

Cape Vintage Engine

Newsletter of the Cape Vintage Engine and Machinery Society. NUMBER 3. APRIL 2008.

Next year marks the one hundredth anniversary of the first Lister built engines, although the company existed for more than forty years prior to that, selling other maker's engines. Today they are known as Lister-Petter and sell a large range of diesel engines. Surely this is a record for an engine manufacturer.

Wouldn't it be great to get another record going, along the lines of the recent tractor events started at Sandstone Estates in the Free State and carried on in Australia, Ireland, here again and I think, back to Ireland.

Next year there are plans by the "Western Cape Veteran Tractor and Engine Club" to celebrate the centenary "Perhaps by getting a few hundred machines running at SAVTEC's national show in March at Clocolan in the Free State Province". How about a big showing from our little club? I am planning on taking five Listers up (although having recently suffered a temporary setback by being chosen to participate in a vehicle redistribution programme – *me bakkie was nicked*) of which four will be D types. Let's start planning and discussing the "100 years of Lister, Mega Engine Rally" now. **Philip.**

Things have been fairly quiet since the last newsletter, with no local club gatherings, although a few of us did attend the Crankhandle Club charity event at Timor Hall Manor. **Dawn G** has written a fabulous article about the day.

Our thanks to **Andy** and **Ron Wiley** and the others who have yet again contributed to the newsletter. We already have a whole pile of 'mill progress-reports' from Andy that we will run in serial form. I took the liberty of translating **Hennie Swanepoel's** notes on his National into English for the benefit of our non-Afrikaans speaking members – I hope they make sense.

Welcome to the new 'members' - I am not going to list their names in the hope that in the future, they will contribute something to the newsletters and thereby introduce themselves. Any articles, notes and/or photographs are welcome. We will put the articles together if necessary and resize photos to suit. Anything that could be of interest to us is welcome; it does not have to be specifically about engines and machinery.

I have just started up the Petter upon which I have spent the last five years working. Or to be more accurate, I spent nearly five years getting the flywheel off and the last three weeks overhauling the rest of the engine. There is a bit of a mystery surrounding the Petter's model number. The maker's plate gives the following details: Petter, Model AP1 (or API), 3hp @ 1500rpm, Engine No.1538445. The engine is an air-cooled, petrol/TVO (tractor vaporising oil) model. Phil has done some research and has come up with the following near or possible matches:

AP - 1½ to 3hp, petrol/TVO, Nos. 300,000 to 302,029. Model number does not fit into this group.

A1 - 1½ to 3hp, petrol only, Nos. 1,500,000 to 1,599,999. Number fits into range but petrol only?

PA1 - 3 to 5hp, petrol/TVO, Nos. 1,100,000 to 1,999,999. Number fits into range. Phil suggests a dyslexic number puncher, but 3-to 5 hp?

Unfortunately the list Phil sent me does not indicate at what engine rpms the rated horsepower is achieved. Any Petter experts out there who can identify the engine and put an approximate date to it? At a rough guess, we think 1950's?



The Petter - mounted on my engine test-frame.

I eventually got fed up with being chased around my workshop by engines running amuck and fixed a scrap base frame to the concrete slab outside my workshop using four 16mm anchor bolts. The frame can be adapted to fit any engine.



On the subject of removing flywheels – I came across an old engine manual the other day that gives clear, concise instructions on how to remove a flywheel. All one does is to give the flywheel a firm tap inwards towards the crankcase, which will move the flywheel away from the key, pull the key out and then pull the flywheel off. If only I had read this before battling to remove umpteen flywheels!

What these instructions have taught me, however, is to remember to leave a reasonable space between the flywheel and the crankcase or the shoulder of the crankshaft so that one can at least attempt the above. Again, on the subject of flywheel and key removals - how about sending in some of your ideas and gadgets (sketches thereof – not the gadgets), which you used to use for removing the aforementioned before the abovementioned method made them redundant? I personally came up with a crafty design for a 'key-removing' gadget, but I am not going to divulge it until other people submit their ideas. It actually worked after I threw away the hydraulic cylinder and used a spanner instead. ***Seriously – how about sending us some ideas that we can use to do a feature in a later newsletter. Gordon.***

Crank Handle Club Day at Timour Hall Manor.

By ***Dawn G.***

Vintage days are much like fair days. The smells of old machines, the gathering of like-minded people and the joy of seeing familiar faces.

Crank-Handle Club open day dawned cool and clear. A bright autumn day, with just enough warmth in the sunshine to make the weather pleasant.

The venue at Timour Hall Manor Park was the perfect setting for the cars of yesterday. The grounds of the manor house are a park-like country estate and the trees are as mature as the cars and set off the beauty of the vintage cars rather well.

The air was filled with the sounds of the Dixie Band playing their particular brand of music on the side veranda of the manor house, while the crowds drifted between the stalls that were selling car parts and sundry other treasures. The food stalls seemed to be equally popular and the atmosphere was one of a leisurely fun day.

We delighted in showing off our finds to each other as we found our special treasures at the stalls and bought our bargains.

Among the items purchased by Vintage Engine Club members were, 18mm spark plugs, various piston rings, two brass fittings the came off an old steam engine, a hook from chain block, a solid brass tap, and a potjie pot lid that was just the right fit for the pot that had lost its lid through the years of travels. What joy!

We drooled over the beautiful cars and dreamed our dreams and remembered the good old days before computerised engines. My personal favourite, well there were two, no make that three, the model T-Ford and the model A-Ford and the Morris Minor. The Morris was a memory as my first car was a Morris 1000 and what a wonderful time I had with that car in my energetic youth. That was a car that I could fix and fiddle with for many happy hours.



We managed to get six club members together.



Phil and Arthur - two of the founding members of the club.

(Andy was working on the mill so that he could write articles about it for us).

Braam du Toit, Gordon Riley, Dawn G, Phil Gray-Taylor, Peter Boast and Arthur Wilding.



Dawn G. and Model T Ford.



Riley²



Model A Ford Coupe.

Compagnes Mill – Easter Saturday: Nineteen More Buckets. By *Andy Selfe*.

Stephen Sokolic came and helped today with the making and fitting of more buckets to the water wheel. When we were carrying out the un-bent sheets, he asked how many to bring. I thought 12 would be a good idea, based on what I'd managed to do on my own on the previous two Saturdays. I had an idea Stephen was eyeing the pile of un-bent ones during the day as we progressed, and they didn't seem to be getting any less. The reason was, while he wasn't watching, I was adding more to the stack!

We split the chores of making and fitting them between us, and it saved a lot of time. He had the messy job of fitting them, lots of Iscor Black on his hands from the partly painted buckets and the bolts and nuts which we had soaking in the stuff. I had the cleaner work of shaping the buckets, cutting out the corners and centre-punching and drilling.

One big difference was, when visitors arrived and I gave them the usual tour, production didn't stop! Stephen just kept beavering away, fitting those sticky bolts and nuts!

We worked around the wheel first, filling some gaps from the last two weeks, until we had every third bucket fitted. Then we did the two between them in one place, then turned the wheel to the diametrically opposite side and did two more there. Then 90 degrees apart and opposite that. Then we started widening the fours. Now we have two opposite runs of ten new buckets in a row, as well as two fours. In the end, we'd made and fitted 19! That means that there are only 18 more to do! Things are suddenly moving fast!

There's still a lot of painting to do, but they are painted where it matters, where the metal sheet is in contact with the 'starts' as well as against the wooden planks, and on the cut edges, including the bolt holes.

I had tried in the week to get bolts without modern markings on their heads. Two places in Cape Town promised they had them, but when both parcels arrived, they had **TP m** and **CW 4.6** respectively, prominently raised on their heads. We had managed to get un-marked cup-squares for the planks. We're already compromising by using Metric bolts, but I'm not prepared to advertise the fact! There was nothing for it except to grind the markings off 250 bolt heads! Unfortunately this means the galvanising has gone too, but they were immediately dipped in Iscor Black and will get many more coats in the future.

On Friday I had time to do more on the bottom of the main elevator at home. I'd made the basics of the new box last week, now I had to mark and drill the correct place for the shaft of the pulley to pass through. Once that was done, I could dismantle the remains of the old box. Well, it fell apart! I removed the bearings and the wooden spacer blocks behind them which were nicely preserved with oil, and transferred them to the new box, lining them up with the new holes I had just drilled.



I could then turn my attention to the shaft ends of the pulley which were badly worn. It fitted nicely into my lathe here at home, and to give an idea of the wear, the shaft was originally 1" in diameter, it's now a little over $\frac{3}{4}$!"

The cast iron bearings will now need bushing to size, no problems expected there.

I could then cut, mitre and fit the old Oregon skirting I'd found, to form the strip to attach the box to the base of the vertical trunking for the continuous belt with the buckets on. In the end, I had this to show for my efforts:

Here are the remains of the old box and next to them, the pulley with machined ends on the shafts.

On Saturday evening, after fitting all those buckets, there was still time to offer this up in its new position and to work out how the end under the big grain hopper must look. As it happens, all of the excess at the sloping end can be cut off flush. The mouth of the hopper is just there, level with the ends of the vertical trunking. Easier than I thought! There's also just enough space to fit it, between the concrete floor of



the 'sump' below the grain hopper and the bottom of the trunking.

From Australia: From **Ron Wiley** who attended a recent Power of the Past Rally at Mt. Barker which is about 50km east of Adelaide and about 80km from his home near Victor Harbor .

There were around 180 engines on display, a little lower number than usual; 50 tractors, 86 vehicles and displays of assorted memorabilia. Engines that are running have to be in a fenced enclosure and 1.5 meters from the fence, this is to meet the requirements of public liability insurance.

Products that were featured this year were Fairbanks Morse engines, Allis Chalmers tractors and Holden (General Motors) vehicles.



A view of one of the five stationary engine enclosures.



Briggs & Stratton 'motor wheel' that dates from around 1920, it would be interesting to say the least, riding a pushbike with it attached?



A 1903 Fairbanks Morse type T.



My friend Graham Lange talking nicely to his engine that would not start.

Fairbanks Morse type Z. Note the unusual condenser for boiling water from the hopper.



Ron.

Products.

Metabo Wire Cup-brush. This is a hard wire cup-brush made for use with 115/125mm angle grinders. After battling for years to find a wire cup-brush that really worked without falling apart in the first half hour, I finally came across this product.



I have one of these permanently mounted in a 115mm angle grinder and it gets used regularly for removing rust and scale from steel as well as for removing paint and other gunk. When restoring an engine virtually all the cleaning down to bare metal is done using this combination. It is also great for removing slag from welds - no more chipping hammer marks.

A few words of warning:

The brush is hard - don't use on soft materials (i.e. aluminium, brass, etc). Wires fly off the brush with a hell of a force - I have regularly had them imbedded in various parts of my body so:

Always wear effective eye protection and preferably leather gloves (I use a full face shield whenever I am using one). If I can find it, I usually wear my leather apron as well. I have had wires embedded in my stomach and other

parts of my anatomy which are not normally referred to in polite engineering circles, through four layers of clothing.

The Metabo brush is not cheap, but in fact it doesn't cost much more than the other products that I have tried.

Phil on Phuel.

I was chatting to a mate the other day, "My old car will be needing an overhaul soon, the tailpipe is black" says he. "What petrol are you using?" I enquired, "Unleaded, Why?" I explained that since leaded petrol was withdrawn, tail pipes don't burn grey anymore, so if the oil consumption is alright, then the engine is fine.

This got me to thinking about the fuel we use in our old engines and if it is necessary to use LRP (lead replacement petrol). After a bit of research, the answer is "not really"

Leaded petrol was introduced in the 1940's when the power output of car engines was being increased by higher compression ratios and higher revs. The lead in the petrol acted primarily as an upper cylinder lubricant. If your car engine was designed to use leaded petrol and you run it hard and fast on unleaded you run the risk of causing valve seat recession. This is when the valve seats wear away, reducing the tappet clearance and eventually burning the valves. But! The majority of our engines were designed before the introduction of lead and were intended to be operated on lower priced, minimum spec pump petrol, most are run below 1500rpm (which Shell engineers have calculated is the speed below which valve seat recession rarely takes place) and few are run fully loaded. The only engines at risk are the smaller, high speed, air-cooled types, so please use LRP in your old lawnmower.

Two stroke engines can of course use unleaded.

What about petrol/paraffin engines though? Which ones need tractor vaporising oil (TVO) which is 50 octane and which ones can run on zero octane lamp oil/kerosene/paraffin? There again TVO was developed in the early 1940's, so any engines made or designed before that will only need straight zero octane lamp oil or kerosene. By the way, when using lamp oil your engine should run at 99 Centigrade or hotter otherwise the lamp oil does not vaporise completely and can dilute the sump oil. Nearly all Lister petrol/paraffin engines run on lamp oil, Villiers engines were designed for 70 octane unleaded or TVO when a vaporiser was fitted. Petter four strokes need TVO as do Wolseley engines, again when fitted with a vaporiser. Can anyone add to this list?

There is always the exception though. Listers marketed a TVO conversion for their straight petrol engines, although I have yet to see one here, and Steve Socolic regularly runs Darryl's Villiers on straight lamp oil without any problems.

I won't tell you what my mate uses in his two stroke engines, suffice to say the petrol used to wash off oily parts is never thrown away but that is a story for another day. **Phil.**



A turbo Fergie (or Vaaljapie).

This was sent to **Phil** by **Ron Wiley** some time ago.

Phil's comment; why?

I doubt if the compression ratio had to be lowered for the use of the turbo on this engine? **G.**

Hennie Swanepoel's 1914 National Hot Bulb Oil Engine

at the Neville Botha Engine Day at Henley-on-Klip. From **Hennie Swanepoel.**



"Here I am proudly showing my 1914 National Hot Bulb Oil Engine at Henley-on-Klip near Vereeniging.

When I got the engine it was totally bare and had a hole in the sump. I had to make up the drip lubricator, governor, oil pump and injector myself.

The governor gears were made up by hand and they work and it runs, but no guarantee for how long!"

Unusual.

Let's see if anyone can identify this 1904 car.



Clue – this should give it away.



Before – as new.

After – as it is now (another clue).



Not much bigger than my lawnmower engine!

Six speed tiptronic this ain't.



The before and after pictures are not exactly in the order in which we would like to see them! The 'remains' are located less than a kilometer from my home. G.

Wanted: *Ron Wiley* would like anyone who is interested in sheep shearing and sheep shearing equipment to contact him. He can be contacted at ronwiley@bigpond.com.

From the Last Newsletter:

Tony Beckett:

There's a running Coventry-Climax engine available in the Barrydale area, my friend Richard has the details. Sorry we omitted to include the telephone number 028 572 1032. A gremlin crept into Tony's email address. It should have been radio@netpiont.co.za

Unidentified: From Newsletter No. 2. *Tony Beckett's* engine has been identified as a 1930's vintage 28hp. Hercules.

In the last newsletter *Phil* mentioned hearing about a scrapped MG Magnette. A few days ago whilst looking around a scrapyards he came across the remains.



Tewkesbury Mill.



A while back *Andy* was approached by a lady visitor to the Compagnes Farm Mill. She lives in Durban, but is the owner of a mill in the middle of the river Severn at Tewkesbury in the UK.

'There are two wheels, one each side. You can just make out the one this side, behind the tree'. That part is 900 years old! (Indicated by the arrow).

THAT'S ALL FOR NOW!