

The Continuing Story of TBM 895



Removal of anything removable progresses in friend Dave's garage.

TBM 895 is a ZB Varitone Magnette and first appeared in the June 1985 issue of *Enjoying MG*. Since the end of 1983, when the first part of the story ended, many things have happened. This has turned out to be a very long restoration project but I am sure that it will not approach the all-time record. Those of you who meet rather more demanding schedules will not be impressed... the rest of you probably won't be impressed either.

The original reason for buying the car was that it seemed to be a good way of acquiring a reliable vehicle which should give good service in regular use and should last many more years without costing a fortune to maintain - yes, I certainly believed all those other articles I had read about the MG Magnettes. After a while it became apparent that there were some problems involved in running a car as old as this, the main one being that some parts are not easily available and this can lead to problems if you are relying on the car as the main form of transport. Fortunately I have had a second car to use regularly (Ford Escorts may not be MGs but they are good work-horses) and so the ZB is now a much-loved indulgence. Much-loved by all the family, so with the former urgency removed from the project I can now approach it all in a more relaxed way and hopefully do it all the right way. I will state now that it was never my intention to present the car in original condition - I have made changes which I consider improvements on the original and I also accept that this may be a matter of opinion.

The first idea was that as the car was to be in regular use the rebuild should be done a bit at a time, starting with the most urgent matters. I did a lot of planning to start with and then realised that I



General view of rust in offside side-beam.

was much better at planning than doing. All I had achieved by the Spring of 1984 was a frighteningly large list of Things to Do'. The only work I had done on the car (apart from removing all the doors and then replacing them) was to run the engine up to working temperature occasionally, and if the weather was dry, shunt up and down the driveway to remind the car of its true purpose in life. Then a friend intervened.

The friend features in the story throughout 1984, not unfortunately purely because of his help in providing the necessary kick-start to the rebuild project - I will call him Dave since that is his real name.

Dave has a double garage which he was prepared to let me use for a time. This was a welcome offer despite the mile or so journey that was necessary in order to work on the car. He also persuaded me that the only way to really do the job was to strip the car completely and put it back together as each part was restored. I set to work inspired by the novelty of working in a large garage uncluttered by

many bicycles and other paraphernalia of transient hobbies. All the interior trim was removed, including a rather sad roof-lining which I decided would have to be replaced (this will be included in a later article - I hope). To assist in re-assembly I packed small items like nuts and bolts into separate polythene bags classified by the main part to which they belonged, labelling them all and putting them all in a larger container. This is a highly recommended method by which the careless amongst us can also loose the whole lot in one go, so take care at this stage; do not use plastic bin-liners for obvious reasons!

Throughout the work I also took photographs to show the 'Before' and 'After' state of the car. Some of the pictures accompany this article and I hope they will give a general idea of what was required and how the various repairs were carried out without the need to go into minute detail with exploded diagrams. Apart from obvious additional uses for later valuation etc. I have since found some of the pictures useful for reminding me where some of the parts belong, for example, I now know that the engine should go back in the front half somewhere.

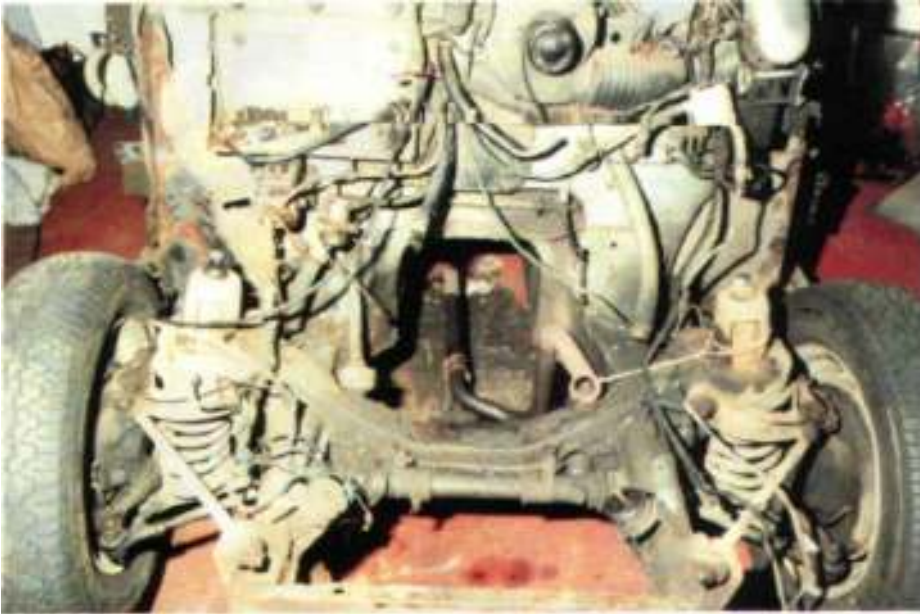
Lights and other external items were then removed and packed carefully together in a large box. I then removed the front panels, which all bolt on, the engine, transmission, doors (yet again), and any other bits likely to be damaged in the following processes or likely to be concealing parts of the main body-shell in need of major repair. I labelled the wiring-loom as comprehensively as possible since all the colour-coding had faded, numbering all connections and switches in order to assist in the re-assembly process, and then removed the whole lot. The wiring was in very good condition, entirely original, and will be re-installed.

The engine and gearbox had performed admirably during the period we had been using the car but it was apparent that with synchromesh suffering on second and third gears the gearbox ought to have attention. I removed the cylinder head from the engine to get some idea of its condition and decided that bore-wear was a bit excessive. As Dave pointed out, it would be a bit daft to present a rebuilt car with an engine likely to give up the ghost any mile now. The question was whether to rebuild or replace and if replace then perhaps with a different, newer type of power unit. This was a problem which was not going to be pressing for some time however.

I was now left with a bare body-shell, still on wheels for convenience. I knew that the sill-replacements commissioned by the previous owner had been bodged and concealed extensive corrosion in the side-beams so the first major step in the restoration of the body-shell was to replace these parts (both sides) so that only sound metal remained. I also had a hope that correct replacement followed by thorough anti-corrosion protection would mean that a similar exercise might not be necessary until I was too old to care about cars. This event is a long way off despite the comments of so-called friends and family pursuing cheap laughs.

The box-section formed by the inner and outer sills is a quite substantial structure on these cars.

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General view of front end showing its general state

at least it is when they are in good condition- The main problem seems to be caused by condensation rotting away the lower parts and gradually creeping upwards. On TBM 895 the rot had stopped at the halfway point so I was fortunate that the lower door-frames were still very strong and that repairs would be simplified. After much deliberation I decided to get a local engineering company to fold the necessary basic parts. I decided to use 14 gauge mild steel for the outer and bottom parts of the box - slightly thicker than the original gauge, but giving greater rigidity to compensate for the possible inherent weaknesses of welded joints where there used to be one-piece panels. That's the theory anyway. The half inner sills needed were folded from 16 gauge mild steel and I also designed panels to repair the floor-pans and 2" panel stiffeners for them to match the existing ones under the car. I had to consider anti-corrosion treatment carefully since it was not possible to get galvanized steel in the gauges required at the time.

I am not convinced that galvanized steel is the best material to use; the plating must be removed for a considerable area around parts to be welded because over-heating can produce a poisonous gas. This leaves areas where corrosion is likely to start so final painting is just as important - and paint does not adhere so well to the remaining plated surfaces. When it seems that you just cannot win it is reassuring to find a good choice of rust-proofers and final-finish paints available, one of the best being Finnigan's Hammerite. Hammerite gives a superb finish when sprayed using the correct thinners and with a final coat of nearly neat thinners. Another big advantage with spraying Hammerite is that those rust-encouraging pin-holes left after brushing are avoided. Although it is recommended that Hammerite should be used directly on new or rusted metal I have achieved good results by using a rust-preventive/primer with a top-coat of Hammerite providing its characteristic non-stick and durable surface. One of the best rust preventive/primers I have found is Comma Stop-Rust which brushes on easily, dries to a smooth continuous surface and seems to do its intended job very well. In the end I have used a few different combinations of primer/Hammerite/



All the unground metal removed.



Bulkhead after initial cleaning.



Underside after floor repair completed and prior to fitting of new jacking-point.



The result of a few weeks hard graft - the front chassis legs after stripping and repainting.

Waxoyl on different parts so the car will be a sort of mobile laboratory when its all complete. To prevent a patch-work quilt effect visible bits have been finished with the same type of treatment. Time alone will now tell.



First step in installation of new jacking-point - 14 gauge inner strengthening parts welded in.



Offside jacking-point showing advanced decay revealed by removal of sill



Showing relationship Between new jacking-point and already completed work on floor and sills.

It was when the work was progressing very well that I received a telephone call one evening informing me that Dave had been involved in a serious accident driving his lorry and was likely to be in hospital for at least 12 weeks. Those weeks dragged by and some work on the car was accomplished but a lot of time was taken up with hospital visits and work for my injured friend and his wife. Dave had offered to gas-weld all the new parts for me but this would not be possible now of course. This additional setback gave me time to consider alternative methods, my own forte of arc-welding not being suited to this type of work. I had considered MIG welding but knew very little about this technology. Talking about the various options with people who did know suggested that MIG would be the best welding to use with its minimal heat-output, speed and strength.

Dave recovered slowly and returned home at Christmas. His own car would need to be housed in the garage so I packed my boxes, hired a trailer and moved back to my own garage. On the way I took the opportunity to visit a local jet-wash and spent a few pounds cleaning the layers of grease and road-dirt from the suspension and underside - a job I had not been looking forward to doing with a scraper, brush and paraffin. The jet-wash was very effective - it was only when I

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New offside jacking-point during installation



Front of offside side-beam showing how new parts have been fitted and prior to final finishing. The section with the circular ventilation hole is part of the new half-inner-sill panel and the L-section the new 14-gauge panel to replace the outer and lower parts of the beam.



Some parts of front suspension before and after blast-cleaning.

through cleaning and repainting. The dampers were all rather rusty but seemed to be in good working order - well, they hadn't done many miles from new so they should be OK¹ The rear springs were a different story however with considerable wear where rubber interleaving had disappeared and with the smallest leaves broken. I had no alternative but to find replacements.

With the suspension parts dealt with for now and the car jacked up to somewhere just below the garage roof (and well supported on axle stands because I still enjoy living really) I proceeded to cut all rotten metal off using mainly a small grinder fitted with met-cutting discs. I managed to remove the remaining parts of the old sills with a well sharpened cold-chisel and congratulated myself that new sills should now fit like the original ones. There was still the question of welding to be dealt with now. Again, Dave came to the rescue, pointing out that a local tool supplier was advertising a special offer on small MIG welders. I leapt in with both feet, clutching my Access card and bought a Sealey Mightymig 100 - probably the best thing I ever did since getting married (the wife always does my proof-reading).

I proceeded to practice MIG welding - not, I hasten to add, on my MG. Only when I had attained a level of consistent quality did I dare to start attaching my specially manufactured parts to the car. The results were well worth the expense and effort - one of the best features of this method of welding for those not familiar with it is the lack of distortion caused by excessive

heat. Another good feature is the convenience of having the welder available instantly, enabling you to fit, clamp and weld parts quickly and cleanly - especially thin steel plates.

Repairs to the offside inner sills and floor went very smoothly. The only part which took some time was the jacking point, which on the Varitone is a steel tube fitted to the side-beam at its outer end and a floor stiffener on its inner end. The tube has to lift the entire side of the car and when the inner attachment had rusted away it had pivoted on the outer attachment point thus becoming worse than useless. My replacement was fabricated from a few hefty steel parts including a new length of tubing from a redundant office chair. The finished product resembles the original closely but is a lot stronger, having been semi-welded to the floor for its entire length and to a new floor stiffener at its inner end. In fact, it is so strong you could probably lift the car using it! Repairing straight sections and flat panels is relatively simple but it was pretty obvious that my ingenuity was going to be taxed making repair section for both rear wings and front wings.

I had practiced my new craft on other cars and on the MG only where it would not show, leaving the pretty bits where bodge-ups were verboten until I could MIG with a surgeon's skill. I started with small repairs to the offside rear wheel-arch which was generally good apart from two small patches more hole than steel. Then another question raised itself - should I lead-fill where re-contouring of my repairs was needed, or should I use filler? Modern fillers are very good and it was not my intention to use vast quantities of the stuff - heaven forbid! I decided that as I had once seen a local, and very able, body-repair man using filler thinly on repaired steel this method would be alright for me - it is also much quicker.

Although I have started making repair sections for the rear offside wing this work is not yet completed. I now have to complete work to the offside of the car before refitting the suspension and turning the car round so that I can start on the nearside. Of course, with all the experience I now have the second side shouldn't take long, should it? I hope to be able to show the results of my work in a further article.

STEVE NICHOLAS
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returned to the cash-desk to get a final one-pound token and the proprietor asked me if this one was to jet-wash me that I realised where all the grease and road-dirt had gone. Eventually my rather unimpressive car was returned to my own rather cramped premises and I consoled myself that at least I could now do a bit of work when I felt like it without the journey at each end. Actually, it is better to do the work anyway because I don't often feel like it - but I have enough excuses to fill another page or two.

The early part of 1985 was spent removing all the suspension from the car. I then stripped the front chassis-legs of all paint and rust, gave the bulkhead the same treatment and then repainted with silver-grey Hammerite. This was all done in the cool winter evenings and it took rather a lot of them to get to the repainting stage. The spring turrets proved especially difficult - although they were very sound their interiors showed their years. A fair depth of rust flakes had to be removed by chipping away with small chisels, old screw-drivers and the like. At times the work seemed more akin to archaeology! The commission plates etc. removed from the bulkhead were almost illegible and so I polished them with wire-wool, painted them black, revealed the lettering with fine abrasive on a sanding block and then varnished them. The finished product re-fitted to the freshly painted bulkhead was very encouraging. Newly inspired I then approached a local anti-corrosion specialist with all the suspension parts which I had decided to have blast-cleaned.

Blast-cleaning cost me about £20 and was well worth it in time saved and quality achieved. A coat of black Hammerite following repairs to some parts which had partly rusted away and yet another job was completed. The front coil springs were blast-cleaned and shot-peened - a treatment recommended by my specialist to stress-relieve the metal. The springs were then spray-painted with the ubiquitous black Hammerite since it is no fun brush-painting coil-springs.

The back-axle was really only in need of a

