

# CRANKING

*The Wessex Stationary Engine Club's Monthly Newsletter*

November  
2011

Thirty fourth year  
of publication

[www.wessex-sec.co.uk](http://www.wessex-sec.co.uk)

## From the Sump

Wessex is still the largest stationary engine club in the country, I believe. Just look at the calendar of events for next year – none could say that we are inactive! I am ever the optimist, especially in the affairs of men. Whenever you really need someone in club life, someone can be found who didn't run away fast enough to do the task at hand. The trouble is that the old guard who have been deeply committed to keep Wessex SEC going over the years are feeling our age, I'm afraid. I'll not echo Brian's comments, but – well – something must be done.

We are going through a difficult patch at the moment and I'm sure it is only temporary with new members joining and younger people coming into the hobby. It is to these new members that I speak now. Guys, we need you. First and foremost, we need a Secretary to answer the occasional letter and generally deal with the day to day running of the club. It is not an onerous task and one that could be done by anyone who can read and write reasonably well. Bonus if you can use a computer! Frankly, it is a job capable of development and an enterprising person could make both the job and the club a much more vital organisation. There will be many who are shy of putting their hand up and themselves forward, but I do assure you that a very warm welcome awaits anyone with the initial nerve to do so. Like I said – guys, we need YOU.

Peter Harris (the ex museum owner from France) is restoring a Petter A1 with a Sykes pump. circa 1940/50. He is looking for the brass instruction plates on top and side of the engine. Can any members help (perhaps transfers instead) Black and white Diamond shape "Petter". You can get hold of him most easily by e-mail - [pnpharris@yahoo.com](mailto:pnpharris@yahoo.com)

Jackie & Robin Lambert have a new e-mail address [Jackierobin66@gmail.com](mailto:Jackierobin66@gmail.com)

Putting your stuff away for the winter? I'll remind you of my favourite thief deterrent – put the biggest engine you've got across the entrance to your store and take the wheels off.

With modern fuels liable to attack rubber and the copper in your fuel systems, I'd drain them all out, spraying a good whoosh of Duck Oil into the petrol tank before dropping in an oily rag on a string.

## Moving the Metal For sale

**Ruston Hornsby P.B.** 1.5 hp. Restored. £190.  
**Norman SC.** Good Spark. Needs some TLC. £70.  
Pair of strong aluminium runners. 5'10" X 5" £25.

Phone John Emery 01761451665

**Flat bed braked trailer** with headboard. Low load bed 4ft 6ins wide by 8ft long. With ramps, winch & rear steadies. Nearly new 165x13 8 ply tyres & spare. Sufficient for Lister L type on a proper trolley! £200.

More details, phone Graham. 07843 583855. Trowbridge.

**Lucas SR1** magneto. Good sparking condition. £55 ono  
Phone Steve on 01749 670379

**Allen Sythe** Almost new cutter £90

Phone Frank on 01373 832678

**Nissan "Cargo" vanette.** 1996, 2.3 Deisel. 203k, Recent tyres, service, cambelt. MOT March. £800 ono. I have various mags – give me a ring.

All the above - Eric Gay 01225 754374

**International**, M type, LT, 3HP, 1920, £450. Tel John: 01225 340432 or email [wjohnfire@virginmedia.com](mailto:wjohnfire@virginmedia.com).

**Slate switching board** by Nevill, 38" by 28". 6" brass cased instruments. In totally unmolested and unrestored condition. Photos available by e-mail. £400 ONO.

**WW2 Lauson engine** driving small compressor. Unusual little unit with underslung petrol tank and diaphragm pump. Restored. On steel frame ready to rally.

Both above. phone Kim Siddorn 0117 964 6818

## WANTED

**No. 52 Steel Detachable Chain** as used on conveyors. Looking for 10 yards, but any quantity will do.

Phone Gerald Atherton - 01934 852670

Stuart Turner R2Y cylinder side plate with "STUART" cast into it. Phone R. Champion 01275 892944

**Vincent** industrial engine powered compressor.

**Pultra lathe or parts.** 1510 Or 1710 considered.

**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 **Electro-Dynamic Corporation** dynamo. PLEASE look under your bench for one!

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.
- The picture must be clear and contrasty.

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](mailto:kim.siddorn@blueyonder.co.uk).



## Calendar of Events

Key. CN = Club Night. CU = Crankup

**Dec 4<sup>th</sup>** Sunday. Antifreeze CU at Nunney Catch.

December **no club night**.

**Dec 27<sup>th</sup>**. Mince Pie CU at The Court Hotel

2012

**Jan 30<sup>th</sup>** CN. Slide show by Robin Lambert.

**Feb 12<sup>th</sup>**. E. Selwood Sortout at Zeals Airfield on the B3092. (Take the Mere Exit off the A303 and follow Signs for Stourton House & Stourhead. Post Code BA12 6QD)

**Feb 27<sup>th</sup>** CN. Annual General Meeting. 8.00pm at The Court Hotel. There will be a FREE buffet. Please do make an effort to attend & have YOUR say in the club's business

**March 3<sup>rd</sup>**. E. (Sat) Wessex Spring Sortout at Cranmore Station Yard.

**March 26<sup>th</sup>** CN. WW2 in banknotes - invasion, occupation, liberation by Jonathon Hockedy

**March 31<sup>st</sup>**. (Sat) Tractor & Engine Jumble. Langley Farm, Bampton, Oxfordshire, OX18 2RZ.

Sellers £20 Buyers £4 Per Person

**April 3<sup>rd</sup>**. (Sun) Sammy Miller's Motorcycle Museum. Spring Trip. Drive yourself, Bashley Cross Roads New Milton BH25 5SZ. Details later.

**April 9<sup>th</sup>**. E. Easter Monday at Mells.

Contact Robin Lambert 01373 463526 if you want to attend as space is always limited

**April 21<sup>st</sup>**. (Sat). Spring Enstone Sale.

info: Anne Harris 01367 810415

**April 22<sup>nd</sup>**. (Sun) Crank up at Nunney Catch transport café

**April 30<sup>th</sup>** CN. "My life on the River Severn" by Chris Witts

**May 26/27<sup>th</sup>**. Selwood Rally. Southwick, Nr Trowbridge

BA14 9RH. Forms from Mrs Pearl Francis, 45,

Stonebridge Drive, Frome, BA11 2TW.

<http://www.selwoodvintage.co.uk/page6.html>

**May 28<sup>th</sup>** CN. "The Longleat Rallies" by Stuart Ashman

**June 16/17<sup>th</sup>**. E. Wessex Midsummer Vintage

Gathering. Our club rally at Semington.

**June 23/24<sup>th</sup>**. Event. 28<sup>th</sup> 1000 Engine Rally, Astle Park.

**June 25<sup>th</sup>** CN. "Mary Rose". Talk on the Tudor warship by Bill Moore

**July 21/22<sup>nd</sup>**. E. West Oxen Steam & Vintage Show.

Ducklington, Whitney, OX29 7TY (junction A40/A415)

Info: Anne Harris 01367 810415

**July 29<sup>th</sup>**. (Sun) E. Haynes Motor Museum. Mini rally at Sparkbrook. BA22 7LH. (Subject to building work being completed. Details later)

**July 30<sup>th</sup>** CN. Crank Up at the Court Hotel.

**August 20<sup>th</sup>** CN. Early because of bank holiday. In house quiz.

**Sept 24<sup>th</sup>** CN "Engines at the 1000 Engine Rally" by Kim Siddom

**Oct 6<sup>th</sup>**. (Sat) Skittle Match at South Parade club, Frome.

**Oct 13<sup>th</sup>**. E. Wessex Autumn sortout at Cranmore Station Yard.

**Oct 29<sup>th</sup>** CN. Other Hobbies evening.

Bring stuff along to illustrate a table display or talk about it!

**Nov 12<sup>th</sup>**. (Sat) Autumn Enstone Sale.

info: Anne Harris 01367 810415

**Nov 26<sup>th</sup>** CN. Photo presentation by the members. Bring along ten photo's or slides. Prize for best effort.

**Dec 2<sup>th</sup>** (Sun). CU. Antifreeze Crank Up at Nunney Catch.

**December** – No meeting this Month.

**Dec 27<sup>th</sup>**. CU. Mince Pie Crankup at The Court Hotel  
*Our local events programme has been put together by Brian Baker and, as an ordinary club member, I'd like to offer a vote of thanks to him for his efforts in finding speakers and chasing up venues. I have added*

*information about events further afield that I believe would interest the members – Ed.* 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

## Social news

By Earwig

No new members this month. Earwig has proved unresponsive to a sharp stick in the ribs – perhaps he is hibernating...

## Chairman's Report

by Brian Baker (printed as received)

The meeting at the Court Hotel on Monday 31st October was supposed to be an inter club quiz with the Selwood club, however they could not raise a team, so we had an "in house" quiz with the members present taking part. I compiled a quiz of 124 questions from various subjects which I knew would be fair, but would tax their brains. The winner of the quiz with 70 correct answers from the 124 was Michael Jennings, who was presented with a bottle of wine for his efforts, well done Michael. The meeting only attracted about 15 members and I think we had more raffle prizes than members. The members who did attend enjoyed a very entertaining evening indeed; I even had a phone call from a member who said how much he and his wife enjoyed it. The usual raffle followed the quiz with a large selection of prizes on offer, thanks to the members who did turn up, and thanks to the members who brought along raffle prizes. The programme for next year has now been completed with some good guest speakers booked for the meetings, also good events and visits; it needs you the members to support these events to justify the work put in by myself and the committee in arranging them. The committee have decided to cancel the crank up we have in June at Cranmore Railway Station due to lack of support and the failure to find another venue. The moral of this is, if you don't use it, you will lose it. There will be the usual mince pies, sausage rolls and hot roast potatoes at the Mince Pie Crank Up and we are putting on a buffet again at the AGM, make sure you turn up and have your share.

## WANTED URGENTLY

The club urgently requires a membership secretary to take the subscriptions which will be due soon. Jackie is giving up this job due to health problems. All this job entails is to receive the subs from members, record the details of their membership in a book and bank the money. As we have no secretary at the moment and only six active committee members we have no one to do this task which is very important as the subs is our main source of income. I have appealed now for a long time for a member to take on the job of secretary all to no avail. Brian Verrall has told me that he intends to do one more year as President and committee member and then stand down. I would also like to take a back seat as

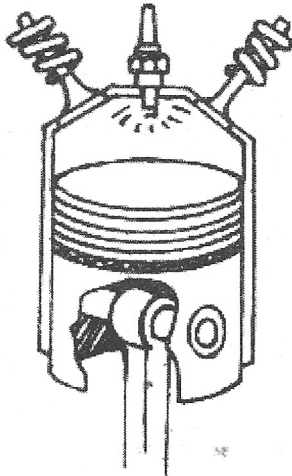


## Featured Engine No. 59

Bits and pieces – the piston by Kim Siddorn

*We are coming up for Featured Engine Number 60,- which will of course appear in the Christmas edition of Cranking - it could be your engine featured here! If your skills don't run to Deathless Prose, no matter – all I need are a brief description of how it came into your hands, some facts, manufacturer's details and two or three clear contrasty photos that look OK in grayscale. How about it - or would you prefer another of Kim's flights of fancy? ;o))*

Right at the heart of any engine is the piston – the bung in the barrel as Harold Willis once called it. It leads an incredibly hard life yet for the most part gives no trouble and is rarely even considered by those whose lives might depend upon its trouble free operation.



The piston was of course inherited from the steam engine and a good fit between cylinder wall and the piston itself was difficult to manufacture and maintain in the early days of steam. Newcoman engines (early types had brass cylinders) were considered in a good state of repair if an old Georgian penny would not fit between piston and bore!

Things rapidly improved and it was soon discovered that the engine was the better for a fairly loose piston with grooves fitted with sealing rings. Many materials were tried and asbestos string packed with a heavy grease laden with graphite was in use for many years. The internal combustion engine required a different approach and as both the combustion pressure and temperature rose during the 1860's, cast iron became the engine manufacturer's friend. Used for cannon and shot since the 14<sup>th</sup> century, its characteristics were well understood and it is a stunningly versatile metal. Different mixtures of alloyed metals give widely differing results. Thus, the main cylinder casting would be of fairly pure "gray" iron, but the liner in which the piston operates is quite different in its constituent elements. Utilising various types of iron, a thin wall cast iron piston would carry cast iron rings running in a cast iron cylinder, all three components varying widely in their make up and treatments during manufacture.

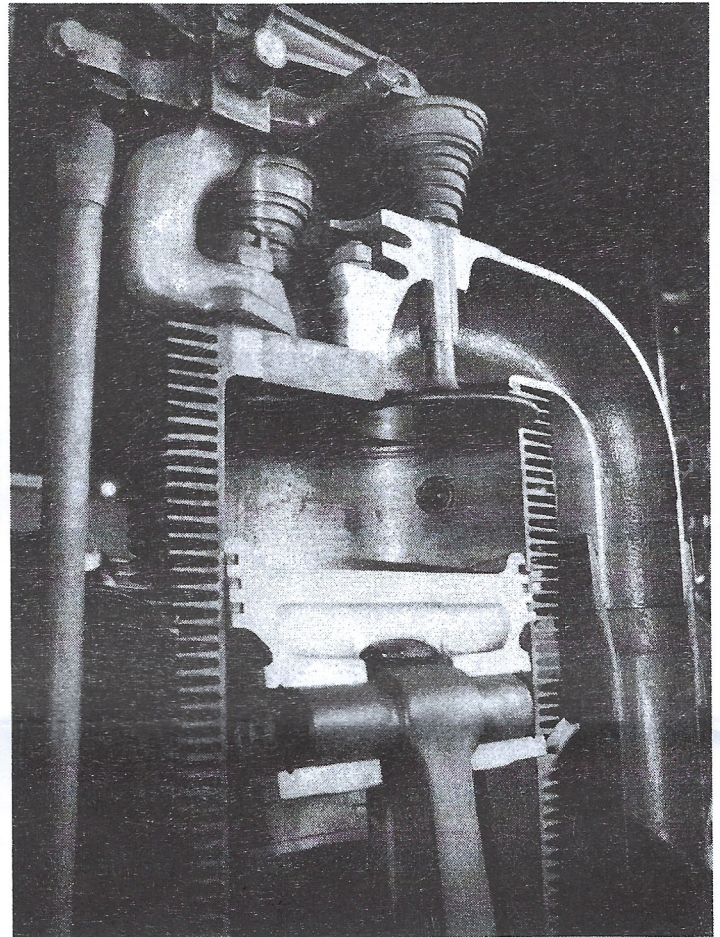
In the early years of the last century, the development of nodular iron reduced the thickness of liners to about a third of earlier dimensions and for a couple of decades, pistons too were made of this material. However, the WW1 accelerated engine development at great speed and as engine speeds rose and tolerances became tighter, aluminium alloys were developed that rapidly took the place of cast iron for pistons.

There was an exception to this in rotary aero engine practice. In these engines, the whole engine rotates, crankcase, cylinders, propeller an' all. The crankshaft and pistons are fixed and maintaining a good running clearance between piston and bore was a very different problem from that in a fluid cooled engine where the pistons operated in a much kinder environment. Many of the best rotaries were almost entirely built from steel and cast iron. The metals were very well understood and

the could be machined in fast running machines, cast iron being machined dry as the graphite inherent in its structure lubricated the cutting tools. Steel requires cutting lubrication, but iron ore was easy to come by and much cheaper than aluminium which needs to be imported.

In rotary aero engines, the cylinder bores were machined slightly off centre (10 thou was not uncommon) as the leading side of the cylinder was better cooled than the trailing side. It was not an inconsiderable difference and even so the cylinders would "banana", creating an environment where a very thin wall steel cylinder and cast iron piston closely mirrored the others operating temperature.

An exception was the ill-fated "Dragonfly" (cutaway cylinder illustrated) produced by Granville Bradshaw who in 1918 contrived to so convince the British Government that his high output rotaries were all they needed, they more or less gave all rotary engine work to his company. Unfortunately, whilst the hand built units were brilliant, the aluminium pistons they used to get the performance gave terrible trouble when assembled in a



production environment. Suffice it to say that if they had been ordered in 1917, they might well have cost us the war in the air.

Sand cast aluminium pistons were rapidly replaced by die cast examples of high silicone alloys which gave many advantages in machining accurately in quantity production and having ever improving wearability.

Lubrication is the key to high performance piston engines and it is by no means an exaggeration to say that the modern automotive and aero piston engines largely owe their long, trouble free lives to the adequate provision of a positive flood of very highly developed oil that keeps the various bits from welding themselves together at very short notice. I'll look at oil in a later article.



at present I am doing the secretaries job and running the club as chairman, who the hell wants to take over my job? If the present trend continues with no one willing to responsibility for running the club I fear for its future, with a declining membership as we all get older and not many younger people interested I can only see the club eventually ceasing to exist. This will come sooner rather than later unless you the members take up these tasks. **YOU HAVE BEEN WARNED.**

### **"Featured Engine" Errata**

Eric Brain has been kind enough to point out that the engine powering Keith Jones' vacuum cleaner in October's "Featured Engine" article is in fact an early Gardner. I saw it at Robert's Open Day and took four photos of it from all sides. No sign of a name on it as far as I could see, but I'm sure Eric is right - Ed.

### **Steam To The Rescue – Again!**

By Rob Armstrong (*FP* 1995)

The time - 1955. The place: West Wales. The problem: to move four enormous steam turbo-generator sets to the new power-station just then being built at Carmarthen Bay.

I had not long started my first job, as a young chemical engineer in the explosives factory at Pembrey, some six miles west of Llanelli (or LLanelly as it was then spelt. It didn't make any difference to the sheer difficulty for an Englishman trying to pronounce the word) I hadn't known much about the new power station being built two or three miles down the coast, except that tiresomely, a few of our better workers had left to go to "The Bay" in search of better pay and more generous overtime. But then came the announcement that an abnormal load would be moving on the local roads, that it would be moving very slowly and would generally get in quite a lot of peoples' way. It was the first of the turbo-generators, coming from the manufacturer to the station site. Certainly too big and probably too heavy to move by rail, road transport was the answer.

I started to take a real interest in this then, because of the likely effect it would have upon the factory. The first part of the journey didn't concern me at all; but once past Swansea, the convoy could not take the A48, the normal main road towards the West, because the road, bridge at Llchwyr (now, there's another challenge to pronounce!), where both road and rail cross the river estuary on parallel bridges, was only rated to carry a normal load of thirty tons. The set on its multi-wheeled, solid rubber tyred trailer comfortably exceeded one hundred tons - so it had to take to the minor roads inland, planning to rejoin the coast road at Cydweli to turn East towards the power station site. If such a load were to block up these roads, it might seriously delay the factory buses, which ran to collect and deliver the shift workers. And if you work in an explosives factory, where the manufacturing process runs continuously, you cannot just stop the plant when you think you will. A sudden stop

upsets the plant badly and it takes days to settle again, nor is such stopping totally without risk.

I had come on duty for the Sunday afternoon shift. Only one bus was waiting in the bus park outside the factory gates; admittedly, I was early because the morning shift manager wanted away in good time, but there should have been more than that. A brisk run around the plant to seek volunteers to work on went well; if the bus wasn't there to take them home, of course they would work a doubler, at Sunday overtime rates!

It was only an hour later that a phone call from the driver of one of the missing buses told me what had happened. The alternator was being dragged cautiously down a steep "B" road, one BRS diesel tractor in front and three behind holding back, and had got totally stuck on the peak of a sharp bend, blocking the road entirely. And there it stayed.

Somehow, alternative routes were worked out to collect the night shift, and the next day I drove out in my (series 2) Morris 8 to see what had happened. A notice at the bottom of the hill leading from Trimsaran to Pontiets said, simply "Road Closed", but I ignored that and drove on to see. Only one tractor remained, coupled to the rear of the trailer, which lay over at a slight tilt. The local paper carried the news that the obstruction would not be moved until the following Sunday, but gave no details.

On that Sunday morning, as I had been on night shift, I went out to see what I could. Robert Wynn, the famous heavy-load haulier from Newport had come to the rescue. Three Sentinel heavy tractors (no., sorry, I can't remember the detail or the type of the machines; I was more interested in the load than the tractors then, stupidly!) were there, being coupled to the trailer. One in front, two behind; I remember being impressed by the sheer silence with which they moved. The gentle hissing of breathing safety valves from all three engines could be heard, just before the first move was tried, the one in front blew off fully, with a sharp roar. At a signal from the front driver, the back two released brakes and set their engines in reverse, while the front one gently opened his regulator to pull. With no fuss, no noise, no skidding, and only a lump of grass being ripped slowly out of the bank at the side of the road by the tail of the trailer, the entire convoy started to move downhill. I walked down to follow it, totally impressed by the power and the complete smooth control being grasped by the three drivers who worked as one with – as far as I could see – minimal signalling between them.

As I drove home to bed, I passed the convey on the flat on the A484; easy going and they were moving at perhaps ten miles per hour, again in uncanny silence. The other alternators were delivered by steam without trouble on succeeding weekends.

Now in 1995, Carmarthen Bay has ceased generating. It maybe that my memory of dates and roads is not perfect - I apologise for that, it was a long time ago!