Taken from TVMGOC October 2016 Newsletter

How to rebuild your SU HS carburettor

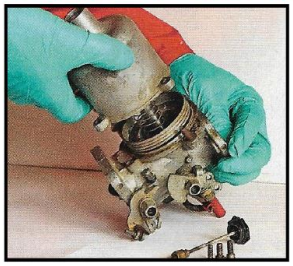
Overhaul Britain's most common classic carburettor at home

The SU HS is a standard fitment on MG's. It's a brilliantly simple device. If it's in good order and well set up, the sophistication of its fuel delivery is second only to injection. It does, however, feature a number of moving parts that can wear with use and adversely affect its function. To assess general condition, try to wobble the throttle spindle in its bushes, if there's any slack beyond a basic clearance for movement, the spindle will need to be renewed. The bushes may also be tired, though this is less common. Needles and main jets are prone to wear.

Overhauling an HS is very straightforward DIY exercise. Individual parts are available, but it's a better idea to buy a full kit that includes gaskets and a float valve. A new main jet will be included in the kit, but the metering needle usually has to be ordered in addition. Consult a specialist or the marking on the original needle to make sure you get the right size for your engine.

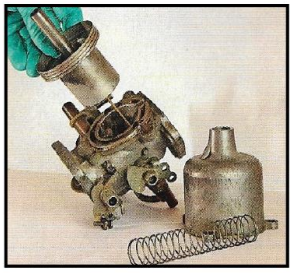
So lets have a look at the things you will need to do.

REMOVE PISTON & DASHPOT



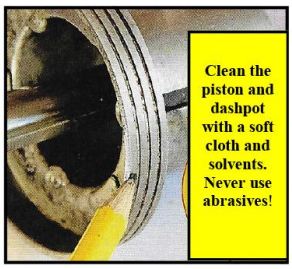
Remove Dashpot

Remove the damper piston by unscrewing the plastic cap. Undo the three retaining screws and lift the dashpot straight up. Take care not to scrape it against the central guide tube.



Remove Piston

Lift the piston out of the carburettor body, it comes out complete with the metering needle. Turn it upside-down to drain the oil out of the central guide tube. Examine the piston and the dashpot for any damage, wear and scoring.

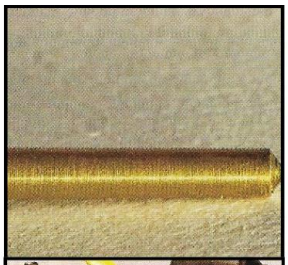


Check Piston & Damper

Check this area of the piston and the internal surface of the dashpot for abrasion or scoring, which can lead to air leaks. The dashpot retains a vacuum, which raises the piston and needle to meter the fuel and air supply.

Remove Needle

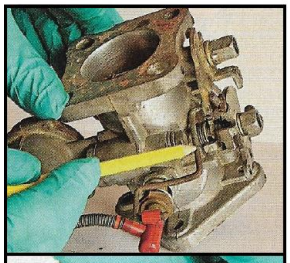
Remove the grub screw and pull the needle out of the piston. Note the needle bush (the grey bit) and the tiny spring. The bush has an arrow stamped in it. The new one must be fitted with the arrow pointing the same way.



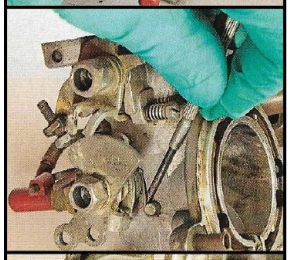
Check Needle & Jet
Look at the condition of the machining marks on the metering needle. If they're worn off on one side, it will need renewing. There may also be a corresponding groove worn on one side of the of the main jet orifice, calling for jet replacement.

Assess Lifter Pin
The lifter pin is used to raise the piston slightly to test for correct mixture adjustment. It can be taken out, if necessary, by removing the E-clip on top. If it moves freely and the spring's in good order, simply oil it and leave it in place.

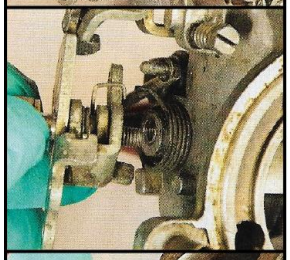
REMOVE JET AND LINKAGES



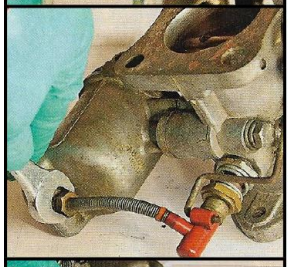
Choke Linkage
The choke link rod lowers the main jet to enrich the fuel mixture when the engine's cold. It needs to come off before the jet can be removed. First, though, the choke spindle and quadrant must be removed from the carburettor body.



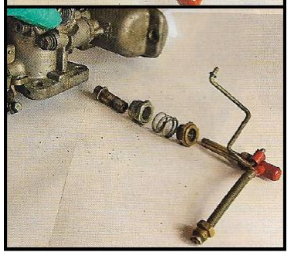
Unhook Spring
Remove the locking washer that attaches the link rod to the choke quadrant. Unhook the return spring from its lug on the carburettor body. Unscrew the central spindle bolt that retains the complex quadrant assembly and pull it off.



Remove Quadrant
The whole quadrant assembly should now come off in one piece. Leave it that way if you can. Gently rinse it in petrol if it's dirty. If you need to dismantle it, note how it's assembled. Pay particular attention to the way the spring fits.



Remove Fuel Supply
Unscrew the union of the jet's fuel supply pipe from the base of the float chamber. Pull the tube out. Use a strong needle or a tiny screwdriver to tease out the small rubber sealing washer that's left behind in the hole in the float chamber.



Extract Jet Assembly
Remove the main jet assembly. The brass jet will come out with the plastic holder and choke linkage. Unscrew the brass jet adjusting nut and remove the spring. Use a socket to unscrew the steel nut that retains the brass jet guide tube.

Part Two Next Month