

March 2008

Alvic

The Newsletter of the Alvis Car Club of Victoria (Inc)



Feature:

The Early Days of Lucas Industries

Also

Alan McKinnon talks about his acquisition of car No 9136 seen here at the Yarra Glen Fly-in trading stories with a Ryan PT22 Trainer

Alvis Car Club of Victoria (Inc)

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Meetings—third Friday of each month [except DEC/JAN] at 8.00pm. Newsletter Deadline—first Friday of month.
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MARCH 2008
VOL 47

ISSUE 2

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PRESIDENT'S REPORT

I have just returned from a great weekend at Phillip Island where we celebrated the 80th anniversary of the first Australian Grand Prix.

I choofed down in the 12/50 with Thorpe Remfrey as passenger; minimal traffic on the road and the wonderful burble of the 12/50s exhaust note in our ears. We had a nice lunch at the Tooradin Airport (which would make an ideal venue for a future run) and arrived in Cowes just in time for afternoon tea.

That night we dined in a nice little restaurant and got talking to Simon Taylor (U.K. MotorSport Editor in Chief) who was in Australia doing some interviews and driving Maybach 1 in the regularity events.

Most of Saturday was spent wandering around looking at the cars, meeting old friends and watching the races. We met Mac Hulbert who was running a Formula Junior car, Duncan Rabagliati who I have corresponded with for a number of years and never met and who was instrumental in organising 10 or so Formula Junior cars to these shores, plus a host of other people to either talk to or to nod at as we walked past.

The Alvis fraternity was well represented with Trevor Eastwood, Paul Chaley and Mark Burns doing their stuff and I believe Mark actually won his first regularity that Saturday.

The reason for taking the 12/50 was that I had been selected along with 70 others to do a couple of laps of the original Phillip Island circuit as part of the 80th anniversary celebrations.

We assembled at the nominated time and had a driver briefing session before being let loose under police escort. As the original circuit is now public roads, the police had blocked off the whole track for our use and what a great time we had. The 80km speed limit soon became 100km in some spots and the huge crowds that had gathered to watch certainly would have seen many cars actively campaigned.

At the conclusion of our run, we all gathered in the main street of Cowes for a static display which bought even more people in to view the cars. In fact you could hardly see the cars for people.

Again we were well represented with Alvis members. Apart from Thorpe and I, there was Andrew Green, Mark Burns, and Dale and Maritta Parsell who was campaigning the M.G.

What amazed me more than anything else were the comments from the public in regarding the body of my car. If I got a dollar for every person who asked me if the body was made of stainless steel or chrome plated, I would have made a fortune. Then if they are not sure, they then have to touch it leaving their finger prints all over the car, which I guess is better than having a milkshake spilt all over the radiator which happened a few years ago on another occasion.

At the conclusion of the event, we were all set to leave only to find that petrol was going on the road rather than into the carburettor, the cause being a float full of petrol in the carburettor bowl. Luckily Dale came to our rescue and we towed the car around the corner to our motel.

Sunday saw us back at the track doing much the same thing as the day before. Alan McKinnon came down for the day in his 12/50 tourer along with a spare float for me just in case I couldn't repair my own one. This I managed to do with the help of the TAFE chaps who were doing some repair work to Glen Seton's racing car. Also seen wandering around was Andrew and Francis McDougal, Frank Mornane and my wife who had come down for the day with Frank. Sunday night back in town for dinner, an early night and a good run home first thing Monday morning escaping the 37 degree forecast.

Every year, this event gets better and better and if you haven't been to Phillip Island for a historical event, then put it in your calendar for next year. The VHRR certainly knows how to put on a great event and they should be congratulated for a fine effort.

P.S In closing, those with 12/50s, may I suggest you keep in your car a spare float or a butane torch and solder, battery operated drill and a set of drill bits!

Chester McKaige

SUPPER
JOCELYN & DARRELL

Dale Parsell is reviewing our website and would be happy to hear your ideas on what and how information should be displayed. Have your say now, not your grumble later!

Email Dale: dparsell@ozemail.com.au



Alvis 12/50 Cross & Ellis Sports Tourer Car No. 9136 Chassis No. 3776 Engine No. 4122 and Body No. 1086 left the UK for Australia on the 25th of October 1925. Seen here on its first ACCV club outing to Kilmore in 2006.

I purchased this car in November 2000 from Don Smith in Tasmania and their lies a tale.

We were attending the Bendigo Swap, as our business dictates and during a discussion with our distributor in Hobart he announced that he had forgotten to tell me something that had occurred a couple of weeks earlier.

Geoff's position is that of Development Works Engineer with the Clarence Council in Hobart and he was visiting a local resident regarding a potential road widening affecting this person's property which is located in a very picturesque part of Hobart with superb waterfront views.

After discussing the issue at hand the subject turned to the pleasant surroundings and the man suggested that Geoff would enjoy living with such a view (he was sub- dividing his property) . Geoff said yes but that his vintage cars would get far too dirty on the unpaved road. With that the man said he too was into old cars and in fact had one that Geoff might like to look at.

With that the shed was unlocked and there stood a 12/50 TE Tourer painted yellow and black.

During their discussion about the car the man said that regrettably he would probably have to sell the car as failing health and time were hindering any restoration.

Geoff, not being interested in English cars, promptly forgot about it until he saw me at Bendigo. It was then that the penny dropped and he remembered I had an Alvis. He said he had the man's phone number at work and that he would ring me the next week. When he had not phoned by Wednesday I phoned him, got the number, made phone contact with the owner and arranged to fly to Hobart on Friday to view the car. By Friday night we had purchased the car from Don Smith and made arrangements to go and collect it before Christmas.

Prior to Don owning the Alvis it appears to have spent many years in Tasmania. The first reference I found to it was an advertisement placed by the owner, in the Victorian Alvis newsletter, seeking parts. This was around 1964. Andrew McDougall had some knowledge of the car and it's past. Andrew also has a Cross & Ellis TE Tourer some 400 or so body numbers later and there are some differences. In particular, the rear guards on my car stand away separate from the body – Andrew's are set into the body. His is wider at this point. Windscreens frames have completely different side members. I am led to believe my car is the earliest TE now running either here or in the UK.

Alan McKinnon

Next month - the Ups and Downs of Restoration

EVENT CALENDAR

MAR	20	GENERAL MEETING (NOTE THURSDAY EVENING - due Easter)
	21	WORKING BEE at the Club Rooms
	29	EDDINGTON SPRINTS— 25th Anniversary (<i>it is hoped to get a big turn out of pre-war cars, this may be the last event at Eddington</i>)
	30	52nd ANNUAL KALORAMA RALLY
APR	18	General Meeting
	20	Visit Como Gardens & Car Museum
	27	VDC 50th Anniversary Celebration - Vehicle Display at Ballarat.
MAY	3 & 4	Lake Goldsmith Steam Rally
	16	General Meeting
	18	Tahbilk Winery Visit (NATIONAL MOTORING HERITAGE DAY)
JUN	22	Horton Run - detail to be advised


JNBC UPDATE

The majority of Entry Forms and Deposits have been returned and preliminary accommodation allocations have been made.

Acknowledgement of the entry forms is about to be sent out to participants with our calculation of the individual balances owing, to be paid by 1 July.

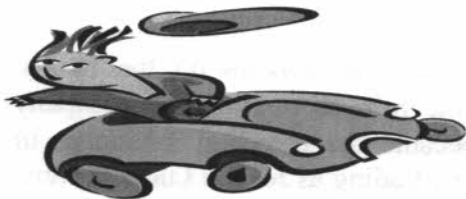
If you are planning to join the tour, tell us about it now, as there are locations at which the surplus accommodation reservations will be cancelled.

RUSH, RUSH RUSH!



**JNBC Memorial Tour
is COMING!!!!!!**

in just **7** months



Lucas Industries-the Early Days to 1930

Chester McKaige

Most of us at some time or another have had a love hate relationship with the electrical systems of our cars and as most of us are blessed with Lucas products we are no doubt aware of the many jokes regarding the company and its products.

Such gems as *Lucas denies having invented darkness, but they still claim "sudden, unexpected darkness"* or *Lucas is the patent holder for the short circuit or Lucas systems actually use AC current; it just has a random frequency* are just three that come to mind, but take away the jokes and delve more deeply into company history and you will find a completely different story, a story that I will now divulge.

The patriarch of the company Joseph Lucas was born on the 12th April 1834 and whilst not a lot is known of his early life, we do know that the occupation of his father Benjamin was listed as being that of a "plater."

Joseph would have gone to school at some stage in his early life although schools back then were completely different to what they are today. In and around Birmingham, most schools had a tie up with the local church and it would be on Sundays that Joseph would be taught to read and write. The rest of the week would be spent in what was referred to as "Dames Schools" where children were housed during the week mainly to keep them off the streets.

In 1847 at the age of 14, Lucas was apprenticed at the Birmingham firm of silversmiths H & G. R. Elkington, qualifying as a plater journeyman at the age of 21 by which time he was married to wife Emily and had his first child.

With a good income, a wife and small child he soon found he needed a new challenge and decided to set up his own business selling paraffin oil which he bought in bulk and re-bottled. Later he included other wares such as shovels, scoops, buckets and chamber pots. He was meticulous with his record keeping and sales increased steadily with the result that in some cases he was able to give credit to some of his most favoured customers.

In 1869 he achieved official recognition in the Birmingham Directory equivalent of our "Yellow Pages" trading as a Lamp and Oil Dealer, the lamps

bought from the makers and sold wholesale.

His oil sales exceeded expectations and the idea of manufacturing his own range of products took a big step forward in 1872 when he decided to make oil cans setting himself up as a tin plate worker, ash pan manufacturer and lamp and oil dealer. By this stage he was 36 years old with a family of 6 and a desire in his head to manufacture the best oil lamp money could buy.

The manufacturing of oil lamps was not new in Birmingham. There were many small companies making oil lamps that burned initially fish oil, paraffin and distilled coal. One firm in Birmingham alone produced over 375,000 lamps.

Joseph's oldest son Harry was given the job of costing new products and in 1875, Joseph manufactured a lamp that would well and truly put him on the map. Another lamp manufacturer by the name of Isaac Sherwood was manufacturing the "Tom Bowling" a ships lantern in small numbers and Lucas had the opportunity to sell a number of these lamps before Sherwood gave him the opportunity of manufacturing them himself. George Thomas a friend and an excellent sheet metal worker plus five men from Elkingtons came on board and the Tom Bowling Lamp Works was founded in 1875, specialising in lamp manufacturing and many of the other lines that Lucas had previously been selling.

Always on the lookout for new products to manufacture, Joseph turned his attention to the manufacture of lamps for penny farthing bicycles, the first being produced in 1878 and called "The King of The Road" and designed to fit onto the front hub. Whilst other lamps were available, there were always the continual problems of split seams and joints due to the heavy pounding they suffered. Lucas solved this problem by using copper rivets and took out a patent in 1880. Three sizes of lamp were manufactured 3inch, 3½inch and 4 inch diameter.

By 1880 Lucas had 58 workers on the books. Harry took on the role of running the company whilst Joseph became the traveling salesman. In 1882, the company trading as Joseph Lucas became Joseph Lucas and Son.

The catalogue of 1883 shows a huge selection of hand lamps, railway lanterns, a lamp for riding a horse at night, cycle lamps of various shapes and sizes, egg whisks, cash boxes and two types of evaporative coolers. The ship lamp range included amongst the Tom Bowling range an engine room lamp, hold lamp, bunker lamp and gimbal lamp. Side lamps included port and starboard lamps and a copper masthead lamp.

Due to such a large turnover of goods, the factory was soon too small to cope and problems of supply became a big issue. Larger factory space was purchased and in next to no time sales were back on track, many coming in from overseas. It was also during this time that Joseph's wife Emily died at the age of 52, Joseph selling his own property and moving in with Harry and his brothers and sisters.

In 1887 Brookes, the company that manufactured bicycle seats, did a deal to be included in the Lucas catalogue and this gave Harry Lucas the idea of manufacturing his own range of bicycle accessories. It started off with saddle bags, lamp wicks, polishing paste, bicycle trouser clips, spanners and wrenches and before long led to a full blown manufacturing plant supplying every conceivable component to the bicycle industry including complete bicycles in kit form.

The biggest seller however was the bicycle bell made in various sizes and their bicycle lighting system which evolved from the hub type lamp to the headlamp the most important of the range being the Silver King, a new design of lamp patented by Harry Lucas in 1895.

Yet again more factory space had to be found and the original factory situated in Little King Street, Birmingham was soon swallowed up with new factory situated in Great King Street.

With the completion of the new factory in 1889 the company changed its trading name to Joseph Lucas Limited with Harry very much in control. Joseph still spent considerable time overseas and it was on one such trip to Naples in 1902 that he was struck down with typhoid fever and subsequently died. As he was a strict tee-totaller it may have been the local water that caused his demise. He was 65 years old.

The advent of the motor car had began slowly but by the early 1900s it had gathered sufficient pace for Harry to take notice and so began the manufacture of lamps, horns and pumps and having a sense of humour listing the new range in his catalogue under the heading "Motoralities" and for his electrical products "Electricalities."

The first Lucas motor headlight was built in 1902 and designed to run on burned petroleum and was simply called Lucas but in 1903 the first acetylene burning lamp was given the name King of the Road. Also listed under "Motoralities" were bulb horns, wrenches, jacks and tyre patches.

With the death of Joseph, Harry Lucas was made Chairman and Managing Director whilst his Brother-in law Bernard Steeley was appointed to the Board as Assistant Managing Director.

A census taken in 1906-1907 suggested that there were 60,000 cars on the roads throughout the U.K. and an act was passed by the government of the day that cars were compelled to carry lights at night, this act further changed in 1909 to include tail lights and reflectors. To Harry, this was a dream come true.

Bicycles also were growing fast with 624,000 of them recorded for the same period motorcycles in much smaller numbers but growing steadily, 3,800 recorded in 1907.

Petroleum burning headlights gave way to acetylene although side and tail lights remained petroleum burning.

The early lights were basically larger variants of the bicycle lamp, the cheaper ones selling for £12.5 shillings whilst the most expensive cost £15.10 shillings. A package deal comprised the two headlights and a separate carbide generator that sat on the running board feeding the headlights via a rubber tube. The top of the range model for 1907 was the King of the Road "Duplex" headlight which had a double carbide canister designed for outings in the dark for periods greater than 8 hours.

The manufacture of bulb horns was another fast moving line. As no two horns were to sound the same, a special department was established to undertake the precise manufacture and the tuning of the reeds used to produce the distinctive honk.

By 1909, there were various headlights to suit large, medium and small cars the middle of the range given the title "Motorlite." 1909 also saw the introduction of the King of the Road electric tail and side lights of 4 volt capacity and a full range of various bulb holders and bulbs. The next year a package deal containing a battery of either 4 or 8 volt capacity and a set of lights could be bought for £24.12 shillings in brass or £25.11 shillings plated. What was lacking amongst the whole Lucas range was a dynamo.

Cars fitted with accumulators (batteries) could now be fitted with electric horns and this became another

product within the Lucas product range. It was noted that Lucas always seemed to be one step behind their opposition as the use of dynamos had been available for some time. To get around this, the product was always described as being better designed and the best available. A dynamo finally arrived in 1910 and further developed between 1911 and 1912. The testing of dynamos was carried out largely by Harry's son Oliver who used his 38hp Daimler as a test rig. The King of the Road dynamo lighting system cost £16.00 for the G80 100 watt model and £18.00 for the G90 200 watt model.

In 1913 Morris Motors introduced the Cowley and Lucas was given the contract to supply 6 volt dynamos and a set of three lights – 2 combined headlight and side lamps and a tail lamp. The dynamo was mounted on the cylinder head by means of a steel bracket and was driven by a flat belt from the fan pulley.

There were three ways the company sold their lighting systems. The first was directly to the motor manufacturer such was the case with Morris where the car was sold as a complete item, lighting sets sold directly to the coachbuilder in some cases the lights designed to suit the bodywork and thirdly as a package for those customers who wanted to change existing lamps or other brands to the Lucas brand. The various packages contained all the paraphernalia including mounting brackets, cables and connectors.

Two items of equipment still eluded the company leading up to the outbreak of war in 1914. One was the starter motor, the other the magneto.

When war broke out in 1914, the only leading manufacturer of magnetos was Robert Bosch of Germany and when the call came to produce military equipment including aircraft production it was thought (quite naively) that Bosch magnetos could be brought in via the Bosch American distributor. At that stage 98% of magnetos used in Britain came from Bosch whilst the remaining 2% came from a couple of very small companies mainly involved in commercial transport.

With Harry Lucas deaf at 50 years of age, he handed much of the day to day running of the company to his son Oliver and it was he who came up with the idea of finding a source to manufacture magnetos under the Lucas banner.

The white knight came in the form of Thompson-Bennett who was basically the only company at the time producing magnetos. They were later joined by BTH and Morris and Lister (M.L.). With the acquisition of Thompson-Bennett production

suddenly changed direction and orders came in for magnetos from the French Le Rhone company and later magnetos for V twin motorcycle engines, six cylinder tank engines and general purpose four cylinder magnetos. B.T.H., M.L., North (Watford) and Thompson-Bennett all made magnetos for the aircraft industry and at the end of the war Thompson-Bennett alone had produced in excess of 130,000 magnetos.

Not just magnetos were produced for the war effort, the Lucas factory churning out olive drab bicycle lamps by the thousands, bells and signaling lamps designed by Oliver Lucas following much design work done at the front lines. Shell fuse covers, batteries, dynamos and aircraft landing lights were also manufactured in large numbers.

At the end of hostilities Peter Bennett (the Bennett of Thompson-Bennett) was appointed managing director along with Harry Lucas and a year later (1920) Oliver Lucas at the age of 30 would also join the board becoming joint managing director in 1923 alongside Bennett whilst Harry Lucas took on the role of consultant director.

The nationwide slump of 1920-1921 knocked the stuffing out of the company although they were saved primarily with a surplus of 250,000 bicycle bells which they managed to sell to America and Germany. The introduction of "summer time" in 1916, meant that there were longer daylight hours resulting in very poor sales of bicycle lamps.

At the conclusion of the slump, the company concentrated on a cheaper range of cycle lamps in order to capture a much larger market particularly overseas. The motorcycle range also picked itself up off the ground through the patent and design of the magdynamo that Harry Lucas had patented in 1915, the company churning out 1,000 units per week.

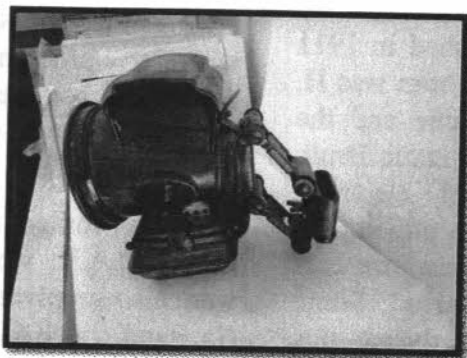
Magneto sales were also doing well, Thompson-Bennett selling magnetos to 25 motor cycle manufacturers by the end of 1919 and these numbers increased steadily into the mid 1920s.

In 1924, Lucas acquired two more companies in the form of E.I.C. and Brolt whilst Morris and Lister (M.L.) were subsequently taken over by S. Smith and Sons (later Smith's Industries).

E.I.C. (Electric Ignition Company) was the company that Peter Bennett had first started with. E.I.C. produced mica tipped spark plugs, trembler coils and switches. It had a bit of a rocky road to travel, the company at one stage forced into



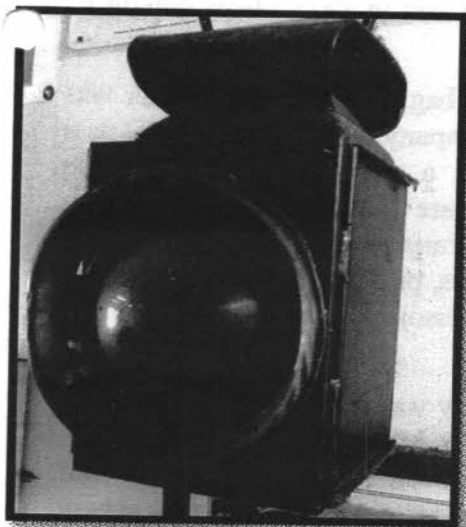
Left: *Early Ship's Lantern attributed to a Joseph Lucas design*



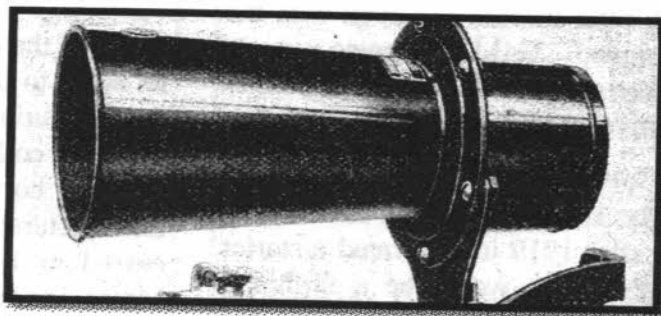
Left: *Lucas King of the Road "Silver" bicycle lamp*



Above: *Powell and Hanmer bicycle lamp*

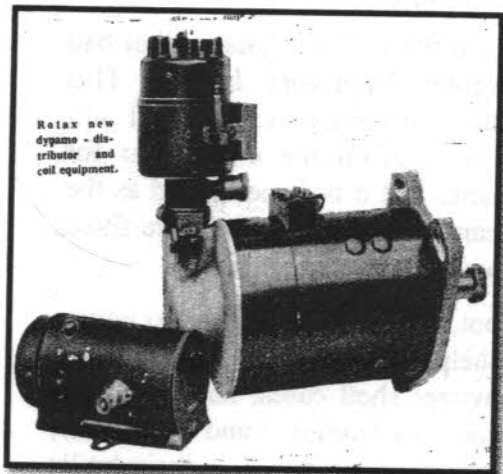


Above: *Early railway signal lamp*



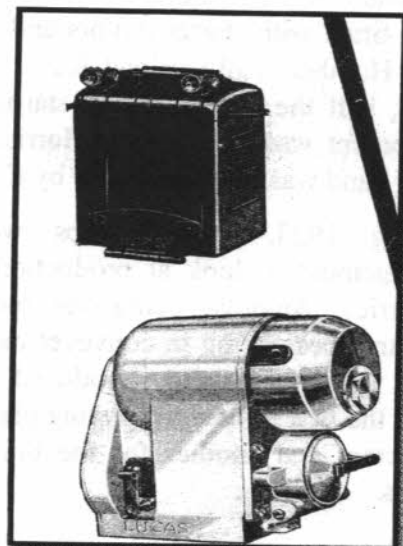
Above right: *Lucas Sparton electric horn*

Below right: *Lucas motorcycle battery and magneto*



Relax new dynamo - distributor and coil equipment.

Above: *ROTAX dynamo / distributor*



liquidation and later resurrected. Single and twin magnetos for motorcycles, Douglas being one that immediately comes to mind and well as for J.A.P and Sunbeam.

Brolt Limited of Oldbury was established in 1911 and set up by two gentlemen one of whom was H. D. Brookes of the bicycle saddle name and the other by the name of Holt, hence the name Brolt. The company produced lights and electrical equipment mainly for commercial use although it did produce lamps for small to medium size cars such as Beardmore, Hampton and Calcott. Some lights were also fitted to Alvis cars during this period.

At the end of 1918 it was thought that there were 100,000 motor cars on the road in the U.K. including imported makes. By 1922 the number was 500,000 with 40 new makes appearing during 1920 and 100 manufacturers displaying their wares at the 1920 Motor Show.

One of the major customers of Lucas was Morris Motors that had bought a lot of equipment prior to hostilities in 1914 and after the war they continued to buy products although in some cases they were used more as a test bed with a lot of problems associated with Lucas products bringing down the Morris name. Morris began using Thompson-Bennett magnetos and then experimented with magdynos all with little success and even with the new Lucas designed G4M magneto made specifically for Morris cars it too proved a disaster and had to be improved with larger electrodes.

The early Morris Cowley wasn't fitted with electric starters although the Hotchkiss engine that Morris would finally use after 1919 incorporated a starter and a dynamo although it would be a further 2 years before the starter motor appeared and the dynamo offered as a extra. By 1924 all Morris cars were fitted with starter motors and dynamos along with Humber, Hillman and Rover. By the end of 1923, half the production of starting and lighting equipment was supplied to Morris. Austin on the other hand was being supplied by C.A.V.

During 1923, various trips were made by management to look at production lines in other countries, America being the most up to date country specialising in conveyer mechanisation. In 1925 conveyors were introduced into the Lucas plant the first to feed the plating plant for headlamp reflectors and another for the building of switch boxes.

Things were moving along at a frantic pace and soon it became obvious that demand exceeded production and complaints regarding quality became a constant issue. Service depots sprang up around the country and overseas as a means whereby problems could be rectified and equipment serviced. Lack of space was another issue and the way to solve that problem was to buy more companies.

The main competition to Lucas at this time was of course C.A.V. who had Austin tied up and who were also supplying the commercial vehicle market (Leyland, A.E.C. Thornycroft) and smaller passenger car firms (Lea Francis and Clyno). C.A.V. never actually manufactured their headlights using instead the firm Worsnop and later Samuel Heath of Birmingham who were referred within the company as the Lamp Works. Whilst it looked like C.A.V. was doing great things, its financial situation was woeful and in 1925 Lucas bought C. A.V.

With C.A.V. in the bag, the next acquisition was Rotax, a London company established in 1902 as a manufacture's agent a year later becoming the Continental Hardware and Cycle Company opening a office in Paris to handle such things as footballs, electric toys, phonographs and a range of motor and cycle accessories that proved to be their best sellers.

By 1906 the company was doing well and changed its name to the Rotax Motor and Cycle Company, manufacturing head, side and tail lamps and trembler coils. A brass works was rented where lamps, horns and other accessories were manufactured. The cycle side of the business ceased in 1909 and the company became Rotax Motor Accessories Company.

In 1910 they took on the Leitner dynamo that had been recently invented by Henry Leitner. This dynamo was of the third brush variety and self regulating. Rotax was given the concession for marketing the dynamo and it became known as the Rotax Leitner Dynamo. These dynamos were fitted to Daimler and Standard cars.

When war broke out, the company shifted to larger premises and helped the war effort by manufacturing howitzer shell cases, hand grenade cases, aero engine carburettors and electrical switch panels. They also produced a "windmill dynamo" that went into production for the Sopwith Pup aeroplane.

After the war the company concentrated on the manufacture of the Leitner dynamo which apart from the two manufacturers mentioned above was also taken up by Belsize, Singer, Riley and Sunbeam. At around the same time Newtons Electrical Works was taken over by Rotax who provided them with sales for industrial motor transformers, switch boards, and railway lighting using the Leitner dynamo. Rotax also got hold of the Jaegar instrument agency.

Originally it was thought that perhaps Lucas could team up with Rotax and purchase C.A.V. but when Lucas bought C.A.V. outright, Rotax decided a merge with Lucas would probably be within the best interests of the company and both C.A.V. and Rotax remained as separate companies.

A year later (1926) Lucas bought the selling rights to Nife Batteries from Batteries Ltd. of Redditch. This company made batteries for commercial applications and later in the year they bought the tools, patterns, trade name and stock of magnetos, lights and starter motors from the British Lighting and Ignition Company (BLIC) a subsidiary of Vickers. As Wolseley was a part of Vickers, all future models were fitted with Lucas equipment. The name B.L.I.C., like Brolt and E.I.C. before it all but disappeared.

In the old E.I.C. factory, a new spot welder was purchased to manufacture a new range of products including door locks and window winder mechanisms.

Looking for new business opportunities continued into 1927 when an agreement was signed with the Auto Research Corporation, a Canadian company to manufacture the Bijur Luvax central lubricating system. This job was given to C.A.V. to manufacture and 2 cars were fitted with the system and put on display at the 1928 motor show. Sunbeam and Rolls-Royce were the first motor manufacturers to take up the Bijur lubrication system.

Bulb horns were still fitted to many cars of this period particularly taxis but by 1928, the days of the bulb horn were numbered. Through a U.S. based company, Lucas was able to obtain the manufacturing rights to the Sparton motor-driven electric horn. This particular horn was well accepted and Morris was the first to jump on the band wagon ordering horns for their 1929 model range. Lucas had been making electric horns for some time most of which were accessory items. In 1928 the King of the Road Alto electric horn was

added to the range in direct competition to the Bosch horn that had become fashionable to own amongst British drivers.

In 1929 when one had thought that Lucas had purchased just about every conceivable company in the area, another came up in the form of a very old company by the name of D.A.V. Rist who prior to the war had been manufacturing batteries and who after the war were making ignition coils, horns, lamps and flywheel magnetos for the Ford Model T being assembled in Manchester. When Ford produced the Model A, sales fell away as these cars were fitted with coil ignition. This transaction was done through Lucas buying the share rights to the company and was kept a secret from Lucas shareholders for the next 30 odd years. It kept going mainly supplying equipment to Austin and manufacturing electric horns.

The Lucas Empire now turned its attention to the purchase of Powell and Hanmer, a company that had been in competition with Lucas way back in the early cycle industry days making candle and oil lamps for bicycles. In 1904 they made lighting systems for cars and motorcycles and prior to WW1 built another factory for the manufacture of electric dynamo lighting sets for cars and motorcycles. Like the deal with Rist, the P&H deal was also kept under wraps.

While all these take-overs were going on, Lucas still found time to manufacture new products one of which was a new headlight to compete against the likes of Marchal and Zeiss. The result was the "new high-power mirror projector". The main feature was an optically ground mirror set in the centre of a parabolic reflector, the bulb carried on a tripod extension and facing towards the mirror.

Before this new headlight went to the press, it was discovered it didn't have a name and when asked by someone as to what the lamp should be called, Oliver Lucas replied, "call it the P100, P for posh and 100 for candle power." The next stage of P100 development came in 1929 when the P100DB was introduced, basically a dipping version of the P100 although initially there were problems as when dipped it gave a image of the globe on the ground! Sales of these lights did eventually pass onto such makes as Bentley, Rolls-Royce and other manufacturers although Marchal and Bosch really did have the upper hand.

Windscreen wipers were also introduced during the latter parts of the 1920s. Originally there was the Lucas suction type windscreen wiper that had

developed from the hand operated type but the problem of windscreen wiper speed fluctuation with throttle openings was a constant source of annoyance to Oliver Lucas so much so that in 1927, he patented a electric wiper with an inductor type motor and introduced in 1929. This wiper was not self starting-starting consisted of turning a knob before the motor took over. A 12 volt wiper motor was later developed that would have enough power to drive a second blade on the passenger's side.

The other significant addition to the 1930 catalogue, was the Luvax shock absorber. The first design attempts were along the lines of the Hartford friction type shock absorbers that the company initially fitted to a Morris Cowley. The end result was a cracked chassis so the Hartford design was dropped in favour of the Houdaille vane type shock absorber that relied on hydraulic vanes

rather than wooden discs. These shock absorbers were made in France and Lucas managed to obtain the rights to manufacture and the name Luvax sprung from the three companies Lucas, CAV and Rotax. Luvax shock absorbers were made at the C. A.V. factory.

Here ends the story of Lucas Industries up to 1930. In order to grow the product range, the company needed more space. The only way to get more space was to buy up existing companies or buy licensing right to manufacture. This maybe one of the reasons why Lucas got the reputation of "Prince of Darkness" as it would have been extremely difficult to co-ordinate the checking of all finished goods. The establishment of Lucas service depots around the world certainly helped but the name "Prince of Darkness" certainly became the catch cry and has continued to this day.

The Arthur Whittaker Memorial Fly In

The 17th of February could not have been a better day for vintage cars and vintage aviation.

25 degrees centigrade, not a cloud in the sky and a light wind on the hills that provided some gasps from onlookers and airborne passengers as well.

The light chop over the undulating hills made some landings interesting and some routine.

We were the guests of the VSCC who in turn were guests of the Vintage Aircraft Association.

The photographs will provide some exercise of the minds of the automobilist readers and the aviationists will recognise a Winjeel, several Austers, a Cessna 130, 150, 172 &180. Some Chipmonks, two Stearmans, a CT4, a Piper Tri Pacer and a Ryan.

To add to the interest was the Foden steam truck with built in heater to the cabin. Even without windows it must have been stifling, you could feel it coming before you heard it. At one stage Sally McKaige decided that old cars were no longer for her as she enjoyed the comforts of steam in the rear seat of the mobile Jacuzzi.

The American La France fire engine also added to the scene.

Alvis was represented by the 12/50s of Mark Burns, Alan McKinnon, Chris Higgins, the Speed 25 of Frank Mornane, the Hetherington TE21, the Tonkin Crested Eagle. Andrew McDougall's SP20 special, Rex Robert's 12/40, the Northey's SP20 saloon. They were spread throughout the 60 odd cars present and the photographs don't do justice to their presence. Apologies to anyone I missed.



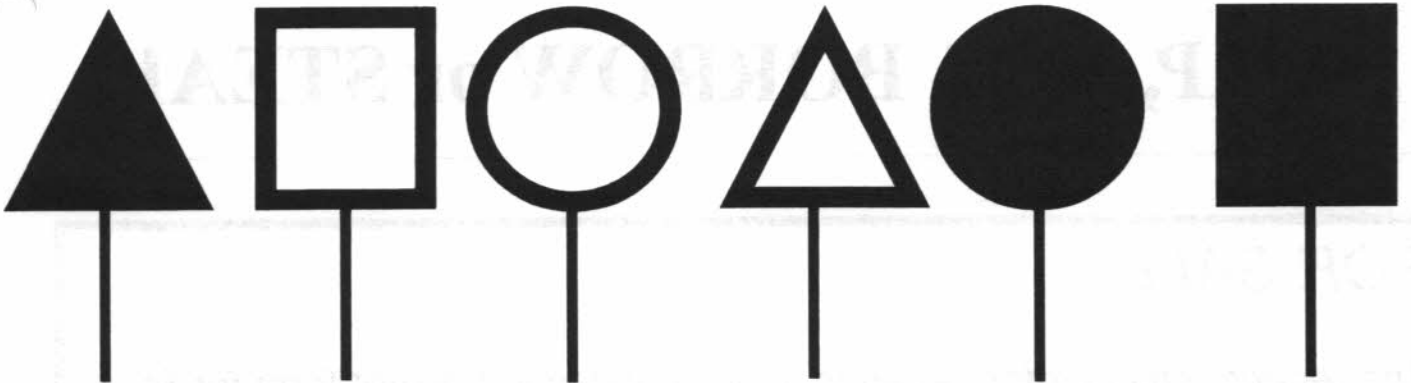


Above: several of the aircraft at the fly in



Above: Frank Mornane's SP25 and Richard Tonkin's Crested Eagle compliment a Riley

Above: Chris Higgins 12/50 hidden in the crowd



*Bob Graham writes,
Every Alvis owner should recognise these signs.
Where are they found?
What do they mean?*

Warning - Overheated Exhaust Manifold

I am writing about my recent experience, as advice and warning to others who may be heading towards the same outcome.

In driving the 1934 Speed 20 Special after purchase from Austin Tope, I found that it was prone to rough running, through fuel vaporisation, on hot days and when waiting at traffic lights.

As one of the remedial measures I decided to install an aluminium heat shield over the exhaust manifold and underneath the bodies of the triple SUs. As I had some asbestos cloth I decided to do a "proper" job of it and make a sandwich type of heat shield with 2 layers of aluminium sheet, with the asbestos cloth in between. This proved to be reasonably effective in reducing the fuel vaporisation problem, but in retrospect I could have made the shield differently so that it swept out and away from the exhaust manifold and further out beneath the float bowls. This will be the design of the Mark 2 shield when I come to make and fit a replacement.

Because of the way Austin had installed the carburettors, he had fabricated four 20mm thick aluminium blocks as spacers which were inserted between the cylinder head exhaust ports and the corresponding manifold branches. Recently it sounded as though the car had blown a manifold gasket (which it had), but on investigation I found that the cast iron manifold was badly cracked and that the two centre spacer blocks, through which the gasses from cylinders 2 & 3 and 4 & 5 respectively pass, had softened in operation and as a consequence, severely distorted. The centre portion of the cast iron manifold looked quite blue from the effects of operating at excessive temperature.

I put the failure down to having a very close fitting heat shield and one that was very effective in preventing heat transmission. Also the centre area that failed was receiving, relatively, a lot of gases. Also the current modern unleaded fuels burn slower than the original fuels, which means that the fuels can still be burning when the exhaust valves open. As a consequence the manifolds run hotter and this probably explains why some of the older cars are now more prone to fuel vaporisation.

This manifold cracking occurrence also lead me to think that manifolds which are wrapped in glass fibre cloth, to prevent fuel vaporisation and unwanted heat in the car's cabin are also likely to experience the same manifold cracking, over time. I have seen examples of cars which have their manifolds and engine bay exhaust pipes lagged.

It just so happens that I have recently been reading a book on the experiences of entrants in the 2007 Peking to Paris re-enactment rally. One of the competitors on this rally experienced a severe exhaust manifold failure, precisely due to having lagged the manifold. This confirmed my thoughts and concerns. To enable them to continue they had a steel extractor manifold fabricated.

I hope that my experience provides a timely warning to others, who may have fitted effective close fitting shields or who have wrapped their manifolds in glass fibre cloth, so that they can modify their shielding arrangements before the manifold fails.

Andrew McDougall

SWAP, BEG, BORROW or STEAL

FOR SALE

The recent census information is now available in booklet form for \$5 + postage

Contact Marg or John Lang on (03)5426 2256 or jdmelang@bigpond.net.au

FOR SALE

1925 TE 12/50 ALVIS DUCKSBACK.

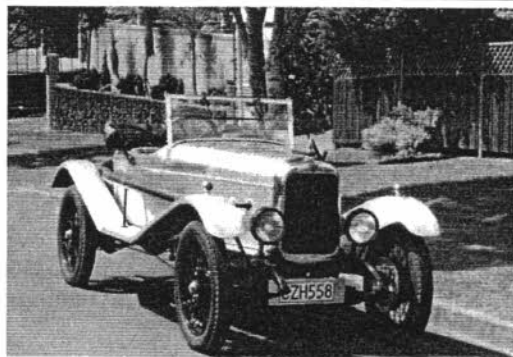
The car has been built from a ground up restoration over the past 4 years. The following work has been completed.

New Radiator core, all Alloy pipes and housings are new, mag. overhauled, motor has been fully reconditioned including the head. full flow oil filter. new clutch components flexible joints all new bearings and close ratio gears in the gearbox, fully balanced driveshaft new bearing in the diff and new crown wheel and pinion high ratio, all new wheel bearings and new wheels (centres and rims) new wooden body and skin. New upholstery. and windscreen.

This car was on the ALVIS NATIONAL RALLY IN APRIL in Sth. Australia and went well. the car has travelled 1350 miles since being restored. I am selling the car as I have bought another 12/50

Price: \$70,000

Contact Derek Dixon on (07) 5443-4320 or on email d_g_dixon@bigpond.com



WANTED

For SP20 SC

2 plates for the gearbox sump, each with 10 stud holes

Transmission shaft flexible coupling x 2

Stub axle (Near side) or LHS, including the associated part that the king pin bushes are pressed into and with top yoke for suspension spring, and with bottom yoke for the outside of the wishbone or radius arm
Stuart Paton phone (07) 5441 5437 or fax (07) 5441 4292

WANTED

A one piece, 4 branch, cast iron exhaust manifold to suit a Silver Crest engine. It is believed that an SC and SD Speed 20 manifold is the same.

A Marles steering box to suit a Speed 25 Alvis. It is believed that the same steering box is used in SC and SD Speed 20s, 3 1/2 Litre and 4.3 Litre cars.

Andrew McDougall, Phone: 03 9486 4221, Mobile: 0427 220 249, Email: amfi@dunollie.com.au

FOR SALE

FOR SALE

1951 ALVIS TA21 partly restored.

Original 3 litre engine. Body newly sprayed silver. Red seats and interior lining. Gearbox, radiator etc. Car located in Maiden Gully, engine has had a total rebuild.

\$12500 or offer

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Mark Burns and partner exercising the latest model pop up roof!