

March, 1965
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TO: ALL ROOTES DEALERS

MODEL: SUNBEAM IMP

SUBJECT: AUTO CHOKE CARBURETTORS, TYPE B.30 PIHT, B.30 PIHT-2
B.30 PIHT-3.

- A) Excessive Fuel Consumption
- B) Difficult Starting and Drive Away
- C) Hesitancy and Flat Spot

When dealing with the above complaints, refer first to the Workshop Manual which contains a full description, diagnosis of faults and instructions for adjustments. The following amplifies this information and explains the action to be taken in cases which fail to respond to the standard procedure.

We would particularly draw your attention to the need for ensuring that ignition settings are strictly as laid down in the Workshop Manual.

A) Excessive Fuel Consumption

1. Remove the auto choke cover and examine the choke bi-metal spring; if broken or excessively loose on the entire pillar, replace with new cover and spring assembly incorporating split brass ferrule on centre pillar, Part No. 7080074.

Check fast idle spring (14) and if broken fit new top cover assembly, Part No. 7080235.

2. Check the kick piston (18) for freedom of movement in the bore; if seized or if there is an excessive amount of abrasive dust or dirt present in the chamber, it will be necessary to replace the top cover assembly complete Part No. 7080235.
3. Examine the kick piston chamber end cover and ensure that the sealing disc is a good fit; if there is any doubt, apply suitable jointing compound over the sealing edge. Check the air tubes to the heater element in the exhaust manifold for leaks. Seal is necessary.
4. Remove the carburettor and clean thoroughly before removing the top cover assembly complete. Examine the choke spindle for wear, examine the fast idle intermediate lever spindle where it enters the auto choke chamber; a certain amount of endfloat is permissible. If there is excessive wear on either the choke spindle or the fast idle intermediate lever pivot, fit a new top cover assembly incorporating steel bush, Part No. 7080235 (includes choke cover).

5. Before refitting with either new or old top cover assembly, examine the body of the carburettor (if throttle spindle is badly worn fit a new B.30 PIHT-3 carburettor). Check all jets for correct size and freedom from foreign matter, clean as necessary. Check particularly that the econostat jet (7) is seating correctly and that the head of the jet does not stand proud of the main body. To remove any foreign matter from the suction passage to choke chamber, blow out the air connection in the top cover assembly to the kick piston from both ends, using light air pressure (10 lbs. per sq. in.). Similarly blow out or use a syringe, to remove any foreign matter from the matching air connections in the body of the carburettor (See Sketch).
6. Carefully examine all blanking plugs in the carburettor, ensuring that they are sealing satisfactorily; it is advisable to check against a new carburettor as some holes are blind and do not require plugs.

B) Difficult Starting and Drive Away

Carry out instructions shown in 'A' sections 1, 2 and 3, in conjunction with present instructions in Workshop Manual.

C) Hesitancy and Flat Spot

Where complaints of hesitancy and flat spots arise, the following action should be taken, although it should be appreciated that under certain operating conditions, slight hesitancy is permissible.

7. Remove and check the pilot slow running jet (16) for blockage. Blow out with an air line (see sketch). Check the pilot jet seating in the carburettor body to ensure that there is no dirt on the seat and that it is not damaged.
8. With the air cleaner removed and the choke held open, operate the accelerator pump nozzle (2) and that it is directed between the main discharge jet and the side of the venturi onto the throttle butterfly as shown in the sketch. Carefully reposition as necessary.
9. If there is no discharge from the accelerator pump nozzle (2) remove the carburettor and dismantle the accelerator pump, removing the cover, the diaphragm (12) and the return spring (11) checking for damage, etc.

Using light air pressure, blow back from the discharge nozzle (2) to the accelerator pump chamber. It will be necessary to hold the non-return valve ball (4) off its seat whilst carrying out this operation (see sketch). Use a thin wire suitably bent to lift the valve. The discharge nozzle should not be cleaned with a wire. Recheck after cleaning.

Check the progression holes situated immediately above the slow running mixture outlet, ensure that they are free from foreign matter or carbon build up.

10. Re-assemble the accelerator pump to the carburettor and ensure that when assembled the accelerator pump lever (6) is in direct contact with the diaphragm spindle. If there is a perceptible clearance between the pump lever (6) and the diaphragm spindle when the throttle is fully closed, this should be eliminated by removing and straightening the accelerator pump control rod (15) sufficiently to establish direct contact between lever and spindle with throttle closed.

Replace after straightening and check for free movement of linkage and instant action of pump when throttle is opened.

N.B. On the earlier carburettors identified by 1998 or 1998A on the top of the float chamber, ensure that the short accelerator pump lever (17) at the throttle spindle end, does not go over centre when throttle is fully open.

11. Check that the by pass holes in the main body adjacent to the throttle butterfly are clear.
12. Check the manifold drain pipe; ensure it is not blocked or loose.
13. Check items A) 1 and 2 above. Check all jets for correct size and freedom from foreign matter.

N.B. When re-assembling the carburettor, use new gaskets. Check the plastic connection, float chamber to main well, for leaks.

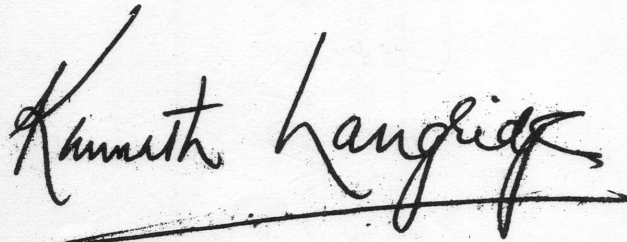
If the measures detailed above have no appreciable effect, fit a new B.30 PIHT-3 carburettor. Adjust as detailed in the Workshop Manual.

Encl: Sketch Nos. 7856 and 7857.

Key to Sketches

1. Slow running jet air bleed
2. Accelerator pump discharge tube
3. Air correction jet.
4. Acc. pump non-return valve.
5. Float
6. Acc. pump lever
7. Econostat jet
8. Float Needle Valve
9. Econostat discharge tube
10. Acc. pump feed drilling
11. Acc. pump diaphragm return spring.
12. Acc. pump diaphragm
13. Acc. pump discharge drilling
14. Fast idle spring
15. Acc. pump control rod.
16. Pilot slow running jet
17. Acc. pump lever short
18. Kick piston.

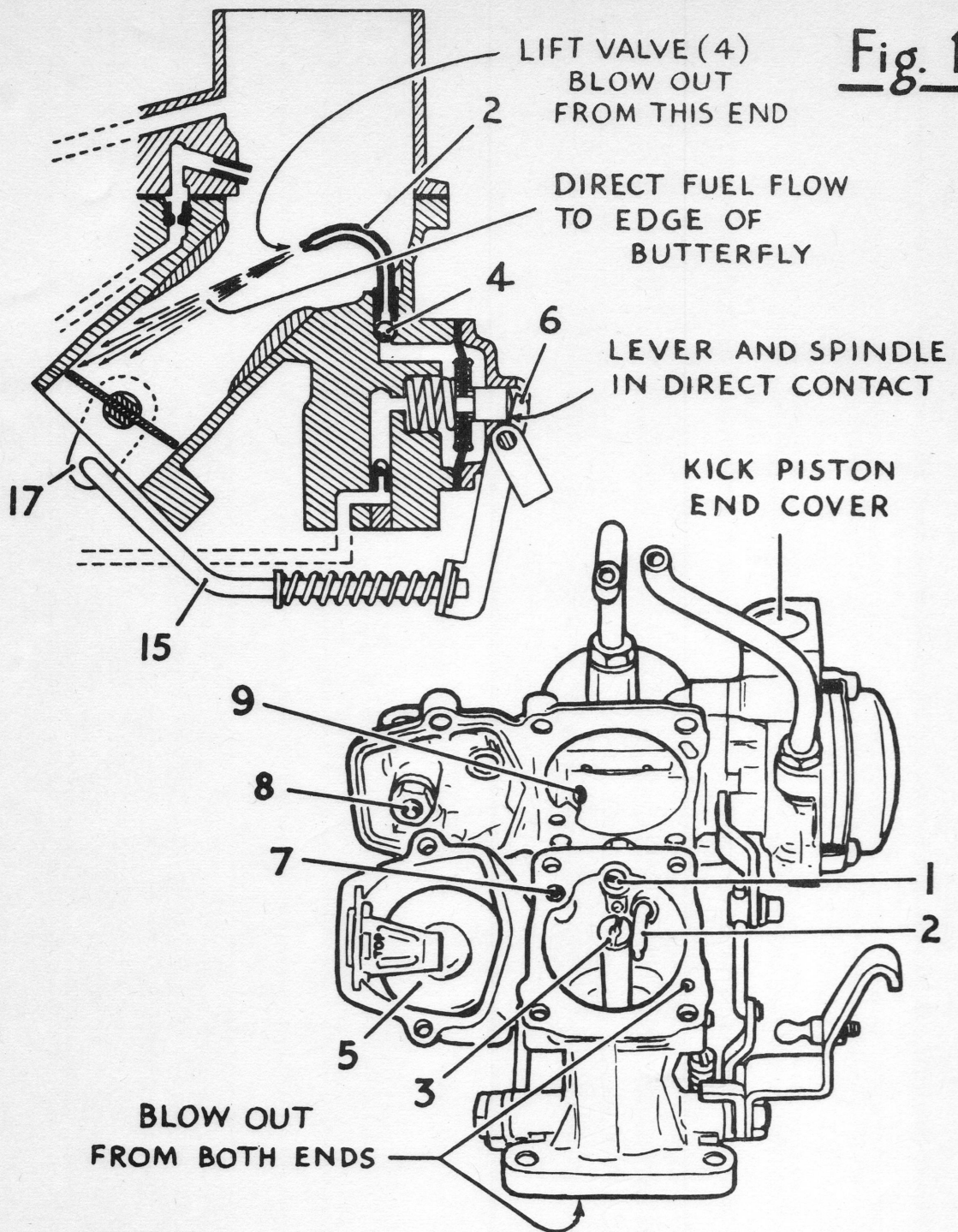
ROOTES MOTORS INCORPORATED



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Enclosure 7856/7857

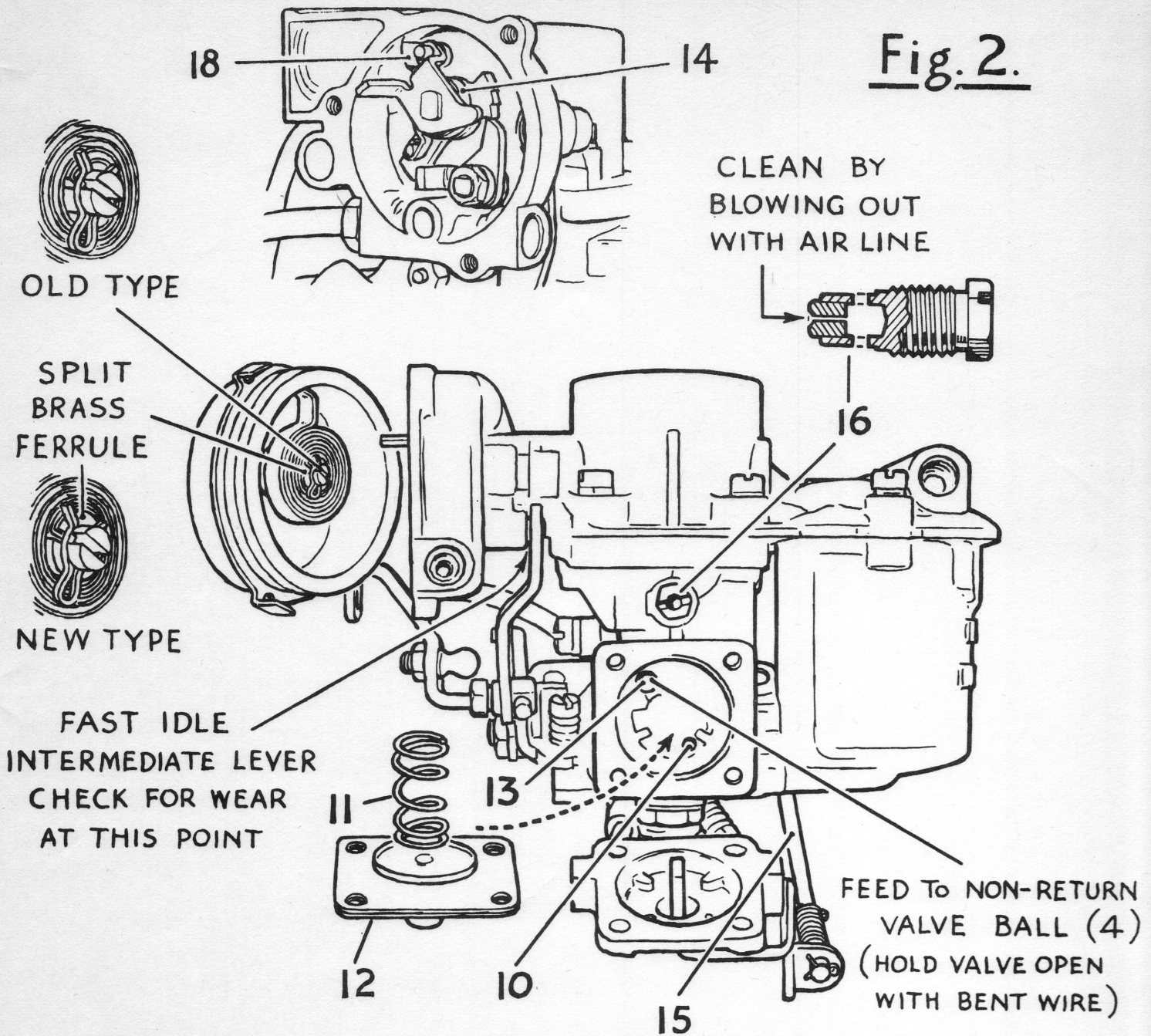
Fig. 1.



7856

NOTE :- Sketch Illustrates a B30-P.I.H.T. Carburettor. Certain changes, Not shown, are incorporated on the B30-P.I.H.T.-2. and B30-P.I.H.T.-3. Carburettors

Fig. 2.



7857

NOTE :- Sketch Illustrates a B30-P.I.H.T. Carburettor. Certain changes, Not shown, are incorporated on the B30-P.I.H.T.-2. and B30-P.I.H.T.-3. Carburettors.