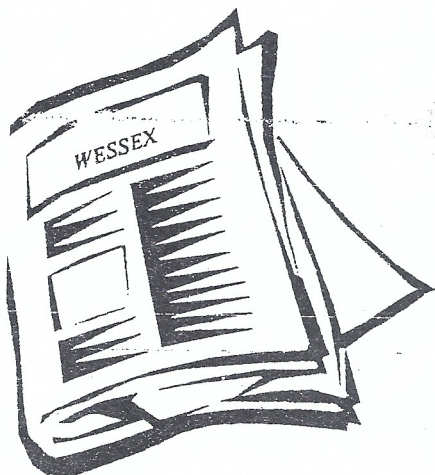
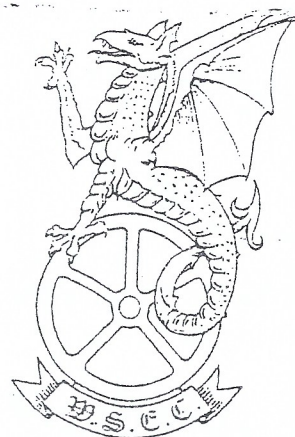


NOVEMBER 2006

WESSEX STATIONARY ENGINE CLUB LIMITED



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NEWSLETTER

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******* EDITORIAL *******

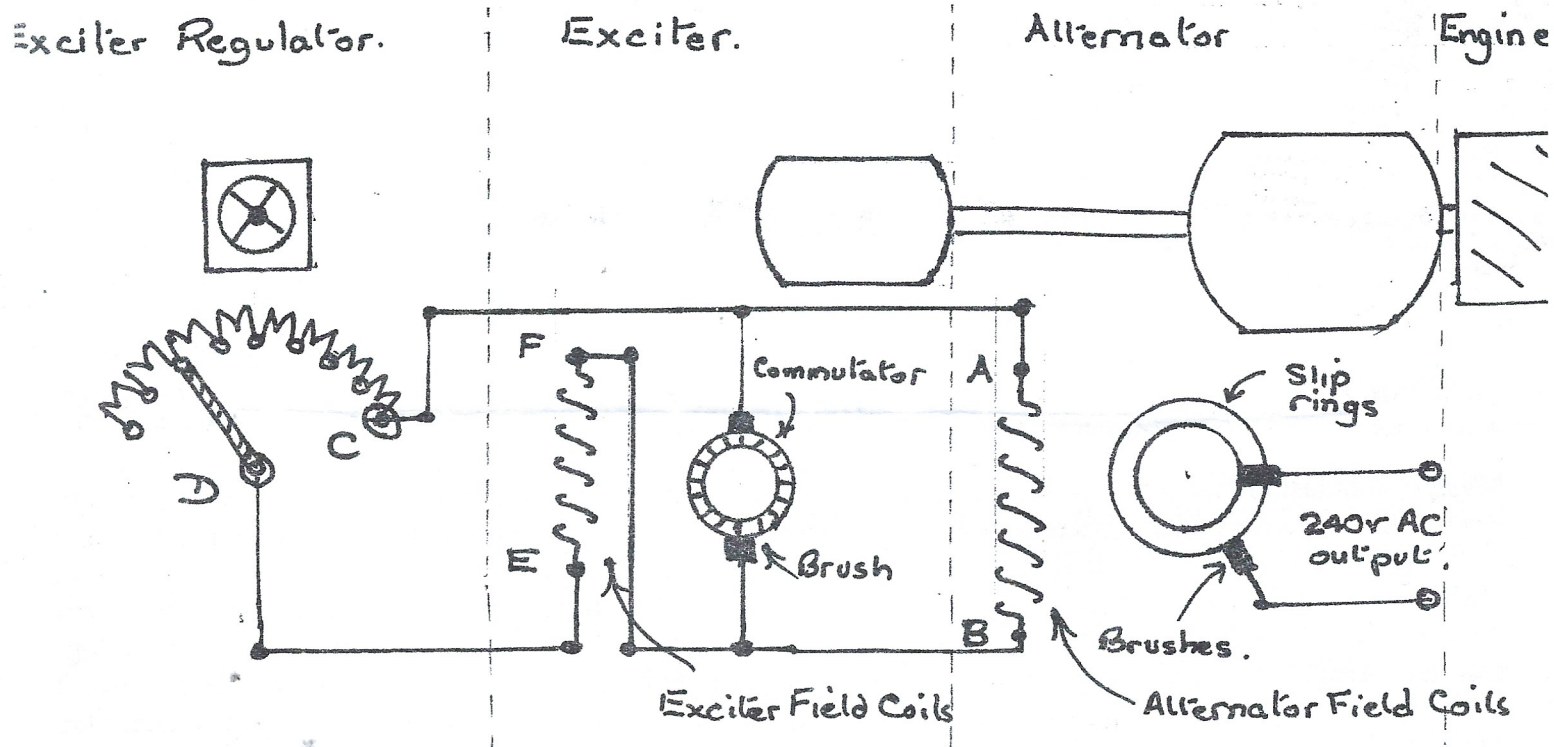
My appeal in last months newsletter for members to fill the vacancies on the committee at the AGM in February has had the response I fully expected – absolutely **ZERO**. It doesn't take rocket science to work out that if there is no committee to run the club, then there is no club. The members of the WSEC are really fortunate that most of the present committee have served this club for a very long time. Jackie and Robin over 20 years, Eric over 20 years. Myself, committee member and then Chairman over 15 years. Editor 13 years. Not forgetting our secretary Arthur who has been doing this important job brilliantly for the club for quite a number of years. I really think that members take it for granted that these members will carry on indefinitely, well this is not the case, some of you will have to take on responsibility for some of these tasks or the club will suffer. I will now sit back and wait for the phone to ring with a flood of nominations for these posts.

******* CHAIRMANS REPORT *******

The October club night at the Old Down Inn saw a good crowd assembled in the hall for an evenings entertainment by Mike Dean, Mike had been to the Old Down before when he gave a talk on the SS Great Brittain. Mike's talk and slide show this time was entitled " Holy Grail and Obby Oss". This consisted of the different tales of "folklore" around the area, the Holy Grail referring to when Joseph of Aramethea came to Glastonbury and planting his walking stick, which turned into the holy thorn tree on Wearyall Hill. The Obby Oss referred to centuries old traditions acted in the streets in various villages and towns. All in all it was a very good presentation and very entertaining. On the second Tuesday of every month the committee meets at the Old Down Inn for a committee meeting. The October meeting was on the 10th, we were assembled in the small bar and had got to the point of sorting out a club visit for next year when we heard a loud "bang" from outside, someone from the bar said there had been an accident outside. We suspended the meeting and went out to see what had happened, to be greeted with a scene of utter destruction. A car had crossed over from the otherside of the road and entered the Old Down car park at speed into my car, which it then pushed it into Fred Biggs 4x4 which was parked behind it. It had pushed both cars, which were parked with their hand brakes on, more than two car lengths down the car park. The chap in the car (a Honda Civic) had entered the car park according to the police at over 60 mph. He had a cut head, and a large bulge in his windscreen where his head had hit it, he also had a very badly gashed knee, which Andrea said the bone was showing. The police and ambulance were called so I had no option but to abort the committee meeting and adjourn it to the following week. My car (an Orion) was an absolute write off and is now subject to a claim against the other party. Fred now has his 4x4 back from the repairers where it cost over three grand to put right. I can see why members are reluctant to come on the committee, it's a very dangerous occupation. I found out afterwards that the chap spent 5 days in hospital having an operation on his leg, he is claiming that he passed out, (he was 78 years old) if the police could prove he went to sleep he would be prosecuted, but if he can prove he passed out he will not be. At the meetings now at the Old Down my car will not be parked outside as usual, it will be in the far corner, well away from the road. With no transport home Fred had to cadge a lift to Midsomer – Norton with one of the pub customers and I had to ring my daughter to come and fetch me. I would like to thank Eric Gay who offered to go out of his way to take me home if I was stuck, Thanks Eric.

THIS DYNAMO WON'T DYNE AT ALL WELL

Most of the elderly dynamos that we have to care for and (occasionally) show off at a rally normally last well and work for many years. But I came across some odd difficulties the other month when working on the exciter dynamo of a Stuart generating set, which maybe helpful to report, in case it can help any other club member.



The exciter +of this set (the small dynamo which sits near the main alternator, whose only task is to provide direct current to feed the field coils of the alternator to make the whole thing work) was sulking badly. The output measured between points "A" and "B" (which the brass plate on the body of the exciter said should be 110 volts) was a miserable 15 volts or so, even though the engine was running steadily at a good speed. And so the main alternator was only producing a tiny fraction of what it could and should have done. There are a lot of faults to look for. Did the exciter brushes sit nicely on the commutator? Was the exciter commutator smooth and bright? Did the wiring seem sensible? Did the field regulator (the wheel which alters a variable resistor to change the current through the exciter's own field coils to alter the exciter output) work sweetly, changing the resistance smoothly from a very low to a very high value? Well, no. one of the exciter brushes had the expected smoothly curved surface to its end, but the other was rough, sticking in its holder and only touching the commutator now and again. The commutator was evenly polished – that was a relief, and suggested that the armature coils were in good order – but the entire brush holder assembly was slightly skewed away from its proper position. Odd. This was eventually cured by dismantling the end of the exciter to clean everything out. I think the trouble had been caused by over-greasing the ball bearing, dynamo bearings don't need much in the way of greasing at all once they have been cleaned out and the space inside the ball race half filled with lithium grease. Even if there is a grease nipple fitted there is no need to use a grease gun on it more than once every blue moon. Now the field regulator. No easy way of checking this without an Avo 9 or do they call them multimeters these days??), a meter able to measure resistance, voltage or current. When the wires were removed from the regulator terminals and the Avo connected to "C" and "D" to measure the resistance between them, the resistance started at zero, but shot up very high as soon as the wheel was moved. Broken wires between the brass studs of the switch and the resistance wire coils were found and mended, and the surface of the studs and the switch arm were cleaned with Brasso. Now when the wheel was moved from low to high, the resistance changed smoothly from zero to about 500 ohms. The exciter dynamo was (like all of those we have anything to do with) shunt connected, that is the field coils are in series with the regulator and the field/regulator combination is connected across the brushes. There was rather a lot of wiring for meters and this and that – but for this testing, all the existing wiring was removed and the exciter armature brushes were connected via the

CONTINUED OVER

field regulator to the excite field coil, and the exciter output at "A" & "B" was checked with the Avo (and a small 110 volt bulb as well). When the engine was started up and run up to speed, nothing happened. No movement on the Avo's needle, no glow from the little lamp. What could be wrong? Off came all the wiring for more tests to be done. The resistance of the field coils of the exciter between "E" & "F" was good, showing 500 ohms when tested. The insulation was also excellent, better than 20 megohms when checked with the Avo between field coil terminal "E" and the machine case. There's an important caution here! It's quite safe to use an Avo to measure insulation resistance on an old machine because the voltage used is low, only 15 volts or so from the battery inside the meter. A real test of insulation needs a higher voltage to stress the insulation properly, and a proper insulation tester, a "Megger" uses a very high voltage which may stress old insulation past all endurance and certainly could destroy any modern rectifier or semiconductor. So this low voltage test isn't really an insulation test at all, but merely a check that the insulation is hopefully OK. The resistance between the exciter brushes (when they are disconnected from all their wiring) was reasonably low, about 20 ohms, not varying much as the shaft was slowly turned. And the insulation of the brushes to frame was about 4 megohms, a very reasonable figure. So the exciter field was disconnected from everything and a 12v car battery was connected to "E" & "F" to generate a small steady magnetic field. The Avo, set on its most sensitive voltage range, was connected to the exciter brushes at "A" & "B". the meter moved nicely when the starting handle was gently turned, so the exciter could generate some juice. But when the wiring was changed back to that in the last but one paragraph and the test repeated, there was still no output at all. How could this be ? The frame and field coils of a dynamo are normally very slightly magnetised, because of the magnetism which was left in them from the last time it ran, or possibly even because of the surrounding magnetic field of the earth. When a shunt dynamo is run up to speed, this tint magnetism in the field is enough to make the armature generate a very small voltage. This voltage now powering the field coils should be enough to make the armature generate a little more and so on until full output is soon built up. (The output will build up most rapidly if the field regulator resister is set to it's lowest value). The field coils may chance to be connected the wrong way round to the brushes, if they are, as the speed builds up the armature will start to generate a voltage which opposes that produced by the original remaining magnetism, and an instant comes when these two voltages will be exactly equal and opposite, so nothing further can happen at all no matter how long you wait. The cure for this is to swap the field wires over, so that "F" which was connected to "B" is now connected to "D", and similarly "E" which was connected to "D" is now linked to "B". If you are lucky, all will now be well; if not (and we were not) still nothing will be produced. So what can be done now? Go back to the original connection of the field coil wires to the exciter brushes. Run the machine up to full speed, and briefly connect the wires from the car battery to "F" & "E". a fraction of a second is quite long enough for this and the battery voltage must be much less than the rated voltage of the generator. A 12v car battery will be about right for a 110 volt generator. This shock treatment (if a bit crude) did work, the full output appeared and the generator now runs up and excites itself properly each time it is started. Next task was to loosen the brush holder ring mount slightly and rock the brushes to and fro while the machine runs at full steady speed. Lock the brushes at the point where the output voltage is the greatest possibly, in this case nearly 140 volts. Finally, connect the exciter output to the field of the main alternator, and measure the output voltage of the main generator, both with no load, and something near full load. The main generator was now giving it's full rated output. I am grateful for all the work which Robin Lambert, the owner of this lovely set, did to prepare for all this testing, and for his patience while I tried to work through all the tests in a fairly logical way!

<<<<<<<<<<<<< NEWS AROUND THE REGION >>>>>>>>>>>>>

Mary Verrall has been under the weather recently, made worse I believe by being prescribed tablets that didn't agree with her, but I'm told she is now a lot better. We wish you a speedy return to good health Mary and look forward to seeing you at the events,

***** **BEWARE THE EXPERT** *****

This is not a story of a stationary engine calamity, it is the tale of what happened when after many years of loyal service the Lucas battery on my BSA Shooting Star finally passed away and was laid to rest. I have owned the bike for just over 20 years and it was on the bike when I bought it. I looked after the battery and it was always kept charged, and when it was not in use it was stored inside and checked at regular intervals. It just goes to prove that we in Britain could build some dam good products once upon a time. Well it was of to the local motor cycle dealer, "please can you get me a 6 volt 12 amp hour battery Mr motorcycle man? Oh yes no trouble at all. The nice man checked his book for a battery of the required size and the battery was ordered. Two days later and I was the owner of a new 6 volt battery. It was fitted to the bike, lights OK, so on the Sunday I go for a blast out over the plains around the Pewsey area, did about 60 miles and returned home. I put the bike in the garage and a little voice inside said try the lights, no lights, no horn, no stoplight, check battery, totally flat. Must be a fault on the bike, I checked every connection, every wire, I even checked the dynamo output and polarity, also the working of the ammeter. I could find no fault anywhere. I returned the battery to the motorcycle shop, no trouble we will get you another one, it must have been faulty. New battery arrived and was fitted to the bike, bike run up to check if it was charging, "yes all was OK" well on the following Wednesday it was the annual Vintage Evening at Longbridge Deverill near Warminster, (this was last year, 2005) off I go and had a good time despite the rain. Well around eight o'clock I set off for home, by the time I got to Westbury it was time for lights, oh dear, no lights, not unless I kept the revs high, so in this way I managed to make Trowbridge. The following weekend I again checked the bike from front to back, every wire, every connection etc. And I was beaten. Yes the new battery was flat, and just like the first one it would not recharge no matter how I tried. It was on the Monday evening when I rang the BSA expert for the Vintage Motor Cycle Club. He like me was beat. Although he did make some suggestions, so again with test equipment in hand I did some more checks but to no avail. Another call to the BSA expert, but like me he was beaten. Now in the motor cycle press there is a firm A&O services, they have a phone help line, so I gave them a call and told them my troubles, The very, very nice man soon put me on the road again, IT'S NOT YOUR BIKE, it's the idiot that is supplying you with batteries, have you checked that they are filled with acid and not distilled water?. No I had not, I had relied on the expert in the motor cycle shop in Trowbridge. The next day I went to a supplier of motorcycle and custom bike bits who could get me a battery for the following day. The next day I had a battery complete with it's own bottle of acid, the filling instructions and the charging details. No more trouble, and many more miles on the clock of Bessie the BSA. I won't tell you what I said to the original supplier of the first two batteries but I can be pretty sure that in future they will fill batteries with acid and not water.

ERIC GAY

***** **THE MARKET PLACE** *****

FOR SALE Trailer. 8 x 4. Two wheeled with brakes. Drop down tailgate. Spare wheel. With loading skids. Good condition ready for use. £250. For further details ring Robin on 01373 463526.

***** **EVENTS FOR YOUR DIARY** *****

SUNDAY DECEMBER 3rd. Anti – Freeze Crank – Up at Nunney Catch Transport Café. The café will be open for the usual hot food and drinks. The Grand Raffle will take place after dinner. Prizes will be appreciated. Bring along any bits you have for sale. Cars, Motorcycles, Displays etc welcome.

WEDNESDAY DECEMBER 27th. Mince Pie Crank – Up at The Old Down Inn. This is the last Wessex Event of 2006, so turn up and make it a good one. Hot mince pies and sausage rolls will be handed out. The pub will be open for drinks etc. We shall run the usual raffle. Prizes will be very much appreciated. Bring along any bits for sale. Lets have a good turnout to round off another successful year for the club.

MONDAY 29th JANUARY. The first club night of 2007 at the Old Down Inn. Guest speaker is member Keith Nash giving an illustrated talk on his travels around Norway with his 1911 Gregoire. This is an evenings entertainment not to be missed, so turn up early and make sure of a seat. The usual raffle will take place. The landlady Maxine now puts on some lovely fresh rolls in the interval which are on sale at £1-50 each.