Memories and Reflections

My Years With The Allard Motor Company

By

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1932 - 2022

Part 2

The Second Round

Foreward

For many years up until his death, David had been writing his ‘Memoirs’. When he passed away I was fortunate to be left in his Will all his Allard related documents.

This included his ‘Memoirs’. Unfortunately there were multiple printed versions as well as about 30 digital copies - none of which appeared to be duplicated, each having various additions or amendments, plus numerous pages of notes.

We have therefore cross checked every copy, paragraph by paragraph, to try to ensure we have one complete version. Whilst it was necessary to make some slight adjustments we have tried to avoid duplication and retain David’s wording throughout.

Darell Allard

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Drawings and Photographs have been taken from David’s own collection.

Memories and Reflections

Part 2 - The Second Round

With my studies now complete I left Allard's to do two years National Service in the Royal Air Force and some two years later I had to consider my future. After a brief chat with Sydney Allard I gave up thoughts of going for an interview with de Havillands and rejoined the now much smaller Allard Motor Company. The Gran Tourismo Jaguar powered car was based on the Palm Beach/JR tubular chassis and was to be built at the South Side Clapham workshop. My first task was to design the mountings for the Salisbury 4HU differential unit for the prototype G.T. which originally had a live axle and was to be converted to a De Dion axle. The axle used the fully floating rear hubs, as used on the JR and had trailing link rear suspension with lateral location by Panhard rod. The front suspension was based on the MacPherson system using laminated torsion bars connected to the vertical sliding pillar by ball-jointed link. It's design originated from Dudley Hume and the consequence of this linking system produced very heavy steering. As the 'new boy' it was not for me to try and convince Sydney that there was no simple solution to reduce the heavy steering loads. Reductions in castor angle had virtually no effect. At the same time the existing drum brakes were to be replaced with front disc brakes, new hubs and adapter plates had to be designed to mount the Girling callipers. As a single master cylinder was used a proprietary brake booster was fitted which allowed additional pressure to be applied to the front disc brakes so that it was possible to achieve an acceptable brake balance. Most similar applications had used a servo to achieve acceptable brake pedal pressures, however the booster worked satisfactorily, albeit with a slightly long pedal. The Salisbury differential unit had to be fitted with backplates and brake drums, which was relatively easily achieved. However the handbrake operating linkage was only achieved with considerable difficulty.

During my time in the Forces, I had started to think about building a special and during spells of leave at home I began formulating my ideas. From some initial drawings, so that I could evaluate the strength of the chassis - essentially it's torsional integrity, I produced a ¼ scale chassis using a similar section square balsa wood chassis frame. At this time to run in the sports car class it was required to have doors, not only for the driver but also for the passenger. The special took years to build being finally registered as a Ford Special with a registration number of 20 RPH.

I had tried to register it, as a Manta Ford, but the Licensing Authority would only accept the name as Ford Special. The name was borne from the front body shape looking slightly like the Manta Ray fish, well before the Manta Opel usage.

The Manta Jaguar of Gordon Viola was my second venture into the world of specials and it came about in the early sixties. Gordon had purchased, from Don Farrell, a 3.4 Jaguar Special using a single tube (3" diameter) chassis, with Jaguar front and rear suspensions grafted on. It sported an aluminium body with the flattest nose you could ever believe. Without belittling Don Farrell's handy work it was, in my view, 'horrid'. By this time Sydney had decided to stop any further attempt to produce the Allard marque, however I had a wish that we should have resurrected the J2/J2X in a modern form. The company had started to move on to more productive work, so a chance to use some of the redundant Allard parts in conjunction with the next 'Manta' seemed a good idea. Having convinced Gordon Viola to rid himself of the Farrell chassis, I drew up a simple chassis using the Allard P2 2" diameter chassis tubes. Holding the view that there is little point in the chassis extending much further than the centre line of the front and rear axles the result was quite compact, requiring only light weight tubular structures to hold the front and rear of the body. This time, unlike with my own car, there was no attempt to provide a clear door access. There would be doors, but it was necessary to climb over the chassis to gain entry, this met with the spirit of the RAC regulations. Having decided a wheelbase of approximately 100", the relative position of the engine and gearbox in relation to the front axle, plus the track of the rear axle, the set of the P2 chassis tubes were slightly modified, warmed up and the shape of the bends slightly increased. It was now possible to begin to make the four major horizontal tubes. The cross tubes were cut to length and then with my elderly Myford ML2, a 1" radius was machined in the ends so that they fitted their mating chassis tubes. Once all the cross tubes were machined the initial assembly of the chassis took place. With the cross tubes accurately machined the assembly was a simple process with little fear of welding distortion.

The front axle would use the Jaguar upright, however like my own car, fabricated wishbones were made. The pivot points were phosphor bronze bushes with greasers. The use of aircraft type spherical joints was considered and would have allowed adjustments to be made to the suspension geometry. Their cost at the time would have been in excess of £200! The rear axle would be as per Allard with a De Dion axle utilising some Allard designed parts, plus a cut and shut Salisbury axle. Rather than using twin ball thrust bearings to locate the wheel ends of the axle Gordon opted to retain the Jaguar outer Timken race and inner ball thrust bearing – a cost saving but poor engineering solution with major difficulties in getting the correct level of preload. The diff unit was cut and shut to produce a unit similar to the Salisbury 4HU unit using more Allard designed parts. This diff unit was rigidly mounted on the chassis and incorporated the track for the De Dion axle location roller to operate. Twin radius rods, which picked up on the outside of the chassis located the De Dion axle. The coil springs and shock absorbers used were obtained from various sources, however while the shock absorbers needed overhauling the load carrying capacity of the springs was questionable. Using best estimates of front and rear axle weights plus, estimated spring rates, the shock absorbers were modified so that they acted as suspension units. Unlike the 'real thing' threaded adjustment circular clamps around the body of the shock absorber located the spring. Spring adjustment was then via a compressor, not a viable solution however it would suffice to do the job until proper suspension units could be had.

Once all the mounting points for the engine, gearbox, differential unit, brake and clutch were made and fitted the chassis was arc welded by Tommy McLaughlin, an enthusiastic fitter. When the chassis was completed, it was inverted and a central aluminium under tray was fitted in the cockpit area. My final involvement was the body. While aluminium welding was seen as almost a 'black art' I did not see it this way and constructed a new nose, using a home-made set of rollers and panel beating dollies, to fit onto the 'Farrell' front. The new nose was rather long, however it was a solution which did not involve major alteration to the original Farrell body centre section. The rear end was shortened and a Ferrari style recessed flat panel was made.

Gordon entered the Manta for a Brands Hatch sprint for himself and for me to try in practice only. In the limited time available it did not appear to have any obvious quirks, the only slight criticism being the self-adjusting Jaguar brakes which did not instil a lot of confidence. Apart from my wish to see a new competitive Allard J series I need to acknowledge Gordon for the use of his garage. Not only had I finished my own car there but part of the Steyr rebuild had also been done in this garage.

At this time there was a constant flow of technical letters regarding the whole range of Allard models and I seemed to spend large amounts of time dealing with these queries. A limited number of spare parts were still produced, the front grille being the most sought after, as were requests for bonnet badges.

I was introduced to the part completed Steyr 'Sports Car', which was being constructed in the small workshop below the Clapham High Street Head Office. To complete this I had to design the drive flanges for the rear drive shafts. A De Dion axle was used from the Clark designed 1950 hill climb car with a quick-change centre differential unit. Instead of the usual 12-inch diameter drum brakes it was possible to adapt Ford Zephyr 9 inch diameter by 1.75 inch rear brakes. Instead of the usual Hardy Spicer drive shafts, this axle utilised a Layrub rubber coupling at one end of the shaft and the conventional hardy Spicer needle roller joint at the other end. The extension of the shaft on bump and rebound was taken through the Layrub coupling. This worked extremely well, provided axle bump and rebound movements were no greater than 1.75 inches and had the considerable advantage of not affecting the rear suspension characteristics when the power was applied. While the conventional Hardy Spicer sliding coupling was capable of movement under load, there was sufficient friction to upset the rear suspension performance under heavy cornering. The front suspension was based on shortened Ford 105E front suspension units and initially had drum brakes and pressed steel wheels. A pair of Lotus wheels were purchased, so I had to juggle with Timken bearings so they would fit the Ford stub axle and the Lotus wheel. An adapter plate was then made to mount the Girling disc brake calliper and to line up with the purpose made disc brakes.

After some brief testing, the car was entered for the Herts County Automobile and Aero Club, Westbrook Hay Hill Climb. The car was powered by a 4.5 litre Steyr engine, running on petrol, rather than the usual

Methanol. No special ducting was made for cooling and it ran without any major overheating problems. As far as ‘Sports Car’ regulations were concerned it met these in spirit, however the top competitors like Phillip Scragg, with his HWM Jaguar, were not entirely amused. Sydney put up I believe second fastest in his class, however on his final run the Layrub mounting through the brake drum failed, so no second run time was recorded.

A re-design of the Layrub mounting flanges was made which did not require any loads to be taken through the brake drum. The new drive flanges were made of Dural and gave no further trouble throughout the cars life. While the axle was stripped down a ZF differential unit was fitted, being one of six units which had been made way back in 1951/2. The ZF roller cam design had been copied from some pre-war confiscated ZF drawings. However when they were initially tested they failed to produce the expected limited slip performance and were considered to be "no better than a normal differential". Of the six sets, four sets had languished with numerous Allard spare parts at Clapham High Street and were not considered to be serviceable. We had started to use Jack Knight, a Clapham based machinist for various turning jobs which could not be done in house at our own machine shop at Upper Richmond Road. On a visit I noticed that he was making ZF type differential units for Cooper Cars and I asked if he would look at the ones we had made. An alteration to the cam size cured the original problem so we had a viable ZF unit to fit to the Steyr ‘Sports Car’. The two black lines left on the road was ample proof that these ageing differential units were now working.

The steering heaviness of the Palm Beach Mk2 continued to be a problem, but while Sydney seemed reasonably happy with the GT version, the steering was too heavy for normal road use. The only real solution was to alter the basic design, however there was the ever-pressing need to start producing chassis. In order that there was an independent assessment of the car there was an urgent need was to get the G.T road tested by either ‘Autocar’ or ‘Motor’. However, it was pointless to get it tested until the steering loads could be reduced

From time to time I went with Sydney to a general practice day at Brands Hatch where he spent most of the afternoon lapping the Kent circuit. His times were comparable to like cars, however because it was a general practice day there was a wide variety of cars, from standard saloons to Formula Ford and Formula 2 cars. From a development point of view this testing proved that the G.T handling was mechanically sound and the only failure was to the studs holding the top radius rod. This was resolved with a simple outrigger bracket. There was probably inadequate flexibility in the Silentbloc bushes to allow for the amount of body roll produced in hard cornering. The problem of the heavy steering still existed and we modified the G.T to take it’s suspension loads through the lower wishbone. This meant beefing up the wishbones and modifying the manner in which the trunnion bearing was located. The worst feature of the lower swivel was that the threaded load carrying centre line was offset from the lower wishbone pivot point. This was liable to wear at a greater rate than it should. However the result was clearly a substantial improvement.

It was, in my view, a great pity because it did not have the inherent problems of the Hume design, that the development of my design fitted to the P2 Safari chassis was not followed, . If it had been developed, by using left and right-hand threads to cancel out the tendency to pull slightly to one side, plus incorporate the shock absorber into the front upright, the Palm Beach Mk2 would have been a more viable proposition.

The modified system was tested again at Brands Hatch and performed satisfactorily. Sydney did not perceive that there was much change in the GT's handling, however it was agreed to pursue this modification. One of the other handling vices was related to the laminated torsion bars. Initially it was felt that the front shock absorbers setting was too hard. After a brief trip to MIRA and a relatively short run on the 'pave' it was clear that the front springs were too hard. The front springs were laminated torsion bars and unlike coil springs were not easily altered. One of the characteristics of the laminated torsion bar was it’s self-damping properties. The trip to MIRA substantiated that the GT’s suspension was satisfactory for relatively smooth road surfaces, however it was lacking on rough surfaces. One solution would have been to increase the length of the bar, but there was no room within the chassis to do this. There was no easy solution and we went ahead and produced three cars. One was for a member of the Du Pont family, to be powered by a large capacity Chrysler engine coupled with an automatic gearbox and De Dion rear axle. The others, both open models, were built on spec. While the Chrysler powered car was a GT, the extra weight of the American engine improved the front suspension. It was a modified engine with a somewhat vicious power curve that made it an unpleasant car to drive in traffic. Sad to say the new owner was not pleased with his purchase, wanting a car that was more in keeping with the Facel Vega concept. It was shipped to the States in due course, not before it had had two minor accidents while being tested by Sydney and myself. The remaining two cars were eventually sold one to the Secretary of the Allard Owners Club, the other going to the States.

'The Autocar' Road Tested the works GT, but not without problems. The bonnet flew up causing a damaged roof and needing a new bonnet. 'Autocar' were very critical of certain aspects of the car, however I will always believe they did not shut the bonnet properly in the first place. The road test was completed in due course and the cars shortcomings were exposed. The reference in the report to poor workmanship reflected 'Autocar''s' view of the bonnet problem, which I felt was unnecessary. The works red GT was taken down to Goodwood for the Guild of Motoring Journalist Day and after scaring one possibly inexperienced journalist was withdrawn. Soon after Sydney announced that Allard production would cease.

When one considers just how long the 'Lotus 7', now 'Caterham 7', has been in production, I believe a development of the J2 could have still been produced. In it's original form, before the large American engine was fitted, it was in my view a car of considerable merit. However the lack of reasoned development spoilt it's place in history.

The production of a modified Austin/Morris chassis for the London County Council had been based at South Side, Clapham and was now to move to the Machine Shop at Upper Richmond Road, Putney. The volume of machine sub-contracted work had begun to reduce as the aircraft industry went through a recession and the increase in volume of work associated with the ambulance chassis meant that the Upper Richmond Road facility could be better used. The rear of Southside, where the last production Allard was produced was now getting more and more involved in the fitting of Webasto soft-top roofs, plus an ever growing level of body repairs, essentially for Fords. The link through Adlards and it's Ford Dealership meant we were involved in a number of projects, one of which was to reduce the overall length of the original Ford Capri. The reduction was, as I remember, less than three inches but it allowed Ford to export these Capri's to a country where there were maximum length requirements. The volume of Webasto roofs being fitted continued to increase with orders coming from Ford Dealers around the London area. An approach was made to Ford to get this modification approved and after submitting a modified vehicle and detailed drawings of the conversion we got it passed.

Attention now turned to performance enhancements to the Ford Zephyr. Starting with the triple carburettor conversion which consisted of two additionally linked carburettors that came into operation above 30mph. The set-up was quite successful but was only sold in relatively small numbers. It did not reach a point where it justified a new manifold casting, although this had been designed and costed. With the increase in performance a front disc brake conversion was designed using Girling callipers. The balance between front and rear on this servo-assisted set-up was not so easy to achieve because there was not the range of rear wheel cylinder sizes to reduce their braking effort. A juggle of different brake materials achieved a satisfactory result.

Resulting from the wire wheels used on the Palm Beach, a wire wheel conversion was produced for both Ford Consul and Zephyr models. Around the 60's it was still the vogue to fit wire wheels, plus it did improve the airflow past the brakes. Inevitably there was a request for a disc brake version of the wire wheel conversion, however the cost of another new hub design and manufacture precluded this request.

Following on from the larger Ford saloons it was only time before there was a call for a disc brake conversion for the Ford 105E. This was, in the end, the most successful disc brake conversion produced with over a thousand sets being made. The Ford 105E was gaining in popularity in both rally and race form and the inadequacies of the standard drum brakes were very apparent. The demand was such that it was hard to match the ever-increasing number of orders. Orders were now coming from Ford Dealers across the country and while not being given company approval this conversion did have their 'tacit' approval. Suspension modifications including stiffened front roll bar and anti-tramp bars for the rear were designed and produced in kit form. Fords produced the Classic, which had an enlarged 1340cc engine and it was not long before the 105E Anglia was being fitted with this larger engine. The increased engine power was now beginning to turn the relatively 'tame' Anglia into a competitive club rally car. Sydney was now using one for club rallies, and once again entered in the Monte Carlo Rally.

Tuning standard saloons was becoming more and more popular and to add an extra arm to the relentless quest for more power we evaluated a Shorrock supercharger. These were starting to be produced in kit form by Shorrock Superchargers of Wendesbury and it was from this initial installation that we attended one of the first Racing Car Shows at Olympia. The major advantage of the supercharger was that it gave a significant power increase at lower revs and did not incur the relatively narrow power bands associated with the modified cam profile and multi carburettor conversions. There is no doubt in my mind, that for normal road use the supercharger had many advantages over the normally aspirated conversions. However it's power did drop off at higher revs, plus for competition use it did have the penalty of having to compete in the next higher class. With more and more involvement in the tuning market, it was not long before we took up the agency for the Shorrock Supercharger, which involved us in producing manifolds and 'V' belt pulleys for a full range of the current UK manufactured saloons. With our involvement the numbers of superchargers required exceeded Shorrocks own manufacturing capability and a link was made with Rubery Owen who took over the production. There were two sizes of the eccentric type supercharger with the smaller being the most popular. Upper Richmond Road was turned over to fitting the installations, plus doing some of the machining. Fitting agents around the country were also appointed, so that there was now a substantial workload for the company. With representatives operating through-out the country it was also possible to sell a developing range of tuning aids, plus the Webasto soft-top roof. At the Clapham Southside workshop at one time as many as 15 roof conversions were completed in a week.

One of the difficulties associated with the tuning business was of course manufacturers changed and updated their models and there was ever pressing need to produce new kits and adapt existing ones. The reliability of the Shorrock supercharger, when produced by Shorrock themselves, was of a very high standard. However problems began to develop with the Rubery Owen manufactured units. It could of course have been that the tolerances set by Shorrock were not sufficiently tight for bulk production. Failures did begin to occur which tended to mar a very successful conversion. It must also be said that as soon as engine power outputs increase revs also rose which took the supercharger rpm beyond its maximum safe limit. Once this had happened either the vanes touched the case or the trunnions were beginning to get excessively worn, causing the efficiency to drop. It caused a drop in boost pressure and the inevitable loss of power.

While the production of cars was now over there was a continual call for spare parts and the need to provide technical information. Keswick Road still provided the Allard repair centre along with the Adlards Ford sub dealership. It was around this time that we had an enquiry from a J2X owner in Lima, Peru, for a set of disc brakes. There was still a small stock of brake parts from the Palm Beach Mk2. If they were provided to the Peruvian owner he was prepared to accept the cost of some specially designed hubs and calliper adapters and we would make a one-off set. In order that the correct balance between front and rear brakes could be achieved, dual master cylinders would have to be fitted and this was to be done in Peru. The parts were made and shipped to Peru. I never heard how the conversion worked. Some time, later I had a letter from the mother of the J2X owner to tell me her son had been killed in road accident while driving his Austin Healey. It could be claimed that this was the only J2X to have a genuine manufacturer's disc brake conversion.

During this time the Steyr 'Sports Car' was run at selected meetings and in between it was taken to Silverstone where we set up a timed quarter mile section on the old club straight. We borrowed the BARC timing equipment and had several sessions of timing the car against the clock. With the quick-change axle it was possible to change the rear axle ratio and get the best out of the car. It was on one of these testing sessions that a con rod failed wrecking a very nice engine. Prior to running it that day, it had been noticed that there had been a fall in oil pressure but instead of calling it a day the engine continued to be run with dire results. When it was stripped it was found that a small 6mm bolt had come out of the camshaft front bearing housing. Tracing back the oil galleries it was found that the camshaft ran in a chamber, which had it's oil supply direct from the main oil galleries. From this gallery oil was supplied via the push rods to the rockers and while it had always been recognised that the oil supply came via the camshaft gallery it was not thought to be at high pressure. The argument that the fall in oil pressure was a miss-reading of the oil gauge was proved to be a very empty argument! The failure had been due to lack of oil resulting in a ventilated block and a shattered con rod. The con rods on this engine were aluminium and had a generous section, however the cost of making another set of like con rods was not considered viable, so one of several engines lying about Clapham High Street was rebuilt. A set of special Allard produced cylinder heads, with larger valves and Grand Prix Amal carburettors were fitted. One of the potential failure items on the crankshaft was the counter balance weights, which were bolted on. As I remember the failed engine had these weights bolted on with larger securing bolts. The replacement engine used the standard Steyr design but with new high tensile socket screws. The engine ran successfully however the carburettors tended to flood, essentially because the float chambers were probably slightly too high and did not have sufficient insulation from engine vibration. The car was taken to Goodwood for testing, however the staff (Alan Tiley) who took it down, decided to get it running before the 'Guv'nor' arrived and due to a hydraulic lock managed to bend a connecting rod.

The relatively easy operation of spinning the engine over, with the plugs removed, vintage radial aircraft style, would have avoided this damage. With a large number of spares back a Clapham I drove back, and got two spare connecting rods. The Steyr with its separate cylinder barrels and heads made it easy to replace the bent connecting rod and about half an hour before the track closing time we got the engine running again. It did not run particularly well, mainly because the carburettors tended to flood.

I believe this was the last time the car was run because Sydney had got his sights set on building a twin engined Steyr 'Sprint Car', more on the lines of the early American dragsters. The front cover of an American dragster magazine showing a four-engined car run by Micky Thompson had got his thoughts towards an outright sprint machine.

An outright sprint machine built on American lines did at the time present major problems due to the basic requirements of The RAC rulebook. The two major areas were related to the solid located rear axle and no front brakes. It was argued that there were a few vintage racers running with only rear brakes. However, as I remember The RAC were adamant that front brakes had to be used. The solid rear axle was an arguable point because it avoided the need to build a relatively complex rear suspension system. A solid rear axle was to be used. A set of 8.00 x16 inch M&H slicks were obtained from the USA. There was no time to try them on the Steyr 'Sports Car' as the twin engined Steyr 'Sprint Car' was top priority. In the workshop below Clapham High Street the major components were laid out. I was left with the "simple" task of designing the multi-chain drive to couple the output of each gearbox to the central prop shaft which had a Rover freewheel diff built into it. The object was that once the rear wheels started to break loose the free wheel unit locked and then the drive was taken on all four wheels. To satisfy the RAC the front brakes were taken through one single disc, running at prop shaft speed, mounted on the nose of the front differential unit. This satisfied the regulations. The main braking effort was taken by 12" diameter by 1.75" inboard brakes. In order to get both engines C of G down, they were fitted with dry sumps. The existing Steyr oil pumps were modified so they had two stages. One to provide oil through the normal oil galleries, the other to scavenge oil from the greatly reduced sump and return it to a separate oil tank. Of all the specialised items designed for this car the dry sump worked extremely well.

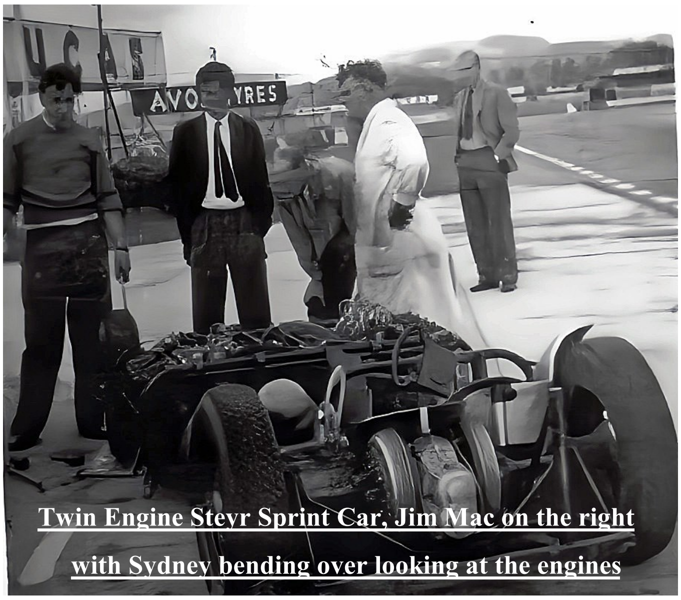
An order for some 20-ambulance rear axle conversions for Hong Kong suddenly arrived out of the blue. It was to be shipped in broken down form and assembled in Hong Kong. This sizeable order needed a considerable amount of work, including a full set of working drawings, plus assembly instructions. Sydney could best describe this like many jobs as "just a few sketches which would not take long". In reality there was more than a month's work to provide sufficient information for the Hong Kong authorities to carry out the conversion to the Austin LD2 chassis. While this was a one-off order, we were led to believe that the conversions were carried out and worked satisfactorily. Soon after this order we had a request from the Yorkshire Ambulance authority to provide a rear axle conversion for the Austin LD1. This entailed a new design because the LD1 axle was smaller than the LD2, however something like 12 conversions were carried out.

While these ambulance conversions continued the LCC wanted us to explore the possibility of carrying out out an ambulance type conversion on a larger chassis, to be used for handicapped school children. While it was clearly possible, there was a need for design changes to the De Dion axle tube wall thickness and both front and rear springs. This project was actioned several years later and was for a total order of some 75 chassis.

Work on the twin engine Steyr 'Sprint Car' continued to be carried with new drive shafts being made to mate up with the inner standard Hardy Spicer yoke coupling and the outer end splined to fit the fully floating hub arrangement of the De Dion axle of the Clark designed hill climb car. This was the same De Dion axle that had been used on the Steyr 'Sports Car'. The front suspension originated once again from the Clark designed car, with double the engines, each developing no more than 200 BHP. A triple link chain of approximately 6" diameter and 0.75" pitch was used.

The gearbox outputs was splined to pick up on the gearbox output shaft with an additional outer steady bearing. The chains from each gearbox being connected to a central sprocket assembly. The whole assembly was encased in a 3/16" chain guard, and while I had severe reservations on the reliability of this drive assembly it did not give any trouble in the limited time it ran.

As ever this project was running out of time and with some two weeks to go before the Brighton Speed Trials the car was far from complete and had yet to turn a wheel in anger. In the week before Brighton it was taken, I believe, to North Weald where the engines were run.



Twin Engine Steyr Sprint Car, Jim Mac on the right with Sydney bending over looking at the engines

However it still needed at minimum, a nose cowling to satisfy the RAC rule book. I expressed my reservation about attempting to run the car at Brighton, however it was taken there and parked to one side of the competing cars.

In due course it was taken to Silverstone and after almost a full day of sorting numerous problems we did get it fired up on all 16 cylinders. It did a few slow runs up and down the old club straight. Silverstone did not allow any track use after, I believe, 4.30pm which precluded any more than our initial runs. The major problem was to cure carburettor flooding caused by the lack of adequate float chamber isolation from engine vibrations. There was very little space between the V of the cylinders to mount the Amal designed float mountings and the compromise we had fitted was inadequate to provide sufficient insulation.
I believe the complexities and shortcomings of this project had begun to get Sydney to question the long-term potential of such a machine. After one more trip to Silverstone, where it completed at least one lap of the old club circuit, it was dropped. I had severe misgivings about the chain drives from the gearboxes and it was with some relief when the car was scrapped.