

ENTHUSIAST'S RESTORATION MANUAL SERIES

SECTION 2. 'UNWINDING' A GEARBOX

'Gearbox unwinding' is a term that seems to be used exclusively by 2CV folk. It refers to dealing with a gearbox which has either

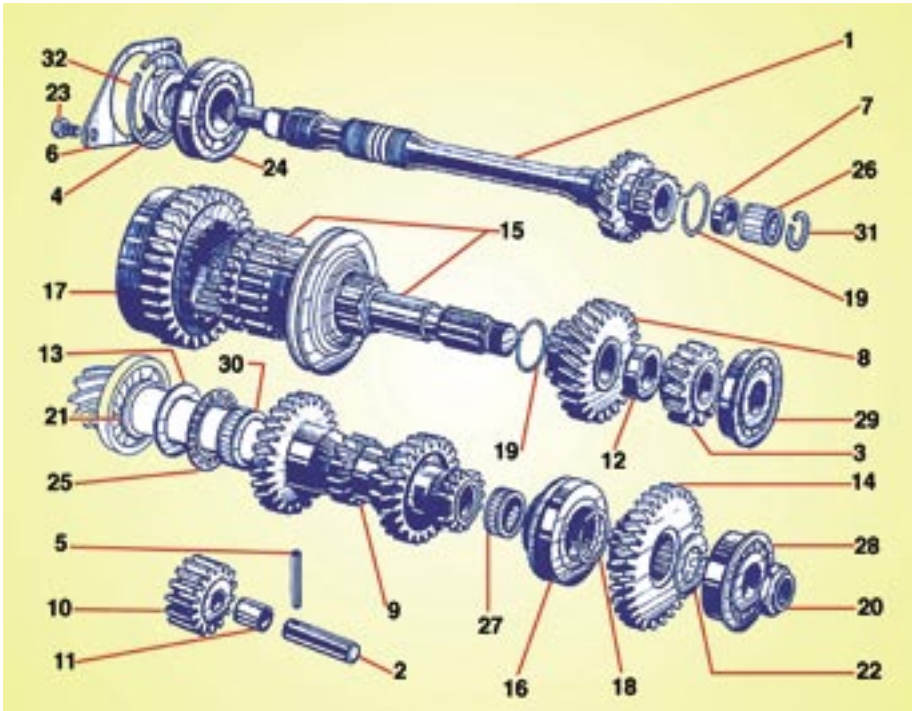
jammed solid, or has left just reverse gear available when the gearstick is in what was previously the neutral position. It usually happens after a period of sharp reversing, and the car might need to be recovered by

a suitable recovery vehicle with the 2CV's front wheels lifted off the ground. The good news, however, is that the problem can almost always be rectified, and the even better news is that it can be prevented.

The following sequence of pictures shows 2CV Club member, and well-known repair specialist, Rick Pembro, as he sets about unwinding a 2CV gearbox.

This particular type of malfunction is a sure sign of wear, so the repairs we're going to outline here to a worn gearbox can only be regarded as a temporary fix.

It appears that it's only the later gearboxes, that is, those from the 1980s, which are prone to this unwinding, and it appears to be due to a deterioration in steel quality. However, if you've got a low-mileage gearbox that's in excellent condition, or an early gearbox, it's well worth doing this job as a preventative measure.



5-2-1. The gearbox components.



5-2-2. The ring for the second and third gear selector fork was staked onto the synchro hub when the gearbox was built (inset, arrowed). The problem is that the three stakings may not hold, especially on the later gearboxes.

The ring is threaded with a right-hand thread onto the synchro hub and, when it unscrews, the synchro hub will slide forward, into the third gear, which makes the gearbox engage third gear.

The symptoms of the problem are that you can engage reverse okay, if you put the lever in what was neutral, but if you can then find any other gear, the vehicle will be in both first and third, and will be immovable. Don't struggle with the gearstick - you'll only cause more problems.



5-2-3. This ring is inside the synchro hub first gear, at the opposite end of the hub to the ring that unscrews itself.



5-2-4. This internal ring has three dogs on it which slide in three slots on the second and third synchro hub. The dogs can come free of the slots, and the ring on which they are located can turn so that the dogs no longer line up with the slots. You then have the job of realigning the dogs with the slots before you can get the ring back on the synchro hub. (In other words, before you can push the first gear synchro hub onto the second and third gear synchro hub.)



5-2-5. This picture shows one of the dogs located correctly in its slot.