

## Imp powered motorcycle sidecar

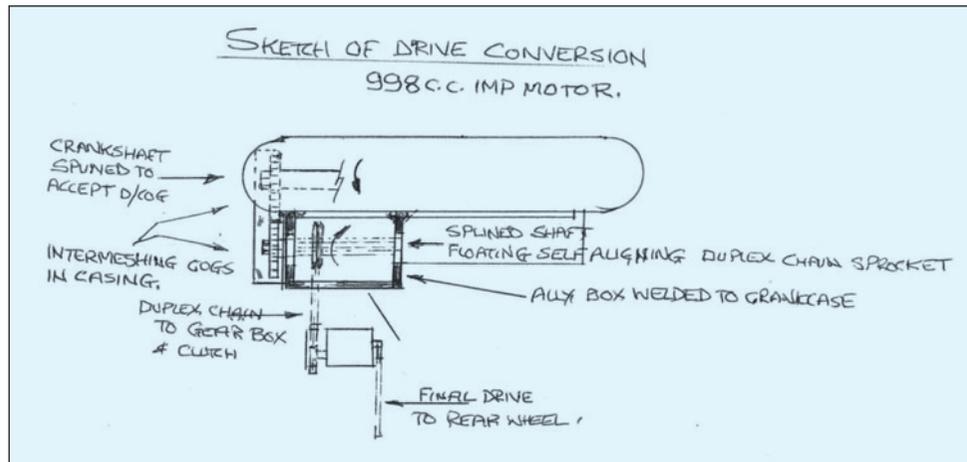
Derek Savill (non-member), Tenerife

It was in 1963 when I first took sight of a Hillman Imp engine – my dad had bought one of the very first cars produced by the Rootes Group. After using the car for a few weeks he found it to be too lively and also found the accelerator difficult to control, unfortunately he decided to return it to the dealer.

In 1970 I began racing sidecars with an outfit powered by a 750 cc Triumph motor which was reasonably competitive. Later the Japanese machines came along, most of us competitors with British powered machines found it very difficult to compete with the Hondas and Yamahas and it was therefore necessary to look to alternative power units, the Japanese motors were very expensive at the time so were beyond me.

I had seen one or two Imp engines installed in sidecar chassis, but configuration made access to the carburettors very difficult if any tuning was to be carried out once installed.

I was very keen to produce my own sidecar power unit and decided to go and ahead with converting an Imp engine with the necessary modifications in order that tuning adjustments could be carried out easily. In order to do this the motor would need to be installed in the opposite direction in order that the carburettors were easily accessible, but this would mean that the rotation was in the opposite direction to what was required to drive the primary and final drive chains. I then came up with the idea of installing a driveshaft in a casing welded on to the crankcase which was to have a drive cog on one end engaging with a cog mounted on the end of the crankshaft. This method seemed possible to me but I would now need to consult with both an engineering company and a competent welder as the box which was to house a shaft would also require to be welded to the crankcase. (See sketch.) I was only informed later when designing the half engine that, with various valve and timing modifications, it could be run in the reverse rotation which would have saved most of the work shown in the sketch, and was the method I used on the later half Imp project!

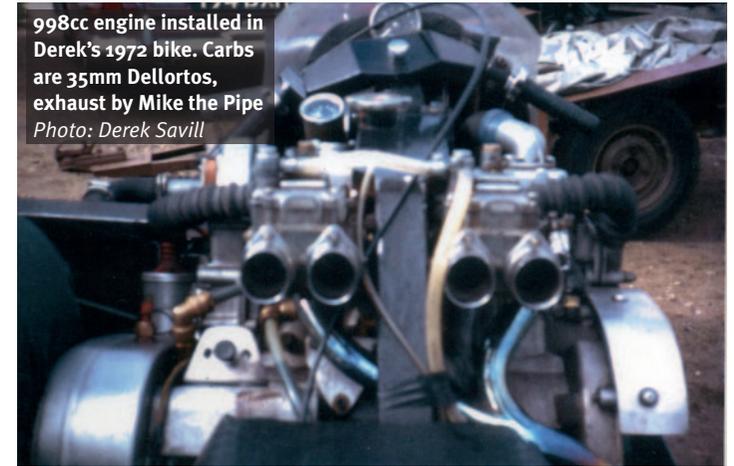


Fortunately I had very good contacts in the engineering field, and after many lengthy discussions I decided to go ahead with the project which probably was more expensive than the cost of the Honda engine.

I acquired the crank-cases from Paul Emery Cars in Fulham. Paul was a great help to me by assisting with finer points of preparation and final tuning; he also helped me later on when I was designing the half Imp motor which I will describe in a future article.

The next step was to weld the aluminium box on to the rear of the crankcase which would subsequently be bored out to receive the roller bearings into which the layshaft was fitted. (Again, see sketch.) The next stage was to carry out the machining, i.e. splining the end of the crankshaft and also the entire length of the layshaft to accept the intermeshing drive cogs and the duplex chain sprocket which would provide the duplex chain drive through the motorcycle four-speed gearbox and clutch.

Mike the Pipe, as he was known, was a specialist exhaust pipe manufacturer at Mitcham in



Surrey, produced the bespoke manifold and exhaust system.

Paul Emery recommended the use of twin choke 35mm Dellorto carburettors as in his opinion the narrower inlet tracks improved the balancing of the fuel inflow.

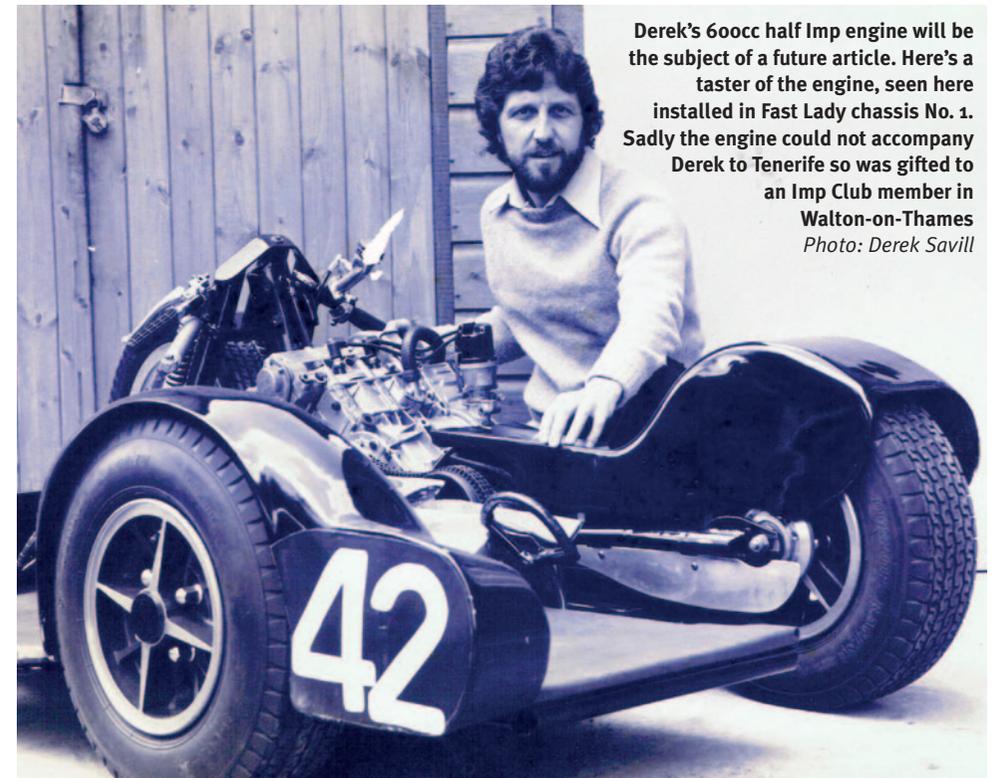
The cooling was provided by the radiator installed in the nose cone of the sidecar, pumped by an electric water pump through a header tank which was integral in the top tube of the frame.

Wills rings were used in place of a conventional head gasket in order to ensure independent sealing of the cylinders at high temperature and compression, again as advised by Paul Emery.

Obviously there were many more refinements to be carried out to mounting brackets, electric fuel pump and battery mountings, etc. Surprisingly the initial tests on the Snetterton circuit were very successful, and only minimal changes were necessary, and I was placed most favourably on the very first outing.

I raced with this engine for a couple of years before deciding to build the half Imp motor which unfortunately I was unable to complete prior to emigrating to Tenerife.

I had always promised myself that I would bring a sidecar outfit to Tenerife as I knew that it would create a lot of interest at classic shows and events. It has taken 30 years to achieve that ambition as it is now the only one on the Canary Islands. My passenger and I attend classic shows regularly throughout the year and also demonstrate on the track on occasions. The interest is amazing with the motorcycle and car enthusiasts alike. (Google 'Viejas Glorias 2016' for details of our first show on Gran Canaria in 2016, we have exhibited there every November since.)



**Derek's 600cc half Imp engine will be the subject of a future article. Here's a taster of the engine, seen here installed in Fast Lady chassis No. 1. Sadly the engine could not accompany Derek to Tenerife so was gifted to an Imp Club member in Walton-on-Thames**

*Photo: Derek Savill*