

### SAVVA Technical Tip 167 – Welsh Plugs (core plugs)

Some months ago, we discussed overheating problems - the curse of older cars which was invariably caused by loose or broken fan belt, blocked radiator, or hose problems and the subsequent loss of water. Recently whilst assembling an old engine, I was reminded of another problem.

One of the most overlooked parts of water-cooled engines is the core or welch plugs. They must be the cheapest part of an engine to replace and the most overlooked but if they pack up unexpectedly, as they usually do, the result can be catastrophic to the engine.

When last did you check the plugs on your engines? Unfortunately, some are situated under the carburettors and difficult to get to or in the bell housing which means removing the gearbox, clutch and fly wheel to get to it.

Modern cars have all kinds of goo in the water system which protects the alloy and aluminium components and also the core plugs to a certain degree. Over the years however, with the older cast iron engines, anything that resembled water went into the radiators resulting in the water pumps, hoses and core plugs having a terrible time trying to survive.

There are two types of plug, a cup and a saucer. The saucers, which were used on early engines, are becoming increasingly hard to find and if necessary, one has to revert to using the modern cup ones. In the past, in desperation, I've had to use cup plugs instead of saucer ones and ground most of the lip off until they were a tight fit and swathed them with good old Indian Head shellac and tapping them in. Once fitted they did the job.

Ideally, if you can, making or finding brass plugs is the answer. One wonders why vehicle manufacturers didn't fit brass as standard. Perhaps because it would add a few Rand to the cost of the vehicle which would be a tragedy for them.

Incidentally, I recall seeing a mining tender for rebuilding engines and they stipulated brass core plugs – I wonder why????

The following pictures show the different plugs. The smaller being an old saucer and the larger a modern cup.

