

LEAD OR NOT LEAD - THAT IS THE QUESTION. The Truth About HEAVY METAL!

I would like to try to answer our 'Stationary Engine Movement DOOMWATCH Correspondent' Harry Champion when he so aptly asks if the withdrawal of lead from petrol will put the finishing touches to our hobby. A very interesting question indeed, and one which anyone with a high performance ^{CAN} should heed, because few people noticed the implications. In my opinion, for what it is worth, it will be the stationary engine which will be the LEAST affected of all when one considers the whole of the internal combustion engine sphere.

The answer to the whole question lies in the reason for adding lead to the petrol in the first place. Most motorists are familiar with the pinking or knocking noise which is emitted from an engine which is under heavy load-- especially when perhaps two or three star octane petrol is being used in an engine designed for 'four star'.

The reason for this knocking is difficult to explain without writing several pages, and furthermore, I am sure the average Newsletter reader does not want to sit at the bar and wade through a highly complex article. So, in brief, the gas in an engine cylinder is ignited by a spark and an explosion takes place-- a well known fact ! But what is often forgotten is the fact that explosion is not pure-- if it was, the whole cylinder would be blown to pieces by the drastic rise in pressure and temperature. So what generally happens is this, combustion begins at the sparking plug and travels at a moderate speed across the cylinder until about an eighth of the unburnt gas is left, then it accelerates rapidly in this final area and the rise of pressure is very rapid-- as is the rise of temperature, this delivers a sharp blow to the gases which set up a compression wave, and BANG, this wave hits the cylinder wall. Hence the 'knock'. One of the ways to increase the efficiency of an engine is to raise the compression ratio, but this makes the final part of the explosion even more violent-- in other words, it increases the 'knock rating' of the engine. Early innovators hit upon the idea of adding an 'anti-knock' substance, or 'dope' which would enable much higher compression ratios to be used, along with higher octane fuels. One such additive was lead tetraethyl. I do not actually know when anti-knock dopes were first used but the experiments along these lines did not take place until around 1920, so wide scale usage must have been much later-- maybe after the war years ? So, it can be seen that the majority of early stationary engines were designed and built to run on lead free fuel, and even so, it is only the engine with a very high compression ratio which will suffer. The vast majority of stationary engines have a very low compression ratio, example-- a Patter 'A' type has a c.r. of 4.5 to 1. They were designed in the days when high octane fuel was a mere pipe-dream.

It is the high compression automotive engine which WILL be in trouble. For instance the average run of the mill twin cam Alfa Romeo engine uses a c.r. of 10.1 to 1, others in tuned form use 11 to 1. Although I have not seen any government figures on this subject, I would guess that engines with a compression ratio BELOW about 9.5 to 1 will be ok.

So don't think the removal of lead will bring our hobby to an untimely end, this lies only in the hands of bureaucracy or the oil barons, and it is the latter which, in my opinion, are the rogues. Although we are basking under the umbrella of cheaper petrol again, another decade will bring the wind of change and may well see our hobby becoming an expensive pastime-- especially if people are forced to run their engines all day at certain rallies.

LEAD OR NOT LEAD. (cont'd.)

If engine prices had a 'stock market type of price guide' and I was a gambler, I would say, sell your gas guzzlers while times are good, and keep your 'petrol misers' for your future enjoyment. (By saying GAS guzzlers, of course I mean PETROL and not natural gas).

David W. Edgington

Cranmore Railway Station. May 2nd. & 3rd.

At rather short notice we decided to support our "hosts of the past" and take an engine along to Cranmore's Road Rail '82 weekend.

The weather was cold and stormy but this did not deter us from having a thoroughly enjoyable weekend.

Lack of space and high entries made this a very compact show - except the Stationary Engine enclosure where we had plenty of room as only 5 engines appeared over the weekend. Roger Pike brought his newly restored Amanco 1¹/₂HP (why does it always rain on their first showing?), Chris Gulliford brought his Wolsely WDS and we took a Ruston Hornsby. Phil Harris came on Sunday with his Blackstone and on Monday Pete Holloway brought a Bamford and water pump (minus florescent green water!)

Military vehicles were there in force with a tank, which all the kids enjoyed clambering on, various "jeeps", scout cars and trucks.

A "Gazelle" Helicopter hovered in on each day and this proved a star attraction, especially with the youngsters who were allowed to sit in it and pull levers.

Steam was well represented with 2 showman's tractors, 2 road rollers, a Fowler ploughing engine and a general purpose agricultural engine. One road roller sported a sign saying "Next stop- Port Stanley - To repair runway" - topical for this particular weekend.

A dozen or so vintage cars and several lorries and buses were present as well as numerous stalls and side shows.

A large marquee housed the refreshments and bar, and was also used for the Sunday night social gathering when "the Westerners" from Midsomer Norton provided the entertainment. During each day the trains were in steam and we were given free tickets for rides. A tremendous amount of work has been done at the station since our last visit 3yrs. ago, but the association is still hoping for more financial support in order to open another 2 miles of track in the near future.

Public attendance was high and the organisers were justifiably pleased with the result of this their first sizeable event.

I hope that next year (again the first weekend in May) we, as a Club, can put on a bigger display of engines as it was a bit embarrassing when the PA system announced that the Stationary Engine Display was "with the compliments of the Wessex Stationary Engine Club" - in fact there were only 3 engines present at that time.

Club members who visited (and there were several) will, I hope, next year be exhibitors at this friendly and very interesting "rally".

Diana Emery.

BUCKFASTLEIGH RALLY, EASTER 1982.

We arrived at Buckfastleigh on the Saturday afternoon, set up and then had a walk around the Dart Valley Railway Museum before their closing time of 5.30p.m. After tea we walked down to the village for fish & chips and a look at the shops.

Easter Day dawned fine and dry, and we were pleasantly surprised when Adrian Stride and his sons stopped off for a while on their way to visit friends down in Cornwall. In the afternoon most of the exhibitors went on the steam railway to Totnes, travelling alongside the beautiful River Dart, with primroses growing profusely along its banks.

Wessex Members were represented by Don Rogers with his 2¹/₂h.p. Fairbanks "Bulldog" of 1912, Arthur Cox with a Petter 'A' Type, 1¹/₂h.p., driving a Lister water pump, D. Watts with his Coventry Victor of 1942., P. Williams with a 1956 Lister 'D' Type, Barrie and Sue Thomas with a Petter Universal 'M' Type, 2h.p. of 1932, and yours truly with a radiator cooled Lister 'D' Type of 1943 driving a Godwin water pump. Apologies for any members omitted.

The two-day event was very well supported by the public, with the steam railway engines the main attraction. Three different groups of Morris dancers performed in the afternoon as did a team of Majorettes. The miniature steam railway was also kept very busy and the cafe, station shop and museum all did a roaring trade, the dry, sunny weather being a major factor. Easter Monday came all too quickly and we were soon packing up after a very enjoyable Bank Holiday to make our run home in good time.

Rene & Len Fry.

SCOUT FETE at NAILSEA SCHOOL, BANK HOLIDAY MONDAY, MAY 3rd.

We set off for Nailsea School in lovely sunshine after early morning showers. When we arrived, most engines were already in place on hard standing at the end of the playing field. The fete was opened by The Wurzels, and there were quite a few Wessex members there. They were; G.Harris with his Lister 'A' and mill, R.Chandler and son, Lee, with their Petter 'M' and Wolseley, which must be the only one running a traction engine!! Phil Wookey with his ever faithful Ford 8 and Wolseley engine. Gerald Atherton with his Petter 'M' and Lister H3 pump - minus its dome! Can anyone help? Terry Denham and son, Martyn brought their Fairbanks Morse, a nice engine. Then there was Derek Maybee with an Amanco and pump. B.Smele & son with their Amanco, pump and Lister D. D.Crane with his Kohler generating set and his mate L.Childs with his Ruston and water pump. Plus myself with my faithful engine and SAUSAGE MACHINE!

Now on to the BIGSTUFF. Phil Harris and his marvellous Blackstone which ran very well on a mixture of paraffin and coal dust! Rod Dring with his DONKEY ENGINE and also the South Bristol Tech. Merryweather steam pump looked after by Eddy May. There were also about 8 members of the Somerset Vintage Farming Society with a collection of small engines of their own, plus a very large Lister R Type of 1917, 8h.p., owned by the club.

The afternoon went very well, it kept dry and there was a good crowd looking around the engines. By the way, I hope that Gerald Harris watches out for low bridges on his way to rallies, because, on his way in driving his newly converted Caravanette, he pulled down the loudspeaker! Never mind, Gerald, just watch out for low flying aircraft!

We then said our goodbyes and headed for home having completed two one-day rallies and not a drop of rain- touch wood!

"Sausage Machine"

CONGRATULATIONS!!!!

Congratulations to our Treasurer, Stuart Ashman and his wife, Jan, on the birth of their daughter, Stephanie Louise (8lb.13 $\frac{1}{2}$ oz.) on Monday, May 10th. I am sure all our members will join in sending best wishes to Stuart and Jan and will be looking forward to seeing our newest family member on the rally field.

ENGINE INSURANCE - SPECIAL ANNOUNCEMENT.

We are pleased to confirm that our new Third Party Insurance policy for members has now been extended to cover the operation of dragsaws. We regret, however, that it still does not cover any type of pressure vessel. Our insurance premium has more than trebled to provide the extended cover now available to us. We will be assessing the effect of this increase at the end of the year, but we will make every endeavour to keep any increase in membership rates to a minimum.

APRIL CLUB MEETING.

The April Club Meeting took place at the Old Down Inn, Emborough, on April 26th., and there was a good turnout of about 50 members.

The speaker for the evening was the Reverend Frank Larkworthy from Westbury, Wiltshire, who is currently the Honorary Chaplain to the Showman's Guild of Great Britain. He was introduced by Chairman, Ian Skuse, the subject for the evening being, 'The Fascination of Showland.'

The club room was littered with books and fairground posters, rally programmes and, along with some very interesting books on fair organs, fair transport, fairground equipment, etc., there were information sheets on some of the country's old street fairs and the room resembled more an open-air market rather than a club meeting.

The talk itself concentrated on the showman's fraternity and close family life. He also spoke of his earlier memories of the Anderton and Rowland fairs at Newton Abbott, and, later on, the Noyce family. Unfortunately, he did not get on to the subject of the showman's transport and the rides and organs, but in spite of that, the books that he had brought along for us to browse through more than made up for the rather off-beat talk. It was a very interesting evening and it was nice to get away from the usual slide and film shows of engines and listen to something different. The evening ended with our Herbie doing one of his excellent and well performed raffles.

Generating Jones.

FOR SALE CLIMAX water pump, £40. LISTER D Type, 2h.p. £30. ATCO lawn mower, 1930/40, c/w grass box, £5. Wooden mangle (button crusher!) c.1930, offers. Contact Len Fry after 6p.m. on Salisbury 24273.

WANTED AIR VESSEL for Lister H2/H3 water pump (part No. 42) Gerald Atherton, Mill Farm, Flax Bourton, Bristol. Tel:- Flax Bourton 2393.

WANTED FLAT PULLEY to fit shaft 1 $\frac{3}{8}$ " dia. M.Cannon. 19, Eagle Road, Northend, Batheaston, Bath. Tel:- Bath 859536.

Petter A2, 10 b.h.p., £10. B.S.A. Industrial unit, £10. 1951 Petter A1, as rallied last year, £14. Climax gearing, as rallied last year, £10. Crossley type PHC 1040 3¹/₂h.p. engine compressor, £40. Small Stuart Turner water pump, £3. Small vintage French engine, £2. Very small open crank engine of unknown make, £86. Norman 240 volt generator, £36. Small vertical engine of unknown make, £3. 1¹/₂h.p. single phase electric motor & starter, £3. 4h.p. three phase motor & switchgear, £3. 1929 Stuart Type N engine, £9. Petter A1, £9. B.S.A. engine, £8. Villiers engine, £2. Villiers 4-stroke engine, £7. Small engine & brass pump, £7. Lister engine trolley, £21. Tank donkey engine, £15. Petter A1's, £9 & £4. Lister D Type, £15. Wolseley fin-top WDII, £14. Honda 200cc motorbike, £100. 1960 350cc Matchless, reg. YDL 661, c/w log book, £86. French horse-drawn cart. £100.

A lot of entries were missing, as were a lot of would-be buyers. I saw several Wessex members in the crowd, including our Chairman, but the West Somerset Club had the most stuff.

I understand that the tractors and stationary engines at Stourpaine this year will be organised by someone else since Sam Blackwell and Mike Duck, and John Cornelius will not be doing it. Now that they have got it organised, admission to Stourpaine is going up. (to pay for the mud we bring home!)

I quite agree with Colin Sealey about engines at rallies. On the Ross-on-Wye entry form it states that engines must run 50% of the day in order to get the £1.50 per day payment. Also a lot of forms are giving preference to engines driving something even if it is only a pump or a dynamo.

Several people at Shaftesbury told me that they were not doing any long-distance rallies this year, only their local ones, plus a few garden fetes, so the long-distance travellers will have to make some new friends.

I am back to my old Lister D, the one I started with, as the Petter A that I had hoped to have ready has got a cracked head.

I hear that the Sodbury Vale ploughing match and rally will be at Pucklechurch (opposite the prison) this year.

Harry Champion.

CLUB EVENTS.

JUNE 19 WESSEX BARBECUE, DISCO & GARDEN PARTY. To be held in Tony Jones' garden at 59, Marsh Road, Trowbridge. Tickets are £1 per head and will get you 2 hot dags and coffee or tea. Engines must be small and trolley mountd, maximum width, 3'. Any profit will go to Cancer & Leukemia in Children Trust. Contact Tony Jones for full details.

JUNE 28 ANNUAL CRANK-UP at the Old Down Inn, it's what your right arm's for!

JULY 17/18 CLUB RALLY, YATTON. Open to everyone. All types of stalls will be welcome. Engine exhibitors can set up stalls free of charge. Other stall-holders are welcome for the modest sum of £3 for the weekend! All types of vintage bits & pieces, junk, antiques(!), bric-a-brac, collectors items etc. are wanted and the evnt will be well advertised. Stall holders only are requested to book in advance by telephoning Stuart Ashman on on Chew Magna 2655. Pass the word round. Volunteers from amongst the Club's ladies are needed to assist in the running of Yatton rally, mainly on stalls and catering. Any willing ladies please contact Diana Emery at the club meetings, or telephone Temple Cloud 52939.

JULY 26 THE LONGHEDGE COLLECTION of vintage agricultural tractors, engines and machinery is to be opened to the Club for the evening from 7.00p.m. It is at Corsley, just off the Frome to Warminster road, close to Cley Hill. Afterwards, food and refreshment will be available at the Royal Oak where the landlord will make us most welcome.

AUGUST 23 Still to be arranged.

SEPT 27 RAILWAY MISCELLANEA. Steam trains for a change. The speaker is the Rev.A.G.Newman.

OCTOBER 25. FILM NIGHT with John Forward. Films of rallies and restorations.

NOVEMBER 27.W.S.E.C. DINNER AND DANCE with LIVE MUSIC in the form of SIROCCO, a popular local group with music for all occasions and tastes. Venue:- Masonic Hall, Frome.

NOVEMBER 29.KENNET & AVON CANAL, an updated talk with film/slides from Bob Scydamore.

JANUARY 31. THE CROFTON ENGINES. more details later.

STOP PRESS EASTWOOD MANOR FARM. At rather short notice we have been able to arrange another evening visit ot Eastwood Manor Farm at East Harptree, for FRIDAY, MAY 28th. This is a very interesting farm with extensive purpose-built buildings which, in 1860, were very much ahead of their time. The high spot of the evening is without doubt the 1929 14h.p. TANGYE engine. Coffee and cheese are served up for afters and this is a MUST for anyone who has not been before. The numbers are limited to the first 30 to contact Diana Emery. A modest charge of £1 is made at the farm to assist in the preservation work.

AND FINALLY....

It is with much regret that I am now resigning from my long-held position as Newsletter Editor, due to considerable pressure of other work. Eric Brain takes up where I leave off and I hope you will give him as much support as you have given me in the past.

Tom Randall.