



Words: Dan Williamson  
Photography: Jon Hill

## CARB 'N' COPY

Follow these few simple steps to service your snorting sidedraught Webers.

**T**win Weber carbs are the George Foreman of the modified car world. Big, old and a bit simple, but they still hit hard enough to keep up with today's lightweight contenders.

Chuckling in enough petrol to make Gordon Brown dribble with delight, a well-tuned pair of DCOEs can burble its way to as much grunt as expensive throttle bodies. And in 40, 45, 48 or even 50 mm form, these sidedraught monsters can be fitted to most Total Vauxhall motors.

While the car won't drive as nicely on old carbs as it would on throttle bodies, the difference isn't massive — if you treat them with care. Meaning regular attention and occasional rebuilds before the ageing process takes hold.

The job isn't as frightening or hard as it at first appears. Service kits cost just £19 per carburettor and include most of the basic gaskets, springs and screws you'll need. Depending on how much wear is in your carb, you might need to replace jets, floats, spindles and such like, which are all available separately.

With the help of experts Alan and Roger at Aldon Automotive, we'll guide you through a strip-down and rebuild of a sidedraught carb. Here we've used a factory-fitted Weber 40 DCOE from reader Paul Woodcock's Nova Sport. Yours may have slight differences — like removable chokes — but the basics are similar

### Checking For Wear

If your Vauxhall's been running Webers for years or you've

bought a pair second-hand it's essential to check for wear before beginning a rebuild. It's not unusual for ageing or neglected carbs to be bin fodder if they're heavily corroded or simply tired out. Although most replacement parts are available, it's often more cost-effective to simply buy new ones.

Alan says: "Bad carbs will probably work OK at full throttle, but driveability will suffer. For example, if they have air leaks you'll need to run rich jets to overcome them, not pleasant at low revs."

If the Webers are still on the engine, make sure their studs aren't too tight on the manifold — carbs have flexible O-rings to stop fuel frothing in their float chambers. Check for cracks in the castings, particularly around mounting flanges — any signs and the carbs are scrap. Look for missing parts or damaged threads, which are impractical to fix. Feel for play in the throttle spindle — if it's really wobbly you might as well forget it.

If you're buying a pair of second-hand carbs, be very wary. Many Webers were designed for specific cars (those in our stripdown are unique to the Nova Sport), but some DCOEs won't work with your Vaux — don't buy any with a breather spacer under the butterfly covers, because they're Holbay Rapier type and are simply rubbish.

Finally, remove the carbs' lids and check for corrosion, shown up in the form of a white, powdery substance. If water's got into the casting it could be bunged up. And if there's any corrosion in the float chambers, you've got a pair of petrol-smelling paperweights.

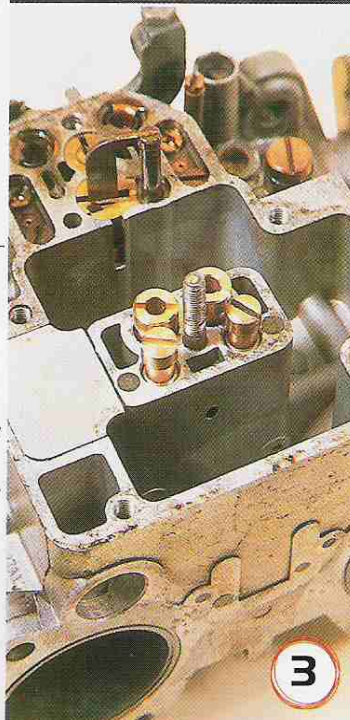


1. Clean the carb with engine degreasant or carb cleaner. Don't be tempted to bead blast it. With the dirt removed, check for any damage to the casting, which will reduce the carb to scrap.

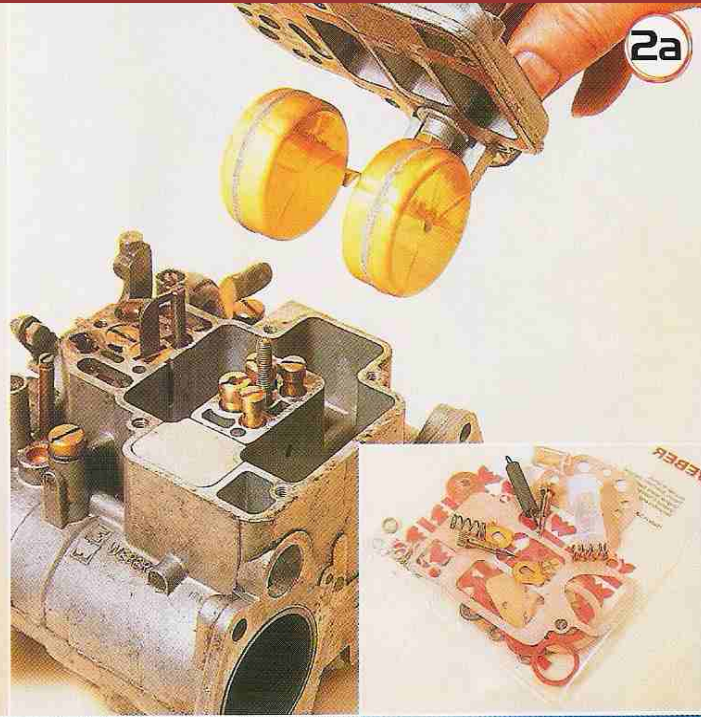
2. Remove the jet cover by unscrewing the butterfly nut. Next undo the five lid cover screws, being careful not to lose their washers. Remove the lids.

3. With the lid removed, have a deep delve inside to check for signs of corrosion — especially if the carbs have been unused for a while. Furry white powdery corrosion can be very bad news.

4. Remove the inspection cover, which is retained by two screws. You need to check to make sure







that the return spring isn't broken or loose.

5. Unwind the idle mixture screw, counting how many times it needs to be turned. If it's been screwed in too tightly in the past there is a danger of it shearing off — again this means having to scrap the carb.

6. Unscrew the jets. In the front two holes live the idle mixture jets. In the rears are the main jets, emulsion tubes and air correctors. If rebuilding a pair of DCOEs, ensure that they have matching sets of emulsion tubes.

7. Next remove the two pump jets. Each one has an aluminium washer that can be awkward to remove. Examine the holes for corrosion — if you see any signs,

you need to clean with degreasant and air.

8. On a typical DCOE there is a screw to remove the auxiliary venturi, but these aren't present on the Nova Sport carbs pictured. If yours should have screws, make sure they're still present and the venturis haven't slipped out of alignment.

## Essentials

### Cost

DCOE service kits cost £19 per carb and come complete with gaskets, springs, screws and such like. If your Webers are worn you may need extra parts such as floats and spindles. Like jets and chokes, these are available separately.

### Where From

Aldon Automotive,  
01384 572553,  
[www.aldonauto.co.uk](http://www.aldonauto.co.uk)

### How Long

Allow yourself around half a day for the first carburettor. With experience, the second one shouldn't take as long.

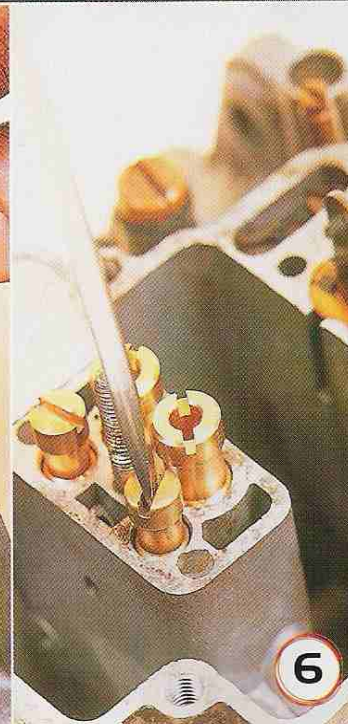
### How Hard

Not difficult, but pretty fiddly. If you're good at building Airfix kits you should be able to tackle this job no problem.

### Tools

Screwdrivers  
Spanners  
Pliers  
Degreasant  
Wire

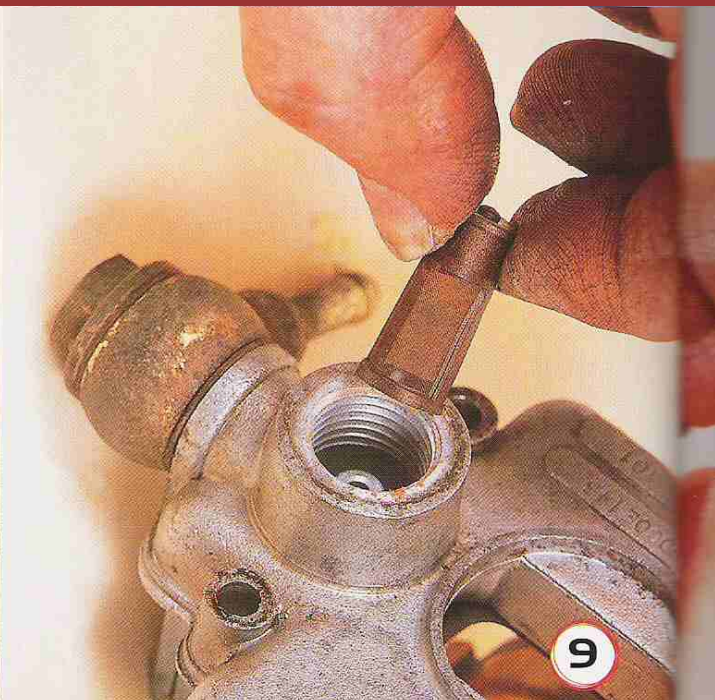
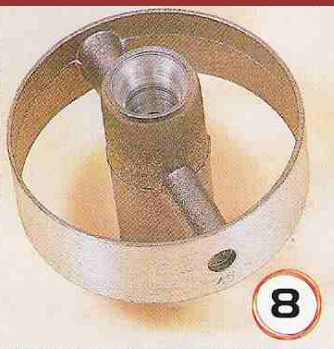
\*Haynes and Weber manuals are also available to help your rebuild. Contact Weber dealers for details.





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9. Returning to the lid, remove the filter. A 19 mm spanner unwinds the filter cover, after which you can simply slide out the filter.

10. Now using a 14 mm spanner, unscrew the fuel intake union and banjo bolt and put them safely to one side.

11. Remove the floats by pushing out the pin from one end, pulling it through with pliers. Shake the floats to ensure they've absorbed no petrol. If they slosh, you'll need new floats.

12. With the floats removed, the needle valve will now be exposed. Tip up the lid and it will fall out.

13. Unscrew the needle valve seat holder with a 10 mm spanner. Remove the gasket, which could well be broken.

14. Check for any play in the throttle spindle. If you can feel signs of wobble, it's sensible to replace the spindle, which can be ordered separately.

15. Check the size of the needle valve is as recommended for your car — it has a number stamped into the seat holder. Next you need to replace the needle valve and its seat holder.

16. Fit the new gasket carefully onto the underside of the lid. This must be in position before you replace the floats.

17. Replace the floats, be careful not to break the weak casting that holds in the pin — you'll need a new lid if you do. If your carb has brass floats, you can't interchange with later plastic types.

18. Hold the lid upright until the spring inside isn't compressed but the floats haven't fallen backwards. Check the float height. Here it should be 8.5 mm so we're using an 8.5 mm drill bit for reference.

19. The repair kit comes with a new filter and new gasket, which should now be slid into place. Screw the filter cover back into its position.

20. Reassemble the fuel intake union, being careful to get the gaskets the right way round on the banjo bolt. The thinner gasket goes on first.

21. You need to ensure that the jets are clean and unblocked. The idle jets go into the front two holes and the main jets, emulsion tubes and air correctors all fit into the rear holes.

22. Renew the throttle return spring. Release the old spring from the spindle by pushing it to one side with a screwdriver. Slide the spring off the grooves in the retaining plate.

23. Attach the new spring by lifting it into the groove on the spindle. The easiest way is to loop a piece of wire around the spring and lift it up into place, then slide the end onto the retaining plate.

24. Refit the inspection plate using the new gasket supplied. It needs to be put into place on the carburettor, with the plate fitted afterwards. Tighten the plate's two screws.

25. The kit comes with new idle mixture screws but they are not suitable for this Nova carb. Instead, you can fit a new O-ring to your old screw by rolling it into position. Slide the new spring over the screw.

26. Blanking off the tiny side holes in the pump jet, blow air through from end to end (using, say, a foot pump) to ensure it's clear. Slip the tiny aluminium sealing washers onto the pump jet.

27. Slide the pump jet carefully into position, ensuring you get the

pump jet's flats located in the correct place in the pump jet housing.

28. Fit a new seal to the pump jet screw and then tighten it up. As with all carburettor screws, fit fairly tightly but don't overdo it — this would damage the casting.

29. Screw the idle jets and emulsion tubes back into the carburettor body. If you're using second-hand carbs, you may need new jets to suit your engine. The best way is to have it set up on a rolling road.

30. You're almost done now. Replace the lid with its five screws. Make sure that each screw still has its spring and flat washer in place.

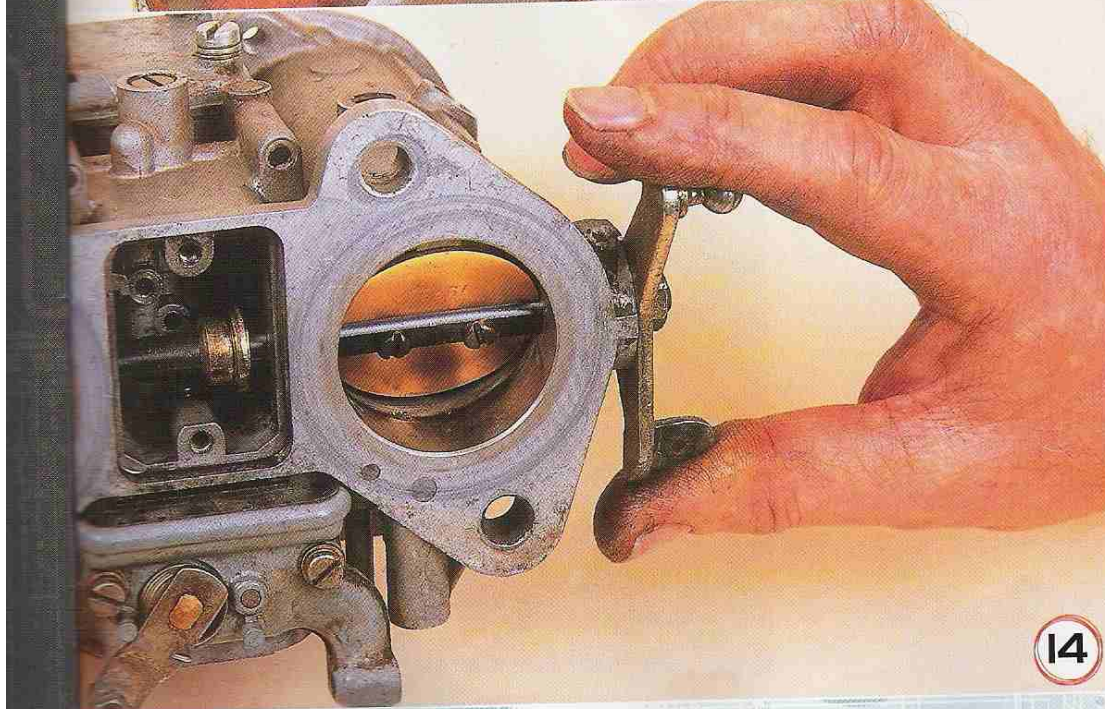
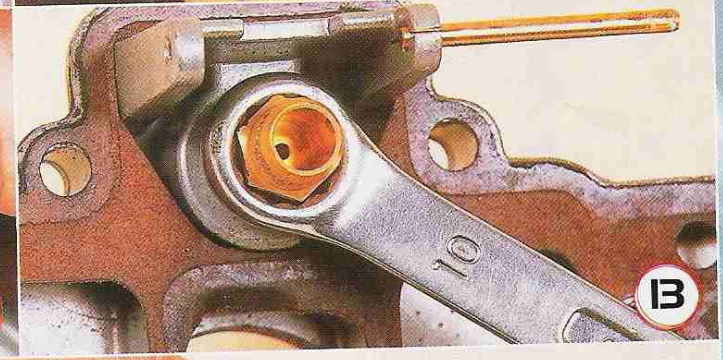
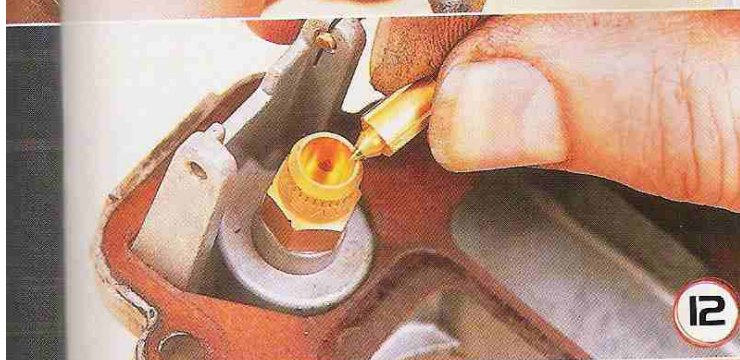
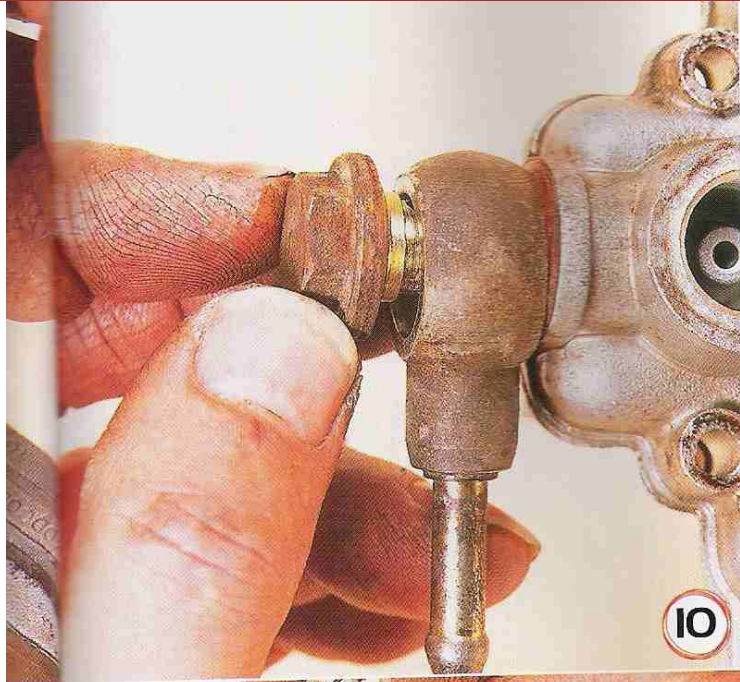
31. Fit a new gasket between the lid and the jet cover, which pushes into the recess in the jet cover. Screw down the jet cover and the job's complete. Don't be concerned if there are bits left over — they're simply not needed for your carb.



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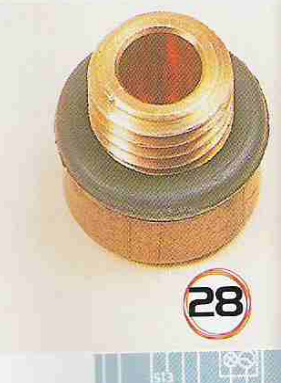
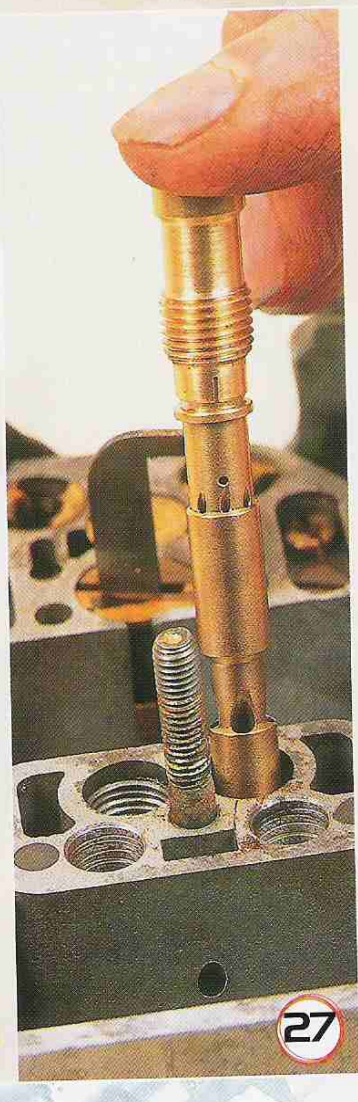
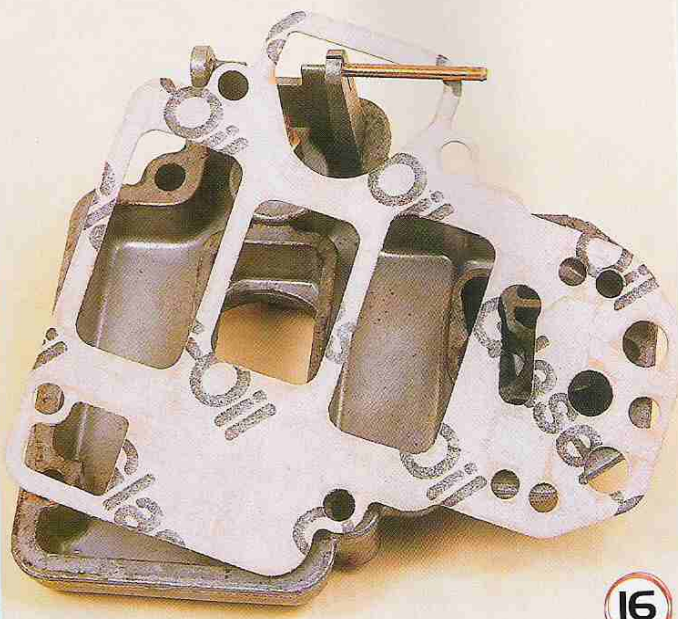
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