

## Greasing the gear lever cup on an LT77 or R380 gearbox

### How to grease your gear lever and remote

Steve Newton describes how to grease the gear lever cup on the remote on an LT77 or R380 gearbox fitted to an RV8. Access is tight and particular care needs to be taken with a spring loaded nylon plunger which holds the gear lever both when removing it and when replacing the gear lever – if you are not careful it can fly off and then you will need to spend time scabbling around under the car hunting for the spring and plunger! Steve says “let’s begin”.



Lift the **leather arm rest** and release it from the four black self-gripping pads underneath (see two of those pads below).



**Moulded panel with four screws**

Pull the leather arm rest clear of the four pads which reveals the black volumetric alarm unit mounted on a cream coloured **moulded panel**. Disconnect the plug from the volumetric unit and then loosen the four cross head screws which secure the moulded panel.



Next you need to remove the **trim pad under the radio** and take out the last two screws.

Unscrew the gear knob from the gear lever and then as you lift up the centre console and place it to one side, be aware of the remote alarm aerial cable which should be taped to the underside of it – just pull it free and re-tape it back in position later.

Now remove the four screws holding down the rubber gear lever gaiter **metal clamping ring** and pull it upwards out of the way. The exposed carpet is eased to the side.



Now remove the bolt holding down the **bracket on the side of the dust cover cap** – you may find at this stage that the bracket has broken so you will either need to replace it or repair it. You can see above that the access to carry out this service work is very restricted and tight.



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The single bracket on the side of the dust cap is bolted to the body of the gearbox remote control housing. With only one fixing point, movements of the gear lever as gears are selected cause the cap to flex and over time the bracket or cap can break.



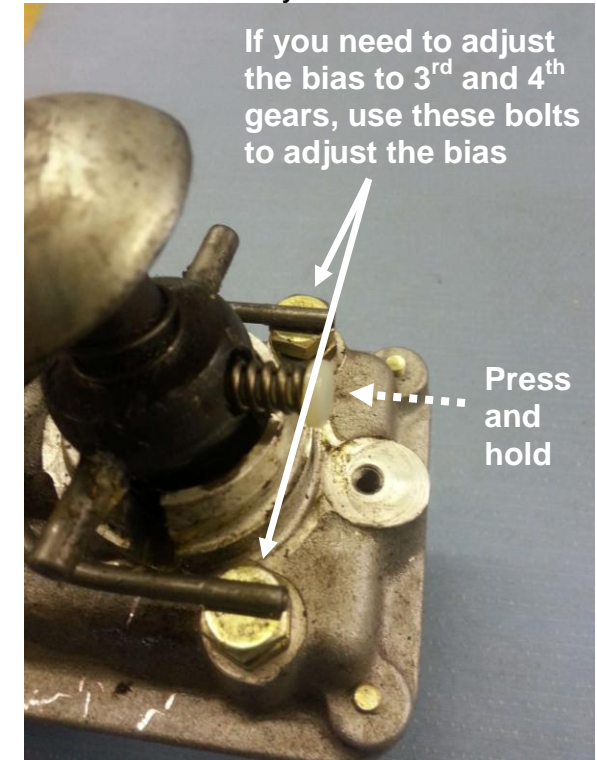
Pull the dust cap up and tape it up out of the way.



Gear lever cup

Take a flat bladed screwdriver or pry bar and lever the **bias spring arms** from over the gear lever cross pins (see left) on both sides so each spring arm is then below the cross pins (see below). The bias spring ensures the resting place for the gear lever when out of gear is in line with gears 3 and 4. The cross pins are part of the gear lever ball.

**Now the gear lever is very nearly ready to be withdrawn from the cup but first be aware that the nylon plunger and anti-rattle spring will fly out and could be lost easily.**



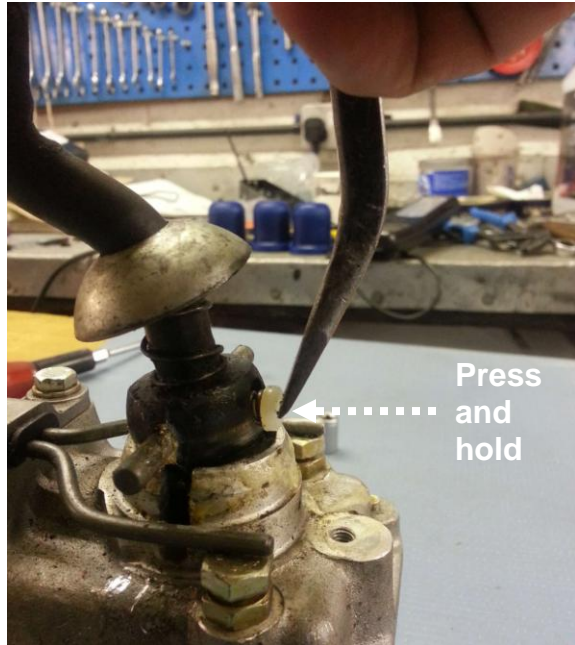
If you need to adjust the bias to 3<sup>rd</sup> and 4<sup>th</sup> gears, use these bolts to adjust the bias

Press and hold

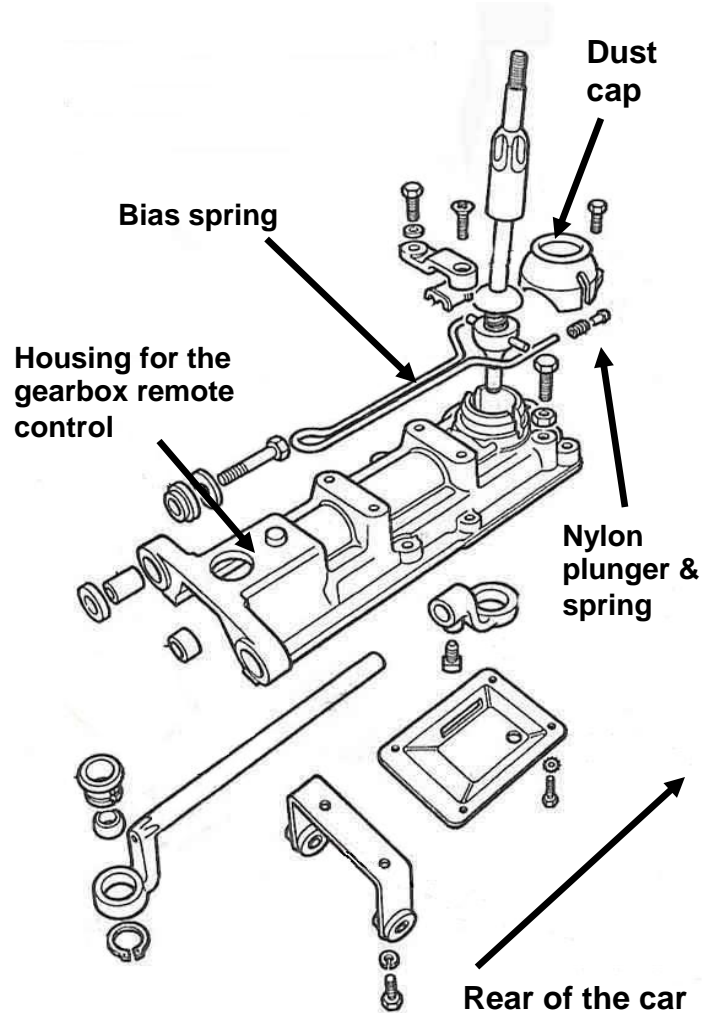
I overcome this by using a screwdriver or pry bar again to try and **press and hold the spring loaded nylon plunger in place** when I pull the gear lever upwards and out of the remote casting. If you have been able to keep the plunger in place then now is the time to pat yourself on the back. Well done! Grovelling around the garage floor looking for them if they have shot off is not much fun.



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Push the nylon spring loaded plunger in and hold into securely in there whilst easing up the gear lever to release it from the casting.



Looking into the centre of the ball at the bottom, it's like a rose joint. Clean off the old grease from the gear lever and remote casting. When all is clean it's time to re-grease them both with a multipurpose grease (for example Castrol LM or other general purpose grease) including the selector rod yoke ball which you can see when you look down into the remote casting. With road dust flying about you can see how vital it is to keep these parts well greased, including the dust cap too.

Also do not forget to **grease the nylon plunger and spring** as this will help hold the plunger in place when you refit it.

**Now is the time for the hard bit – reassembly.** This could go right the first time or you could still be there for an hour or two wishing you had not started the job in the first place! Position the gear lever into the casting **with the nylon plunger and spring facing the rear of the car.** Then depress the nylon plunger against the spring pressure and maintain that pressure using a screwdriver or pry bar whilst at the same time pushing the gear lever down until it is fully home in the remote casting.

Next take your screwdriver or pry bar and lever the bias spring back into place on top of the gear lever cross pin arms on both sides. Make sure you have greased the spherical washer above the spring on the gear lever shaft, then press the gear lever dust cap down on to it and into place. Refit the single bolt through the bracket flange and tighten. Replace the metal ring securing the gear lever gaiter.

Now it's time to refit the trim. Lower the centre console on to the gear lever and re-tape the aerial wire back on the underside of the console. Push the cable for the volumetric sensor back through the hole and reconnect the plug. Then screw the gear knob back

on the gear stick and refit the six cross head screws. Don't forget the two larger screws go to the rear of the console. Refit the trim pad below the radio and then the arm rest panel and arm rest.

Remove all tools and clean up. Bingo you have finished – time to go and treat yourself to a hard earned cup of tea, put your feet up and think about the next job that has to be done.