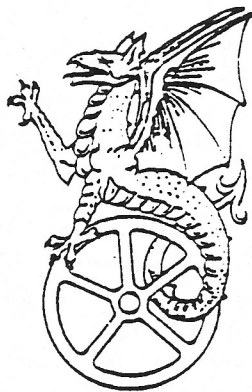


WESSEX STATIONARY ENGINE CLUB



NEWSLETTER

JUNE 1991.

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THE SUMMER EVENING CRANK-UP at the Old Down Inn. May 20th.

The evening of the Crank-up was, as luck would have it, was the evening of the warmest day of the year so far and Wessex members turned out in force to support this popular event. Praise and thanks must go to Messrs Baker for giving up some of their time preparing the venue; they were witnessed on site before 5 pm that evening erecting lamp pins and ropes to comply with our 'safe code of conduct'. Thank-you Brian and Ray.

Nearly thirty engines were on display with plenty of variety to amuse the steady stream of onlookers. Rarest species was Brian Reakes' Capel type X but unfortunately the high altitude of Mendip seemed to affect its spark and we had to be content to admire a silent engine. Lister D types were very plentiful, many actually driving something; variations on these included a tank-cooled model and a Kerosene version. Towering above a nice little Petter A2K and a Wolseley driving an Aerograph compressor was a splendid Lister L type 4 hp of 1917.

Another unusual engine and the result of a 'labour of love' for its owner was the Bernard 5 hp, owned and restored by Cecil Giblett; replacement of its eighty two copper cooling tubes used 1½ rolls of 6mm copper tube and Cecil tells us that the soldering was a two-day nightmare! However, it was running well. Audrey Harris was in charge of her Ruston ZPR 2 hp (so she told me!) while son Andrew proudly showed his newly acquired little model engine, made in Germany at around the turn of the century. Don Rogers' Bulldog was un-muzzled and barking away as well as ever next to Carol Cox who was trying to 'out-ZRP' Audrey with her Ruston. On the subject of Rustons, Vic Walton had the tool-box out to his APR 2½hp, but Mr. Bevan seemed to have sorted out his Amanco Hired Man which was running like the proverbial Swiss watch.

The little Leek engine owned by Jeremy Adams drew a crowd to watch it start, but they were all disappointed as it started first pull! This is another engine which has just been sorted out by its owner having recently almost been renamed LEAK engine! Entertainment was provided by Anne and Dave Day with their Dean organ while Roy Pointing's Austin 3 litre hearse transporter provided amusement for many and, indeed attraction to the event for passers-by.

Eric Gay and Brian Verrall conducted the monthly raffle; I'm afraid I did not jot down all the prize winners but I did see Marg Appleby attacking Bill with a large pair of pliers'. Yours truly was not among the lucky prize winners however. As the evening turned to dusk, engines were reloaded and their owners headed, either for the comfort of the bar or homeward to see the late night movie after a very enjoyable evening.

EMERSON BRANTINGHAM.

THE ANNUAL MENDIP CRANK-UP Sunday 4th August at Tencrest Garage, Gurney Slade.

Approximately 40 stationary engines required for this now well established event, engine owners who would like to attend please contact Bill Coombes on Oakhill 840868, early booking advised as spaces are soon snapped up. Bill is also looking for car boots to attend, so if you know of anyone who would like to go, or do one yourself, please contact Bill and book your space.

OBITUARY It is with regret that we learn of the death of Ken Passmore of Tiverton. The club and committee send their condolences to his wife and family, he will be sadly missed.

Whenever engines are under discussion, either commercially or historically, the name Petter always appears. At Bath University, a Petter PH IW has formed the basis for some interesting research for many years; alas it has recently been thrown out to make space for other work with different funding. The Petter was termed, the 'adiabatic' engine, that is in simple terms an engine where heat loss is minimised thus to increase efficiency. The heat loss down through the piston was especially monitored using a special piston instrumented with many tiny thermocouples or measuring devices.

An insulated piston crown was developed for this engine, the insulating medium being an airspace across the crown. This research naturally led on to a brief period of research with a ceramic crown, a field of study in which most engine manufacturers are interested and in which the Japanese are having the most success. For this, the PH IW was modified or rather, in preservation terms, 'Bastardised' somewhat by the fitting of a direct injection cylinder head from an AV-I LAB. The production method of the piston and the difficulty of working with an alien material like ceramic resulted in a test run of less than five minutes duration - and alot of ceramic powder! Trials with different methods and types of material soon proved that such technology was best left to the land of the Rising Sun.

While on the subject of recently abandoned research projects, another very interesting engine which we did some work on but has been cleared out was the 3-cylinder steam engine designed and developed by Dr. Alex Moulton. Dr. Alex Moulton is best known for his unique and expensive bicycles and for his design work with Issigonis on the controversial and complicated suspension systems used through the sixties and seventies by British Leyland. His steam engine with poppet valves and flash boiler had been used in a couple of boats and it came to us for a series of tests. The main problem with it was 'control' this being effected by a pressure sensing switch and a feed pump. Working at pressures between 200 psi and 900 psi, I can only leave the rest to your imagination! The most spectacular event was when the safety valve blew, filling the lab. with clouds of steam. However, eventually we did achieve some succes with it - which highlighted another weak area, the condensing and oil cleaning systems. Still, as they say, it was fun while it lasted. For more detail of this engine read Stationary Engine No. 188, October, 1989.

The next article in this series will be on the Wankel and the Ricardo E6 but meanwhile, if anyone knows of a good home for a Greenwood and Batley Steam Turbine engine on a heavy cast base, there is one for disposal at Bath University.

ERIC G. BRAIN.

COACH TRIP TO THE GREAT DORSET STEAM FAIR - Saturday 31st August.

Members and friends who would like to go on this trip please note that the coach will leave the Old Down Inn, Emborough at 9.00 am and will leave the show at approximately 10.00 pm. This will allow visitors to see the evening spectacular of the illuminated, steam fun fair and showmans engines all lined up, a sight often missed by the people who leave before dark. We hopeto arrange for the coach to be open at a certain time during the day for those who would like to rest up for a while. More details on this at a later date. Cost including entry into the show will be as follows:- Adults £8.00, OAP and children up to 15 - £6.00 Payments please to Mrs. Shirley Gale, 18 Church Lane, North Bradley, Trowbridge, Wilts. (Cheques made payable to Wessex S.E.C.) by the end of July, so that we can order our tickets in advance.

FAULKLAND FLOWER SHOW have once again contacted us with a request for 8 engines to attend their show on 14th September (Saturday). Anyone wishing to attend please contact Mr. Tom Rodford, 2 Turners Tower, Hemington, Bath, Somerset. BA3 5UP.

WANTED 3" wide flat belting approx. 4 ft long. Please contact Edward Jones, 37 Sutherland Avenue, Downend, Bristol BS16 6QW or Tel: 0272 574371.

FOR SALE 1983 Y Reg. Ital Van. MOT 19/10/91. Tax 31/10/91 £550. Contact Mr. S. Holmes, 11 Everett Close, Wells. or Tel: 0749 75267.

A PIG ROAST plus veggy burgers will take place on Saturday 27th July at West Lydford Argricultural Store, on A37 Shepton Mallet to Ilchester road. Approx 20 stationary engines are invited and proceeds will go to C.L.I.C. The evening will also include live music and a bar. Members and friends who would like to support this event just give our club president Herbie Gane a ring on Wells 74402 and tell him you are coming.

FOR SALE A Reg. Austin Maestro 1.6L £800 For further details Tel: Bill Appleby 0373 66782

AN IDEA that arose at the last committee meeting was that if any club member with special skills would like to assist a fellow member in need of practical help or advice on how to get over a problem and would be prepared to have their name and skill entered on a club register please contact any club committee member or write to the editor. The sort of thing that would help would be for example: Repairs and maintenance of particular engine makes, i.e.. Amanco-Petter-Lister. Magneto repairs, white metalling, castings, fuel tank repairs, welding, in fact anything that could be of help. To be able to pool our knowledge would be a huge benefit to our hobby as a whole.

WHILST SPENDING a long weekend in Suffolk recently I took the opportunity to visit the Charles Burrell Museum in Thetford. Opened this year it tells the story of the company, the works, the employees and the engines and agricultural machinery that they produced, housed in the former finishing shop, on view are traction engines and trailers and some of the original workshop machinery now installed in worklike surroundings. The entrance fee was only £1 and good value for money ED.

ENGINE RAFFLE We still have raffle tickets for sale. The little Stover engine is still looking for a good home. All committee members have tickets to sell at 25p per ticket or £1 per book of four, they will be on sale at Rallies and at other club events.

CLUB MEMBERS who visit places of interest during the year please share your visits with us by writing about your day out or holiday and send it to the editor.

LETTER TO THE EDITOR Thank you Anne for your letter re: plaques and the 'new rallyist', your suggestion that an engraved bottle of Scotch as an alternative sounds a great idea and it certainly would not get thrown in a drawer. Seriously though your comments are noted and will be passed on along with others for your committee to discuss.

While looking through some back copies of our newsletter from several years ago, there are a few technical supplements that I thought would be worth reprinting again, especially for the benefit of our more recent club members. ED.

THE MAGNETO IGNITION SYSTEM

The primary circuit of a magneto is made up of a permanent magnet field system in conjunction with a primary winding in the armature, this winding being connected in series with a contact breaker which has a condenser across the breaker points. An ignition switch, which is 'open' in the on position and earthed in the off position completes the primary circuit components. The secondary circuit consists of a secondary winding on the armature connected to the centre contact arm of a distributor head, and leads from the distributor terminals to the sparking plugs.

MAIN TYPES OF MAGNETO

There are three types of magneto, 1 - The rotary armature type. 2 - The polar inductor type. 3 - The rotating magnet type. All three function in a similiar manner but have different characteristics.

THE ROTATING ARMATURE TYPE

The rotating armature type has a II magnet frame of cobalt or tungsten steel fixed to a cast aluminium body. The name is self explanatory to any electrical engineer.

THE CONTACT BREAKER

The contact breaker for this type of magneto differs from the coil ignition type in that the cam is stationary and the contact breaker plate revolves with the rocker arm and contact stud. A fibre heel on the rocker arm is pressed against the stationary cam and opens the contacts twice in each revolution.

THE POLAR INDUCTOR TYPE

The development of the polar inductor type of magneto has met the requirements of six, eight and other multi-cylinder high speed engines. The chief advantage of this type is that it can be constructed to give four sparks per revolution and consequently halve the speed required from a two-spark magneto.

THE ROTARY MAGNET TYPE

The rotary magnet is similiar in construction to the polar inductor type, except that the permanent magnet is in cylindrical form and is mounted over pole laminations fixed between two end plates on the rotar shaft. This magnet revolves between laminated poles cast in with the frame. Magnetos of this pattern built within the standard dimensions are made to give two sparks per revolution and therefore run at the same speeds as the rotating armature type for engines having the same number of cylinders. Automatic timing of magnetos may be effected by a mechanical device interposed between the engine and the magneto. The device is centrifugal in action and advances the timing of the magneto as engine speed increases.

MAGNETO FAULT FINDING DIAGRAM

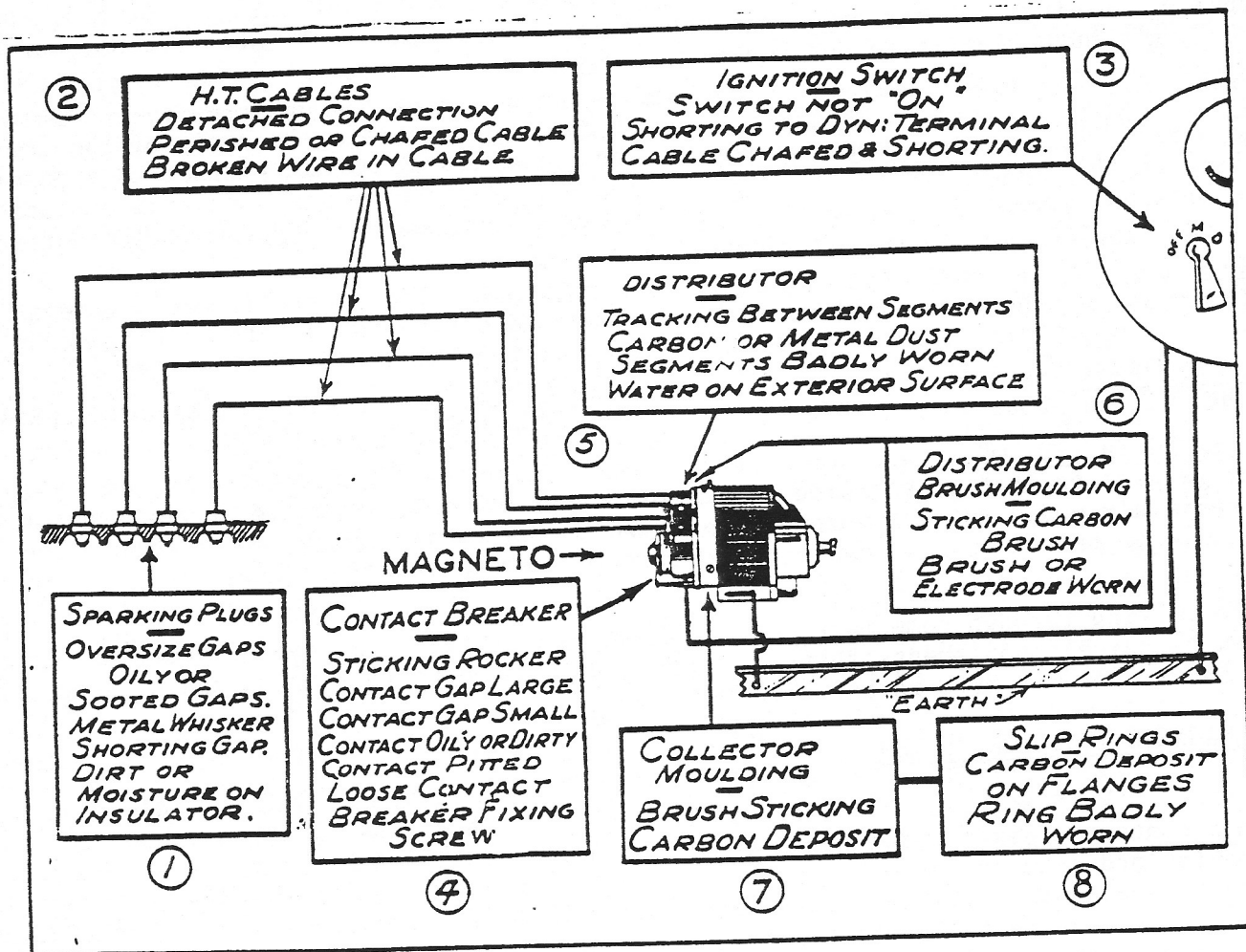
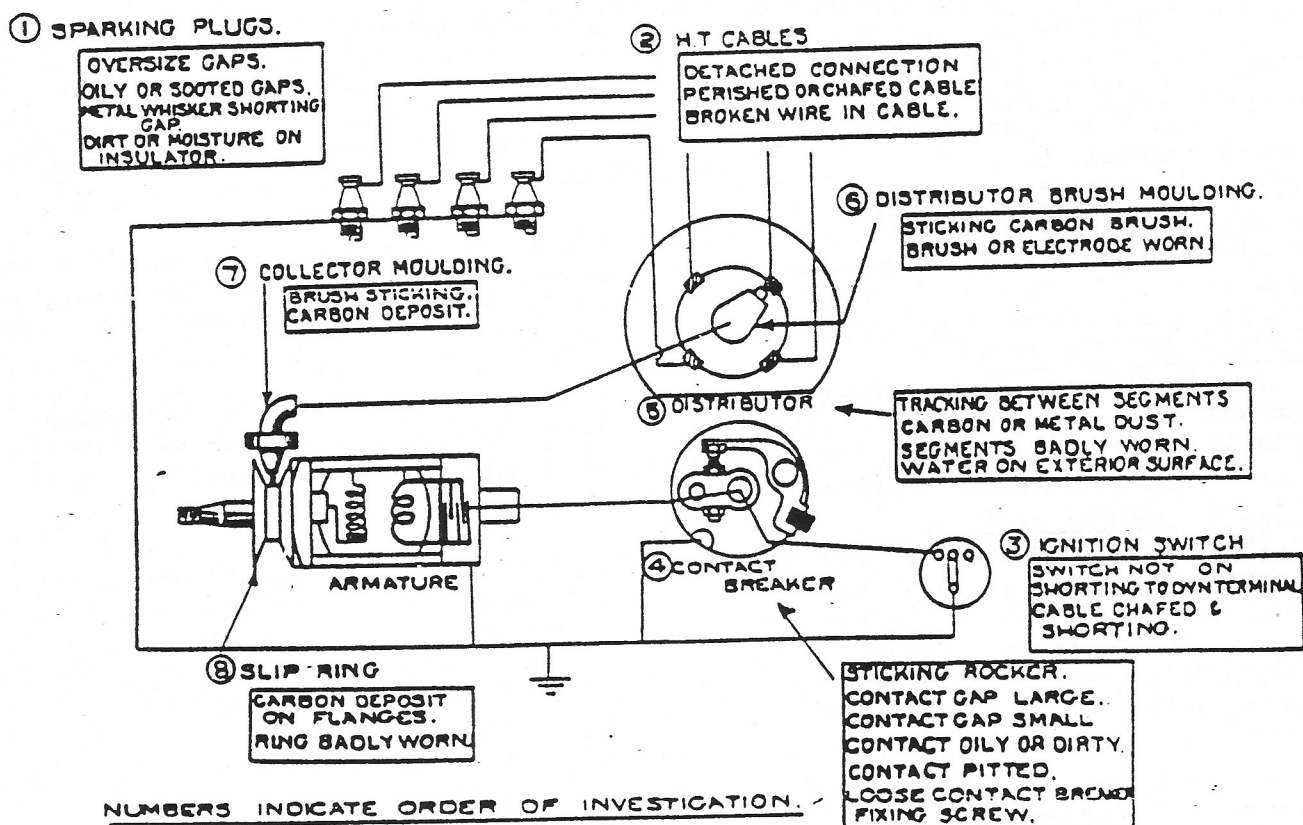


Fig. 16.—WHERE TO LOOK FOR TROUBLE IN A MAGNETO IGNITION SYSTEM.
(Pictorial diagram.) See also Fig. 17.



NUMBERS INDICATE ORDER OF INVESTIGATION.

Fig. 17.—WHERE TO LOOK FOR TROUBLE IN A MAGNETO IGNITION SYSTEM.
(Technical diagram.) To be studied in conjunction with Fig. 16.