

## Eliseparts Gear Linkage Kit 1 S2 Fitting instructions

### Basics

This kit has been put together with all the parts you will need to replace all the joints in the gear linkage, however, you will need some basic tools, and some method of \***SAFELY**\* supporting the rear of the car, either using stands or ramps. You will need to spend some time working underneath the car, so please ensure that you can do this safely.

1. Raise the rear of the car so that you can comfortably work underneath it, making sure that it is secure.
2. Remove rear under-tray. This has 5 bolts at the rear edge, 6 at the edge of the front sides (3 each side) and 4 in the middle.
3. Remove the two gear cable clips (shown right), being careful not to lose them as they spring



out.



4. Push out the old rubber bushes from the ends of the gear cables, then, move the cable out of the way.
5. Remove Nyloc and Lock nut from bell crank, (using 2x10mm spanners), and push the link clear from the bracket.



6. Remove the bell-crank nuts (shown left), this is a Nyloc and half nut. When removed, the bell-crank should be slid off with the old joints attached.



7. Remove the old rod ends from the bell-crank, and then dis-assemble them from each other. Make up the new rod ends to mimic the old ones, setting them distance from the centres to the same as the old ones (this should be about 70mm). Then bolt one end back to the bell-crank as shown.

The end should be the bolt through the joint end, then a plain nut (tighten to the joint), a plain washer, then the bell-crank, another plain washer, and finally the Nyloc nut. Do not tighten the lock nuts between the joints yet, you will need to be able to adjust them latter.

9. Re-fit the bell-crank to it's bracket (making sure the shaft is clean and lightly greased (using the supplied Molybdenum grease), replace the nut, tightening only by fingers until there is no slack on the pivot, but not enough to cause any friction, then tighten the lock-nut.

10. Bolt the other (lower) rod end to the gearbox selector bracket, using the bolt, the joint, the plain nut, the bracket, and finally the Nyloc nut.

11. Push the gear cable Nylatron bushes over the cleaned up pivot points. Once the cable ends have been greased, these can then be pushed over the Nylatron bush, followed by the M8 washer and secured by the 'R' clip (as shown).NB\* Grease all surfaces liberally.

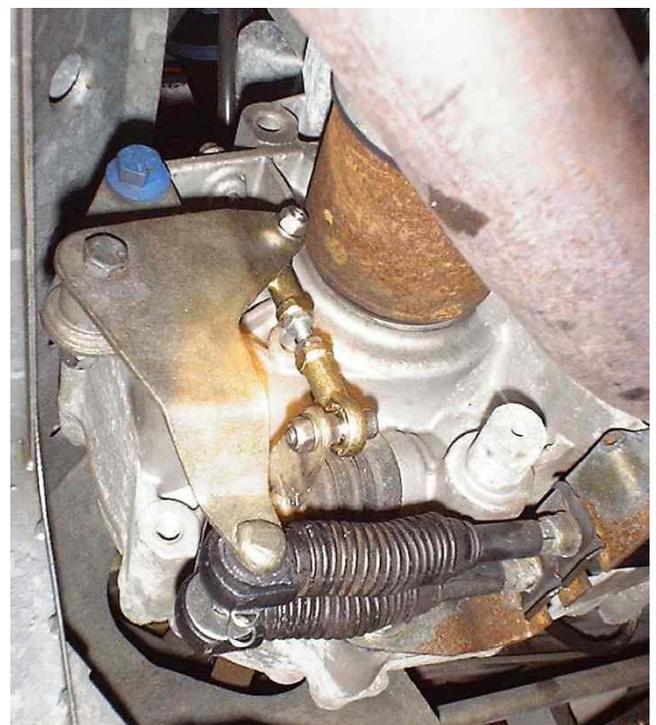


12. Replace the cable clips. The whole assembly should look something like this.

All that needs to be done now is to check that you can reach all the gears; this is best done with an assistant. Whilst watching the linkage get the assistant to select 2<sup>nd</sup> Gear, and then 5<sup>th</sup> gear. If all is well, tighten up the lock-nuts between the rod-ends, making sure that they can still articulate.

If you can't reach 2<sup>nd</sup>, then you need to shorten the distance between the rod-ends, if you can't reach 5<sup>th</sup>, you will need to lengthen the link. To adjust the link, un-bolt the lower rod-end from the selector bracket, then turn clockwise (to shorten) or anti-clockwise (to lengthen), then re-fit.

When you are completely satisfied you have correctly adjusted the joints, make sure they are all tight, and re-fit the under-tray and test drive!



## **TROUBLE SHOOTING**

Disconnect the gear cables at the gearbox and move the inner cables by hand. If the gearlever now moves quite freely inside the car then the problem is within the gearbox itself.

Movements of 1<sup>st</sup> to 2<sup>nd</sup> and 3<sup>rd</sup> to 4<sup>th</sup> and 5<sup>th</sup> to reverse are simple inward outward motions and the cable directly moves backwards and forwards only. If these are heavy/difficult then the problem is "probably" within the gearbox.

If the issue is with 1<sup>st</sup> to 2<sup>nd</sup> and not 3<sup>rd</sup> to 4<sup>th</sup> then the cross gate linkage needs more adjustment.

Ideally adjust the linkage so you get 1<sup>st</sup> to 2<sup>nd</sup> perfect if you then have problems with 5<sup>th</sup> to reverse you can still adjust the small adjuster screw under the plastic gear cover in the cockpit of the car (at the side of the gear lever). This screw limits the bell crank (side to side) motion and simply unscrewing it further will give you a few mm more movement at the gearbox end