Servicing Your Two Pot

Another technical article! This time for the 2-cylinder brigade. This certainly appears to be a simple path towards servicing a 2-cylinder Citroën - whether it be a real 2CV and Ami or one of those pretend 2CVs - a Dyane.

There is a curious idea that the French are garrulous. No Citroën owner will believe that one - not so far as maintenance is concerned, anyway. Look in the handbook for a guide to servicing your car and you are met with a silence so deafening that it matches that of a Norman peasant when asked for a discount on his calvados.

After years of work on 2 cylinder Citroens I thought it was time I shared my experiences with the technically challenged. So, here is a quick run through of an average 6,000mile service on a 2CV/Ami...even an imitation 2CV, such as a Dyane.

Engine. The first question the average owner asks is "How do you adjust the tappets?". When you gaze down through the 2CV's crowded bonnet at the horizontal cylinders far below you understand why! In fact once the tappet covers are off there is ample room even if it is a bit of a stretch.

As with all "flat" engines, removal of the tappet covers means a loss of oil. About 300ml is trapped in each cover, so it's essential to position an oil tray under each head as you work on it and also to slide a wad of absorbent cloth on to the chassis member below the head to soak up the rest.

That done, remove the 12mm nut holding the tappet cover. The engine needs to be stone cold for this job - not just because you are likely to to find it uncomfortably warm work if it isn't, but because the heads are of light alloy and the clearance will be wildly out if set when hot.

The method is simple enough. Turn the engine on the starting handle until one valve on the side on which you are working if fully open. Then, adjust the other valve - a simple "screw and locknut" job. [See illustration 10] Repeat the performance for the second valve, refit the cover - using a new rubber gasket - and then adjust the other side.

Normally, the tappet adjustments and oil changes are carried out at the same time, but if for any reason the tappets are reset between oil changes, do not forget to top up the oil level to compensate for the loss of lubricant in the covers.

Oil changes [3,000miles for filter-equipped models, 1,500miles for models without filters] are delightfully simple. Slide a hand under the car, and you will feel a 19mm drain plug, just protruding from the undershield. Slide a tray beneath this, open the filler cap and undo the drain plug. The oil just flows out. No grubbing about underneath the car at all.

Unfortunately there remains the slight question of the filter

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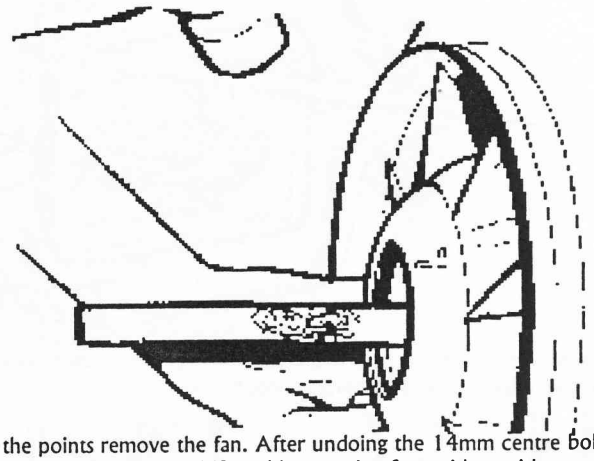

To reach the points remove the fan. After undoing the 14mm centre bolt break the taper by inserting a drift and hammering from side to side.

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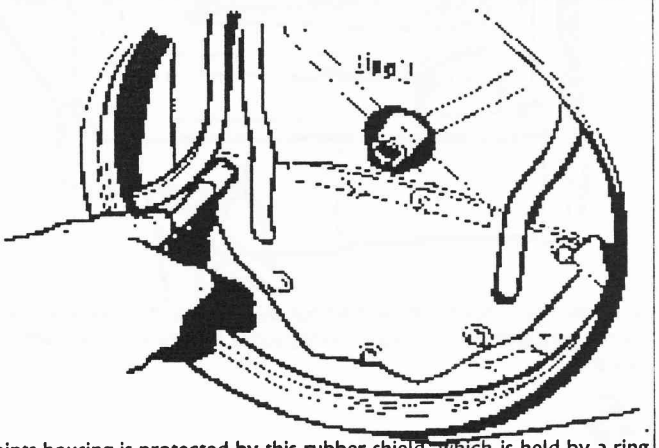

The points housing is protected by this rubber shield, which is held by a ring of seven 8mm bolts.

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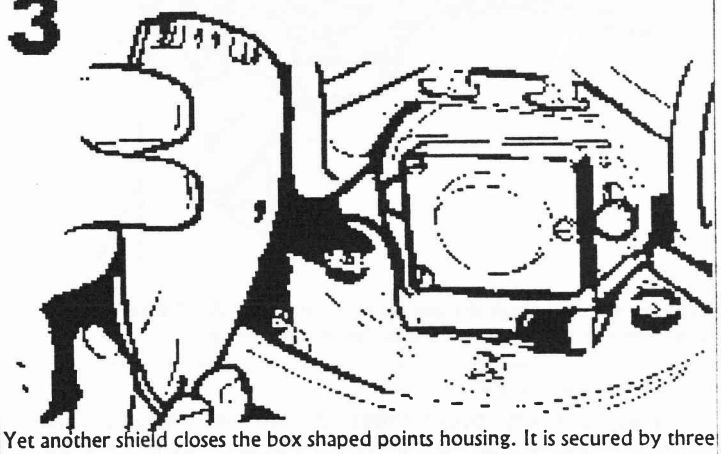

Yet another shield closes the box shaped points housing. It is secured by three screws.

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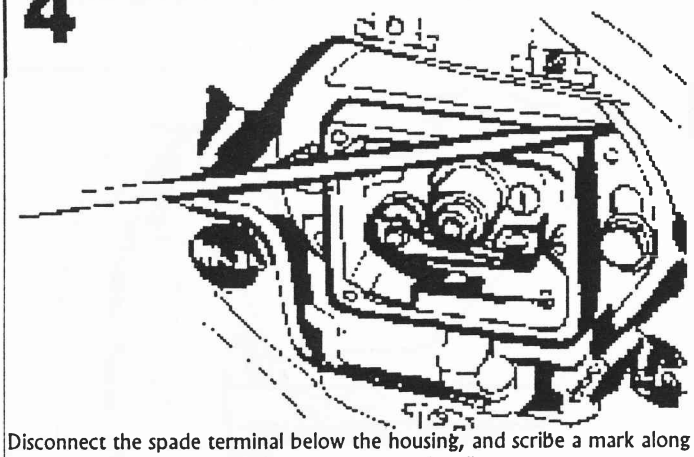

Disconnect the spade terminal below the housing, and scribe a mark along the upper edge so that the timing cannot be "lost".

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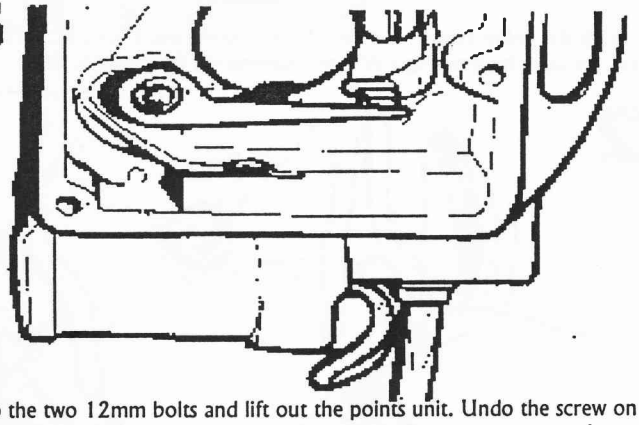

Undo the two 12mm bolts and lift out the points unit. Undo the screw on the terminal and the back plate locking screw to detach the contacts for cleaning.

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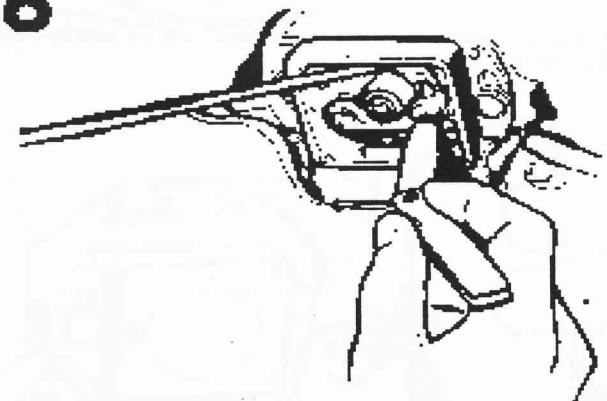

Refit the unit and check the gap on each cam peak. A 12-thou feeler should be just a loose fit, a 15-thou feeler must be tight.

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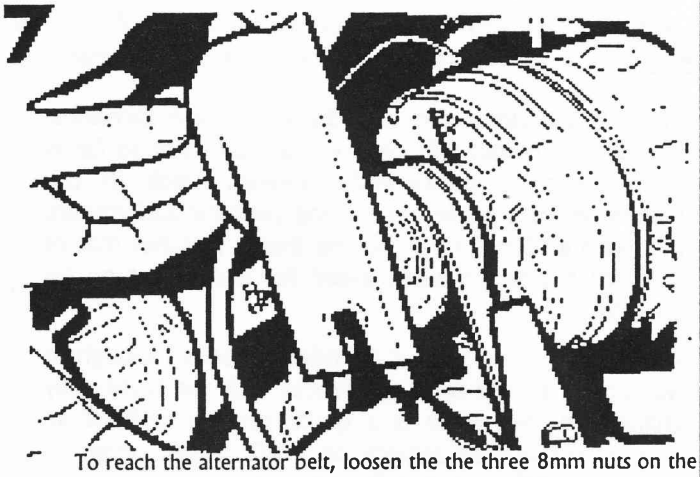

To reach the alternator belt, loosen the the three 8mm nuts on the securing studs and slide off the cover. It is slotted for easy removal.

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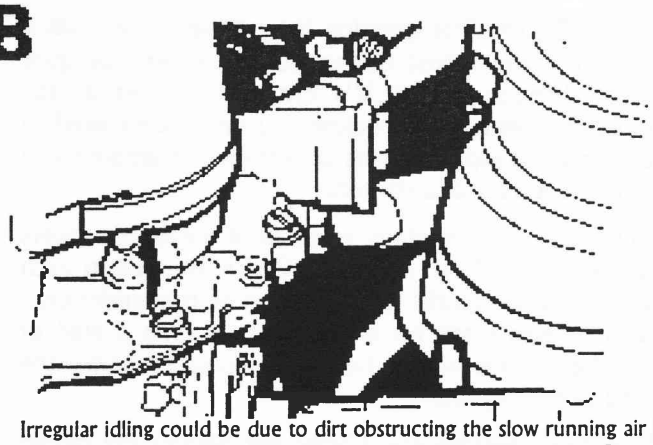

Irregular idling could be due to dirt obstructing the slow running air jet which is fitted externally at the front of the carby. Clean it!

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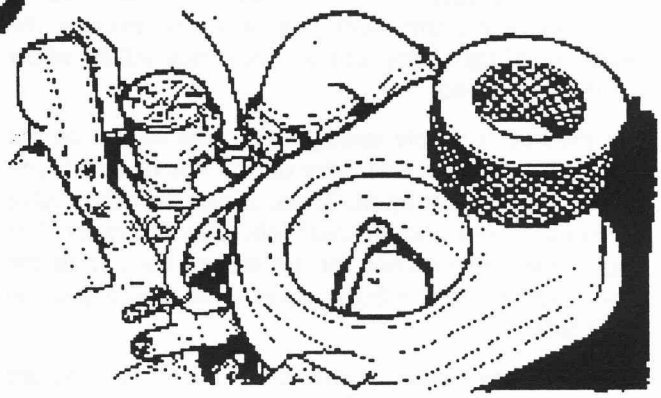

There is a mesh filter in the fuel inlet on the carburettor, and the air cleaner element must be washed in petrol. Check every 6,000miles.

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- changed every 6,000miles. A canister type, it lurks inaccessibly below the off-side cylinder and it calls for some acrobatics to reach it. A strap spanner will free it, but the DIY owner will have to "guesstimate" the torque required for replacement - 11 ft lb. A tip here, incidentally, is to apply a light smear of grease to the oil filter seal. This will allow it to seat without distorting as it is tightened down.

When the filter has been changed there's a trick to refilling with oil too. Pour in 2.5 litres and then start the engine. Run it till the dashboard light goes out - it is, contrary to popular belief, an oil pressure light and not an ignition light. This should happen in about five to ten seconds, showing that the filter is fully charged with oil. Stop the engine, allow the oil a few minutes to settle and you will find that the engine will take about 500 to 600ml more.

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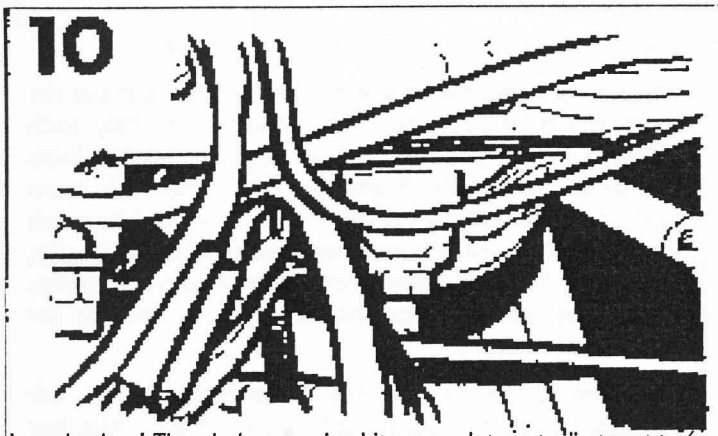

It can be done! Though the space is a bit cramped, tappet adjustment to 6 thou cold is made from the top of the engine.

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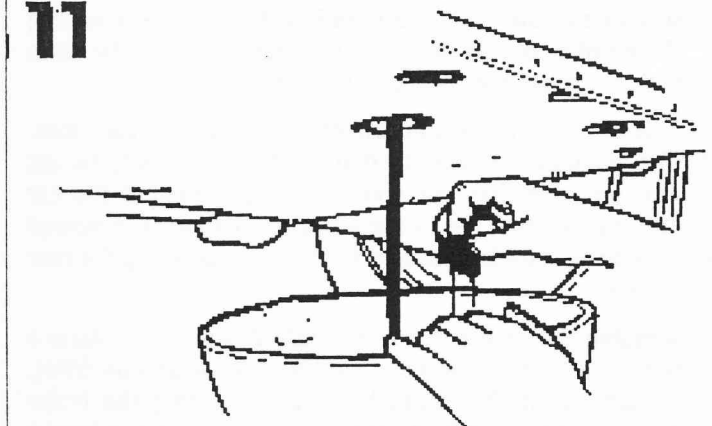

You could drain the oil while wearing your best suit! The plug can be reached without getting under the car...

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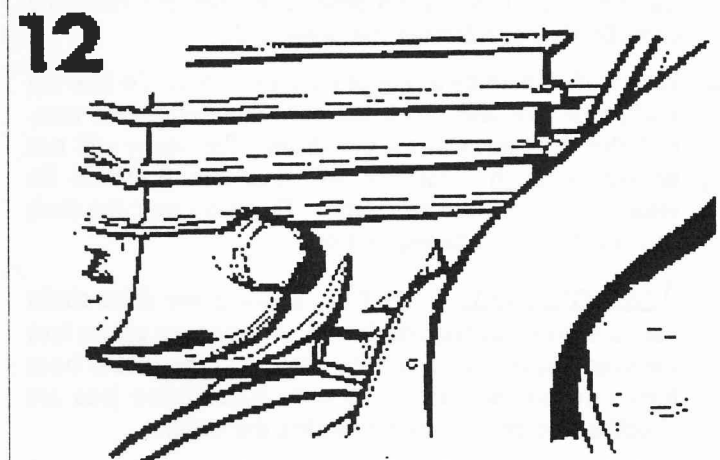

...but the gearbox is a different matter. This 17mm combined filler/level plug demands a syringe for topping up the transmission.

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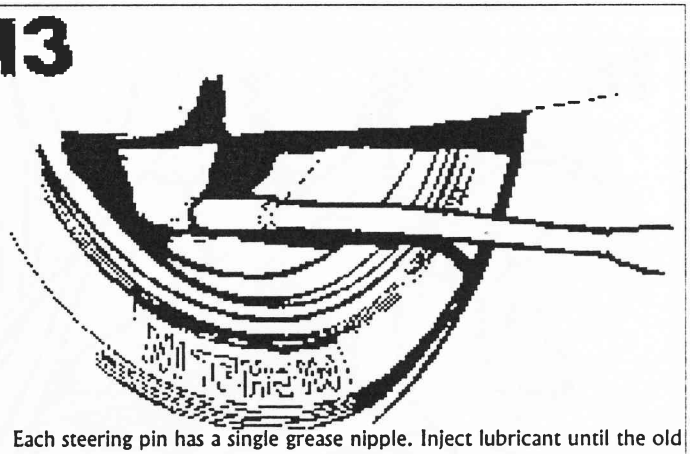

Each steering pin has a single grease nipple. Inject lubricant until the old grease begins to squeeze out of the joint.

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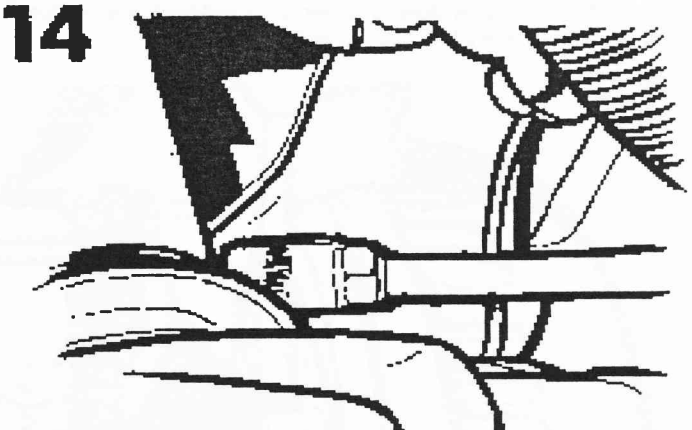

Greasing the driveshaft splines is a tricky job - you have to wheel the car back and forth until the single nipple on each shaft is accessible.

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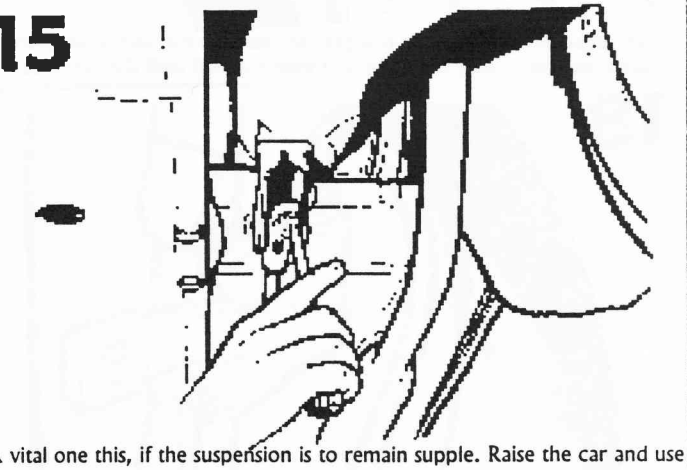

A vital one this, if the suspension is to remain supple. Raise the car and use a spatula to pack grease all around the four knife-edge bearings on the spring rods.

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2CV drivers who do not know this trick can worry themselves silly about an oil consumption which seems, temporarily, to have reached "litres per km".

Electrics. Have you ever wondered where the points are? The picture strip reveals all - well almost all. To reach them involves a certain amount of dismantling. The grille comes of most models quite easily, and the method of breaking the fan taper shown here will succeed, if you persevere. The actual setting of the gap is reasonably simple - but it does require a degree of judgement. a 0.015inch feeler gauge should be tight in the gap, while a 0.012inch blade should be loose.

Alternator belt adjustment is straightforward. There should be 12mm of play in the belt, set by loosening the

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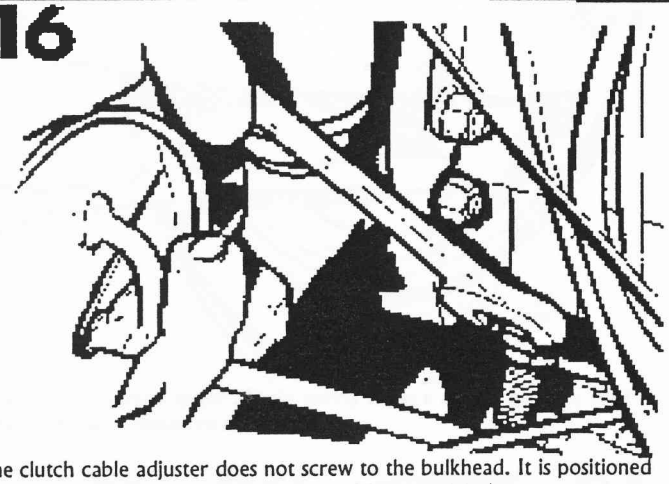

The clutch cable adjuster does not screw to the bulkhead. It is positioned by a nut secured with a lock nut. Set to 20mm pedal play.

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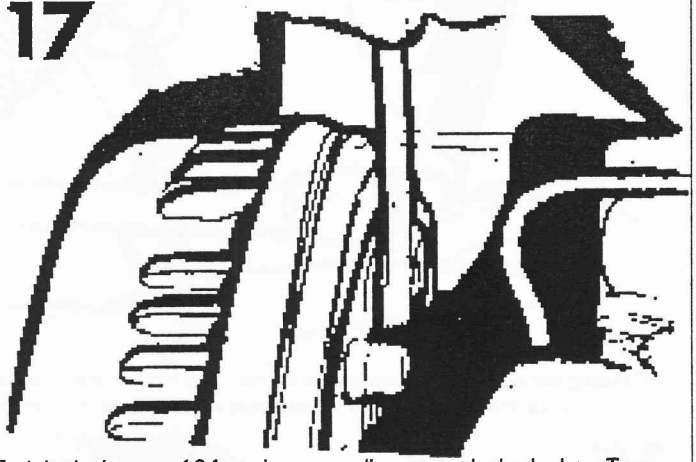

Each brake has two 124mm hexagon adjusters on the back plate. Turn them outwards to lock the shoes and then back off until they are free.

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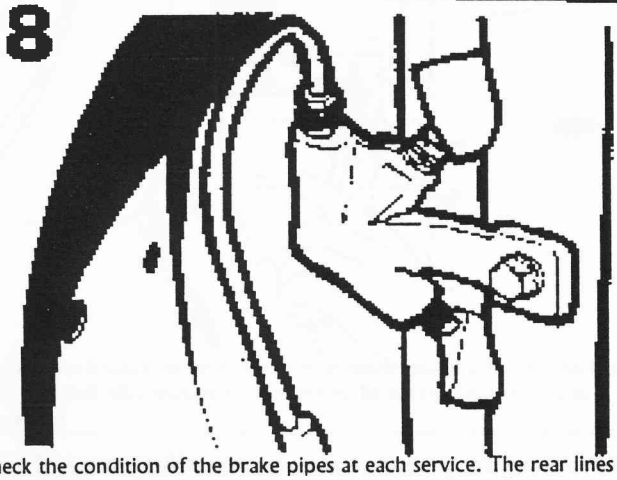

Check the condition of the brake pipes at each service. The rear lines come to this junction on the chassis and then run internally to the arm centres.

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11mm adjuster bolt and the 14mm alternator pivot bolt, and then pulling the alternator upwards.

Brakes. It is far easier to adjust the brakes with the car standing free on level ground, than by jacking it up, so that's the method to adopt whenever possible.

Release the handbrake and open the bonnet. Lift out the spare wheel. Adjust the front brakes by turning each 14mm hexagon headed adjuster outwards until it locks the shoe against the drum. Back off until the drum unlocks - check this by rocking the car back and forwards - and then turn the adjuster very slightly outwards again, so that the final adjustment occurs on an outward stroke. Repeat the procedure for the second shoe, then for the other front brake.

Since the handbrake operates on the front wheels, this can now be set. Adjustment is by a pair of wing nuts, low down beside the front cross-member. Pull out the handbrake by three or four notches on the ratchet. Then turn one of the wing nuts until it locks its brake, counting the number of half turns this requires. Then do the same with the other nut. The two should synchronise.

Complete the brake adjustment by setting the rear shoes. The method is similar to that used at the front, except that one stretches out comfortably just behind the car and reaches in to get to the adjusters. This enables you to rock the car backwards and forwards by grasping the rear bumper.

Bleeding the brakes involves standard procedure, using a sequence of nearside rear, offside rear, near side front, off side front. No snags here. But reaching the brake shoes is a trickier job. At the rear, it is essential to have a puller to detach the drum/hub unit. At the front, where the brakes are inboard, no puller is needed but there is a complication of releasing the drive shafts.

Each shaft is held by a ring of six 14mm nuts. To free the shaft, first jack and block the car. Then undo the nuts, pull the shaft away from the drum. This alone will not provide enough clearance to allow the drum to be removed, so jack the car higher. This will lower the shaft and the drum can be wiggled out.

Transmission. Apart from greasing the drive shafts - another job that requires "feel" - by injecting grease into the single nipple on each drive shaft until the rubber boot feels firm but not hard, the only transmission jobs are checking the gearbox and adjusting the clutch.

You will look in vain in the handbook for any reference to the clutch cable adjuster. Actually, it is barrel shaped and located in an aperture in the front bulkhead. Adjustment is made by freeing the lock nut, holding the adjuster nut and screwing on the barrel by means of a flat on its lower end. When the pedal clearance is right, tighten the lock nut hard against the adjustment nut.

Stiff clutch operation can be traced, often, to a badly lubricated cable. It is possible to trickle oil through,

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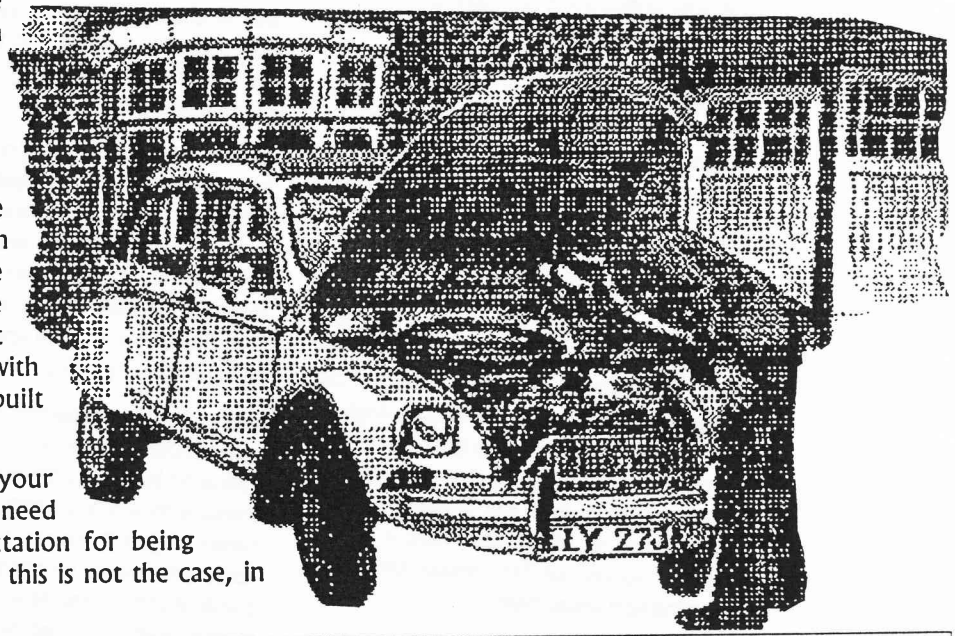
injecting it from the passenger compartment end. A more permanent method is to detach the cable from the car, coil it up, an"sink" it into one of those motorcycle lubricants - Duckhams "Chainguard", for example. An admirable idea that and thanks to the UK Citroen Car Club, from whose magazine I stole it.

This article is reprinted from Practical Motorist, February, 1973

Steering and Suspension. Basically there is nothing to do here but carry out a regular greasing routine. Apart from the nipple of each steering pin, the main essential is to pack the knife-edge pivots on the suspension rods with grease. It is vital that this is done properly, or the quality of the ride will suffer.



It involves getting under the car and using a spatula or a screwdriver blade to pack grease right round the pivots on the suspension rods. Be liberal - the results are worth the effort. At the same time, give the damper attachment points a generous application of spray with a silicon can to combat any inbuilt "stiction".

With regard to routine servicing of your 2CV/Ami/Dyane, that's about all you need to undertake. Despite having a reputation for being difficult to work on, as a DIY vehicle, this is not the case, in my view.