

# Cape Vintage Engine

Newsletter of the Cape Vintage Engine and Machinery Society.

Number 7. September 2008.

While searching for an answer to the spark plug conundrum posed by **John Menasce** I immediately put it down to using a modern plug of incorrect heat range as our old engines tend to run colder than modern engines and so cause fouling of the centre electrode but then I came across this snippet of information in my 1974 edition of Modern Motorcycle Mechanics. "Set plug point gaps at .015-.020" for magneto ignition, .020-.025" for coil ignition .025-.030" for all two stroke motors". The reason for using a smaller gap with magneto ignition is that the spark is weaker when the engine is running slower or on start up.

Magnetos normally have built-in safety gaps that pass the spark to earth at around 8000volts. According to my 1946 edition of Dyke's Automobile and Gasoline Engine Encyclopaedia an old type spark plug with a gap of .025" under 65lbs. pressure in the cylinder also needs 8000volts to fire but as John states, *modern plugs have a built in impedance* which would require the magneto to build up higher than 8000volts, so the spark takes the path of least resistance and jumps the safety gap instead. The Briggs and Villiers have flywheel magnetos with no safety gap and run faster producing a hotter spark. The old 1920 Fairbanks probably has a lower compression pressure so gets by on a lower voltage spark. It would be interesting to try a modern plug with a .015" gap to see how it compares with an old demountable plug.

This theory of mine doesn't explain why Johns' Lister D and JAP don't like modern plugs but maybe there is something in it? Now for my question, (which is keeping me awake at night) a magneto's voltage flows through an HT cable, jumps across the gap at the spark plug and returns to the magneto via the metal components of the engine, right, but if you introduce a second gap, like a spark intensifier or Stromberg converter, how does the voltage know that if it jumps the first gap into the middle piece of wire, that there will be a return path for it after it has jumped the gap of the spark plug? **Phil**.

The big event since the last newsletter was the Heidelberg Show - The Hundred Engine Rally. **Andy** has kindly taken us along with him and **Phil** has added to our enjoyment of the event. **Andy** has also contributed the next episode of the Compagnes Mill restoration. **Peter Noble's** Ferguson article that appeared in the last newsletter was very well received and he has followed that up with an extremely interesting article on the Fordson N Tractor clutch. Dare we hope that he will become a regular contributor? **John Menasce** has given us an insight as to how and why 'throw-away' Briggs & Stratton engines came about and **Ron Wiley** has made his usual contributions. **Ron** has for a long time been asking for South African sheep shearing related information - can anyone **please** help him?

In the last newsletter I asked for **Help** in removing a seized up jet/emulsion tube from my Briggs & Stratton type B carb (Andy quite correctly pointed out that it is an emulsion tube and not a venturi). I had a flood of replies, some of which can be seen in the Mailbox (**Harvey Metcalf** wins first prize) and I have been asked to write up the removal saga (see later). **Gordon**

**Temper.** The well-known Greek poet and philosopher, **Anon Ymous**, who had been removing a piston from an old engine when he dropped a gudgeon pin circlip down into the gungy, 50 year old oil in the crankcase, wrote this.

**When I have lost my temper, I have lost my reason, too.  
I'm never proud of anything that angrily I do.**

**When I have talked in anger and my cheeks were flaming red,  
I have always uttered something that I wish I hadn't said.**

**In looking back across my life, and all I've lost or made,  
I can't recall a single time when fury ever paid.**

**So I struggle to be patient, for I've reached a wiser age;  
I do not want to do a thing or speak a word in rage.**

**I have learned by sad experience that when my temper flies,  
I never do a worthy thing, a decent deed or wise.**

**Anon Ymous.**

Before I forget I took you all along, let me remind you how it went:

I got away as soon after an early lunch on Thursday as I could, it was cold and showery, and the wipers don't work. I was worried and excited at the same time, as I didn't know how reliable the IH would be, nor what kind of fuel consumption it would have. I started driving with both hands on the wheel, the rear wheels could have had more air for the one engine and bits and pieces in the back, and I found driving a bit squishy, particularly downhill, over an indicated 45 MPH. The trip was uneventful, the weather improved and I got more used to the steering. Riviersonderend is 100 km away and to test, I filled up again and it took 18½ litres (!) so I knew what I was in for. Better weather, jacket off, and more air in the rear tyres, and I started enjoying myself! Before long, all those old habits started coming out, one hand on the wheel, the other hanging from the rain channel (isn't that what it's for?) or the other resting on the back of the bench seat (ditto?) (Pity there wasn't a pretty girl sitting there!)



3 uneventful hours and I was with my buddies in Heidelberg, at 200 km. The trip would best be described as 'interactive'.... most people passing waved, hooted, pointed cell-phone cameras, others pulled off ahead and photographed the runpast!

Once at the showgrounds, already with a lot of old iron there, we went straight up to Derick's farm near Grootvadersbos outside town and loaded as much as three bakkies could take, including the IH of course. Remember, we were aiming for 100 engines! Up there we met Derick's parents again (they have a beautiful Bolinder stove in their house, but we didn't go in this time). I also took some scenic shots of the IH with the mountains in the background on Petter's hi-res camera.

Back to the showground, with Petter B deMille filming some run pasts of the bakkie. On the way, though, the bakkie cut out for a moment, typical fuel starvation, coughed, and carried on as normal. Very well, in fact, so that I forgot about it. We offloaded and set up engines until dark, Denis arrived with the news that all the Villiersdorp contingent trucks had been pulled off at the weigh-bridge at Swellendam, including a 3-axle low-bed with 2 tractors and a Haflinger on!!! Little wonder the traffic cops at the weigh-bridge are called Mermaids!



View from Derick and Carien's garden.

Back to Derick and Carien's where Philip and I were staying over and Denis at the B&B next door. Petter joined us without his 'Skat' (=treasure), who had gone to bed at home (?). Much (engine) talk, fire making and braai-ing and eventually it must have been 1am before we turned in. I'd forgotten my sleeping bag, but luckily Carien had laid everything on for us, otherwise it would've been a tight squeeze for Philip and me in his!

Next morning, I woke to find Philip washing the IH (thinks... did I tip him?) and off to the showgrounds. Parked up the IH and put up a display board I'd made on Wednesday evening and e-mailed to Joanne West in UK to have the Sandstone Heritage Trust letterhead added. She'd sent it back and I got it laminated on Thursday morning, phew! Then turned my attention to the one engine I'd brought from home (knowing there was one to collect on the way home). It's a Fairbanks Morse ZC 52, which you can start up in the morning and it'll run all day with very little attention. This was wise, as Friday was Judging Day. Derick and I were detailed that job, and there were quite a few to do.



Part of the Fairbanks Morse camp.

The engines were displayed, as far as possible according to make, so while it might have been difficult for one owner to watch engines in different areas, it made a stunning display. We put up *skaaphekkies* on the outside and poles and barber tape on the inside so our displays could be viewed from both sides.

After a while, it became apparent that Derick was just toooo busy to get away. It's also his home turf, so people were stopping him and talking to him the whole time. Also the MME low-bed with 6 engines on arrived unexpectedly (they were supposed to be towing wrecked fishing boats off the beach at Melkbosstrand!) and space had to be found, then their follow-up bakkie seized an engine outside Swellendam so they had to organise a mechanic and tow vehicle :- So I got stuck in on my own. At the same time I was also meeting old and new

friends, and looking for owners to demonstrate their engine (one of the judging points), so it took a long time. With tractors, the owner brings it to a pen for judging, so they are fairly removed from the passers by. With engines, they're done where they stand in the display area.



MME's display on the low-bed, FM ZCs and a ZD. They brought a Blackstone OP as well!



Derick swinging the 'Jack' into life.

Judges were treated to a slap-up lunch and with that over, it was back to judging. This time Willem Stemmet came to help, being finished with judging the lorries and bakkies. With new members, the Viviers from Beaufort West, I went through the judging carefully on their two exhibits, to show them where they could improve, for extra points. There was a hiccup with the engine-and-implement judging, I'd been given the wrong forms, so with three of them, I had to go back with the correct forms and do them over. Eventually the job was done, by this time middle afternoon, and we could relax and enjoy the vibe. At one time, Derick started his Jack-of-all-Trades. Now Derick is a big lad, but this is one big engine!

The Club AGM and prize-giving was at 7pm, at which I was delighted to accept 2nd prize for the IH on behalf of Sandstone Heritage Trust and proudly stuck the ticket on the windscreen! There were no fireworks at the meeting, and everybody is still in office, with the exception of the Vice Chairman, who has been rotated in deference to the show in two years time. Next year will be back in Villiersdorp, the following will be in Malmesbury, so Fanie Basson is now the V/C.

Thereafter, we went back to D & C's for another braai. Philip had snuck home a bit earlier and had a good bed of coals by the time we got back. Again it was a great supper, this time, with Petter's 'Skat' (Ellbie's) company as well. Too much of everything, food, talk, beer and wine and good company made it a late night again.

Saturday! No judging to worry about, so fun, fun, fun! There was a loooong road-run through the Town, including the Old Age Home. The IH with passenger and four people on the back certainly turned some heads! I wonder how many photos were taken by the amazed public! A circuit of the arena with the IH at one stage, but otherwise, just playing with engines and chatting to the owners. At one stage, we made a list of the engines. Horror! We were 5 short! Off to the farm again and suddenly, another 5 were on the show, including Petter's ultra-rare Petter M with uncooled head and the only known example of a special exhaust in the world!



Ellbie (Skatjie) holds the broken, unique exhaust in place on the rare Petter with uncooled head.



Johnny Verreyne's Foes.

So, we got our 100 engines (there were upwards of 130 tractors, too!), then we remembered that two more had been displayed on Friday and had been taken home. So our tally, attached, is 102! The mix is interesting and probably unique to Southern Africa. Being centrally positioned between UK, the Continent, USA and Australia, we tend to get engines from all over. What is interesting is the makes which were *not* represented... then one turns up! An example is this Foes from the USA brought by Johnny Verreyne.

Not that much to do to get it running! One show-stopper was Derick's 8HP Hornsby Ackroyd. A big, very rare engine, which he has already freed off, and all it needs is the hot bulb and an injector to run! He has already been sent copies of blueprints of the missing parts by Ray Hooley, along with the transfers he'll need. Amazing that these are available still, 105 years later!

Several photos were taken of the IH during the day, for the Prize Certificate which will be produced shortly. Hennie Richter took this one:

Two from the same stable at the same time!



While running around moving the bakkie around, I was driving slowly in first gear and discovered it was happy to continue without a driver! I took it into the arena, set the steering at full lock and climbed out, and 'lunged' it for a few circuits! The indicated engine speed was 150 RPM! Later on, well loaded, it was happy to do the same in the streets of Heidelberg, in 2nd gear! A bit disconcerting for the passengers!

Well, all good things come to an end, and even the weather started to deteriorate, so in middle afternoon, we started to pack up. 102 engines is not child's play, especially when half of them belong to the two locals, Derick and (by adoption) Petter! It took the combined efforts of us and the MME team, a forklift and two full loads of this rig to get their stuff away!



It took two loads of this rig to get Derick and Petter's stuff away!

The other trouble was to shoe-horn it all in to limited space at the other end!



Shoe-horning engines into a confined space!

The second load was just driven into the silos for offloading on Sunday, we were all too exhausted by then!

Sunday morning, after a leisurely breakfast and fond good-byes, it was time to 'klim in die pad' for home. However, for me there was a detour via Napier, near Bredasdorp to collect the other engine as arranged. However, a Fowler Diesel had already hopped onto the back, no small weight. The engine I had to collect from Kevin was a Ruston & Hornsby PB which he rescued on my behalf from a scrappie, and I had forgotten that I'd promised to bring back a Wolseley from there for someone else! That wasn't all.... the balance of the amount I'd paid over to the scrappie had 'earned' me a huge engineer's vice, so by the time that was on too, the back was hanging!



A heavy load in a willing bakkie!

The willing beast was more than up to the load, and all went well, till 20 km out of Caledon, the engine coughed again as it had on Thursday evening. This time, it didn't go away. Cutting out, then a backfire and all would be well for a kilometre, or more or less. I didn't want to do anything on the side of the road, in case I couldn't get the carb to seal again if I opened it, so I struggled along to Compagnes Drift in Bot River where I'm restoring the Mill and did the job in their yard. I found a piece of something the size and shape of a tea leaf, removed and checked the main jet, applied a touch of sealer (added to the emergency kit I'd put together for the vehicle on Thursday) and put it together again. I made it home with no further problems.

Next year will be our turn to turn on the taps and empty our sheds with anything that can make a noise! Many thanks to the Organisers of this year's show! **Andy.**

*Andy omitted to say that he was driving a freshly restored early fifties International Harvester ½ ton pick-up. Phil.*

Andy mentioned that MME should have been moving a fishing boat.



Well they managed to do that as well a couple of days later! Taken by **Vicky** out of the car window when held up in the resultant traffic jam on the way home from school. At 180 tons it was impossible at the time to get far enough away to capture the complete load on one frame. **Phil.**

**Vicky** is Phil's daughter. A few people have recently asked me who designed our letterhead/logo. It too was Vicky's handywork. **G.**



## Heidelberg Show - The Hundred Engine Rally.

*Phil Gray-Taylor.*

My plans to attend this show started more than a year ago when Derick Kleynhans asked me to bring along my 1½hp International M type of 1929. It being the Annual Wes-Kaap Veteraan Trekker en Enjinklub Skou held in Heidelberg, it was Dericks home ground so he wanted a good showing. We needed the 1½hp to complete the range of M types sold in South Africa. This wasn't the only range of engines that Derick was able to display at the show. There was also a good showing of International LB's, Fairbanks-Morse Z's, Petter 2-stroke Universal's (courtesy of Peter Boast), Massey Harris, Listers and what must surely be the best collection of throttle governed John Deere engines in this country. These engines are extremely rare in America, their country of manufacture because the vast majority there were hit 'n miss governed; hence the throttle governed variety found here. I had taken along the Inter 1 ½ hp as mentioned and six other little 'uns to fill up the bakkie and make up the numbers to achieve the magical 100 engines at the rally. I think this is a record for the Cape Province and as Johann Van Vuuren says, "the only way to prove it is a record is to state it publicly and then wait for it to be disproved"

The record 100 engines was achieved on Saturday but only after it was found that by mid day only 97 had arrived, Derick immediately drove to his shed to load up another five.

For the number crunchers, the statistics were as follows.

Fairbanks-Morse 18 engines represented,

International Harvester 14

Lister 8

Petter 7

Wolseley 6

Who had the most engines there? The top three were; Derick 39, Peter Boast 11 Philip 7.

How many of the 102 engines were running at one time or other? 80%.

There were a few very rare and interesting engines as can be seen in the photos.

Many thanks to Derick and Carien for their wonderful hospitality during the four days I was there.



Lister two stand shearing set.



Hornsby Acroyd.



International 1½ hp.



Andy and David Stemmet.



John Deeres 1½ - 6 hp.



Peters Petters.



Ronaldson Tippet.



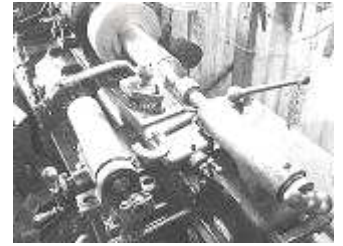
Fairbanks Eclipse.



International Harvester.

## Compagnes Mill - Launder Rim - Stage Two. *Andy Selfe.*

I left off last time mentioning I needed to make something to roll the corrugations out of the outer (upper?) +/-180mm of the launder on both sides, so that the sheet could be attached to the wooden rails I was busy making up. In the week, I had two rollers machined, 60mm diameter, with stubs sticking out each end, 20mm diameter, to fit pillow block bearing units. However, I realised that the pillow blocks at the outer end would foul with the corrugation that I wanted to leave, so I scratched in the junk and found two smaller plain bearing blocks with a 1/2" bore. That meant machining down the stub at one end of each of them;



The comparative sizes of the bearings can be seen on the left. Here, Eric can see I've cleaned the lathe! I then cut and drilled some flat steel bar, and soon had this contraption:

I had brought the offcut home to try out on, and even the dog can see that it actually works! I had also brought a short offcut of a plank with the rounded edge, and soon I could see that my plan was going to work:



At this stage, I realised it wouldn't be easy to roll the flattened sheet over and bolt it down, so on Saturday I took along everything I had in the line of g-clamps.



The roller worked well! I had made it to hinge open enough to put over the sheet with corrugations, but after a bit of practice, I found it wasn't necessary, even where the sheets overlapped. I feed it onto the upper edge of the sheet and work it back and forth along the topmost corrugation until that is flat, then I 'steer' it down to the next, roll that flat and then to the full width of the roller which starts rolling the next corrugation flat. It sounds easy, but bear in mind that this has to be done at the top of a ladder, and the roller probably weighs 20kg! But the effect is just what I needed:



As expected, it wasn't easy to roll the metal over the rounded edge of the wooden strip, but I realised that my one 5" g-clamp was going to help, but only after modification. Luckily I travel with short pieces of steel flat bar and a welder: I bent up the curved 40 x 6 flat bar to the shape of the top edge of the wood, allowing for the extra 6mm where the joining plates are, and welded it to the swivelling foot.



Before folding over, the outside of the joining plate and the serial numbers got a coat of the 'black stuff', the numbers being no longer required. I drilled every 1/2 metre and fitted a gutter bolt, through the sheet, then the wooden rail, then through the sheet again. I think that will give enough support:

It took most of a day to get half-way with the first side, but now I have the knack, it should go faster. However, the launder is getting further from the ground, which is going to make life interesting. Also I'm going to struggle where the launder is close to the Mill-house wall. Once the second rail has been made and fitted, I can refit the spreader bars to straighten the launder up.



There is a degree of stretch in the sheet, it seems, after the corrugations have been rolled out, so the edge on the outside of the wooden rail does not lie flat. I could screw the outer edge to the wood at the very bottom at frequent intervals, but after painting it doesn't look bad. I suspect these corrugated iron launders never did look too pretty. **Andy.**

**Technical Terms.** I'm not sure why I remembered this from the early 1960's?

The charge hand (Harry) when I was an apprentice had an old Matchless 500cc motorcycle to come to work on. If he forgot to retard the ignition when starting the engine it would backfire. One day his three-year-old son

Tim asked his dad what the bang was when he tried to start the engine and Harry explained to him that engine had backfired. When the engine was started Tim said to his dad, is the engine now front firing? **Ron Wiley.**  
**The Fordson N Tractor Clutch.** **Peter Noble.**

We all take the modern car and tractor clutches for granted. We push the pedal down and the gears stop spinning instantly. We get into gear or change gear at will. The only possible criticism could be that the 'single plate dry clutch' (it's description) does not take too kindly to abuse. A heavy footed driver operating a front-end loader tractor shunting forward and back to load a trailer can burn the friction plate in a relatively few hours. The N Tractor clutch is almost the opposite in every way. It is a multi plate wet clutch and when it has taken it's full dose of abuse it does not slip - but what is possibly worse - it will not separate to allow you to get it into gear!

It is made up of 17 plates - 8 driven and 9 driving - assembled alternately. The driving plates are slightly dished to help it separate and it runs in the engine oil. None of the plates has any friction material - they are all plain steel. A special Ford tool is required to squeeze them all tight in order to bolt the casing together. If you pile a new set of plates on the bench in the correct order - the height of the pile is greater than the space available inside the casing. It's only the drag of the 90/140-gear oil that gets the clutch to 'free' as the plates are never clear of each other

The abuse of it - which I referred to - is nearly all caused by the design of the tractor. But we must remember that the production of the N tractor ran from 1917 to 1947. There is only one foot-pedal and no hand levers to operate the tractor. Pushing the pedal down halfway releases the clutch and all the way down engages the very efficient transmission brake (another multi plate unit). For parking there is a hook on the footplate, which holds the pedal down - so that the clutch is held in the disengaged position all the time that the brake is on.

Probably the majority of N tractors produced were on steel lug wheels (originally steel cleats) so that under field conditions the brake rarely needed to be on. When rubber tyres were introduced that is probably when the clutch suffered most. All the time a trailer was being loaded or unloaded the pedal would be held down. The heat produced must have been enormous, which caused the 'dish' on the driving plates to flatten out and burned oil would also stick to some of the plates. All this prevented the clutch from separating - broken gear levers were not unknown when drivers tried to force the gears together trying to stop them spinning. The noise was unbelievable!



My friend David and I restored three N tractors in the UK. For the first one we had managed to acquire a complete set of new plates. For the second one we were able to sort out those with the most 'dish' and still get a reasonable clutch operation. When we did the last one, as all the plates we had were almost completely flat, we decided to leave out one of the 'driven' plates. The logic of this decision was that we never intended to tow anything heavy and as long as the clutch pulled the tractor along, we would be satisfied. The experiment was a complete success - the clutch separated almost instantly and took up the drive as normal. **PN.**

### **Briggs and Stratton Engines.**

**John Menasce.**

Recently I contacted **John Menasce** requesting information on my B&S Type B that was mentioned in the last newsletter. Apart from providing me with me a load of advice and information, John sent the following interesting notes G :-

I am delighted to hear about your type B Briggs—they are great little engines and we are very fortunate to have a 1947 Type B attached to a Cyclohm 115 volt AC generator with the engine still in original condition.

I am a great fan of B+S as I think their engineering is very clever in its simplicity. I was lucky to meet one of their engineers [now retired and having a ball selling garden implements with B+S engines] on one of my trips to the USA and it was a fascinating story of understanding the American consumer market and making a product to match that.



**John's 1947 B&S type B Gemset.**

The all aluminium "Cool Bore" engines first produced in the 1960's were the result of that study and they were designed to last only as long as the oil in the sump as the consumer market was identified as being either incapable or unwilling to service the engines so there was little point making a long life engine as it would die anyway when the oil ran out or got so dirty that the engine ground itself to death.

The exercise even extended to the air cleaners and the oil bath filter was replaced by a sponge type because again the user was unwilling to service the air cleaner. He then showed me the modern answer to a consumer's engine starting needs with a rope pull that wound up a spring until the torque was sufficient to spin the engine- so no more hernia's, back problems etc for the unfit consumer—just a gentle and steady pull on a rope!!

Back in the late 1960s they produced a 2 BHP engine model 60102 that was a failure especially here in RSA as it was not powerful enough for a reel type mower at our altitudes and this was superseded by the 3 BHP engine the 80000 series. So if you find a little 2 BHP “coolbore” engine with horizontal crank—grab it, as it is a rarity. We are lucky enough to have one dated 1967 that we restored - it runs so smoothly that people are amazed that such simple carburetion is effective.

The “easy spin start” is also a very clever patent—a subtle positive profile on the inlet valve cam that holds the valve open for part of the compression stroke and decompresses the engine sufficient to make starting easier.

I have been using B+S engines for many years and have found that when serviced and oil changed regularly they last a long time. The modern industrial engines like the Intek and Vanguard series are really super products.

By the way B+S are also very clever at using common parts across the range so carburettor spares are still available for the type B and oil seal, piston rings etc should not be a problem. Unfortunately they go by model and type no and so it is difficult to identify the actual parts and their interchangeability but if you get stuck email a guy in the USA called Bob Blin who runs a repair outfit called Bob’s Small Engine Repairs- you can Google the site. He is a mine of knowledge on B+S engines especially the oldies. **JM.**

## From the Mailbox.

- Hi Gordon, I saw in the newsletter that you are trying to free the jet/emulsion tube in a B&S carb. I do not want you to join the “broken jet club” with me. (I broke the jet in the B&S in my boat and had no more boat for the rest of my holiday)

Suggest you try boiling the carb. The heat will make things expand differently and usually free things. Put the carb in a pot of water and allow it to boil for say 10 mins at the first attempt. If no joy, allow the carb to cool and then boil again. The successive expanding and contracting must eventually do something. Try to move the jet both with the carb hot and cold - there could be a difference. If the carb is dirty you can add some soap to the mix as well.

If you haven’t got the float out of that carb yet – be careful – it might not like the heat of boiling water especially if it is a plastic one. If its brass at worst you may have to solder up a crack.

We have recently had lots of success with a 36DCD Weber carb that had been lying in water and corroded. It went into the cooking pot at least 5 successive times (and the soapy water looked like porridge) and many doses of penetrating oil before everything came free. Getting the internal passages cleared took lots of boiling and blowing through.

This not my idea – it comes from a good friend of mine who earned the nickname of “The Chef of the Garden Route” for boiling carbs while he was working at a garage in Plett. I chatted to my “carb chef” friend and we agreed that a damaged float is the lesser of the two evils. I have soldered up so many leaks in the Benz “carb” float that I can virtually do it in my sleep.

Note it is very advisable to make sure no womenfolk are around if you want to use the kitchen (and the pot for that matter) as there are likely to be severe repercussions.

Let me know how your culinary efforts progress and Good Luck. **Harvey Metcalf.**

- In his Winter Warm Up article Bill Hoskin commented 'let the blurry thing boil'. This is probably a dumb question, but why is it that a hopper cooled engine can happily run on a small amount of water, whereas if one follows the manufactures' instructions, a tank cooled engine requires a very much larger volume? **Gordon.**

- Information Required - The Stewart Handy Worker (sheep shearing handpiece).

The Stewart Handy Worker was made by the Chicago Flexible Shaft Co. Stewart & Clark the founders of CFS Co went into partnership with Wm Cooper & Nephews around 1899/1900 and formed the Cooper-Stewart Sheep Shearing Machine Co to sell Stewart Shearing machines. The Cooper Sheep Shearing Machine Co was set up in Sydney in 1902 by the Wm Cooper & Nephews to sell Stewart Shearing machines under the Cooper brand name. The company name changed to Cooper Engineering in 1909

The brand names used were Stewart in the USA, Cooper in Australia and Cooper-Stewart in the rest of the world. Just to put a spanner in the works a few products prior to 1920 were sold in Australia under the Stewart brand name. Ed Bartlett Joined CFS Co in 1924 and was sent to South Africa for 2 years, He returned to the USA in 1926 and became the Sheep Shearing Expert for the company until he retired in 1948. The “EB” shearing hand piece that came out in 1927 and was produced for the next 30 or so years was named after him.

It would be nice if someone could tell me if the South African company went under the name Cooper-Stewart or CFS Co and if so maybe tell me something about the company in South Africa? **Ron Wiley.**



Ron sent the pictures from Australia. Interestingly the one handpiece has the name 'Cape Colony on it'. G.

- Great newsletter - thanks to all contributors & compilers. A bit of luck occurred a few weeks back -- a friend in Barrydale was on an old car outing to a farm nearer the coast which is far off the 'Scrappies' route and there he found another Bernard 1-pot engine, which he thinks is the same as the Bernard W-110 14-Hp unit that I acquired recently. In any event, it is captured but as yet, not collected.



The old 1930's Hercules 28-Hp 4-Banger is still available @ R600.

I have this Villiers carb & air cleaner Available, (Villiers Logo on air-cleaner top). If it's needed, it can go to CT at the end of the month when a friend from Simon's Town has visited. It's a 'freebie' to the right engine-owner.



This little Zenith is also available, same deal.

Ph Tony @ 027-7618920 for further info. Best regards --- **Tony Beckett**.

### **B&S Carburettor - Jet Removable Saga.** I have been asked to report on the above.

In the last newsletter I asked for advice on how to remove the main jet/emulsion tube from the carb on my B&S Type B engine. I received so many replies from our members that the operation basically became a team effort, with repeated requests for progress reports.

As mentioned in that newsletter, **John Menase** had fortunately warned me that this item has to be removed before the carb top can be removed. I therefore happily removed the main jet needle assembly, stuck a screwdriver up the hole and attempted to remove the jet. All of a sudden ----- nothing happened and I was left with that sinking feeling that we have all experienced at times - how do I remove a very firmly stuck, delicate, 50year old and probably irreplaceable item.

Having asked for help in the newsletter, I received advice from numerous people. **Phil** suggested boiling the carb, which I tried, but being wary of popping the float I only boiled it briefly. John Menasce suggested immersion in diesel - I didn't have any diesel and as the nearest garage is 20km away I passed up on that one. I had obviously tried generous applications of penetrating oil but that didn't work either. **Pieter Fourie** had just managed to remove two broken studs from his Landy manifold that had stubbornly resisted all attempts with normal penetrating oil and heat by using a very powerful 'Made in America' muti. He kindly donated some and I applied liberal amounts of this to the offending item over a period of 48 hours. Again - no joy. **John Menase** had suggested a rather radical 'if all else fails' plan D, but I was determined to remove the offending item undamaged. **Harvey Metcalf** then sent me a recipe that he had successfully used in the past. He also warned that the float would probably pop, but commented that having to solder up the float would be a small price to pay for removing the jet.

With the recipe in hand, I placed the carb in an old saucepan covered, it with water and boiled and cooled it over a period of about eight hours. As per the recipe I also added a dash of dishwashing liquid. Having left the carb dry and cool overnight, I squirted a little Hershell drilling and tapping fluid onto the jet, put **the** screwdriver into the slot and tapped it gently inwards with a hammer for a few minutes. I then tried turning it in both directions and thought I could sense a fractional bit of movement, but it was obviously not prepared to come out at that stage. I then boiled the carb again for about 30 minutes in soapy water and whilst very hot, again tried tapping and then turning. This time there was definitely some movement and I cooled the carb with tap water, applied more tapping fluid and tried again. The jet then turned relatively easily and having worked it backwards and forwards a few times with added tapping fluid it screwed out easily.

Thanks to **Harvey** for the advice. Without the repeated boiling and cooling I am sure it would never have come out. In addition I think that having ground the screwdriver to fit precisely into the slot also helped. At no stage did it slip out of the slot and damage it. Needless to say another important ingredient is patience. The recipe turned out to be infinitely more successful than the others I had on the stove at the same time.

The other good news is that I have tested the float in hot water



**The Offending Item** ---

and it is undamaged and as an additional bonus the carb came out squeaky clean.



Flushed with my success, I later decided that I would like to shine the carb body up a bit and applied some of the Hudchem aluminium cleaner that was mentioned in a previous newsletter. I had been warned that if the item being cleaned is not pure aluminium, the item will turn black - it did. Having done so, it then became totally impervious to further applications of cleaner. This was obviously due to some sort of chemical reaction caused by something in the alloy. I then gave all the components a good going over with a wire brush and everything came up bright and shiny.

As chemistry was never one of my strong points, the exact cause of the 'turning black' defeats me, but knowing that we have at least one chemical engineer in the club, I am sure we will get some technical explanations in due course. Come on Russ - enlighten us. Obviously we don't know what the components of the alloy or the cleaner are, but there must be some sort of explanation. *Gordon.*

*Phil* has suggested a couple of new thingys for this and future newsletters. The first is a 'Touch of Yesterday' - old photo's from the distant past and the second being a 'what is it?' picture - the object of the exercise is to identify the item in the picture. Let's see who can identify the first one. How about some submissions for these in the future?



### A touch of Yesterday.

This is a Fowler Roller operated by Griffiths and Inglis rolling roads in Pinelands about fifty years ago. The two boys are Beverley's brothers Gavin and Eric. I believe the roller is now in Canada.

Submitted by *Phil*.  
*Beverly* is his lovely, long-suffering wife.

**What is it?**  
It has "CGR stamped on the top left.



## Worcester Wheels Festival – 24&25 October 2008

Why did the WWF decide to make the Pioneer School our Charity Event??

### HISTORY – PIONEER SCHOOL

It was a dream of two preachers in 1877 to have a school for deaf and blind children in Worcester. The first deaf girl followed by a blind boy arrived in Worcester in 1881.

The first property was bought and the first building erected for the school in 1882. The blind and deaf learners were separated in 1905. The school on the central campus where the primary school is situated at present was built in 1907.

In 1953 the learners wore school uniforms for the first time and the school song was written in 1956. New Afrikaans Braille was introduced to the pupils in 1964.

With the 100<sup>th</sup> birthday celebrations the name of the school changed to Pioneer School. In 1984 the section for visually impaired children opened on the Langerug campus where the high school and multi-disabled section are situated at the moment.

Learners with specific learning problems were taken in at the school in 1995. At present there are 82 blind, 45 partially sighted, 7 deaf & blind, 27 multi disabled and 100 learning problem pupils in the school – thus a total of 261. At the moment 78 of these learners are totally dependent on the school in respect of scholarship, stationary, hostel accommodation, clothes, toiletries, pocket money etc.

On 15 June 2008 the school celebrated their 127<sup>th</sup> birthday.

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**Don't forget the Hermanus Whales and Wheels Festival 24<sup>th</sup> to 28<sup>th</sup> September.**