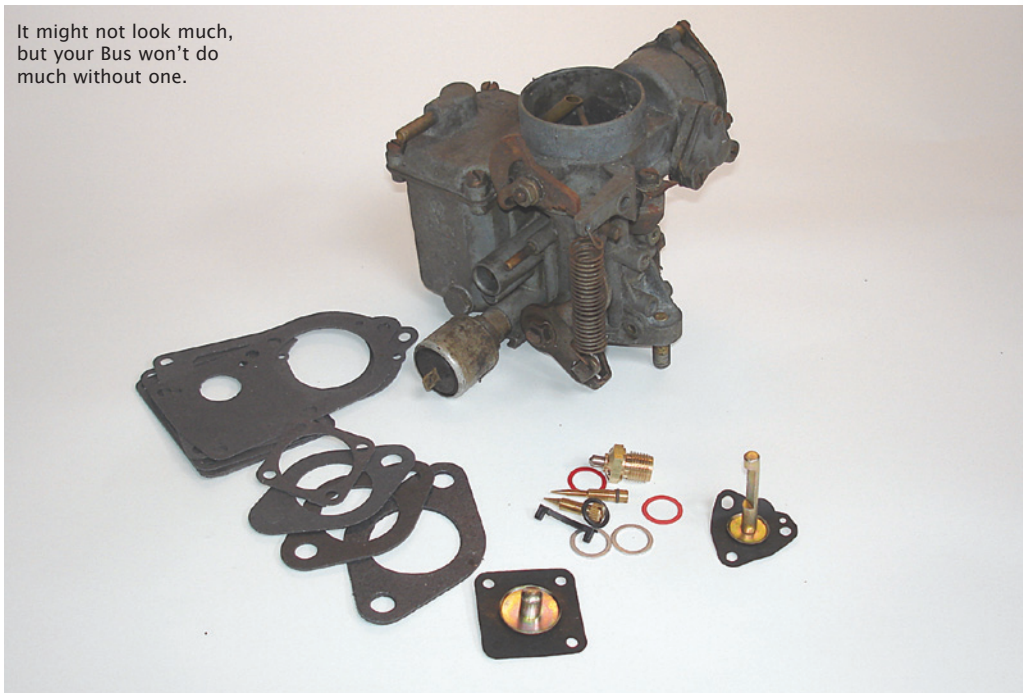


# Carburettor overhaul

**MANY POOR RUNNING** issues can be traced to the little dirty component on the top of your engine. Here's what's involved in rebuilding one

It might not look much, but your Bus won't do much without one.



**T**his is how you go about re-commissioning a stock Solex carburettor. VW used a very similar part right across its air-cooled model range and, while there are numerous variations on the theme, the principle for rebuilding is the same for all air-cooled motors.

The carburettor featured here is the Solex 34 Pict 3. This is probably the most common carb out there in VW land, as it's the main staple of pretty much all air-cooled 1600cc engines. Even if your carb is different, you'll find most rebuild kits are 'universal', so will include extra gaskets, washers and jets to cover most applications from the 1960s onwards.

Carburettor rebuild kits are readily available and inexpensive, especially when compared with the price of a brand new carburettor. The likes of Cool

Air, GSF, Just Kampers and VW Heritage all stock them and they are priced at around £12.

Working on a stock Solex carb is also pretty simple, but we would advise you orientate yourself well with the whole unit first, and then with each item that you remove. And why not grab a digital camera and take pictures along the way to help when it comes to re-assembly time? If in any doubt, seek professional advice.

**Rebuilding your carb will save you dosh at the petrol pump**

Whilst carburettors are fairly simple, they are precision instruments and reasonably complex in operation, so attention to detail is paramount. Miss one jet or sealing washer and your carburettor will not function correctly. Worse still, it may leak fuel, which could lead to an engine fire.

Removing a carburettor from

an air-cooled VW engine is easy - simply remove the air filter first so you can see what you are doing. Then undo the accelerator cable, disconnect the choke and fuel cut-off solenoid wires, undo the clamp and withdraw the fuel pipe. The carb itself is secured to the inlet manifold by two 13mm nuts. Undo these and, hey presto, the carb will now come off in your hands (though try and keep the carb upright as there will be some residual fuel in the float chamber).

Disassembling a carburettor is also simple, and this feature covers the salient points.

So why might you want to rebuild your carburettor anyway? Well, over the years parts wear out inside the carb and erratic running will ensue. Rebuilding your carb will have your VW running like clockwork and save you dosh at the petrol pump. Which, these days, is of great importance to us all...

## TOOLBOX

### TOOLS USED:

A selection of screwdrivers, a 13mm and a 17mm spanner and a pair of needle-nose pliers



### SKILL LEVEL:

1 2 3 4 5

### COST OF JOB:

DIY: £12-£15 (parts)

Pro: £90 (labour) plus parts

### TIME TAKEN:



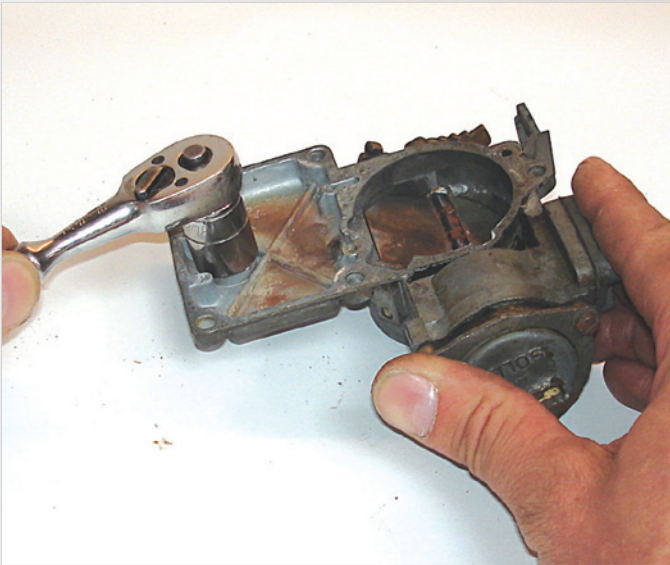
**TOP TIP:**  
Carburettor rebuild kits are comprehensive and inexpensive



**faq**

**Q:** Is it not better just to buy a new carburettor?  
**A:** No, rebuild kits are cheap, so try one first

**01** Starting from the top, remove the five screws that secure the top of the carburettor to the main body. They can sometimes be stiff, so it may pay to soak them in penetrating fluid first. Use the largest screwdriver that will fit.



**02** The fuel inlet needle valve is one of the most common causes of problems on VW carbs, as they wear with age and then allow excess fuel to leak past. These are found in the underside of the top cover.



**03** Before removing the choke mechanism, scribe or mark a line to help you orientate the mechanism with the body when re-assembling. The mechanism is spring loaded, so will move when you release it.



**04** Removing the three screws will allow the cover to be removed. The internal shield can then be pulled out gently with pliers. Give these components a gentle clean in carburettor cleaner as they are very delicate.



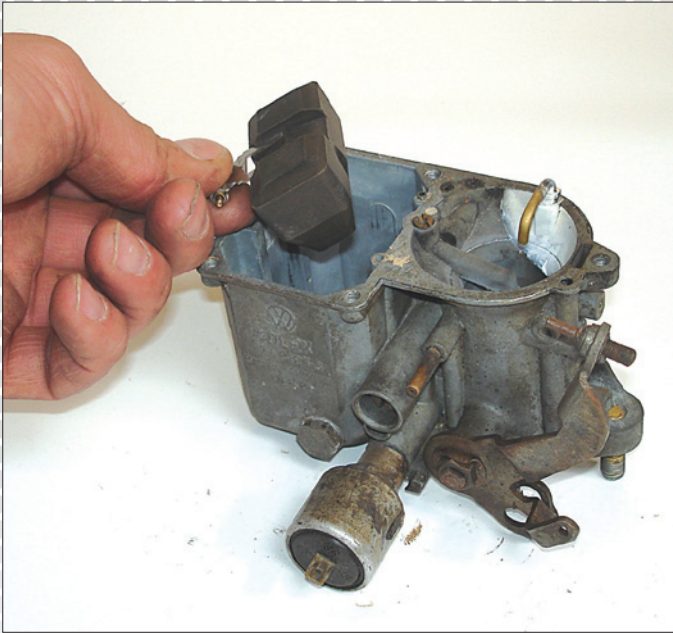
**05** With the electric choke mechanism removed, you can then undo the three screws securing the choke diaphragm. Discard the old diaphragm as these wear with time and a new one is supplied in the rebuild kit.



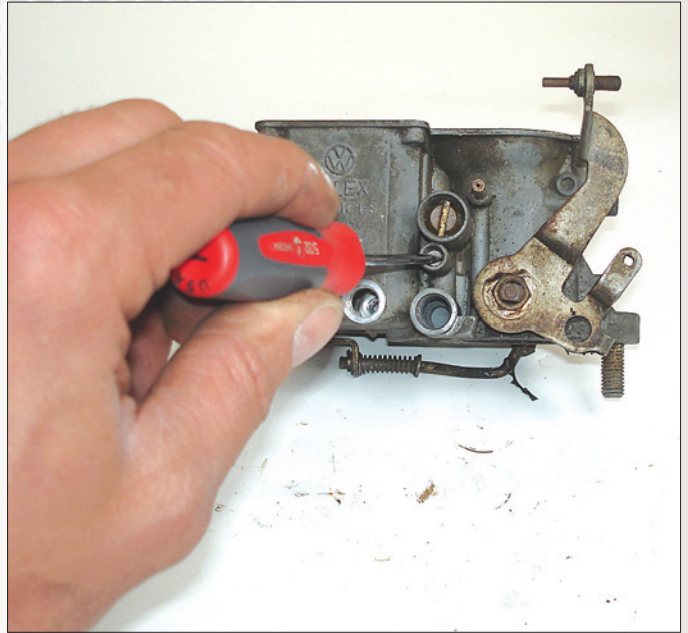
**faq**

**Q:** My carb looks different. Can I still use this feature?  
**A:** Yes, the procedure on all VW carbs is similar

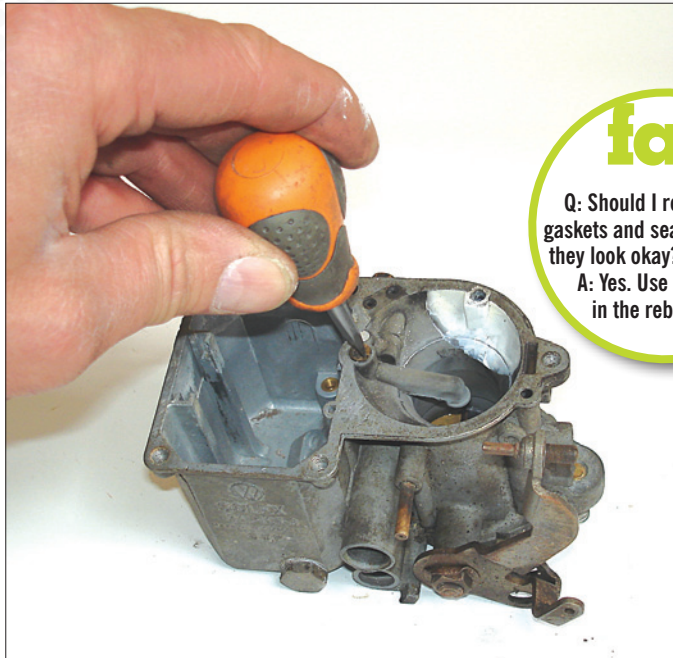
**06** Remove the fuel cut-off solenoid to aid with the cleaning process. You can test its operation on the bench with a simple 12-volt circuit. It should open when given a live feed.



**07** Remove the plastic securing tang and then you can pull out the float. Check it for integrity (it should be air tight) by submerging it in water.



**10** The idle mixture screw, along with the idle speed screw, need to be removed and cleaned. It is important that their passageways are cleaned and blown through (ideally with compressed air, if possible). Count and note down on a piece of paper how many turns from fully wound in they are as this will help with setting up and fine tuning the carburettor when you re-fit it.



## faq

**Q:** Should I replace all gaskets and seals, even if they look okay?

**A:** Yes. Use all the ones in the rebuild kit

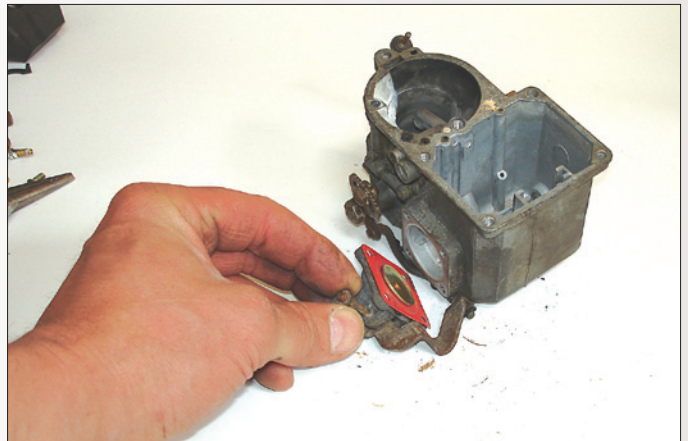
**08** Take care when removing the brass jets such as the emulsion tube (shown) as they are delicate. Always use the right size screwdriver.



**11** The idle jet sits to the side of the accelerator pump housing. This jet is the cause of many idle-related running issues, so make sure you remove it and clean it spotlessly. It can sometimes be stubborn to remove, so go carefully, using the largest screwdriver that will fit.



**09** Access to the main jet is via the side of the carburettor body. Remove the 13mm blanking plug first, then insert a well-fitting screwdriver through the hole. Check the main jet for size with jet gauges if possible.



**12** The accelerator pump diaphragm often corrodes and perishes with age. A good amount of crud may also be present in this area. Note that the spring, which should be behind the diaphragm, is missing on this carb.



**faq**  
 Q: What should I use to clean my carburetor?  
 A: Use a proprietary carb cleaner, but jets can be cleaned in vinegar!

**13** Once the carburetor has been stripped of all its jets and ancillaries, give it a good clean with carburetor cleaner. Ensure the body is clean and the passageways are spotless. If you have access to compressed air, blow through all passageways once the carb has been cleaned.



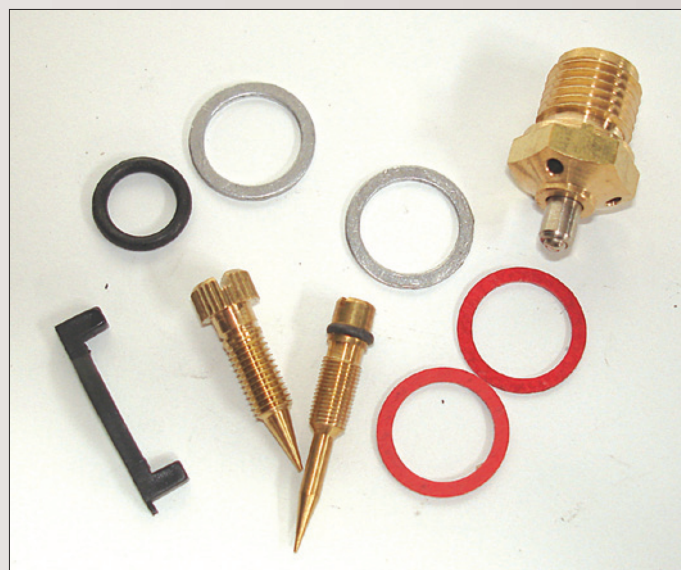
**16** After cleaning, it is wise to lubricate all moving parts with a quality, long-lasting penetrating lube. Ensure all moving parts operate as they should.



**14** The jets need to be spotlessly clean, too. Soak them overnight in either cola (any old brand will do!) or malt vinegar. The mild acidity will remove the tarnish and get them sparkling.



**17** The choke mechanism is subject to a certain amount of heat during operation. Copper slip is best to lubricate the moving parts here. When all is clean and lubricated, the carb can be re-assembled using the new gaskets and o-rings supplied in the rebuild kit.



**15** The rebuild kit is fairly comprehensive and contains all the essential parts to replace when doing an overhaul. Always replace the gaskets and seals with new items as old ones invariably leak. Leaking fuel = fire potential. Not good!



**18** Re-assembly is the reverse of disassembly, so just work backwards through this procedure and you should have no problems. Be careful not to cross thread or overtighten the brass jets. Start them by hand and pinch them up gently.