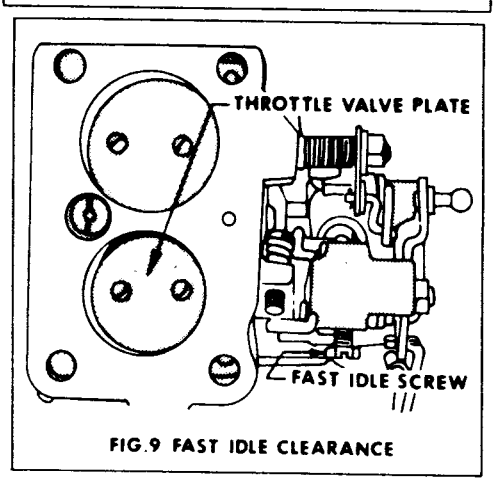


FIG. 9 FAST IDLE CLEARANCE

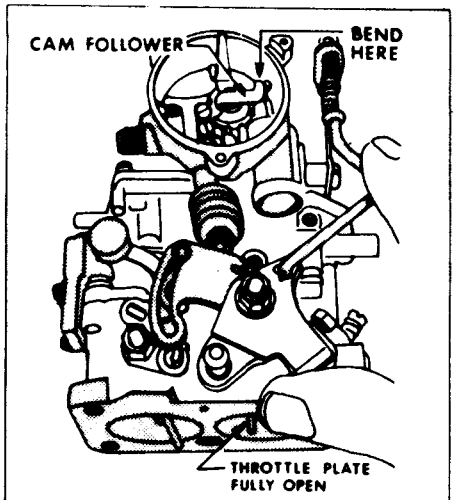


FIG. 10 UNLOADER

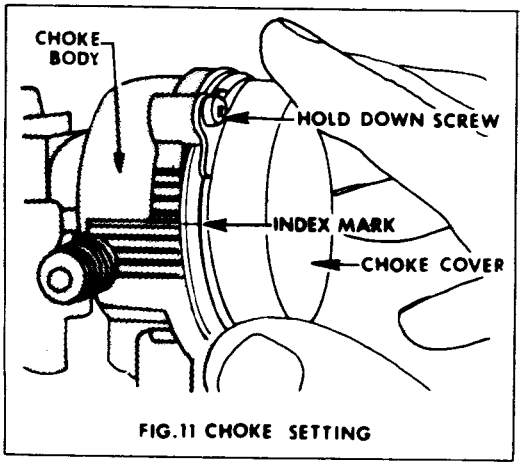


FIG. 11 CHOKE SETTING

FIG. 7 SECONDARY OPENING, PRIMARY SETTING

Set primary valve at an angle (See Specification Chart) before wide open position, then check to see if upper end of throttle link contacts end of slot in throttle shaft lever. To adjust, bend throttle link until end touches top of slot in throttle shaft lever without opening secondary valve.

FIG. 8 AIR VALVE STOPPER LEVER CLEARANCE

Measure clearance between air valve stopper and air valve shaft and lever assembly at the position where secondary valve begins to open. **NOTE:** Refer to car service manual for correct setting. If adjustment is required, bend air valve stopper lever as shown.

FIG. 9 FAST IDLE CLEARANCE

Turn choke valve to fully closed position. At this point throttle valve plate must be open as specified (See Specification Chart) from closed position. To adjust, turn fast idle screw as required.

FIG. 10 UNLOADER

Move throttle valve plate to fully open position. At this point choke valve opening must measure as specified (See Specification Chart). To adjust, bend cam follower as required.

FIG. 11 CHOKE SETTING

To adjust choke (cold engine), loosen three choke cover hold-down screws. Then position index mark on choke cover with corresponding line graduation on choke body (marked during disassembly). Now tighten hold-down screws. To lean mixture, rotate choke cover clockwise and counter clockwise to enrich mixture. **NOTE:** One line graduation on choke housing is equal to 7 degrees F.

FIG. 12 RE-LOADER

NOTE: For carburetor used with 8R-C Engine move choke valve plate 50 degrees from fully closed position. At this point re-loader lever must disengage from stop with a smooth positive action. To adjust, bend re-loader rod as required.

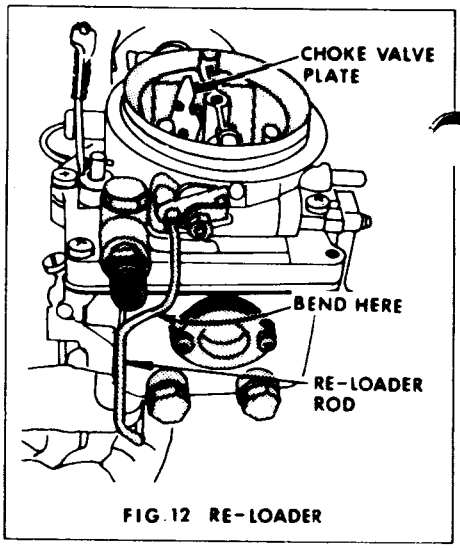


FIG. 12 RE-LOADER

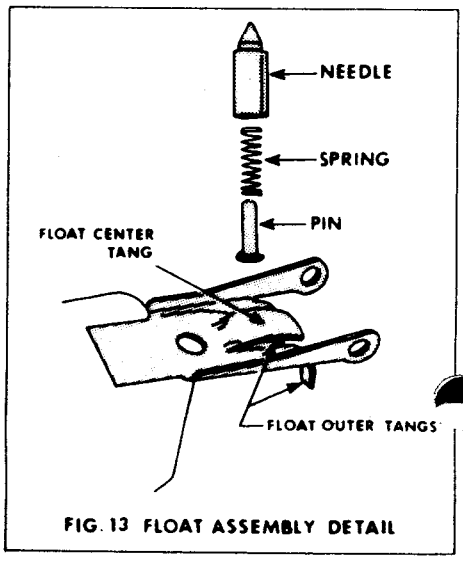


FIG. 13 FLOAT ASSEMBLY DETAIL

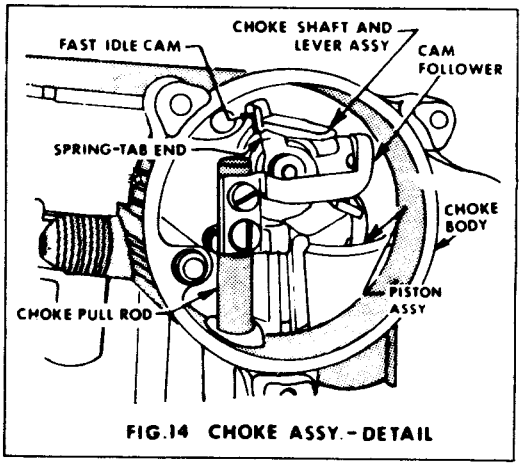


FIG. 14 CHOKE ASSY. - DETAIL

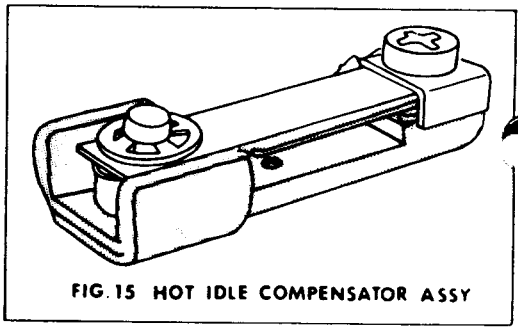


FIG. 15 HOT IDLE COMPENSATOR ASSY

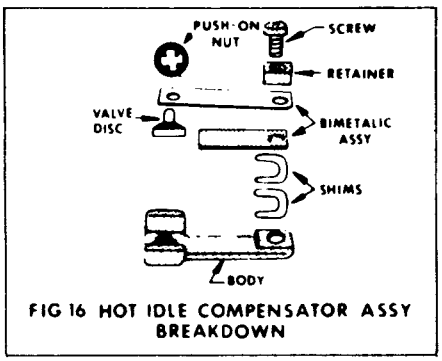


FIG 16 HOT IDLE COMPENSATOR ASSY BREAKDOWN

FIG. 18 IDLE SPEED-MIXTURE ADJUSTMENT

Turn mixture adjusting screw in until lightly seated. Mark position then turn out as specified (See Specification Chart). Now, start engine and run at operating temperature.

NOTE: If engine stalls out turn throttle speed screw to increase RPM slightly. Next, check to see if engine idles smoothly at specified RPM (See Specification Chart). If adjustment is required, rotate mixture adjusting screw and/or throttle speed screw accordingly.

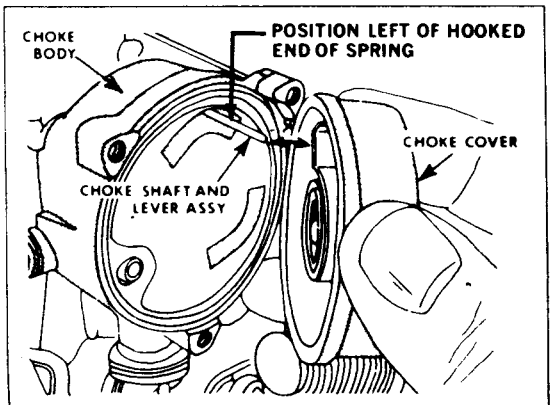


FIG. 17 CHOKE COVER-CORRECT INSTALLATION

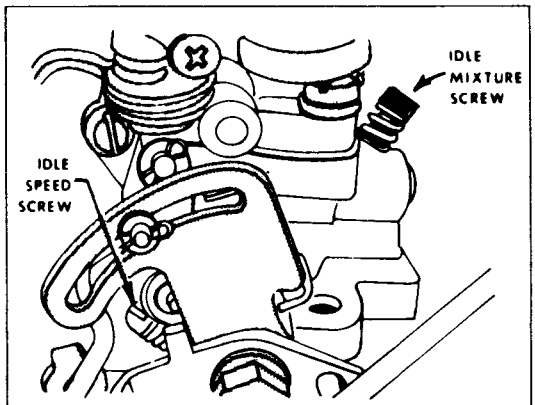


FIG. 18 IDLE SPEED-MIXTURE ADJUSTMENT

SPECIFICATION CHART

Carburetor No.	Float Level	Float Drop	Float Lowered Clearance	Secondary Opening Primary Setting	Air Valve Clearance	Unloader	Idle Mixture Screw Turns Open	Idle Adjustment Slow (RPM)	Idle Adjustment Fast (Clearance)
21100-34060	3/8	7/8	—	30°	1/64-1/32	51°	2	650A/T,M/T	1/32•
21100-34061	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34062	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34070	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34071	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34072	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34080	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34081	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34082	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34110 21100-34111	3/8	7/8	—	30°	1/64-1/32	51°	2	650A/T,M/T	1/32•
21100-26010	1/8	—	3/64	33°	—	43°	1-5/8	650A/T 750M/T	3/64•
21100-26011	1/8	—	3/64	33°	—	43°	1-5/8		
21100-26012	1/8	—	3/64	33°	—	43°	1-5/8		
21100-26021	1/8	—	3/64	33°	—	43°	1-5/8		
21100-26030	1/8	—	3/64	33°	—	43°	1-5/8		
21100-26031	1/8	—	3/64	33°	—	43°	1-5/8		
21100-26032	1/8	—	3/64	33°	—	43°	1-5/8		
21100-26080	1/8	—	3/64	33°	—	43°	1-5/8		
21100-34030	3/8	7/8	—	30°	1/64-1/32	51°	2	650A/T,M/T	1/32•
21100-34031	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34040	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34041	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34090	3/8	7/8	—	30°	1/64-1/32	51°	2		
21100-34032	3/8	7/8	—	30°	1/64-1/32	51°	2	650A/T,M/T	1/32•
21100-34091	3/8	7/8	—	30°	1/64-1/32	51°	2		

NOTE: If Spec. Data conflicts with Car Service Manual, follow information set forth in Car Service Manual.
•Refer to Figure 9 for Adjustment.