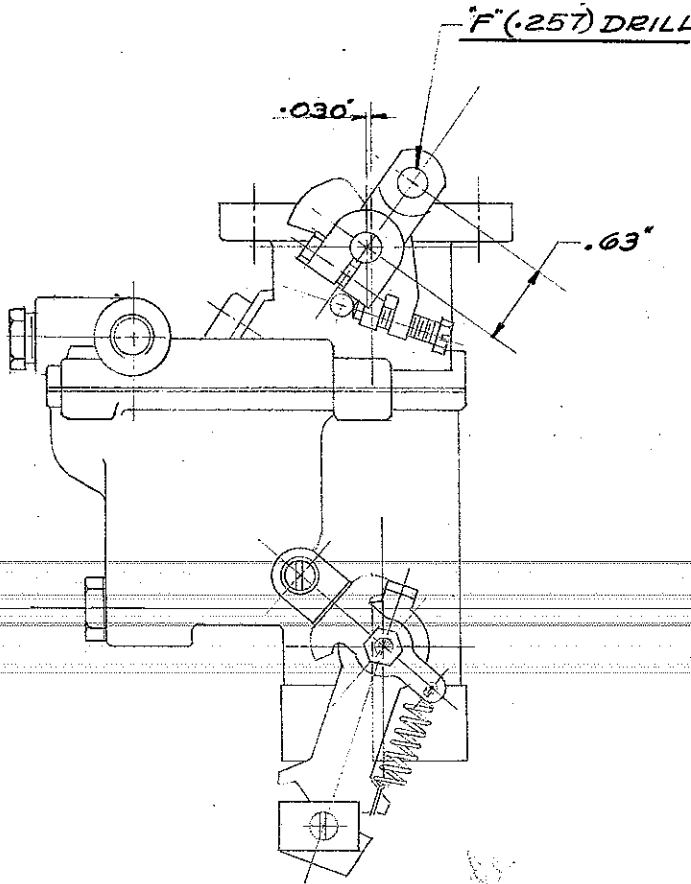


ZENITH CARBURETOR DIVISION
BENDIX AVIATION CORP.
DETROIT, MICH., U. S. A.

TOLERANCE ON LEVERS AND GAS CONNECTIONS UNLESS OTHERWISE SPECIFIED

1. LEVERS NOT PINNED IN PLACE—POSITIONS ARE ONLY APPROX.
2. LEVERS PINNED IN PLACE ± 3 DEGREES IN RADIAL POSITION.
3. LEVERS—WHEN DIMENSIONS ARE GIVEN FROM O/L OF CARB. ALLOW $\pm 1/32$.
4. POSITIONS OF GAS CONNECTIONS ARE ONLY APPROX.
5. PIN ALL THROTTLE STOP LEVERS.
6. DO NOT PIN THROTTLE CLAMP LEVERS.



*Chg. Log
#4100
5771*

SPECIAL NOTES
~~ASSEM. HEX HEAD~~
~~BOWL TO BODY SCREWS~~
~~IN HOLES NEAREST~~
~~INTAKE~~
PLUG FUEL INLET WITH
#30X16 CUP PLUG, L.H.
SIDE.
CRACK THRO. PLATE FOR IDLE.
SET IDLE ADJ. 1 to 2 TURNS OPEN.

PRIM. PLUG- CR78-49

DATE		LET	CHANGE	CHG. NO.	SETTING				MANIFOLD FLANGE		ENGINE		MANUFACTURED FOR			
5-19-64	9		BROUGHT UP TO DATE	N-1705	VENTURI	MAIN	IDLE	M. DIS. WELL	F. V.							
11-5-56	8		SEE BULLETIN	M-9256	JET	JET	JET	JET	VENT	SEAT						
6-25-56	7		SEE BULLETIN	M-9122	FUEL LEVEL				CENTERS		MAKE		CONTINENTAL			
3-5-52	6		WAS: CR28-2	M-7796	13	17-1	11	50-5	26	30	3	FT. HEAD	13"	11a	MOTORS CORP.	
8/1/49	5		REDRAWN	M-6897	WITH				DRILL		MODEL		THEIR PART NO.			
4/5/49	C		SEE BULLETIN	B-65	PRIMING PLUG HOLE				BORE AND STROKE		NG2		NG2E-400			
8/21/47	4		SEE BULLETIN	M-6040	REVEALING .017"				TAP		2 7/8 x 3 1/2"		STAMP ON NAME PLATE			
7/23/47	3		SEE BULLETIN	M-6009	C.C. .150"				NO. CYL.		4		ZENITH NO. S-1231C			
5/28/47	2		SEE BULLETIN	A-9295	SPARK ADVANCE				MILLED		R. P. M.		CUSTOMER NO. NG2E-400			
12/6/46	2		SEE BULLETIN	M-5720	DRILL SIZE				PARTS LIST							
9/30/46	A		SEE BULLETIN	A-8507	REVEALING				SCALE		FULL		DRAWN BY			
1/22/46	1		SEE BULLETIN	M-5320	C.C.				DATE		8/1/49		CARBURETOR MODEL		6155	
												OUTLINE NO.				
												05-1231				

PARTS LIST
ZENITH CARBURETOR DIVISION
BENDIX AVIATION CORP.
 DETROIT, MICH. U. S. A.

S-Serviceable Part
 K-Included in Repair Kit
 G-Included in Gasket Set

G & K Items are Serviceable Separately
 P- See Special Service Parts
 (*) Indicates New Part

ITEM	QTY.	SYMBOL	PART NAME	NOTES	QTY.	SYMBOL	PART NAME	NOTES	
THROTTLE BODY & PARTS					SETTINGS				
*****					*****				
4	1	B2-94F-1	ASS'LY-THROTTLE BODY		1	C38-35-13	Venturi	S	
5	1	BR2-94F	Throttle Body						
6	1	CR78-49	Priming Plug		1	C52-6-1-17	Main Jet	S	
7	1	C147-28	Identification Tag	(9)	1	T56-24	Washer	G	
8	1	C124-28	Retaining Pin	(9)					
9	1	CR88-8	Float Bracket		1	C55-6-11	Idle Jet	S	
10	2	T73-14	Retaining Pin	(9)					
11	1	T57-4	Felt Seal	K	1	C66-26-5-50	ASS'LY-DISCHARGE JET	S	
12	1	C131-4X2	Seal Retainer	K	1	T56-60	Washer	G	
13	1	T66-4	Stop Pin						
14	1	CR137-1X1	Cup Plug	K	1	C77-18-26	Well Vent	S	
15									
16	1	C23-458	Shaft	P	1	C81-17-30	ASS'LY-FUEL VALVE & SEAT	K	
17					1	CR82-10-30	Fuel Valve Seat		
18					1	CR83-8	Fuel Valve		
19	1	CR28-103	ASS'LY-STOP LEVER	P	1	T56-20	Washer	G	
20			T858-12 #8-36 Screw	S					
21	1	T63-9	Retaining Pin						
22									
23	1	C24-11CNX2	ASS'LY-CLAMP LEVER	(9) S			SPECIAL SERVICE PARTS		
24	1	CR24-11CNX2	Clamp Lever	(9)			*****		
25	1	T8510-9	#10-32 Screw	S					
26					1	C141-4-10	Flange Gasket	K	
27	1	C21-99	Plate	S					
28	2	T31555-4	1/8-40 Screw & L'washer	(9) S	1	C181-66	Gasket Kit	K	
29									
30	1	C46-25	Idle Adj. Needle	K	1	C29-743	ASS'LY-THROTTLE STOP LEVER & SHAFT		
31	1	C111-9	Spring	S	Consists of Column # 1 Items # 16 thru # 21				
32									
33	1	T91-3	1/8 Pipe Plug	S	1	K-2073	Minor Repair Kit		
34									
35	1	F36X1G	Shipping Seal	(9)					
36									
37	1	C85-103	ASS'LY-FLOAT	S					
38	1	C120-4	Float Axle	K					
39									
40	1	C142-16	Body Gasket	G					
41	4	T308510-9	#10-32 Screw & L'washer	(9) S					
42									
43									
44	BOWL & CHOKE PARTS								
45	*****								
46									
47	1	B3-83D-2	ASS'LY-FUEL BOWL	S					
48	1	BR3-83D	Fuel Bowl						
49	1	T66-10	Stop Pin	(9)					
50	1	C67-36	Restriction Bushing						
51	1	CR137-19	Cup Plug	S					
52									
53	1	C105-135	Shaft	S					
54									
55									
56	1	C106-17	ASS'LY-STAMPED LEVER	(9) S					
57			T858-6 #8-36 Screw	S					
58	1	T2258	#8-36 Nut	S					
59	1	T41-10	Lockwasher	(9) S					
60	1	C112-12	Return Spring	S					
61									
62	1	C109-46	ASS'LY-BRACKET	S					
63			C110-1 Bracket Clip	S					
64			T858-10 #8-36 Screw	S					
65			T2158 #8-36 Nut	S					
66	1	C140-2	Bracket Retaining Screw	S					
67									
68	1	C101-17	ASS'LY-PLATE	S					
69	2	T31555-4	1/8-40 Screw & L'washer	(9) S					
70									
71	1	C138-24	3/8-24 Plug	S					
72	1	T56-23	Washer	G					
73									
74	1	T91-3	1/8 Pipe Plug	S					
75									
76									
77									
78									
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84									
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86									

Obsolete

PARTS LIST
ZENITH CARBURETOR DIVISION
BENDIX AVIATION CORP.
 DETROIT, MICH. U. S. A.

ITEM	QTY	SYMBOL	PART NAME	NOTES	QTY	SYMBOL	PART NAME	NOTES
1	1	B2-94F-1	ASS'LY.--THROTTLE BODY					
2	1	BR2-94F	THROTTLE BODY					
3	1	C766-4	THROTTLE LEVER STOP PIN	(8)				
4	1	CR78-49	PRIMING PLUG					
5	1	CT57-4	PACKING WASHER					
6	1	CL31-4X2	PACKING RETAINER					
7	1	CR88-8	FLOAT HINGE BRACKET		1	C138-24	LOWER PLUG	(5)(8)
8	2	T73-9	BRACKET DRIVE SCREW		1	T56-23	FIBRE WASHER-- LOWER PLUG	
9	1	CR147-1	NAME PLATE					
10	1	T73-8	NAME PLATE DRIVE SCREW					
11	1	CR37-1X1	SHAFT HOLE PLUG					
12								
13								
14	1	CR28-103	ASS'LY.--THROTTLE STOP LEVER					
15	1	CR25-1	THROTTLE STOP LEVER					
16	1	CR26-2	LEVER HUB	(6)				
17	1	T888-12	STOP SCREW					
18	1	CT63-9	TAPER PIN					
19								
20								
21	1	G24-7BEX2	THROTTLE CLAMP LEVER					
22	1	T8810-9	CLAMP SCREW--CLAMP LEVER					
23	1	G23-458	THROTTLE SHAFT					
24	1	C21-99	THROTTLE PLATE					
25	1	C46-25	IDLE ADJUSTING SCREW					
26	1	C111-9	IDLE ADJUSTING SCREW SPRING					
27	2	T315B5-3	THROTTLE PLATE SCREW					
28	1	CT91-3	PIPE PLUG--FUEL INLET (REAR)					
29	1	F36X1F	PAPER PLUG--FUEL INLET L.H.					
30								
31								
32	1	C85-103	ASS'LY.--FLOAT & HINGE		1	C38-35-13	VENTURI	VAR.
33	2	CR85-28	SHELL--UPPER					
34	2	CR85-29	SHELL--LOWER					
35	1	CR86-42	FLOAT HINGE		1	C52-6-1-17	MAIN JET	VAR.
36	1	C120-4	FLOAT AXLE		1	T56-24	FIBRE WASHER--MAIN JET	
37								
38								
39					1	C55-6-11	IDLE JET	VAR.
40	1	C142-16	BOWL TO BODY GASKET					
41	2	T301810-10	BOWL TO BODY ASSEMBLY SCREW					
42	2	T308810-9	BOWL TO BODY ASSEMBLY SCREW		1	G66-26-5-50	ASS'LY.--MAIN DISCHARGE JET	VAR.
43					1	CR66-26	BODY	
44					1	CR63-34	TUBE	
45	1	B3-83D	ASS'LY.--FUEL BOWL		1	T56-60	FIBRE WASHER--MAIN DISCHARGE JET	
46	1	BR3-83D	FUEL BOWL					
47	1	CL21-33	AIR SHUTTER STOP PIN					
48	1	CR20-3	LOCKING PIN	(7)	1	C77-18-26	WELL VENT	VAR.
49	1	C67-36	RESTRICTION BUSHING					
50	1	CR137-19	SHAFT HOLE PLUG					
51	1	CT91-3	1/8 PIPE PLUG--DRAIN		1	C81-17-30	ASS'LY.--FUEL VALVE & SEAT	VAR.
52					1	CR83-8	FUEL VALVE	
53					1	CR82-10-30	FUEL VALVE SEAT	
54	1	C101-17	ASS'LY.--AIR SHUTTER		1	T56-20	FIBRE WASHER--FUEL VALVE	
55	1	CR102-28	AIR SHUTTER					
56	1	C103-6	ASS'LY.--AIR SHUTTER VALVE					
57	1	CR103-6	AIR SHUTTER VALVE					
58	1	CR104-2	AIR SHUTTER VALVE STEM					
59	1	C111-3	VALVE SPRING					
60	1	C132-2	VALVE SPRING RET. WASHER					
61								
62	1	C105-135	AIR SHUTTER SHAFT					
63	2	T315B5-3	RET. SCREW--AIR SHUTTER					
64	1	T2289	NUT--AIR SHUTTER SHAFT					
65	1	T45-8	LOCKWASHER--SHAFT NUT					
66	1	CL40-2	ASSEMBLY SCREW--BRACKET					
67	1	C112-12	SPRING--AIR SHUTTER LEVER					
68								
69								
70								
71	1	C106-127	ASS'LY.--AIR SHUTTER LEVER					
72	1	CR106-3	AIR SHUTTER LEVER					
73	1	CR134-4	SWIVEL 3/32" DRILL					
74	1	CT52-1	SWIVEL WASHER					
75	1	T888-7	SWIVEL SCREW	(7)				
76								
77								
78	1	C109-46	ASS'LY.--AIR SHUTTER BRACKET					
79	1	CR109-46	AIR SHUTTER BRACKET					
80	1	C110-1	WIRE CLAMP					
81	1	T888-10	CLAMP SCREW	(7)				
82	1	T2188	NUT					
83	1	T44-102	LOCKWASHER--BRACKET	(7)				
84								
85								
86								
87								

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ZENITH 61 AND 161-SERIES CARBURETORS

DESCRIPTION AND OPERATION

DESCRIPTION

The 61 and 161-Series carburetors are of the single barrel, single venturi updraft design with a semi-concentric fuel bowl to allow operation at quite extreme angles without flooding or starving. They are of the "balanced" or "sealed" type in that all air for idle and high speed operation as well as for fuel bowl ventilation must enter through the air cleaner. Some models are available with or without main jet adjustment and back suction economizer. The fuel supply system is made up of the threaded fuel inlet, fuel valve (needle and seat), floats and fuel bowl. The idle system is made up of the idle discharge port, idle air passage, idle adjusting needle, idle jet and fuel passage. The

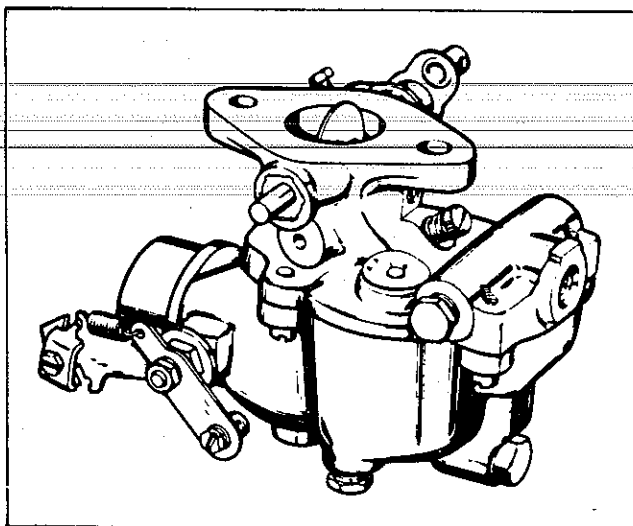


Fig. 1. External View

high speed system consists of the venturi, main jet, well vent, and main discharge jet. The economizer system consists of a "milled" slot in the throttle shaft (which acts as a valve), a vacuum passage between the throttle bore and slot in the throttle shaft, and a vacuum passage from the slot in the throttle shaft to the fuel bowl. The choke system is of the semi-automatic type and includes a choke plate with built-in poppet valve, choke shaft and external choke lever.

MODEL IDENTIFICATION

Type -- Updraft

Material -- Barrel and bowl castings, cast iron.

Styles --

- "A" Throttle and Choke Shafts parallel.
- "D" Equipped with Degasser Assembly.
- "E" Elbow type Air Intake.
- "J" Back-suction Economizer.
- "R" Built-in Governor.
- "S" Straight through Air Intake.
- "X" Flange next size larger than standard.
- "XX" Flange second size larger than standard.

SIZE DESIGNATION

Size	Nominal Size	Throttle Bore Diameter	Flange Size S. A. E. Standard
5	5/8"	.787 or 25/32"	5/8"
7	7/8"	1.023 or 1-1/32"	7/8"
X7	7/8"	1.023 or 1-1/32"	1"
XX7	7/8"	1.023 or 1-1/32"	1-1/4"
8	1"	1.181 or 1-3/16"	1"

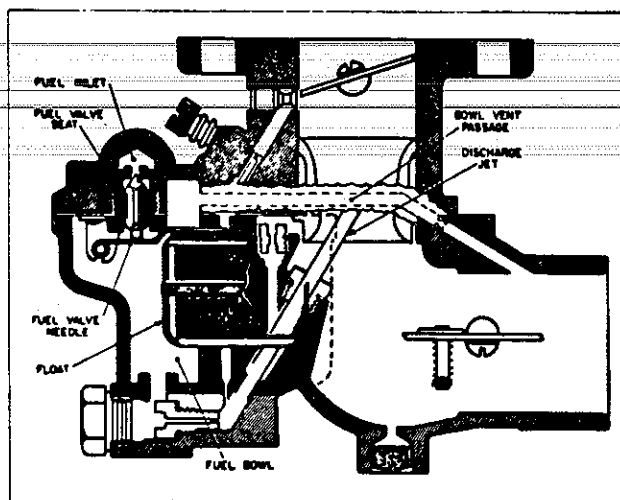


Fig. 2. Fuel Supply System

OPERATION

FUEL SYSTEM - Fuel under pressure is supplied to the threaded fuel inlet fitting and passes through the fuel valve (needle and seat) into the float chamber. The float automatically regulates the opening through the fuel valve (needle and seat) to maintain the proper level of fuel in the fuel bowl equal to the demand of the engine according to its speed and load.

IDLE SYSTEM - Fuel for idle operation is supplied through the main jet to a well directly below the main discharge jet. The idle passage connected to this well is restricted by a small drilled hole near the bottom of the passage. The

fuel travels up this channel and through the idle jet calibration to be mixed with air originating back of the main venturi. The amount of air admitted is controlled by the idle adjusting needle. The position of the needle in this passage controls the suction on the idle jet and, thereby on the idle fuel-air mixture. Turning

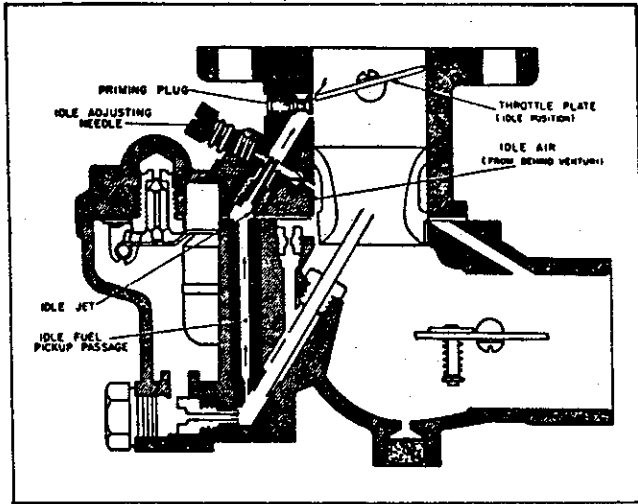


Fig. 3. Idle System

the idle needle IN (clockwise) increases the suction on the idle jet for a richer mixture. Turning the idle needle OUT (counter-clockwise) increases the amount of air admitted to reduce the suction and deliver a leaner mixture. Fuel and air are mixed in the passage leading to the discharge port (priming plug) before entering the air stream.

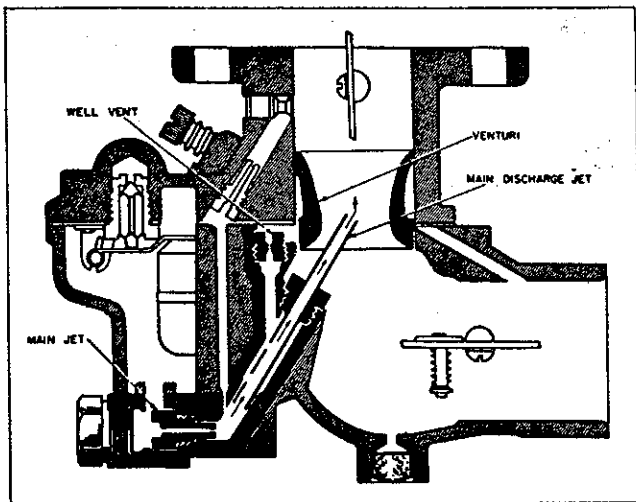


Figure 4. High Speed System

HIGH SPEED (MAIN METERING) SYSTEM - The high speed system controls the fuel-air mixture from part throttle to full throttle range of opera-

tion. To maintain a proper mixture ratio a small amount of air is admitted through the well into the discharge jet through the air bleed holes in the discharge jet at a point below the level of fuel in the metering well. The fuel flows from the fuel chamber through the main jet and into the main discharge jet where it is mixed with air admitted by the well vent. This fuel-air mixture is then discharged into the air stream through the main venturi.

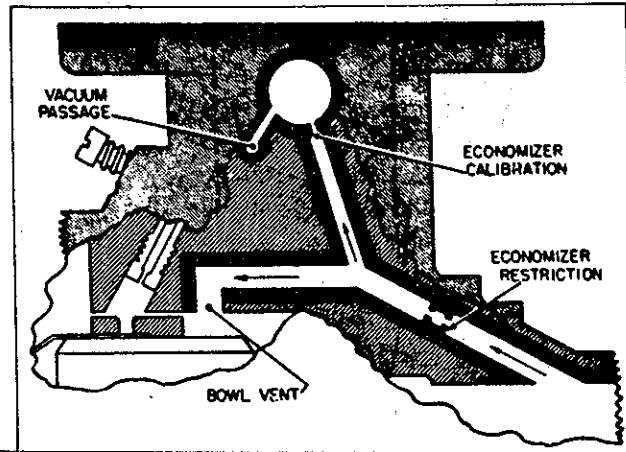


Fig. 5. Back Suction Economizer System

ECONOMIZER SYSTEM - This system provides economical mixture ratios for part throttle operation while still permitting richer mixture ratios for full load operation. During most of part throttle range of operation a "back suction" on the fuel in the fuel bowl is created by manifold vacuum, through the channels connecting the throttle bore with the fuel bowl. This retards the flow of fuel through the metering systems and thus permits the carburetor to operate on leaner mixture ratios at part throttle. Rotation of the throttle shaft controls the economizer system. During part throttle operation (from one-quarter to three-quarters throttle), the passages are open and the pressure in the fuel bowl is lowered which retards the flow through the main jet to supply a leaner mixture. At full open throttle, the passages are closed and the main jet flows to full capacity to supply the richer mixture required.

CHOKE SYSTEM - Closing the choke plate when starting a cold engine restricts the air entering the carburetor through the air cleaner and creates an increase in suction at the jets. This increase in suction causes more fuel to be drawn into the engine and provides a richer mixture for starting a cold engine. As soon as the engine starts, a poppet valve in the choke plate automatically opens and admits sufficient air

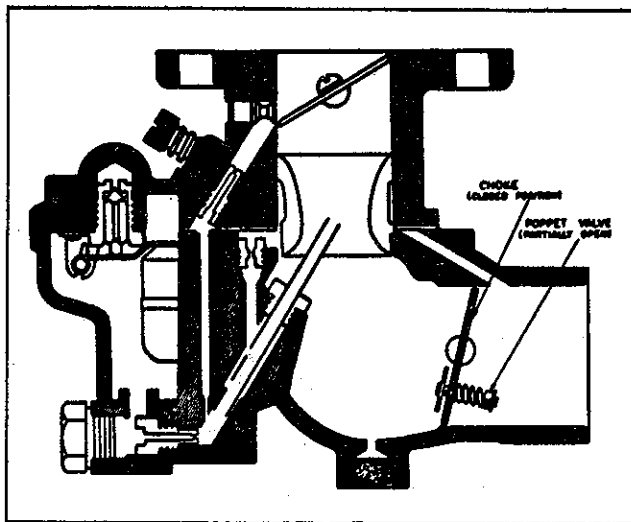


Fig. 6. Choke System

to avoid over-choking or flooding of the engine. As the engine warms, the choke plate must be gradually returned to the open position.

4. Remove idle adjusting needle (12) and friction spring (13) from side of throttle body.
5. Remove idle jet (54) from passage in machined surface of throttle body near fuel valve seat, using a small screwdriver.
6. Back out throttle stop screw (66) flush with end of lever (58), close throttle and mark levers and throttle body as a guide to correct assembly of parts.
7. Loosen throttle clamp lever screw (10) and remove lever (9), cotter pin (11), spring retainer (8), spring (7) and throttle lever bushing (6), (if carburetor includes these parts).
8. File off riveted or peened end of throttle plate screws (68) flush with throttle shaft. Use care not to damage throttle plate or throttle bore.
9. Remove throttle plate screws, throttle plate (2) and throttle shaft and lever assembly (57).

SERVICE PROCEDURE

IDENTIFY CARBURETOR - See page 2 for illustration and procedure to follow.

DISASSEMBLY

REMOVAL OF THROTTLE BODY ASSEMBLY

1. Remove four bowl to body assembly screws (38) and lockwashers (39), using a screwdriver.
2. Raise throttle body slightly and separate bowl to body gasket (15) from fuel bowl assembly, then lift off throttle body carefully to avoid damage to the floats.

DISASSEMBLY OF THROTTLE BODY

1. Press against end of float axle (14) at slotted side of hinge bracket to force axle through hinge bracket, using a small screwdriver. Then remove float axle completely with fingers from opposite side and remove float assembly (51), with fuel valve needle.
2. Remove bowl to body gasket (15) from machined surface of throttle body (3), then remove venturi (50).
3. Remove fuel valve seat (52) with fiber washer (53), using C161-82 wrench.

10. To remove throttle shaft packing (4) and retainer (70), screw a 5/16"-24 thread tap into packing retainer until firmly seated, then insert long punch or rod through opposite shaft hole and drive out retainer and packing with tap. Repeat operation for packing and retainer at opposite side.

NOTE: DO NOT remove throttle plate, throttle shaft and lever assembly, throttle packings and retainers from throttle body unless shaft is bent or unless other components of assembly are damaged.

11. Remove fuel inlet plug (55) and screen (if used).

DISASSEMBLY OF FUEL BOWL

1. Remove main jet adjustment assembly (36) and fiber washer (35) from bottom of bowl, using 1/2" wrench.

NOTE: Some models have a 1/2" plug in place of adjustable main jet.

2. Remove fuel bowl drain plug (40) from bottom of fuel bowl, using C161-10 wrench.
3. Remove main jet (34) and fiber washer (33) from threaded passage near bottom of fuel bowl, using C161-1 main jet wrench.

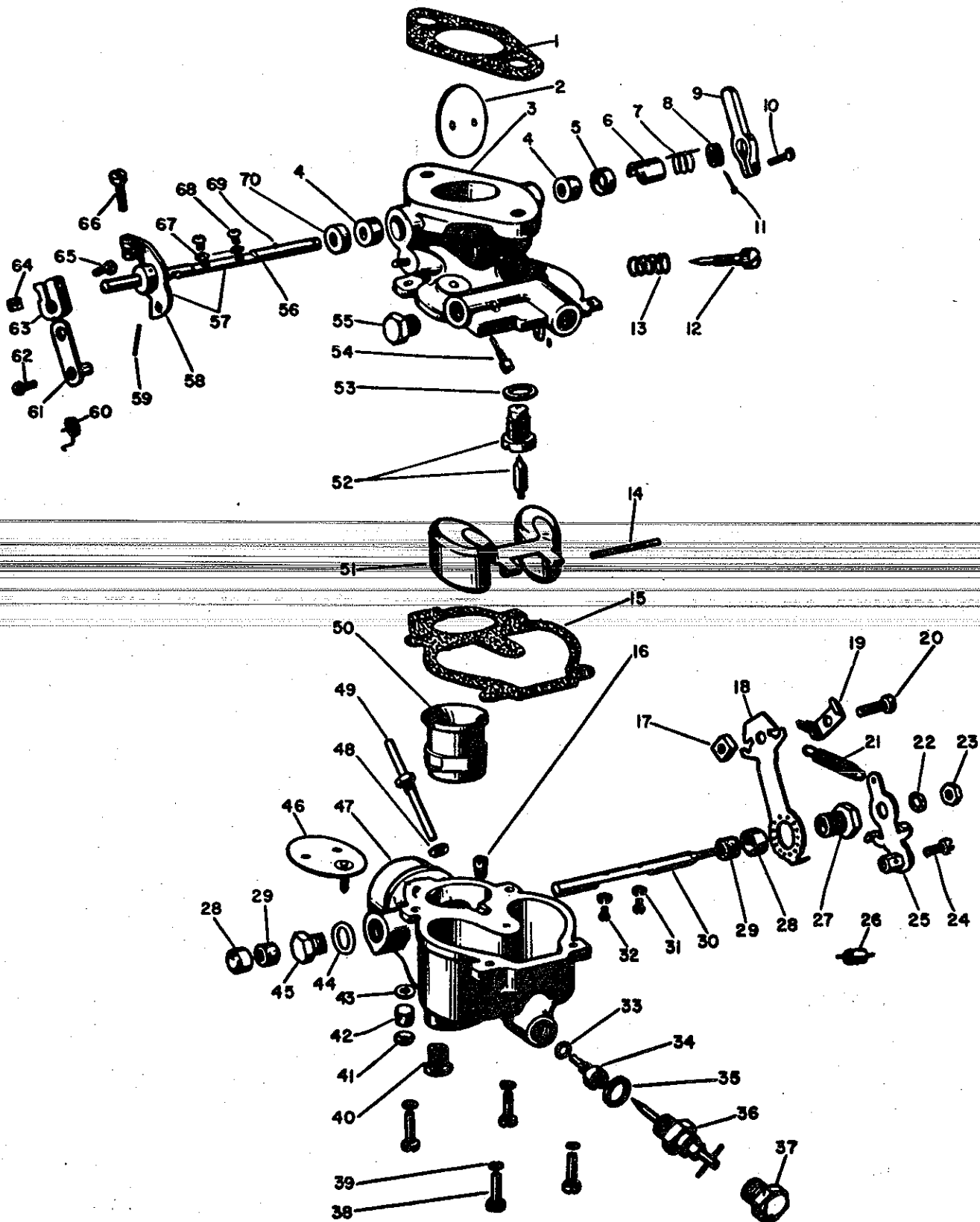


Fig. 7

4. Remove main discharge jet (49) with fiber washer (48) from center of fuel bowl casting, using C161-25 wrench.
5. Remove well vent jet (16) from machined surface of fuel bowl, using a small screwdriver.
6. Mark choke bracket (18), choke lever (25) and air intake body as a guide to correct assembly.
7. Remove choke lever spring (21), close choke and remove choke plate screws (32) and lockwashers (31) and choke plate (46). Note position of poppet spring in air intake.
8. Remove choke shaft nut (23) and lockwasher (22), using C161-25 wrench, then remove choke lever (25).
9. Remove bracket assembly screw (27), using 1/2" open end wrench and then remove choke bracket (18).
10. Remove choke shaft hole plug (45) and fiber washer (44), using 1/2" open end wrench.

NOTE: Some models include choke shaft packings and packing retainers in the choke shaft holes. For disassembly of packings (29) and retainers (28), refer to operation 9 under Disassembly of Throttle Body.

CLEANING

Thoroughly clean all metal parts in Bendix Metalclene or Speedclene and rinse in solvent. Blow out all passages and channels in the castings with compressed air. Reverse the air flow through each passage to insure the removal of all dirt particles. NEVER USE A WIRE OR DRILL TO CLEAN OUT THE JETS.

INSPECTION

Inspect all parts and replace any that are damaged or worn. Always use a Zenith Repair Kit. For correct Repair Kit, refer to Zenith Parts Catalog Specification Page.

RE-ASSEMBLY

FUEL BOWL AND AIR INTAKE ASSEMBLY

1. Insert choke shaft packing (29) in open side of packing retainer (28) and place assembly on C161-72-1 bushing driver with packing facing small end of tool.

2. Insert small end of tool in choke shaft hole, start retainer into counter-bore of body (47) and lightly drive retainer into body until flush with machined surface. Repeat at opposite side.
3. Carefully guide choke shaft (30) through packings and retainers into position in air intake body. Insert choke plate (46) in cut out of choke shaft. Make certain choke plate poppet valve is in same position as when it was disassembled, then install choke plate screws (32) and lockwashers (31), using small screwdriver.
4. Install choke shaft hole plug (45) with fiber washer (44) and tighten with a 1/2" open end wrench.
5. Place choke shaft bracket (18) on assembly screw (27) and attach bracket to air intake in same position as when removed and tighten screw with 1/2" open end wrench.
6. Assemble choke lever (25) on choke shaft in same position as when removed, then assemble lockwasher (22) and nut (23). Tighten nut, using C161-25 wrench.

7. Attach choke lever spring (21) to choke lever and choke bracket.
8. Place fiber washer (48) over threads of main discharge jet (49) and install main discharge jet in bowl assembly and firmly tighten, using C161-25 wrench.
9. Install well vent jet (16) in bowl assembly and tighten, using a small screwdriver.
10. Place fiber washer (33) on main jet (34) and install main jet in threaded hole near bottom of bowl assembly, using C161-1 wrench.
11. Install main jet adjustment (36) or hex plug (37) with gasket (35) whichever is included.

NOTE: When main jet adjustment is used, back out idle needle several turns before tightening fitting.

THROTTLE BODY ASSEMBLY

1. Install throttle shaft packing (4) in open side of packing retainer (5) and place assembly on C161-72-1 bushing driver with packing facing small end of tool.
2. After inserting small end of tool in throttle shaft hole, start retainer into counter-bore

of throttle body (3) and lightly drive retain-
er into body flush with machined surface.
Repeat at opposite side of throttle body.

3. Install throttle shaft and lever assembly (57) in throttle body and rotate throttle shaft to wide open position.
4. Insert throttle plate (2) and rotate to closed position. Hold plate with fingers and start throttle plate screws (68) and lockwashers (67) and partially tighten with small screwdriver. Center throttle plate in throttle bore and then tighten screws.

NOTE: Make certain beveled edges of throttle plate fit the throttle bore when the throttle plate is closed.

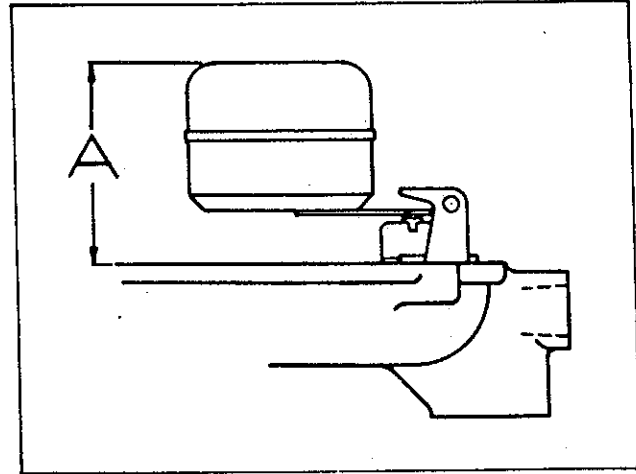


Fig. 8

5. On carburetors which include throttle lever bushing (6), spring (7), spring retainer (8) and cotter pin (11), install these parts over end of throttle shaft. Rotate spring retainer (clockwise) to hold throttle in closed position and then insert cotter pin through spring retainer and hole in throttle shaft.

6. Install throttle clamp lever (9) in same position as before disassembly. Align to match marks made at time of disassembly.

7. Install idle adjusting needle (12) with friction spring (13) in threaded passage at side of throttle body. Turn needle IN lightly against its seat, then back needle OUT 1-1/4 turns as a preliminary adjustment.

8. Install idle jet (54) in counter-bored passage and tighten, using a small screwdriver.

9. Install fuel inlet plug (55) and screen (if used) in threaded hole at side of throttle body, using C161-10 wrench to tighten plug.

10. Invert throttle body and install fuel valve seat (part of 52) and fiber washer (53), using C161-82 wrench.

11. Place new throttle body to fuel bowl gasket (15) on machined surface of fuel bowl cover and install fuel valve needle (52) in seat.

12. Place float assembly (51) in position with float lever bushing in line with holes in hinge bracket and assemble float axle (14) through bushing and in hole of bracket at side opposite slotted hole. Press float axle into slotted hole of bracket, using handle of small screwdriver to center axle.

13. To insure correct fuel level in the float chamber, check distance "A" from top of floats to machined surface of cover (no gasket) with throttle body inverted, see Figure 8. This dimension should be 1-5/32" for all 61-Series and 161-Series (except 161 carburetor with Float C81-50 in which case dimension "A" is 1"). To increase or decrease distance between float body and machined surface, use long nose pliers and bend lever close to float body.

NOTE: DO NOT bend, twist or apply pressure on the float bodies. When viewed from their free end, the float bodies must be centered and at right angles to the machined surface and must move freely on the float axle.

14. Insert large opening end of venturi (50) into throttle bore and position venturi so that machined flat will be toward fuel bowl when bowl is assembled.

ASSEMBLY OF FUEL BOWL TO THROTTLE BODY

1. Place fuel bowl assembly on throttle body assembly and align holes in bowl flange with holes in gasket and cover.
2. Install four assembly screws (38) and lockwashers (39). Tighten screws evenly and securely.
3. Hold throttle lever in closed position and turn throttle stop screw (66) IN until it just contacts stop pin on throttle body, then turn screw IN 1-1/2 additional turns as a preliminary adjustment.

Assembly Is Now Completed.