

Clutch Notes

Recently I received a mailing from Jim Buckley concerning the Sprite Clutch: He was having problems with the system pumping up. Jim has since sorted out the problem so for this edition of the Site I have moved my reply here for its technical tip content...

The clutch used on the Sprite does not have a return spring as such, it relies upon the diaphragm springs in the clutch pressure plate to push the release bearing back when the pedal pressure is released. The bearing should stay very close to the clutch plate and not be pulled completely clear - a bit like brake pads when the pressure is released. The initial pedal press after rebuilding will often produce more movement than subsequent presses as the first press will take up any slack in the system. The amount of movement subsequently visible at the slave cylinder is surprisingly small, so with regard to your son's clutch I would ask the following questions:

1. Does it work? i.e. does it slip when you drive the car (can you engage the drive at all?). If it does chances are that everything is OK. If the car is not driveable try putting it in gear and getting someone to push it and you should be able to tell if the clutch is disengaging OK (admittedly this won't tell you if it will slip under load), I am presuming here that the engine is complete and has compression.

2. Does the pedal return after you release it, and if you depress it once can you then depress it a second time? If the answer to both is know then I would suggest that you may have mistakenly assembled the master cylinder incorrectly. Watch out for the effect of pumping up the cylinder i.e. each push of the pedal produces more and more extension of the slave cylinder pin until eventually the arm reaches its limits this is a definite indication that something is wrong in the master.

The hydraulic system on the Sprite is fairly simple and presuming that you have followed normal procedure on reassembly i.e. cleanliness, not re-using cylinders with rusty bores, (and of course reassemble in the correct order) then you shouldn't have any problems. I may be getting confused with the brake master, but If I remember correctly there were two variants of the master cylinder with different innards; a long shot is that you had the wrong repair kit, but this is unlikely as you would have noticed the difference between the bits you removed and those that you fitted, there are usually details of this difference in the literature that comes with the overhaul kits anyway.

Lastly one thing to check would be that the release arm is fairly free to move. It shouldn't exactly be sloppy but there should be very little resistance to its lateral movement in the box: I haven't ever heard of this arm becoming tight, it usually becomes sloppy quite quickly as it pivots on a phosphor bronze bush which can wear quite rapidly, (especially if you have a tendency to drive with your foot riding on the clutch pedal). If however this arm was sticking it could conceivably give the effect of clutch slip or permanent disengagement. If this is the case you could try some WD40 carefully applied through the inspection hole on the underside of the bell-housing directly opposite the release arm aperture, (careful you don't get it in the clutch though).

I would check 1. first as if it works OK then it is unlikely you have a problem; but if it doesn't work or has the symptoms of 2. and the cylinder is assembled correctly I would probably blame the rebuild kit: I have heard that genuine kits are hard to get hold of in the US. Finally a word of warning; on the LHD models the clutch is very hard to bleed correctly by conventional methods, (I don't however know if this is true of the RHD models

as obviously the pipe run is different). If the clutch slave moves but won't disengage you've probably got a bit of air in there. I spent a whole day trying to bleed a clutch on a Sprite once by hand; it always seemed as though there was no air in there but just wouldn't work. I had to resort to buying a pressure system in the end (on of those that works on the spare tyre), and I've never had any problems since.

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