

# HOW TO STOP YOUR (2CV) GEARBOX UNWINDING

Usual disclaimer stuff, this is how I do it, it works for me. If you are not absolutely sure of what you're doing ask someone, and before you start, go out and buy 1ltr of gearbox oil. (either 80 or 90 grade – it doesn't really matter). As you're taking the top off, you might as well do an oil change as well, it's virtually impossible any other way.

Disconnect the battery, negative first. Put a collector under the car and remove the gearbox drain plug. Leave the oil draining while you continue.

Remove one wing, the heater hoses, the negative battery lead and the air filter. (if the metal cable clip is still on the air filter leg – BIN IT. It's a fire hazard.) Remove the nuts that hold the brake pipe onto the gearbox and gently ease the brake pipe brackets off the studs. Don't be tempted to bend the brake pipe right out of the way, they fracture very easily. Disconnect the rubber linkage at the tip of the gear lever. If the top of the box is very manky, give it a dose of engine cleaner/ paraffin/ petrol/ white spirit/ whatever so that no grunge gets inside.

Remove the studs and bolts but keep the gearbox top in place until they are all out. If the top is now loose carry out the next bit. If the top is stuck give it a few taps from the side with a plastic mallet, keeping one hand on top to stop it flying off when it does come loose. If someone has stuck it on with gasket glue then you might need a bit more than a few taps, but it should go.

Now, the tricky bit. At the front of the top, in the middle there is a bump. Underneath that is where the spring is, so lift the top just enough to slide your other hand underneath and get two fingers either side of the spring, then remove the top.

**Take the spring out and put it safe. If the worst happens and you drop it in the works, it can be got out with a telescopic magnet thing, but as you haven't got one and your car doesn't work at the moment, I suggest you be very careful and don't.**

What you are now looking at are the three selector rods with the selector forks attached to them. The middle one is where our interest lies. The grooved ring that the selector fork arms engage in is the bit that comes unscrewed. If you look at the back of the ring you will see that it has a lip coming out from the middle. This lip should have several small dints – or peens – in it, corresponding to the shallow grooves in the bit of the shaft that it's screwed onto. Three or four were put there in the factory, but sometimes not very accurately or enthusiastically, and a few more won't go amiss anyway. I tend to peen every single groove, using a long punch and a hammer. Don't go mad with a 4lb sledge hammer, you're only distorting a small amount of metal, but make sure that the peens do go into the grooves. I find it easier with two people, one to hold the

light and a piece of wood to stop the gears spinning, and the other to do the peening.

When you're done replace the drain plug, (if you want to be clever you can anneal the copper washer first, heat it in a gas flame to cheery red, then drop it in cold water) then pour the new oil in the top. I think Haynes says 90cc, and if you want to measure it be my guest. (If there is a lot of muck at the bottom of the box I have been known to go round the block with a mixture of paraffin and 20w50 in it, but there's probably a dozen reasons why I shouldn't.)

Before you put it back together see if there is any free play in the shaft, this is an indication of wear in the rear bearing and is often accompanied by a whining noise in 3<sup>rd</sup>.

Make sure that the lid and box mating surfaces are clean and then put the spring back in the hole and hold it there while you re-locate the lid. Gently wiggle the gear lever around to make sure it has located in the slots then press the lid down. You should be able to press it flat on the box. Replace the studs and bolts, 10 – 14 ft/lb torque, make sure you can get all the gears, then put everything else back. Secure the wring loom to the air filter leg with a nice cable tie or two.

That's all there is to it, so go out and do it to your box before your box does it to you.

Dave Burdett  
(Taken from 2CVGB NEWS June 2001)