TECHNICAL NOTES SERIES

JOWETT JAVELIN – PA, PB, PC, PD & PE

– PART XXII –

INSTALLING AN ELECTRIC FUEL PUMP

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Compiled by Mike Allfrey – 12th November, 2015.
Revised – February, 2024.

INTRODUCTORY COMMENT FOR TECHNICAL NOTES

These introductory notes should be read prior to reading Part XXII of the Technical Notes Series.

The Jowett Technical Notes Series have been an ongoing activity for several years. That means that some techniques and specifications may have been superseded in later notes on the same, or associated topics in the series. Also be aware that some topics and recommendations may be specific to certain Engine Serial Number ranges. It appears that, in Australia, the various State Main Agents did not carry out Service Bulletin information during Jowett active times. A set of known Service Bulletins is in Part III.

Some of the notes are restorations of what was written by members of the Jowett Car Club (UK), the Jowett Car Club (NZ) and by members of the JCCA.

Over the years of involvement with matters Jowett, and with the dawning of the personal computer age, a personal decision was made to help members of the Jowett Car Club of Australia Inc. with technical information. Included with the Technical Notes are 'restored' versions of the Javelin and Jupiter Maintenance Manuals and the associated Spare Parts Catalogues. Future generations will prefer to flick through images on their personal device screens, rather than leafing through pages in a tattered and oil stained book to access information.

The term 'restored' has been used because it soon became apparent that, as with our efforts in restoring Jowett vehicles, we desire excellent quality of workmanship in the reproduction of Jowett related documentation. Not for us the crude, and crooked, photocopies that have been issued over the years. These have, even though accurate at their time, become partly out of date.

Hence the decision to 'restore' the publications and documents that have come to hand.

It should be noted that the Javelin and Jupiter Spare Parts Catalogue is a combination of all the catalogues that were to hand (from 1948 to 1953).

The Maintenance Manuals were originally written on the assumption that they would be used by skilled motor mechanics who had attended service training courses conducted by Jowett Cars Limited and after works closure, were made available for owners who had reasonable mechanical knowledge of motor car maintenance and overhaul.

Included with the Technical Notes Series is a Lucas Overseas Correspondence Course, which can be of great assistance when trouble-shooting electrical problems related to your Jowett, or any other British vehicle of the same period.

Please be aware that this is an ongoing project . . . .

Mike Allfrey – February, 2024

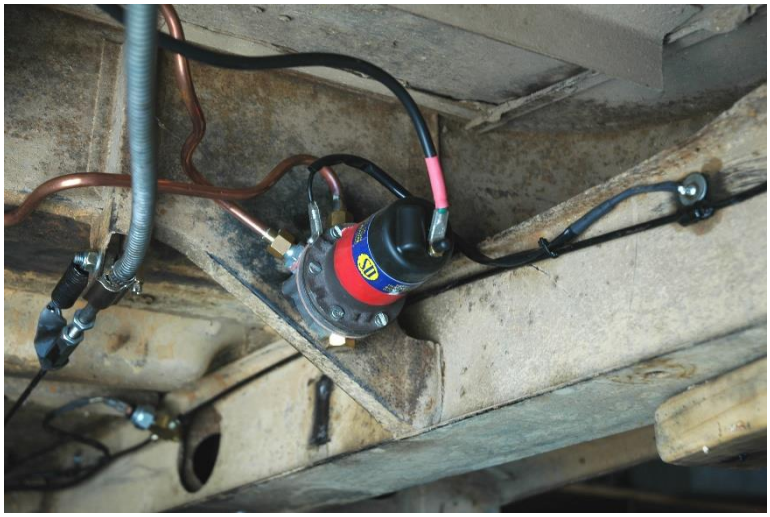
INSTALLING AN ELECTRIC FUEL PUMP (SU)

An Electronic Sound Effect 'Click'

As a part of preparing our Javelin for the National Jowett Rally at Armidale, the engine's petrol supply came under consideration. Over the years I have developed a mutual relationship with the AC mechanical pump – it is based entirely on mistrust. Mind you, my relationship with the electric SU type pump has always been such that when it becomes erratic, throw it away and install a new one. This philosophy is based on fiddling with points on Morris Eight vans in winter snows and trying to obtain some petrol flow to the twin SU carburettors on various MGs. Fortunately, my Jupiter's electric pump has been reliable over the years. However, while the engine was out and the overhauled one being built, the pump became sluggish in operation. A look in Holden Vintage & Classic's catalogue revealed that electric fuel pumps to the old SU configuration were still readily available. A Positive-to-Earth unit was ordered on the Internet, and it arrived four days later. Very convenient, until Tony George threw his biggest spanner in the works! Electronic ignition, as described in a recent issue of *The Javelin*, also refer to *Technical Notes – Part XX – Electronic Ignition*.

In my situation, this was too tempting and, as part of the engine project, electronic ignition was added. This required that the Jupiter's electrical system be converted to Negative-to-Earth. The Holden Vintage & Classic Website was perused again and a pointless electronic pump was here in two days. Their service is as good as that of our Club!

Thus I had a spare (new) SU Positive-to-Earth petrol pump sitting idle and, as the Javelin's overhaul was progressing, it was decided to convert to electric pulses rather than mechanical thumps. The car was high up on chassis stands and the underside rear was studied for a good location for the pusher type pump. On the driver's side, at the rear under the seat there is a convenient triangular gusset inboard of the chassis R.H.S. box member. Two ¼-in. holes were marked out and drilled for the pump securing setscrews. A suitable piece of 3 mm steel plate was found under the bench and was similarly drilled and cut to size to form a strengthener, the chassis gusset being sandwiched between the pump and the support plate. That was the easy bit.



Right: Figure 1. SU pump mounted on gusset and its pipes. To the rear of the pump is an earth cable.

A couple of metres of $^{5}/_{16}$-in. OD copper tube was obtained and, using a pipe bender in the vice, along with many trips under the car, the pipe work was formed and installed. Joiner olives and unions are still available from Pirtek, as are the silver solder nipples for the petrol pump inlet and outlet unions. Furthermore, once the tubing is bent to shape, Pirtek will silver solder the nipples to the pipes. It was decided to remove the pipe from the petrol tank, this is a steel pipe and it was in good condition. The petrol tank is on the L.H.S. of the car and the pump is mounted on the R.H.S. The pipe from the tank was cut and bent, using a tube bender, so that it passes over the rear tail shaft shield. Where it passes over the shield, a length of loose fitting rubber hose was fitted over the pipe to prevent rattles. An olive connector joined the supply pipe to the copper tubing connected to the pump's inlet fitting. Suitable pipe clamps hold the pipe to the underside of the car.

The outlet side of the pump was connected to the remaining piece of the original supply pipe adjacent to the mid-ship bearing cross member, the copper tube passing above the mid-ship bearing support and held close to the floor with pipe clamps. With this installation, my car now has an electric petrol pump in a similar position to that in my Jupiter, so it should work well in delivering suitable amounts of fuel to the carburettors.

An earth cable, from the terminal on the pump body, was attached to the chassis gusset and a main feed cable was inserted into a sheath with the petrol gauge cable and a ring-in red cable of unknown parentage, but as all the electrics worked before the car was laid up, was left well alone. This feed cable was then secured along the under body and continued up to the front bulkhead. The electrical supply to the petrol pump is taken via a fuse box from the control box A5 terminal, like the Jupiter.

All that remains to be done is the installation of a good filter and a Petrol King pressure regulator, most likely on the front bulkhead. There is now a thick aluminium plate mounted over the original petrol pump mounting face on the crankcase.

Mike Allfrey.

WARNING!
ASBESTOS COULD BE PRESENT IN GASKETS AND FIBRE WASHERS