

## Maintaining a Triumph TR7

Acknowledgement: John Dobbins.

Having owned quite a number of TR7's over the years and worked on many more as a result of my present day time activity I thought some pointers on maintaining a TR7 could be helpful to you DIY types.

The TR7 has a number of inherent weaknesses which if attention is not paid to can have expensive or just inconvenient consequences so I shall start with these.

The engine has a cast iron block and aluminium cylinder head which with a copper cored radiator sets up a perfect condition for galvanic corrosion to take place with the aluminium head corroding. It is therefore imperative to ensure your coolant has an antifreeze added with a suitable inhibitor. A 50:50 mixture of water and antifreeze is recommended. Whilst on the cooling system it is interesting to note that the water pump is situated in the block and if either of the seals fail tell tale signs of coolant or oil will be seen coming out of the rectangular hole on the side of the block under the carburetors. Plugging the hole with silicone is not the solution and the pump has to be removed and replaced with either a new one (very expensive at about R3000) or have yours reconditioned at a cost of about R500 if the impeller is not too badly corroded. The thermostat is not the same as is used in other Triumphs as it has an additional valve on the bottom of it to block off / reduce coolant flow from the head to the pump when the engine is at operating temperature. I have found that a high proportion of TR7's have the wrong thermostat which is strange as it is readily available as it is used in the early VW Golfs (part no 1240).

The timing chain on the engine is of the simplex type and stretches very easily and like the cambelt on modern cars should be renewed at about 80 000 km. These engines do bend valves which is an expensive repair so pay attention to this.

The front brake pads on the TR7 are very small (same as a Mini GTS) and so brake fade is common. The resultant heat build up also results in the life of the front wheel bearings being limited. Once again these are readily available and inexpensive. Upgrading the front brakes on a TR7 is recommended to avoid the brake fade situation and you can do it by either importing a kit from the UK or the cheaper option of replacing the callipers which those off a Chicane (you have to drill out the mounting holes to take the metric bolts and chain to get the centre line correct) or rear wheel drive Fords such as the Escort and Cortinas. New seals and pistons should be fitted to second hand callipers (Mark at BBS can supply). Fitting a 25 mm front anti dive block between the front anti-roll bar and the sub frame and SD Rover rear wheel cylinders also improve braking.

The five speed gearbox has a small oil pump in the 5<sup>th</sup> gear housing which delivers oil down the main shaft to the input shaft bearing. Lack of lubrication to this bearing results in its failure which in turn allows the main shaft to drop onto the lay gears and destroy the gears. Normal EP90 gearbox oil especially when cold is too viscous for the pump to supply oil to the bearing so a less viscous oil is required. ATF seems to be a popular alternative which works well except for increased oil seepage past the "O" ring on the selector shaft. Incidentally the oil pump is driven by the lay gears which do not turn when the car is in neutral which is why you should never tow the car long distances with the prop shaft connected as the main shaft is turning while the input shaft is not and the bearing is getting no oil!

Regular oil changes are essential as firstly the oil filter is very small (once again Mini size) and lack of oil feed to the cylinder head can result in wear to the "buckets" between the camshaft and the valves as well as possible bearing failure. Changing the oil and filter every 5000 Km or once a year is a good policy. The Mini oil filter looks the same but I am not sure it is suitable so rather import the correct one or convert to a "spin-on" type as filters are locally available plus filter changing much easier. Oil leaks are not usually a major problem on a TR7, assuming gaskets and seals are in good order but a mysterious one which eluded me for some time is on the right hand side of the engine in the region of the oil pump. The oil pump which is external to the engine seals against the block by means of a large "O" ring plus there is an "O" ring on the cap of the pressure release valve in the oil pump. 'o' rings harden over time and as a result no longer affectively act as seals, so if you notice oil on the garage floor in the vicinity of the clutch slave cylinder remove the oil pump and replace both "O" rings, especially the one on the pressure release valve.

The electrics on a TR7 can be somewhat of a night mare especially if an immobiliser has been fitted or an auto electrician unaware of the system has worked on the car. In general the most common problem is the raising and lowering of the head lights and the non-operation of the park lights. Component failure such as the 5 pin relays that activate the headlight motors can be cause of the problem but mostly I have found it to be poor electrical contact in items like the fuse holders, switches, multi plug connectors and globe holders, so first and foremost make sure all the electrical connectors are in good order. Bulb holders, fuse holders, multi plugs and the light switch itself are in good starting off points to make sure good electrical contact is being made. A small piece of 200 grit water paper and switch gear cleaner as used by electricians are needed to clean oxidised surfaces. The hazard and light switches can be disassembled by careful use of a small flat screw driver and on a surface where you can catch the small springs and contact pieces that have a habit of jumping out and vanishing!

Wipers have a habit of not switching off automatically or parking in the correct place. If you have used the intermittent

wiper you first have to go to the “on” position and then to the “off” position to cancel it, which is how the system works. The wiper motor circuit has two power sources, one from the switch itself and a continuous one that is interrupted by the “parking” switch in mechanical part of the motor assembly. The position of this switch is adjusted by means of two small screws, which if incorrectly set or not connected to the lever on the wiper rack (which could be broken or incorrectly positioned) will result in non-parking.

Removal of the top cover of the motor assembly is necessary to assess if the lever is doing its job. If one or both of the wiper arms appears “lazy” in operation and not covering the whole windscreen check that the nuts on the wiper wheel boxes are tight and that the wiper rack tube is correctly located in the wheel boxes not just “floating”. Also check that the nut connecting the wiper rack tube to the wiper motor assembly is connected.

As an addendum to this article I have included a list of locally available parts you might find useful.

If you have any questions please feel free to contact me on 082 508 0910 (cell) or 011 708 1722 work.

John Dobbins.

Locally available TR7 Spares.

With the ever increasing cost of importing spares due to the weakening of the Rand I thought a list of spares readily available locally would be of help to TR7 owners. Perhaps other members can add to this list.

Part Description	Part Number	Comments
Speedo cable	Anropa 2351-133	Rover SD
Front wheel bearings	Unipart front hub bearing kit GHK1004TIMKEN contains inner, outer, 1x seal and 1x split pin. Outer Timken Set1 (LM11749 & LM11710) Cup/Cone Set Inner Timken Set4 (L44649 & L44610) Cup/Cone Set	Venter Trailer
Points	CS787 Echlin	
Condenser	RR174 Echlin	
Rotor	RR178 Echlin	
Timing Chain	RF06B	1 m required
Master link	RF06BCL	
Front oil seal	MIS114	
Diff oil seal	SM30477	
Clutch plate	6337	Cortina 1600
Release bearing	RB9545	Chicane
Air Filter	Fram CA3166	XJ6
Thermostat	Echlin 1240	Golf
Rear Wheel bearings	Kit 153	5 speed
Rear shocks	Gabriel 45078 (G45078)	
Front brake pads	D84	Mini GTS