The 5-speeder Ian Brett

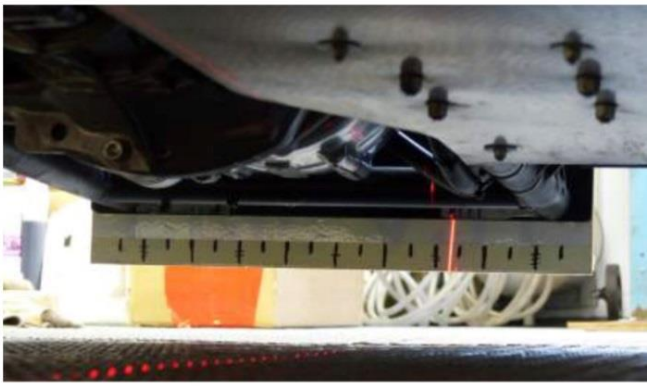
I am taking on the new role of 5 Speeder Liaison Officer. As more 5 Speeders come out of warranty and owners may wish to maintain and modify their cars, I hope to be of some help to them. I do not pretend to know it all but I may be able to find someone who does know the solution to a problem or have some useful advice. I have owned my 2013 5 Speeder from new and was part of the unwitting "Customer Development Team" that was the first 1000 or so owners. I have been asked to write a regular 5 Speeder related article in the *Bulletin*. I have a few items planned, but if you have tips or anything of interest to other owners, please let me know and I can include it. I start with . . .

Aligning the rear wheel on a 5 Speeder

The handbook instructions for removal and fitting of the rear wheel says to screw the adjuster bolts evenly on the back of the swing arm. This will give approximate alignment, but the adjuster screw brackets tend to deform and a small error here can drastically alter the alignment of the rear wheel.

After watching the wheels on an ordinary car being aligned using a laser system, I thought something similar could be used on the 5 Speeder. I have a Bosch PLL1P laser level – there are several similar ones – this one is £30 from Screwfix (item 7879G). The laser projects a dot from one end and a line from the other, I find the line easier to see for this job. The laser needs a target that is central on the chassis and at the front of the car. I hang an old number plate with graduations marked on the back face from the fitted front number plate. This must be central between the chassis rails and visible under the car from the rear wheel when it is jacked up off the ground (see photo).

To adjust the alignment, first check that the rear wheel is not distorted by spinning it over; you must also check that the swing arm is central in the chassis. Place the level flat against the lower edge of the wheel rim (see photo below) and note where the laser line is on the target in relation to the centre line. Go to the other side of the wheel and do the same, using the same face of the level against the rim, and check the position of the laser line on the target again. Obviously you need the two measuements to be an equal distance from the centre of the target. Use the screw adjusters until you have the laser lines equal left and right of the centre of the target.



The wheel alignment and tension of the drive belt must be set at the same time. Tension of the belt is about right with 5 -10 mm vertical deflection at the midpoint or 45 degrees of twist. The belt should be tighter side if you have the NVH kit fitted. If it is too loose I find my car's transmission makes a turbine-like whine under acceleration, too tight and the bevel box makes (even) more noise than usual. The drive belt should have about 5 mm clearance from the sidewall of the tyre at the closest point. Once alignment and tension are good the large axle nut and bolt should be fully tight-ened. Check alignment and tension again after this as is can change. Finally, fit the split pin to the axle nut.

The wheel should now run straight and tyre wear will be even. If the alignment was out by a lot before, you may need to re-centre the steering wheel. Another job . .