

# servicing a 2CV



## The Oozy Squelchy Parts

Next on our servicing schedule (shed not sked!) comes the cleaning and re-lubricating of the air filter. Almost all modern 2CVs have a sponge type filter rather than one of the paper variety. The object of the exercise is to clean the element in a bowl of paraffin (or similar degreaser) then wring it out and shake it dry. Next soak it in clean engine oil and wring it out again, though this time not so vigorously. It can then be reinstalled. If your car has a paper element then either blow it clean with compressed air or replace it.

Now for the grease. You will need a grease gun, a pot of clean grease and a half inch paint brush that you are prepared to sacrifice for this higher purpose. Jack up the back of the car and support it on axle stands. Observe on each suspension arm the bracket which receives the rod emanating from the central suspension spring pots. The rod is screwed into an eyelet which passes into this bracket (clevis?) and is held in place by a type of clevis pin. The pin has the sectional shape of a segment and it is the pointed end bearing on the inside of the eyelet which supports the weight of that particular corner of your car. In most descriptions, this is referred to as a 'knife edge'. A lack of lubrication here could well cause sufficient wear to take place for the car to collapse. Therefore, using the paintbrush, work clean grease well into the gaps between the clevis and the eyelet. Ensure that the pin's bearing surface is well supplied with the lubricant. It is important that this is carried out while the weight is off the wheel in question. (Incidentally removing the eyelet and modifying it to take a grease nipple would be an excellent idea at some stage!). Repeat the operation for the other rear suspension arm and then raise and support the front of the car. Lubricate in the same way the front 'knife edges'.

Now clean the nipples at the base of the kingpins and, attaching your grease

gun, pump like mad and, turning the steering from lock to lock, try to get the grease to flow throughout the housings. Again it is vital that the wheels are raised off the ground or the bearing surfaces between the bottom lug and the suspension arm will not receive grease. If all is well, you should observe old and dirty grease being forced out above and below the arm but not above and below the kingpin housing. If grease escapes from here, then it means that the kingpin was incorrectly fitted on the last occasion. It also means that, due to an inability to accept a decent pressure of lubricant delivery, the important areas will almost certainly be starved of their fair share. It would be best to have any such problem rectified without delay.

Next examine the gaiters on the driveshafts, revolving the front wheels with steering on full lock. Give the outer gaiters a squeeze. They should not 'exhale' either air or grease (signs of a pin-hole or insecure attachment). Rotate the wheels so that the central grease nipples on the driveshafts are positioned uppermost and then lower the car. Now clean those nipples and pump with grease until the bellows gaiters can be seen to move slightly under the pressure. Too much here will make a mess over the next few thousand miles. Incidentally it is correct for the lower ends of these concertina gaiters to be left unsecured.

Examine all brake and fuel pipes for corrosion or signs of chaffing or even leaks. If all is well, go and wash your hands, and have a well earned cup of coffee!

## Servicing Charges

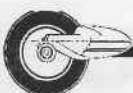
Unless your battery declares in writing that it is maintenance-free then it would be wise to assume that it requires periodical checking. If the plates inside are not covered with electrolyte (acid) then top up the relevant cell(s) with distilled water. If you have access to a battery voltage drop tester then use this to try to gauge the predicted serviceability of this critical component. Finally, in this area, if you have access to a volt meter then connect it across the poles of the battery and start the car. Bring up the

revs to about 3500 rpm and observe the meter reading. If it fails to manage 14 volts then suspect a weak alternator as the most likely cause. If it exceeds 15 volts then consider renewing the voltage regulator. These diagnoses are the most common in my experience but remember, for every rule there is an exception!

## Record Braking!

Now we cover the important department of brakes, for which the appropriate end of your car needs to be raised off the ground (rather than to it!) and the parking brake released. If you own one the dying breed of drum-braked cars then, starting at the front end, proceed as follows: using a top quality, long handled 14mm spanner turn the rear brake adjuster on one side. Do this in a quiet environment and spin the road wheel at the same time as you make the adjustment. You should aim to hear (rather than feel) the brake shoe merely brush against the drum. Please do not make the mistake that I have in the past of leaving the brakes' tolerances so tight that they bind badly when things heat up. Repeat this operation for all four front adjusters and after adjusting the handbrake apply the same procedure to those at the rear. To adjust the handbrake then, simply (!) turn the brass wingnuts until both front brakes are firmly and evenly applied after four or five clicks of the operating lever ratchet.

Disc front brake models need an inspection of the front footbrake pads. Look to the rear of each calliper, using a torch. Either side of each disc will be the locating tongue of one pad (making four in all). Choose the one that appears closest to its disc. With a stout screwdriver or a pry-bar, lever the pad back as far as it will go. Inserting a further (and slightly smaller) screwdriver into the hole atop the calliper, complete this levering until the pad can move no further. Now, carefully holding the tongue of the pad so as not to drop it (do not!), lever rearwards the retaining spring and renew the pad. If it has less than 3mm of lining left then renew all four using the procedure just described. If you have levered any of your brake



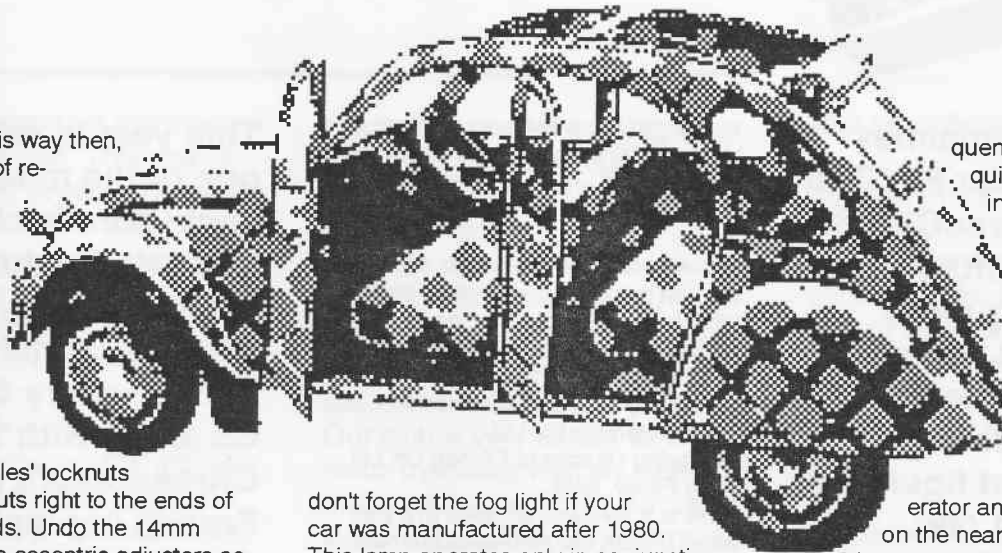
pads back in this way then, on completion of re-assembly, you MUST press the footbrake pedal until normal feel is resumed. Finally on this subject, for disc type handbrake adjustment, slacken the cables' locknuts and adjusting nuts right to the ends of the cable threads. Undo the 14mm bolts holding the eccentric adjusters so that the latter may be turned. I made a splendid little tool for adjusting the eccentrics by welding a rod for a handle to an appropriately sized sawn-off box spanner, but right now (two waking hours to holiday and counting) I cannot for the life of me remember the size

across the flats. In any case this tool makes life terribly easy for the budding handbrake adjusting expert as one can hold the eccentric steady whilst simultaneously tightening the locking bolt. The method here too is to adjust the eccentric so that there is absolutely no perceptible drag on the disc as the wheel is turned but so that you may just hear the two brush together at the (inevitable) point of 'run out' of the disc. This in turn may be assisted by slightly backing off the footbrake pads if you so desire.

Absolutely lastly, be sure to change the brake fluid every year for drum-braked models or the LHM every two years if yours has front discs.

Check and adjust the pressures of all five tyres: 20 psi front 26 psi rear, 28 psi spare. This latter allows for gradual deflation prior to the necessity for usage.

Check the operation of all lights - and



don't forget the fog light if your car was manufactured after 1980. This lamp operates only in conjunction with dipped beam.

### Blue Watch

The next item on the schedule is to check the safety of heater hoses and wiring harnesses. You may or not be aware, of the

quences of this can very quickly write off the car in a most unsavoury manner.

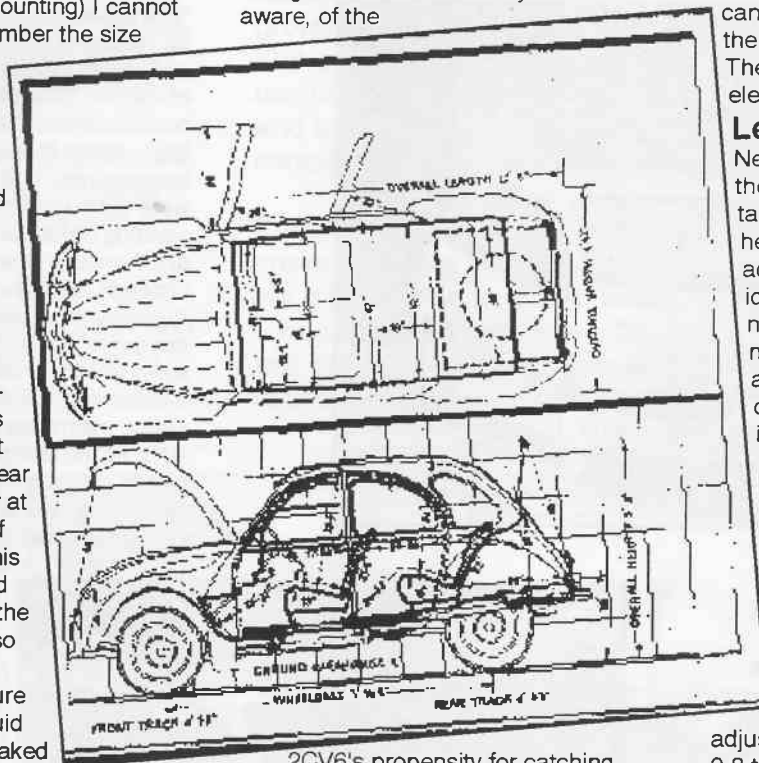
Thus it is vital that the hoses are a good tight fit between the engine and the bulkhead and additionally are secured in the middle: on the off-side to the accelerator and choke cables and on the nearside to the protruding metal strip/handbrake guard and the battery live lead.

The wiring loom can cause similar danger if, where it is clipped to the oil filter stay there is no protective sleeve around the wire binding. The lack of this can allow chaffing by the metal clip until the wires are exposed and short out. The possible consequence may be an electrical fire - very nasty.

### Let Us Spray

Next, using aerosol grease, lubricate the various cables and linkages pertaining to the carburettor, the heating system and the headlamp adjustment assembly. It is a good idea too to check the tightness of the nuts securing the carburettor to the manifold as these occasionally go astray and so too all screws on the carburettor's anti-flood capsule (the item with the bent rod sticking out of it. The purpose of this unit is to prevent the engine from being flooded by injudicious use of the choke. It makes a fair difference to cold starting and running. Finally, take your car for a 15 minute road test to check everything out and get the engine nice and warm and, if you know anybody who has access to an exhaust gas analyser,

adjust the mixture to give a reading of 0.8 to 1.6% CO at 750-850 rpm - a setting easily achievable for any decent 'A' series Citroen.



two years

2CV6's propensity for catching fire.

This unfortunate malady is frequently due to heater hoses, which are in poor condition (frayed ends; chaffed through in the middle: very little torsional stiffness and thus a sloppy fit: no strapping) dropping onto the front exhaust silencer and igniting. The conse-

