

CRANKING

The Wessex Stationary Engine Club's Monthly Newsletter

February
2011

Thirty fourth year
of publication

www.wessex-sec.co.uk

From the Sump

It's been truly said that you can only please some of the people some of the time! At a very well attended club night in January, I was quite taken aback by the number of men who went out of their way to tell me that they had very much enjoyed the "Featured Engine" series on Rolls-Royce piston aero engines. Indeed, a nearby club has asked me to speak at a club night on them. Heartened as I undoubtedly am, I nonetheless feel that I should be looking at more mundane devices for a while. I'm delighted that Tony Davis gave me a nice write up on his Grigg – a sign of things to come I hope!

Without doubt, many of us have been spending chilly hours in the workshop as the days – and the hazel catkins – lengthen. I am no exception but instead of just an engine this time, I have been renovating an old motorcycle and it is now approaching completion. It has been lurking at the back of the workshop for forty years and it occurred to me the other day that I'm running out of years in which to get around to it! I'll bring it to some Wessex crank ups instead of an engine now and again.

Have YOU been restoring an engine etc? You know that we are all interested to hear what you've been doing!

Some event news. Eric tells me that the Vintage Working Weekend on 7 & 8th May at the **Breamore Countryside Museum**, nr Fordingbridge, Hampshire, SP6 2DF is open to members of the Wessex SEC. Please contact Eric Gay for details on 01225 754374. Next, many will be interested to hear that the popular **Netley Marsh Rally** at Meadowmead Farm, Netley Marsh, Hants. SO40 7GY will take place on 22-24th July. If you'd like an application form, contact Jean White on 023 8086 0313. There is no fee to display this year but the club would be grateful for a donation. Then there is **The 47th Welland Steam Rally**, at Woodside Farm WR13 6NG, mid-way between Upton-Upon-Severn & Malvern. 29 – 31st July. Phone 01531 890 762 for an entry form.

Finally, junior Henry Baker will be 17 on 23rd March – happy birthday Henry – only another year before you need to pay a full sub!

Moving the Metal

For sale

Length of steel shafting, 2½" diameter, 9ft long with 2 plumber blocks. A bit rusty but a lot of useful steel for only £5. Buyer collects. Phone Tom Randall 01761 418926

Detroit 2.5 HP vertical, circa 1913. £750. **International Titan** 1HP horizontal £1,050. **International**, M type, LT, 3HP, 1920, £450. Tel John: 0122 5340432 or email wjohnfire@virginmedia.com.

Wood-effect 15" high glass lined barrels. Just the thing for a small cooling tank. £15 each

Stuart Turner P55 Industrial engine. (photo 1 below) No magneto, but in good order. £80.00 ono.

Both above, phone Kim Siddorn 0117 964 6818

WANTED

Four to five inch **flat belt pulley**. Petter A1 starting handle. Phone R. Champion 01275 892944

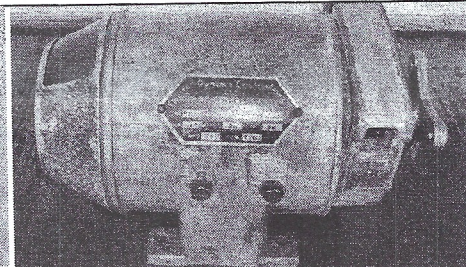
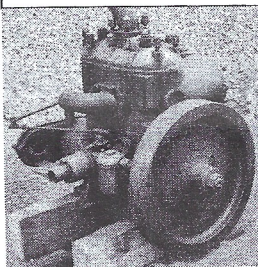
ABC engine. Particularly 1915 250cc Firefly but anything considered. Good price paid for right engine!

Stuart Turner flat twin generator complete. Alternatively, I just need the (apparently!) special dynamo. PLEASE look under your bench for one! (photo 2)

Both above, phone Kim Siddorn 0117 964 6818

PLEASE NOTE

- In future I'll run ads for **TWO** months. If you want to run it again, you'll have to phone me.
- I'm prepared to print a **SMALL** photo of your engine etc in this column IF I have space.



Have you paid your subs yet? If not, this will be your last newsletter & your Third Party Liability cover is invalid!

However, Mrs Jackie Lambert, 19, Beechwood Ave, Frome Somerset, BA11 2AX would be delighted to accept your renewal

Articles, cartoons, photos etc are always very welcome – this is not a one-man band, but an expression of all our thoughts and experience. Submissions should be preferably typed or word-processed or even handwritten, (if brief), - it is the content we're after, not the grammar or spelling, so please don't feel your efforts will be ignored. The editor reserves the right to change, edit, augment or lessen your Deathless Prose and asks all to note that opinions expressed in this newsletter may or may not represent club policy

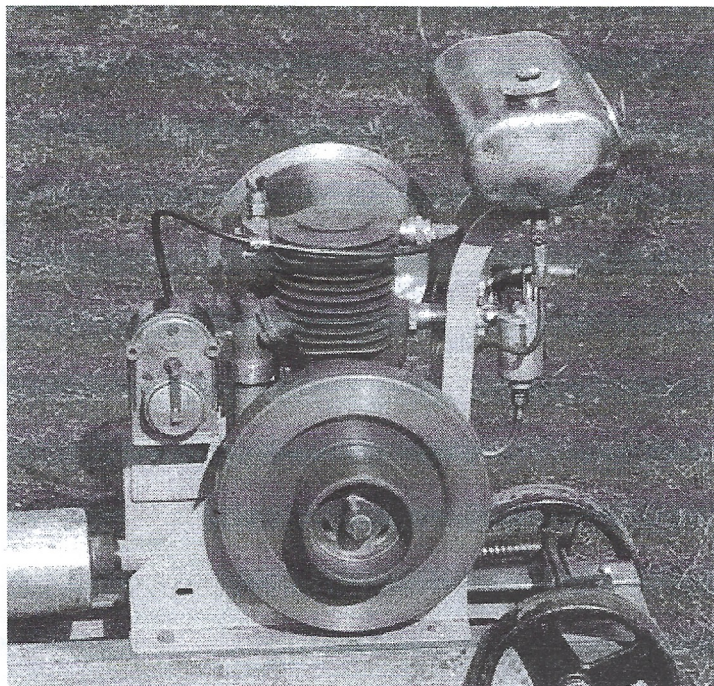
Phone - 0117 964 6818

J. Kim Siddorn, 9, Durleigh Close, Bristol. BS13 7NQ or by e-mail to kim.siddorn@blueyonder.co.uk.

Featured Engine No. 49

The "Grigg" by Tony Davis

I first came into possession of this motor over 35 years ago. It was lying in a Frome scrap yard and was exchanged for some scrap copper pipes and fittings. At the time I knew nothing of stationary engines or engine clubs and, having been a chippy all my working life, did not have a clue about engineering.



But I just liked the look of this little motor and as it was called a Grigg, thought it was a bit interesting. So I took it home and put it under my workbench. There it remained for many years while I did my work over it. Now as I must wear sandals most of the time I was forever stubbing my toe on it to serve as a constant reminder. To shift the darn thing would, no doubt, have been the easy answer and cut down on my constant discomfort. This was solved when I sold it to Robin Lambert where once more it took up residence under yet another bench for a long spell.

The Grigg is a 144cc 2 stroke running on a 12 to 1 petrol oil mix, giving 2.25 -3 HP at 2000rpm. It was manufactured in Twickenham by the Grigg Brothers, who were bolting the motor on to a very crude scooter in 1922. Production finished in 1923 and in a matter of six months it was all over, the company closing down in 1924.

Many years later - after I retired - we joined the Wessex Stationary Engine club and started into this alien business of engine restoration. I bought this little beast back again. This time it went on top of the bench, not under it.

The engine was partly stripped down. The first problem - no life in the mag, so that went off for a full service. I think the engine had been used as a power unit for a saw bench as when the mag chain

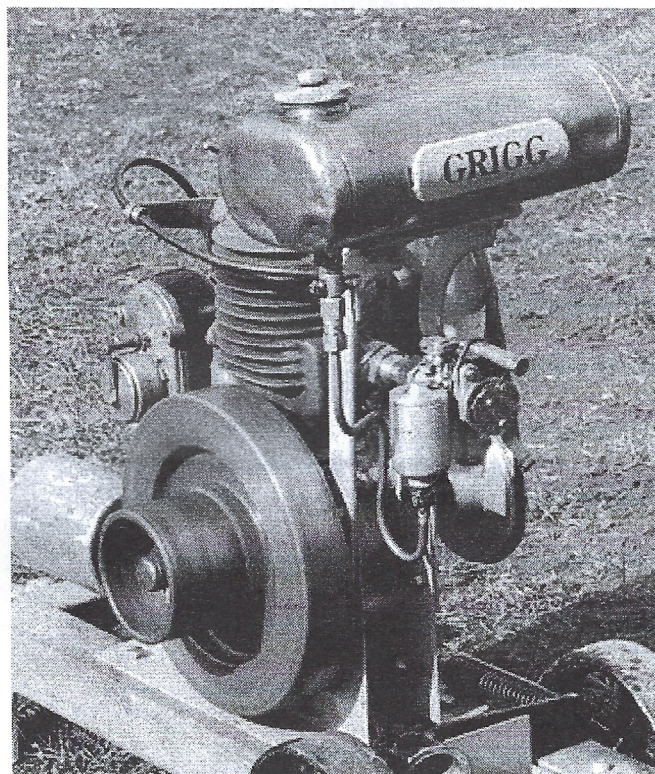
drive cover was removed, it was solid with a mixture of oil and fine sawdust.

The next work involved the engine going to Arthur Smith's workshop for some master engineering. This was the machining of new piston rings, extending the crankshaft plus many other bits - all well beyond my engineering capabilities.

While all this was being carried out, I prepared a petrol tank and stand. Bit of luck there - found one the right size in stock! I also cut out a clover leaf fan blade and made up a pine trolley with small wheels, all this in my own workshops.

When I got the engine back and the bits fitted, it would not fire up. All very disappointing. Arthur and myself spent more time trying to get it to work to no avail, even with a little help from club members. Then I had a turn of good luck. My knight in shining armour turned up, not on a white horse, but in a blue VW van. This was Adrian Grant, who it turned out knew more about the little two stroke than the rest of us put together. So after much tuning and countless roll-ups (Adrian's), the Grigg is now running. It just needs a bit more work and the petrol tank repainted (my fault - I put it down on a rag soaking in petrol and off came my gold sign writing), but I can sort that out myself.

Well, that's about it. I hope to create a lot of interest next year on the rally fields. Hope to see you all in 2011.



Editor's note. These two photos of a Grigg are not of Tony's engine but of one displayed at Astley (not Astle Park) last year. They are so rare that I suspect that it is very similar.

My thanks to Tony for this article. Hopefully, it will rouse out a few more of you!

Calendar of Events

Key. CN = Club Night. CU = Crankup

March 5th Saturday. Spring Sort Out. Cranmore Station.

March 28th CN. Robin Lambert will give a **slide show**.

April 3rd. Sunday. Club Visit. Drive yourself trip. Weston Zoyland Pumping Station. In Steam day.

April 9th Saturday. Spring Enstone Sale.

April 17th Sunday. CU at Nunney Catch

April 18th. CN. *Early because of Easter BH.* Mike Horler. "Michael the country boy."

April 25th Easter Monday Event at Mells. Contact Robin Lambert 01373 463526 if you want to attend.

May 7/8th E. The Breamore Countryside Museum. Fordingbridge, Hampshire, SP6 2DF. Contact Eric Gay 01225 754374.

May 23rd . CN. Guest speaker John Heron. **"The RAF Harrier in the Cold War"**

June 1st Wed. CU. D-Day Cranmore station Yard. Bring something military if you can.

June 18/19th Wessex Midsummer Vintage Gathering. Our club rally at Semington.

June 25/26th. Event. Please bring an engine **Cranmore Railway Station.** An in steam day at this popular venue.

June 25/26th. Event. 27th **1000 Engine Rally**, Astle Park.

June 27th . CN. Richard Harris. **"Restoring a Bedford TK."**

July 25th CN. Crankup at The Court Hotel

July 31st Sunday. Event. Mini rally at **Haynes Museum**, Sparkford mini - rally Haynes motor museum.

August 22nd CN. *Early because of bank holiday.* **Photo presentation** by the members. Bring along ten photo's or slides. Prize for best effort.

Sept 10/11th. Event. Stockbridge Working Weekend. Please phone **Alan Vickery** for details 01256 703169

Sept 18th Sunday. Club Visit. Coach trip to Kew Bridge Steam Museum.

Sept 26th CN. Kim Siddom. "Engines at the 1000 Engine Rally"

Oct 8th. Sat. Skittle match. South Parade Club, Frome.

Oct 15th. Sat. Autumn sortout at Cranmore Station Yard.

Oct 31st CN. Selwood preservation club. Inter club quiz.

Nov 12th Saturday. Autumn Enstone Sale.

Nov 28th. CN Guest speaker Patrick Hassell. "Bristol Before Rolls-Royce"

Dec 4th Sunday. Antifreeze CU at Nunney Catch.

December **no club night.**

Dec 27th. Mince Pie **CU** at The Court Hotel

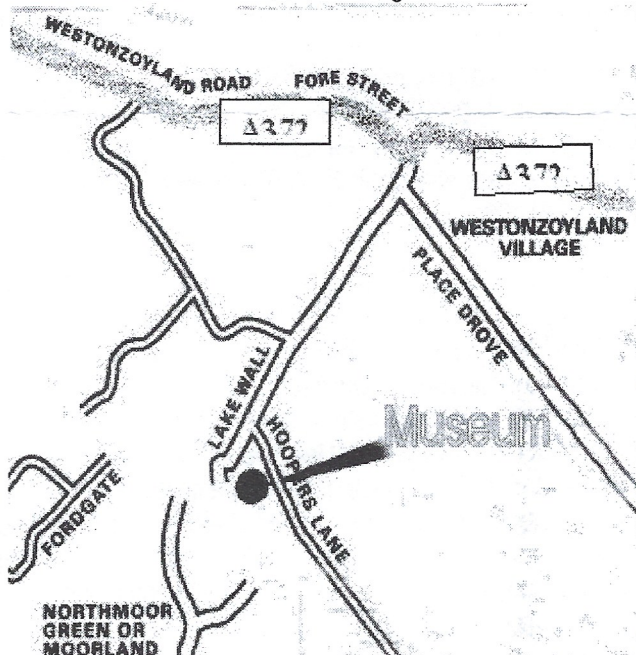
All events are listed in good faith. You should always ascertain if an event is taking place before you go. If in doubt, ring Brian Baker on 01749 342671

Westonzoyland Steam Pumping Station – TA7 0LS Club Visit On Sunday 3rd April

This is a "drive yourself" visit to Westonzoyland Steam Pumping Station that has been updated with many more exhibits since a club visit many years ago. The Museum opens at 1pm, so if we could gather at around that time we could take advantage of any group booking entry fee. In the village of Westonzoyland is a very good pub serving excellent food where you may wish to lunch before going on to the Museum. The Easton and Amos engine will be in steam which drives the beam engine which pumped flood water from the Somerset Levels into the river Parrot and out into the sea. A map is provided for you, and for the members who have invested in a Sat Nav the post code is included. On

site is a narrow gauge railway with two engines in use, a 1949 Lister Railtruck and a 1968 Simplex Locomotive. On site is free parking and picnic area, a snack bar serving light refreshments, toilets, a shop selling specialist books and DVDs, the museum has a pleasant riverside setting. There is a large exhibition hall on site that houses the Trust's working engines. Also on display outside is a nicely restored Portable Marshall Boiler. This is certainly a very interesting and worthwhile way to spend a Sunday afternoon in the company of fellow members, I hope to see as many of you as possible to make this visit a success. If you have any queries ring me on 01749 342671. B.J.B.

Directions. From Bridgewater, follow the A372 Langport Road into Westonzoyland village. At the corner shop, turn sharp right and follow the tourist signs via Lake Wall for about a mile, then turn left into Hooper's Lane. In about a quarter of a mile, you will find the Museum entrance on the right.



Chairman's report (printed as received)

By Brian Baker

The meeting at the Court Hotel on Monday 31st January saw quite a nice crowd of members turn out for the first meeting of the year, including two visitors from the North Somerset club. I would like to remind members that guests are always welcome at our meetings and events, in the past we have had guests turn up who have later joined the club. The guest speaker for the evening was our old friend from Radstock Dennis Chedgy, who has given talks to us in the past. This talk was about local history entitled "The Twin Towers," this was about rivalry between two rich and powerful families in the Radstock area, who built large mansions for their family homes. One of these men built a very tall tower on his land so he could look over his domain from an observation platform at the top. Not to be outdone his wealthy neighbour built an even taller one on land which overlooked the first one, and so the feud continued. Dennis gave his illustrated talk for about ninety minutes, without referring to notes or barely pausing for breath, remembering dates and facts without pausing, he is certainly a remarkable man. Jackie was busy taking membership renewals, and I would like to remind members that if you have not renewed your membership yet this will probably be the last newsletter that you will receive. Send it off to Jackie and make cheques payable to WSEC Ltd. The raffle followed the talk with plenty of prizes on

offer, thanks to the members who contributed. The committee have planned two visits this year; the first is to Westonzoyland Steam Pumping Station, the details of which are printed in this issue. We had a club visit to this venue many years ago and since then the site has been updated with a lot more exhibits. The station will be in steam on the day. The other visit planned is to Kew Pumping Station at Kew. This is another site we visited many years ago and have planned to visit again by coach due to popular demand. The details for this trip will be published in the newsletter and will be on a first come first served basis. So when you know the details will you please ring me on 01749 342671 to book your seat. A full twelve months has passed since the last AGM, and the vacant post of secretary has still not been filled. With so many members in the club this is a diabolical situation. At the moment most of the work normally carried out by the secretary is being done by me. This cannot continue indefinitely, if a new secretary is not forthcoming there will be two vacancies.

Social news

By Earwig

Happy fourteenth Birthday for 25th February to Max Feeney! Other good wishes also go to David Coats on March 2nd and Eric Gay on March 28th

Water injection

By Kim Siddorn & Max Lambky

Water injection was pretty well known in the 20-30's. My dad was a mechanic and then a service engineer & drove throughout the war - very unusual in war torn Britain! Fuel was poor, got worse and ever harder to get hold of. He experimented with a cobbled-together water injection system, a very simple device that dripped water through a fine bore copper pipe first into the carb post airfilter and then through a union in the manifold post carb. The small tank of water was screwed to the bulkhead in the engine compartment and a loop of the supply pipe came inside the car so he could adjust the tap.

He told me that it definitely made a difference and improved running on Pool Petrol (about 70 Octane) considerably. Pinking vanished, the engine produced more power and ran more smoothly. He thought - and so do I - that the results were down to a number of quite simple factors.

Upon combustion, the water flashes to steam, causing an abrupt rise in combustion pressure, effectively raising the compression ratio whilst at the same time causing the temperature of the exploding mixture to drop equally sharply. As the flame front reaches the edge of the combustion space, the relatively cold metal around the hot gas cloud starts to condense out the water again.

All his experiments were empirical and he kept no notes. Finally, I recall that he said that he'd always turn it off a mile or so from home to allow the cylinders to stay oily overnight.

From the USA, Max Lambky added the following.

My wife's grandpa, Charles Edward Patrick (b. 1892) was a colorful sort. Of Irish heritage with a sprinkling of American Cherokee Indian. In his early years tried prospecting for gold. Spoke fluent Spanish, no accent, as he learned it from a Mexican woman who mothered him after his natural mother died in childbirth. Limited education, (sixth grade). Put all of his sons through college. All three sons served in the military during WWII. Through on the job experience he learned the trade of Tool and Die. Worked at Cessna Aircraft here in Wichita as a

tool designer for many years. Patti found this letter written by her grandfather in Jan 1970 to the Lear-Siegler Corporation, the makers of the Lear Jet.

"Gentlemen: In the year 1920, I was hired to sell a "gadget" that was supposed to duplicate the condition of a motor operating in a fog. This was a condition which caused the internal combustion motor to run as smoothly as a steam engine.

This "gadget" was purported to eliminate carbon deposits. I covered a territory "up hill and down dale" on country roads, before the days of paving. I drove 245 miles from San Antonio to Kerrville, Texas and return. During this journey, the engine consumed only about five gallons of gasoline. At that time the "white" gasoline had no additives. The engine had only thermo siphon cooling, I removed the fan belt & manually injected water to cool the engine internally.

On returning to San Antonio, I took off the cylinder head and dropped the sump to remove one of the pistons for inspection. There was not one particle of carbon either inside the engine or under the piston head. The interior was light reddish brown color, indicating that the engine had been hot enough to get thorough combustion without excessive heat. This gadget was constructed to inject water from the radiator into the intake manifold by a thumb screw on a needle valve to regulate the flow of water. I conceived the idea of automatic regulation of the water flow through thermal control regulated by the heat of the engine, subject to variations of the throttle control.

In order to get a smooth running engine, I cut the gasoline down to where I had a lean mixture which caused excessive premature ignition, then using the water injection to counteract this premature ignition as is accomplished in using Ethyl gasoline in a modern engine used today. In accomplishing this I was not spewing lead into the air aiding pollution, the exhaust from the engine was carbon dioxide without carbon monoxide.

The motor I used was a 1918 Model T. This model did not have a generator, but was run off a flywheel magneto. This engine would ordinarily get only 18 to 20 MPG. I ran a check to see what miles per gallon I was getting. On a straight paved road at 40 MPH, I travelled 70 miles before I ran out. I conducted other experiments which convinced me the possibilities of constructing a compound internal combustion engine, as the poppet valve exhausting the gases from the first expansion to the second expansion cylinder would not be burned, because of the control of the heat of the combustion inside the engine.

I have a set of tracings I made at that time which indicate a possible design for this engine. The value of these tracings is to indicate the theoretical possibility of this engine and not the practical design. If you are interested I will send you a copy of the tracings I have picturing this internal combustion compound expansion steam engine.

I discovered a patent issued to a German inventor about the year 1875, who had the same idea only he had shown it used in a single cylinder stationary gas engine.

Now, this may surprise you. I am not asking any remuneration for this. If you can remove pollution from our atmosphere you are welcome to what I have discovered. You may find yourself opposed by oil companies because of the enormous increase of utilization of 57% of the BTU content in the fuel in contrast to the 17 % BTU being utilized now. The chemical companies will not like elimination of their additives to fuel used. "

Respectfully Yours,

Charles E. Patrick, Sr.