



# SU-524 HD8 Carburetor Kit

### PISTON DROP TIMES

On 1 1/4" carburetors the drop time is 3-5 seconds. All larger carburetors have a drop time of 5-7 seconds. Thoroughly clean the piston, dashpot chamber, and plug depression transfer holes. Fit nut, bolt & large flat washer to one dashpot securing flange & measure time piston takes to move length of chamber.

### Float Chamber Fuel Level

7/16"

Remove the float chamber lid and invert it.  
 (a) With the needle on its sealing insert a 11.0 mm (7/16 in) diameter round bar between the forked lever and the lip of the float chamber lid.  
 (c) The prongs of the lever should just rest on the bar. If not, carefully bend the lever until they do.

### P.T.F.E. BUSHING

Illus. #	Description	Part #
A	Ring - outer	AUC 2424
B	Bush (teflon) - spindle	AUC 2500
C	Ring (brass) - inner	AUC 2500

\*Part #'s listed above ^ included in rebuild kit.

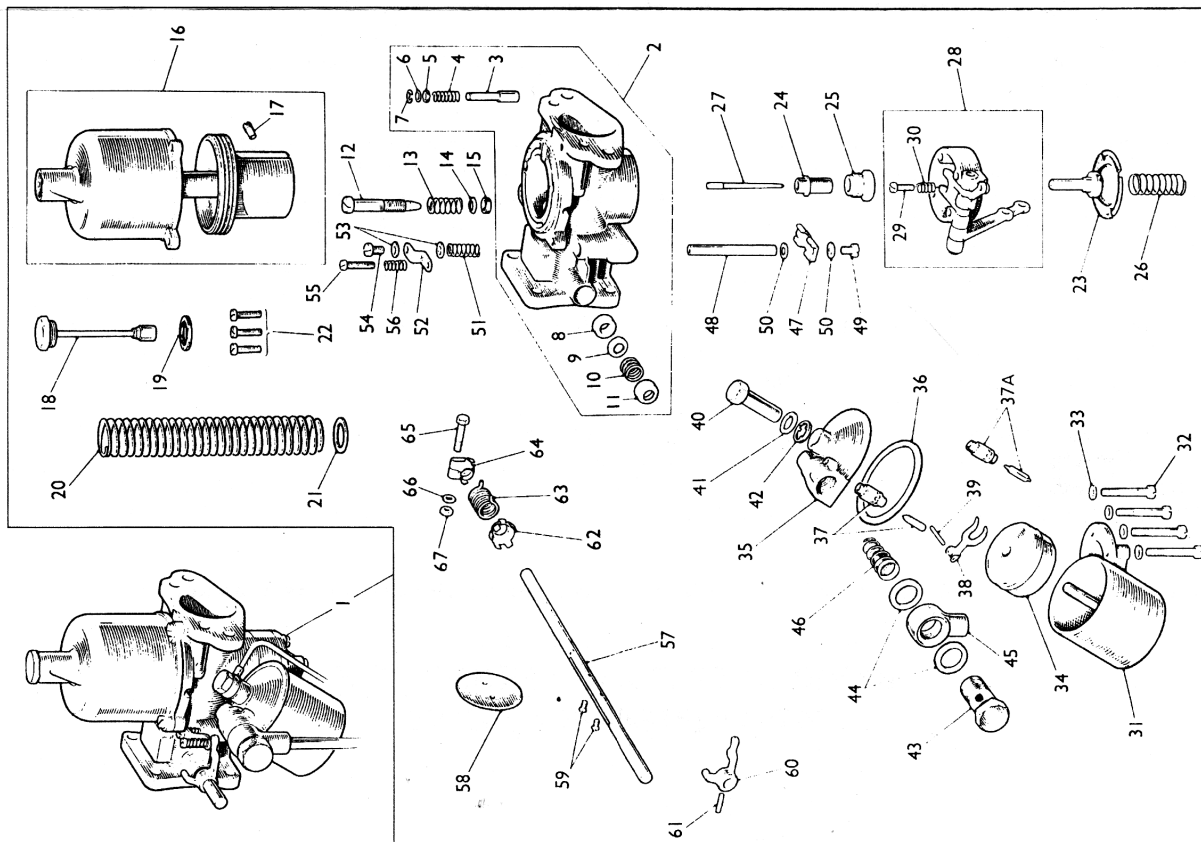
Parts for the Solution



Replacement Parts For SU & Zenith Carburetors

Illus. #	Description	Part #
1	Carburetor assembly	
2	Body assembly	
3	Pin-piston lifting	
4	Spring-pin	AUC 4943
5	Washer (viton)	
6	Washer (brass)	
7	Check-jet (cork)	
8	Washer - (distished)	AUC 2088
9	Spring	
10	Retainer-spring	
11	Valve-slow running	
12	Spring-valve	
13	Washer-dished (brass)	AUC 2030
14	Washer-gleed (vixon)	AUC 2029
15	Chamber & Piston Assy	
16	Screw-needle locking	
17	Cap & Damper	AUC 4900
18	Washer (black fibre)	
19	Spring-piston	
20	Washer-truss-piston	
21	Screw-chamber to body	
22	Jet	included
23	Bearing - jet	
24	Screw - jet locking	
25	Spring - jet return	AUC 2006
26	Needle - jet	
27	Housing Assembly - Jet	
28	Screw - stop	
29	Spring - screw	
30	Chamber - float	
31	Bolt - chamber to body	
32	Washer - shakeproof	
33	Float (nitrophen)	
34	Lid - float chamber	
35	Washer - lid	AUC 1147
36	Float needle & seat	6151
37	Lever - hinged	
38	Pin - hinged lever	AUC 1182
39	Nut - cap - lid	
40	Washer (aluminum)	AUC 1157
41	Washer (fibre)	AUC 1928
42	Bolt - banjo	
43	Washer (fibre)	
44	Union - banjo	AUC 2141
45	Filter	
46	Shoe - cam	
47	Shoe - shoe	
48	Screw - rod to shoe	
49	Washer - shakeproof	
50	Spring - rod	
51	Plate - top	
52	Washer - shakeproof	
53	Screw - plate retaining	
54	Screw - stop adjusting	
55	Spring - screw	
56	Spindle - throttle	
57	Disc - throttle	
58	Screw - disc	
59	Lever - throttle stop	
60	Pin - taper-lever	
61	Plate - return spring anchor	
62	Spring - spindle return	
63	Clip - end	
64	Bolt - clip	
65	Washer - plain	
66	Nut - bolt	
67	Washer - plain	

\*Part #'s listed above ^ included in rebuild kit.



Typical S.U. HD Type Carburettor (Manual Choke)



## HELPFUL HINTS for HD MANUAL CHOKE CARBURETORS

When undertaking the repair and rebuilding of S.U. Carburetors, you have to remember that the units you wish to repair are at least 30 years old, and possibly as much as 50. It would be naïve to think that you are the first person to disassemble these units; many of these units have been gone through by knowledgeable people as well as by people who have no experience. You should have at hand the diagram enclosed with this kit as well as a factory shop manual. In the case of multiple carburetor installations, take one apart at a time so that you may have some reference when reassembling.

Cleaning the carburetor requires solvent usually found in local auto parts stores, and sometimes a mild abrasive. *Scotchbrite™* brand nylon scrub pads work well. DO NOT USE SAND PAPER OR GLASS BEAD on any of the piston and dome assembly. These are critical fit components; it is best not to introduce any abrasive into the carburetor as you will regret it.

The HD carburetor with a few exceptions (Aston Martin) idles through the large idle air screw (AUC 2028) only, so for it to be effective the butterfly must be closed fully at idle. Do not use high idle screw (AUC 3463) to set idle.

When assembling any carburetor, be sure to oil the threads of any and all screws.

When installing jets, be sure to back off the old mixture setting screw (AUC 2521) so that the diaphragm is stretched. This lets the jet tube come up to the top of the jet bearing (AUC 2001).

Some HD8 carburetors use a plastic bushing in the throttle shaft which has a narrow (1/16") spacer between the bore and the bush as well as a wide one (1/4"). If you are removing the shaft, be sure to not lose these narrow rings on either side of the bush.

**THROTTLE SHAFT WEAR:** Remove all shaft springs, open butterfly about 30% and wiggle in the 2 o'clock to 7 o'clock direction; if movement seems excessive new throttle shafts are needed as worn shafts affect mixture and idle. The factory said 2.5 thousandths inches was minimum clearance.

Inspect floats for signs of leakage. Brass floats get vertical stress cracks which are visible. Plastic ones wear out their pivot points.

**FLOAT FORKS:** There were changes in float fork configuration. There are two types of forks: (1) ones that have folded pivot tangs with a hole drilled for the pivot pin (AUC 1980/AUC 1981) made of steel and plated; (2) there also is a stainless steel fork where the pivot end looks like the tines of a fork (AUD 2285/AUD 2299). They ARE NOT interchangeable. AUC 1980 fit bowl covers with a short pedestal (AUC 1160, 1161, 4260, 4261 etc.). Height of pivot hole on pedestal from gasket face to center of hole is approx .220". The AUD 2285 fits "tall" pedestal. Those covers' (AUD 2283, 2284 and others) pedestal height is approx .325". While forks and covers are not interchangeable individually, whole cover & fork assemblies are interchangeable as a unit. They all take the same needle and seat. The low pedestal covers are most common pre-war up to the mid 1960's, the tall ones are later, and are currently supplied as replacements. There are other part numbers of covers out there too numerous to list.

**FILLING THE DAMPER:** For the proper operation of the carburetor, you must fill the hollow steel tube attached to the piston. This acts as a shock absorber (pre-war carbs do not have a hollow tube) and smoothes the piston rise. You can use official SU damper oil, or in warm seasons use motor oil (10/40 or 20/50), and in the cold season use automatic transmission oil. You can also experiment. Fill tube halfway. If you overfill slightly, do not worry.

**FUEL LEAKAGE: You are the first line of defense! If you see a leak or smell gas, stop and investigate.**

Revised Dec. '14