CARBURETOR SERVICE PROCEDURE

HOLLEY MODELS 1904, 1908 and 1960

FORM NO. 16-H-13

Note: Some models of the above listed carburetors may vary slightly in general design and appearance from others, but basic cleaning and adjustment procedure will remain the same.

1. DISASSEMBLY

The following procedure for disassembly divides the carburetor into two main sections: Main Body and Throttle Body. Disassembly will be best accomplished by following alphabetical listing which denotes name of part to be removed and number sequence indicating order of removal.

Main Body Section:

A. Thermostat housing assembly (if used) — 1, 2, 3, 4 and 5.

B. Choke shaft nut and washer (if used) — 6 and 7.

C. Choke housing assembly (if used) — 8 through 13.

D. Float bowl, clamps and gaskets — 14 through 19.

E. Fuel inlet plug — 20 and 21. Some models may have an inlet fitting in place of plug (20). On others the fuel inlet valve and seat will be an integral part of plug (20) and will not use an inlet seat (24) as shown.

F. Fuel inlet valve and seat assembly — 22 through 25.

G. Float assembly — 26 and 27. On models that have a non-removable float pin, remove retainer to separate float from main well body (34).

H. Economizer cover and diaphragm (if used) — 28 through 31.

I. Main well and economizer body — 32 through 35.

J. Main jet — 36.

K. Pump discharge retainer, weight and ball — 37, 38 and 39.

L. Pump inlet ball and retainer — 40 and 41. Parts (37-41) not removable on all models.

M. Pump diaphragm and rod assembly — 42 through 46. To disassemble unit, apply pressure on sleeve (45), compressing spring (46), allowing ball (44) to drop out.

N. Pump discharge nozzle — 47, 48 and 49. Some models have non-removable nozzles.

Throttle Body Section:

O. Pump link — 50 and 51.

P. Throttle body and gasket — 52 through 55.

Q. Distributor passage ball and retainer (if used) — 56 and 57.

R. Idle adjusting screw and spring — 58 and 59.

S. Spark valve assembly (if used) — 60 and 61.

2. CLEANING

A. Using a regular carburetor cleaning solution, soak parts long enough to give a thorough cleaning and make sure parts and passages are free of all foreign matter.

B. To remove any residue that might be left after use of cleaner, it is recommended that parts be immersed in clean gasoline or suitable solvent.

C. BLOW OUT ALL PARTS AND PASSAGES WITH DRY COMPRESSED AIR.

D. Do not soak any parts containing rubber, leather or plastic if they are to be re-used.

3. REASSEMBLY

Reassemble carburetor in the reverse order of disassembly, paying particular attention to the following:

A. When installing the idle adjusting screw (58), lightly bottom (do not force), then back out 1½ turns.

B. When installing the pump inlet and discharge balls (41 and 39), take note that the inlet ball (41) is the larger of the two.

C. When installing the main well and economizer body (34), place the left palm over air horn and with fingers hold the main well body in place. Start screws (32 and 33) and apply thumb pressure against protruding end of pump push rod sleeve (45) compressing spring. Release thumb pressure before fully tightening screws. This positions diaphragm for proper flexing action.

D. When installing the fuel inlet valve and seat (24 and 25), make certain that seat and gasket fit flush with side of casting and that fuel inlet seat screw (22) is firmly tightened. A leakage of fuel between gaskets and seat will result in a flooding condition.

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I. ADJUSTMENTS

A. Float Level: (Fig. 1)

Invert carburetor and allow float to rest on the closed needle valve. Using the gauge supplied, the distance between bottom of float and floor of fuel bowl should be as listed in table. To adjust, bend tab on float lever that contacts needle valve. Note: This is a bench adjustment and fuel level must be checked after installing carburetor on engine.

B. Fuel Level: (Fig. 2)

With carburetor installed, crank engine until fuel ceases to enter fuel bowl. Remove economizer parts (28-31) and measure distance from fuel level to top surface of economizer hole. Setting will be correct when distance is plus or minus 1/32" of figure listed in specification table.

C. Accelerator Pump: (Fig. 3)

When two or more holes are provided in throttle lever for seasonal setting of pump link, position link as follows: Use hole farthest from throttle shaft for cold weather operation. Use hole closest to throttle shaft for normal or warm weather operation. Maintain original setting when possible.

D. Unloader: (Fig. 3)

Hold throttle wide open and close choke valve until choke lever rests against unloader lever. The clearance, measured as shown in figure 3, between upper edge of choke valve and air horn wall should be as listed in specification table. To adjust, bend unloader lever.

E. Automatic Choke:

With screws loosely in place, rotate cover against spring tension until index mark on cover is aligned with specified mark on housing. Tighten screws. Choke valve should be completely closed, but free to open with slight finger pressure.

F. Dashpot: (Fig. 4)

If dashpot is used, this setting should be checked after idle speed is properly adjusted. With engine idling, hold dashpot stem all the way in. The clearance (A), between stem and dashpot adjusting screw, should be as listed in specification table. To adjust, rotate adjusting screw.

5. IDLE ADJUSTMENT (Fig. 5)

A. Rotate throttle stop screw (1) to slightly open throttle.
B. Allow engine to warm up thoroughly before making final adjustment.
C. Rotate idle adjusting screw (2), in or out, until engine idles smoothly.
D. Rotate throttle stop screw (1) for proper R.P.M.
E. Recheck idle adjusting screw (2) for best setting.

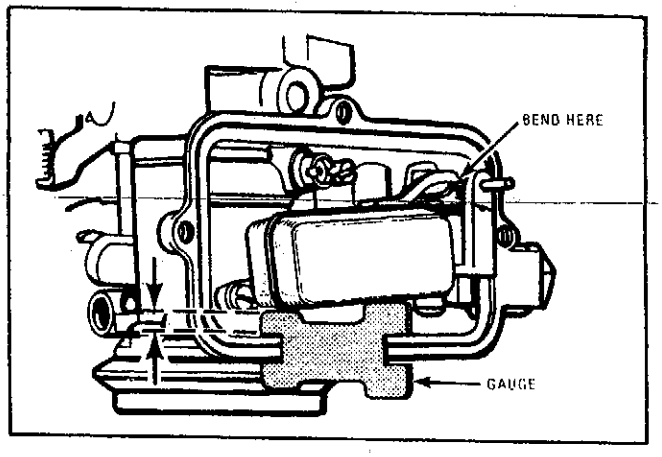

Figure 1

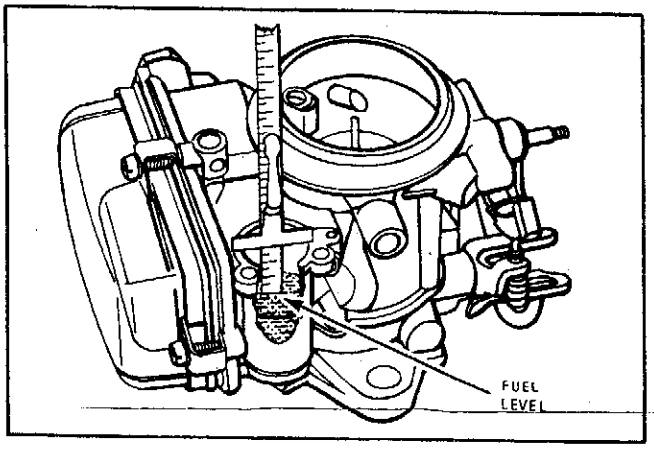

Figure 2

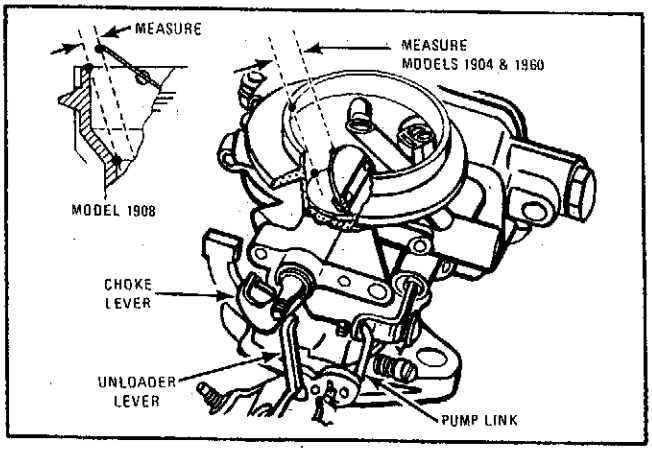

Figure 3

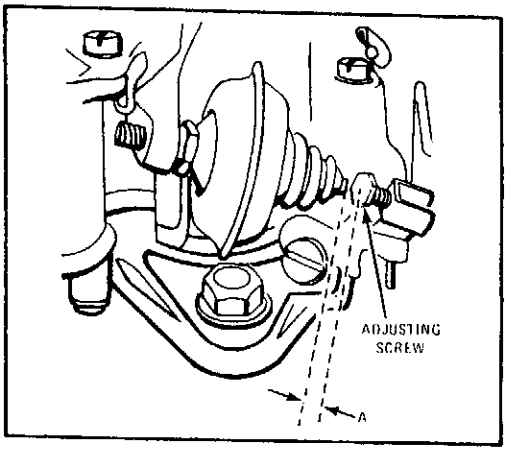

Figure 4

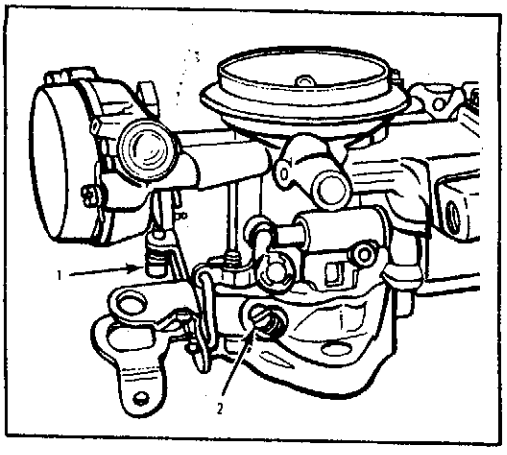

Figure 5

HELPFUL SERVICE SUGGESTION

USE DRILLS FOR GAUGES:

A complete set of drills (which most shops have) make an ideal assortment of gauges for checking certain required adjustment settings. *Below is a table of the most popular drill sizes* available given in fractions of an inch and their corresponding decimal equivalent.

SPECIFICATION AND ADJUSTMENT TABLE

Application	Float Level Setting	Fuel Level Setting	Unloader* Setting	Auto** Choke	Dashpot* Setting
COMET					
1960-61	13/64	23/32	1/4	Index	.120-.150
EDSEL					
1959	13/64	11/16	–	Index	.045-.064
1960	13/64	11/16	–	–	.060-.090
FALCON					
1960	13/64	23/32	–	Index	.045-.060
1961	13/64	23/32	–	Index	.120-.150
FORD					
1952-57	13/64 (1)	3/4	–	Index	.045-.064 (2)
1958-59	13/64	11/16	–	Index	.045-.064
1960-64	13/64	11/16	–	Index	.060-.090
FORD TRUCK					
1958-60	13/64	11/16	–	–	.045-.060
1961-62	13/64	11/16	–	–	.060-.090
1963-64 144" Eng. (Econo)	13/64	23/64	–	–	–
1963-64 223" & 262" Eng.	13/64	3/4	–	–	.060-.090
1963-67 170" Eng. All/T	13/64	23/64	–	–	–
G.M.C. TRUCK					
1955-60	13/64 (3)	3/4 (4)	–	–	–
I.H.C.					
Metro & Scout	3/8	3/4	–	Index	.095-.105
Trucks	3/8	3/4 (5)	–	Index	.095-.105
RAMBLER					
1959	9/32 (6)	23/32 (7)	7/16 (8)	Index	–
1960	9/32 (6)	3/4 (7)	7/16 (8)	Index	.130-.160
1961	13/64	3/4 (7)	5/16	Index (9)	.130-.160
1962	13/64	3/4	5/16	Index (10)	.130-.160
R-4512-AAS	13/64	11/64	5/16	2 Lean	.085-.115
IDLE SPEED R.P.M. (Approx.)	Standard Transmission 500-525			Automatic Transmission 475-500	

* Not required on all carburetors.

** If so equipped, allowable variation is 2 marks either side of initial setting.

(1) Carb. No. R-2042AA, AAS = 9/32
(2) Carb. No. R-2042AA, AAS = .060-.090
(3) Carb. No. R-1915A, 1A = 9/32
(4) Carb. No. R-1915A, 1A = 11/16
(5) Carb. No. R-4134A, 35A = 11/16
(6) Carb. No. R-2138A = 21/64
(7) Carb. No. R-2138A = 11/16
(8) Carb. No. R-2138A = 5/16
(9) Carb. No. R-2381A, 1A = 3 Lean
(10) Carb. No. R-2446A = 3 Lean

Drill Size, Fraction-Inch	Decimal Equivalent	Drill Size, Fraction-Inch	Decimal Equivalent	Drill Size, Fraction-Inch	Decimal Equivalent
1/64	.015	11/64	.172	21/64	.328
1/32	.031	3/16	.187	11/32	.344
3/64	.047	13/64	.203	23/64	.359
1/16	.062	7/32	.219	3/8	.375
5/64	.078	15/64	.234	25/64	.390
3/32	.094	1/4	.250	13/32	.406
7/64	.109	17/64	.265	7/16	.437
1/8	.125	9/32	.281	15/32	.469
9/64	.140	19/64	.297	1/2	.500
5/32	.156	5/16	.312	9/16	.562

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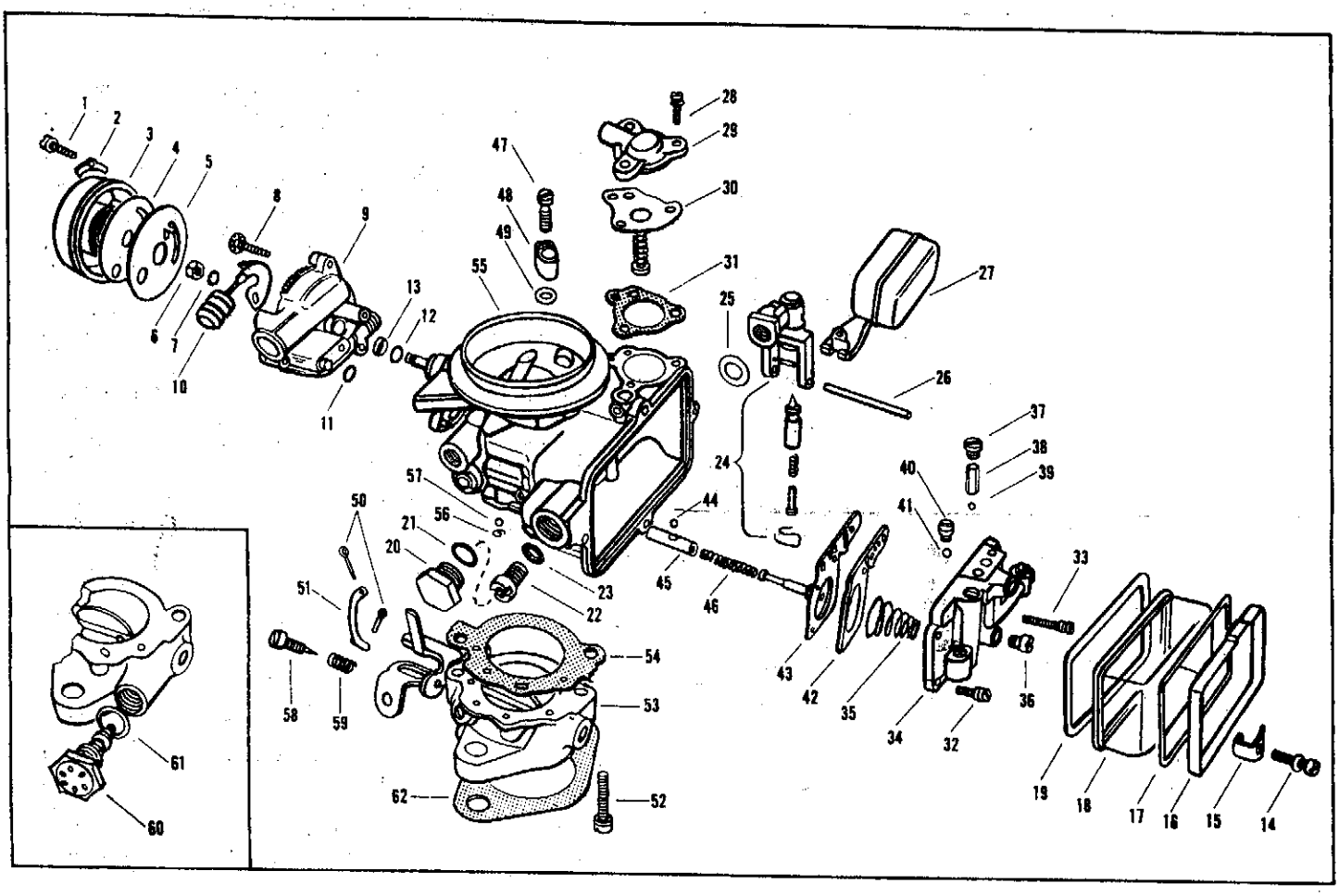
EXPLODED VIEW OF TYPICAL HOLLEY CARBURETOR MODEL 1904-FC



Ref. No.	Nomenclature
1	Thermostat Housing Screw
2	Thermostat Housing Clamp
3	Thermostat Housing Assembly
4	Thermostat Housing Gasket
5	Choke Housing Plate
6	Choke Shaft Nut
7	Lockwasher
8	Choke Housing Screw
9	Choke Housing Assembly
10	Choke Piston and Lever Assembly
11	Choke Housing Gasket
12	Choke Shaft Seal Washer
13	Choke Shaft Seal
14	Float Bowl Clamp Screw
15	Float Bowl Clamp
16	Float Bowl Clamp Ring
17	Float Bowl Clamp Ring Gasket
18	Float Bowl
19	Float Bowl Gasket
20	Fuel Inlet Plug
21	Fuel Inlet Plug Gasket
22	Fuel Inlet Seat Screw
23	Fuel Inlet Seat Screw Gasket
24	Fuel Inlet Valve and Seat Assembly
25	Fuel Inlet Seat Gasket
26	Float Pin
27	Float Assembly
28	Economizer Screw and Washer
29	Economizer Cover
30	Economizer Diaphragm and Stem
31	Economizer Body Gasket

Ref. No.	Nomenclature
32	Main Well and Economizer Screw (Short)
33	Main Well and Economizer Screw (Long)
34	Main Well and Economizer Body
35	Pump Return Spring
36	Main Jet
37	Pump Discharge Ball Retainer
38	Pump Discharge Ball Weight
39	Pump Discharge Ball
40	Pump Inlet Ball Retainer
41	Pump Inlet Ball
42	Spacer Gasket
43	Pump Diaphragm and Rod Assembly
44	Pump Push Rod Sleeve Ball
45	Pump Push Rod Sleeve
46	Pump Operating Spring
47	Pump Discharge Nozzle Screw
48	Pump Discharge Nozzle
49	Pump Discharge Nozzle Gasket
50	Cotter Pin
51	Pump Link
52	Throttle Body Screw and Washer
53	Throttle Body
54	Throttle Body Gasket
55	Main Body
56	Distributor Passage Ball Retainer
57	Distributor Passage Ball
58	Idle Adjusting Screw
59	Idle Adjusting Screw Spring
60	Spark Valve Assembly
61	Spark Valve Gasket
62	Flange Gasket

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50% Post Consumer Fiber